



Digital platform services inquiry

Final report

March 2025



Acknowledgment of country

The ACCC acknowledges the traditional owners and custodians of Country throughout Australia and recognises their continuing connection to the land, sea and community. We pay our respects to them and their cultures, and to their Elders past, present and future.

Australian Competition and Consumer Commission
Land of the Ngunnawal people
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Executive summary

Introduction

The ACCC has been examining digital platforms since 2017 through its original Digital Platforms Inquiry (2017–19), Digital Advertising Services Inquiry (2020–21) and ongoing Digital Platform Services Inquiry (2020–25) (the Inquiry). Across these 3 inquiries, the ACCC has published a total of 14 reports, concluding with this final report of the Inquiry. The reports in these inquiries have made a total of 35 recommendations, spanning competition law, consumer and small business protection, media regulation and privacy law.

Since the 2019 Digital Platforms Inquiry Final Report, successive Australian Governments have taken important action in response to the ACCC's recommendations, including:

- legislating penalties for contraventions of the unfair contract terms provision of the Australian Consumer Law (ACL)
- establishing the National Anti-Scam Centre within the ACCC and enacting the *Scams Prevention Framework Act 2025*
- introducing a legislative framework to incentivise good faith voluntary commercial negotiations between digital platforms and Australian news businesses
- legislating the first tranche of reforms to strengthen Australia's privacy laws following the review of the *Privacy Act*
- investing in the development of Australia's first National Media Literacy Strategy and providing funding for online learning tools to help schools keep children safe online.

The ACCC also strongly supports the Government's announcement that it will introduce a general prohibition on unfair trading practices, and its commitment to implement a new digital competition regime in response to the ACCC's recommendations. The ACCC considers that timely action is needed to legislate the proposed digital competition regime and prohibition on unfair trading practices, and to provide an independent external dispute resolution scheme for users of digital platform services. Given the existing body of work already undertaken by the ACCC, this Final Report of the Inquiry focuses on competition and consumer issues in 3 areas:

- recent overseas legislative and regulatory developments regarding digital competition regimes, unfair trading practices and dispute resolution
- major developments and key trends in online private messaging, app marketplaces and mobile operating systems (OS), ad tech services, and general online retail marketplaces
- potential and emerging competition issues in cloud computing and generative AI, and consumer issues in online gaming.

The importance of digital platform services

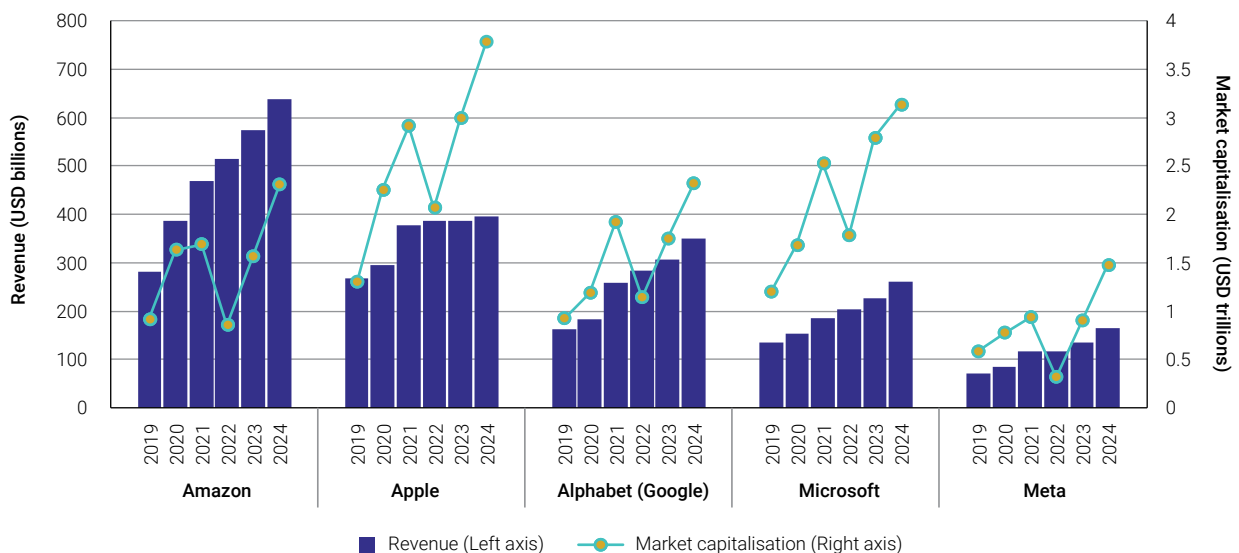
Digital platform services are critically important to Australian consumers and businesses and are major drivers of productivity growth in our economy. Today, Australians have a clear reliance on these services to participate in modern life. For example, in 2024:

- almost all Australian adults (99%) used a device to access the internet, increasing from 90% in 2019¹
- 94% of Australians aged 14 and over owned a smartphone²
- 37% of Australians had a wearable device connected to the internet.³

Many Australian businesses also benefit from accessible and user-friendly digital platform services. These include search and display advertising that allows businesses to reach customers in larger markets, and tools for developing, promoting, and distributing physical or digital products (including apps). The global availability of digital platform services reduces the friction of trading across borders, making it easier for Australian businesses to connect to international customers. Such services are particularly beneficial for small and medium-sized businesses that lack the resources of larger firms to access customers through other channels. Digital platform services have also created opportunities for businesses to innovate with their own products, services, and business models, such as through the development of apps available on marketplaces. As Australian businesses conduct more of their activities online, digital platform services are becoming increasingly crucial to their success and productivity.

With businesses and consumers relying more on digital platform services, this has allowed digital platforms to become among the largest companies in the world. By the end of 2024, these 5 digital platforms had a combined market capitalisation of more than US\$13 trillion.⁴

Figure E.1: Revenue and market capitalisation for large digital platforms, 2019–2024



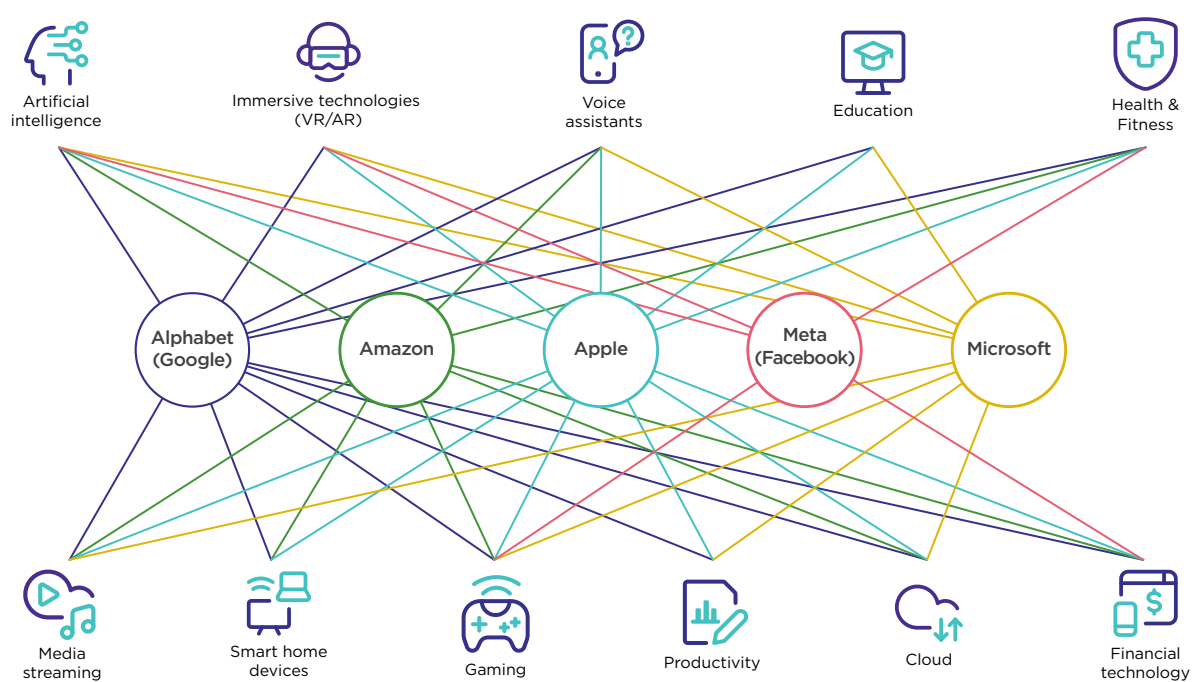
Source: ACCC analysis of company financial reporting and market capitalisation data.

1 ACMA, [How we use the internet – executive summary and key findings](#), December 2024, p 1.
 2 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37. Survey conducted October–November 2024.
 3 ACMA, [How we use the internet – executive summary and key findings](#), December 2024, p 1.
 4 Revenue data gathered based on ACCC analysis of company financial reporting. Market capitalisation data as at year end sourced from [stockanalysis.com](#).

Digital platforms are also continuing to grow and expand the breadth of their offerings, most recently into generative artificial intelligence (generative AI). Google, Apple, Meta, Microsoft and Amazon have all made significant investments in their own AI products and services or through partnerships with other providers, while their market capitalisations and revenue have continued to grow, as shown in figure E.1.

This report also covers the expansion of digital platforms into other areas, including cloud computing and online gaming, highlighting how online products and services are now integral to Australians’ everyday activities. As we increasingly study, work and seek entertainment online, we become more reliant on services provided by large digital platforms.

Figure E.2: Expansion of digital platform ecosystems



Significant risk of consumer and competition harms on digital platforms

Trust and confidence underpin effective, well-functioning markets. For consumers and small businesses to trust providers of goods and services, they must feel confident that providers will act fairly, meet their obligations and respond to their concerns if problems arise. Consumers and small businesses may experience a range of harms, including financial losses, a lack of ability to make informed choices, reduced control over their personal data, or reduced confidence in their ability to engage in transactions and other interactions online.

Throughout this 5-year Inquiry, the ACCC has identified the following risks of consumer harm on digital platforms of all sizes, including Australian based platforms:

- A range of unfair trading practices, including choice architecture that exploits consumers' behavioural biases and undermines consumer choice.⁵
- Harmful apps that are made available on app marketplaces, despite app marketplace review processes.
- The practice of creating, buying and selling fake reviews and otherwise manipulating reviews is distorting competition in related markets and undermining trust in digital platforms, and has significant consequences for affected businesses.

Australian consumers are still encountering a significant number of potentially unfair practices online. In the context of general online retail marketplaces, ACCC consumer survey data found that 72% of respondents who had used one of these platforms in the previous 12 months had encountered a potentially unfair practice during this time, such as hidden charges, accidental clicks or accidental subscriptions (as shown in figure E.3 below).

⁵ Choice architecture refers to the design of the way that choices are presented to users. In some cases, choice architecture can be used to influence consumer choices by appealing to certain psychological or behavioural biases.

Figure E.3: Rates at which online marketplace shoppers have experienced certain potentially unfair practices

Which of the following experiences, if any, have you had when using a general online retail marketplace in the last 12 months?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. Question G10 (Which of the following experiences, if any, have you had when using a general online retail marketplace in the last 12 months?). Filtered to consumers who had used a general online retail marketplace to make a purchase within the previous 12 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

A lack of redress and avenues for dispute resolution compound these problems, as many consumers and small businesses simply give up on enforcing their consumer guarantees and other rights.

Protecting and promoting competition in digital platform markets – ensuring that these markets are contestable – is crucial for productivity and innovation.

A lack of competitive constraint can reduce digital platforms' incentives to innovate and improve the quality of their products and services. Reduced competition in markets for digital platform services is also likely to result in higher prices than would be expected in a more competitive market. For zero-priced services, price increases could take the form of greater exposure to advertising, increased exposure to low-quality content, or greater harvesting of personal data.

A lack of competition can also lead to less choice, including regarding the types of business models offered by digital platforms, as well as giving incumbent digital platforms the ability and incentive to engage in strategic conduct to entrench and extend their market power, for example by impeding the ability of consumers to easily switch services.

Significant harms to competition have been identified throughout the course of this 5-year Inquiry. These harms are particularly prevalent across services where the ACCC has identified a small number of large digital platforms holding significant market power.

The positions of significant market power held by large digital platforms give them the ability and incentive to engage in strategic conduct to entrench and extend that market power. Digital platform markets have a tendency to tip (leaving one or 2 firms dominating a market) and often feature high barriers to entry and expansion. This means that dominant digital platform firms have a particularly strong ability and incentive to protect their market power, including through exclusionary conduct and acquiring potential rivals.

The ACCC has observed a range of conduct being undertaken by the most powerful digital platforms and has concerns that this conduct is interfering with the process of competition. This conduct includes self-preferencing, tying, exclusivity agreements, impeding switching, denying interoperability, and withholding access to important hardware, software, and data inputs. The ACCC is also concerned about lack of transparency and the ability of digital platforms with market power to degrade the quality of the services they offer, including in the terms on which services are provided to business users.

Current laws are insufficient and regulatory reform is urgently needed

The ACCC continues to support its recommendations made in its Regulatory Reform Report (see List of Recommendations) and will work closely with the Government on the proposed digital competition regime.

While Australia has robust competition and consumer laws capable of addressing many forms of harmful conduct across the economy, they are not well-suited to addressing the range and scale of consumer and competition harms identified in digital platform markets. The ACCC therefore considers that there is a need for new up-front (ex ante) measures for digital platforms.

Enforcement of existing laws through litigation may take a long time, and available remedies may have a limited ability to address the effects of the conduct. The fast-moving, opaque, and complex nature of digital platform markets also makes it difficult to address systemic competition issues in these markets through enforcement of economy-wide competition law alone. Even when enforcement action is successful, it may not be able to adequately address systemic and widespread harmful conduct. This can be a particular challenge where digital platforms change their conduct to achieve a similar harmful outcome by a different means.

Key gaps in consumer law that have been identified in previous reports also remain. Digital platforms and unscrupulous actors can take advantage of inadequate consumer and business user protections to exploit vulnerabilities, biases and power imbalances. Not only does this directly harm affected digital platform users, but it also reduces trust in digital services and has a dampening effect on the digital and wider economy. These risks can be minimised by closing gaps in Australia's existing consumer laws relating to unfair trading practices, strengthening consumer protections against scams, harmful apps, and fake reviews, and ensuring adequate dispute resolution processes exist for when issues arise. While the ACCC recognises the efforts of many digital platforms to address these harms, it still considers that further protections are necessary.

There is broad recognition of the need for coherent digital competition reform and laws prohibiting unfair trading practices

Australia is not alone in identifying significant competition and consumer harms in digital markets and that current laws are insufficient. There is international recognition that reform is needed to increase competition and protect consumers in digital markets. The competition authorities of the majority of G7 countries,⁶ the Organisation for Economic Co-operation and Development (OECD)⁷ and other national competition agencies⁸ have also acknowledged that digital markets exhibit economic characteristics that set them apart from traditional markets, enabling select digital platforms to gain market power.

There is also broad acknowledgement of the limitations in using existing enforcement tools to address anticompetitive conduct in digital markets. This includes concerns around the slow pace of pursuing enforcement cases through local courts,⁹ the difficulty in addressing continuing competitive harms with retrospective tools,¹⁰ and the limitations of competition law remedies in addressing harms that can be caused by broader economic factors.¹¹

The economic characteristics that make digital markets prone to tipping (where one large platform supplies, or a very small number of large platforms supply, the vast majority of users)¹² warrant regulatory intervention to ensure greater competition and conditions for innovation. Strategic conduct designed to entrench market power – including self-preferencing and leveraging proprietary data – can stifle innovation by limiting growth opportunities for small firms and nascent technologies.¹³ Through digital competition regulation, Australian consumers and businesses will benefit from more contestable markets, greater innovation and greater choice in products and services across the economy.

6 G7, [Compendium of approaches to improving competition in digital markets](#), November 2023, p 7.

7 See, for example, OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 9; J Furman, [Unlocking digital competition: Report of the Digital Competition Expert Panel](#), March 2019, p 4; European Parliamentary Research Service, [Regulating digital gatekeepers: Background on the future digital markets act](#), 2020, p 1.

8 See, for example, Standing Committee on Finance, Ministry of Corporate Affairs (India): [Anti-Competitive Practices by Big Tech Companies](#), July 2023; Brazilian Ministry of Finance, [Plataformas Digitais: aspectos econômicos e concorrenciais e recomendações para aprimoramentos regulatórios no Brasil](#), October 2024 (in Portuguese); OECD, [Ex-Ante Regulation and Competition in Digital Markets – Note by Korea](#), 2 December 2021.

9 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

10 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

11 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 12.

12 Once 'tipping' occurs, the most effective form of competition may be competition 'for the market' rather than competition 'in the market'. In these circumstances, the most significant competitive rivalry is likely to come from disruptive entry – that is, entry on a scale that is likely to displace the incumbent. Such disruptive entry is unlikely to come from an entrant that largely replicates the service offered by the incumbent platform.

13 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 5–6.

Consumers continue to face harms from unfair trading practices occurring in digital markets including manipulative design practices (such as using interfaces that direct consumers to more expensive subscriptions or purchase options), undisclosed sponsorships and subscription traps.¹⁴ For example, ACCC consumer survey data shows that 26% of consumers who had spent money on games in the past 2 years thought they made a one-off gaming purchase that turned out to be a paid subscription.¹⁵

Emerging technology such as generative AI may also exacerbate existing harms (such as AI-generated content that may mislead consumers)¹⁶ or give rise to new risks for consumers.¹⁷ In this Final Report, the ACCC has taken a closer look at consumer issues in online gaming and identified measures that could be adopted to improve consumer outcomes, including transparency measures to improve consumer understanding of online game licensing limitations and to mitigate harms from in-game spending.

Internationally, several jurisdictions have sought to use prohibitions against unfair trading practices in general consumer protection legislation to address harms in digital markets. In addition, the European Union (EU), United Kingdom (UK) and United States (US) have introduced specific prohibitions against unfair trading practices that occur in digital markets.

Given the widespread use and influence of digital platforms in Australia, a wide range of policy and regulatory measures are being implemented to protect users online, promote innovation and support Australia's productive participation in the digital economy.

It is in the best interests of consumers, businesses, and platforms themselves for the implementation of such new measures to be coordinated, coherent and – where possible – consistent. This will provide certainty, minimise regulatory burden and incentivise compliance with the new requirements.

There should be no obstacle to a general prohibition on unfair trading practices, external dispute resolution mechanisms and the proposed digital competition regime being designed and implemented in a manner consistent with these goals.

The ACCC also expects that the Digital Platform Regulators Forum (DP-REG) – comprising the ACCC, the Office of the Australian Information Commissioner (OAIC), the Australian Communications and Media Authority (ACMA) and the Office of the eSafety Commissioner (eSafety) – will continue to be instrumental in ensuring effective coordination and collaboration between relevant Australian regulators to promote coherent treatment of digital platform issues. Consequently, the ACCC has recommended that the Australian Government prioritise a whole-of-government approach to digital platform regulation and endorse DP-REG as a permanent forum with adequate resources to continue to undertake information-sharing and collaboration between Australian regulators.

The ACCC will also continue to work closely with international competition regulators that are implementing similar digital competition regimes in their respective jurisdictions.

14 OECD, [Protecting and empowering consumers in the digital transition](#), Issues Note, Consumer Policy Ministerial Meeting, October 2024, p 3.

15 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 58.

16 G7 Italia 2024, [Digital Competition Communiqué, G7 Competition Authorities and Policymakers' Summit, Rome, Italy](#), 4 October 2024, p 3.

17 OECD, [Protecting and empowering consumers in the digital transition](#), Issues Note, Consumer Policy Ministerial Meeting, October 2024, p 7.

Targeted service-specific codes for digital platforms are the best tool to address competition harms and promote innovation

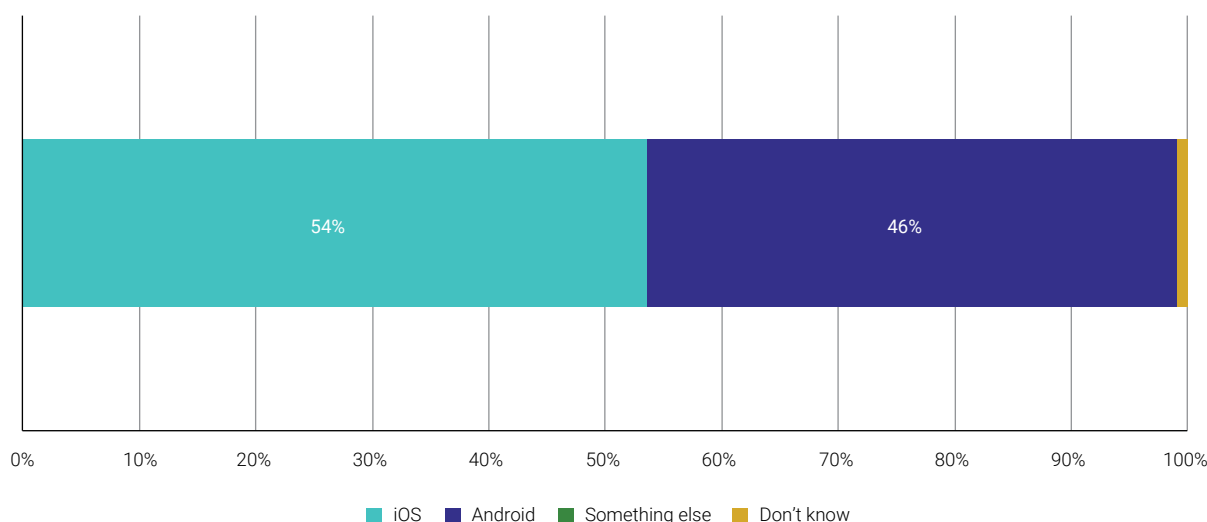
The ACCC continues to support the implementation of mandatory, service-specific codes of conduct that offer a flexible, targeted solution to prevent harms in particular digital platform service markets.¹⁸ Principles would be enshrined in legislation to guide the development of the codes. These codes would only apply to certain designated platforms that meet quantitative and qualitative criteria, reflecting a targeted, balanced and flexible approach to regulation that seeks to maximise innovation while minimising the cost of compliance.

In line with this approach, the ACCC considers that, based on current evidence, not all services examined in this Inquiry should be designated under the new regime at this time. However, the ACCC considers it important to continue monitoring conduct in digital markets to identify whether, in future, other services should be considered for designation under the new regime.

Market dynamics in mobile app distribution have remained largely unchanged since the ACCC's 2021 Report on App Marketplaces, and the ACCC retains its view that Apple and Google continue to have significant market power in the supply of mobile operating systems (OS) in Australia. This provides Apple and Google with market power in mobile app distribution in Australia, and the ACCC considers it likely that this market power is significant. According to ACCC consumer survey data, Apple and Google combined have approximately 100% market share in mobile OS in Australia, as shown in figure E.4 below.

Figure E.4: Operating systems of Australian consumers' current smartphones

What operating system does your current phone use?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37. Question D3 (what operating system does your current phone use?). Filtered to consumers who had a smartphone for personal use. Survey of Australian consumers aged 14+, conducted October–November 2024.

18 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 108–120.

The ACCC continues to have a range of concerns about harms arising from a lack of competition on app marketplaces and mobile OS. These harms affect competition with potentially significant impacts for both app developers and consumers, potentially resulting in higher prices, limiting consumer choice and placing undue restrictions on innovation.

The ACCC's Regulatory Reform Report provided indicative examples of the kinds of obligations that a new service-specific code of conduct on app marketplaces and mobile OS could potentially include,¹⁹ noting that final code development would involve further detailed consideration and significant consultation.²⁰ The ACCC will also continue to closely monitor international developments and take into account the experiences of regulatory regimes and outcomes from relevant litigation involving digital platforms overseas.

The ACCC's Ad Tech Inquiry and Regulatory Reform Report have considered Google's market dominance in the ad tech supply chain,²¹ as well as competition concerns around self-preferencing by ad tech providers,²² tying conduct (including tying ad inventory to the use of ad tech services)²³ and concerns around lack of transparency (including auction, ad verification and pricing transparency).²⁴ In light of these concerns the ACCC has previously called for service-specific rules to apply to ad tech.²⁵

Accordingly, the ACCC considers that designation investigations for app marketplaces/mobile OS and ad tech services should be prioritised under the proposed digital competition regime.

Consumers and small businesses need an independent external dispute resolution body for digital platform services

Dispute resolution mechanisms can provide consumers and businesses with important means of addressing complaints with digital platforms. The EU and UK have legislation or regulations that either mandate requirements for digital platforms' internal dispute resolution systems or provide consumers and business users with formal external dispute resolution systems for resolving complaints with digital platforms.²⁶

19 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 123–185.

20 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 123.

21 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 7, 36; ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 5.

22 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 13; ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 7.

23 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 13.

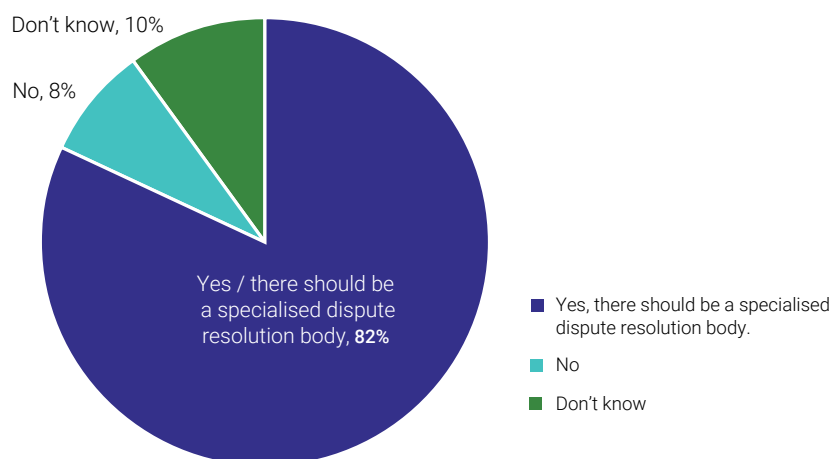
24 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 13.

25 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 11.

26 Further detail as to specific legislation in respect of dispute resolution standards is discussed at section 2.3.2.

Consumers in Australia agree that it needs to be easier to make a complaint and have issues resolved with digital platforms.²⁷ ACCC consumer survey data shows strong support for external dispute resolution, with 82% of respondents agreeing that there should be a specialised independent external dispute resolution body for users of digital platform services to escalate complaints which cannot be resolved with platforms directly.²⁸ Consumers surveyed also considered it was important for there to be an external dispute resolution service for several types of digital platform services, especially general online retail marketplaces (which includes Australian-based platforms), with 91% considering this to be important.²⁹

Figure E.5: Strong consumer support for an external dispute resolution body



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 11. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 123 (question H1) for the full wording of this question in the consumer survey. Survey of Australian consumers aged 14+, conducted October–November 2024.

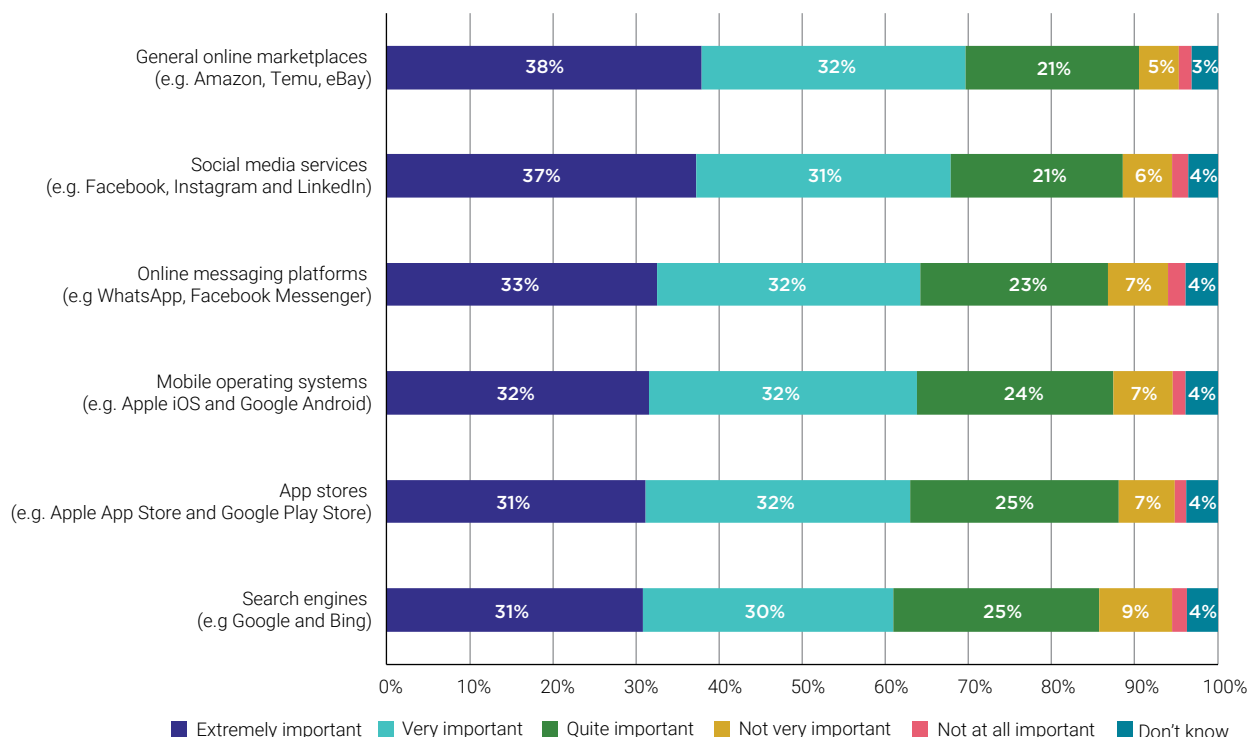
²⁷ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 90.

²⁸ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 11.

²⁹ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12, question H2 (How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?). 91% was the total proportion of consumers who considered having a specialised, independent external dispute resolution body to be either 'extremely', 'very' or 'quite' important for general online retail marketplaces. Note that question H2 measured the intensity (or lack thereof) of consumers' support for an external dispute resolution body across various digital platform services, by using a unipolar scale which ranged from zero importance ('not at all important') to maximum importance ('extremely important').

Figure E.6: Consumer support for external dispute resolution body by digital platform service

How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12. Question H2 (How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?). Survey of Australian consumers aged 14+, conducted October–November 2024. Note that in the survey questionnaire, the terms ‘general online marketplace’ and ‘marketplace’ were used synonymously with ‘general online retail marketplace’. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 70–87 (chapter 7).

The ACCC has previously heard concerns from Australian businesses about the ways in which their complaints are resolved by digital platforms.³⁰ In addition, as part of this Final Report, the ACCC received submissions³¹ highlighting the importance of dispute resolution mechanisms for businesses.

The ACCC considers that further progress on minimum dispute resolution standards and an external dispute resolution body is needed to provide Australian consumers and businesses with greater support when attempting to resolve complaints with digital platforms.

Privacy reform remains an important issue

Consumers wanting greater control over how their data is collected and used has been a consistent concern since the 2017–2019 Digital Platforms Inquiry, leading to the ACCC’s recommendation for a review of the *Privacy Act*. The ACCC welcomes the passage of the first tranche of these reforms, as concerns have been reinforced by some digital platforms’ practices regarding the collection and use of user data to train AI models.

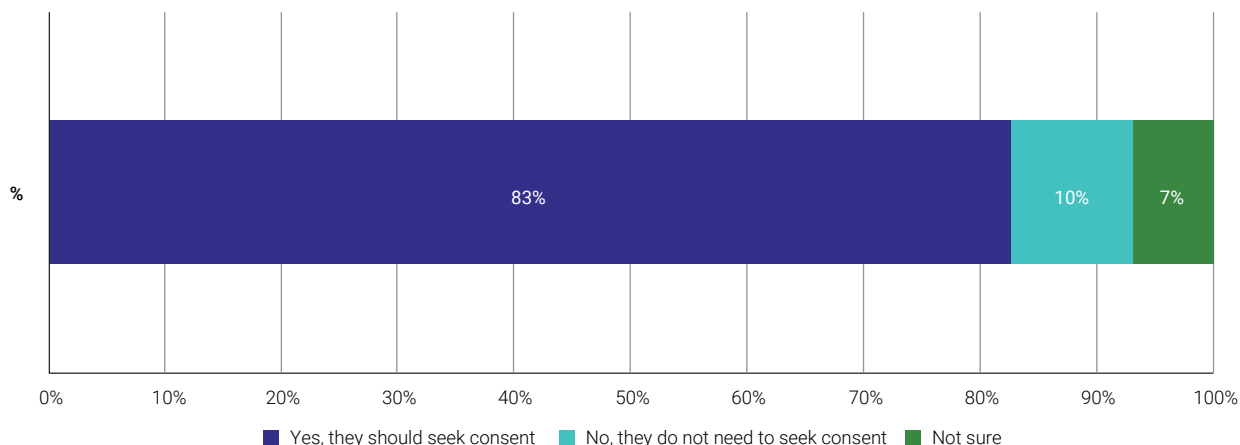
30 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, pp 87, 155.

31 SBS, [Submission to the Final Report](#), 11 October 2024, p 8; Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

Notably, in relation to consumers' privacy concerns, there appears to be a discrepancy between consumer preferences and industry practice when it comes to how companies use consumer data to train their generative AI models. According to ACCC consumer survey data, 83% of consumers surveyed agreed that companies should seek their consent before using their data to train AI models.

Figure E.7: Consumer views on whether companies should seek consent to use consumer data to train AI models

Should companies seek consent before using consumer data to train AI models?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 25. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 99 (question C8) for the full wording of this question in the consumer survey. Survey of Australian consumers aged 14+, conducted October–November 2024.

Emerging services and technology need continued scrutiny

Digital platform services continue to rapidly develop and evolve, as demonstrated most notably by the explosive growth of generative AI since 2022 – 2 years after this Inquiry started. Given the dynamic nature of digital platform services, it is critical that the proposed digital competition regime enables continued scrutiny and monitoring of emerging technologies and their effects in other markets. For example, generative AI may affect competitive dynamics in a wide range of other markets, including cloud computing.

Cloud computing refers to the provision of global, on-demand network access to computing resources such as networks, servers, storage, applications and services.³² Cloud computing can be contrasted with traditional on-premises computing, where an organisation installs and maintains its own IT infrastructure for private use.

Cloud computing has several benefits for organisations in comparison to on-premises computing, including removing the need for significant upfront expenditure on computing infrastructure, allowing businesses to scale their usage according to need and avoid the costs of excess capacity, and enabling smaller firms to quickly access new technologies that would otherwise be cost-prohibitive.³³

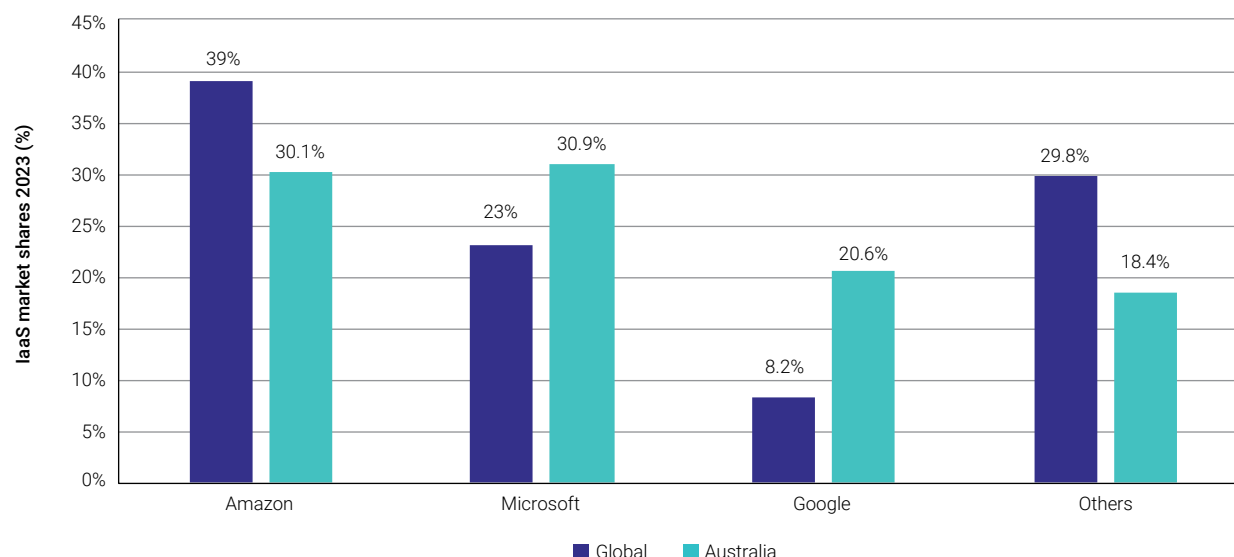
³² National Institute of Standards and Technology (US), [Cloud Computing](#), 12 May 2022, accessed 13 March 2025.

³³ H McMillan et al., [Head in the cloud: firm performance and cloud service](#), Conference paper for *Economic implications of the digital economy*, 9–10 March 2022, p 5.

Cloud computing also assists businesses to operate efficiently across separate locations and engage with customers in new ways (for example, telehealth).³⁴

Amazon (through its subsidiary, Amazon Web Services or AWS), Microsoft and Google are 3 of the leading providers of cloud services globally, generating combined revenue of US\$66.26 billion for their cloud services in the fourth quarter of the 2024 calendar year.³⁵ These firms are also key providers of cloud infrastructure services in Australia.³⁶

Figure E.8: Estimates of global and Australian market share for IaaS



Source: ACCC analysis of Gartner data.

The ACCC has identified potential risks to competition in cloud computing:

- There are significant barriers to entry and expansion in the supply of cloud infrastructure services, including economies of scale and scope, network effects and significant upfront investment costs.
- Many major providers of cloud computing services are large, incumbent digital platforms that are vertically integrated across the cloud stack. These firms may be incentivised to engage in vertical foreclosure³⁷ through conduct including potentially anti-competitive bundling and tying of their own services across different layers of the cloud technology stack.
- Existing users of cloud infrastructure services may face high impediments to switching or 'multihoming' across different service providers, including technical barriers to interoperability, and high egress fees when moving data out of a cloud ecosystem.
- Generative AI developers and deployers generally require access to significant cloud computing power to train and deploy their products. Where cloud providers also offer generative AI products

34 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), Conference paper for *Economic implications of the digital economy*, 9–10 March 2022, p 5.

35 Alphabet Inc., [Alphabet Announces Fourth Quarter and Fiscal Year 2024 Results](#), 4 February 2025, p 2; Amazon, [Amazon.com announces fourth quarter results](#), 6 February 2025, p 1; Microsoft, [Press Release & Webcast: Earnings Release FY25 Q2, 29 January 2025](#), accessed 13 March 2025.

36 This is according to researchers at Gartner – see CRN, [Australian IaaS market grew 20.76% in 2023: Gartner](#), 23 July 2024, accessed 13 March 2025. According to Gartner, IaaS is a 'standardi[s]ed, highly automated offering in which computing resources owned by a service provider, complemented by storage and networking capabilities, are offered to customers on demand'. The 'Australian IaaS market' refers to IaaS services supplied in Australia. Australian market shares refer to the proportion of revenue earned by each firm supplying IaaS services in Australia. See Gartner, [Infrastructure as a Service \(IaaS\)](#), Gartner Glossary, 2024, accessed 13 March 2025.

37 Foreclosure is when a firm prevents or impedes a rival firm from competing.

and services, they may be incentivised to bundle, tie or self-preference their own products above those of competitors. In addition, where major cloud providers enter into partnerships with AI developers that restrict the use of competing cloud services, this could reinforce the position of the major providers and raise barriers to entry and expansion.

Generative AI refers to a type of artificial intelligence (AI) that can create content such as text, images, audio, video or data, in response to prompts entered by a user. Generative AI adopts a machine learning approach for turning inputs and outputs into new outputs by analysing extremely large datasets.

Generative AI products and services have the potential to bring significant benefits to Australia's economy and society, including by closing skill and labour gaps, improving productivity and accelerating innovation. Research by Microsoft (a supplier of generative AI) and the Tech Council of Australia estimates that generative AI could contribute up to \$115 billion to the Australian economy annually.³⁸ The Productivity Commission found that many Australian businesses are likely already using AI³⁹ (including generative AI), and ACCC consumer survey data shows that consumers are using generative AI for a range of purposes, including to help with a personal task, for entertainment, for work or business, and for study purposes.⁴⁰

Globally, developers are continuing to create new foundation models (the core technology underpinning generative AI systems), with many of the most popular models to date having emerged from the US and China. Digital platforms are also increasingly integrating generative AI tools into their products and services, including in general online retail marketplaces⁴¹ and online private messaging services.⁴²

However, the rise of generative AI also brings new challenges, including potential risks to competition. Regulators around the world are considering potential harms to competition that could arise across the generative AI technology stack, as well as the impacts to competition in other product and service markets where generative AI technology is being integrated. Without a sufficiently competitive landscape, there may be reduced innovation in generative AI technologies, and Australian consumers and businesses may end up paying more than they otherwise would to use generative AI products and services in the longer term.

Australian consumers are also concerned about generative AI, with 96% of consumers aged 14 and older in the recent ACCC consumer survey indicating they had at least one concern about generative AI (including misuse by scammers, implications for personal privacy, the creation of harmful content, and other issues).

38 Microsoft and Tech Council of Australia, [Australia's Generative AI opportunity](#), July 2023, p 3.

39 Productivity Commission, [Making the most of the AI opportunity – Research paper 1 – AI uptake, productivity, and the role of government](#), January 2024, pp 8–9.

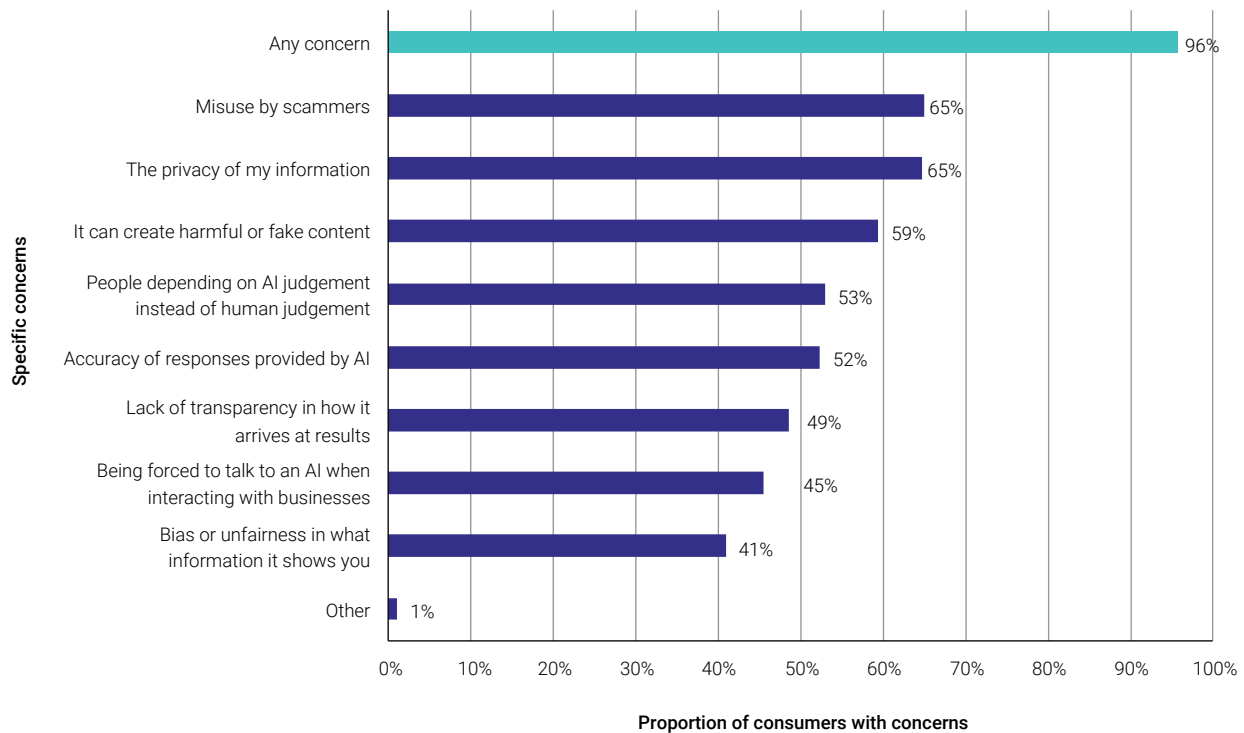
40 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 22–24.

41 See section 3.3.2 for further discussion on the introduction of AI services in general online retail marketplaces.

42 See section 3.1.2 for further discussion on the introduction of AI services in online private messaging.

Figure E.9: Consumer concerns about generative AI

What concerns, if any, do you have about generative AI?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 26. Question C10 (What concerns, if any, do you have about generative AI?). Survey of Australian consumers aged 14+, conducted October–November 2024.

Due to these strong consumer concerns and the potential risks to competition the ACCC has identified, the ACCC has recommended that the proposed digital competition regime should include the ability to continue to monitor developments in emerging services and technologies, including cloud computing and generative AI.

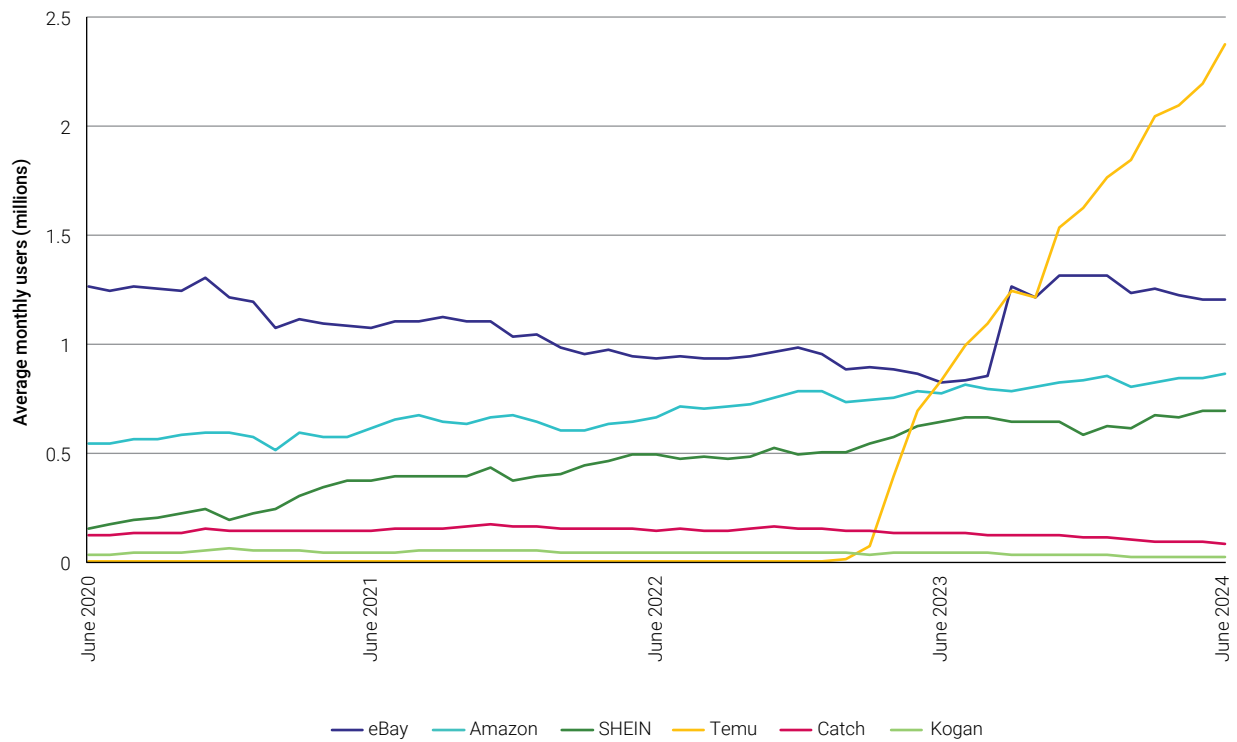
Continuing market developments need monitoring

It is also critical that services that the ACCC has previously examined in this Inquiry continue to be monitored under the proposed digital competition regime. Some digital markets, such as general online retail marketplaces, may see changes in market structure over time. In some markets, such as online private messaging services, trends in technological functionality and consumer usage may also have implications for competition.

There have been significant developments in general online retail marketplaces, with the rapid growth of Temu since 2023 (see figure E.10 below)⁴³ and the closure of Catch’s Australian operations.

⁴³ Source: ACCC analysis of Sensor Tower data. This chart is based on data which captures Australian monthly active users who have downloaded the selected general online retail marketplace app on their mobile device through the Apple App Store (iOS devices only) or Google Play Store. The range in Australian user numbers refers to the average figures for monthly active users on the relevant mobile apps across the years 2020–2024. The data set has been captured as of a specific point in time (as of October 2024). The ACCC notes that this does not include data on users aged under 18.

Figure E.10: Average monthly active users of general online retail marketplace apps, June 2020 to June 2024

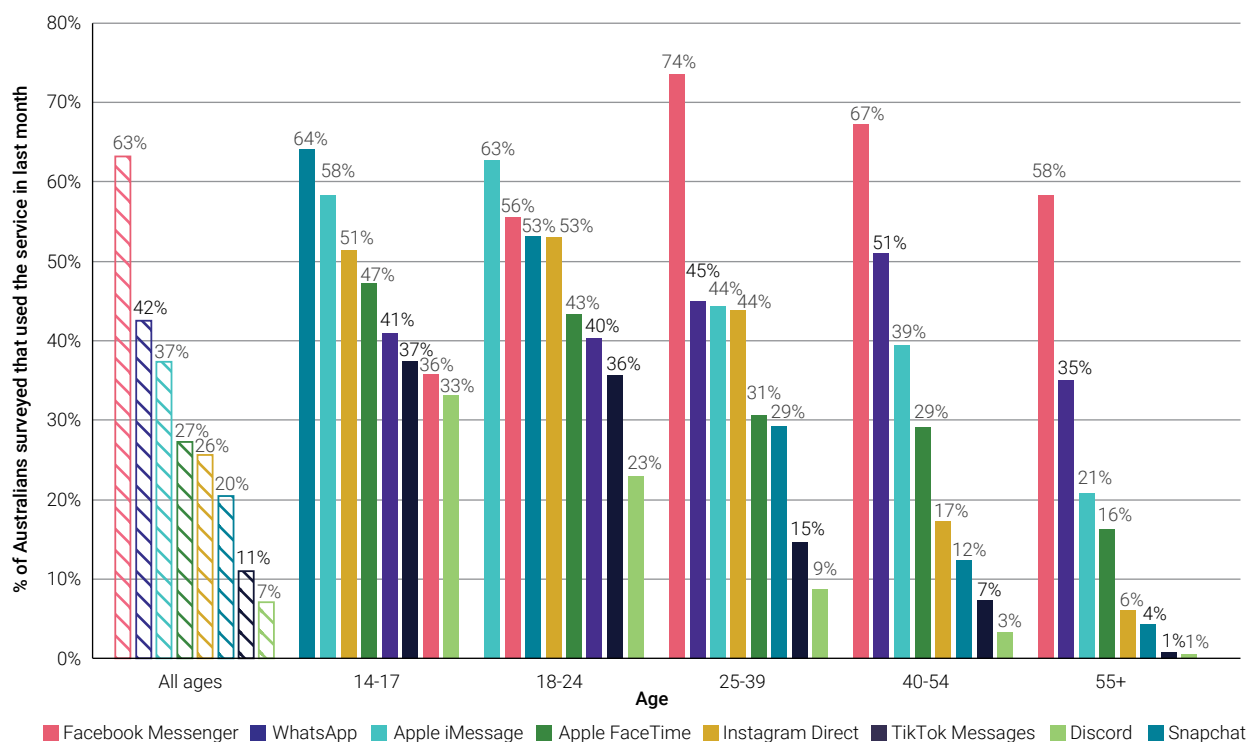


Source: Sensor Tower data.

In the context of online private messaging services, whilst the ACCC has found that Meta and Apple are the largest providers of standalone online private messaging services, the usage of online private messaging services varies by demographic with younger consumers more likely to use alternatives such as Snapchat (see figure E.11 below):

Figure E.11: Selected online private messaging services used by Australians, by age

Which of the following have you used to either send messages and/or make audio or video calls in the last month?



Source: ACCC analysis of consumer survey results data, questions A2 (How old are you?) and B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 92. Survey of Australian consumers aged 14+, conducted October–November 2024.

There has also been considerable growth in the use by younger demographics of non-standalone messaging services offered through the Instagram and TikTok social media apps. The ACCC notes that the trend in younger users adopting non-standalone services may have broader implications for competition and consumers in the future. Accordingly, the ACCC considers that digital platform services should continue to be monitored under the proposed digital competition regime.

Next steps

This Report marks the conclusion of the Digital Platform Services Inquiry. The Inquiry produced detailed work which identified and helped understand competition and consumer issues in digital platform markets. There is more work to do, and the implementation of a new digital competition regime must remain a priority.

The implementation of this regime would ensure Australia's competition law keeps pace with overseas jurisdictions and is fit-for-purpose for the digital age. This would make Australia well placed to embrace the opportunities afforded by digital platform services, and to respond to current and future challenges as they arise.

List of recommendations

Existing Digital Platform Services Inquiry recommendations

This Report provides further support for the timely implementation of the ACCC's 4 recommendations from the 2022 Regulatory Reform Report. The ACCC welcomes successive Governments' commitment to digital platforms reforms, and the Government's response supporting these recommendations.

The chapters regarding international developments, online private messaging, app marketplaces and mobile OS, general online retail marketplaces and online gaming provide further evidence supporting the need for the consumer recommendations (1 and 2). The chapters regarding international developments, app marketplaces and mobile OS, and ad tech provide further evidence supporting the need for the competition recommendations (3 and 4).

Recommendation 1

Economy-wide consumer measures

The ACCC continues to recommend the introduction of new and expanded economy-wide consumer measures, including an economy-wide prohibition against unfair trading practices and strengthening of the unfair contract terms laws. These reforms, alongside targeted digital platform specific obligations, would assist in addressing some of the consumer protection concerns identified for digital platform services.

► Recommendation 2

Digital platform specific consumer measures

The ACCC recommends additional targeted measures to protect users of digital platforms, which should apply to all relevant digital platform services, including:

- mandatory processes to prevent and remove scams, harmful apps and fake reviews including:
 - a notice-and-action mechanism
 - verification of certain business users
 - additional verification of advertisers of financial services and products
 - improved review verification disclosures
 - public reporting on mitigation efforts
- mandatory internal dispute resolution standards that ensure accessibility, timeliness, accountability, the ability to escalate to a human representative and transparency
- ensuring consumers and small business have access to an independent external ombuds scheme.

► Recommendation 3

Additional competition measures for digital platforms

The ACCC recommends the introduction of additional competition measures to protect and promote competition in markets for digital platform services. These should be implemented through a new power to make mandatory codes of conduct for 'designated' digital platforms based on principles set out in legislation.

Each code would be for a single type of digital platform service (i.e. service-specific codes) and contain targeted obligations based on the legislated principles. This would allow flexibility to tailor the obligations to the specific competition issues relevant to that service as these change over time.

These codes would only apply to 'designated' digital platforms that meet clear criteria relevant to their incentive and ability to harm competition.

► Recommendation 4

Targeted competition obligations

The framework for mandatory service-specific codes for Designated Digital Platforms (proposed under Recommendation 3) should support targeted obligations based on legislated principles to address, as required:

- anti-competitive self-preferencing
- anti-competitive tying
- exclusive pre-installation and default agreements that hinder competition
- impediments to consumer switching
- impediments to interoperability
- data-related barriers to entry and expansion, where privacy impacts can be managed
- a lack of transparency
- unfair dealings with business users
- exclusivity and price parity clauses in contracts with business users.

The codes should be drafted so that compliance with their obligations can be assessed clearly and objectively. Obligations should be developed in consultation with industry and other stakeholders and targeted at the specific competition issues relevant to the type of service to which the code will apply. The drafting of obligations should consider any justifiable reasons for the conduct (such as necessary and proportionate privacy or security justifications).

Government response to Recommendations 1–4

The ACCC notes that the Australian Government has to date taken important action to respond to recommendations 1 to 4 of the Digital Platform Services Inquiry, including:

Recommendation 1: The Government has legislated penalties for contraventions of the unfair contract terms provision of the ACL. These measures came into effect on 9 November 2023.

From 15 November 2024 to 13 December 2024, the Treasury consulted on proposed amendments to the ACL that would prohibit unfair trading practices. On 14 March 2025, the Government announced that it would also consult in 2025 on the design of unfair trading practices protections for small businesses.

Recommendation 2: On 15 May 2023, the Government announced funding to establish a National Anti-Scam Centre to address scam activity. The *Scams Prevention Framework Act 2025* was recently enacted, and it establishes a framework for regulated entities to prevent, detect, report and respond to scams.

In the Government's December 2023 response to the Regulatory Reform Report, the Government noted that the Treasury would undertake further work to develop internal and external dispute resolution requirements for digital platforms. As a first step, the Government called on industry to develop voluntary internal dispute resolution standards by July 2024.

Recommendations 3 and 4: From 2 December 2024 to 14 February 2025, the Treasury consulted on a proposed approach to implement a new digital competition regime administered by the ACCC.

New recommendations in this Final Report

► Recommendation 5

The ACCC continue to have a monitoring function for emerging digital technologies under the proposed digital competition regime

Digital platform services continue to evolve, and new technologies can impact competition and consumers in digital markets. The proposed digital competition regime should enable and adequately resource the ACCC to continue to monitor changes to services it has examined throughout its inquiries to date, as well as emerging services such as generative AI.

Regular monitoring of competition and consumer issues could ensure that proposed new measures remain fit-for-purpose and inform the development and amendment of service-specific codes. Compulsory information-gathering powers would need to be available to undertake such work. Other areas of government should continue to monitor emerging technologies for their impact on privacy, security, sustainability, and labour markets.

► Recommendation 6

The Australian Government prioritise a whole-of-government approach to digital platform regulation and endorse the Digital Platform Regulators Forum (DP-REG) as a permanent forum with adequate resources to undertake information-sharing and collaboration between Australian digital platform regulators

The Government should prioritise domestic regulatory coherence of cross-cutting issues through supporting a whole-of-government approach to the regulation of digital platforms.

A streamlined and collaborative regulatory approach helps ensure any new regulations are designed with the wider regulatory regime in mind. This promotes competition, contestability and innovation in digital markets while addressing harms and risks, and minimising unnecessary burdens and compliance costs for businesses.

A whole-of-government approach would also benefit international regulatory cooperation, recognising the global nature of these digital markets, by providing a holistic and consistent view across different regulatory remits.

The Digital Platform Regulators Forum (DP-REG) – comprised of the Australian Competition and Consumer Commission, the Australian Communications and Media Authority, the eSafety Commissioner and the Office of the Australian Information Commissioner – should be permanently established and resourced for a period of at least 5 years to continue to build on existing expertise and develop new expertise in digital markets and the use of digital technology, with the purpose of:

- proactively monitoring and co-ordinating on cross-cutting issues arising from developments in digital technology across competition, consumer, media, online privacy and online safety regulation
- promoting efficiencies by undertaking joint research to inform government and citizens about the use and impact of digital technology, avoiding potential duplication of such activities across regulators
- ensuring a streamlined and cohesive approach to the regulation of digital environments, with a view to minimising regulatory burden on industry.

The establishment of DP-REG as a permanent entity should also involve reviewing its scope, terms of reference and composition to ensure that they remain fit for purpose.

Potential measures for new areas of concern identified by the ACCC

Potential measure 1: to address online game licensing limitations

The ACCC considers that any businesses seeking to rely on 'standard-form gaming contracts' should take steps to ensure the terms of any licence limitation clauses are transparent, in plain language and prominently displayed so consumers can clearly understand what they are purchasing and make an informed decision.

The ACCC also considers that, where possible, operators of digital game stores should explore mechanisms that allow consumers to download and keep the games they purchase, so that they can continue playing them even if the store ceases trading. The ACCC acknowledges that digital game stores and games may have different functionalities and business models which may impact the ability for consumers to download and keep games. Accordingly, digital game stores and game developers are best placed to determine when it is feasible to implement this potential measure.

Potential measure 2: to mitigate consumer harm from paid loot boxes

The ACCC considers that developers of games which include paid loot boxes should clearly and prominently disclose to game players who are considering purchasing a loot box:

- what items the loot box may contain
- the probability that each of these items will appear in the loot box, expressed in easily understood terms such as a percentage chance.

In games that allow players to purchase paid loot boxes or other in-game content in exchange for virtual currency such as coins or gems, developers should prominently disclose the costs in real-money terms of these transactions, prior to the point of purchase.

The ACCC considers that transparency measures such as these are particularly important in games where consumers are more likely to spend beyond their means on loot boxes, such as games which are marketed towards children.

Potential measure 3: to reduce the risks of unwanted and accidental in-game spending

The ACCC considers that developers of games which allow players to make in-game purchases should employ measures to reduce the risks of consumers making unintended or unauthorised in-game purchases. Such measures may include:

- in cases where in-game currency such as coins or gems can or must be purchased with real money (as opposed to only being obtainable through gameplay), prominently disclosing the costs in real-money terms of any in-game items that consumers may purchase with this in-game currency, at the point of purchase
- in games where consumers can use real money to purchase currency or other items, requiring an additional step for a consumer to 'confirm' their purchase. For example, if a consumer has opted to link their card details to their account, this could include requiring them to re-enter their CVV number and press a button to make the purchase. The ACCC considers such measures could reduce the risks of accidental purchases or children incurring unauthorised charges on their parents' cards, and provide all game players with an opportunity to consider if they would like to make an in-game purchase.

Previous 2017–2019 Digital Platforms Inquiry recommendations

Throughout the Digital Platform Services Inquiry, the ACCC has continued to identify issues regarding the collection and use of consumers' data. This Report also highlights the importance for the expeditious implementation of **Recommendation 16** of the original 2019 Digital Platforms Inquiry Final Report, which recommended strengthened protections in the Privacy Act and broader reform of Australian privacy law, which have been partially enacted.⁴⁴ This is particularly important in light of the rapidly evolving nature of digital platform services and the privacy risks that can be associated with them.⁴⁵ The ACCC notes that the reforms covered in Recommendation 16, in particular 16(a), (b), (c) and (d), align with one or more proposals in the Attorney-General's Department's Privacy Act Review Report for which the Australian Government has indicated its support but not yet enacted.⁴⁶

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- 44 For example, in December 2022, the [Privacy Legislation Amendment \(Enforcement and Other Measures\) Bill 2022](#) received Royal Assent. Among other measures, this legislation addressed recommendation 16(f) of the Digital Platforms Inquiry (DPI) Final Report by increasing the maximum penalty for a breach of s13G of the *Privacy Act* to match the quantum of penalties in the Competition and Consumer Act (CCA). Subsequently, on 10 December 2024, the [Privacy and Other Legislation Amendment Bill 2024](#) received Royal Assent. Among other measures, this legislation addressed Recommendation 19 of the DPI Final Report by introducing a statutory tort for serious invasions of privacy.
- 45 These include the privacy risks discussed elsewhere in this Report, as well as those the ACCC has observed in previous reports of this Inquiry. See, for example, ACCC, [Digital Platform Services Inquiry Eighth Interim Report](#), 21 May 2024, pp 30–36, 93–115; ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 43; ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 132–133.
- 46 Attorney-General's Department, [Government response to the Privacy Act Review Report](#), 28 September 2023, last updated 9 May 2024, accessed 13 March 2025. See also Attorney-General's Department, [Privacy Act Review Report](#), 16 February 2023, accessed 13 March 2025; ACCC, [Privacy Act Review Report – ACCC Submission](#), March 2023, accessed 13 March 2025.

Glossary

Term	Description
ACCAN	The Australian Communications Consumer Action Network, a consumer organisation representing Australian consumers of communications products and services.
ACCC	Australian Competition and Consumer Commission
ACCC consumer survey	Online survey of 3,075 Australian consumers aged 14 and older about their usage of and experiences with various digital platform services. This survey was conducted by Lonergan Research for the ACCC in October–November 2024 and received 3,075 responses from consumers aged 14 and older.
ACL	The Australian Consumer Law, contained in Schedule 2 of the <i>Competition and Consumer Act 2010</i> (Cth).
ACMA	Australian Communications and Media Authority
Ad Tech Inquiry	Digital Advertising Services Inquiry 2020–21 . An ACCC inquiry into markets for the supply of digital advertising technology services and digital advertising agency services.
Ad tech services	Digital advertising technology services. In this Report, this term refers to services that provide for, or assist with, the automated buying, selling and delivery of display advertising. <i>See also display advertising.</i>
Android	The Google-owned operating system for supported devices, such as mobile phones.
App	Application. A software program that allows a user to perform a specific task either on a particular device or online.
Apple App Store	The app marketplace operated by Apple for iOS, iPadOS, macOS, watchOS, and tvOS devices.
App marketplace	A digital distribution platform or storefront for apps that typically allows users to search and review software programs offered electronically, and provides associated services for app providers, app developers and consumers (also known as an app store or app distribution service).
Application Programming Interface or API	A computing interface that allows interactions between multiple software programs, such as apps and the OS, for the purpose of simplifying programming.

Artificial intelligence or AI	The ability of computer software to perform tasks that are complex enough to simulate a level of capability or understanding usually associated with human intelligence.
Augmented Reality or AR	Technology that uses the existing environment and overlays new information on top of it, to experience existing reality in a heightened way. <i>See also Virtual Reality and Immersive Technologies.</i>
Brick-and-mortar store	A physical retail store.
Browser	An application that enables users to visit web pages on the internet. Well-known browsers include Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge.
Bundeskartellamt	Federal Cartel Office, Germany's competition regulator.
Chrome OS	Google's operating system for Chromebook desktop devices.
CCA	Competition and Consumer Act 2010 (Cth)
Choice architecture	The design of the way that choices are presented to users. User interface design is a form of choice architecture and can influence consumer choices by appealing to certain psychological or behavioural biases.
CMA	Competition and Markets Authority, UK
Compute	Computing power
CPRC	Consumer Policy Research Centre, a consumer advocacy body based in Australia.
Daily active user	A user of a product or service who, within any given day, used or accessed the product or service.
Developer	An individual or group that creates, maintains and updates apps, online games or other software.
Digital Markets Act or DMA	Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828. The Digital Markets Act applies to platforms that act as 'gatekeepers' in the digital sector. It aims to prevent gatekeepers from imposing unfair conditions on businesses and consumers and ensure the openness of important digital services.

Digital platform	<p>A network that enables users (either consumers, businesses, or both) to interact with each other, or a supplier of such a network (a digital platform service provider).</p> <p>Where necessary, the Report distinguishes between the digital platform firm (i.e. the corporate entity) and the digital platform service or services that the firm operates</p>
Digital Platform Services Inquiry or DPSI	Digital Platform Services Inquiry (2020–2025) . The ACCC’s 5-year inquiry into the supply of digital platform services. This Report is the tenth and final report of the DPSI.
Digital Platforms Inquiry or DPI	The original Digital Platforms Inquiry (2017–2019) . An inquiry conducted by the ACCC into digital search engines, social media platforms and other digital content aggregation platforms, and their effect on markets for media and advertising services.
Digital Services Act or DSA	<p>Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC.</p> <p>The DSA focuses on issues such as liability of online intermediaries for third-party content, safety of users online and asymmetric due diligence obligations for different providers of information services depending on the nature of the societal risks such services represent.</p>
Direction or Ministerial direction	Competition and Consumer (Price Inquiry – Digital Platforms) Direction 2020 . Under the Ministerial direction, the ACCC is directed to conduct an inquiry, and give a report to the Treasurer every 6 months (between September 2020 and March 2025), into markets for the supply of digital platform services.
Direct-to-consumer shipping	A business model used by some online marketplaces whereby products are shipped directly and individually from overseas suppliers to consumers in Australia.
Display advertising	<p>The supply of opportunities for the placement of advertising, by way of the internet, other than classified advertising and search advertising.</p> <p><i>See also ad tech services.</i></p>
DOJ	Department of Justice, US
DP-REG	Digital Platform Regulators Forum . The formal arrangement between the ACCC, eSafety, ACMA and OAIC for information-sharing and collaboration on digital platform regulatory issues.
Economies of scale	Cost advantages obtained by a supplier, where average costs decrease with increasing scale.

Ecosystem	In this Report, the term ‘ecosystem’ is used to encompass the range of interrelated first-party products and services that are offered by digital platform service providers (whether a single company or a related group of companies).
EEA	European Economic Area
eSafety	eSafety Commissioner, Australia
EU	European Union
Gaming console	A gaming device that is primarily used to play video games. Examples include the Sony PlayStation, Nintendo Switch and Microsoft Xbox series of consoles. In contrast, other gaming devices such as smartphones and personal computers may be used to play online games or for a variety of other purposes.
Gaming device	A physical device that a consumer can use to play an online game. Examples include smartphones, tablets, personal computers and gaming consoles. <i>See also online game.</i>
General online retail marketplaces	Online platforms that facilitate the supply of general goods between suppliers and Australian consumers, excluding platforms which operate only as classified services.
Generative AI	A specific type of artificial intelligence (AI) that uses algorithms trained to learn the patterns and structure of their training data, and generate new content in response to prompts.
Google Play Store	The app marketplace operated by Google for Android devices.
IaaS	Infrastructure as a Service
Immersive technologies	Technologies that create distinct experiences by merging the physical world with a digital or simulated reality. Augmented reality (AR) and virtual reality (VR) are 2 principal types of immersive technologies.
Interoperability	The ability of different products and services from different digital platforms or other providers to work together and communicate with one another.
iOS and iPadOS	iOS is Apple’s operating systems for mobile devices, including the iPhone. The iPad runs iPadOS, which is based on iOS.
Issues Paper	The Issues Paper for the final report of the Digital Platform Services Inquiry, published on 25 July 2024.
JFTC	Japan Fair Trade Commission
KFTC	Korea Fair Trade Commission, South Korea

Machine learning	The ability of some computer software to autonomously improve knowledge and processes through the repetition of tasks, without the manual entry of new information or instructions.
Manipulative design practices or deceptive design practices	The design of user interfaces in a way that is intended to confuse users, make it difficult for them to express their actual preferences, or manipulate them into taking certain actions. Also referred to as 'dark patterns'.
macOS	Apple's OS for desktop devices, including MacBooks.
Mobile app	Apps designed specifically for and installed on mobile devices such as smartphones and tablets.
Mobile device	A smartphone or tablet device.
Monthly active user	A user of a product or service who, within any given month, used or accessed the product or service.
Multi-homing	The practice of using more than one supplier of the same type of service. In contrast, a user who uses a single supplier for a type of service could be described to be 'single-homing'.
Multi-sided platform	A platform which is characterised by 2 or more distinct types of users or parties who interact on the platform. The value that a user or party obtains from the platform depends on the number and identity of users or parties of another type.
Natural language processing	Technology that allows computer software to collect, analyse, interpret and produce 'natural' language in the form of text and speech.
Network effect	Present where an increase (or decrease) in the number of platform users on one side of the platform affects the value of the service to other users of the platform.
OAIC	Office of the Australian Information Commissioner
OECD	Organisation for Economic Cooperation and Development
Ofcom	Office of Communications, UK
Online game	A video game that can be purchased, downloaded or played over the internet on a gaming device. <i>See also gaming device.</i>
Online game store	A digital store where consumers can purchase, download and play online games. Examples include app marketplaces such as the Apple App Store and Google Play Store, and stores operated by gaming device manufacturers or game developers such as Microsoft, Sony and Valve (Steam). <i>See also online game, standard-form gaming contract.</i>

Online private messaging services	Services that enable users to communicate privately and in real-time with friends, family members, colleagues and other contacts, one-to-one and/or with a group using text, voice or video.
Online retail marketplace	Online platforms that facilitate the supply of goods between suppliers and Australian consumers, excluding platforms which operate only as classified services.
Operating System or OS	Operating systems manage computer hardware (e.g., processing, memory, and storage) and all other programs in a computer.
PaaS	Platform as a Service
Paid loot box	A paid loot box is a type of in-game purchase available in some online games which allows players to spend in-game currency or real money to obtain a randomised item or bundle of items for in-game use.
Personal computer or PC	A desktop or laptop computer device.
Pre-installation	When an app or service is installed on a device or operating system prior to purchase by end-users.
Privacy Act	Privacy Act 1988 (Cth)
Privacy Act Review	A review of the Privacy Act led by the Attorney-General's Department, which published a final Privacy Act Review Report in February 2023. The government released its response in September 2023.
Product listing	A digital offer of a product for sale on an online marketplace.
Regulatory Reform Report	The fifth interim report of the DPSI on regulatory reform, published on 11 November 2022.
Report or Final Report	The tenth and final report of the DPSI (this report).
Report on App Marketplaces	The second interim report of the DPSI on app marketplaces, published on 28 April 2021.
Report on Data Products and Services	The eighth interim report of the DPSI on data products and services, published on 21 May 2024.
Report on Expanding Ecosystems of Digital Platforms	The seventh interim report of the DPSI on expanding ecosystems of digital platform service providers, published on 30 September 2023.
Report on General Online Retail Marketplaces	The fourth interim report of the DPSI on general online retail marketplaces, published on 28 April 2022.
Report on Search Defaults and Choice Screens	The third interim report of the DPSI on web browsers, general search services and choice screens, published on 28 October 2021.

Report on Social Media	The sixth interim report of the DPSI on the provision of social media services in Australia, published on 28 April 2023.
Report Revisiting General Search Services	The ninth interim report of the DPSI revisiting general search services, published on 4 December 2024.
SaaS	Software as a Service
Search services or search engines	Software systems designed to search for information on the internet, generally returning a curated, ranked set of links to content websites. Refers to general search services only, and not specialised search.
Self-preferencing	Where a platform operator gives preferential treatment to its own products and services when they are in competition with products and services provided by third parties using the platform.
Seller	A supplier of goods (for example, via an online marketplace).
Sideloading	The installation of an app on a mobile device without using an official application distribution method (that is, a pre-installed app marketplace such as the Apple App Store, Google Play Store or Samsung Galaxy Store).
Smartphone	A mobile phone with a touch screen, variety of hardware sensors and multimedia functionality (including access to the internet).
Social media platforms and services	Online services that allow users to participate in social networking, communicate with other users, and share and consume content generated by other users (including professional publishers).
Standard-form gaming contract	A set of standard-form contractual terms which a consumer must agree to in order to use an online gaming service (such as an online game store or a particular online game). Often referred to as an end-user licence agreement, a subscriber agreement or similar. <i>See also online game, online game store.</i>
Subscription trap	A service which fails to provide consumers with sufficient information or control over ongoing, often excessive, subscriptions that offer low or no useful functionality or are difficult to cancel, resulting in consumers feeling ‘trapped’ in the subscription.
Third-party seller	A seller on an online marketplace other than the marketplace itself.
UK	United Kingdom
US	United States
US FTC	Federal Trade Commission, US

Virtual Reality or VR	Technology that offers a digital recreation of a real-life setting and replicates a real or imagined environment. <i>See also Augmented Reality.</i>
Voice assistant	Software accessed via an application or device that uses voice recognition, speech synthesis and natural language processing to perform tasks or services for an individual based on commands or questions. Examples include Google Assistant, Siri and Alexa.
Windows	Microsoft's OS for devices including desktop devices manufactured by Microsoft (such as Microsoft's Surface Books) and third-party desktop devices (such as devices manufactured by Lenovo, HP and Dell).

1

Introduction



1. Introduction

1.1 Overview of the Digital Platform Services Inquiry

On 10 February 2020, the Australian Government directed the ACCC to conduct an inquiry into markets for the supply of digital platform services (the Digital Platform Services Inquiry or the Inquiry; see Ministerial Direction at Appendix D).

Digital platform services covered by this direction include internet search engine services, social media services, online private messaging services, digital content aggregation platform services, media referral services and electronic marketplace services.

The direction also covers digital advertising services supplied by digital platform service providers and the data practices of both digital platform service providers and data brokers.

The ACCC was directed to provide the Treasurer with an interim report on the inquiry by 30 September 2020, followed by further interim reports every 6 months until the inquiry concludes with a final report, to be provided to the Treasurer by 31 March 2025.

Matters considered by the Inquiry include:

- the intensity of competition in markets for the supply of digital platform services, with particular regard to the concentration of power, the behaviour of suppliers, mergers and acquisitions, barriers to entry or expansion and changes in the range of services offered by suppliers of digital platform services
- practices of suppliers in digital platform services markets which may result in consumer harm
- market trends that may affect the nature and characteristics of digital platform services
- developments in markets for the supply of digital platform services outside Australia.

Prior to this Final Report, the ACCC has published 9 interim reports in this Inquiry:

- On 23 October 2020, the ACCC released the [first interim report](#) (Report on Online Private Messaging) of the Digital Platform Services Inquiry. This report provided an in-depth focus on online private messaging services in Australia. It also updated the ACCC's previous [digital platforms inquiry](#) analysis in relation to search and social media platforms and identified competition and consumer issues common across these platforms.
- On 28 April 2021, the ACCC released the [second interim report](#) (Report on App Marketplaces) of the Inquiry. This report provided an in-depth consideration of competition and consumer issues associated with the distribution of mobile apps to users of smartphones and other mobile devices. It specifically focused on the 2 key app marketplaces used in Australia, the Apple App Store and the Google Play Store.
- On 28 October 2021, the ACCC released the [third interim report](#) (Report on Search Defaults and Choice Screens) of the Inquiry. This report examined market dynamics and consumer choice screens in search services and web browsers.
- On 28 April 2022, the ACCC released the [fourth interim report](#) (Report on General Online Retail Marketplaces) of the Inquiry. This report examined general online retail marketplaces. Previously, the ACCC had published stakeholder submissions to the issues paper and released 2 short surveys, inviting views from consumers and small business sellers.

- On 11 November 2022, the ACCC released the [fifth interim report](#) (Regulatory Reform Report) of the Inquiry. In this report, the ACCC recommended a range of new measures to address harms from digital platforms to Australian consumers, small businesses and competition.
- On 28 April 2023, the ACCC released the [sixth interim report](#) (Report on Social Media) of the Inquiry. This report examined social media services in Australia.
- On 27 November 2023, the ACCC released the [seventh interim report](#) (Report on Expanding Ecosystems of Digital Platforms) of the Inquiry. This report considered competition and consumer issues from the expanding ecosystems of digital platform providers in Australia.
- On 21 May 2024, the ACCC released the [eighth interim report](#) (Report on Data Products and Services) of the Inquiry. This report considered potential competition and consumer issues in the supply of data products and services by data firms in Australia.
- On 4 December 2024, the ACCC released the [ninth interim report](#) (Report Revisiting General Search) of the Inquiry. This report considered industry, regulatory and technology change in the supply of general search services in Australia since the ACCC last examined general search services in the Report on Search Defaults and Choice Screens.

1.2 Focus of the Final Report

The tenth and Final Report of the Inquiry focuses on competition and consumer issues in 3 areas:

- recent overseas legislative and regulatory developments regarding digital competition regimes, unfair trading practices and dispute resolution
- major developments and key trends in online private messaging, app marketplaces and mobile operating systems, advertising technology (ad tech) services, and general online retail marketplaces
- potential and emerging competition issues in cloud computing and generative AI, and consumer issues in online gaming.

1.3 Structure of the Final Report

This report is structured as follows:

- **Chapter 2** details a range of international developments in digital platform services markets, with a focus on jurisdictions that are developing or implementing ex ante digital competition regimes (section 2.1), the regulation of unfair trading practices (section 2.2) and external dispute resolution mechanisms (section 2.3). It notes the need for Australia to keep pace by implementing specific legislative reforms to address competition and consumer harms in these markets (section 2.4).
- **Chapter 3** centres on major recent developments in several digital platform services markets considered in previous reports of this Inquiry and the ACCC's Digital Advertising Services Inquiry, namely online private messaging (section 3.1), app marketplaces and mobile operating systems (section 3.2), general online retail marketplaces (section 3.3) and ad tech services (section 3.4).
- **Chapter 4** identifies potential or emerging issues in areas that the ACCC considers are likely to have significant future impacts on competition and consumers in Australia. It considers potential competition issues in cloud computing services (section 4.1) and generative AI (section 4.2), and potential issues facing consumers in online gaming (section 4.3).

2

International developments



2. International developments

Key points

- There is broad international support for the view that digital markets exhibit economic characteristics that allow digital platforms to act as gateways – or gatekeepers – controlling access to digital markets for consumers, developers and businesses.
- Control of access to digital markets can lead to competition and consumer harms, including higher prices; reduced choice, quality, and innovation; limited access to markets for competitors; and impediments to effective consumer decision making. In some cases, dominant digital platforms can extend their market power by engaging in conduct designed to discourage competition by rival firms and business users.
- Among countries represented in the G20, the ACCC has identified around 260 competition cases and investigations since 2010 against digital platforms including Google, Apple, Meta, Amazon, Microsoft, Alibaba, Baidu, Yandex, Naver and Booking.com for alleged anticompetitive conduct under existing competition laws. Competition authorities in some jurisdictions have publicly stated that existing competition tools remain ill-suited to addressing harms in digital markets, given the slow pace of pursuing enforcement cases, the difficulty of addressing continuing competitive harms with retrospective enforcement tools, and the limitations in the remedies that enforcement action can provide to address market concentration and anticompetitive conduct in digital markets.
- Competition authorities in a majority of G7 countries consider that timely intervention and the ability to address harm in its incipency are required to make digital markets more competitive and to drive innovation.
- Several jurisdictions have proposed or introduced ex ante regulation to promote innovation, ensure fair and competitive markets, and enhance consumer choice. These include the European Union (EU), United Kingdom (UK), Germany, Japan, India, Brazil and South Korea.
- On 6 March 2024, the EU's Digital Markets Act (DMA) came into force. Views from stakeholders on the effect of the DMA have been mixed. Some concerns have been raised about the DMA's obligations having the effect of being 'pre-set' and 'overly broad' when applied across different business models in the digital ecosystem, which may cause unintended consequences. On the other hand, stakeholders have also submitted that the DMA has had a positive impact for businesses and consumers.
- On 2 December 2024, the Australian Government announced consultation on a proposed digital competition regime to promote effective competition and unlock innovation, lower prices and better services for the benefit of Australian consumers and businesses. Timely progress towards legislation and service-specific codes will ensure that the benefits of competitive and contestable digital markets can flow to Australian consumers and businesses.

- While digital markets can benefit consumers by providing convenient access to goods and services, information and bargaining power asymmetries can lead to business practices that increase the risk of small business and consumer harm. Several jurisdictions have enshrined prohibitions against unfair trading practices through general fair trading and consumer protection legislation. On 16 October 2024, the Australian Government announced that it will address a wide range of unfair trading practices with reforms to the Australian Consumer Law (ACL), to be settled with states and territories in the first half of 2025.
- According to ACCC consumer survey data, the majority of respondents (82%) agreed there should be a specialised independent external dispute resolution body for users of digital platform services to escalate complaints which cannot be resolved with platforms directly.
- The EU and UK currently provide regulations that either mandate requirements for digital platforms' internal dispute resolution systems, or provide consumers and business users with formal external dispute resolution systems for resolving complaints with digital platforms.
- The ACCC has previously recommended the introduction of mandatory minimum internal dispute resolution standards and an external dispute resolution scheme for digital platforms. The Australian Government is considering this issue, and the ACCC supports further work on progressing minimum internal dispute resolution standards and an external ombudsman.

This section considers international developments in digital markets, with a focus on jurisdictions which are developing or implementing ex ante digital competition regimes, unfair trading practices and external dispute resolution mechanisms.

This section is structured as follows:

- **Section 2.1** articulates the need for ex ante regulation to address systemic harms in digital competition markets, given the challenges with relying on enforcement of existing competition law to address these harms. It discusses the opportunity for greater innovation that can be spurred by digital competition regulation. It also provides an overview of proposed or existing ex ante digital competition regimes in force internationally and notes the Australian Government's consultation on a proposed digital competition regime applicable to Australia.
- **Section 2.2** examines the need for unfair trading practices prohibitions to address consumer and small business harms in the digital era. It explores various international approaches to addressing consumer and small business harms in digital markets through unfair trading practices prohibitions. It also notes the Australian Government's consultation on proposed amendments to the *Competition and Consumer Act 2010* (CCA) that would prohibit unfair trading practices.
- **Section 2.3** examines the importance of providing adequate, independent external dispute resolution mechanisms for consumers and businesses to address complaints with digital platforms. It considers various approaches undertaken to introduce external dispute resolution bodies internationally and notes existing models for external dispute resolution that are already operational in Australia.
- **Section 2.4** considers the need for Australian laws to keep pace with evolving digital markets through ex ante regulation to better address systemic competition harms in these markets. It also considers the need to continue progressing legislative reform aimed at addressing consumer and small business harms in the digital era through unfair trading practices prohibitions, and the provision of external dispute resolution bodies for complaints addressed at digital platforms, in light of existing findings and recommendations made by the ACCC.

2.1 Digital competition regimes

2.1.1 Why is ex ante digital competition regulation needed?

The ACCC has previously discussed the valuable services that digital platforms bring to Australian consumers, as well as the concerns that arise in digital markets where a lack of competition can lead to reduced incentives to innovate, less choice and higher prices (including through the collection of personal data), and can give digital platforms the ability and incentive to engage in strategic conduct to entrench and extend their market power.⁴⁷

There are systemic harms to competition in digital markets

The competition authorities of a majority of G7 countries,⁴⁸ the Organisation for Economic Co-operation and Development (OECD),⁴⁹ other national competition agencies⁵⁰ and some academics⁵¹ have also acknowledged that digital markets exhibit economic characteristics that set them apart from traditional markets, enabling select digital platforms to gain market power. These characteristics include:

- **multi-sided markets** that connect and rely on the interaction between 2 or more different sides of the market and their users, such as platform users and advertisers⁵²
- **strong network effects**, where the value of a service depends on the number of users with whom other users can interact⁵³
- **access to vast amounts of data**, as well as the capacity to create data-driven feedback loops that reinforce the value platforms can create through their own data.⁵⁴ This can include refining data and algorithms to improve services and target advertisements
- **economies of scale and scope**,⁵⁵ including that the average cost of providing a service decreases with increased use, giving larger platforms a cost advantage.⁵⁶

These characteristics allow digital platforms to act as gateways – or gatekeepers – controlling access to digital markets for consumers, developers and businesses.⁵⁷ In addition, by leveraging established user bases and resources, large digital platforms may extend their dominance into

47 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 6.

48 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 7.

49 See, for example, OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 9.

50 See, for example, Standing Committee on Finance, Ministry of Corporate Affairs (India), [Anti-Competitive Practices by Big Tech Companies](#), 27 July 2022, p iv; Brazilian Ministry of Finance, [Plataformas Digitais: aspectos econômicos e concorrenciais e recomendações para aprimoramentos regulatórios no Brasil](#) [in Portuguese], 10 October 2024; South Korea, [Ex-Ante Regulation and Competition in Digital Markets – Note by Korea](#), 2 December 2021, pp 3–5.

51 See for example, T Prado, [‘Assessing the Market Power of Digital Platforms: Quello Center Working Paper’](#), *Proceedings of TPRC48: The 48th Research Conference on Communication, Information and Internet Policy*, 17–19 February 2021, p 4.

52 OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8.

53 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 7; OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8.

54 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 9; OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8; L Cabral et al., [The EU Digital Markets Act – A report from a Panel of Economic Experts](#), 2021, p 6.

55 OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 9; L Cabral et al., [The EU Digital Markets Act: A report from a Panel of Economic Experts](#), 2021, p 6.

56 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 6.

57 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 9; L Cabral et al., [The EU Digital Markets Act: A report from a Panel of Economic Experts](#), 2021, p 6.

adjacent markets, creating an ecosystem of products and services.⁵⁸ The ACCC noted in the Regulatory Reform Report that markets for digital platform services can be prone to ‘tipping’ where one large platform supplies, or a very small number of large platforms supply, the vast majority of users.⁵⁹ Once this occurs, the most effective form of competition may be competition ‘for the market’ rather than competition ‘in the market’.⁶⁰ In such a circumstance, the most significant competitive rivalry is likely to come from disruptive entry – that is, entry on a scale that is likely to displace the incumbent.⁶¹ Such disruptive entry is unlikely to come from an entrant that largely replicates the service offered by the incumbent platform.⁶²

The economic characteristics of digital markets can result in firms establishing durable or entrenched positions of economic power, enabling them to engage in exploitative and exclusionary conduct. Such conduct can further lead to systemic competition and consumer harms, including higher prices; reduced choice, quality, and innovation; limited access to markets for competitors; and impediments to effective consumer decision making.⁶³ Additionally, in some cases, dominant digital platforms can engage in conduct designed to discourage competition by rival firms and business users, translating into high barriers to entry and reinforcing consumer lock-in.⁶⁴ Such conduct can include:

- self-preferencing, with large digital platforms unfairly favouring their own products and services to the detriment of competing businesses⁶⁵
- exclusionary terms and conditions for business users to access certain functionalities⁶⁶
- anti-competitive tying or bundling of products and services⁶⁷
- imposing unclear or unreasonable terms and conditions on business users, and/or⁶⁸
- restricting or refusing data interoperability, such as the ability for products or services to communicate and function with other systems, products or services.⁶⁹

These findings are consistent with the ACCC’s reports throughout this Inquiry.

58 In its September 2023 Interim Report of this Inquiry, the ACCC considered competition and consumer issues arising from the expanding ecosystems of digital platform service providers in Australia. See ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023. See also G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 9; M Bourreau, [Some Economics of Digital Ecosystems: Note by Marc Bourreau for the OECD Hearing on Competition Economics of Digital Ecosystems](#), 3 December 2020, p 6.

59 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 33.

60 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 33.

61 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 33.

62 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 33.

63 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 9; P Marsden and R Podszun, [Restoring Balance to Digital Competition: Sensible Rules, Effective Enforcement](#), 2020, pp 20–30; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 2, 9–11.

64 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 9; M Bourreau, [Some Economics of Digital Ecosystems: Note by Marc Bourreau for the OECD Hearing on Competition Economics of Digital Ecosystems](#), 3 December 2020, p 6; European Parliamentary Research Service, [Regulating digital gatekeepers: Background on the future digital markets act](#), December 2020, p 2.

65 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 3; Section 20(3)(b) of the [Digital Markets, Competition and Consumers Act \(UK\) 2024](#); Article 6(5) of the [Digital Market Act \(EU\) 2022](#).

66 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 3, 13; Sections 20(3)(a) and 20(3)(f) of the [Digital Markets, Competition and Consumers Act \(UK\) 2024](#); Articles 6(12) and 6(13) of the [Digital Market Act \(EU\) 2022](#).

67 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 22, 66; Section 20(3)(d) of the [Digital Markets, Competition and Consumers Act \(UK\) 2024](#); Articles 5(7) and 5(8) of the [Digital Market Act \(EU\) 2022](#).

68 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 3; Section 20(3)(a) of the [Digital Markets, Competition and Consumers Act \(UK\) 2024](#); Article 6(12) of the [Digital Market Act \(EU\) 2022](#).

69 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 17, 73; Section 20(3)(e) of the [Digital Markets, Competition and Consumers Act \(UK\) 2024](#); Articles 6(7) and 7 of the [Digital Market Act \(EU\) 2022](#).

There are gaps in existing laws and enforcement tools

In its Regulatory Reform Report, the ACCC noted that these characteristics and the dynamic nature of digital platform markets mean that enforcement of existing economy-wide provisions of the CCA may not on their own be sufficient to protect and promote competition, or be well-suited to addressing the range and scale of competition harms identified in digital platform markets.⁷⁰

The ACCC has identified around 260 cases or investigations against major digital platforms in G20 jurisdictions for alleged anticompetitive conduct since 2010. A significant number of investigations and cases have been commenced in the United States. The ACCC also notes that enforcement cases have been taken against other digital platforms, including in their home jurisdictions, such as actions against Booking.com in the European Union, Yandex in Russia, Alibaba in China, and Naver in South Korea. See Appendix A – Competition cases or investigations involving major digital platforms in G20 jurisdictions for further details. This number of cases or investigations is likely to be significantly higher if all jurisdictions were included, but the ACCC considers this appendix demonstrates the challenges in using existing competition law to remedy harms in digital markets. As set out by the OECD, existing competition tools remain ill-suited to addressing harms in digital markets, noting:

- The **slow pace of pursuing enforcement cases** through local courts, particularly noting the right of parties to appeal at several junctions. This can exacerbate the impacts of potentially anticompetitive, technologically driven conduct over a period of time.⁷¹
- The **difficulty of addressing continuing competitive harms** with enforcement tools that are retrospective. A case-by-case approach to anticompetitive conduct does not present an efficient mechanism to address systemic harms in dynamic and interrelated markets. Investigations take years, remedies are often ineffective, and platforms can easily adapt their practices to maintain dominance.⁷²
- The **limitations in the remedies** that enforcement action can provide to address market concentration and anticompetitive conduct in digital markets. As noted by various competition authorities, it can prove difficult to rely on conventional competition tools based on an assessment of price and consumer welfare when addressing dynamic issues in digital markets that may stem from their economic characteristics (such as zero-price services, network effects, economies of scale and scope and the relevance of access to and capacity to monetise data).⁷³ The majority of G7 competition authorities have noted that even when remedies are imposed, they often fall short of fully restoring competition in digital markets.⁷⁴ There is also a difficulty of relying on enforcement tools to achieve pro-competitive outcomes, particularly remedies such as data portability or interoperability.⁷⁵

Improved digital competition regulation is needed to increase innovation

The ACCC acknowledges that it can be a complex and subjective task to quantify levels of innovation. Digital platforms have argued that ex ante regulation of digital markets can stifle innovation, productivity and market dynamism. For example, Apple submitted to this Report that ex ante regulatory intervention might cause an ‘unintended chilling of market dynamism and innovation’⁷⁶

70 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 8–9.

71 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

72 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

73 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 12.

74 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 10.

75 See, for example, European Parliamentary Research Service, [Regulating digital gatekeepers: Background on the future digital markets act](#), December 2020, pp 3–4; J Furman, [Unlocking digital competition: Report of the Digital Competition Expert Panel](#), 13 March 2019, pp 5, 10, 54; Standing Committee on Finance, Ministry of Corporate Affairs, [Anti-Competitive Practices by Big Tech Companies](#), 27 July 2022, pp 7, 11.

76 Apple, [Submission to the Final Report](#), 11 October 2024, p 2.

and Meta cautioned that broad ex ante regulation ‘may stifle productivity and innovation’.⁷⁷ Similar concerns were also raised in submissions to this Report by industry groups and think tanks.⁷⁸

Academic research and international reports note that these arguments frequently overlook broader market dynamics.⁷⁹ Unchecked dominance by a few players can entrench monopolistic practices, stifle competition and limit opportunities for emerging competitors.⁸⁰ Jacques Crémer et al. emphasise the importance of distinguishing between the innovation observed in today’s digital platforms and the potential innovation that could arise under greater competition.⁸¹ A dominant firm may have fewer incentives to innovate, as it faces neither the prospect of gaining profits from rivals, nor the risk of losing customers to them.⁸²

While digital platforms can drive innovation, their incentives may also lead them to entrench market power and maximise profitability at the expense of competition.⁸³ For example, Ariel Ezrachi and Maurice E. Stucke argue that digital platform ecosystems have both the ability and incentive to suppress innovation, including by identifying and responding to emerging trends that might otherwise impact their value chain or market power.⁸⁴

Practices such as leveraging proprietary data, limiting consumer switching, bundling or tying access to services, and self-preferencing conduct stifle innovation by limiting opportunities for smaller firms and nascent competitive technologies.⁸⁵ Furthermore, the ability of large digital platforms to copy and replicate their competitors’ new features can also serve to protect their core markets, depriving smaller firms of the scale necessary to succeed.⁸⁶ Concentrated market power creates high barriers to entry for new players, impeding smaller firms – even those with innovative solutions – from effectively competing.⁸⁷

In these types of scenarios, regulation can increase innovation rather than hinder it. A number of US start-ups also support this view, and have come out in support of digital competition regulation.⁸⁸

77 Meta, [Submission to the Final Report](#), 11 October 2024, p 7.

78 See US Chamber of Commerce, [Submission to the Final Report](#), 11 October 2024, p 2; International Center for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 2; Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 6; Progressive Policy Institute, [Submission to the Final Report](#), 11 October 2024, p 2.

79 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 9, 23; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 9–15; J Crémer et al., [Digital Regulation Project: Fairness and Contestability in the Digital Markets Act](#), 6 July 2021, pp 26–32; M Cappai and G Colangelo, [Taming digital gatekeepers: the more regulatory approach to antitrust law](#), *Computer Law & Security Review*, Vol 41 (2021), pp 5–6; A Cozzolino, L Corbo and P Aversa, [Digital platform-based ecosystems: The evolution of collaboration and competition between incumbent producers and entrant platforms](#), *Journal of Business Research*, Vol 126 (2021), pp 396–397.

80 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 9, 23; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 9–15; J Crémer et al., [Digital Regulation Project: Fairness and Contestability in the Digital Markets Act](#), 6 July 2021, pp 26–32; M Cappai and G Colangelo, [Taming digital gatekeepers: the more regulatory approach to antitrust law](#), *Computer Law & Security Review*, Vol 41 (2021), pp 5–6; A Cozzolino, L Corbo and P Aversa, [Digital platform-based ecosystems: The evolution of collaboration and competition between incumbent producers and entrant platforms](#), *Journal of Business Research*, Vol 126 (2021), pp 396–397.

81 J Crémer et al., [Digital Regulation Project: Fairness and Contestability in the Digital Markets Act](#), 6 July 2021, p 27.

82 J Crémer et al., [Digital Regulation Project: Fairness and Contestability in the Digital Markets Act](#), 6 July 2021, p 28.

83 A Ezrachi and M Stucke, [‘The Darker Sides of Digital Platform Innovation’](#), *Network Law Review*, 18 August 2022, accessed 13 March 2025; M Cappai and G Colangelo, [Taming digital gatekeepers: the more regulatory approach to antitrust law](#), *Computer Law & Security Review*, Vol 41 (2021), pp 5–6; A Cozzolino, L Corbo and P Aversa, [Digital platform-based ecosystems: The evolution of collaboration and competition between incumbent producers and entrant platforms](#), *Journal of Business Research*, Vol 126 (2021), pp 396–397.

84 A Ezrachi and M Stucke, [‘The Darker Sides of Digital Platform Innovation’](#), *Network Law Review*, 18 August 2022, accessed 13 March 2025.

85 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 5–6.

86 A Ezrachi and M Stucke, [‘The Darker Sides of Digital Platform Innovation’](#), *Network Law Review*, 18 August 2022, accessed 13 March 2025; ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 5–6.

87 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 5–6.

88 M Zeff, [‘Y Combinator urges the White House to support Europe’s Digital Markets Act’](#), *TechCrunch*, 13 March 2025, accessed 14 March 2025.

Regulation which does not prioritise the incentives of the platform over business users could enhance innovation opportunities for the many, rather than for the handful of dominant platforms that set the rules for innovation on their services.

Venture capital activities of dominant digital platforms can further stifle innovation.⁸⁹ Serial acquisitions (including startups) and the 'locking up' of valuable assets, hinders their broader, efficient utilisation and serves further ecosystem expansion as opposed to genuine market dynamism.⁹⁰ As digital technologies become increasingly integrated into the economy and society, dominant platforms funded by the revenue obtained from their core services are making substantial investments to secure strategically important positions in the evolving digital landscape.⁹¹ For example, section 4.2 provides examples of risks of anticompetitive conduct and associated competitions harms in the generative AI sector.

Without regulatory intervention, dominant digital platforms may continue to entrench their market dominance at the expense of competitors or nascent technologies. Former President of the European Central Bank, Mario Draghi, identifies the importance of incentivising the adoption of open access and interoperability regimes, as set out under the DMA, as a priority for enhancing competitiveness in the EU.⁹²

The Draghi Report also notes that it is of 'paramount importance' that the DMA is enforced effectively by the European Commission to ensure that the intended benefits for consumers and businesses are realised, and failure to do so could lead to 'reduced appetite of multinational companies to invest in Europe and the delayed deployment of technological advancements'.⁹³

89 See also, R Feldman and M Lemley, [Atomistic Antitrust](#), *William & Mary Law Review*, Vol 63:6 (2022), p 1,927.

90 R Feldman and M Lemley, [Atomistic Antitrust](#), *William & Mary Law Review*, Vol 63:6 (2022), p 1,927. See also, C Cunningham, F Ederer and S Ma, [Killer acquisitions](#), *Journal of Political Economy*, Vol 129:3 (2021), p 2; ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 148–151, 179.

91 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 27.

92 M Draghi, [The future of European competitiveness: Part B | In-depth analysis and recommendations](#), September 2024, p 302.

93 M Draghi, [The future of European competitiveness: Part B | In-depth analysis and recommendations](#), September 2024, p 302.

2.1.2 There is international support for regulatory reform in digital markets

The competition authorities of a majority of G7 countries agree, however, that timely intervention and the ability to address harm early are required to make digital markets more competitive and to drive innovation.⁹⁴ As presented below in Sections 2.1.2 and 2.1.3, several international jurisdictions have proposed or introduced ex ante regulation to promote innovation, ensure fair and competitive markets, and enhance consumer choice.⁹⁵ These include:

- jurisdictions that have ex ante digital competition regulation enacted, such as the EU,⁹⁶ UK,⁹⁷ Germany⁹⁸ and Japan⁹⁹
- jurisdictions with proposals for ex ante digital competition regulation, including India,¹⁰⁰ Brazil¹⁰¹ and South Korea.¹⁰²

Stakeholders acknowledge benefits of international approaches towards digital competition regulation

Several submissions to this Report noted their general support for international developments towards ex ante regulation of digital platforms.¹⁰³ In addition, Microsoft¹⁰⁴ and Meta¹⁰⁵ noted their support for the ACCC's consideration of regulatory developments relating to app marketplaces. In addition, the ACCC also notes that many stakeholders, including TikTok, Microsoft, Skyscanner and Match Group, expressed a preference for obligations that are specifically tailored to the relevant

94 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 32.

95 For example, promoting innovation is stated as one of the objectives of the DMA in Recital 79 of the DMA. The Japanese Act on Improving Transparency and Fairness highlights innovation as an underlying factor driving technological change. Stimulating innovation by preventing abusive conduct which may reduce incumbents' incentives to innovate is found in the US Bill No. 3816 (American Choice and Innovation Online Act). For more examples, see OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 21.

96 [Regulation \(EU\) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives \(EU\) 2019/1937 and \(EU\) 2020/1828 \(Digital Markets Act \(2024\)\)](#).

97 [Digital Markets, Competition and Consumers Act \(UK\) 2024](#).

98 [Section 19a, German Competition Act](#).

99 JFTC, [Summary of the Act on Promotion of Competition for Specified Smartphone Software](#), 12 June 2024; Japan Ministry of Economy, Trade and Industry, [Summary of the Act on Improving Transparency and Fairness of Digital Platforms](#), February 2021.

100 See 'Annexure IV – Draft Digital Competition Bill, 2024' in Ministry of Corporate Affairs, [Report of the Committee on Digital Competition Law](#), Government of India, 27 February 2024, accessed 13 March 2025.

101 [Bill No. 2768/2022 \[in Portuguese\]](#); Brazil Ministry of Finance, [Consultation – Economic and Competitive Aspects of Digital Platforms \[in Portuguese\]](#), 2 May 2024, accessed 13 March 2025.

102 J Lee, 'Digital platforms are the target of planned new South Korean monopoly-abuse antitrust rules', *MLex*, 18 December 2023, accessed 13 March 2025; J Lee, 'Ruling party lawmakers in South Korea to unveil platform regulation legislation, expanding on KFTC proposals', *MLex*, 18 October 2024, accessed 13 March 2025.

103 As part of this Final Report, the ACCC received submissions from the following organisations in favour of ex ante regulation of digital platforms: TikTok, [Submission to the Final Report](#), 11 October 2024, pp 1–3; Skyscanner, [Submission to the Final Report](#), 11 October 2024, p 4; Match Group, [Submission to the Final Report](#), 11 October 2024, p 2; Spotify, [Submission to the Final Report](#), 11 October 2024, p 2; Booking.com, [Submission to the Final Report](#), 11 October 2024, p 4; Yelp, [Submission to the Final Report](#), 11 October 2024, p 3; Commonwealth Bank Australia, [Submission to the Final Report](#), 11 October 2024, p 1; International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 1; Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, p 3; Commercial Radio and Audio, [Submission to the Final Report](#), 11 October 2024, p 1; Per Capita, [Submission to the Final Report](#), 11 October 2024, p 1; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 2.

104 Microsoft, [Submission to the Final Report](#), 11 October 2024, pp 2–4.

105 Meta, [Submission to the Final Report](#), 11 October 2024, p 4.

service, similar to the model under the UK's Digital Markets, Competition and Consumers Act.¹⁰⁶ See box 2.1 for a summary of stakeholder views in respect of particular international approaches to digital competition regulation.

Box 2.1: Stakeholders' views on international ex ante digital regimes

- The **EU's DMA** came into effect on 6 March 2024. Some stakeholders¹⁰⁷ noted the positive impact it has had on effecting change in digital markets, such as enabling alternative app stores on iOS and improving competitors' access to mobile payment systems. Section 2.1.3 provides more details on stakeholders' views on the DMA.
- The **UK's Digital Markets, Competition and Consumers Act** came into effect on 1 January 2025. Several submissions noted support for its flexible and tailored approach.¹⁰⁸ For example, the Coalition for App Fairness observed that the Digital Markets, Competition and Consumers Act allows for tailored interventions based on the unique characteristics of each designated platform,¹⁰⁹ whereas Skyscanner noted that public consultation allows third parties to share their views, facilitating quicker and more effective identification of possible remedies.¹¹⁰ The Software & Information Industry Association expressed concern about the Competition and Markets Authority's (CMA) judicial review standard, arguing it raises rule of law and due process concerns.¹¹¹
- With respect to **Section 19a of the German Competition Act**, which came into effect on 19 January 2022, the Global Antitrust Institute submitted that Section 19a offers more flexibility than the DMA, allowing the Bundeskartellamt to assess market conditions and 'evaluate if banning specific conduct is warranted to promote innovation and competition'.¹¹² Amazon noted commentary that it 'has created legal uncertainties for business impacting their willingness to innovate and invest in the German economy'.¹¹³

106 Submissions citing a preference for Australia to adopt service-specific codes for digital competition regulation included TikTok, [Submission to the Final Report](#), 11 October 2024, p 4; Skyscanner, [Submission to the Final Report](#), 11 October 2024, pp 9–10; Match Group, [Submission to the Final Report](#), 11 October 2024, p 30; Spotify, [Submission to the Final Report](#), 11 October 2024, p 3; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 4–5; Yelp, [Submission to the Final Report](#), 11 October 2024, p 3; Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 4; International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 2; Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, p 9.

107 Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, pp 2–3; Commercial Radio and Audio Australia, [Submission to the Final Report](#), 11 October 2024, pp 9–10; Skyscanner, [Submission to the Final Report](#), 11 October 2024, pp 5–6; Booking.com, [Submission to the Final Report](#), 11 October 2024, p 2.

108 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 4–5; TikTok, [Submission to the Final Report](#), 11 October 2024, pp 3–4; Skyscanner, [Submission to the Final Report](#), 11 October 2024, pp 6–8; Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, pp 9–10; Match Group, [Submission to the Final Report](#), 11 October 2024, pp 21–22.

109 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 4–5.

110 Skyscanner, [Submission to the Final Report](#), 11 October 2024, p 6.

111 Software and Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 3.

112 Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, p 9.

113 Amazon, [Submission to the Final Report](#), 11 October 2024, p 9.

- Skyscanner broadly noted its support for recent developments in Japan,¹¹⁴ while the International Social Games Association advised that ‘Australia should consider aligning its regulatory approach with those of other jurisdictions, including [...] Japan’.¹¹⁵
 - Japan’s **Act on Promotion of Competition for Specified Smartphone Software** (the Act) was passed on 12 June 2024. Apple noted that the Act served as an example of ex ante regulation ‘that seeks to strike a balance between competing goals’ and allowed service providers to ‘take into account security and privacy as equally important...when complying with obligations’.¹¹⁶ By contrast, Google submitted that the Act ‘should not come at the cost of security’ and would likely impact pro-competitive conduct that benefits consumers and innovation.¹¹⁷
 - Japan’s **Improving Transparency and Fairness of Digital Platforms Act** came into effect on 1 February 2021. Amazon noted that its transparency-based obligations demonstrate a nuanced approach to regulation that ‘is more likely to deliver better outcomes for Australian consumers and small businesses’ compared to broader ex ante regulation.¹¹⁸
- On 12 March 2024, India’s Ministry of Corporate Affairs proposed the draft **Digital Competition Bill** (the Bill). On 19 May 2024, nearly 40 Indian startups and technology firms issued a public statement in support of the Bill. The firms, including Matrimony.com, Innov8 and Medibuddy, stated that the Bill ‘will address long-standing concerns of Indian startups to rein in practices which stifle innovation, limit consumer choice and hinder the growth of young businesses’.¹¹⁹ Google raised concerns around potential unintended consequences of the Bill in its current draft.¹²⁰
- In December 2023, the South Korean Government signalled its preference for targeted ex ante regulation of digital platforms, whilst the Korea Fair Trade Commission (KFTC) introduced a draft **Act on the Promotion of Platform Market Competition** (the Act). Match Group backed the Act and identified that any exemptions process would benefit from targeted and prescriptive rules concerning its application.¹²¹ The Information Technology & Innovation Foundation noted that the Act provides designated firm with ‘an opportunity to offer procompetitive justifications for at least some of their behaviour’.¹²² However, Google and Amazon expressed concerns about potential regulatory burdens and higher compliance costs.¹²³

114 Skyscanner, [Submission to the Final Report](#), 11 October 2024, p 8.

115 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 2.

116 Apple, [Submission to the Final Report](#), 11 October 2024, p 13.

117 Google, [Submission to the Final Report](#), 11 October 2024, pp 11–12.

118 Amazon, [Submission to the Final Report](#), 11 October 2024, p 3.

119 T Simhann, ‘[Start-up solidarity: Indian innovators rally behind Digital Competition Bill](#)’, *Business Line*, 19 May 2024, accessed 13 March 2025.

120 Google, [Submission to the Final Report](#), 11 October 2024, pp 8–9.

121 Match Group, [Submission to the Final Report](#), 11 October 2024, p 15.

122 Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 3.

123 Google, [Submission to the Final Report](#), 11 October 2024, pp 10–11; Amazon, [Submission to the Final Report](#), 11 October 2024, pp 9–10.

2.1.3 The DMA has increased consumer choice and may affect innovation

The EU's Digital Markets Act (DMA) came into force on 6 March 2024. This section explores some early impacts that the DMA has had on consumer choice and experience. It also examines how the DMA has led to changes in products and services. This section also examines concerns raised by stakeholders as to the effectiveness of the DMA's broad, gatekeeper-agnostic obligations to addressing systemic competition harms in digital markets. Finally, it considers views within the private sector as to improved innovation in technology markets under the DMA.

The DMA has led to changes in products and services. The DMA entered into force on 1 November 2022 and became applicable on 2 May 2023.¹²⁴ The first 6 designated gatekeepers were required to comply with all obligations under the DMA by 7 March 2024,¹²⁵ while the most recently designated gatekeeper, Booking, had until 13 November 2024 to meet these obligations.¹²⁶ In the past year, gatekeepers designated by the European Commission have made various changes to their products and services in response to the obligations set out in the DMA. While most of the changes only apply to users in the EU or in the European Economic Area, others have been introduced worldwide.

Table 2.1 below outlines several product or service changes that designated gatekeepers have adopted to comply with the DMA. The ACCC notes that some of these changes are subject to additional requirements, such as developer access to alternative app marketplaces under specific terms and conditions which include fee structures.¹²⁷ The ACCC also notes that the European Commission has found that the measures introduced by Google, Apple and Meta 'fall short of effective compliance of their obligations under the Digital Markets Act'.¹²⁸ As a result, the European Commission has opened non-compliance investigations against these designated gatekeepers.¹²⁹ On 19 March 2025, the European Commission issued preliminary findings in respect of its non-compliance investigation into Google (Alphabet), noting that:

- certain features and functionalities of Google Search treat Alphabet services more favourably than rival services, and does not meet the requirement for transparent, fair and non-discriminatory treatment of third-party services under the DMA
- the Google Play app store does not comply with the DMA as app developers are prevented from freely steering consumers to alternative app distribution channels for better offers.¹³⁰

Non-compliance investigations against Apple and Meta are currently underway and may also lead to further changes in products and services. On 19 March 2025, the European Commission also adopted two specification decisions under the DMA that set out the measures Apple is required to comply with in respect of interoperability provisions under the DMA. See section 3.2.3 for further information.¹³¹

124 European Commission, [About the Digital Markets Act](#), accessed 13 March 2025.

125 European Commission, [Designated gatekeepers must now comply with all obligations under the Digital Markets Act](#), Press release, 7 March 2024, accessed 13 March 2025.

126 European Commission, [Commission designates Booking as a gatekeeper and opens a market investigation into X](#), Press release, 13 March 2024, accessed 13 March 2025.

127 For further discussion on the issue of alternative app marketplaces, see section 3.2 (app marketplaces).

128 European Commission, [Commission opens non-compliance investigations against Alphabet, Apple and Meta under the Digital Markets Act](#), Press release, 25 March 2024, accessed 13 March 2025.

129 European Commission, [Commission opens non-compliance investigations against Alphabet, Apple and Meta under the Digital Markets Act](#), Press release, 25 March 2024, accessed 13 March 2025.

130 European Commission, [Commission sends preliminary findings to Alphabet under the Digital Markets Act](#), Press release, 19 March 2025, accessed 20 March 2025.

131 European Commission, [Commission provides guidance under Digital Markets Act to facilitate development of innovative products on Apple's platforms](#), 19 March 2025, accessed 20 March 2025.

The ACCC also notes that some designated gatekeepers do not consider that the DMA has delivered benefits to consumers at this time.¹³² Further changes may be made by designated gatekeepers in line with their 2025 DMA compliance reports.

Table 2.1: Changes in products and services in the EU/European Economic Area following the DMA

Designated gatekeeper	Some of the changes made in response to the DMA
Alphabet	<p>In respect of search, Google has:</p> <ul style="list-style-type: none"> ■ implemented numerous product changes to Google Search to provide greater visibility for other content aggregators, suppliers and businesses on Google search results pages. This includes the introduction of carousels (interactive visual icons summarising price, product ratings and images) for travel, local and shopping queries and aggregator units (buttons summarising search results to 'Jobs sites' or 'Flight sites')¹³³ ■ developed choice screens and enabled switching of search engines on Android phones ■ enabled consumers in the European Economic Area (EEA) to choose if they want to continue to share data across Google services by linking them.¹³⁴ <p>For app developers, noting that the Google Play Store already provided support for third-party apps and app stores, Google has:</p> <ul style="list-style-type: none"> ■ enabled support for alternative billing systems for the completion of in-app purchases in the EEA, and communicate freely with customers outside its app about offers or lower-cost options available on a rival app store or the developer's website.¹³⁵ <p>In September 2024, Google announced that it would not require users to have a Gmail account to set up Android handsets. This shift allows users to use third-party email addresses to access services like YouTube and the Play Store.¹³⁶</p>
Amazon	<p>Amazon has introduced:</p> <ul style="list-style-type: none"> ■ consent prompts for the purposes of using personal data between the Amazon Store and other Amazon services, as well as for third-party advertising¹³⁷ ■ new tools for data portability including the capacity to share data with an authorised third party through an API¹³⁸ ■ greater access to business user data for Amazon sellers¹³⁹ ■ access to price and performance data for advertising customers including the introduction of a data clean room to independently verify success and impact of campaigns.¹⁴⁰

132 Google, [Submission to the Final Report](#), 11 October 2024, p 3; Amazon, [Submission to the Final Report](#), 11 October 2024, pp 7–8.

133 Google, [New Search experiences in EEA: Rich results, aggregator units, and refinement chips](#), *Google Search Central Blog*, 15 February 2024, accessed 13 March 2025.

134 O Bethell, ['Complying with the Digital Markets Act'](#), *Google Blog*, 5 March 2024, accessed 13 March 2025.

135 O Bethell, ['Complying with the Digital Markets Act'](#), *Google Blog*, 5 March 2024, accessed 13 March 2025.

136 The European Commission had scrutinised the practice as a potential violation of the DMA's ban on 'tying' core platform services. Google's proactive change, made without a full non-compliance investigation, is now under review by the European Commission to determine its sufficiency as a compliance measure under the DMA.

137 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, p 5.

138 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, pp 7–13.

139 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, p 13.

140 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, p 21. See also ACCC, [Digital Platform Services Inquiry Eighth Interim Report](#), 21 May 2024, pp 59–60 for a discussion of data clean rooms.

Designated gatekeeper	Some of the changes made in response to the DMA
Apple	<p>Apple has announced the following changes:¹⁴¹</p> <ul style="list-style-type: none"> ■ introduced a choice screen for web browsers on iOS ■ allowed support for alternative app marketplaces on iOS ■ introduced a new framework and APIs for creating alternative app marketplaces – enabling marketplace developers to install apps and manage updates on behalf of other developers from their dedicated marketplace app ■ provided options for using payment service providers – within a developer’s app to process payments for digital goods and services ■ provided options for processing payments via link-outs ■ allowed developers to inform EU users of promotions, discounts and other deals available outside of their apps.¹⁴²
Booking	<p>Booking has made the following changes:</p> <ul style="list-style-type: none"> ■ removed all parity requirements throughout the EEA ■ launched the new Booking.com Data portability API to give users even more access, to and control over, their personal data ■ increased the scope of the data Booking provides to its partners ■ implemented additional controls over personal data flows within its business.¹⁴³
ByteDance	<p>In March 2024, ByteDance introduced the Data Portability API, to enable users to authorize the transfer of their information and third-party apps.¹⁴⁴ TikTok’s Data Portability API is globally available but currently limited to qualified applicants, specifically covering data for TikTok users in the EEA.¹⁴⁵</p>
Meta	<p>In January 2024, Meta provided consumers with the:</p> <ul style="list-style-type: none"> ■ ability to choose whether they would consent to Meta sharing information between their Facebook and Instagram accounts¹⁴⁶ ■ ability to use Facebook and Instagram for free with ads, or subscribe to stop seeing ads¹⁴⁷ ■ choice of using Facebook Messenger, Marketplace or Gaming services linked to a Facebook account, or create a stand-alone Messenger account or Marketplace/Gaming experience (that does not use their Facebook information). <p>In September 2024, Meta announced the introduction of ‘third-party chats’ for WhatsApp and Messenger to enable interoperability with third-party messaging services.¹⁴⁸ The third-party chats will be introduced in 2025, with voice/video calling available from 2027.</p>

141 For further discussion around Apple’s compliance with the DMA, including additional technical or financial requirements associated with its changes to app marketplaces, see section 3.2.3 (app marketplaces).

142 Apple, [Apple announces changes to iOS, Safari and the App Store in the European Union](#), Press release, 26 January 2024, accessed 13 March 2025.

143 Booking, [Booking Holdings Inc.’s Digital Markets Act Compliance Report: Public summary](#), November 2024, pp 2–3, accessed 13 March 2025.

144 TikTok, [TikTok’s Compliance with the Digital Markets Act](#), TikTok Newsroom, 4 March 2024, accessed 13 March 2025.

145 N Agius, [‘TikTok gives users enhanced data control for Digital Markets Act compliance’](#), *SearchEngineLand*, 5 March 2024, accessed 13 March 2025.

146 T Lamb, [‘Offering People More Choice on How They Can Use Our Services in the EU’](#), *Meta Newsroom*, 22 January 2024, accessed 13 March 2025.

147 T Lamb, [‘Offering People More Choice on How They Can Use Our Services in the EU’](#), *Meta Newsroom*, 22 January 2024, accessed 13 March 2025.

148 Meta, [An Update on How We’re Building Safe and Secure Third-Party Chats for Users in Europe](#), *Meta Newsroom*, 6 September 2024, accessed 13 March 2025.

Designated gatekeeper	Some of the changes made in response to the DMA
Microsoft	<p>In March 2024, Microsoft:</p> <ul style="list-style-type: none"> ■ enabled and provided instructions for third-party web search applications to offer web search services through the search box on the Windows task bar and to rely on any browser of their choice to show a search results page in the same way as the Microsoft Bing web search application ■ allowed users in the EEA to uninstall the Edge browser and Bing search engine from Windows devices ■ modified the sign-in experience on Windows, so Windows no longer automatically signs users into Microsoft products and services ■ introduced new data handling practices to ensure that any data collected from Windows PCs in the EEA about non-Microsoft applications running on Windows is not used for any competitive purpose against the providers of those applications.¹⁴⁹ <p>Additionally, LinkedIn users in the EEA can choose to keep their core LinkedIn experience connected or disconnected with other LinkedIn services they use.¹⁵⁰</p>

Some submissions to this Report contended that the DMA has had a positive impact for European businesses and consumers. Commercial Radio Australia noted that Apple has been required to allow iPhone and iPad users access to rival app stores and payment systems whereas Google has been required to change how it displays certain search results.¹⁵¹ Similarly, the Australian Computer Society observed that Apple enabled alternative app stores to be installed on iOS and improved competitors' access to mobile payment systems and Meta made WhatsApp and Messenger apps interoperable with other messaging apps.¹⁵²

Skyscanner's submission to the ACCC suggested that the DMA has had a positive impact in terms of market contestability for business users of Google Search.¹⁵³ Google, though, has argued that the changes it has made under the DMA with respect to hotel comparison features on its search page have negatively affected user satisfaction and web traffic to hotel websites, while traffic to intermediary hotel comparison websites has stayed flat.¹⁵⁴ The ACCC also notes Sensor Tower data demonstrating cumulative increases in downloads of alternative mobile browsers in Europe, following the introduction of the DMA.¹⁵⁵

149 Microsoft, [Microsoft implements DMA compliance measures](#), *Microsoft Blog*, 7 May 2024, accessed 13 March 2025.

150 Microsoft, [Microsoft implements DMA compliance measures](#), *Microsoft Blog*, 7 May 2024, accessed 13 March 2025.

151 Commercial Radio Australia, [Submission to the Final Report](#), 11 October 2024, pp 9–10.

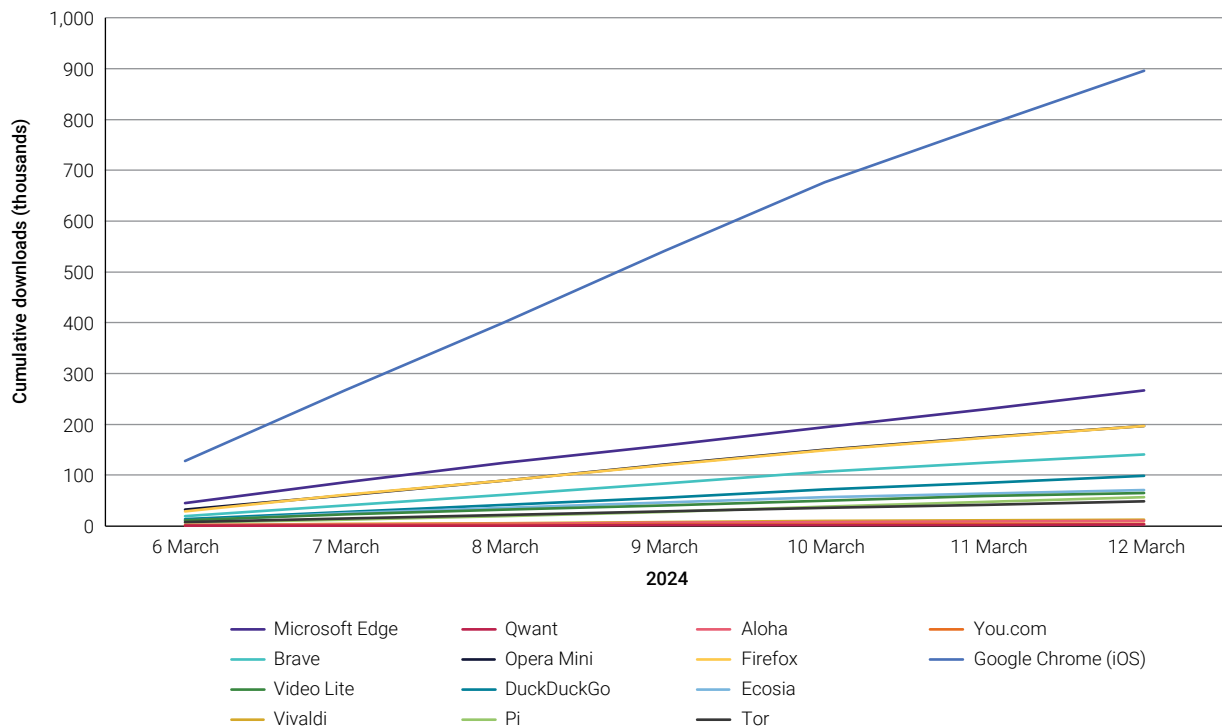
152 Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, pp 2–3.

153 Data from SparkToro shows that in 2024 for every 1,000 EU Google searches, 374 clicks go to the open web (that is, a non-Google-owned, non-Google-ad paying property). This figure is higher than the figure in the US, where only 360 clicks go to the open web. See R Fishkin, [‘2024 Zero-Click Search Study: For every 1,000 EU Google Searches, only 374 clicks go to the Open Web. In the US, it’s 360.’](#), *SparkToro*, 1 July 2024, accessed 13 March 2025; Skyscanner, [Submission to the Final Report](#), 11 October 2024, p 5.

154 O Bethell, [‘Sharing data on our DMA hotels test’](#), *The Keyword*, 12 December 2024, accessed 13 March 2025.

155 Source: ACCC analysis of Sensor Tower data.

Figure 2.1: Increased alternate browser downloads in Europe following the Digital Markets Act's effective date (6 March 2024) (iOS and Android devices)



Source: Sensor Tower data.

The ACCC also notes that in March 2025, Y Combinator (a prominent American technology startup accelerator and venture capital firm) together with a group of American startups and other technology companies and industry associations, wrote to the United States President to express their support for the objectives of the DMA in creating opportunities for American startups in sectors including AI, search and consumer apps.¹⁵⁶

Some stakeholders have raised concerns about the DMA's broad obligations

Some submissions argued that the DMA's obligations had the effect of being 'pre-set', 'overly broad' and 'backwards looking'¹⁵⁷ when applied across different business models in the digital ecosystem, or that they potentially gave rise to unintended consequences.¹⁵⁸ Apple and Google cited concerns about the impacts of compliance with DMA obligations on user privacy, safety, and security.¹⁵⁹ In addition, Google, Meta, Apple and Amazon raised concerns around whether the broad obligations,¹⁶⁰ or the prescriptive nature,¹⁶¹ of the DMA would improve competition outcomes and innovation in the EU.

¹⁵⁶ M Zeff, 'Y Combinator urges the White House to support Europe's Digital Markets Act', *TechCrunch*, 13 March 2025, accessed 14 March 2025.

¹⁵⁷ TikTok, [Submission to the Final Report](#), 11 October 2024, p 4.

¹⁵⁸ Microsoft, [Submission to the Final Report](#), 11 October 2024, p 2.

¹⁵⁹ Google, [Submission to the Final Report](#), 11 October 2024, pp 3–4; Apple, [Submission to the Final Report](#), 11 October 2024, pp 7–11.

¹⁶⁰ Google, [Submission to the Final Report](#), 11 October 2024, p 7; Meta, [Submission to the Final Report](#), 11 October 2024, p 7; Apple, [Submission to the Final Report](#), 11 October 2024, p 12.

¹⁶¹ Amazon, [Submission to the Final Report](#), 11 October 2024, p 7.

While Booking.com said it supports the DMA, it noted concern around designation criteria overemphasising size, and insufficiently factoring in differences between business models of firms subject to broad obligations. Booking.com recommended that the ACCC consider the adoption of service-specific codes in its regulatory approach.¹⁶²

Match Group noted that the DMA is ‘an important step in levelling the playing field between digital platforms and business users and consumers.’¹⁶³ In citing Apple’s changes to fees for access to alternative app stores, Match Group noted that the DMA would benefit from more prescriptive rules around compliance, as the ‘focus on “self-executing” substantive obligations grant excessive discretion regarding their implementation.’¹⁶⁴

The Coalition for App Fairness noted with concern that the DMA’s standard set of obligations for designated services did not come with extensive deliberations or appeals processes. Citing the current non-compliance investigations being undertaken by the European Commission, it also expressed concern around the willingness of gatekeepers to comply with the DMA.¹⁶⁵

Stakeholders including TikTok,¹⁶⁶ the Coalition for App Fairness,¹⁶⁷ the Global Antitrust Institute¹⁶⁸ and Match Group,¹⁶⁹ expressed their preference for a more flexible and tailored approach to ex ante obligations, similar to the model under the UK’s Digital Markets, Competition and Consumers Act, as opposed to the DMA’s ‘one-size-fits-all’ approach.

The DMA’s effects on innovation and economic opportunities are unclear

As reflected in table 2.1 above, the DMA has required designated gatekeepers to introduce a variety of changes to their products and services in the EU. Noting that the European Commission has ongoing non-compliance investigations in respect of designated gatekeepers,¹⁷⁰ and that the DMA has been in-force for around 1 year, it is difficult to effectively analyse the effect that the DMA has had on innovation in the EU.

The European Commission has estimated that the DMA would support increased opportunities and investment from a greater diversity of digital market participants, with an impact on economic growth in the EU of between €12 billion and €23 billion.¹⁷¹ The Draghi Report and draft policy documents from the EU also point to the importance of enforcement of the DMA so as to open up closed ecosystems and encourage businesses to propose innovative services to consumers.¹⁷²

162 Booking.com, [Submission to the Final Report](#), 11 October 2024, p 2.

163 Match Group, [Submission to the Final Report](#), 11 October 2024, p 4.

164 Match Group, [Submission to the Final Report](#), 11 October 2024, pp 4–5.

165 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 1.

166 TikTok, [Submission to the Final Report](#), 11 October 2024, p 3.

167 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 4–6.

168 Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, p 5.

169 Match Group, [Submission to the Final Report](#), 11 October 2024, p 26.

170 European Commission, [Commission opens non-compliance investigations against Alphabet, Apple and Meta under the Digital Markets Act](#), Press release, 25 March 2024, accessed 13 March 2025.

171 European Commission, [Europe fit for the Digital Age: New online rules for businesses](#), accessed 13 March 2025.

172 European Commission, [A Competitiveness Compass for the EU](#), 29 January 2025, p 7; M Draghi, [The future of European competitiveness: Part B | In-depth analysis and recommendations](#), September 2024, p 302.

However, in their submissions, Apple and Google cited concerns about the effects of compliance with the DMA on innovation. Apple noted the interoperability requirements under the DMA could force Apple to compromise its products in a way that impacts user privacy and security.¹⁷³ Apple also noted the regulatory uncertainties under the DMA have already resulted in the delayed rollout of AI technologies on iOS devices in the EU.¹⁷⁴ Google noted the risk that the DMA would reduce innovation by creating additional regulatory barriers, and similarly cited decisions taken by Apple and Meta to delay introduction of services into the EU as an example of the risk to innovation.¹⁷⁵

The ACCC also received several submissions from industry groups raising concerns that the DMA would:

- increase ‘unwanted standardisation’ by forcing similar compliance strategies ‘across diverse, differentiated services’¹⁷⁶
- restrict ‘free and fair-trade principles and conditions that have enabled mobile economy success and growth’¹⁷⁷
- deter investment and limit a firm’s ability to ‘respond swiftly to evolving market dynamics.’¹⁷⁸

2.1.4 Australia’s path towards a new ex ante digital competition regime

Throughout the ACCC’s Digital Platforms Inquiry (2017–2019), Digital Platform Services Inquiry (2020–2025) and Digital Advertising Services Inquiry (2021), the ACCC has identified a lack of effective competition in a range of digital platform markets, including:

- increasing market concentration across a range of digital platform services¹⁷⁹
- the positions of substantial market power held by large digital platforms give them the ability and incentive to engage in potentially anti-competitive conduct to entrench and extend that market power¹⁸⁰
- conduct that digital platforms engage in can impact businesses and consumers through higher prices, reduced choice, lower innovation and decreased quality of products and services.¹⁸¹

A list of recommendations made by the ACCC in respect of digital platforms can be found at Appendix B – Status of recommendations and relevant Government policy developments.

In its 2022 Regulatory Reform Report, the ACCC recommended a new regulatory regime with ex ante rules to promote competition in digital platform services.¹⁸² This regime would introduce new competition measures for certain ‘designated’ digital platforms to be introduced through service-specific codes of conduct.¹⁸³ Service-specific codes would be designed so as to be flexible enough to account for the dynamic nature of these markets, and are clear and certain to promote investment and innovation.¹⁸⁴ The new measures would address anti-competitive conduct, unfair

173 Apple, [Submission to the Final Report](#), 11 October 2024, pp 8, 11–12.

174 Apple, [Submission to the Final Report](#), 11 October 2024, pp 8, 11–12.

175 Google, [Submission to the Final Report](#), 11 October 2024, p 7.

176 Business Council of Australia, [Submission to the Final Report](#), 11 October 2024, p 3.

177 The App Association, [Submission to the Final Report](#), 11 October 2024, p 2.

178 US Chamber of Commerce, [Submission to the Final Report](#), 11 October 2024, p 2.

179 See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 36–39.

180 See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 40–41.

181 See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 41–44.

182 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 54–56, 108–109.

183 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 54–56, 108–109.

184 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 11.

treatment of business users and barriers to entry and expansion that prevent effective competition in digital platform markets by supporting targeted obligations to:

- prevent anti-competitive self-preferencing, tying and exclusive pre-installation
- address data advantages
- ensure fair treatment of business users
- improve switching, interoperability, and transparency.¹⁸⁵

The Australian Government has proposed a new digital competition regime

In response to the ACCC's recommendations in the September 2022 Regulatory Reform Report, on 2 December 2024 the Australian Government announced consultation on a proposed new digital competition regime to promote effective competition and unlock innovation, lower prices and better services for the benefit of Australian consumers and businesses.¹⁸⁶ Consultation on the proposal paper was run by Treasury and concluded on 14 February 2025.

The Australian Government noted that the rise and dominance of large international platforms, their market power and ability to restrict competition, and their central role in facilitating interactions between businesses and consumers, have also created the following competition harms in the digital markets:

- **higher costs:** limited competition means dominant platforms charge businesses steep fees, often passed on to consumers
- **lack of choice:** platforms preference their own products and services above smaller competitors
- **unfair terms:** small businesses face "take it or leave it" contracts that provide platforms with broad discretion to exercise their powers
- **barriers to switching:** such as designing user interfaces and directing users to default products that make it hard for consumers to select an alternative or switch.¹⁸⁷

The positions paper proposes a regulatory framework to introduce new, ex ante regulation for certain designated digital platforms with a critical position in the Australian economy. Box 2.2 shows the key elements of the proposed regime.

185 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 123–187.

186 Australian Government, [Digital platforms: a proposed new digital competition regime](#), 2 December 2024, accessed 13 March 2025.

187 Australian Government, [Digital platforms: A proposed new digital competition regime](#), 2 December 2024, accessed 13 March 2025.

Box 2.2: Key elements of the Australian Government's proposal for a new digital competition regime¹⁸⁸

Platform designation

Based on an ACCC designation investigation, the responsible Minister would designate digital platforms with a critical position in the Australian economy and that are significant to Australian consumers and businesses.

Designation criteria

The designation criteria would include both quantitative thresholds (such as Australian and/or global service-specific revenue, and number of Australian end users or business users) and qualitative factors (such as the market position held by the digital platform in the relevant service and whether it holds an important intermediary position between groups of users, such as consumers and businesses).

Duration of designation

Treasury has proposed that designation would remain in force for a period of 5 years. However, designation decisions may be reviewed before the expiry of the 5-year timeframe in limited instances, for example where there is a material change in circumstances.

Areas of priority

The Australian Government has published its intention to prioritise app marketplaces and ad tech services for designation under the proposed regime, with the possibility of expanding to more services over time.

Broad and service-specific obligations

The Australian Government has proposed a hybrid mix of broad principles in primary legislation, as well as the capacity for subordinate legislation providing further detailed obligations in respect of a designated firm.

Recognition of international compliance

To promote international coherence, the new regime would include a mechanism to allow platforms to provide compliance proposals noting their compliance measures adopted for similar overseas regimes, and committing that those same measures would be rolled out in Australia.

Enforcement by the ACCC

Once a digital platform entity is designated in respect of a specific service, the ACCC will be responsible for enforcing the digital competition regime, including compliance, investigating potential breaches and impose penalties where necessary.

Penalties

Proposed penalties under the digital competition regime are designed to match the maximum financial penalties under the CCA, which may include fines of up to \$50 million, 3 times the value of the benefit obtained, or 30% of adjusted turnover during the breach period.

¹⁸⁸ Australian Government, [Digital platforms: A proposed new digital competition regime](#), 2 December 2024, accessed 13 March 2025.

2.2 Unfair trading practices

2.2.1 Evolving digital markets continue to give rise to new consumer and small business harms

While digital markets can benefit consumers by providing convenient access to goods and services, information and bargaining power asymmetries can lead to business practices that increase the risk of consumer and small business harm.¹⁸⁹ According to the OECD, digital markets may amplify the presence and severity of a range of consumer harms, including:

- undisclosed influencer sponsorships
- subscription traps
- paying with personal data
- obscure microtransactions
- hurdles to obtain redress for problems.¹⁹⁰

Businesses operating in digital markets may also use consumer data to develop and refine potentially exploitative marketing and sales strategies. The ACCC's Regulatory Reform Report raised concerns about the collection and use of consumer data and excessive tracking of users by digital platforms.¹⁹¹ The OECD notes that pervasive data collection on consumer interactions with products and services by businesses can enable them to exploit consumers' behavioural biases more precisely with manipulative practices.¹⁹²

In 2024, the International Consumer Protection and Enforcement Network observed the prevalence of manipulative design practices across most websites and mobile apps it surveyed globally.¹⁹³ Similarly the OECD, in its survey across 20 countries, found that 90% of consumers had encountered a 'dark pattern' on a website or app.¹⁹⁴ The European Commission has documented the prevalence of manipulative practices extensively. In January 2023, it released the results of a sweep of 399 online retail websites as part of its 'Digital Fitness Check'. It found that 40% of online retail websites relied on manipulative practices designed to exploit consumers' vulnerabilities, including the use of fake countdown timers, hiding or obscuring important information, and user interfaces directing consumers towards subscriptions or more expensive options.¹⁹⁵ Box 2.3 shows the findings of the Digital Fitness Check.

189 OECD, [Protecting and empowering consumers in the digital transition: Issues Note](#), 8 October 2024, p 3.

190 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 3.

191 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 65.

192 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 4. See also, OECD, [Consumer vulnerability in the digital age: OECD Digital Economy Papers No. 355](#), June 2023, pp 5, 22; OECD, [Dark Commercial Patterns: OECD Digital Economy Papers No. 336](#), 26 October 2022, pp 23–24.

193 International Consumer Protection and Enforcement Network, ['ICPEN Sweep finds majority of websites and mobile apps use dark patterns in the marketing of subscription services'](#), ICPEN News, 9 July 2024, accessed 13 March 2025.

194 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 4.

195 European Commission, [Consumer protection: manipulative online practices found on 148 out of 399 online shops screened](#), Press release, 30 January 2023, accessed 13 March 2025.

Box 2.3: Findings of the EU's Digital Fitness Check

General findings

The Fitness Check found that consumer participation in digital markets was high, with most consumers (83%) having made some form of online purchase or used an online product or service between 2022 and 2023.¹⁹⁶ It also found that traders are often testing new territory and consumer law that will have to be applied in novel contexts.¹⁹⁷ Business-to-consumer e-commerce turnover was also found to have grown 65% compared to a 2018 baseline.¹⁹⁸

Consumers, though, were found to have insufficient knowledge of their rights.¹⁹⁹ Notwithstanding measures taken by the European Commission to address this issue, a lack of awareness of consumer rights continues to undermine effectiveness of EU consumer law in the digital environment.²⁰⁰ The Fitness Check also noted a high number of consumer reports of problematic practices.²⁰¹

Problematic practices

The most commonly reported problematic practices fell into the following categories:

- dark patterns (concerns about such practices were found to have intensified)
- addictive design and gaming (addictive use of digital products and services carries the risk of economic, physical and mental harm, and almost one third of consumers reported that they spend more time or money than they intended because of specific features such as the autoplay of videos, receiving rewards for continuous use or being penalised for inactivity)
- personalisation (a majority, 70%, of consumers were found to be concerned about how their personal data is used and shared)
- social media (only 20% of influencers systematically indicated the commercial nature of the content shared on social media platforms, and almost half of consumers have seen influencers promoting scams or dangerous products)
- digital contracts (problems with difficult cancellations and subscription traps have increased).²⁰²

196 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 11.

197 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 11.

198 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 12.

199 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 14.

200 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 14.

201 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, pp 14–17.

202 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, pp 18–23.

Impacts on consumers

Consumers in the EU were found to have incurred financial detriments because of problematic practices in the digital environment. Financial detriments reported included:²⁰³

- extra charges for products and services
- costs of repairs or replacement at a consumer's own expense
- cost of dispute resolution, including costs of experts' advice
- extra costs associated with reimbursements.

Existing consumer protection laws could benefit from more specificity in directives aimed at addressing manipulative design practices

The Fitness Check noted that there has been a continuation of the same problems of power imbalance between consumers and traders that triggered EU action in the past, now amplified by the increased scale, speed and potency of digital solutions for targeting consumers.²⁰⁴ It also noted that directives had insufficient specificity to deal with consumer harms in the digital environment.²⁰⁵

The Fitness Check observed the importance of:

- a strong, and self-standing consumer protection framework in providing added value when assessing evolving commercial practices in digital markets
- well-defined digital consumer rights in EU consumer law.²⁰⁶

However, the Fitness Check also noted that there had been issues around 'insufficient legal certainty about the application of existing general principle-based rules to complex online practices'.²⁰⁷

The emergence of generative artificial intelligence (AI) technology poses risks for consumers.²⁰⁸ Consumers may be misled by convincing AI-generated output, which has the potential to shape the preferences of consumers and prevent informed decision making.²⁰⁹ The OECD notes that AI may give rise to 'new and amplified' risks for consumers.²¹⁰ Businesses may be able to use generative AI and consumer data to target advertising and pricing at consumers' vulnerabilities.²¹¹ The OECD notes that a risk of generative AI is that it may exacerbate bias against certain consumer groups as advertising or services may be offered on 'less favourable terms' or some consumers may be

203 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, pp 25–26.

204 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 80.

205 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 81.

206 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 88.

207 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, p 87.

208 See DP-REG, [DP-REG Joint Submission to Department of Industry, Science and Resources – 'Safe and Responsible AI in Australia' discussion paper](#), 26 July 2023, accessed 13 March 2025.

209 G7, [Digital Competition Communiqué](#), *Proceedings of the G7 Competition Authorities and Policymakers' Summit*, Rome, 4 October 2024, p 3; See also, OECD, [Consumer vulnerability in the Digital Age: OECD Digital Economy Papers No. 355](#), June 2023, p 5.

210 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 7.

211 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 7.

completely ‘excluded’ from offers.²¹² Evidence emerging in international jurisdictions suggests generative AI-enabled consumer harms that may be considered unfair are proliferating online. For example, in 2023, the United States Federal Trade Commission (US FTC) reported that consumers have raised concerns about the malicious use of generative AI, which may be used to facilitate scams and fraud.²¹³

The operation of recommender systems – or ranking algorithms that recommend items to users on platforms and answer users’ queries – is also continuously evolving.²¹⁴ Algorithms can change how choice is ‘personalis[ed], packaged, presented, experienced, and understood’.²¹⁵ For example, digital platforms can tailor the content served to users, including products and services, based on demographic data and user behaviour.²¹⁶ Regulators, though, may face difficulties in understanding how such systems operate and the extent of consumer data collected by platforms to build them.²¹⁷

While enforcement action has been taken by regulators in digital markets, the OECD notes that existing laws and enforcement mechanisms may not be ‘sufficiently effective’ at preventing harms online.²¹⁸ The fast pace of technological change, and the complex and typically opaque nature of digital business models can pose challenges for policymakers in attempting to define and draft effective prohibitions against harms arising in digital markets.²¹⁹ It is therefore vital that efforts to modernise consumer protection and fair trading legislation to address harms in the digital economy factor in the flexibility required to anticipate and respond to ongoing evolutions in technology and consumer behaviour.

While some harms in digital markets discussed in this Final Report may be prohibited by existing provisions of the Australian Consumer Law (ACL) (for example, false countdown timers and drip pricing), other harms (such as the use of ranking algorithms to unfairly influence purchasing decisions and some aspects of subscription trap conduct²²⁰) are not explicitly covered by the ACL.²²¹ The next sections outline the approaches taken by international jurisdictions in dealing with emerging harms in digital markets through prohibitions on unfair trading practices and explain that Australian laws need to keep pace with evolving digital markets to better address consumer and small business harms through an unfair trading practices prohibition.

2.2.2 International jurisdictions already prohibit unfair trading practices in digital markets or are expanding consumer protections

Several jurisdictions have enshrined prohibitions against unfair trading practices through general consumer protection or fair trading legislation.²²² The EU, UK, US and South Korea have introduced, or are seeking to introduce, legislation that seeks to prohibit unfair trading practices. In some cases, such legislation broadly covers economy-wide unfair trading practices, whilst in others it

212 OECD, [Protecting and empowering consumers in the digital transition: Issues note](#), October 2024, p 7.

213 Based on consumer complaints to the US FTC and its ‘national and international data contributors’. See S Fondrie-Teitler and A Jayanti, [‘Consumers Are Voicing Concerns About AI’](#), *FTC Technology Blog*, 3 October 2023, accessed 13 March 2025.

214 M Schrage, [‘The recommender revolution’](#), *MIT Technology Review*, 27 April 2022, accessed 13 March 2025; IBM, [What is content-based filtering?](#), 21 March 2024, accessed 13 March 2025. See also Digital Platform Regulators Forum, [Literature summary: Harms and risks of algorithms, Working paper](#), June 2023, p 16.

215 M Schrage, [‘The recommender revolution’](#), *MIT Technology Review*, 27 April 2022, accessed 13 March 2025.

216 OECD, [Unpacking e-commerce: business models, trends and policies](#), 6 June 2019, p 76.

217 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, p 10.

218 OECD, [Protecting and empowering consumers in the digital transition](#), October 2024, p 7.

219 OECD, [Protecting and empowering consumers in the digital transition](#), October 2024, p 8.

220 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 12.

221 See [Competition and Consumer Act 2010 \(Cth\)](#), Part 3–1 – Unfair practices.

222 For example, see [Singapore’s Consumer Protection \(Fair Trading\) Act, Part 2: Unfair Practices](#).

seeks to address specific conduct occurring in digital markets, such as fake online reviews and the use of manipulative design practices. Summaries of the approaches taken in key jurisdictions are discussed below.

EU legislation uses broad and specific approaches to prohibiting unfair trading practices

In the EU, the Unfair Commercial Practices Directive, the Digital Services Act (DSA) and the (proposed) Digital Fairness Act each, in part, deal with unfair trading practices in different ways.

The Unfair Commercial Practices Directive, adopted by the EU in 2005, prohibits unfair commercial practices that occur before, during and after a business-to-consumer transaction takes place.²²³ The Unfair Commercial Practices Directive prohibits 2 broad categories of harms arising from unfair commercial practices: misleading commercial practices and aggressive commercial practices.²²⁴

- **Misleading commercial practices** include misleading actions such as commercial practices that are likely to deceive the average consumer of the existence, nature, characteristics or price of a product or the commitments by a trader 'in relation to indirect sponsorship or approval of the trader or product'.²²⁵ Such practices may also include misleading omissions related to the product and trader.²²⁶
- **Aggressive commercial practices** including the use of harassment, coercion and undue influence on consumers.²²⁷

The Unfair Commercial Practices Directive also prohibits specified commercial practices²²⁸, including manipulative design patterns, non-transparent search result ranking and fake online reviews, among others.²²⁹ The directive's purpose is to protect consumers from 'unfair commercial practices' which harm their 'economic interests'.²³⁰ The European Commission adopts new interpretations and applications of the directive (known as guidance) occasionally.²³¹ On 17 December 2021, guidance was issued for a range of consumer issues pertaining to digital markets.²³²

The Digital Services Act, adopted in October 2022, introduced rules on the conduct of online intermediary services and business and consumer users of platforms.²³³ Some of the provisions in the Digital Services Act deal with unfair trading practices. For example, users are provided with greater control over content personalisation on digital platforms, pernicious ad targeting (such as advertising directed to minors) is prohibited and requiring transparency on the identity of traders

223 EU, [Unfair Commercial Practices Directive 2005/29/EC](#), 11 May 2005, accessed 13 March 2025; EU, [Unfair commercial practices: Summary of Directive 2005/29/EC concerning unfair business-to-consumer commercial practices](#), 31 May 2024, accessed 13 March 2025.

224 EU, [Unfair Commercial Practices Directive 2005/29/EC](#), 11 May 2005, accessed 13 March 2025.

225 EU, [Unfair Commercial Practices Directive 2005/29/EC](#), 11 May 2005, accessed 13 March 2025.

226 EU, [Unfair Commercial Practices Directive 2005/29/EC](#), 11 May 2005, accessed 13 March 2025.

227 EU, [Unfair Commercial Practices Directive 2005/29/EC](#), 11 May 2005, accessed 13 March 2025.

228 This mix of broad and specific prohibitions against unfair trading practices is also used in Singapore. In Singapore, the Consumer Protection (Fair Trading) Act 2003 (CPFTA) protects consumers against unfair trading practices. The CPFTA contains a general prohibition against 'unfair practices' and specifies 24 specific unfair practices. See Competition and Consumer Commission of Singapore, [Consumer Protection \(Fair Trading\) Act](#), 28 January 2022, accessed 13 March 2025.

229 Your Europe, [Unfair commercial practices](#), last updated 4 November 2024, accessed 13 March 2025.

230 European Commission, [Unfair commercial practices directive](#), accessed 13 March 2025.

231 European Commission, [Unfair commercial practices directive](#), accessed 13 March 2025.

232 For example, the European Commission provided guidance on practices relevant to digital markets, including: 'transparency of search results', 'consumer reviews and endorsements', 'influencer marketing', 'data-driven personalisation and dark patterns' and 'gaming practices', among others. European Commission, [Commission Notice – Guidance on the interpretation and application of Directive 2005/29/EC](#), 29 December 2021, accessed 13 March 2025.

233 [Regulation \(EU\) 2022/2065 of the European Parliament \(Digital Services Act\)](#), 19 October 2024, accessed 13 March 2025; EU [Digital Services Act](#), 15 February 2023, accessed 13 March 2025.

(business users of online marketplaces).²³⁴ While the Digital Services Act also includes dispute resolution provisions, these are discussed further in section 2.3 of this Report. The Digital Services Act has applied to a subset of designated digital platforms in August 2023, and online intermediary services since February 2024.²³⁵ As discussed below (see box 2.4), the EU is also seeking to introduce legislation to address manipulative design practices.

Box 2.4: The EU's proposed Digital Fairness Act

- The Digital Fairness Act is an anticipated legislative proposal from the European Commission. While the proposal has not yet been tabled, it is expected to be presented no earlier than early 2026 by Michael McGrath, Commissioner for Democracy, Justice, and Rule of Law.²³⁶
- The proposed Digital Fairness Act may aim to address unethical techniques and commercial practices related to dark patterns, marketing by social media influencers, the addictive design of digital products and online profiling, especially when consumer vulnerabilities are exploited for commercial purposes. Its scope may also expand to include dynamic pricing.²³⁷
- The proposed Digital Fairness Act will build on the conclusions of the European Commission's 2024 Digital Fairness Fitness Check and the European Parliament's Resolution on Addictive Design. Both documents highlight gaps in EU laws, such as the General Data Protection Regulation, the Digital Services Act, and the Unfair Commercial Practices Directive, which do not fully cover issues like dark patterns, addictive design, or dynamic pricing.²³⁸
- Preparatory steps for the proposed Digital Fairness Act, including evidence gathering, public consultations, and impact assessments, are set for 2025.²³⁹

More broadly, enforcement action has since been taken by EU member states against platforms for unfair commercial practices. Box 2.5 shows an example of this, in respect of enforcement action taken in Italy.

234 European Commission, [The impact of the Digital Services Act on digital platforms](#), accessed 13 March 2025.

235 European Commission, [The Digital Services Act](#), accessed 13 March 2025.

236 Centre on Regulation in Europe, '[Setting the Stage for Digital Fairness: A Crucial Crossroads for Consumer Protection](#)', *CERRE News & Insights*, 11 December 2024, accessed 13 March 2025.

237 J Tar, '[EU Digital Fairness Act set for early 2026, with consumer protection in focus](#)', *MLex*, 10 January 2025, accessed 13 March 2025.

238 European Commission, [Commission Staff Working Document Fitness Check of EU consumer law on digital fairness: SWD\(2024\) 230 final](#), 3 October 2024, pp 48–54; European Parliament, [Resolution on Addictive design of online services and consumer protection in the EU single market \(2023/2024\(INI\)\) – Texts adopted](#), 12 December 2023, p 8.

239 J Tar, '[EU Digital Fairness Act set for early 2026, with consumer protection in focus](#)', *MLex*, 10 January 2025, accessed 13 March 2025.

Box 2.5: Enforcement action against digital platforms by the Italian Competition Authority

The Italian Competition Authority has taken enforcement action using domestic legislative powers against at least 2 digital platforms in relation to unfair trading practices.

- On 14 March 2024, the Authority announced sanctions on TikTok for unfair commercial practices on the social media platform which it found threatened the safety of minors and vulnerable individuals.²⁴⁰ The sanctioned conduct related to systematic algorithmic profiling of users as a result of TikTok's failure to 'implement appropriate content published on the platform'.²⁴¹
- On 5 June 2024, the Authority noted it fined Meta for unfair commercial practices, including that Meta did not adequately inform its users of its use of their personal data.²⁴²

Updated consumer protection law in respect of unfair trading practices in the UK

In the UK, unfair trading practices were previously addressed under the Unfair Trading Regulations 2008, which imposed common rules related to business-to-consumer commercial practices and sought to mirror the prohibitions found under the EU's Unfair Commercial Practices Directive.²⁴³ The existing provisions covering unfair trading practices in the Unfair Trading Regulations 2008 will be repealed and replicated (with minor amendments) in Part 4, Chapter 1 of the recently passed Digital Markets, Competition and Consumers Act.

The consumer protection provisions of the Digital Markets, Competition and Consumers Act include a new 'transactional decision' test for determining whether a commercial practice is unfair. The CMA will assess if the practice is likely to cause the average consumer to take a transactional decision that they would not otherwise have taken because of a misleading action or omission; an aggressive practice; a breach of professional diligence requirements or omitting material information from an invitation to purchase.²⁴⁴

The Digital Markets, Competition and Consumers Act also specifies a number of commercial practices that are 'in all circumstances considered unfair', meaning they do not require consideration of the 'transactional decision' test. Examples include making false 'free' offers, faking credentials and falsely claiming that an offer is only available for a limited time.²⁴⁵ In addition, the Digital Markets, Competition and Consumers Act will provide new protections to mitigate the risks of consumers encountering fake consumer reviews;²⁴⁶ the 'drip pricing' of unavoidable fees,²⁴⁷ and subscription and saving scheme contracts.²⁴⁸ The Digital Markets, Competition and Consumers Act will, for the first

240 Italian Competition Authority, [PS12543 – Italian Competition Authority: TikTok sanctioned for an unfair commercial practice](#), Press release, 14 March 2024, accessed 13 March 2025.

241 Italian Competition Authority, [PS12543 – Italian Competition Authority: TikTok sanctioned for an unfair commercial practice](#), Press release, 14 March 2024, accessed 13 March 2025.

242 A Armellini and E Pollina, [‘Italian watchdog fines Meta for unfair commercial practices’](#), *Reuters*, 6 June 2024, accessed 13 March 2025.

243 L Conway, [Consumer protection: Unfair Trading Regulations – House of Commons Library](#), 26 November 2021, p 5.

244 [Digital Markets, Competition and Consumer Act \(UK\) 2024](#), section 225(4).

245 [Digital Markets, Competition and Consumer Act \(UK\) 2024](#), Schedule 20.

246 [Digital Markets, Competition and Consumer Act \(UK\) 2024](#), Schedule 20.

247 [Digital Markets, Competition and Consumer Act \(UK\) 2024](#), Schedule 20.

248 [Digital Markets, Competition and Consumer Act \(UK\) 2024](#), Part 4, Chapters 2, 3.

time, enable the CMA to directly enforce breaches of the consumer protection provisions (without applying to the courts for remedies).²⁴⁹

Broad legislative obligations against unfair trading practices in the US

In the US, the Federal Trade Commission Act empowers the US FTC, the US competition, consumer, and privacy regulator, to deal with unfair trading practices to prevent unfair methods of competition. The Federal Trade Commission Act also prevents unfair or deceptive acts or practices in or affecting commerce which are considered unfair or deceptive.²⁵⁰ Acts or practices are considered unfair when they cause or are likely to cause substantial injury to consumers, and cannot be reasonably avoided.²⁵¹ An example of the US FTC's use of this provision is its ongoing enforcement action against Amazon (see box 2.6).

Box 2.6: Federal Trade Commission v Amazon (Prime)

On 21 June 2023, the US FTC brought enforcement action against Amazon for allegedly enrolling consumers in Amazon Prime subscriptions without their consent and knowingly making it difficult for them to cancel their subscriptions using 'dark patterns'.²⁵²

The US FTC's complaint alleges that Amazon deliberately designed its Prime cancellation process to be labyrinthine, and that the company and its leadership slowed or rejected user experience changes that would have made the process simpler for consumers because those changes adversely affected Amazon's bottom line.²⁵³ The US FTC alleges this conduct violated the Federal Trade Commission Act (including section 5, discussed above) and the Restore Online Shoppers' Confidence Act.²⁵⁴

The US FTC later provided further details about its allegations, including excerpts from an internal Amazon document that used the word 'misdirection' to describe the company's practice of forcing consumers to find a small blue-text link to make a purchase without joining Prime, while using a far more prominent button saying 'Get FREE Two-Day Shipping' that enrolled consumers in Prime.²⁵⁵ Amazon disputes the US FTC's allegations.²⁵⁶

While the Federal Trade Commission Act does not prohibit specific examples or categories of conduct, it grants the US FTC the authority to issue directives prohibiting certain unfair conduct by businesses. The US FTC can then seek civil penalties against businesses that have violated such directives. On 14 August 2024, the US FTC announced a specific rule banning fake reviews and

249 H Fletcher, 'Getting ready for the consumer protection changes in the Digital Markets, Competition and Consumers Act 2024', *CMA Blog*, 31 July 2024, accessed 13 March 2025.

250 See 'Unfair methods of competition unlawful; prevention by Commission' in US FTC, [Federal Trade Commission Act](#), accessed 13 March 2025, pp 3–9.

251 See 'SEC. 5. [15 U.S.C. 45]' in [Federal Trade Commission Act](#), p 4. See also, The Treasury, [Unfair trading practices – Consultation Regulation Impact Statement, Appendix A: International responses to unfair trading practices](#), August 2023, p 31.

252 US FTC, [FTC Takes Action Against Amazon for Enrolling Consumers in Amazon Prime Without Consent and Sabotaging Their Attempts to Cancel](#), Press release, 21 June 2023, accessed 13 March 2025.

253 *Federal Trade Commission v Amazon.com Inc.*, [Complaint filed in the US District Court Western District of Washington](#), 21 June 2023, p 3.

254 US FTC, [FTC Takes Action Against Amazon for Enrolling Consumers in Amazon Prime Without Consent and Sabotaging Their Attempts to Cancel](#), Press release, 21 June 2023, accessed 13 March 2025; *Federal Trade Commission v Amazon.com Inc.*, [Complaint filed in the US District Court Western District of Washington](#), 21 June 2023, p 3.

255 US FTC, [FTC Adds Senior Executives Who Played Key Roles in Prime Enrollment Scheme to Case Against Amazon](#), Press release, 20 September 2023, accessed 13 March 2025.

256 MLex, [Amazon disputes US FTC's allegations about dark patterns](#), MLex, 21 June 2023, accessed 13 March 2025.

testimonials.²⁵⁷ The rule allows the US FTC to seek civil penalties for contraventions of the following prohibitions:²⁵⁸

- fake or false consumer reviews, consumer testimonials, and celebrity testimonials (including reviews and testimonials that misrepresent that they are by someone who does not exist, or who did not have actual experience with the business or its products or services)
- buying positive or negative reviews (including businesses providing compensation or other incentives conditioned on the writing of consumer reviews expressing a particular sentiment, either positive or negative)
- insider reviews and consumer testimonials (including by insiders who fail to clearly and conspicuously disclose their material connection to the business)
- company-controlled review websites (including the misrepresentation that a website or entity that a business controls provides independent reviews or opinions about a category of products or services that includes the business' own products or services)
- review suppression (including threats by a business to remove a negative consumer review)
- misuse of fake social media interactions (including selling or buying fake indicators of social media influence).²⁵⁹

South Korea seeks to regulate manipulative design practices on online marketplaces

South Korea's Consumer Protection in Electronic Commerce Act (E-Commerce Act) seeks to regulate the fair trade in goods and services online, including providing consumers with protections in respect of product quality, timeliness and accuracy of product delivery and protections against identity theft.²⁶⁰

On 25 January 2024, South Korea's Parliament introduced proposed amendments to the E-Commerce Act, aimed at prohibiting the use of manipulative design practices in online transactions including e-commerce.²⁶¹ The amendments would empower the Korea Fair Trade Commission (KFTC) to impose fines for the use of manipulative design practices on e-commerce platforms, including hidden costs, false hierarchies (creating a false sense of urgency with the impression of limited choice) and obstruction or interference with cancellation or un-subscription processes.²⁶²

257 US FTC, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), Press release, 14 August 2024, accessed 13 March 2025.

258 International Consumer Protection and Enforcement Network, ['Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials'](#), *ICPEN News*, 16 August 2024, accessed 13 March 2025.

259 International Consumer Protection and Enforcement Network, ['Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials'](#), *ICPEN News*, 16 August 2024, accessed 13 March 2025.

260 Statutes of the Republic of Korea, [Act on the Consumer Protection in Electronic Commerce](#), accessed 13 March 2025.

261 Digital Policy Alert, [Republic of Korea: Adopted Bill amending Consumer Protection in Electronic Commerce \(E-Commerce Act/Bill no. 2126387\)](#), 25 January 2025, accessed 13 March 2025; Statutes of the Republic of Korea, [Act on the Consumer Protection in Electronic Commerce](#), accessed 13 March 2025; Digital Policy Alert, [Republic of Korea: Implemented Article 21-2 \(2\) of the Act amending Consumer Protection in Electronic Commerce \(E-Commerce Act\)](#), 13 February 2024, accessed 13 March 2025.

262 Kim & Chang, ['Strengthened Regulations on Dark Patterns'](#), *Newsletters*, 3 November 2024, accessed 13 March 2025.

2.2.3 Australia's path towards prohibiting unfair trading practices

As noted in its Regulatory Reform Report, the ACCC has previously identified several examples of problematic conduct occurring on digital platforms that are currently unlikely to breach the ACL. These include, but are not limited to:²⁶³

- using interface design strategies (including manipulative design practices or 'dark' patterns) which impede choice and harm consumers, including in relation to changing default search engines or making purchases on online marketplaces
- business practices that dissuade consumers and small businesses from exercising their contractual or other legal rights, such as providers making it difficult to cancel subscriptions after free trials with the consequence of subscriptions rolling over to paid subscriptions despite consumers no longer utilising or wanting them
- practices designed to get consumers and small business to agree to unfavourable contract terms, with limited opportunity for them to be informed about their rights and obligations. This includes:
 - using clickwrap agreements containing take-it-or-leave-it terms and bundling consents in policies that are long, complex, and unclear, to obtain unreasonable rights to use data
 - presenting terms, conditions and privacy policies in a way that consumers and small businesses can not readily understand, and/or
 - strategically over-disclosing product details to hide key information consumers and small businesses require to make an informed decision.

There is evidence to suggest that many Australian consumers have been impacted by problematic conduct in digital markets. Citing evidence from the Consumer Policy Research Centre (CPRC), the ACCC's Report on Social Media found that in 2022, 83% of Australians experienced negative outcomes from a website or app using design features aimed at influencing their behaviour.²⁶⁴ In August 2024, the CPRC estimated that:

- 75% of Australians who have subscriptions have had some form of negative experience when trying to cancel a subscription²⁶⁵
- 10% of Australians who have subscriptions (including but not limited to apps) have given up trying to cancel a subscription and therefore keep paying for a product or service they no longer need or want.²⁶⁶

The CPRC also found that large platforms have not adjusted cancellation processes globally in response to Europe's Digital Services Act.²⁶⁷

The ACCC has observed consumers being harmed by under- or un-regulated unfair trading practices that can occur online, including but not limited to:

- subscription service providers making it difficult for consumers and small businesses to cancel their subscriptions, particularly after free trials²⁶⁸
- the use of choice architecture and other practices designed to get consumers and small businesses to agree to unfair or unfavourable contract terms, with limited opportunity for them

263 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 62–68.

264 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, p 149.

265 CPRC, [Let me out – subscription trap practices in Australia](#), 20 August 2024, p 4.

266 CPRC, [Let me out – subscription trap practices in Australia](#), 20 August 2024, p 6.

267 CPRC, [Let me out – subscription trap practices in Australia](#), 20 August 2024, p 4.

268 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 8.

to be informed about their rights and obligations, including to obtain unreasonable rights to use users' data²⁶⁹

- business practices that seek to dissuade consumers and small businesses from exercising their contractual or other legal rights, including the provision of unnecessary information for consumers to access benefits²⁷⁰
- businesses failing to disclose changes to a product or closely related product in circumstances that a consumer would reasonably expect that change to be disclosed²⁷¹
- the use of negative choice architecture such as forced action and friction which significantly impedes consumer and small business choice and autonomy²⁷²
- platforms failing to implement reasonable measures to protect their customers from fraudulent practices by third parties using their services.²⁷³

In the context of the Digital Platforms Inquiry, in 2019 the ACCC recommended to the Australian Government that the ACL be amended to include an economy-wide prohibition on unfair trading practices.²⁷⁴

The recommendation was then restated as part of the Regulatory Reform Report.²⁷⁵ The ACCC noted in its submission to the Treasury's Consultation Regulation Impact Statement on unfair trading practices that throughout the ACCC's work, including beyond the Digital Platforms Inquiry, it has identified a broad range of conduct that is not adequately addressed by the existing provisions of the ACL. The ACCC considers an economy-wide unfair trading practices prohibition is necessary to appropriately establish a whole-of-economy standard of behaviour that would better future-proof Australia's consumer and fair trading laws.²⁷⁶ It would establish a norm of behaviour that applies across different sets of circumstances, and for all participants in markets.²⁷⁷ This norm of behaviour would be able to keep up with evolving commercial practices in a way that more rigid ex-post regulation, like an industry code, cannot.²⁷⁸ See box 2.7 for further detail on the Australian Government's consultation on unfair trading practices regulation.

269 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 9.

270 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 9.

271 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 10.

272 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 10.

273 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 10.

274 ACCC, [Digital Platforms Inquiry Final Report](#), 26 July 2019, p 26.

275 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 66.

276 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 7.

277 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 7.

278 ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 7.

Box 2.7: Australian Government consultation on unfair trading practices regulation

The Australian Government led a public consultation on options to address unfair trading practices on behalf of all Commonwealth states and territories between 31 August 2023 and 29 November 2023.²⁷⁹ The Consultation Regulation Impact Statement proposed 4 potential policy options, including a 'status quo' approach, amendments to unconscionable conduct provisions in the ACL, a general prohibition on unfair trading practices or a combination of general and specific prohibitions.²⁸⁰

On 16 October 2024, the Government announced that it will address a wide range of unfair trading practices, with a final proposal for reforms to the ACL to be settled with states and territories in the first half of 2025.²⁸¹

The Australian Government sought further feedback on a set of proposals between 15 November 2024 and 13 December 2024.²⁸² In a supplementary consultation, it sought feedback on a proposal to address unfair trading practices by amending the ACL to add 'a general prohibition that is principles-based' and 'specific prohibitions targeting certain unfair practices', as well as the consumer benefits of the potential reforms and business compliance costs.²⁸³

On 14 March 2025, the Australian Government announced that it would also consult in 2025 on the design of unfair trading practices protections for small businesses.²⁸⁴

The ACCC supports the Australian Government's current initiatives in addressing unfair trading practices. The ACCC has participated in the consultation process with Treasury on the legislative proposals for unfair trading practices regulation. The ACCC continues to advocate for an economy-wide, principles-based prohibition against unfair trading practices to more effectively address consumer and small business harms.

2.3 Dispute resolution

2.3.1 Dispute resolution processes for consumer and business interactions with digital platforms are needed

Dispute resolution mechanisms can provide users (consumers and businesses) with important means of addressing complaints with digital platforms. At times, individuals acting in bad faith (including untrustworthy sellers and scam advertisers) can take advantage of the inadequate dispute resolution processes on a digital platform to further proliferate harm.²⁸⁵

279 The Treasury, [Unfair trading practices – Consultation Regulation Impact Statement](#), accessed 13 March 2025.

280 The Treasury, [Protecting consumers from unfair trading practices: Consultation Regulation Impact Statement](#), August 2023, p 5.

281 Prime Minister of Australia, [Albanese Government to stop the rip offs from unfair trading practices](#), Press release, 16 October 2024, accessed 13 March 2025.

282 The Treasury, [Unfair trading practices – supplementary consultation paper](#), accessed 13 March 2025.

283 The Treasury, [Unfair trading practices – supplementary consultation paper](#), accessed 13 March 2025.

284 Minister for Agriculture, Fishers and Forestry, Minister for Small Business, Assistant Treasurer and Minister for Financial Services, Assistant Minister for Competition, Charities and Treasury, Assistant Minister for Employment, [Albanese Labor Government to extend unfair trading practice protections to small business](#), Press release, 14 March 2025, accessed 14 March 2025.

285 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 88.

Effective dispute resolution mechanisms are an increasingly important aspect of the digital ecosystem. Digital platforms increasingly act as intermediaries between businesses and consumers (including in search, online advertising and online marketplaces). Businesses are also increasingly reliant on the products and services offered by digital platforms. In the context of increasing network effects driving digital platforms to increased scale, businesses are often faced with an imbalance in bargaining power when seeking to resolve complaints with digital platforms.²⁸⁶

The ACCC has previously noted concerns in how digital platforms respond to consumer and business complaints, in particular:

- the complexity, time and cost of existing dispute resolution processes
- the lack of responsiveness from digital platforms
- inconsistent and unfair handling of complaints
- a lack of transparency over the decision-making of digital platforms.²⁸⁷

As part of the Report on Social Media, the ACCC received submissions from users expressing concern around the existing complaints handling mechanisms of digital platforms, including:

- business concerns around the responsiveness of digital platforms to address conduct that may impact on advertising campaigns, including that complaints are addressed in a timely manner²⁸⁸
- user concerns around resolving account-related issues (including blocked accounts following a disputed age-verification process, and accounts incorrectly labelled as political organisations) with social media platforms in a timely manner.²⁸⁹

As noted in the Regulatory Reform Report, Australians consider that it needs to be easier to make a complaint and get issues resolved with digital platforms.²⁹⁰ According to 2024 ACCC consumer survey data, the majority of respondents (82%) agreed there should be a specialised independent external dispute resolution body for users of digital platform services to escalate complaints which cannot be resolved with platforms directly (see figure 2.2).²⁹¹ In submissions to this Report, the ACCC received submissions from SBS²⁹² and the Australian Small Business and Family Enterprise Ombudsman²⁹³ noting the importance of dispute resolution mechanisms for businesses.

286 European Commission, [Impact Statement on the Proposal for a Regulation of the European Parliament and of the Council on promoting fairness and transparency for business users of online intermediation services](#), 26 April 2018, pp 24–25.

287 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 89–90.

288 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, pp 87–88.

289 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, p 155.

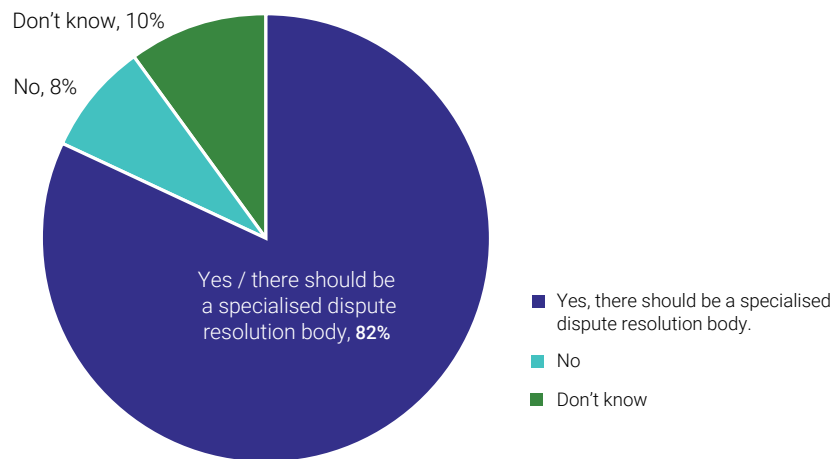
290 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 90.

291 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 11.

292 SBS, [Submission to the Final Report](#), 11 October 2024, p 8.

293 Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

Figure 2.2: Australians' support for an external dispute resolution body for digital services



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 11. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 123 (question H1) for the full wording of this question in the consumer survey. Survey of Australian consumers aged 14+ conducted October–November 2024.

In the context of both the Digital Platforms Inquiry and Digital Platform Services Inquiry, the ACCC has previously recommended that:

- digital platforms be obliged to meet mandatory minimum internal dispute resolution standards, which ensure accessibility, timeliness, accountability, the ability to escalate to a human being, and transparency²⁹⁴
- an external dispute resolution scheme for digital platforms be established.²⁹⁵

The ACCC notes that there are a variety of external dispute resolution mechanisms that exist in different sectors of Australia's economy (see box 2.8). Given the existing capabilities of dispute resolution bodies in Australia, the ACCC considers it vital that progress be made on an external dispute resolution scheme applicable to digital platforms.

²⁹⁴ The ACCC has previously recommended that minimum internal dispute resolution standards should apply, at a minimum, to search, social media, online private messaging, app stores, online retail marketplaces and digital advertising services. See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 88.

²⁹⁵ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 98.

Box 2.8: Examples of external dispute resolution schemes in Australia

Australian Financial Complaints Authority (AFCA)

AFCA provides consumers and small businesses with free, independent external dispute resolution for financial complaints that have not been able to be resolved via mandatory internal dispute resolution obligations, as an alternative to going to court.²⁹⁶ AFCA has the power to make binding decisions, including to award compensation for losses suffered because of a financial service provider's error or inappropriate conduct.²⁹⁷ All providers of specified financial services are required to be members of and fund the AFCA scheme (through annual registration fees and complaint-related charges). There are, however, limited exceptions for certain types of financial service providers.²⁹⁸

Telecommunications Industry Ombudsman (TIO)

The TIO provides independent external dispute resolution for consumers and small businesses who have been unable to resolve their complaint directly with a telecommunications service provider.²⁹⁹ The TIO can make binding decisions, including requiring compensation (up to \$100,000) for financial and non-financial losses caused directly by the provider.³⁰⁰ All telecommunication service providers are required to be members of and fund the TIO scheme (through an industry levy). The Australian Communications and Media Authority (ACMA) may, however, provide exemptions to specific providers.³⁰¹

State and territory energy and water ombudsman schemes

The Australian Capital Territory, New South Wales (NSW), Queensland, South Australia, Tasmania, Victoria, and Western Australia all have free, independent ombudsman schemes to assist consumers with resolving complaints about electricity, gas and water service providers that have not been able to be resolved directly with the provider.³⁰² For example, in NSW, the Energy & Water Ombudsman NSW (EWON) can make binding decisions, including compensation orders.³⁰³ All electricity networks, gas networks, retailers and water providers are required to be members of the EWON (subject to limited exemptions), which is funded by membership fees and complaint-related charges.³⁰⁴

2.3.2 International jurisdictions are providing mechanisms for external dispute resolution

The EU and UK currently have regulations that either mandate requirements for digital platforms' internal dispute resolution systems or provide users with external dispute resolution systems for resolving complaints with digital platforms. These regulations are discussed further below.

296 Australian Financial Complaints Authority, [About AFCA](#), accessed 13 March 2025.

297 Australian Financial Complaints Authority, [How we make decisions](#), accessed 13 March 2025.

298 Australian Financial Complaints Authority, [Funding](#), accessed 13 March 2025.

299 Telecommunications Industry Ombudsman, [Policies and Procedures](#), last updated 1 July 2024, accessed 13 March 2025.

300 Telecommunications Industry Ombudsman, [Compensation for financial loss](#), December 2021, p 1.

301 ACMA, [TIO scheme requirements and exemptions](#), last updated 17 December 2024, accessed 13 March 2025.

302 Australian Energy Regulator, [Useful contacts](#), accessed 13 March 2025.

303 Energy & Water Ombudsman NSW, [Binding decisions](#), accessed 13 March 2025.

304 Energy & Water Ombudsman NSW, [Our funding](#), accessed 13 March 2025.

External dispute resolution bodies that address business and consumer complaints in the EU

The EU Regulation on Platform-to-business relations (Platform-to-Business Regulation) was introduced by the European Commission to create a fair, transparent and predictable environment for small businesses and traders engaging with online intermediation services.³⁰⁵ These services include search engines, online marketplaces, social media, and app stores.³⁰⁶

The regulation entered into force in July 2019 and continues to apply in the UK after it exited the EU.³⁰⁷ It aims to ensure business users of online intermediation services and corporate website users of search engines are granted appropriate transparency, fairness and effective redress possibilities.³⁰⁸ The steps providers of specified services must take are twofold. First, they must provide an internal complaints handling system for business users which is free of charge, easily accessible and timely.³⁰⁹ Second, they must name a minimum of 2 external mediators with which they are willing to engage to attempt to settle, out of court, any disputes that may arise with the business user arising in relation to the provision of the online services concerned.³¹⁰ EU member states are tasked with enforcing the Platform-to-Business Regulation.³¹¹

Article 6(12) of the DMA and Article 21 of the Digital Services Act require designated firms to provide alternate dispute resolution mechanisms for resolving complaints. Several external dispute resolution bodies have been appointed by designated firms (see box 2.9).

305 European Commission, [Platform-to-business trading practices](#), 12 September 2023, accessed 13 March 2025.

306 Centre for Effective Dispute Resolution, [The CEDR Guide to the EU Platform-to-Business Regulation](#), February 2020, p 1, accessed 13 March 2025.

307 The regulation was incorporated into UK law by the European Union (Withdrawal) Act 2018. See Centre for Effective Dispute Resolution, [Platform-to-Business Mediation](#), accessed 13 March 2025.

308 [Regulation \(EU\) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation service](#), Article 1.

309 [Regulation \(EU\) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation service](#), Article 11.

310 [Regulation \(EU\) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation service](#), Article 12.

311 [Regulation \(EU\) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation service](#), Article 16.

Box 2.9: Dispute resolution bodies appointed under the DMA and Digital Services Act

- Google has established a Google Play Mediation Scheme, managed by the Centre for Effective Dispute Resolution (a mediation and alternative dispute resolution firm operating across the EU). The Google Play Mediation Scheme seeks to resolve disputes from developers concerning the application of Google Play policies that are not otherwise resolved through Google Play's internal appeals process. The Google Play Mediation Scheme is free of charge for developers to access.³¹²
- Apple has also appointed the Centre for Effective Dispute Resolution to manage its Mediation Process with app developers. The Mediation Process seeks to resolve complaints from app developers that are not satisfied by decisions of Apple's App Review Board. The Mediation Process is also free of charge for developers to access.³¹³
- On 10 July 2024, RGOAL Limited was certified for 5 years as the first out-of-court Dispute Resolution Provider in the EU under the DSA.³¹⁴ RGOAL Limited is certified to hear disputes relating to content-moderation decisions³¹⁵ including bans, demonetisation and the removal (or not) of content.³¹⁶
- On 12 August 2024, User Rights GmbH was certified as an out-of-court settlement provider under the DSA for disputes involving Instagram, TikTok and LinkedIn.³¹⁷ User Rights GmbH assesses whether actions taken by social media platforms, such as removing posts or refraining from action following a report by a user, were justified.³¹⁸
- On 29 August 2024, Online Platform Vitarendező Tanács was certified as an out-of-court settlement provider for all types of disputes in Hungarian.³¹⁹ Procedures can be initiated by digital platform users with Online Platform Vitarendező Tanács for conduct such as if an online platform has restricted or blocked a user's content or suspended a user's account.³²⁰
- On 26 September 2024, Appeals Centre Europe was certified as an out-of-court settlement provider for disputes related to terms and conditions of social media online platforms.³²¹

312 Centre for Effective Dispute Resolution, [The Google Play Mediation Scheme](#), accessed 13 March 2025.

313 Centre for Effective Dispute Resolution, [Apple EU Mediation](#), accessed 13 March 2025.

314 Malta Communications Authority, [The Digital Services Act](#), accessed 13 March 2025.

315 S Clark, '[Online platforms get first dispute resolution body under EU's Digital Services Act](#)', *MLex*, 7 August 2024, accessed 13 March 2025.

316 S Clark, '[Online platforms get first dispute resolution body under EU's Digital Services Act](#)', *MLex*, 7 August 2024, accessed 13 March 2025.

317 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025.

318 User Rights GmbH, [We review your rights on social media](#), accessed 13 March 2025.

319 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025.

320 Online Platform Vitarendező Tanács, [Online Platform Dispute Resolution Council](#) [translated], accessed 13 March 2025.

321 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025.

- On 24 October 2024, RTR-GmbH, Fachbereich Medien was certified as an out-of-court settlement provider for breaches of information obligations and issues related to data protection and privacy, unlawful statements, unwanted behaviour, online bullying/intimidation, pornography or sexualised content, protection of minors, fraud and/or deception, incitement to self-harm, non-restriction of access to a platform/content, violence, offences against intellectual property and other commercial rights.³²² Disputes are mediated in German.³²³
- On 18 December 2024, ADR Center was certified as an out-of-court settlement provider for harmful or illegal products, violations of data protection, privacy and non-consensual sharing of material, incitement to hatred, violation of human dignity, and other similar crimes, violation of intellectual property rights and other commercial rights, interference with elections and disinformation, online bullying/intimidation, pornographic or sexualised content, violation of laws protecting children and minors, risk to public safety, scams and/or frauds, crimes against animals, acts of violence or criminal activity, violations related to access to a platform.³²⁴ Disputes are mediated in Italian and English.³²⁵

The European Commission's Alternative Dispute Resolution (ADR) Directive was adopted by the EU in 2013 and was amended on 17 October 2023 to improve the quality of dispute resolution procedures offered by online marketplaces.³²⁶ The ADR was originally established as a harmonised set of quality requirements to ensure that alternative dispute resolution schemes across the EU would be 'fair, independent and impartial'. See box 3.17 for further discussion on the quality requirements recommended for online marketplaces.

External dispute resolution mechanisms for users in the UK

The Digital Markets, Competition and Consumers Act includes provisions for more effective dispute resolution with digital platforms. The Digital Markets, Competition and Consumers Act includes provisions for accrediting out-of-court dispute resolution (mediation, arbitration, early neutral evaluation ombuds services) providers for consumer contract disputes with digital platforms.³²⁷ An accredited provider must be accessible to users and its procedures should be 'easy to use, transparent, non-discriminatory and effective'.³²⁸ As of March 2025, no alternative dispute resolution services provider has been accredited under the Digital Markets, Competition and Consumers Act.

322 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025; RTR, [Die RTR Medien](#) [in German], accessed 13 March 2025.

323 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025.

324 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025; ADR Center, [Welcome to the Out-of-court settlement service between users and providers of online platforms under the Digital Service Act \(DSA\)](#), accessed 13 March 2025.

325 European Commission, [Out-of-court dispute settlement bodies under the Digital Services Act \(DSA\)](#), 22 October 2024, accessed 13 March 2025.

326 European Commission, [Impact Assessment Report on The Alternative Dispute Resolution \(ADR\) Directive](#), 17 October 2023, p 3; European Commission, [Recommendation on quality requirements for dispute resolution procedures offered by online marketplaces and Union trade associations](#), 17 October 2023, accessed 13 March 2025.

327 See Part 4, Chapter 4, Alternative Dispute Resolution for Consumer Contract Disputes in [Digital Markets, Competition and Consumers Act \(UK\) 2024](#), accessed 13 March 2025; H Fletcher, 'Getting ready for the consumer protection changes in the Digital Markets, Competition and Consumers Act 2024', *CMA Blog*, 31 July 2024, accessed 13 March 2025.

328 See Schedule 26, Part 1, Criterion 5: fair ADR procedures in [Digital Markets, Competition and Consumers Act \(UK\) 2024](#), accessed 13 March 2025.

2.4 Australia needs to keep pace

2.4.1 Australia needs to keep pace on addressing systemic competition concerns in digital markets

Digital competition regulation will benefit consumers and the economy

As noted in section 2.1.1, the economic characteristics of digital markets have led to limited competitive constraint between incumbent firms, reducing their incentives to innovate and improve the quality of their services. A lack of competition can lead to less choice in services for consumers. Additionally, given the tendency of tipping in digital markets (leaving one or 2 firms dominant in a market), dominant digital platforms have a strong ability and incentive to protect their market power through exclusionary conduct and acquiring potential rivals. The range of conduct being undertaken by digital platforms – including self-preferencing, tying, exclusivity agreements and impediments to switching – can interfere with the process of competition, and stifle innovation by limiting growth opportunities for nascent firms and technologies.

The economic characteristics that make markets prone to tipping warrant regulatory intervention to ensure greater competition and conditions for innovation.³²⁹ In the Australian context, this is best achieved through mandatory, service-specific codes of conduct that offer a flexible, targeted solution to prevent harms in particular digital platform service markets. These codes would only apply to certain designated platforms that meet quantitative and qualitative criteria, reflecting a targeted, balanced and flexible approach to regulation that seeks to maximise innovation while minimising the cost of compliance.

329 M Draghi, [The future of European competitiveness: Part B | In-depth analysis and recommendations](#), September 2024, p 298.

Digital competition regulation follows strong international precedent

As noted in sections 2.1.1 and 2.1.2, there is strong international precedent for digital competition regulation. Competition authorities in a majority of G7 countries,³³⁰ the OECD³³¹ and other national competition agencies³³² have also acknowledged the economic characteristics, including network effects, access to data and economies of scale and scope, that make digital markets prone to tipping and can lead to anticompetitive conduct by dominant firms in an attempt to discourage competition.³³³ There is also broad international recognition that existing competition tools remain ill-suited to addressing harms in digital markets,³³⁴ noting the:

- slow pace of pursuing enforcement cases under existing laws³³⁵
- difficulty of addressing continuing competitive harms with enforcement tools that are retrospective³³⁶
- limitations in the remedies that enforcement action can provide to address market concentration and anticompetitive conduct in digital markets.³³⁷

As noted in section 2.1.3, the EU, UK, Germany, Japan, India, Brazil, and South Korea have proposed or introduced ex ante regulation to promote innovation, ensure fair and competitive markets, and enhance consumer choice.³³⁸

Stakeholder views on service-specific codes

The ACCC also received submissions from stakeholders noting their general support for international developments towards ex ante regulation of digital platforms³³⁹ (and stakeholders supporting ex ante competition regulation of digital platforms in Australia more generally).³⁴⁰ In addition, Microsoft³⁴¹ and

330 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 7–10.

331 See, for example, OECD, [Theories of harm for digital mergers](#), 3 May 2023, p 8; OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 9; J Furman, [Unlocking digital competition: Report of the Digital Competition Expert Panel](#), 13 March 2019, p 4; Standing Committee on Finance, Ministry of Corporate Affairs (India), [Anti-Competitive Practices by Big Tech Companies](#), 27 July 2022, p 2; European Parliamentary Research Service, [Regulating digital gatekeepers: Background on the future digital markets act](#), 8 December 2020, p 1.

332 See, for example, Standing Committee on Finance, Ministry of Corporate Affairs, [Anti-Competitive Practices by Big Tech Companies](#), 27 July 2022; Brazilian Ministry of Finance, [Digital Platforms: Competition Aspects and Regulatory Recommendations for Brazil](#), 10 October 2024; OECD, [Ex-Ante Regulation and Competition in Digital Markets – Note by Korea](#), 9 December 2021.

333 G7, [Compendium of approaches to improving competition in digital markets](#), 8 November 2023, pp 7–9; M Bourreau, [Some Economics of Digital Ecosystems – Note by Marc Bourreau for the OECD Hearing on Competition Economics of Digital Ecosystems](#), 3 December 2020, pp 6–9; European Parliamentary Research Service, [Regulating digital gatekeepers: Background on the future digital markets act](#), December 2020, p 2; Standing Committee on Finance, Ministry of Corporate Affairs, [Anti-Competitive Practices by Big Tech Companies](#), 27 July 2022, pp 1–7.

334 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 11–12.

335 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

336 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, p 11.

337 OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 11–12.

338 For more examples, see OECD, [Ex Ante Regulation and Competition in Digital Markets](#), 1 December 2021, pp 7–8.

339 As part of this Final Report, the ACCC received submissions from the following organisations in favour of ex ante regulation of digital platforms: TikTok, [Submission to the Final Report](#), 11 October 2024, pp 1–3; Skyscanner, [Submission to the Final Report](#), 11 October 2024, p 4; Match Group, [Submission to the Final Report](#), 11 October 2024, p 2; Spotify, [Submission to the Final Report](#), 11 October 2024, p 2; Booking.com, [Submission to the Final Report](#), 11 October 2024, p 4; Yelp, [Submission to the Final Report](#), 11 October 2024, p 3; Commonwealth Bank Australia, [Submission to the Final Report](#), 11 October 2024, p 1; International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 1; Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, p 3; Commercial Radio and Audio, [Submission to the Final Report](#), 11 October 2024, p 1; Per Capita, [Submission to the Final Report](#), 11 October 2024, p 1; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 2.

340 These submissions were received by Commercial Radio and Audio, [Submission to the Final Report](#), 11 October 2024, p 1; Australian Communications Consumer Action Network, [Submission to the Final Report](#), 11 October 2024, p 1; Free TV Australia, [Submission to the Final Report](#), 11 October 2024, p 1.

341 Microsoft, [Submission to the Final Report](#), 11 October 2024, pp 1–3.

Meta³⁴² noted their support for the ACCC's consideration of regulatory developments relating to app marketplaces. The ACCC also notes that some stakeholders, including TikTok, Microsoft, Skyscanner and Match Group, expressed a preference for obligations that are specifically tailored to the relevant service, like the model under the UK's Digital Markets, Competition and Consumers Act.³⁴³

While many submissions supported regulatory reform, the ACCC acknowledges that several stakeholders, primarily large digital platforms and industry bodies that represent their interests, noted a preference for Australia to wait and observe further international developments in digital competition regulation before progressing Australian-specific regulation.³⁴⁴

2.4.2 Australia needs to address unfair trading practices and provide an external dispute resolution body

Australian consumers and businesses should be protected from unfair trading practices

Australian consumers face harms in digital markets, including:

- manipulative design practices, such as nudges or user interfaces that may encourage consumers to make choices that are not in their best interest or hinder consumers from exercising informed choice³⁴⁵
- subscription traps, such as practices that make it more difficult for a consumer to cancel a particular subscription service.³⁴⁶

The ACCC has also heard concerns from Australian businesses about the ways in which their complaints are resolved by digital platforms.³⁴⁷

Given the widespread use of products and services offered by digital platforms, Australian consumers and small businesses will continue to be harmed by these practices. As discussed in section 2.2.1, evolving technologies in digital markets will see the emergence of new forms of consumer harms.

342 Meta, [Submission to the Final Report](#), 11 October 2024, p 4.

343 Submissions citing a preference for Australia to adopt service-specific codes for digital competition regulation included TikTok, Microsoft, Skyscanner, Match Group, Spotify, the Coalition for App Fairness, Booking.com, Yelp, the Commonwealth Bank of Australia, the International Social Games Association, and the Global Antitrust Institute. See TikTok, [Submission to the Final Report](#), 11 October 2024, p 4; Skyscanner, [Submission to the Final Report](#), 11 October 2024, pp 9–10; Match Group, [Submission to the Final Report](#), 11 October 2024, p 30; Spotify, [Submission to the Final Report](#), 11 October 2024, p 3; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 4–5; Yelp, [Submission to the Final Report](#), 11 October 2024, p 3; Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 4; International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 2; Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, p 9.

344 These submissions were received by Apple, Google, Amazon, the US Chamber of Commerce, the Business Council of Australia, the Software and Information Industry Association, the App Association, the Chamber of Progress, the Progressive Policy Institute, the Center for Cybersecurity Policy and Law, the Information Technology and Innovation Foundation, the International Center for Law and Economics, and the Global Antitrust Institute. Apple, [Submission to the Final Report](#), 11 October 2024, p 22; Google, [Submission to the Final Report](#), 11 October 2024, p 35; US Chamber of Commerce, [Submission to the Final Report](#), 11 October 2024, p 6; Business Council of Australia, [Submission to the Final Report](#), 11 October 2024, p 6; Software and Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 7; The App Association, [Submission to the Final Report](#), 11 October 2024, p 28; Chamber of Progress, [Submission to the Final Report](#), 11 October 2024, p 7; Progressive Policy Institute, [Submission to the Final Report](#), 11 October 2024, p 2; Center for Cybersecurity Policy and Law, [Submission to the Final Report](#), 11 October 2024, p 15; Information and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 7; International Center for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 1; Global Antitrust Institute, [Submission to the Final Report](#), 11 October 2024, pp 14–15.

345 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 24.

346 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 166–169.

347 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, pp 87–88, 155.

On 16 October 2024, the Australian Government committed its support for the legislation of a general prohibition on unfair trading practices and released a consultation paper on reforms to strengthen protections for consumers and small businesses under the ACL.³⁴⁸ Given the harms to consumers and small businesses that can occur in digital markets, the ACCC strongly supports continued progress on this legislative reform proposal.

Australian consumers and businesses deserve stronger dispute resolution mechanisms when dealing with digital platforms

As noted in section 2.3.1, Australian users (consumers and businesses) are concerned that they lack effective dispute resolution mechanisms when dealing with digital platforms.³⁴⁹ Australians consider that it needs to be made easier to make a complaint and get issues resolved with digital platforms.³⁵⁰ According to ACCC consumer survey data, the majority of respondents (82%) agreed there should be a specialised independent external dispute resolution body for users of digital platform services to escalate complaints which cannot be resolved with platforms directly.³⁵¹

Australian businesses are often faced with an imbalance in bargaining power when seeking to resolve complaints with digital platforms.³⁵² Submissions from SBS³⁵³ and the Australian Small Business and Family Enterprise Ombudsman³⁵⁴ note the importance of dispute resolution mechanisms for the business community.

The ACCC has previously recommended the introduction of mandatory minimum internal dispute resolution standards³⁵⁵ and an external dispute resolution body for digital platforms.³⁵⁶ The ACCC considers that further progress on minimum dispute resolution standards and an external dispute resolution body is needed to provide Australian consumers and businesses with greater support when attempting to resolve complaints with digital platforms.

348 Prime Minister of Australia, [Albanese Government to stop the rip offs from unfair trading practices](#), Press release, 16 October 2024, accessed 13 March 2025.

349 ACCC, [Digital Platform Services Inquiry Sixth Interim Report](#), 28 April 2023, p 14.

350 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 89–90.

351 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 11.

352 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 89.

353 SBS, [Submission to the Final Report](#), 11 October 2024, p 8.

354 Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

355 The ACCC has previously recommended that minimum internal dispute resolution standards should apply, at a minimum, to search, social media, online private messaging, app stores, online retail marketplaces and digital advertising services. See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 88.

356 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 98.

3

Updates to previous
reports



3. Updates to previous reports

3.1 Online private messaging

Key findings

- Consistent with the ACCC's previous findings, Meta and Apple remain 2 of the largest providers of standalone online private messaging services in Australia. In June 2024, Meta's 'Facebook Messenger' had approximately 15 million Australian daily active users, while 'WhatsApp' had approximately 6.1 million Australian daily active users. As of October 2024, Apple's iMessage had an estimated range of approximately 8 million to 12 million daily active users, and Apple's FaceTime had an estimated range of approximately 2 million to 3 million daily active users.
- While Meta and Apple are the largest providers of online private messaging services, at this time these services need not be a priority for the proposed digital competition regime. However, trends in technological functionality and consumer usage may have implications for competition and consumers in the future. Accordingly, it is critical that the proposed regime enable the ACCC to continue monitoring competition and consumer issues in online private messaging services.
- Many consumers continue to multi-home, with 74% of consumers surveyed by the ACCC having used more than one online private messaging service in the past 6 months. The extent of multi-homing varies across services, favouring Meta's services. For example, while 73% of Snapchat users also used Facebook Messenger in the last month, only 24% of Facebook Messenger users had also used Snapchat.
- Non-standalone online messaging services have grown significantly, including those offered within Instagram and TikTok. This growth is largely driven by young people. Despite this growth, there has been little change in the overall usage of Meta and Apple's services.
- There has been widespread integration of AI-driven features in online messaging services, particularly by services embedded in productivity suites.
- Many scam types with significant victim impact rely on encrypted messaging services for scammer-victim communications. Since its establishment on 1 July 2023, the National Anti-Scam Centre's collaborative efforts across government, law enforcement, consumer organisations and industry have contributed to a 41% decrease in financial losses reported to the ACCC's Scamwatch service, falling from \$559.9 million to 2022–23 to \$330.0 million in 2023–24. In addition, the number of people reporting a financial loss to Scamwatch decreased by 32%, from 32,919 in 2022–23 to 22,351 in 2023–24.
- Children are significant users of online private messaging services in Australia, including Snapchat, iMessage, and Instagram Direct. Australian parents and guardians surveyed consider that the most important factors in choosing a service for their child to use include the level of protection against harmful content, security to prevent malware and hackers, and the privacy of their children's conversation and data.

Many Australian consumers stay connected with family, friends and community through online private messaging services. In the 6 months prior to June 2024, the ACMA found that 84% of Australians used messaging/calling apps on their mobile phone to communicate with others.³⁵⁷

The ACCC previously considered the competitive landscape and consumer experience of online private messaging services as part of its September 2020 Report on Online Private Messaging Services³⁵⁸ and in the context of the September 2022 Regulatory Reform Report.³⁵⁹ Since then, Australians' use of communication apps for messaging has risen steadily.³⁶⁰

This section will revisit the ACCC's analysis of the competitive dynamics and consumer experience for the supply of online private messaging services in Australia from the Report on Online Private Messaging Services. It is structured as follows:

- **Section 3.1.1** provides an overview of the ACCC's previous analysis in respect of online private messaging services.
- **Section 3.1.2** considers recent trends in the development of online private messaging services, such as the rise of business-to-consumer messaging services, growth in the use of messaging services integrated within social media platforms, and the increasing use of AI in messaging services. It also provides an update on trends in Australian consumers' usage of online private messaging services.
- **Section 3.1.3** considers potential competition issues in the market for online private messaging services.
- **Section 3.1.4** provides an update on scam activity on online private messaging services. It also considers potential consumer harms faced by children in accessing online private messaging services.

3.1.1 The ACCC has previously identified competition issues in online private messaging

The Report on Online Private Messaging Services considered competition and consumer issues in respect of the supply of standalone online private messaging services (including text messaging, audio messaging and video messaging services). This work was conducted during the peak of the COVID-19 pandemic, as Australians were increasingly turning to digital forms of communication, including for messaging.

The Report on Online Private Messaging Services found that, as of June 2020, Meta (through Facebook Messenger and WhatsApp) and Apple (through iMessage and FaceTime) were 2 of the largest suppliers of standalone messaging services in Australia.³⁶¹

In relation to competition issues, the Report on Online Private Messaging Services found that:

- Standalone services give rise to identity-based network effects, which are a key barrier to entry and expansion in the supply of standalone services. Network effects arise where, the more users there are on a platform, the more valuable that platform is for their users. This creates a positive feedback loop, granting services with a larger user base an advantage in attracting more users.³⁶² For online private messaging services, these network effects can be described as 'identity-based'

357 ACMA, [Communications and media in Australia: How we communicate – Executive summary and key findings](#), December 2024, p 3.

358 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020.

359 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022.

360 See 'How Australians communicate: Services used' in ACMA, [Communications and media in Australia: How we communicate](#), December 2024, accessed 13 March 2025.

361 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 22.

362 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

since the users' identities, rather than just the number of users, are relevant to determining the utility of the service to users.³⁶³

- Both Meta's and Apple's services benefited from identity-based network effects, providing them with significant competitive advantages over rival suppliers of standalone services in Australia.³⁶⁴ However, the use of Apple's online private messaging services is limited to users of Apple devices. As a result, the ACCC found that iMessage was likely to impose a weaker competitive constraint on Facebook Messenger and WhatsApp than those services imposed on iMessage.³⁶⁵
- Branding and customer inertia may also create barriers to entry, as new entrants may have to make substantial investments in promotional activities to compensate customers for the perceived risk in trialling new products.³⁶⁶

The Report on Online Private Messaging Services also noted several consumer concerns, including relating to:

- The growing use of online private messaging services to perpetrate scams. Based on data collected through the ACCC's Scamwatch service, online private messaging scams reported by consumers increased by almost 95% in the first half of 2020 compared to the first half of 2018.³⁶⁷ This increase may have been due to the increased uptake of these services during the COVID-19 pandemic.³⁶⁸ Scams involving online private messaging, social media and search services resulted in reported losses of up to \$38.5 million in 2019.³⁶⁹ Based on Scamwatch data, in 2019 the ACCC received the most reports about scams involving WhatsApp and Facebook Messenger, compared to other online private messaging platforms.³⁷⁰ From the period of July 2019 to June 2020 (corresponding with the beginning of the COVID-19 pandemic), there was a significant increase in reported scams on WhatsApp.³⁷¹
- Unclear data collection and usage practices – including unclear disclosures relating to the collection of user information through cookies and tracking technologies,³⁷² third party data sharing,³⁷³ and the security and privacy of messages.³⁷⁴

3.1.2 Recent developments in online private messaging

Online private messaging services benefit Australian consumers

Online private messaging services continue to play a vital and growing role in keeping Australians connected with their friends, family and colleagues. Based on data collected by the ACMA, in the 6 months prior to June 2024, 84% of Australians used an application for messages or calls.³⁷⁵

Online private messaging services can be accessed on smartphones, tablets, computers and wearable devices. As noted in the Report on Online Private Messaging Services, many of these

363 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 25–26.

364 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 33–34.

365 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 33–34.

366 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 32.

367 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 56.

368 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 56.

369 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 56.

370 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 57.

371 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 58.

372 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 36–38.

373 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 38–39.

374 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 39–41.

375 ACMA, [Communications and media in Australia: How we communicate – Executive summary and key findings](#), December 2024, p 3.

services rose to prominence by offering low-cost alternative to SMS messaging.³⁷⁶ Over time these services have incorporated more functionalities including video calls and multimedia sharing.³⁷⁷

In 2020, the ACCC found there was a wide range of online private messaging services available to Australian users, which were often highly differentiated, offering different features and functionalities, and used by consumers for several different purposes. The Report on Online Private Messaging Services identified 4 main types of online private messaging services offered in Australia, differentiated by their primary features and functionalities, including:³⁷⁸

- services allowing users to message others across operating systems, such as Facebook Messenger, WhatsApp, Signal and Telegram
- proprietary online private messaging services, such as Apple's iMessage ('iMessage'), Apple's FaceTime ('FaceTime'), and Google Messages
- services providing a messaging service within a broader offering (e.g. through social media and other platforms), such as Instagram, Snapchat, and LinkedIn
- services specialising in video-based communications, such as Zoom, Skype, Google Duo, Google Hangouts, and Microsoft Teams.

Since 2020, there have been several changes in the supply of online private messaging services. Following the COVID-19 pandemic, several video-focused services have ceased to operate in Australia, including Houseparty,³⁷⁹ Google Duo and Google Hangouts.³⁸⁰ Remaining services in this category (e.g. Zoom and Google Meet), and some other business-oriented messaging services, have evolved and been repositioned primarily within broader enterprise productivity suite offerings, in a manner similar to what has happened with Microsoft Teams.³⁸¹ Figure 3.1 shows an updated snapshot of the types of online messaging services available in Australia in 2024.

376 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 10–11.

377 AIBAMS, [The rise of messaging apps: How we communicate is changing](#), 27 May 2024, accessed 13 March 2025.

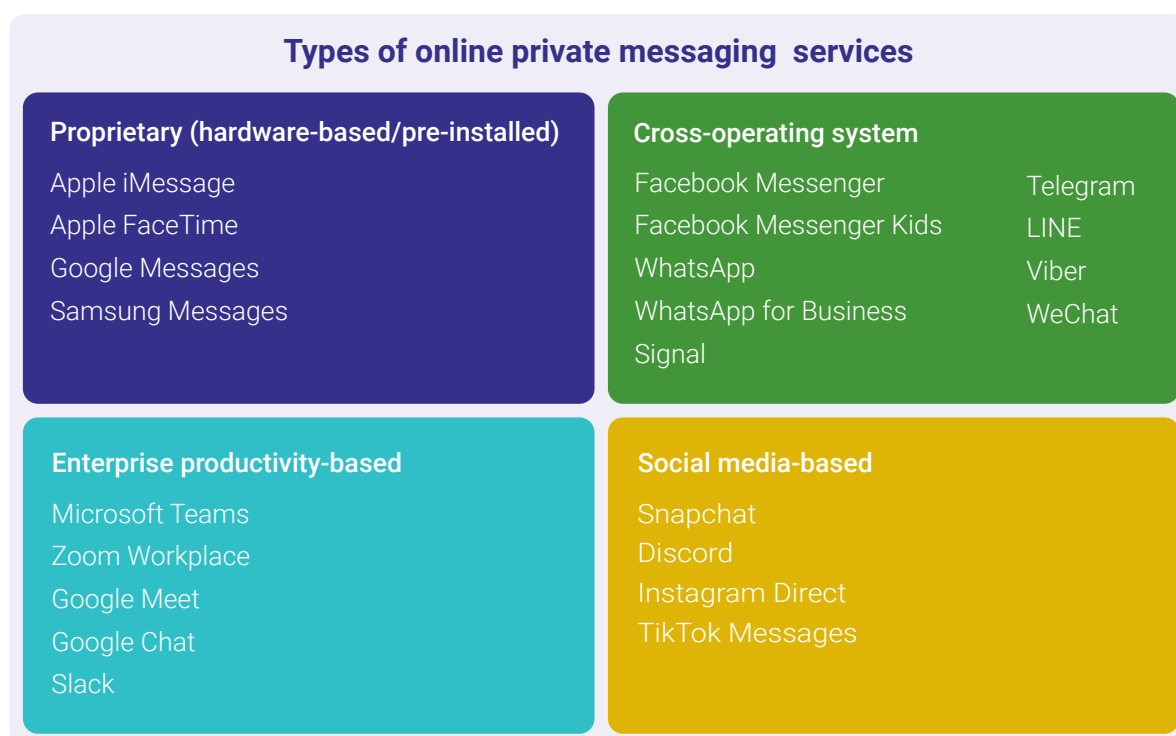
378 See Figure 1.1 in ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 10.

379 D Milmo, ['Houseparty is over: video chat app that boomed in lockdown meets its end'](#), *The Guardian*, 10 September 2021, accessed 13 March 2025.

380 M Vonau, [Here's what Google killed in 2022](#), *Android Police*, 29 December 2022, accessed 13 March 2025.

381 See Section 3.1.2 below for further detail on the rise of business-to-consumer messaging services in Australia.

Figure 3.1: Types and examples of online private messaging services



Key online private messaging services in Australia

As of 2024, many services identified in the Report on Online Private Messaging Services³⁸² continue to be among the most widely used standalone online private messaging services in Australia. Some of these key services include:

- **Facebook Messenger**, a free messaging service by Meta, made available on smartphones, wearable devices, and web browsers. It facilitates chats (including group chats), voice calls, and video calls between Facebook friends or phone contacts.³⁸³
- **WhatsApp**, a free messaging service by Meta, facilitating messaging (including group chats), voice and video calling between a user and their phone contacts or Facebook friends (when synced with a Facebook account). Messages are end-to-end encrypted, and are accessible on smartphones, wearable devices and web browsers.³⁸⁴
- **Apple's iMessage**, a free service pre-installed on Apple iOS devices within the Messages app, facilitating communication between iOS users (including messages, images and video content) over wi-fi or cellular service.³⁸⁵
- **Apple FaceTime**, a free service pre-installed on Apple iOS devices that facilitates video calls between iOS users, over wi-fi or cellular service.³⁸⁶
- **Snapchat**, a free messaging app for smartphones that allows users to send and receive messages, photos and videos that disappear by default after viewing.³⁸⁷

382 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 10.

383 Meta, [Messenger – Features](#), 2025, accessed 13 March 2025.

384 WhatsApp, [About WhatsApp](#), 2025, accessed 13 March 2025.

385 Apple, [iPhone User Guide – About iMessage on iPhone](#), 2025, accessed 13 March 2025.

386 Apple, [iPhone User Guide – Get started with FaceTime on iPhone](#), 2025, accessed 13 March 2025.

387 Snapchat, [Snapchat 101](#), accessed 13 March 2025.

- **Discord**, a free messaging service which enables online messaging, video and voice chats through a smartphone app, desktop app and on web browsers. It primarily hosts group discussion boards (called 'servers' or 'channels'), which can be public or private, and are often 'themed' – commonly used by online gamers.³⁸⁸
- **Microsoft Teams**, a service that enables instant messaging, audio and video calls, online meetings and web conferencing services through a desktop and smartphone app (iOS and Android). It is offered for free to individuals, as well as part of a subscription to Microsoft's enterprise services.³⁸⁹
- As well as a number of other services identified in the first interim report, including **Signal**, **Telegram**, **LINE**, **Viber**, **WeChat**, **Skype**,³⁹⁰ and **Slack**.

In addition to these services, the ACCC has observed some additional online private messaging services that have evolved or emerged since 2020:

- **Facebook Messenger Kids** is a free messaging and video calling app owned by Meta, aimed at children under 13 years and offering enhanced parental controls. A parent or guardian may sign up on a child's behalf (no Facebook account required), and it enables parents to communicate with their children from Facebook Messenger.³⁹¹
- **WhatsApp Business** by Meta enables direct business-to-consumer messaging through an app or API. Businesses can set up a profile to advertise directly on Meta's platforms and communicate with customers during the purchase process.³⁹²
- **Samsung Messages** is a free messaging service available on the Google Play store, which was previously the default messaging app on Samsung phones, and pre-installed on Samsung Galaxy phones.³⁹³
- **Google Messages** is a free messaging service available as an app on the Google Play Store, and pre-installed on certain Android devices (including some Google Pixel³⁹⁴ and Samsung³⁹⁵ phones). It allows users to communicate with their contacts (including messaging, image and video sharing) over wi-fi or cellular service.³⁹⁶
- **Zoom Workplace (formerly Zoom)** is a workplace collaboration and productivity software platform which evolved from the video conferencing service known as 'Zoom'.³⁹⁷ As well as messaging and calling, it now offers paid users a range of integrated productivity tools including email, calendars, file sharing, scheduling, and shared documents.³⁹⁸
- **Google Chat and Google Meet** are the instant messaging and video-calling services within Google Workspace's (formerly G Suite) productivity suite.³⁹⁹ These services were previously

388 Discord, [What is Discord?](#), 12 May 2022, accessed 13 March 2025.

389 Microsoft, [Microsoft Teams service description](#), Microsoft 365, Learn, 28 February 2024, accessed 13 March 2025.

390 On 28 February 2025, Skype owner Microsoft announced that it would globally retire Skype's operations as of 5 May 2025. See: Microsoft Community, [Skype is retiring in May 2025: What you need to know](#), 28 February 2025, accessed 13 March 2025.

391 eSafety Commission, [Messenger Kids](#), 6 January 2025, accessed 13 March 2025.

392 Meta, [WhatsApp Business](#), 2025, accessed 13 March 2025.

393 ZDNet, [Samsung Messages is getting bumped for Google's app. Here's how to prepare](#), 22 July 2024, accessed 13 March 2025.

394 Google, [Get your messages on your Pixel phone](#), 2025, accessed 13 March 2025.

395 Google Messages, [Help Center – Google Messages on Samsung devices](#), 2025, accessed 13 March 2025.

396 Android, [Google Messages](#), accessed 13 March 2025; Google Play, [Google Messages](#), Apps, 11 February 2025, accessed 13 March 2025; Google Messages, [Learn about Rich Communication Services \(RCS\) messaging](#), Help Center, 2025, accessed 13 March 2025.

397 Zoom, [Products](#), 2025, accessed 13 March 2025; Zoom, [Collaboration tools](#), 2025, accessed 13 March 2025.

398 Zoom, [Zoom workplace is now generally available, providing an AI-powered collaboration platform to reimagine teamwork](#), Product, 15 April 2024, accessed 13 March 2025.

399 Google Workspace, [Do your best work, all in one place](#), 2025, accessed 13 March 2025.

only available to paid business users of Google's G Suite, until free versions of these Google Workspace apps were released for everyone with a Google account in 2021.⁴⁰⁰

Since 2020, there has also been significant growth in the use and popularity of some non-standalone online private messaging services. These include:

- **Instagram Direct Messenger**, an instant messaging service within Meta's social media platform, Instagram. It facilitates instant messaging, audio and video calling, as well as photo and video sharing between Instagram users.⁴⁰¹
- **TikTok Messages**, an instant messaging service within ByteDance's social media platform, TikTok. It facilitates instant messaging and the sharing of TikTok videos between TikTok users.⁴⁰²

Online private messaging services continue to be used significantly by consumers in Australia

The Report on Online Private Messaging Services found that, as of June 2020, Meta (through Facebook Messenger and WhatsApp) and Apple (through iMessage and FaceTime) were 2 of the largest suppliers of standalone messaging services in Australia.⁴⁰³

Since 2020, data collected by the ACCC from several sources indicates that Meta (through Facebook Messenger and WhatsApp) and Apple (through iMessage and FaceTime) remain 2 of the largest suppliers of standalone messaging services in Australia.⁴⁰⁴

To assess the usage of online private messaging services in Australia, the ACCC has obtained mobile app usage data from Sensor Tower.⁴⁰⁵ In addition, the ACCC's consumer survey examined consumers' use of messaging services across mobile, desktop apps and the web.

Active user numbers on messaging services remain consistent over time

The ACCC's analysis indicates that Meta and Apple remain 2 of the largest suppliers of standalone messaging services in Australia.

Based on information provided to the ACCC, as of October 2024 Apple's iMessage has an estimated range of approximately 8 to 12 million daily active users, and Apple's FaceTime has an estimated range of approximately 2 to 3 million daily active users.⁴⁰⁶

Based on ACCC consumer survey data, the ACCC has estimated that there are approximately 11.4 million iPhone users in Australia aged 14 and older.⁴⁰⁷

The ACCC's consumer survey also found that among consumers who owned a smartphone, 54% used Apple's mobile iOS operating system.⁴⁰⁸ Given that iMessage is enabled by default on Apple's Messages app, and Apple's Messages and FaceTime apps are pre-installed on iOS devices, it

400 F Lardinois, [Google opens Workspace to everyone](#), TechCrunch, 14 June 2021, accessed 13 March 2025; Google, [Google Workspace](#), accessed 13 March 2025.

401 Meta, [Instagram – About](#), accessed 13 March 2025.

402 TikTok, [Direct message settings](#), [Direct message settings](#), Messaging and notifications, accessed 13 March 2025.

403 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 22.

404 Based on information provided to the ACCC.

405 The ACCC notes that Sensor Tower captures usage data for apps on iPhone, iPad and Android devices. It does not capture the usage of services via web browsers or via desktop apps. While the ACCC understands that consumers largely use mobile apps for personal messaging, some services (such as enterprise-oriented messaging services) may have higher usage rates on desktop or online. Accordingly, Sensor Tower data may understate the actual usage of these services.

406 Based on information provided to the ACCC.

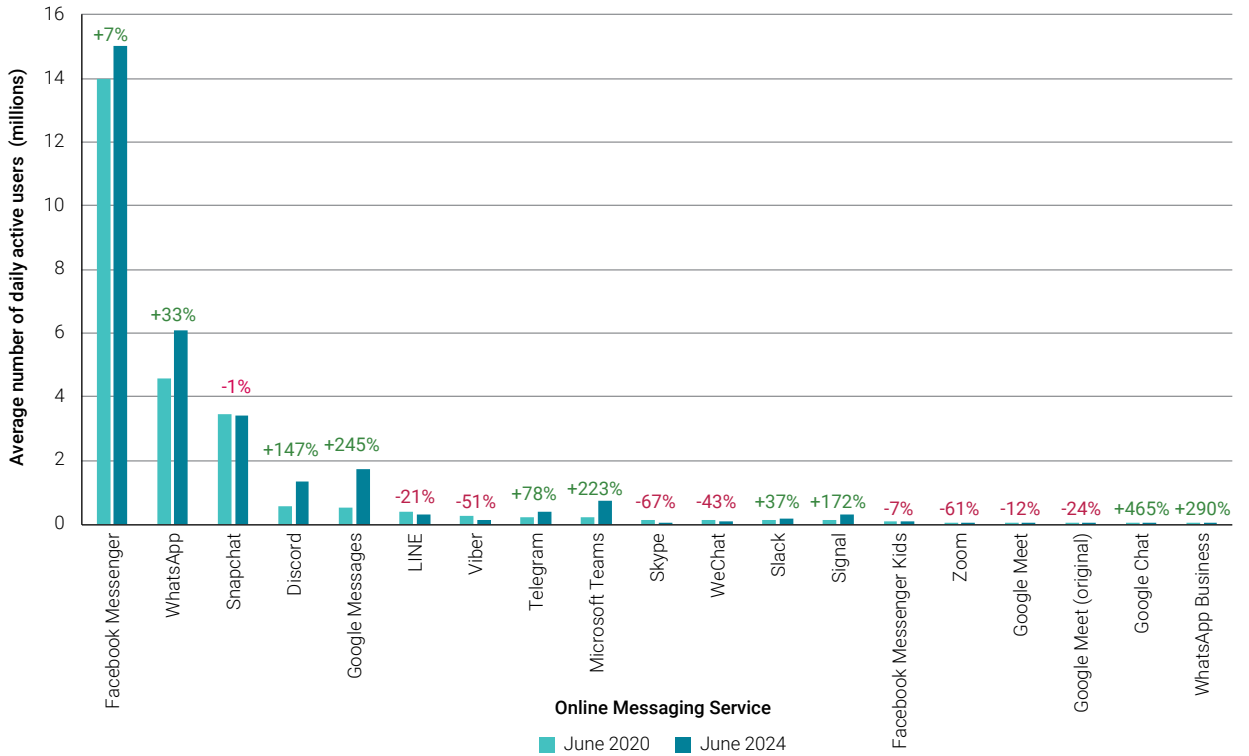
407 Approximate figures based on ACCC analysis of consumer survey data with ABS population statistics.

408 Note that 94% of consumers surveyed owned a smartphone. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37.

is likely that a substantial number of consumers in Australia continue to be regular users of iMessage and FaceTime.

Figure 3.2 shows the largest standalone messaging apps in Australia (excluding iMessage and FaceTime), based on the number of daily active users in June 2020 and in June 2024.⁴⁰⁹ Between June 2020 and June 2024, Facebook Messenger grew from 14 million to 15 million daily active users in Australia (up by 7%), and WhatsApp grew from 4.6 million to 6.1 million daily active users in Australia (up by 33%).⁴¹⁰

Figure 3.2: Change in daily active users of online private messaging services (excluding Apple iMessage and Facetime), June 2020 vs June 2024



Source: Sensor Tower data.

Consistent with the ACCC’s analysis in 2020,⁴¹¹ Meta’s services had a significant number of monthly active users and total time spent, compared to other services. In June 2024, Facebook Messenger had 22.1 million monthly active users, while WhatsApp had 8.5 million monthly active users – representing the largest amount of monthly active users in that month compared to other services.⁴¹² Figure 3.3 shows the largest standalone messaging apps in Australia (excluding iMessage and FaceTime) as at June 2024, based on the number of monthly active users and the total time spent by users on the app.⁴¹³

Figure 3.3: Monthly active users and total time spent on online private messaging services (excluding

409 Source: ACCC analysis of Sensor Tower data. Sensor Tower data was not available for Apple’s online private messaging services.

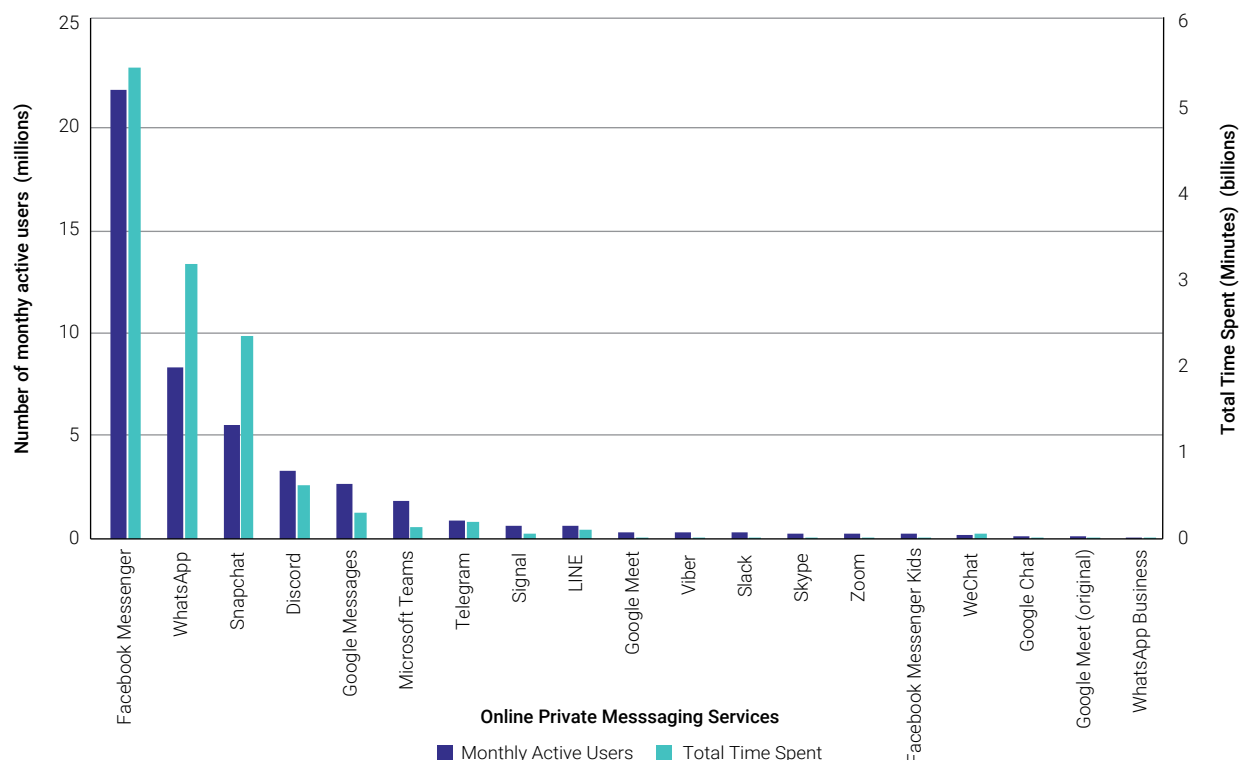
410 Source: ACCC analysis of Sensor Tower data.

411 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 21–22.

412 Source: ACCC analysis of Sensor Tower data.

413 Source: ACCC analysis of Sensor Tower data. The ACCC notes that the methodology used by Sensor Tower to capture active users and time spent data differs from the methodology employed by Nielsen, which previously provided this data for the 2020 Report on Online Private Messaging. This variation in methodology does not materially impact any of the ACCC’s findings or conclusions.

iMessage and FaceTime), June 2024



Source: Sensor Tower data.

At the time of the ACCC's 2020 Report on Online Private Messaging Services, COVID-19 and isolation requirements had likely contributed to significant growth in the use of online private messaging and other services, such as Zoom.⁴¹⁴ Since then, the use of the largest standalone online private messaging services in Australia has stayed either relatively consistent or experienced slight growth. According to Sensor Tower data:

- Facebook Messenger's monthly active users grew by 5%, from 21 million in June 2020, to 22.1 million in June 2024.
- WhatsApp's monthly active users grew by 17%, from 7.2 million in June 2020, to 8.5 million in June 2024.
- Snapchat's monthly active users remained consistent between June 2020 and June 2024, with approximately 5.6 million users.
- All other standalone private messaging services had less than 5 million monthly active users in both June 2020 and June 2024.⁴¹⁵

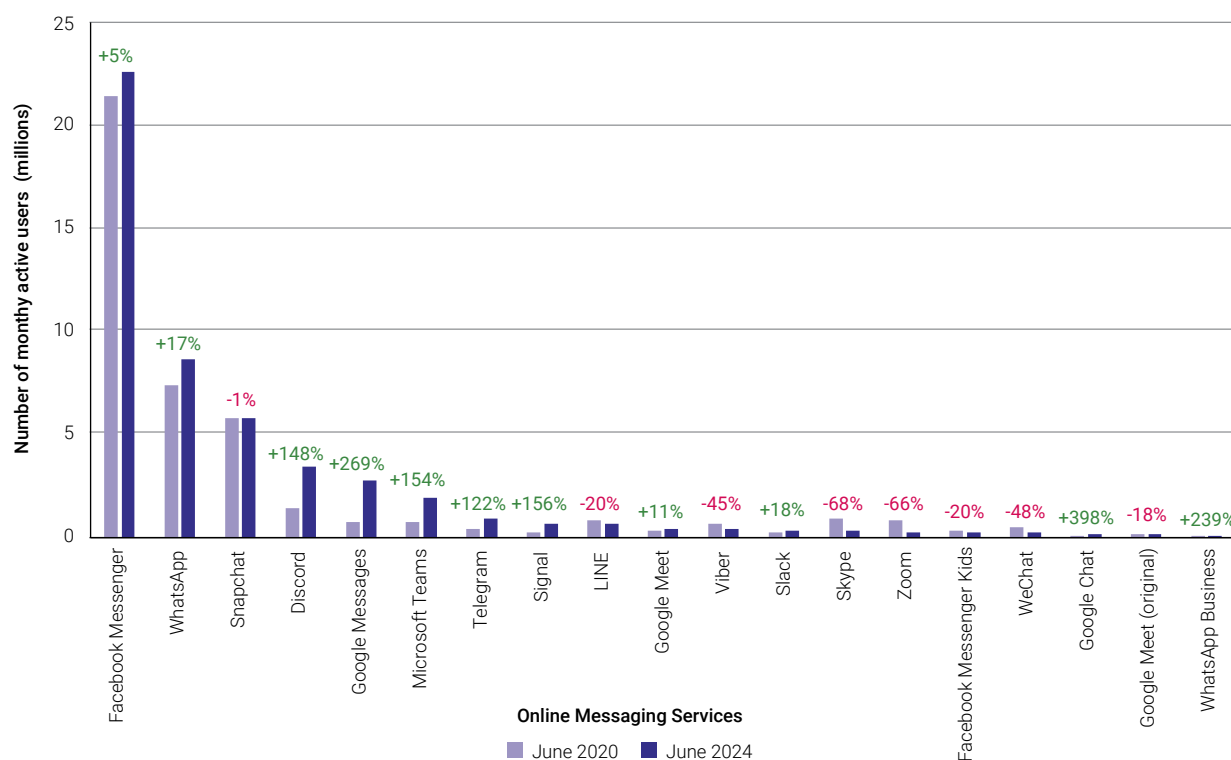
There have also been shifts in the usage of some smaller standalone online private messaging services. For example, between June 2020 and June 2024, Discord grew from 1.4 million to 3.4 million Australian monthly active users. Figure 3.4 shows the number of monthly active users of key standalone online private messaging apps in Australia in June 2020 and June 2024.⁴¹⁶

⁴¹⁴ ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 2–3.

⁴¹⁵ Source: ACCC analysis of Sensor Tower data.

⁴¹⁶ Source: ACCC analysis of Sensor Tower data.

Figure 3.4: Change in monthly active users of online private messaging services (excluding iMessage and FaceTime), June 2020 vs June 2024



Source: Sensor Tower data.

Consumers in Australia spend a significant amount of time on online private messaging services

The Report on Online Private Messaging Services considered the time spent by consumers in Australia on online private messaging services in June 2020, finding that consumers in Australia, on average, 5 hours and 41 minutes on Facebook Messenger per month, and 2 hours and 54 minutes on WhatsApp per month.⁴¹⁷

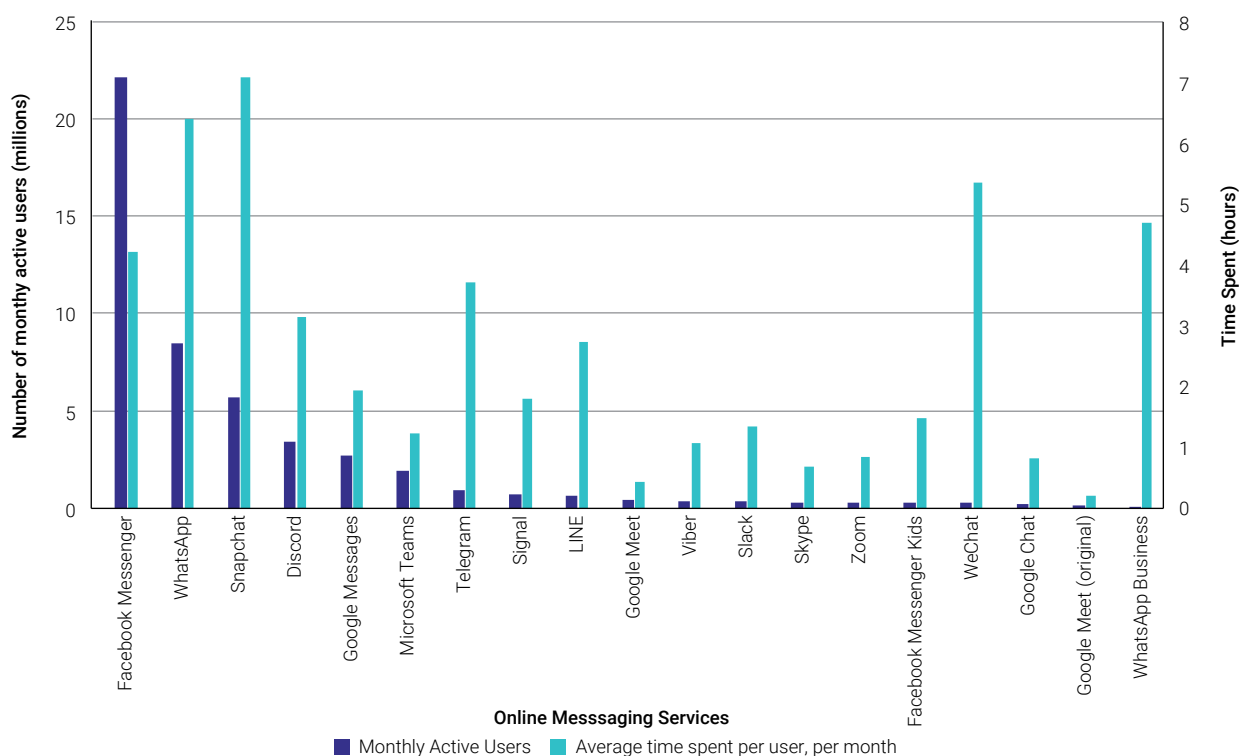
According to Sensor Tower data, in June 2024:⁴¹⁸

- Facebook Messenger's 22.1 million monthly active users spent an average of 4 hours and 12 minutes on the app per month
- WhatsApp's 8.5 million monthly active users spent an average of 6 hours and 23 minutes on the app per month
- Snapchat's 5.6 million monthly active users spent an average of 7 hours and 5 minutes on the app per month.

⁴¹⁷ ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 21–22. This analysis relied on monthly active user data supplied by Nielsen Digital Content Ratings.

⁴¹⁸ Source: ACCC analysis of Sensor Tower data.

Figure 3.5: Monthly active users and average time spent per month on online private messaging services (excluding iMessage and FaceTime), June 2024



Source: Sensor Tower data.

Despite the relative size of Facebook Messenger’s user base in Australia compared to other services, several platforms with a smaller user base appear to attract higher amounts of their users’ time. This may reflect that some services (like Discord, Telegram, WeChat or WhatsApp Business) may be serving more niche or purpose-driven functions, facilitating greater engagement despite having smaller networks.

However, as illustrated earlier in this chapter in figure 3.3 (monthly active user vs total time spent), this dynamic is not sufficient to impact the relative magnitude of the total amount of time spent by all users on Facebook Messenger, compared to other services.

Some online private messaging services are more popular with certain demographics

The ACCC also surveyed consumers in Australia on their usage of a wider range of online private messaging services (on either mobile, desktop, or the web), including some non-standalone services.

In the month prior to being surveyed, the top 5 most widely used services for messaging and/or audio or video calling were Facebook Messenger (63%), WhatsApp (42%), iMessage (37%), FaceTime (27%) and Instagram Direct (26%).⁴¹⁹

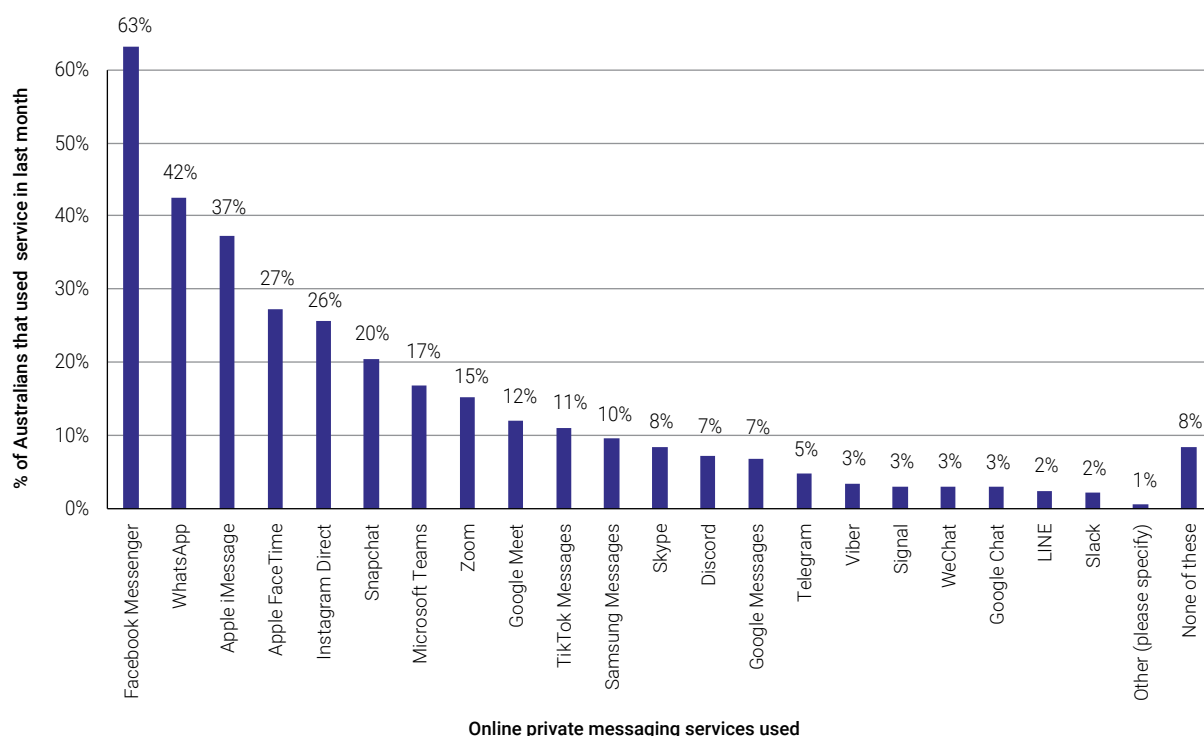
Similarly, the ACMA’s 2024 consumer survey found that the most popular services used by Australians to send messages for personal purposes were Facebook Messenger (59%), WhatsApp (36%), and Instagram (24%) – all increasing since 2022.⁴²⁰

⁴¹⁹ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 28.

⁴²⁰ See ‘Use of communication and social media websites/apps: Used for calls or messages’ in ACMA, [Annual Consumer Survey –How we communicate](#), December 2024, accessed 13 March 2025.

Figure 3.6: Online private messaging services used by Australians for messaging, audio or video calling

Which of the following have you used to either send messages and/or make audio or video calls in the last month?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 28. Question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?). Survey of Australian consumers aged 14+, conducted October–November 2024.

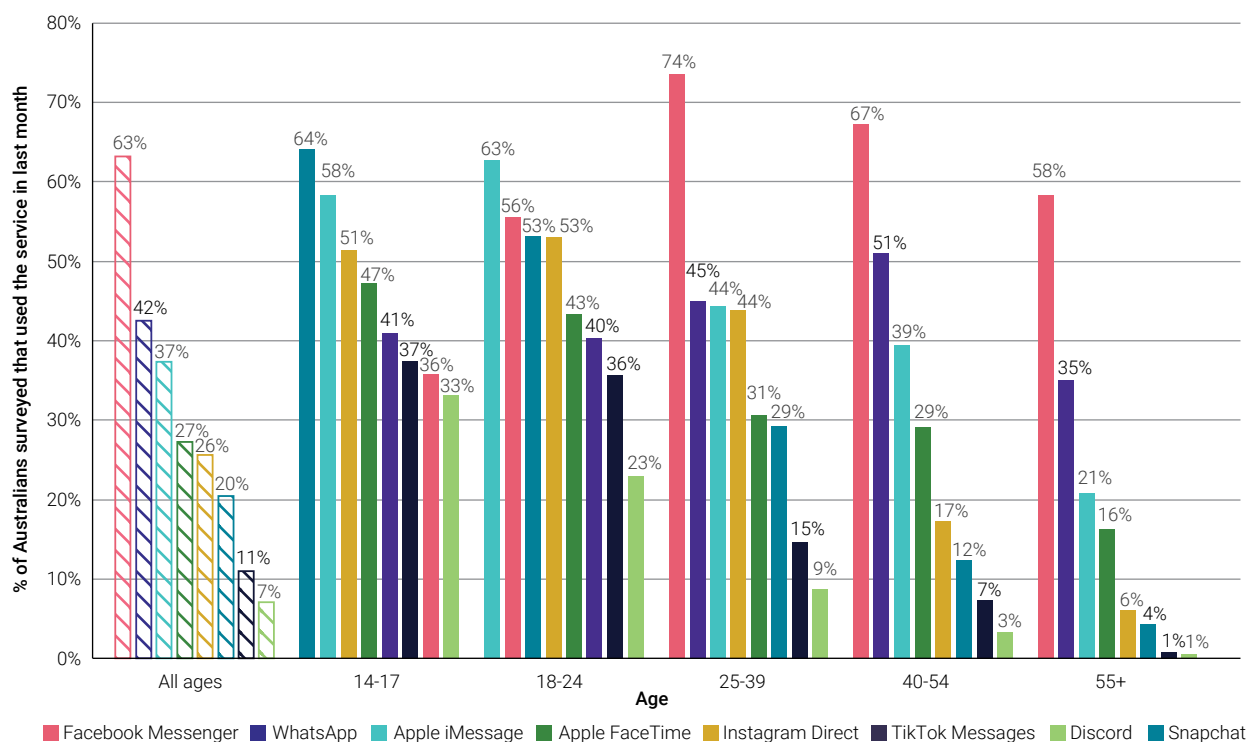
While Facebook and WhatsApp remain the most used services for consumers aged 40+, younger consumers are increasingly adopting alternative services. In the month prior to being surveyed:

- Consumers aged 25 to 39 were the most likely to have used Facebook Messenger (74%) – and they were almost as likely to have used iMessage (44%) and Instagram Direct (44%) as they were to have used WhatsApp (45%).
- Consumers aged 18 to 24 were the most likely to have used iMessage (63%) and were also more likely to have used Snapchat (53%), Instagram Direct (53%) and Facetime (43%), than they were to have used WhatsApp (40%).
- Among consumers aged 14 to 17, the most widely used services were Snapchat (64%), iMessage (58%), Instagram Direct (51%) and FaceTime (47%). They were also more likely to have used TikTok Messages (37%) than Facebook Messenger (36%).⁴²¹

⁴²¹ ACCC analysis of consumer survey results data questions B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?) and A2 (How old are you?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 92.

Figure 3.7: Selected online private messaging services used by Australians, by age

Which of the following have you used to either send messages and/or make audio or video calls in the last month?



Source: ACCC analysis of consumer survey results data, questions A2 (How old are you?) and B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 92. Survey of Australian consumers aged 14+, conducted October–November 2024.

As figures 3.6 and 3.7 show, while Meta’s services have remained the most widely used messaging services across all age groups, there is a potential shift in the preferences of younger demographics away from Meta’s Facebook Messenger and WhatsApp services.

Many consumers in Australia use more than one online private messaging service

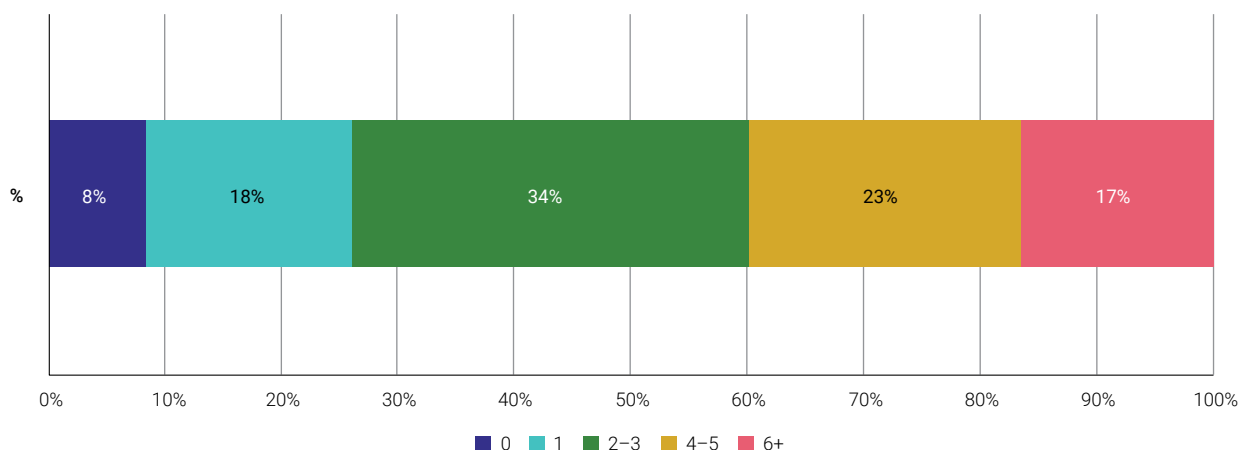
The Report on Online Private Messaging Services identified that many users of standalone services sign up to and use more than one service (‘multi-home’).⁴²²

In 2024, many consumers still multi-home. According to the ACCC’s consumer survey, almost three-quarters of Australians had used 2 or more different services for online private messaging or audio/video calling within the last month, and more than one in 4 Australians had used 4 or more services (see figure 3.8).⁴²³

⁴²² ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 23.

⁴²³ ACCC analysis of consumer survey data, question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?) and A2 (How old are you?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 92.

Figure 3.8: Number of online private messaging services used by Australians for messaging, audio or video calling within the last month



Source: ACCC analysis of consumer survey results data, question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 92. Survey of Australian consumers aged 14+, conducted October–November 2024.

In 2020, the ACCC also found that the degree of multi-homing differs across services. It found that at least 80% of WhatsApp, Zoom, Snapchat and Microsoft Teams users were also monthly active users of Facebook Messenger. Conversely, of Facebook Messenger’s monthly active users, only approximately 50% also used WhatsApp, 35% used Zoom, less than 25% used Snapchat and 15% used Microsoft Teams.⁴²⁴

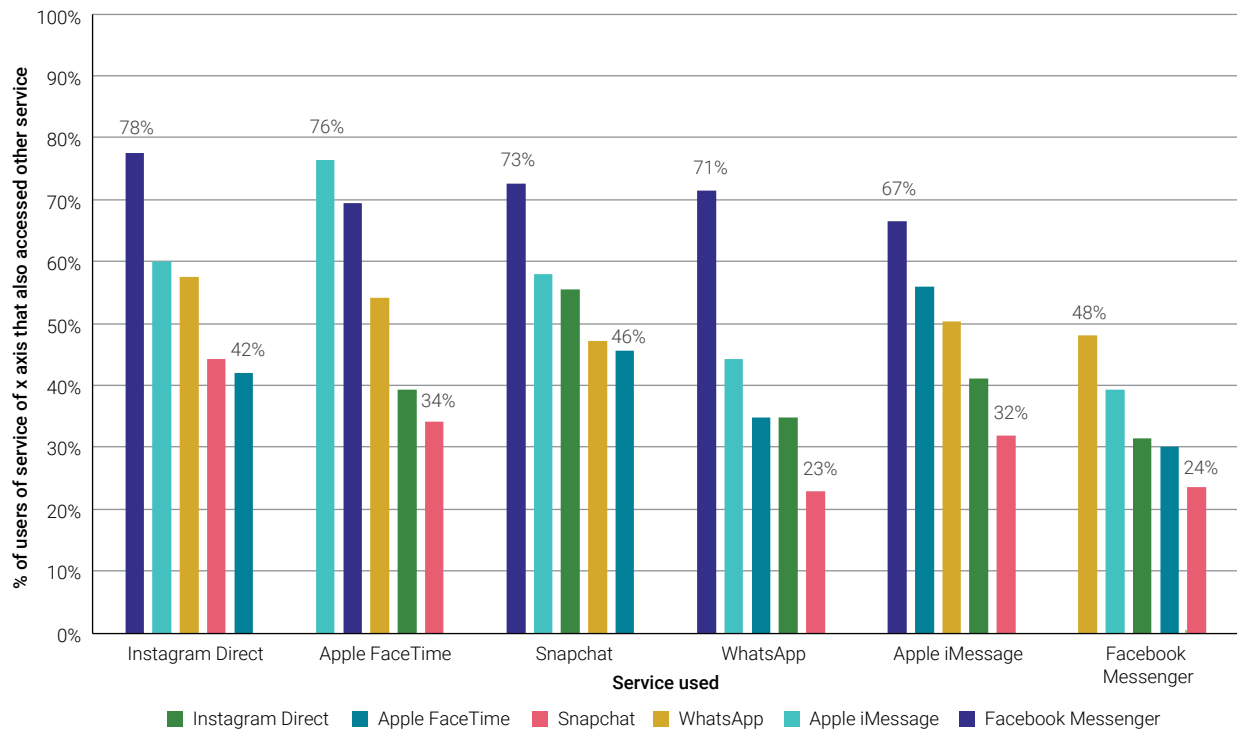
Consistent with the Report on Online Private Messaging Services, the degree of multi-homing still differs across services. In October and November 2024, of consumers surveyed:

- At least 67% of consumers who used iMessage, FaceTime, WhatsApp, Snapchat and Instagram Direct in the last month had also used Facebook Messenger.
- Among consumers who used Facebook Messenger, only 48% used WhatsApp, 39% used iMessage, 31% used Instagram Direct, 30% used FaceTime and 24% used Snapchat.
- 58% of Instagram Direct users, 54% of FaceTime users, and 47% of Snapchat users, had also used WhatsApp in the last month.
- Among consumers who used WhatsApp, only 35% had used Instagram Direct, 35% had used FaceTime and 23% had used Snapchat.⁴²⁵

424 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 23.

425 ACCC analysis of consumer survey results data, Question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 90.

Figure 3.9: Proportion of users of each service that used another messaging service within the last month, for select online messaging services



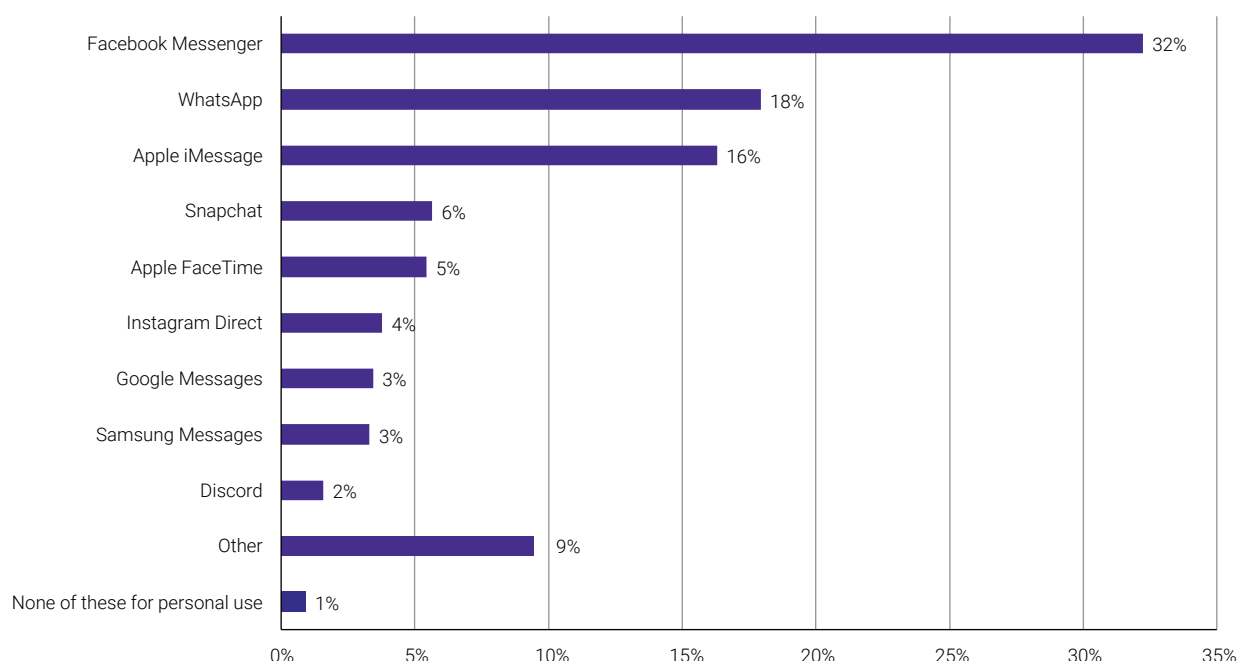
Source: ACCC analysis of consumer survey results data, question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 92. Survey of Australian consumers aged 14+, conducted October–November 2024.

Despite the current level of multi-homing, Meta and Apple’s services are still used most often by consumers who multi-home. Of consumers who had used more than one messaging service in the last month, 32% had used Facebook Messenger most often, followed by WhatsApp (18%) and iMessage (16%).⁴²⁶

⁴²⁶ ACCC analysis of consumer survey results data, question B1 Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 93.

Figure 3.10: Messaging service used most often by consumers who multi-home, for select online messaging services

Which of the following have you used most often for personal use to either send messages and/or make audio or video calls in the last month?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 30. Question B2 (Which of the following have you used most often for personal use to either send messages and/or make audio or video calls in the last month?). Filtered to those who used more than one type of online messaging service or audio or video calling service in the last 12 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

There is recent growth in the use of non-standalone private messaging services by consumers in Australia.

Online private messaging services can be offered as:

- a standalone service, where the primary function of the service is to provide users with the ability to communicate with others
- part of a broader offering (i.e. non-standalone), where the ability to communicate with other users of the service is provided in addition to another service (such as LinkedIn and Instagram).

While focusing primarily on standalone services, the Report into Online Private Messaging Services noted that services offered as part of a broader offering were not likely to pose a strong competitive constraint on standalone services, as the primary function of these platforms is not private communication.⁴²⁷

Since then, the ACCC notes that some social media platforms have expanded their messaging functions to align more closely with standalone services. For example, Instagram's Direct Messenger supports group chats,⁴²⁸ image and video sharing,⁴²⁹ and message reactions.⁴³⁰ TikTok Messages also includes message reactions, video sharing, group chats and additional safety features.⁴³¹ Both

⁴²⁷ ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 31.

⁴²⁸ Meta, [Instagram Help Centre – Add people to an existing group chat on Instagram](#), 2025, accessed 13 March 2025.

⁴²⁹ DMPro.app, [How to send videos on Instagram DM? Complete guide 2024](#), accessed 13 March 2025.

⁴³⁰ V Polakova, [How to fix "Can't react to messages with emojis on Instagram" error](#), *Elfsight*, 2025, accessed 13 March 2025.

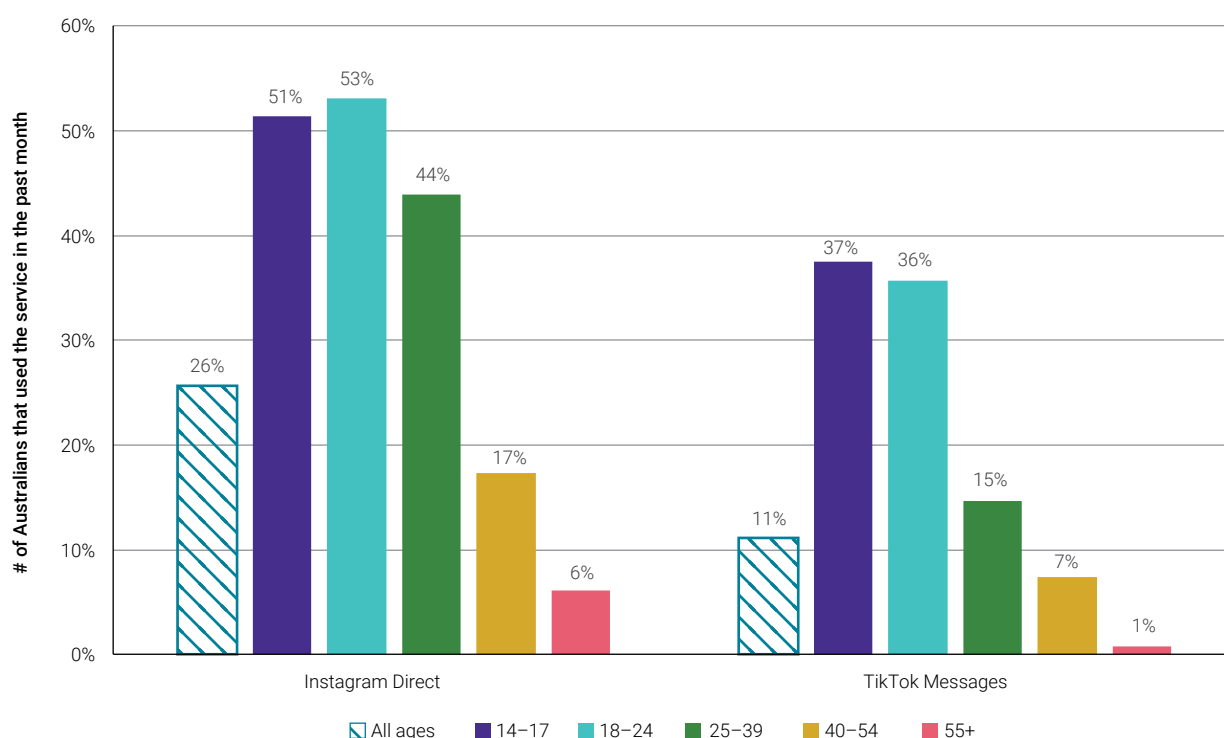
⁴³¹ TikTok, [Direct messages – TikTok Help Center](#), 2025, accessed 13 March 2025; TechRadar, [TikTok finally adds group chat functionality with new safety barriers for teens](#), 13 August 2024, accessed 13 March 2025.

Meta and the Business Council of Australia submit that TikTok's Direct Messaging service has seen considerable growth and popularity among consumers in Australia.⁴³²

The ACCC's consumer survey indicates that the use of these non-standalone messaging services in Australia is significant. Instagram Direct was the fifth most widely used online private messaging service (behind Messenger, WhatsApp, iMessage and FaceTime), used by 26% of consumers aged 14 or older to send messages or make audio/video calls in the last month.⁴³³ The popularity of Instagram Messages appears to be driven by young people – including being used by 52% of consumers aged 14 to 17, 53% of consumers aged 18 to 24, and 44% of consumers aged 25 to 39. Despite TikTok Messages only being used by 11% of consumers surveyed overall, it was used by 37% of those aged 14 to 17, and 36% of those aged 18 to 24 (see figure 3.11).⁴³⁴

Figure 3.11: Usage of Instagram and TikTok by Australians for messaging, by age

Which of the following have you used to either send messages and/or make audio or video calls in the last month?



Source: ACCC analysis of consumer survey results data, questions B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)) and A2 (How old are you?). Filtered to those who used more than one type of online messaging service or audio or video calling service in the last 12 months. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 93. Survey of Australian consumers aged 14+, conducted October–November 2024.

432 Meta, [Submission to the Final Report](#), 11 October 2024, p 11; Business Council of Australia, [Submission to the Final Report](#), 11 October 2024, p 5.

433 ACCC analysis of consumer survey results data, question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 92.

434 ACCC analysis of consumer survey results data, questions B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month?) and A2 (How old are you?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 92.

The ACMA's 2024 consumer survey similarly found that 24% of consumers in Australia used Instagram to send messages,⁴³⁵ and that the use of both Instagram and TikTok to send messages had steadily increased since 2022.⁴³⁶ It found that those aged 18 to 24 were more likely to have used Instagram (57%) and TikTok (20%) to send messages than all other age groups, increasing significantly since 2022.⁴³⁷ Among this age group, usage of Facebook Messenger had simultaneously declined, from 71% in 2022 to 59% in 2024.⁴³⁸

Despite these trends, there has been little overall impact on the position of Facebook Messenger and WhatsApp as the largest online private messaging services in Australia, and their continued growth year-on-year.

AI is being integrated into messaging services

The ACCC also notes the increasing integration of AI-driven functionalities into online private messaging services. This includes the adoption of AI-driven tools to enhance user-to-user messaging, for example:

- Meta AI can be used within Messenger, WhatsApp, and Instagram to compose messages, generate and animate images, search the web for information, and make recommendations. Users can also use commands to prompt Meta AI to delete information in a conversation, clarify information contained in a message thread, and provide responses within a private chat with another user.⁴³⁹
- Discord hosts several popular generative AI apps on the platform, including popular AI image generator, Midjourney. Midjourney's server is the largest server on Discord, with over 13 million members worldwide. Among other features, users within Discord servers can also utilise Discord's AI assistant 'Clyde' and AI-powered conversation summaries, built on OpenAI's foundation models.⁴⁴⁰
- Snapchat's 'My AI'⁴⁴¹ (built on ChatGPT) and TikTok's 'Tako'⁴⁴² are generative AI-powered chatbots made available to users within the platforms' direct messaging functions. The chatbots can respond to messages from users, answer questions across a variety of topics, and provide advice and recommendations.⁴⁴³
- Google Messages has introduced 'Magic Compose', an experimental feature which uses generative AI to provide suggestions or edit messages in a conversation.⁴⁴⁴
- Apple has made a range of AI features available in its Messages app on iPhone 15 and 16, including tools to summarise conversations and draft responses.⁴⁴⁵

435 See 'Use of communication and social media websites/apps: Used for calls or messages' in ACMA, [Annual Consumer Survey –How we communicate](#), December 2024, accessed 13 March 2025.

436 See 'Use of communication and social media websites/apps: Used for calls or messages' in ACMA, [Annual Consumer Survey –How we communicate](#), December 2024, accessed 13 March 2025.

437 See 'Use of communication and social media websites/apps: Use for calls or messages' in ACMA, [Annual Consumer Survey – How we communicate](#), December 2024, accessed 13 March 2025.

438 See 'Use of communication and social media websites/apps: Use for calls or messages' in ACMA, [Annual Consumer Survey – How we communicate](#), December 2024, accessed 13 March 2025.

439 Instagram, [Use Meta AI on Instagram](#), 2025, accessed 13 March 2025.

440 Discord, [Discord is your place for AI with Friends](#), 9 March 2023, accessed 13 March 2025.

441 Snapchat Support, [What is My AI on Snapchat and how do I use it?](#), accessed 13 March 2025.

442 A Heath, 'TikTok is testing an AI chatbot called Tako', *The Verge*, 26 May 2023, accessed 13 March 2025.

443 Snapchat Support, [What is My AI on Snapchat and how do I use it?](#), accessed 13 March 2025; TikTok, [Tiktaktako](#), accessed 13 March 2025.

444 Google Messages, [Draft messages with Magic Compose](#), Help Center, 2025, accessed 13 March 2025.

445 Apple, [Use Apple Intelligence in Messages on iPhone](#), 2025, accessed 13 March 2025.

AI tools are similarly being adopted within enterprise productivity-based messaging services. This may have the effect of further embedding these messaging services primarily within productivity software suites, as opposed to being used as standalone services. For example:

- Google's 'Gemini for Workplace' add-on offers generative AI features within Google Workspace apps, including Google Meet and Google Chat.⁴⁴⁶ Gemini can summarise Google Chat messages within the Workspace Home page, as well as take notes, and soon, generate background images during meetings in Google Meet.⁴⁴⁷
- Microsoft has integrated Copilot into Microsoft 365 plans for consumers and enterprises, including integrations in Microsoft Teams. Copilot can be used in Teams to write and edit content, generate meeting notes, answer questions in meetings and chats, and summarise information across workplace message threads, emails, documents and the web.⁴⁴⁸
- Zoom's 'AI Companion' is available to all paid users of Zoom Workplace, and can create or edit written content, query or summarise documents or emails, identify action items in chat channels, and answer user queries or perform web searches during meetings.⁴⁴⁹
- Slack has also rolled out generative AI capabilities to paid business users, including features such as channel recaps, thread summaries, personalised search and content generation.⁴⁵⁰

Some firms are also exploring the adoption of AI-driven tools to assist with business to consumer messaging. In 2024, Meta announced its focus on generative AI opportunities in the business messaging space, planning to expand adoption of business messaging through integrating AI.⁴⁵¹

Meta considers that AI integration will assist businesses to communicate with customers more efficiently, and has been testing the ability for businesses to set up AI chatbots that represent them in messages with customers.⁴⁵² 'Business AI' has been made available to businesses on WhatsApp in some countries, and can perform tasks such as recommending products and services to customers, and responding to customer queries about basic business information, specific products and services, discounts, payments or shipping.⁴⁵³

3.1.3 Potential competition issues in online private messaging

In this section, the ACCC considers the extent to which Meta and Apple may continue to benefit from identity-based network effects, and potential impacts on online private messaging services caused by Apple's recent changes to contact access for third party apps on iOS devices. The ACCC also considers competition issues raised by bundling and tying, as well as limited interoperability between services.

Identity-based network effects may raise barriers to entry

In the Report on Online Private Messaging Services, the ACCC observed that standalone messaging services give rise to identity-based network effects. As some standalone messaging services are not

446 Google Workspace, [The better way to work just got an upgrade with Google AI](#), AI, accessed 13 March 2025.

447 Google Meet Help, [Get started with Gemini for Google Workspace](#), Help Center, 2025, accessed 13 March 2025.

448 Microsoft, [Use Copilot in Microsoft Teams chat and channels](#), Copilot, 2025, accessed 13 March 2025; Microsoft, [Get started with Microsoft 365 Copilot Chat in Teams](#), Copilot, 2025, accessed 13 March 2025.

449 Zoom, [AI Companion 2.0 launches, helping to transform work and get more done](#), Article, 23 October 2024, accessed 13 March 2025.

450 R Carter, 'Slack AI: Exploring the Innovative AI Features in Slack', *UC Today*, 15 April 2024, accessed 13 March 2025; Slack, [Guide to Slack AI](#), accessed 13 March 2025.

451 Meta, [Second Quarter 2024 Results Conference Call, 31 July 2024](#), accessed 13 March 2025, p 2.

452 Meta, [First Quarter 2024 Results Conference Call, 24 April 2024](#), accessed 13 March 2025, p 7.

453 WhatsApp, [About using business AI to chat with customers](#), 2025, accessed 13 March 2025.

interoperable,⁴⁵⁴ the more a users' network (such as friends, family or colleagues) are on a particular service, the more attractive that service will be to the user.⁴⁵⁵

In 2020, the ACCC noted that the significant size of the Facebook Messenger and WhatsApp user bases, and the presence of these network effects, provided Meta's services with a competitive advantage over smaller suppliers of standalone services in Australia.⁴⁵⁶

As usage of Meta and Apple's online private messaging services is similar to the levels observed in 2020, and standalone services are generally not interoperable, Meta and Apple may still be benefitting from identity-based network effects.

With reference to previous analysis on differentiation of services in the Report on Online Private Messaging Services,⁴⁵⁷ the ACCC notes that:

- standalone services continue to provide text, voice and video messaging across different device types, with Zoom and Microsoft Teams allowing users outside of their network to use their services
- Zoom and Microsoft Teams continue to have a predominant focus on facilitating communication in professional environments
- certain services, such as FaceTime and Zoom, continue to emphasise particular forms of communication such as video and voice calling
- certain services, such as Signal, continue to market themselves on the basis of their privacy controls (such as the use of end-to-end encryption).

The above trends suggest that standalone services with tailored functionalities are more likely to compete closely with each other than with Facebook Messenger and WhatsApp, and therefore may have a limited competitive constraint on Meta's standalone services.

In respect of Apple's iMessage and FaceTime services, the Report on Online Private Messaging Services noted that whilst they were used by a significant number of Australians, their use is limited to iOS devices.⁴⁵⁸ As these services are not available for Android users and have limited interoperability for iOS users wanting to communicate with others on a different operating system, Apple's services did not pose an effective alternative to Meta's services, limiting the competitive constraint that Apple's services posed on Facebook Messenger and WhatsApp.⁴⁵⁹ As such, the report noted that Apple was likely to pose weaker competitive constraints on Meta's Facebook Messenger and WhatsApp services than those services imposed on Apple's standalone services.⁴⁶⁰ The ACCC considers that this finding still applies.

Despite the increase in popularity of non-standalone services such as Instagram Direct and TikTok Direct Message, there has not been a considerable decrease in the overall usage numbers of Meta and Apple's services (as discussed in section 3.1.2).

The ACCC also notes that leading standalone online private messaging services are supplied to consumers at zero monetary cost and are not monetised through advertising revenue. Notably, Apple's iMessage does not generate revenue⁴⁶¹ and WhatsApp's revenue is primarily derived

454 Interoperability would enable users of different messaging apps to communicate with each other directly without needing to use the same app. OECD, [Data Portability, Interoperability and Digital Platform Competition](#), 9 June 2021, p 12.

455 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 25–26.

456 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

457 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 27–28.

458 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 30–31.

459 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

460 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

461 Voye, [Is it free to use iMessage internationally?](#), accessed 13 March 2025.

from its business customers.⁴⁶² Consequently, there are low financial incentives to supply online private messaging as a standalone service and any new entrant faces high barriers to entry as these services generally do not earn revenue. For example, Signal, a recent entrant in the supply of standalone online private messaging services, relies primarily on donations from users to supply its service.⁴⁶³

In its submission in response to the Report on Online Private Messaging Services, Meta (then known as Facebook) considered that network effects did not pose a significant barrier to entry given the ease with which consumers could multi-home and switch between services. Meta noted that third-party messaging apps could easily access a user's contact list stored on their device, providing a network of contacts 'which facilitates costless multi-homing and switching'.⁴⁶⁴

The Information Technology & Innovation Foundation submitted that the existence of network effects does not entail a 'winner-take-all market structure', particularly in markets characterised by multi-homing strategies where users 'prefer using multiple alternatives, increasing competition in the market'. It also submitted that the various messaging options provided to consumers, as well as multi-homing behaviour, indicates a market 'dominated by no single platform where consumers and developers can choose the product that best suits their preferences'.⁴⁶⁵

The International Centre for Law and Economics also noted that whilst network effects may offer an incumbent an advantage, 'they do not guarantee a comfortable monopolist position' in the face of consumers switching to a perceptibly superior service.⁴⁶⁶

Apple's recent changes to iOS contact access should be monitored for impacts on competition

With the release of iOS 18, Apple has implemented changes to the process by which third-party apps (including online private messaging apps) can request and be permitted access to a user's contacts list. Previously, Apple device users seeking to connect with contacts on third-party apps had no choice but to allow full access to their address book (or refuse access entirely). The new process allows users a new option to grant 'Limited Access' to apps – meaning consumers can choose which specific contacts an app can see and access.

These changes may have privacy benefits for consumers. The Report on Online Private Messaging Services highlighted concerns relating to the broad disclosures used by online private messaging services in their terms of use and policies to enable them to collect extensive information about users, as well as a lack of clarity about the extent to which user data will be collected, used, or shared with others.⁴⁶⁷ Introducing the option to only share a limited number of contacts provides consumers with greater control over the privacy of their contacts list and offers improved transparency over what data is shared and can be accessed by third party apps.⁴⁶⁸

The ACCC notes Meta's submission to this Report, contending that Apple's recently announced changes to contacts access would 'benefit Apple while threatening to harm competition amongst messaging and other apps'.⁴⁶⁹ The ACCC notes that Apple's announced contact access changes may impact the capacity for new standalone online private messaging services (as well as other social

462 P Gratton, '[How WhatsApp makes money](#)', *Investopedia*, 11 December 2024, accessed 13 March 2025.

463 Signal, [Donate](#), accessed 13 March 2025.

464 Facebook, [Submission to the First Interim Report](#), 8 March 2021, p 6.

465 Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 4.

466 International Center for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 16.

467 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 44.

468 Based on an ACCC analysis of Apple's WWDC24 conference. See, Apple, [Meet the Contact Access Button](#), Videos, 11 June 2024, accessed 13 March 2025.

469 Meta, [Submission to the Final Report](#), 11 October 2024, p 3.

network services) to enter the market, given the potential for an increasing number of consumers to opt-out of sharing all of their contacts with third party apps.

The ACCC will continue monitoring barriers to entry and the presence of identity-based network effects in online private messaging services.

Tying and bundling may raise competition concerns

The Report on Online Private Messaging Services noted the tendency of digital platforms to bundle or tie access to hardware and software services as part of a broader ecosystem of products and services offered.⁴⁷⁰ It acknowledged the benefits of convenience and efficiency to consumers, particularly where a platform can fulfil a variety of consumer needs, as well as the potential for improvements in quality of services because of bundling or tying hardware and software.⁴⁷¹

The ACCC also noted the capacity for tying and bundling of services to retain a consumer within its ecosystem, forcing rivals to incur significant costs and offer an increased range of services to attract users. This may make it difficult for suppliers of standalone services to compete and may create barriers to entry.⁴⁷² Noting that most standalone private messaging services are offered to consumers at zero monetary cost, the ACCC considers there may be concerns with respect to tying or bundling of messaging services offered under subscription to business or professional users. The European Commission has further examined the impact of tying and bundling of services on competition for enterprise messaging services.

Box 3.1: European Commission's investigation into Microsoft Teams

After commencing a formal investigation in June 2023,⁴⁷³ on 25 June 2024 the European Commission served Microsoft with a Statement of Objections alleging it was abusing its dominant position in productivity software by tying Microsoft Teams (Teams) to its productivity applications included with its business suites Office 365 and Microsoft 365.⁴⁷⁴ The European Commission is concerned that Microsoft may have granted Teams a distribution advantage by not providing consumers with the choice of whether or not to acquire access to it as part of enterprise productivity application subscriptions. The European Commission alleges that this conduct may have prevented Teams' rivals from competing and innovating, to the detriment of consumers in the European Economic Area.⁴⁷⁵ On 1 April 2024, Microsoft announced reduced pricing for Office 365 and Microsoft 365 business suites without Teams installed.⁴⁷⁶ However, the European Commission preliminary findings are that these changes are insufficient to address its concerns and that more changes are necessary to restore competition.⁴⁷⁷

Tying and bundling of enterprise messaging services by large digital platforms may increase barriers to entry. The ACCC also notes the increased capacity for AI integration in online private messaging

470 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 82–85.

471 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 85.

472 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 85.

473 European Commission, [Antitrust: Commission opens investigation into possible anticompetitive practices by Microsoft regarding Teams](#), Press Release, 27 July 2023, accessed 13 March 2025.

474 European [Commission sends Statement of Objections to Microsoft over possibly abusive tying practices regarding Teams](#), Commission, Press Release, 25 June 2024, accessed 13 March 2025 21 February 2025.

475 European [Commission sends Statement of Objections to Microsoft over possibly abusive tying practices regarding Teams](#), Commission, Press Release, 25 June 2024, accessed 13 March 2025 21 February 2025.

476 MLex, [Microsoft extends unbundling of Teams worldwide to address EU antitrust concerns](#), 1 April 2024, accessed 13 March 2025; Microsoft, [Realigning global licensing for Microsoft 365](#), Licensing, 1 April 2024, accessed 13 March 2025.

477 European [Commission sends Statement of Objections to Microsoft over possibly abusive tying practices regarding Teams](#), Commission, Press Release, 25 June 2024, accessed 13 March 2025.

services (as discussed above), which may serve as another method by which firms seek to bundle or tie AI products or functionalities to messaging services.

Limited interoperability between messaging services and operating systems may impact competition

The Report on Online Private Messaging Services observed that most standalone services are not interoperable with one another, i.e. messages or calls cannot be sent or received between different services.⁴⁷⁸ Some services are also not interoperable across device operating systems, for example iMessage cannot be used when messaging non-iOS devices. In both instances, the more a user's network (such as friends or family) are on a particular service, the more attractive that service will be to the user, creating identity-based network effects.⁴⁷⁹

Due to the presence of network effects, the significant size of Facebook Messenger, WhatsApp and iMessage's user bases provides Meta and Apple a competitive advantage over smaller standalone services in Australia. Since these services are not interoperable, rivals seeking to attract individual users will also need to attract some or many of the user's friends, family, colleagues and acquaintances to their service.⁴⁸⁰

Box 3.2: European Commission's designation of WhatsApp and Facebook Messenger under the DMA

The EU's DMA requires gatekeepers who provide a designated messaging service to ensure that the core functionalities of their messaging service are interoperable with competing services for EU users.⁴⁸¹ This could include, for example, facilitating end-to-end encryption in messaging, voice and video calls, and the sharing of rich media and files between a user on WhatsApp and another user on Telegram.⁴⁸²

As of March 2025, Meta's WhatsApp and Facebook Messenger have been designated under the DMA.⁴⁸³ In compliance, Meta announced in March 2024 that it would enable interoperability with third party messaging services for WhatsApp and Facebook Messenger users in the EU.⁴⁸⁴ Meta stated that it would aim to offer '1:1 text messaging between individual users and the sharing of images, voice messages, videos and other attached files between individual end users'.⁴⁸⁵ Developers will be required to sign an agreement with Meta to enable interoperability.⁴⁸⁶

Google's messaging services are not designated under the DMA however Google submitted to this Report that it supports greater interoperability, ensuring consumers are free to choose a preferred

478 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

479 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, pp 25–26.

480 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

481 See Article 7 'Obligation for gatekeepers on interoperability of number-independent interpersonal communication services' point 1 in EU, [Regulation \(EU\) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives \(EU\) 2019/1937 and \(EU\) 2020/1828 \(Digital Markets Act\) \(Text with EEA relevance\)](#), Document 32022R1925, 14 September 2022, accessed 13 March 2025.

482 R Rombolà, ['Digital Markets Act and the interoperability requirement: is data protection in danger?'](#), *MediaLaws*, 31 March 2023, accessed 13 March 2025.

483 European Commission, [Gatekeepers](#), Digital Markets Act (DMA), accessed 13 March 2025.

484 D Brouwer, [Making messaging interoperability with third parties safe for users in Europe](#), *Engineering at Meta*, 6 March 2024, accessed 13 March 2025.

485 D Brouwer, [Making messaging interoperability with third parties safe for users in Europe](#), *Engineering at Meta*, 6 March 2024, accessed 13 March 2025.

486 Meta, [Messaging Interoperability](#), 2025, accessed 13 March 2025.

messaging app and communicate securely, and without degradation of content, features, and capabilities.⁴⁸⁷

The ACCC understands that there may be challenges associated with implementing interoperability, and that it requires the support of smaller competitors.⁴⁸⁸ Further analysis is required to understand the impacts of interoperability measures on competition and innovation in Australia.

Interoperability between operating systems can increase competition

Online private messaging services compete on their features and functionalities, including the ability to facilitate communication across device operating systems (e.g. across both iOS and Android devices).⁴⁸⁹ Unlike SMS/MMS messaging which relies on mobile carrier networks, internet-based messaging services (like WhatsApp, Messenger and Signal) can offer enhanced features like encryption, read receipts, and high-quality media sharing, facilitating feature-rich communication across devices and operating systems.⁴⁹⁰

While iMessage and FaceTime offer similar features, these are not interoperable across operating systems. As a result, the ACCC previously considered that, for users seeking to communicate across operating systems, iMessage and Facetime were not effective alternatives to internet-based services, like Facebook Messenger or WhatsApp.⁴⁹¹

The ACCC notes that Apple's global introduction of the Rich Communication Services (RCS) standard for messaging may bring the functionality of Apple's messaging services closer to internet-based services.⁴⁹² RCS is considered an upgrade to SMS/MMS messaging, providing similar features to internet-based messaging (like media-sharing, read receipts and typing indicators).⁴⁹³ Apple stated that this decision will allow better interoperability with other devices, and that RCS messaging will coexist alongside iMessage.⁴⁹⁴ Meta submitted that this would bring the functionality of Apple standalone services 'in even closer competition with Meta's messaging services'.⁴⁹⁵

Google Messages⁴⁹⁶ currently supports RCS messaging in Australia, implemented through Google's own proprietary RCS server (i.e. without reliance on support by local carriers).⁴⁹⁷ Apple's global rollout, however, will rely on local carriers to integrate RCS into their infrastructure, rather than Apple deploying its own RCS backend.⁴⁹⁸ As of March 2025, Australian telecommunications providers are yet to provide RCS support, however some providers are considering its implementation.⁴⁹⁹ The ACCC will continue to monitor developments in the roll out of RCS technology in Australia.

487 Google, [Submission to the Final Report](#), 11 October 2024, p 21.

488 Bundesnetzagentur, [Discussion paper on interoperability between messaging services](#), 9 Dec 2021, pp 17–19.

489 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 11.

490 See paragraph 84 in P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, p 36.

491 ACCC, [Digital Platform Services Inquiry First Interim Report](#), 23 October 2020, p 2.

492 Apple, [What is the difference between iMessage, RCS and SMS/MMS?](#), 16 September 2024, accessed 13 March 2025.

493 Google, [Submission to the Final Report](#), 11 October 2024, p 20; Apple, [What is the difference between iMessage, RCS and SMS/MMS?](#), 16 September 2024, accessed 13 March 2025.

494 T Williams, ['Apple announces surprise adoption of RCS messaging, 'the new SMS' Android-maker Google spend years pushing for'](#), *Australian Broadcasting Corporation*, 17 November 2023, accessed 13 March 2025.

495 Meta, [Submission to the Final Report](#), 11 October 2024, p 3.

496 Google, [Submission to the Final Report](#), 11 October 2024, p 20.

497 Jibe, [How Jibe can help](#), Jibe Platform, accessed 13 March 2025.

498 A Choros, [This core iOS feature doesn't work in Australia](#), *WhistleOut*, 19 September 2024, accessed 13 March 2025; GSMA, [RCS Now in iOS: a New Chapter for Mobile Messaging](#), Newsroom, 17 September 2024; GSMA, [RCS](#), Rich Communication Services, 2025, accessed 13 March 2025.

499 T Williams, ['Aussies missing key features in iPhone, Apple Watch updates'](#), *Information Age*, 24 September 2024, accessed 13 March 2025; D Swan, ['Telcos in talks to roll out SMS on steroids'](#), *The Sydney Morning Herald*, 30 October 2024, accessed 13 March 2025.

Box 3.3: US Department of Justice's (US DOJ) consideration of cross-platform messaging interoperability on iOS

In March 2024, the US DOJ filed a complaint alleging that Apple illegally maintains a monopoly over the smartphone market (including messaging services) by selectively imposing contractual restrictions on, and withholding critical access points from, developers.⁵⁰⁰ The complaint alleges that:

- Apple prevents third-party messaging app developers from combining the 'text to anyone' functionality of SMS with advanced features of internet-based services.⁵⁰¹ Denying this functionality 'reinforces network effects that benefit Apple'.⁵⁰²
- Apple prohibits third-party developers from incorporating various features that are available for iMessage and FaceTime. For example, third-party messaging apps cannot operate in the background while an app is closed, impairing message delivery confirmation, and cannot automatically access the iPhone camera to allow users to preview their appearance before answering a video call.⁵⁰³
- Introducing RCS 'would not cure Apple's efforts to undermine third-party messaging apps', as developers will still be prohibited from accessing the 'text anyone' capability of RCS, 'just as they are prohibited from incorporating SMS'.⁵⁰⁴

3.1.4 Online private messaging services continue to give rise to consumer harms

Scam activity remains prevalent on online private messaging services. Many scam types with significant victim impact rely on encrypted messaging services for scammer-victim communications. In a job scam or romance scam, initial contact is generally made on an unencrypted social media, recruitment, or dating platform, before the scammer quickly moves communications to an encrypted messaging service. The National Anti-Scam Centre's Job Scam Fusion Cell found that task-based job scams, which rely heavily on encrypted messaging services, account for an estimated 90% of job scam losses.⁵⁰⁵

In its submission to this Report, Meta noted various steps it has implemented to address scams and harmful content on its online private messaging services, including:

- the development of an anti-scams resource hub to educate users and businesses on identifying and avoiding scams
- a scam awareness and consumer campaign.⁵⁰⁶

500 P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, pp 3–4.

501 See paragraph 85 in P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, p 36.

502 See paragraph 88 in P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, p 37.

503 See paragraph 86 in P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, pp 36–37.

504 See paragraph 89 in P R Sellinger, J S Kanter, D G Mekki, H J Doshi, M B Kades, [Case 2:24-cv-04055](#), Document 1, US District Court for the District of New Jersey, 21 March 2024, p 37.

505 ACCC, Intelligence Brief – Job and Scam Fusion Cell (unpublished), September 2024, p 2.

506 Meta, [Submission to the Final Report](#), 11 October 2024, pp 11–12.

On 2 December 2024, Meta announced that it will require advertisers seeking to run ads targeted to Australian users on Meta's platforms, and that are related to financial services, to:

- verify beneficiary and payer information through a "Paid for By" disclaimer
- if operating as a business, hold an Australian Financial Services Licence number
- if operating as an individual, provide a government-issued ID.⁵⁰⁷

Google noted the security measures it has adopted for Google Messages in response to increased scam activity, including the use of end-to-end encryption.⁵⁰⁸ Google also noted that it relies on rich communication service (RCS) standards to reduce spam content, including server-side protections that identify and block spam messages, and the capacity to verify certain users (including verification of business users with a 'verified' icon).⁵⁰⁹

Such industry-led initiatives are key to combatting scam communications originating on online message services. However, the Government's Scams Prevention Framework will be crucial to uplifting anti-scam measures across regulated sectors; better protecting consumers by preventing and cutting off scammers' contact with Australians (discussed below).

The National Anti-Scam Centre is addressing harms from scams

The National Anti-Scam Centre launched on 1 July 2023. It facilitates partnerships across government, law enforcement, industry, and consumer groups to:

- Collect and share data and intelligence across the scam ecosystem, supporting the early identification of trends as well as disruption activities that seek early intervention to reduce losses to scams.
- Coordinate on scams prevention, disruption, and awareness activities.
- Help consumers identify and avoid scams, including through public messaging, community engagement and educational resources.⁵¹⁰
- Respond to and refer victims to IDCARE for tailored and timely scam recovery support.⁵¹¹

The National Anti-Scam Centre's work is guided by an advisory board with representatives from peak bodies representing the finance, digital platforms and telecommunications sectors as well as consumer advocates, victim support services and others with relevant expertise. From August 2023 to February 2024, the National Anti-Scam Centre ran its first fusion cell, co-led with the Australian Securities and Investments Commission, targeting investment scam fusion cells, leading to the takedown of over 220 investment scam websites.⁵¹² The National Anti-Scam Centre is now leading a second fusion cell with a focus on job and employment scams, aimed at disrupting criminal groups advertising or offering jobs which do not exist.⁵¹³

507 S McKeith, 'Meta tightens ad rules to curb financial scams aimed at Australians', *Reuters*, 2 December 2024, accessed 13 March 2025; BrokersView, [Meta to Enforce Verification for Financial Advertisers to Curb Celebrity Scam Ads in Australia](#), 3 December 2024, accessed 13 March 2025.

508 Google, [Submission to the Final Report](#), 11 October 2024, pp 18–19.

509 Google, [Submission to the Final Report](#), 11 October 2024, pp 20–21.

510 ACCC, [National Anti-Scam Centre in Action, Quarterly update](#), July to September 2023, 27 November 2023, p 7.

511 ACCC, [National Anti-Scam Centre in Action, Quarterly update](#), April to June 2024, 28 November 2024, p 22.

512 ACCC, [Investment scam fusion cell](#), Final report, May 2024, 21 May 2024, p 1.

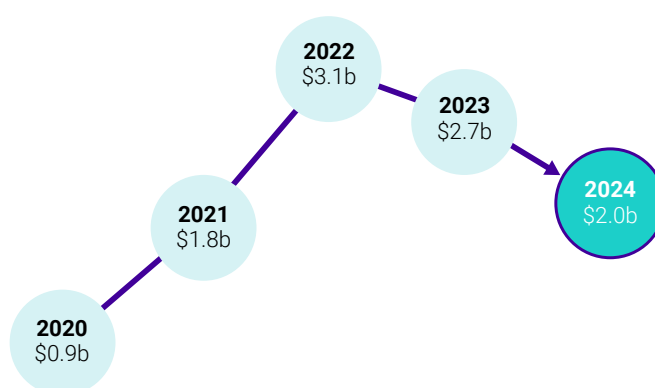
513 ACCC, [Second National Anti-Scam Centre fusion cell to tackle job and employment scams](#), Press Release, 31 July 2024, accessed 13 March 2025.

Since its establishment on 1 July 2023, the National Anti-Scam Centre’s collaborative efforts across government, law enforcement, consumer organisations and industry have contributed to a decrease in financial losses reported to the ACCC’s Scamwatch service. Between July 2023 and June 2024:

- Financial losses reported by the public to Scamwatch decreased by 41% from \$559.9 million to 2022–23 to \$330.0 million in 2023–24.
- The number of people reporting a financial loss to Scamwatch decreased by 32% from 32,919 in 2022–23 to 22,351 in 2023–24.⁵¹⁴

The reduction in reported losses to Scamwatch is consistent with a decrease in reported losses in the combined data.⁵¹⁵ Before the introduction of the National Anti-Scam Centre on 1 July 2023, reported losses increased from \$851 million in 2020 to a peak of \$3.1 billion in 2022. Reported losses decreased by 13.1% in 2023 to \$2.7 billion and decreased by a further 25.9% in 2024 to \$2.03 billion.

Figure 3.12: Australian businesses’ total financial losses from scams, 2020–2024



Source: ACCC, [Report of the National Anti-Scam Centre on scams activity 2024](#), p 2.

Australians reported more than 249,000 scams in 2024. Scams where contact occurred via social media held relatively steady from 17,542 in 2023 to 17,084 in 2024. The National Anti-Scam Centre continues to note that many job scams and investment scams relied on advertisements and posts on social media, as well as direct engagement using WhatsApp.

The decrease in reported losses in 2023 and 2024 is a result of the concerted efforts of government, including the National Anti-Scam Centre, industry, law enforcement and community organisations. National Anti-Scam Centre initiatives that have provided better protection for Australians against scams include increased consumer awareness through the ‘Stop. Check. Protect.’ national media campaign and community presentations, collaboration across government and industry to identify and disrupt scams through scam website takedowns and collaboration with telecommunications providers to identify and disrupt suspected scam phone numbers and sender IDs.⁵¹⁶

While the trend of decreased reported losses in 2023 and 2024 is encouraging, reported losses in the second half of 2024 were higher than the first half of 2024, indicative of the increased sophistication of scams. The implementation of the Scams Prevention Framework, including mandatory, consistent and enforceable obligations on banks, telecommunications providers and digital platforms to prevent, detect, report, disrupt and respond to scams will provide better protection for consumers, is an important development given the increased complexity of scams.

⁵¹⁴ ACCC, [National Anti-Scam Centre in action, Quarterly Update](#), April to June 2024, 28 November 2024, p 1.

⁵¹⁵ Combined data refers to total combined losses reported to Scamwatch, ReportCyber, IDCARE, Australian Financial Crimes Exchange (AFCX), and Australian Securities Investment Commission (ASIC).

⁵¹⁶ For further information regarding significant anti-scam initiatives in 2024 refer to ACCC, Targeting Scams: Report of the National Anti-Scam Centre on scams data and activity in 2024, “National Anti-Scam Centre in action”.

Scams Prevention Framework legislation

The Regulatory Reform Report identified that the most effective way to prevent widespread scam victimisation is to prevent scammers from reaching consumers in the first place. It recommended targeted measures to protect consumers from scams on digital platforms, including mandatory processes to prevent and remove scams, such as a notice and action mechanism for identifying and responding to scam content.⁵¹⁷

The Scams Prevention Framework Act 2025 was passed by the Australian Parliament on 13 February 2025⁵¹⁸ and received royal assent on 20 February 2025.⁵¹⁹ This legislation inserts a new Part IVF into the CCA to establish a new 'Scams Prevention Framework' requiring regulated entities to prevent, detect, report, disrupt and respond to scams, and implement governance arrangements in relation to these principles.⁵²⁰ The framework allows a Treasury Minister to designate industry sectors to be subject to these overarching principles, make sector-specific codes for regulated entities in that sector, and designate a regulator to enforce that code.⁵²¹ Under the framework:

- overarching Scams Prevention Framework principles require regulated entities to make reasonable governance arrangements relating to anti-scam actions, and take steps to prevent, detect, report, disrupt and respond to scams⁵²²
- sector-specific 'Scams Prevention Framework codes' will provide prescriptive obligations for regulated sectors⁵²³
- regulated entities are required to have internal dispute resolution mechanisms that are accessible and transparent for consumers,⁵²⁴ and must also be a member of an external dispute resolution scheme authorised by a Treasury Minister for that sector⁵²⁵
- timely reporting and information sharing is required by firms in designated sectors.⁵²⁶

The ACCC will regulate and enforce compliance with the overarching Scams Prevention Framework principles.⁵²⁷ Once drafted and the sectors designated, the Government intends that the ACCC will also enforce the digital platforms sector-specific code, with ASIC and ACMA intended to be the regulators of the banking and telecommunications sectors respectively.⁵²⁸

The Digital Industry Group Inc (DIGI) noted its work in developing a voluntary Australian Online Scams Code for the digital industry, that is intended to operate alongside the Australian Government's announced Scams Prevention Framework. DIGI noted that its voluntary code has been adopted by Google, Meta, Snapchat and Discord.⁵²⁹

The ACCC welcomes the introduction of the Scams Prevention Framework and considers that the ongoing work of the National Anti-Scam Centre is vital to maintaining this momentum addressing online scam activity.

517 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 72–73.

518 The Hon Stephen Jones MP and the Hon Michelle Rowland MP, [Parliament passes world-leading scams prevention framework](#), Press Release, 13 February 2025, accessed 13 March 2025.

519 Parliament of the Commonwealth of Australia, [Scams Prevention Framework Bill 2025](#), accessed 18 March 2025.

520 Scams Prevention Framework Act 2025, Part 1.

521 CCA, s 58AB.

522 CCA, Pt IVF, Div 2.

523 CCA, Pt IVF, Div 3.

524 CCA, s 58BZD.

525 CCA, Pt IVF, Div 4.

526 CCA, Pt IVF, Div 2, Subdiv E.

527 CCA, s 58EB.

528 The Treasury, [Scams Prevention Framework: Summary of reforms](#), September 2024, p 8.

529 See 'Executive summary for consumers' for an overview of the 9 themes of the Australian Online Scams Code in Digital Industry Group, [Australian Online Scams Code](#), A code of practice for the digital industry, July 2024, p 2 and Digital Industry Group Inc, [Submission to the Final Report](#), 11 October 2024, p 2.

Children's online safety and privacy issues in online private messaging services

Australians under the age of 18 are significant users of online private messaging services. Based on ACCC consumer survey data, 64% of 14 to 17 year olds used Snapchat to send messages and/or make audio or video calls in the month prior to the survey, followed by Apple iMessage (58%) and Instagram Direct (51%).⁵³⁰ Some digital platforms have even introduced standalone messaging services aimed at children, such as Meta's Facebook Messenger Kids.⁵³¹

Based on consumer survey data, the ACCC understands that parents and guardians are conscious of the privacy and safety settings of the online private messaging services that their children use. When choosing an online messaging service for their children to use:

- 79% of Australian parents or guardians surveyed considered the level of privacy afforded to their children's conversations and data to be extremely important or very important
- 81% considered the level of security to protect against malware and hackers to be extremely important or very important
- 83% considered the level of protection against harmful content, predators, scams and spam to be extremely important or very important.⁵³²

530 ACCC analysis of consumer survey results data. Question B1 (Which of the following have you used to either send messages and/or make audio or video calls in the last month? (Multiple responses)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 92.

531 eSafety Commission, [Messenger Kids](#), The eSafety Guide, 6 January 2025, accessed 13 March 2025.

532 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 34. Question B5 ('How important are each of the following to you when choosing an online messaging service for your child/children to use?'), filtered to parents/guardians of children aged 0–17 years old who monitor what online private messaging apps their children have. Note that question B5 used a unipolar scale which ranged from zero importance ('not at all important') to maximum importance ('extremely important') to measure the extent to which parents consider each of these factors to be important.

Box 3.4: International responses to children's safety and privacy issues

In the EU, the Digital Services Act requires designated digital platforms accessible by minors to implement measures ensuring high levels of privacy, safety and security for minors on the service.⁵³³ This includes prohibitions against showing minors targeted advertising based on profiling (using their personal data).⁵³⁴

In the US, the Children's Online Privacy Protection Rule also imposes requirements on online services directed to children under 13, including prohibiting unauthorised or unnecessary collection of children's personal information.⁵³⁵ In July 2024, anonymous messaging app 'NGL' agreed to stop offering its services to children after the Federal Trade Commission filed a complaint alleging that it had breached this Rule.⁵³⁶ It was alleged that NGL engaged in aggressive marketing towards children and teens and had falsely claimed to be safe for children, despite being aware of rampant cyberbullying and harmful language being directed at children on the app.⁵³⁷

Recent Government work in relation to children's online safety and privacy

The ACCC notes that children's safety and privacy with respect to online private messaging services are within the regulatory remit of the ACMA, eSafety Commissioner (eSafety) and the Office of the Australian Information Commissioner (OAIC). The ACMA and e-Safety safeguard all Australians, including children and young people, from abuse or harm that may occur across the online communications and media environments which they regulate.⁵³⁸ The OAIC develops and implements policies and guidance aimed at protecting the privacy and information access rights of children and young people.⁵³⁹ The ACCC works closely with these regulators on digital platform-related issues through the Digital Platform Regulators Forum (DP-REG).

533 See Article 28 'Online protection of minors' point 2 in EU, [Regulation \(EU\) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC \(Digital Services Act\) \(Text with EEA relevance\)](#), Document 32022R2065, 19 October 2022, accessed 13 March 2025.

534 See Article 28 'Online protection of minors' point 2 in EU, [Regulation \(EU\) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC \(Digital Services Act\) \(Text with EEA relevance\)](#), Document 32022R2065, 19 October 2022, accessed 13 March 2025.

535 See '§ 312.10 Data retention and deletion requirements' in Federal Trade Commission, [Children's Online Privacy Protection Rule \("COPPA"\)](#), accessed 13 March 2025.

536 X Yuan and M Hughes, ['Anonymous messaging app NGL to be banned for children as part of settlement with US FTC over cyber harm, privacy violations'](#), *MLex*, 9 July 2024, accessed 13 March 2025.

537 M D Freeman, C L Cheung, S C Amin and J D Jacobs, [Complaint for Permanent Injunction, Monetary Judgement, Civil Penalty Judgement, and Other Relief](#), Case No. 2:24-cv-5753, US District Court for the Central District of California, 9 July 2024, pp 19–21.

538 ACMA, [Child Safety Policy](#), May 2022, p 1.

539 Office of the Australian Information Commissioner, [Annual Statement of Compliance with the Commonwealth Child Safe Framework 2024](#), 30 October 2024, accessed 13 March 2025.

On 29 November 2024, the Australian Government announced that the minimum legislated age to access certain social media would be 16. Under the *Online Safety Amendment (Social Media Minimum Age) Act 2024*, age-restricted social media platforms will be required to take reasonable steps to:

- prevent children who have not reached a minimum age (16) from having an account for a social media platform⁵⁴⁰
- further, age restricted social media platforms must not collect certain information (unless otherwise permitted under the Act) about users for the purpose of ensuring that children do not have accounts on those social media platforms.⁵⁴¹

Additionally, on 29 November 2024, the Privacy and Other Legislation Amendment Bill 2024 was passed, empowering the OAIC to develop a Children's Online Privacy Code.⁵⁴² The code will apply to social media and a wide range of other internet services likely to be accessed by children, including apps, websites and messaging platforms. It will specify how these services must comply with the Australian Privacy Principles and may impose additional requirements provided they are not inconsistent with the existing principles.⁵⁴³

540 See section '63D' in The Parliament of the Commonwealth of Australia, [Online Safety Amendment \(Social Media Minimum Age\) Bill 2024](#), No. , 2024, A Bill for an Act to amend the *Online Safety Act 2021*, and for related purposes, 2024, p 6.

541 See section '63D' in The Parliament of the Commonwealth of Australia, [Online Safety Amendment \(Social Media Minimum Age\) Bill 2024](#), No. , 2024, A Bill for an Act to amend the *Online Safety Act 2021*, and for related purposes, 2024, p 7.

542 Office of the Australian Information Commissioner, [Passing of bill a significant step for Australia's privacy law](#), Press Release, 29 November 2024, accessed 13 March 2025.

543 See [Privacy and Other Legislation Amendment Bill 2024](#), section 26GC (3)-(5), p 15.

3.2 App marketplaces and mobile operating systems

Key Points

- Apple iOS and Google Android continue to be the 2 dominant mobile operating system (OS) providers in Australia and the App Store and Play Store remain the most widely used app marketplaces in Australia. App marketplaces remain crucial services, with Australians downloading 195 million apps from the App Store and Play Store in the third quarter of 2024 alone. App marketplaces also provide a critical gateway for generative AI innovation to reach consumers.
- 94% of Australian consumers surveyed (aged 14 or older) have a smartphone for personal use. Consumers have considerable loyalty to their existing mobile OS. 77% of consumers surveyed are not likely to choose a phone with a different OS the next time they get a new smartphone. In 2024, Apple and Google's mobile OS market shares remain consistent with those of 2020 (Apple: 54%, Google: 46%). Given market dynamics have remained largely unchanged since the ACCC's 2021 Report on App Marketplaces, the ACCC retains its view that Apple and Google continue to have significant market power in the supply of mobile OS in Australia. This provides Apple and Google with market power in mobile app distribution in Australia, and the ACCC considers it likely that this market power is significant.
- The ACCC remains concerned about harms arising from a lack of competition on app marketplaces and mobile OS. These harms affect competition in mobile app distribution in Australia with potentially significant impacts for both app developers and consumers, potentially resulting in higher prices, limited consumer choice and reducing innovation.
- Since March 2021, Apple and Google have implemented some changes internationally in response to regulatory reforms and litigation, including regarding commission rates and access to third-party app marketplaces and sideloading. In most cases, these changes have not been rolled out in Australia, which means that Australian consumers are not benefiting from the same degree of choice or benefits as consumers in other jurisdictions.
- The ACCC considers that a service-specific code for app marketplaces and mobile OS is a priority under the proposed digital competition regime, which would bring benefits to Australian consumers and small businesses including app developers.
- The ACCC notes continued consumer concerns on app marketplaces, including in relation to (i) unfair trading practices on apps, (ii) scams, harmful apps and fake reviews and (iii) dispute resolution standards. The ACCC reiterates its support for its Regulatory Reform Report recommendations.

This section considers competition and consumer issues in app marketplaces and mobile operating systems (OS). It is structured as follows:

- **Section 3.2.1** provides an overview of the ACCC's previous consideration of app marketplaces and mobile OS.
- **Section 3.2.2** discusses developments on app marketplaces and mobile OS since 2021.
- **Section 3.2.3** considers harms arising from a lack of effective competition.
- **Section 3.2.4** discusses consumer issues on app marketplaces.

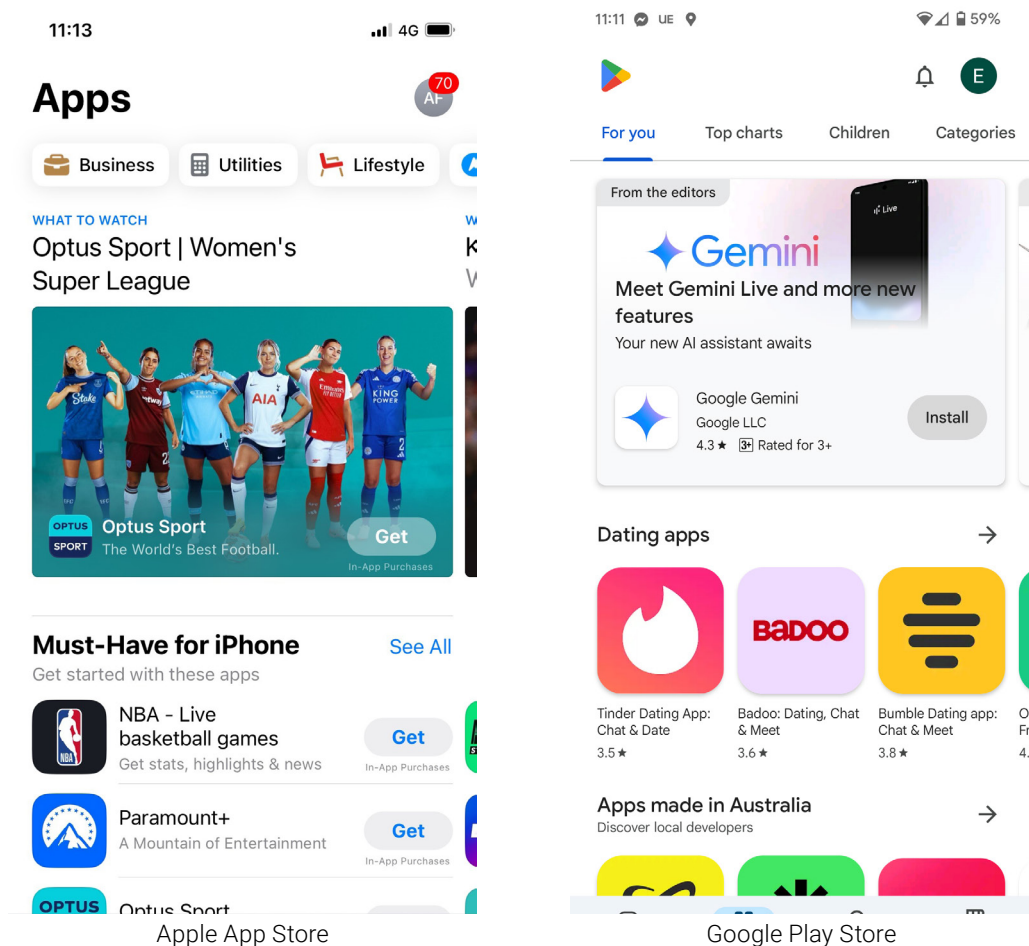
3.2.1 ACCC's previous consideration of app marketplaces and mobile OS

Apple and Google control the distribution of mobile apps on their mobile ecosystems

Smartphones have become integral to the lives of Australians, as consumers rely on mobile apps to live their daily lives. Apps are software applications that can provide a wide range of goods and services, such as social media, games, entertainment and health and fitness services and can facilitate the purchasing of physical services, like food delivery and rideshare.⁵⁴⁴

App marketplaces are digital shopfronts that provide a centralised distribution platform for businesses including app developers to offer and distribute their apps, and for consumers to discover, download and update apps.⁵⁴⁵ The 2 main app marketplaces are Apple's App Store and Google's Play Store. Figure 3.13 shows a mobile view of the Apps Tab of both the Apple App Store and Google Play Store, respectively.

Figure 3.13: A view from the Apps Tab of both Apple's App Store and Google's Play Store



Source: Screenshots captured by the ACCC on 14 November 2024.

544 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 17.

545 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 4.

App marketplaces provide benefits to both consumers and app developers. For the 94% of Australians (aged 14 or older) that have a smartphone for personal use,⁵⁴⁶ app marketplaces offer a secure and easily accessible way for consumers to navigate and browse the millions of available apps, and to help them find and install the apps that best meet their needs. This includes curating apps and offering discovery tools, as well as taking active measures to vet apps for malware or other malicious content, and provide avenues for recourse should an app not meet a consumer's expectations.⁵⁴⁷

For app developers, particularly smaller developers, app marketplaces (and app development tools) provide access to a large market of potential consumers.⁵⁴⁸ App marketplaces also help developers increase their speed to market and distribution of apps, and benefit developers as they have built-in consumer trust and security.⁵⁴⁹ Apple and Google both also provide developers with access to various tools and resources to assist them in developing, publishing, monetising, and marketing their apps, among other benefits.⁵⁵⁰ Apple and Google also have incentives to offer a positive experience for app developers, as these developers are critical to the success of the marketplace and its ability to offer diverse and innovative apps to attract consumers.⁵⁵¹

Mobile apps work in conjunction with the OS running on the mobile device on which they are installed. Mobile apps (sometimes referred to as 'native apps') are designed and built to run on a specific OS.⁵⁵² The OS controls the hardware and software on a mobile device, including access to the device's camera, GPS, phone features and internet.

Apple (iOS) and Google (Android) are effectively the only mobile OS providers in Australia and globally (excluding China). The ownership and control of their respective OS give Apple and Google control over the distribution of mobile apps on their respective mobile ecosystems.

Alternatives to Apple's App Store and Google's Play Store could be made available to app developers to distribute their apps to users via Apple's and Google's mobile OS in several ways. Figure 3.14 shows the avenues through which app developers could make their apps available to consumers.⁵⁵³ This includes:

- **Third-party app marketplaces**, which refers to alternative app marketplaces that could be made available on iOS or Android, beyond the App Store and Play Store, respectively. Examples include the Samsung Galaxy Store and Amazon App Store.
- **Sideload**, which refers to the installation of an app on a mobile device without using the device's official application distribution method (that is, the app marketplace associated with the device's OS). For example, apps can be downloaded directly from a website using a browser.
- **Pre-installing**, which refers to an app that is installed on a device prior to purchase by a consumer.
- **Web apps**, which are apps that run on a server and are accessed through an internet browser typically with an active internet connection rather than being stored locally on a device. They have more functions than a regular webpage, such as including opportunities for interactions, partially operating offline, and providing push notifications, but have less functionality and features than

546 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37.

547 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 21–22.

548 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 21–22.

549 ACCC, [App marketplaces report – App developer questionnaire responses](#), 27 November 2020, response 66; ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 22.

550 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 22.

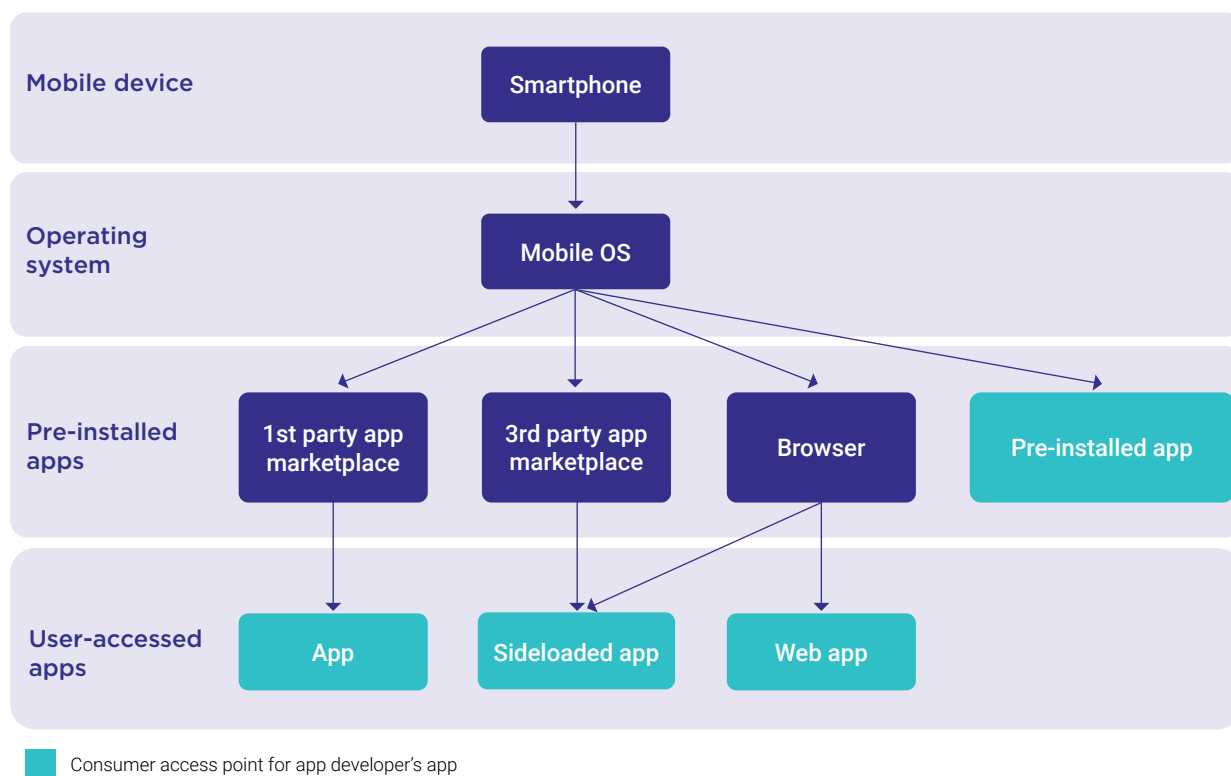
551 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 22; See also Apple, [Submission to the Final Report](#), 11 October 2024, pp 15–17; Google, [Submission to the Final Report](#), 11 October 2024, p 22.

552 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 19.

553 Adapted from 'Figure 2.1: The choice between Apple's and Google's mobile ecosystems' in CMA, [Mobile ecosystems market study final report](#), 10 June 2022, p 12. While this is a simplified figure, it is notable that in addition to being pre-installed on a smartphone, a third-party app marketplace could also be sideloaded or downloaded from a first party app marketplace.

(native) apps. Web apps are available to all consumers regardless of whether they use an iOS or Android device, and are not subject to review by any app marketplace.

Figure 3.14: Potential avenues for consumers to access apps from third party app developers



Source: Adapted from CMA, [Mobile ecosystems market study final report](#), 10 June 2022, p 12.

However, as will be explored through this section, these alternatives to native apps may not be available to consumers on their mobile OS. They may be technically difficult to install, choice architecture by the mobile OS operator may be used to deter these alternatives, or they may have reduced functionality when compared to apps downloaded from the app marketplace owned by the mobile OS operator.

The ACCC's previous consideration of app marketplaces and mobile OS identified competition and consumer concerns

The ACCC's Report on App Marketplaces found Apple's and Google's market power in mobile app distribution was likely significant

The ACCC's Report on App Marketplaces was published in April 2021 and focused on the 2 key app marketplaces used in Australia, the Apple App Store and the Google Play Store.⁵⁵⁴ The report noted that these 2 app marketplaces dominate mobile app distribution in Australia, with minimal use by Australians of rival app marketplaces and other alternatives.⁵⁵⁵

The Report on App Marketplaces estimated that in December 2020, Apple iOS held 54% of the market share of mobile OS in Australia, while Android held 46%. The ACCC found that the duopolistic nature of this market and the significant barriers to entry and expansion, including the high cost and time

⁵⁵⁴ ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 3; Apple, App Store, [About the App Store](#), 2024, accessed 13 March 2025; Google Play, [How Google Play works](#), accessed 13 March 2025.

⁵⁵⁵ ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 3.

to develop a mobile OS and the difficulty in attracting app developers and device manufacturers to a new OS (due to strong cross-side network effects⁵⁵⁶), provide each of Apple and Google significant market power in the supply of mobile operating systems in Australia.⁵⁵⁷ The ACCC considered that the ownership and control of their respective OS gave Apple and Google control over the distribution of mobile apps on their respective mobile ecosystems.

The Report on App Marketplaces found that Apple did not allow the installation of third-party app marketplaces on iOS mobile devices. While third-party app marketplaces could be installed on Android mobile devices (via download from a website), Google used its control of Android to preference its own app marketplace, with the Play Store pre-installed on the vast majority of Android devices.⁵⁵⁸

At the time of the Report on App Marketplaces, Google did not allow third-party app marketplaces to be downloaded from the Play Store. Instead, alternative app marketplaces needed to be pre-installed by device manufacturers or downloaded manually from the internet.⁵⁵⁹ While some device manufacturers such as Samsung were found to pre-install their own app marketplace on devices, these alternatives were typically less prominent than the Play Store due to the home screen placement of the Play Store. The latter option of downloading manually from the internet typically required customers to change security settings, which the ACCC considered that many consumers were likely to be uncomfortable with.⁵⁶⁰ As a result, over 90% of apps on Android were downloaded through the Play Store.⁵⁶¹

The ACCC's Report on App Marketplaces noted that sideloading on iOS is limited to tech-savvy consumers and those prepared to violate Apple's terms of use.⁵⁶² While permitted on Android, sideloading required lowering Android's security settings, which generated warnings about making the device less secure, and was considered likely to deter many consumers (see figure 3.15).⁵⁶³

556 That is, app developers are strongly attracted to the large consumer bases of Android and iOS. Enticing app developers to develop apps for a new OS is likely to be difficult as many developers have limited resources and tend to prioritise efforts towards platforms with most consumers and conversion of apps to a new OS has costs. See ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 28.

557 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 23, 28.

558 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 4.

559 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 27.

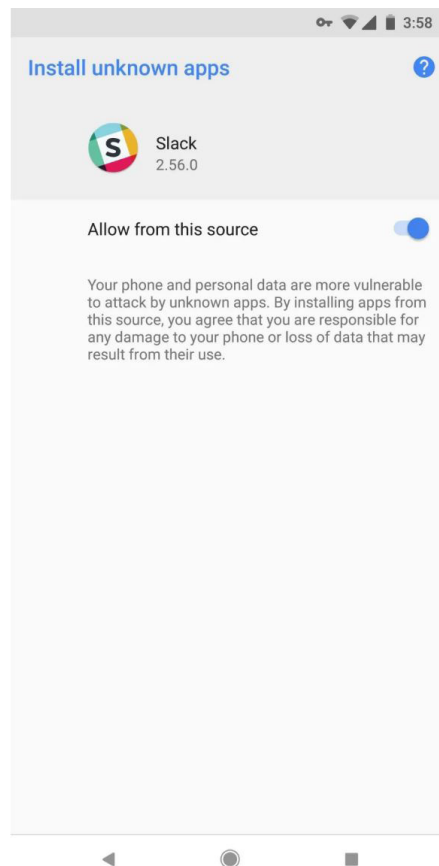
560 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 27.

561 See US Department of Justice v Google LLC, [Complaint filed in the US District Court for the District of Columbia](#), 20 October 2020, p 24.

562 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 29, citing ACM, [Market study into mobile app stores](#), 11 April 2019, pp 45–46.

563 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 29, citing ACM, [Market study into mobile app stores](#), 11 April 2019, pp 46–47.

Figure 3.15: Example of a warning prompt shown to users when attempting to enable the installation of apps from sources other than the Play Store



Source: D Thomas, [How to Sideload Apps by Enabling 'Unknown Sources' or 'Install Unknown Apps'](#), *GadgetHacks*, 24 January 2020, accessed 13 March 2025.

While pre-installation on devices is another potential avenue for app developers to reach consumers, the ACCC's Report on App Marketplaces found that in practice, pre-installation only occurs for a small number of third-party apps, and only on Android devices.⁵⁶⁴

The ACCC's Report on App Marketplaces considered that web apps are not significant or effective alternatives to the App Store and Play Store for consumers using mobile devices. Native apps provide a richer user experience and provide better access to the mobile device's OS and hardware features (such as camera, microphone, GPS, sensors, and swipe based controls), benefit from centralised distribution and discoverability and are used more widely by consumers.⁵⁶⁵ The ACCC's Regulatory Reform Report also noted concerns that the functionality of web apps on iOS may be limited by Apple, limiting the ability for web apps to impose a competitive constraint on native apps.⁵⁶⁶ This issue is considered in further detail in section 3.2.3 below.⁵⁶⁷

While the App Store and Play Store may place some competitive constraint on one another, the ACCC's Report on App Marketplaces found that these constraints are limited by the costs incurred by users in switching mobile OS (which would involve a consumer switching their mobile device) and the

⁵⁶⁴ ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 30.

⁵⁶⁵ ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 31–32.

⁵⁶⁶ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

⁵⁶⁷ The ACCC's Report on App Marketplaces also considered websites and fixed devices (e.g., PC, TV or gaming console) as potential alternative ways for consumers to access some of the services provided by mobile apps. However, in both cases, the report found that usage of these alternatives is unlikely to be a close substitute for mobile apps by consumers. See ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 30–33.

need for many app developers to access both iOS and Android users in order to reach the broadest group of smartphone users.⁵⁶⁸

Given Apple and Google's dominance in mobile OS, combined with the control exerted over the app marketplaces permitted into their mobile ecosystems, the App Store and the Play Store controlled the key gateways through which app developers can access consumers on mobile devices.⁵⁶⁹

As there were limited effective alternatives to access consumers on mobile devices, the App Store and the Play Store were considered 'must haves' for the majority of app developers in Australia. This provided Apple and Google with market power in mobile app distribution in Australia, and the ACCC considered it likely that this market power was significant.⁵⁷⁰

The ACCC's examination of the operation of the Apple App Store and Google Play Store in Australia identified a range of issues. These included:⁵⁷¹

- **In-app payments:** Apple and Google both required that certain in-app payments must be processed through their respective in-app payment system and that an app was not permitted to contain information that directed users to an off-app payment option. The ACCC considered that the commission rates charged on payments made for digital goods through apps were highly likely to be inflated by the market power that Apple and Google were able to exercise in their dealings with app developers.
- **Terms of access:** The Report on App Marketplaces noted concerns raised by app developers in relation to access to app marketplaces (for example, a lack of transparency in the policies and processes governing app review and approval, inadequate avenues to resolve disputes and unfair terms).
- **Risk of self-preferencing:** Apple and Google each had the ability and the incentive to favour their own first-party apps at the expense of rival third-party apps, and that such conduct may have anti-competitive effects on related markets.
- **Data practices of app marketplaces:** Apple and Google had superior access to information about the entire app ecosystem and its users, which enabled them to monitor the performance of all apps and hence gain valuable competitive insights. There were potential competition concerns arising from Apple and Google's intelligence gathering given that their own first-party apps competed with third-party apps in related app markets. The ACCC considered that Apple and Google may have the ability and the incentive to use information to assist strategic or commercial decisions about first-party app development.
- **Risk of harmful apps:** The widespread use of mobile apps by consumers attracts those seeking to scam or otherwise harm consumers through malicious or exploitative apps. While Apple and Google's app review functions provide important protections for consumers, the Report on App Marketplaces found that apps with potential to harm consumers continue to be present on both app marketplaces.
- **Concerns with tracking of consumers through apps:** Many consumers express strong preferences for limitations on tracking, yet the data practices of apps available on the App Store and Play Store often did not align with those preferences. The ACCC considered that there are some key limitations in both Apple and Google's policies and processes pertaining to the data practices of app developers and their third-party partners.
- **Complaint handling processes:** The Report on App Marketplaces identified a number of apparent deficiencies with the complaints handling processes of the App Store and Play Store, including

568 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 23.

569 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 4.

570 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 4.

571 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 4–11, 122.

with respect to app removal processes, the provision of refunds and the ability of developers to access information to support their complaints handling role.

The ACCC's Report on App Marketplaces set out 6 'potential measures' to address the issues identified below (see box 3.5).⁵⁷²

Box 3.5: Potential measures to address issues identified in the ACCC's Report on App Marketplaces

1. To address inadequate payment option information and limitations on developers.
2. To increase transparency and address risk of self-preferencing in app marketplace discoverability and display.
3. To provide an option for consumers to rate and review first-party apps.
4. To provide for greater choice of default apps for consumers.
5. To address the risks of malicious, exploitative or otherwise harmful apps.
6. To address the risk of misuse of commercially sensitive information.

In its submission to this Report, Google noted the measures it has taken to address these issues. Google considered that the Play Store already complied with 3 of the 6 potential measures and were at least in partial compliance with the remaining 3 measures at the time of the report's publication.⁵⁷³ Further information in relation to Google's approach to these measures is set out below. Apple has not indicated it has implemented any of the potential measures from the ACCC's Report on App Marketplaces.

The ACCC's Regulatory Reform Report recommended targeted measures to protect users of app marketplaces and app developers

The ACCC's Regulatory Reform Report considered whether new competition and consumer laws are required to address the harms identified across digital platform services, including app marketplaces. The recommendations made in this report aim to address issues arising on app marketplaces and mobile OS, among other digital platform services.

In relation to consumer concerns, the ACCC continued to recommend the introduction of 2 key economy-wide consumer measures, being the introduction of an economy-wide prohibition against unfair trading practices and strengthening of the existing unfair contract terms laws.⁵⁷⁴ The ACCC considered these reforms would help to address concerns that have arisen on app marketplaces (as well as other digital platform services), such as:

- business practices that dissuade consumers and small businesses from exercising their contractual or other legal rights
- use of manipulative practices (dark patterns) to impede choice.

The ACCC also recommended targeted measures to protect users of digital platforms, including users of app marketplaces, including:⁵⁷⁵

- mandatory processes to prevent and remove scams, harmful apps and fake reviews

572 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 14.

573 Google, [Submission to the Final Report](#), 11 October 2024, pp 24–30.

574 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 9.

575 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 16.

- mandatory internal dispute resolution standards that ensure accessibility, timeliness, accountability, the ability to escalate to a human representative and transparency
- ensuring consumers and small business have access to an independent external ombuds scheme.

As discussed in section 2.1, the ACCC also recommended a new regulatory regime to promote competition in digital platform services. The ACCC recommended that this be implemented through service-specific codes, which impose targeted competition obligations on Designated Digital Platforms based on high-level legislative principles.⁵⁷⁶ The new measures would address anti-competitive conduct, unfair treatment of business users and barriers to entry and expansion that prevent effective competition in digital platform markets.⁵⁷⁷

The Regulatory Reform Report provided indicative examples of the kinds of obligations that new service-specific codes of conduct could potentially include, noting that final code development would involve further detailed consideration and significant consultation.⁵⁷⁸ A range of the indicative examples referred to potential targeted obligations to address concerns arising in app marketplaces.⁵⁷⁹ This included targeted obligations in relation to impediments to consumer switching, interoperability, anti-competitive self-preferencing, anti-competitive tying, lack of transparency, exclusive pre-installation and defaults, and unfair dealings with business users. Each of these issues are considered in further detail in section 3.2.3 below.

3.2.2 Updates to app marketplaces and mobile OS, including following international regulatory reform and litigation

Since the ACCC examined app marketplaces in the ACCC's Report on App Marketplaces in March 2021, there have been several developments on Apple and Google's OS and app marketplaces in Australia and overseas.

Google has made available its User Choice Billing system in Australia, which allows participating developers to use an alternative in-app payment option.⁵⁸⁰ In August 2024, Apple announced that its iOS 18.1 update in Australia would enable app developers to offer contactless transactions from within their own apps on iPhone, separate from Apple Pay and Apple Wallet.⁵⁸¹

In 2024 the Federal Court of Australia heard a trial that raises issues identified in the ACCC's previous reports. The trial combined 4 separate but interconnected proceedings, including *Epic v Google*, *Epic v Apple* and class actions against both Apple and Google (the Australian app marketplaces proceedings).⁵⁸² Epic and the class action applicants alleged that Apple and Google engaged in anticompetitive conduct in the markets for app distribution and in-app payment systems on devices using Google/Apple's operating systems, including by requiring developers to use their respective app marketplaces and payment services for certain in-app purchases. The hearing on liability went for 18 weeks during 2024. A judgment is yet to be handed down.

Apple and Google have also implemented other business changes in international jurisdictions in response to regulatory reforms (such as the EU's DMA) or litigation. These include changes regarding

⁵⁷⁶ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 123.

⁵⁷⁷ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 5.

⁵⁷⁸ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2024, p 123.

⁵⁷⁹ See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2024, pp 124–132, 139, 151, 156, 174, 180.

⁵⁸⁰ See 'User choice billing — Over 35 eligible countries, including the European Economic Area (EEA)' in Google, [Understanding user choice billing on Google Play](#), Play Console Help, accessed 13 March 2025.

⁵⁸¹ Apple, [Developers can soon offer in-app NFC transactions using the Secure Element](#), Apple Newsroom, 15 August 2024, accessed 13 March 2025.

⁵⁸² [Epic Games, Inc & Anor v Apple Inc & Anor](#) (2020); [Epic Games, Inc & Anor v Google LLC & ORS](#) (2021); [David Anthony v Apple Inc & Anor](#) (2022); [Brett McDonald v Google LLC & ORS](#) (2022).

commission rates, app developers' ability to communicate payment options to consumers, access to third-party app marketplaces and sideloading, among others. Further detail on these developments in Australia and in international jurisdictions with respect to Apple and Google are considered in further detail in section 3.2.3 below.

Usage of mobile OS and app marketplaces in Australia

Consistent with the ACCC's Report on App Marketplaces from March 2021, the 2 most widely used mobile operating systems on smartphones in Australia remain Apple's iOS and Google's Android.⁵⁸³ The ACCC's consumer survey found 54% of smartphone owners aged 14 or older used iOS while 46% used the Android mobile OS in Australia.⁵⁸⁴ These market shares have remained roughly constant since March 2021, when Apple and Google together had close to 100% of the mobile OS market worldwide and in Australia.⁵⁸⁵ The ACCC estimates that the number of iOS and Android smartphone users over the age of 14 in Australia are approximately 11.4 million and 9.7 million, respectively.⁵⁸⁶

Apple's App Store and Google's Play Store continue to be the most widely used app marketplaces in Australia. These are also sources of revenue for Apple and Google. Sensor Tower estimates that Australians spent \$4.15 billion on in-app payments across the App Store and Play Store in 2024 (a 22% increase compared with 2022).⁵⁸⁷ App marketplaces retain a proportion of this spending by charging app developers commission on in-app payment revenue.

While Apple generates much of its revenue from the sale of devices, the revenue it generates from its services segment (which includes revenue from the Apple App Store and other sources⁵⁸⁸) has increased significantly in recent years. The ACCC's Report on the Expanding Ecosystems of Digital Platforms noted Apple's services revenue globally doubled between 2018 and 2022, rising from 15% to 20% of Apple's global revenue.⁵⁸⁹ The Report on the Expanding Ecosystems of Digital Platforms also noted that services revenue has been growing as a proportion of Apple's revenue in Australia.⁵⁹⁰ Recent financial reporting from Apple indicates Apple's services revenue globally continues to grow.⁵⁹¹

According to Sensor Tower, Australian smartphone users downloaded 107.4 million and 87.6 million apps from the App Store and Play Store respectively in the third quarter of 2024.⁵⁹² From March 2021, the number of app downloads in Australia for each of the App Store and Play Store has remained broadly constant.⁵⁹³ Similarly, Sensor Tower estimates that app downloads globally are stabilising. Sensor Tower notes that with the influx of new smartphone users slowing and with many

583 Android, [What is Android](#), accessed 13 March 2025; Apple, [iOS 18](#), Overview, 2024, accessed 13 March 2025.

584 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37. Filtered to consumers aged 14+ who owned a smartphone for personal use. The survey results are roughly consistent with mobile OS market shares statistics reported by Statcounter. In October 2024, Statcounter reported Android's share of mobile OS in Australia was 42.54%, while iOS had a share of 56.68%. Samsung, Windows and BlackBerry OS had market shares of 0.7%, 0.09% and 0.02% respectively. See Statcounter, [Mobile Operating System Market Share Australia](#), Sept 2023–Oct 2024, 2024, accessed 13 March 2025.

585 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), March 2021, p 19.

586 Approximate figures estimated based on ACCC analysis of ACCC consumer survey data and Australian Bureau of Statistics population statistics for the reference period June 2024.

587 J Briskman, [2025 State of mobile: Consumers' \\$150 billion spent on mobile highlights another record-setting year](#), *Sensor Tower*, January 2025 Sensor Tower report a figure of US\$2.74 billion for 2024, converted to \$4.15 billion using an average 2024 exchange rate of \$1= US\$0.6603. Average exchange rate for 2024 gathered from the Reserve Bank of Australia. See Reserve Bank of Australia, [Historical data](#), accessed 13 March 2025. Sensor Tower also report a figure of US\$2.24 billion for 2022.

588 Apple's Services segment also includes its digital content and streaming services, advertising cloud and payment services.

589 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 30.

590 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 188.

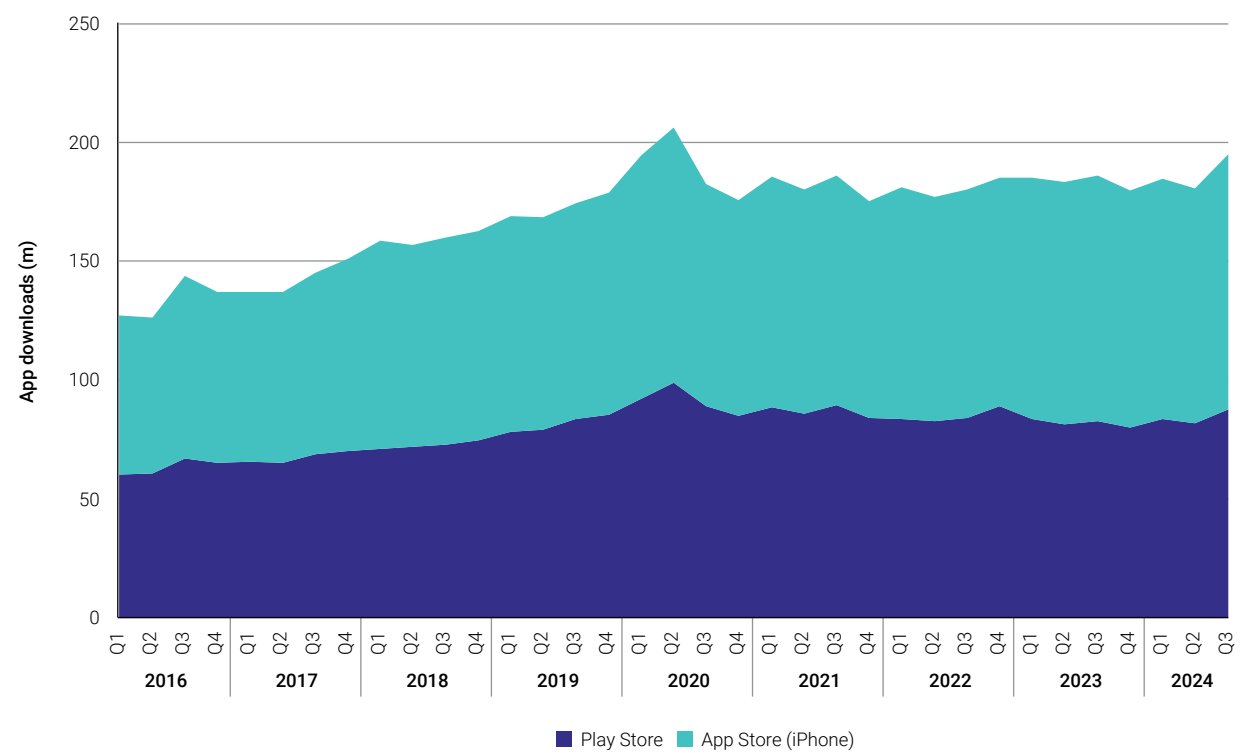
591 K Leswing, [Apple's services unit is now a \\$100 billion a year juggernaut after 'phenomenal' growth](#), *CNBC*, 31 October 2024, accessed 13 March 2025.

592 Source: ACCC analysis of Sensor Tower data.

593 Source: ACCC analysis of Sensor Tower data.

consumers already having most of their favourite apps, global app downloads have hovered around 135–140 billion a year since 2020.⁵⁹⁴

Figure 3.16: Number of app downloads in Australia, January 2016 to September 2024



Source: Sensor Tower data.

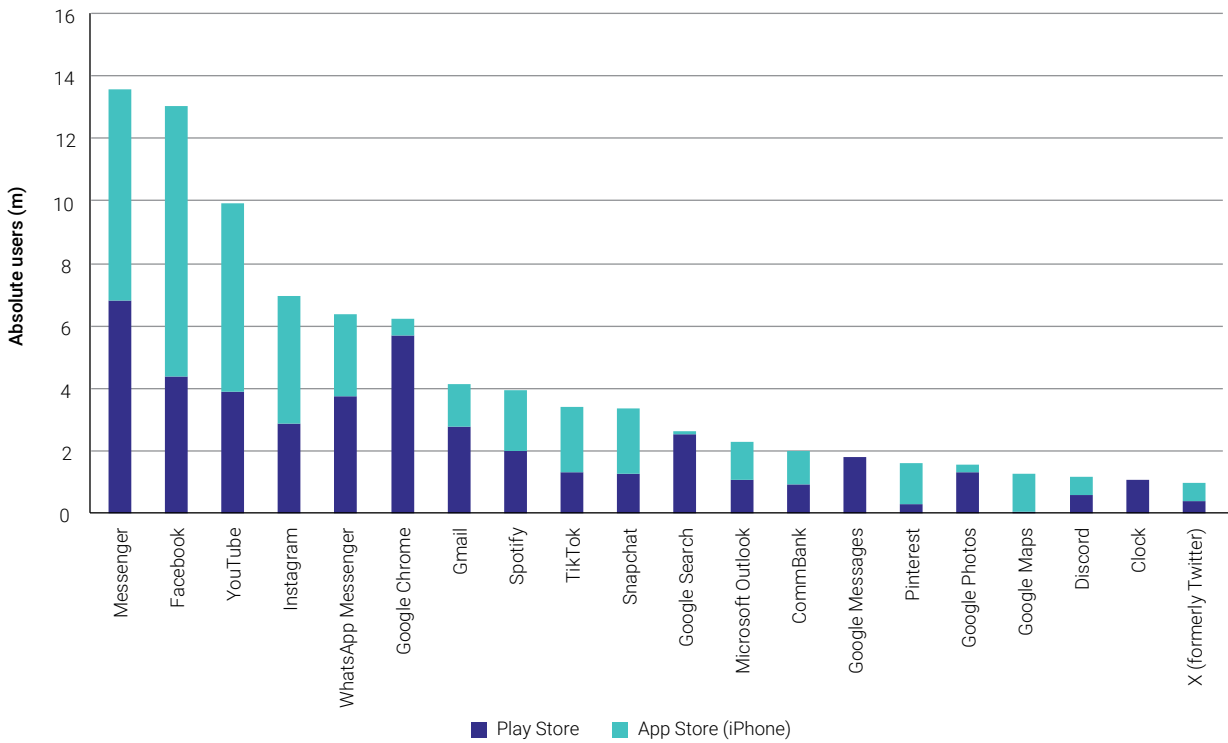
Figure 3.17 also shows the top 20 most popular apps in Australia by daily active users in October 2024.⁵⁹⁵ Nineteen out of 20 apps remain in the top 20 most popular apps by daily active users since January 2021. In October 2024, the top 3 most popular apps by daily active users in Australia were Messenger, Facebook and YouTube, respectively.⁵⁹⁶

594 J Briskman, [2025 State of mobile: Consumers’ \\$150 billion spent on mobile highlights another record-setting year](#), Sensor Tower, January 2025.

595 Source: ACCC analysis of Sensor Tower data. Note pre-installed apps on iOS are not counted in this analysis, as Sensor Tower data does not capture usage figures for pre-installed apps on iOS. Note there may be a very slight level of double counting in this chart should some consumers own both an Android and iOS device. Note also that Google Maps is often pre-installed on Android devices which may impact the accuracy of results from this Sensor Tower data.

596 Source: ACCC analysis of Sensor Tower data.

Figure 3.17: Most popular apps in Australia by daily active users in October 2024



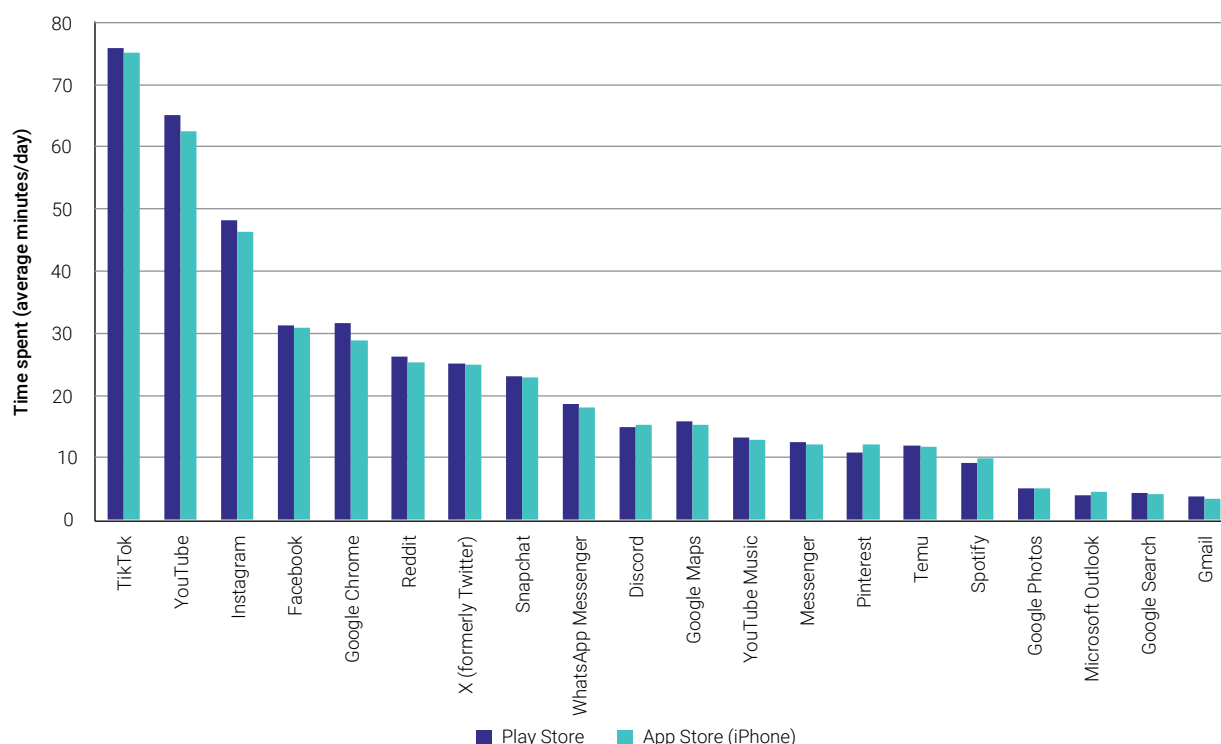
Source: Sensor Tower data.

Figure 3.18 shows the time spent on the top 20 most popular apps by daily active users in Australia.⁵⁹⁷ Since 2021, the average time spent on the top 20 most popular apps by daily active users in Australia has risen by 3.6%.⁵⁹⁸

597 Source: ACCC analysis of Sensor Tower data.

598 Source: ACCC analysis of Sensor Tower data. The analysis excludes the Netflix app and the Clock app—the Netflix app is no longer featured in the top 20 apps by daily active users in October 2024 and data was not available for the Clock app in 2021.

Figure 3.18: Average time (minutes per day) spent on the top 20 apps by daily active users in Australia, 1 May to 31 October 2024



Source: Sensor Tower data.

One market development since March 2021 has been the emergence and availability of consumer facing generative artificial intelligence (AI) services internationally and in Australia.⁵⁹⁹ For example, Apple Intelligence (Apple’s personal intelligence system) has been incorporated into the latest iPhones as a software update with iOS 18.2 for Australian users.⁶⁰⁰

As many of these generative AI services are available through mobile apps, app marketplaces are a critical gateway for this AI innovation to reach consumers. While consumer-facing generative AI apps such as OpenAI’s ChatGPT mobile app are not the most widely used apps in terms of daily active users, they are beginning to feature in the most popular apps downloaded by Australian users. For example, ChatGPT was the fifth and third most downloaded app on the App Store and Play Store respectively in October 2024.⁶⁰¹ In the first 3 quarters of 2024, the ChatGPT mobile app was downloaded from the App Store and Play Store by over 2.4 million Australian users.⁶⁰² Competition issues in generative AI are considered in section 4.2 below.

599 See ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024.

600 Apple, [Apple Intelligence is available today for users in Australia and New Zealand](#), Apple Newsroom, Press Release, 12 December 2024, accessed 13 March 2025.

601 Source: ACCC analysis of Sensor Tower data.

602 Source: ACCC analysis of Sensor Tower data.

Lack of effective competition in app marketplaces and mobile OS in Australia remains

As described in section 3.2.1 above, the ACCC's Report on App Marketplaces found that the duopolistic nature of mobile OS and the significant barriers to entry and expansion, including the high cost and time to develop a mobile OS and the difficulty in attracting app developers and device manufacturers to a new OS, provide each of Apple and Google significant market power in the supply of mobile operating systems in Australia.⁶⁰³ In addition, the Report on App Marketplaces found that the ownership and control of their respective OS gave Apple and Google control over the distribution of mobile apps on their respective mobile ecosystems.⁶⁰⁴ The ACCC considers that these market characteristics remain in the supply of mobile OS and app distribution in Australia.

The vast majority of consumers do not switch between mobile OS

Since 2021, iOS and Android have continued to be the 2 dominant mobile OS in Australia. iOS and Android continue to share almost 100% of the Australian mobile OS market.⁶⁰⁵ As noted above, the ACCC's consumer survey found 54% of Australian smartphone owners aged 14 or older used iOS while 46% used the Android mobile OS.⁶⁰⁶ This remains consistent with market shares in December 2020.⁶⁰⁷

The ACCC's consumer survey found that 84% of Australian smartphone owners did not switch OS between their current and previous smartphone while 10% did switch.⁶⁰⁸ Among those that did not switch, most consumers did not consider switching to a smartphone with a different OS the last time they got a smartphone. 16% of smartphone owners considered switching to an extent while 5% strongly considered it.⁶⁰⁹

603 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 23, 28.

604 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 4.

605 StatCounter, [Mobile operating system market share Australia – March 2021 – October 2024](#), October 2024, accessed 13 March 2025.

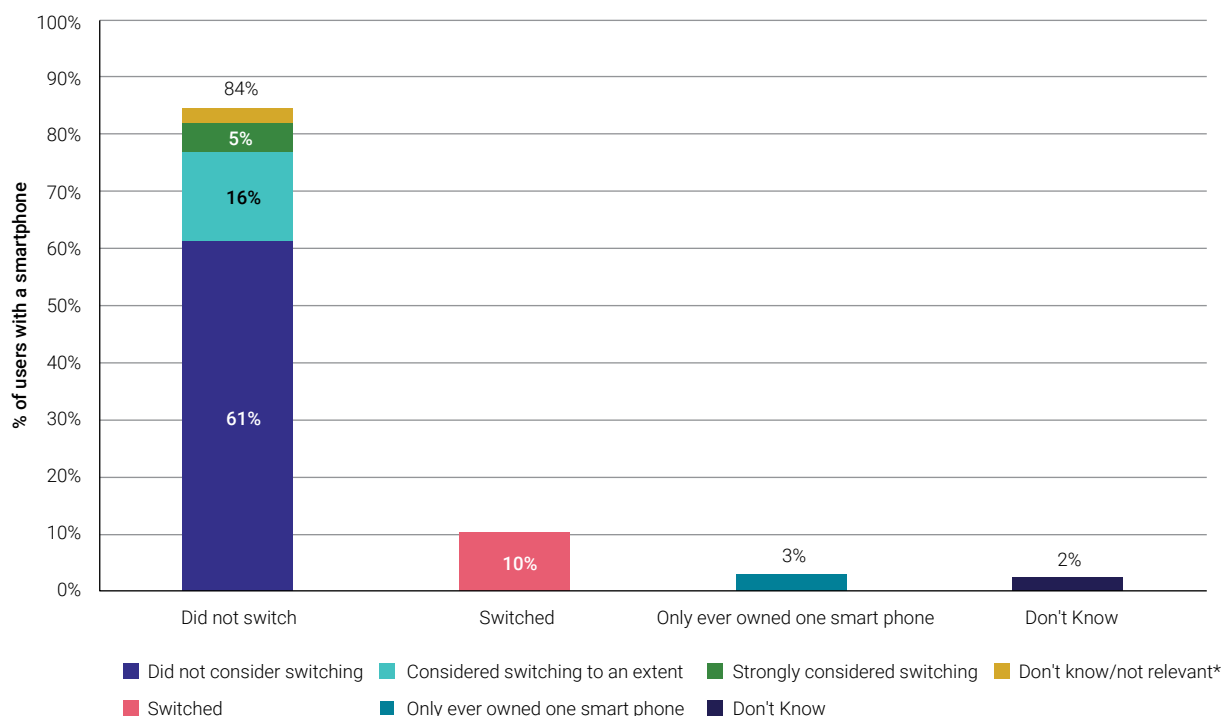
606 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 37. Filtered to consumers aged 14+ who owned a smartphone for personal use. The survey results are roughly consistent with mobile OS market shares statistics reported by Statcounter. In October 2024, Statcounter reported Android's share of mobile OS in Australia was 42.54%, while iOS had a share of 56.68%. Samsung, Windows and BlackBerry OS had market shares of 0.7%, 0.09% and 0.02% respectively. See Statcounter, [Mobile Operating System Market Share Australia](#), Sept 2023–Oct 2024, 2024, accessed 13 March 2025.

607 See ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 114. StatCounter reports estimated mobile OS shares of 54% for iOS and 46% for Android OS for December 2020.

608 3% only ever owned one smartphone and 2% did not know. Lonergan Research, ACCC DPSI Consumer Survey Research Report, January 2025, pp 37–38.

609 ACCC analysis of consumer survey data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 41.

Figure 3.19: Proportion of Australians who switched or considered switching to a smartphone with a different OS between their current and previous smartphone



Source: ACCC analysis of consumer survey data, questions D4 (What operating system did your previous phone use?) and D6 (To what extent did you consider switching to a smartphone with a different operating system this time around?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 101. Survey of Australian consumers aged 14+, conducted October–November 2024. *Note 'Don't know/not relevant' refers to whether, for example, the phone was a gift, of those survey respondents who did not switch.

In the ACCC's consumer survey, 92% of consumers in Australia either agreed or strongly agreed that they were happy with their mobile OS.⁶¹⁰ 49% of consumers agreed or strongly agreed that it would be difficult how to learn a new mobile OS, while 27% disagreed or strongly disagreed.⁶¹¹ A majority of consumers (59%) either strongly agreed or agreed that their friends and family generally use the same mobile OS as them.⁶¹² A majority of consumers in Australia (73%) either strongly agreed or agreed they can't see any significant benefits to switching to a phone with a different mobile OS while 9% disagreed or strongly disagreed.⁶¹³

Figure 3.20 shows that a majority of consumers in Australia (77%) are not likely (not at all likely or not very likely) to choose a phone with a different OS the next time they get a new smartphone.⁶¹⁴ 10%, though, were quite likely, 5% were very likely, 2% were extremely likely and 6% did not know.⁶¹⁵

⁶¹⁰ 6% neither agreed nor disagreed, 1% disagreed, <1% strongly disagreed and did not know. Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 39–40.

⁶¹¹ 24% neither agreed nor disagreed, 21% disagreed, 6% strongly disagreed, 1% did not know. Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 40.

⁶¹² 23% strongly agreed and 36% agreed, while 22% neither agreed nor disagreed, 14% disagreed, 2% strongly disagreed, 3% did not know. Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 40.

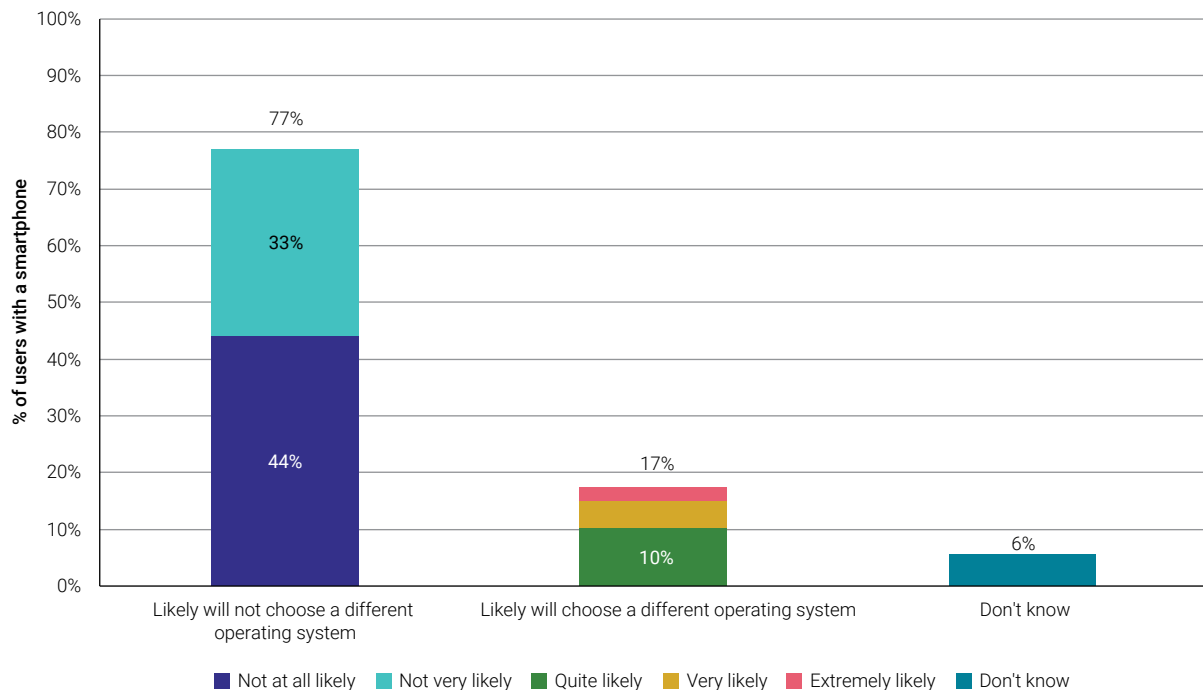
⁶¹³ 32% strongly agreed and 41% agreed, while 17% neither agreed nor disagreed, 7% disagreed, 2% strongly disagreed. Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 39–40.

⁶¹⁴ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 42.

⁶¹⁵ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 42.

Figure 3.20: Proportion of Australians who are likely to choose a phone with a different OS the next time they get a new smartphone

How likely are you to choose a phone with a different operating system the next time you get a new smartphone?



Source: ACCC analysis of consumer survey data, question D9 (How likely are you to choose a phone with a different operating system the next time you get a new smartphone?). Filtered to consumers who owned a smartphone for personal use. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 42, 103. Survey of Australian consumers aged 14+, conducted October–November 2024. Note that question D9 used a unipolar scale to measure how likely smartphone owners were to choose a different operating systems the next time they get a new smartphone, on a scale of 'not at all likely' to 'extremely likely'.

The ACCC's consumer survey also found that that when buying a smartphone for someone else, Australians typically purchased a phone with the same OS as their own. This applied to:

- 70% of parents in Australia who purchased smartphones for their children⁶¹⁶
- 70% of consumers in Australia who purchased a smartphone for an adult who relies on their guidance in relation to technology (such as a parent).⁶¹⁷

Given the propensity of consumers in Australia to remain with their existing OS provider, these findings suggest that intergenerational lock-in may occur, as many younger consumers in Australia who have a smartphone purchased for them will remain with that OS.

⁶¹⁶ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 47.

⁶¹⁷ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 48–49.

App developers rely on both the App Store and Play Store to reach the broadest group of smartphone users

There is substantial overlap between the range of apps available to users on Apple's App Store and Google's Play Store in Australia. The ACCC's Report on App Marketplaces found that around 90% or more of the top 100 apps available in Australia in each of the App Store and the Play Store, were also available in the other app marketplace.⁶¹⁸ Apple's submission noted that developers almost invariably develop apps on multiple platforms and that in June 2021, 97% of the top 100 downloaded iPhone game apps were also available on Google Play.⁶¹⁹ Updated ACCC analysis based on Sensor Tower data between July 2023 and July 2024 found that 100% of the top 100 apps downloaded in Australia on the App Store were also available on the Play Store, and at least 94% of the apps downloaded in Australia on the Play Store were also available on the App Store.⁶²⁰

The top 100 apps ranked by downloads on each of the App Store and Play Store in Australia over the same time period are depicted in a set of figures at Appendix C – Top 100 apps downloaded on the Google Play Store and the Apple App Store in Australia. Some of the most downloaded apps over the period relate to shopping, banking and finance, government services, games, TV streaming services, food, travel, ticketing services, employment, education etc. As of 14 March 2025, 9 of the top 25 companies by market capitalisation on the Australian Securities Exchange have apps that are included in this list of the top 100 (ranked by downloads) apps on either the App Store or Play Store.⁶²¹ This information underscores the breadth of the impact of digital platform services on the Australian economy and the extent to which apps are necessary to the daily lives of Australians.

Apple and Google's market power in mobile OS and app marketplaces continues to raise concerns with stakeholders

Several submissions to this Report raised concerns about the continued market power of Apple and Google with respect to mobile OS and app marketplaces.⁶²² Match Group, a supplier of dating apps, for example, submitted that Apple 'acts as a "gatekeeper" to online commerce' by using restrictions so that iOS developers can only distribute apps through its App Store.⁶²³ Match Group also submitted it has 'little to no bargaining power' with Apple,⁶²⁴ and that in Australia, there continues to be no other significant suppliers of mobile app marketplaces other than Apple and Google.⁶²⁵ Match Group noted that the performance of websites and web apps are 'inferior' to native mobile apps and the services Match Group offers 'are superior in [native] mobile app form'.⁶²⁶

The International Social Games Association argued that Apple and Google, through their app marketplaces, dictate technological standards for app development and maintain exclusive control over app distribution and terms.⁶²⁷ Spotify asserted that the market power of Apple's App Store has grown and become even more entrenched and extends to Apple's mobile OS, iOS.⁶²⁸ Meta also noted that entrants proposing to offer alternatives to mobile OS providers' app marketplaces face several obstacles, including needing to convince consumers to forgo the convenience of stores with which

618 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 34.

619 Apple, [Submission to the Final Report](#), 11 October 2024, p 15.

620 Source: ACCC analysis of Sensor Tower data. Note pre-installed apps on iOS are not counted in this analysis.

621 ACCC analysis of Sensor Tower and Australian Securities Exchange data.

622 Match Group, [Submission to the Final Report](#), 11 October 2024; Spotify, [Submission to the Final Report](#), 11 October 2024; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024; International Social Games Association, [Submission to the Final Report](#), 11 October 2024; SBS, [Submission to the Final Report](#), 11 October 2024.

623 Match Group, [Submission to the Final Report](#), 11 October 2024, p 2.

624 For example, Match Group noted it 'has ... few options if it is dissatisfied with [Apple's] services'. See Match Group, [Submission to the Final Report](#), 11 October 2024, p 2.

625 Match Group, [Submission to the Final Report](#), 11 October 2024, p 22.

626 Match Group, [Submission to the Final Report](#), 11 October 2024, p 3.

627 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 1.

628 Spotify, [Submission to the Final Report](#), 11 October 2024, p 1.

they are already familiar and overcome barriers created by indirect network effects⁶²⁹ (this is where an app marketplace requires an extensive catalogue of apps to attract users, but requires a large user base to attract app developers).

Apple, Google and 3 industry groups disputed that there is lack of competition with respect to app marketplaces and mobile OS, highlighting competition between Apple and Google.⁶³⁰ Google, for example, argued that competition with iOS is a principal driver of Google's strategy for Android and the Play Store.⁶³¹ Google also submitted that, since March 2021, fee reductions, the introduction of its User Choice Billing System, and recent partnerships and technical enhancements in relation to privacy and security reflect the competitive pressure that Android and Play face.⁶³²

Apple asserted that it faces 'strong competition' in transactions with both app developers and app users on its App Store.⁶³³ Apple argued that it faces competition from other digital platform service providers, such as cloud gaming services.⁶³⁴ Apple noted that its security and privacy policies on the App Store are core features upon which it competes.⁶³⁵ Apple also argued that app developers and users have an 'ability and tendency' to substitute transactions between multiple platforms such as cloud gaming services and device- or console-specific platforms, among others.⁶³⁶ The Information Technology and Innovation Foundation argued that Apple and Google's dominance in mobile OS does not imply dominance in app marketplaces and the International Centre for Law and Economics argued market concentration or market shares are not sufficient metrics to determine a competition issue exists in a market.⁶³⁷

Apple and Google continue to have significant market power in the supply of mobile OS and market power in mobile app distribution is likely to be significant

Apple iOS and Google Android continue to be the 2 dominant mobile OS in Australia, and the App Store and Play Store remain the most widely used app marketplaces in Australia. Market dynamics in relation to mobile OS and app marketplaces have remained largely unchanged since the Report on App Marketplaces. For example, the App Store continues to be the only app marketplace available to iOS users and sideloading is not permitted in Australia. While sideloading is possible on Android, the ACCC has not been provided evidence of a notable increase in usage of this method of downloading mobile apps.

While Apple and Google's app marketplaces and mobile OS may constrain each other to some degree, the ACCC's consumer survey results suggest that consumers have considerable loyalty to their chosen mobile OS. Once a consumer chooses their mobile OS, they may become 'locked-in' to an ecosystem, with consequent implications on subsequent purchasing decisions (for example, on accessories or connected devices purchased) resulting in deepening engagement with an ecosystem over time.⁶³⁸

Developers also continue to offer their apps on both the App Store and the Play Store (that is, they multi-home). This suggests that the App Store and the Play Store do not provide much constraint

629 Meta, [Submission to the Final Report](#), 11 October 2024, p 4.

630 Apple, [Submission to the Final Report](#), 11 October 2024, p 14; Google, [Submission to the Final Report](#), 11 October 2024, p 22; Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, pp 4–5; International Centre for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 17; Business Council of Australia, [Submission to the Final Report](#), 11 October 2024, p 5.

631 Google, [Submission to the Final Report](#), 11 October 2024, p 22.

632 Google, [Submission to the Final Report](#), 11 October 2024, p 22. Similar arguments were also raised by the Information Technology & Innovation Foundation and the International Centre for Law and Economics.

633 Apple, [Submission to the Final Report](#), 11 October 2024, p 13.

634 Apple, [Submission to the Final Report](#), 11 October 2024, p 15.

635 Apple, [Submission to the Final Report](#), 11 October 2024, p 13.

636 See Apple, [Submission to the Final Report](#), 11 October 2024, pp 14–15.

637 International Centre for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 17.

638 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 112–113.

on one another with respect to developers, as developers are not choosing one app marketplace over the other. App developers continue to rely on both the App Store and the Play Store to reach the broadest group of smartphone users.

Given market dynamics have remained largely unchanged since the ACCC's Report on App Marketplaces, the ACCC retains its view that Apple and Google continue to have significant market power in the supply of mobile OS in Australia. This provides Apple and Google with market power in mobile app distribution in Australia, and the ACCC considers it likely that this market power is significant.

3.2.3 Harms arising from a lack of competition

The ACCC remains concerned about harms arising from a lack of competition on app marketplaces and mobile OS. These harms affect competition with potentially significant impacts for both app developers and consumers, potentially resulting in higher prices, limited consumer choice and placing undue restrictions on potentially disruptive innovation.

In this section, a variety of concerns are discussed in turn, capturing developments that have occurred domestically and internationally since the Report on App Marketplaces.

As discussed below, since March 2021, competition authorities and policymakers across a number of jurisdictions have taken measures to address concerns on mobile OS and app marketplaces. In response to regulatory reforms (such as the EU's DMA) and litigation, Apple and Google have implemented some changes. These include changes regarding commission rates and access to third-party app marketplaces. In most cases, these changes have not been rolled out to Australia, meaning Australian consumers are not benefiting from the same degree of choice or benefits as consumers overseas.

Internationally, while consumers have benefitted from legislative change, stakeholders have raised concerns that the way app marketplaces have complied with new laws has not sufficiently addressed competition concerns. Approaches taken by app marketplaces to comply with obligations and court orders, such as in relation to 'anti-steering' prohibitions and interoperability obligations have resulted in further legal action in the US, Netherlands and the EU. The ACCC will continue to closely monitor these developments and take into account the experiences of regulatory regimes and litigation internationally. This will assist in reducing compliance costs under a digital competition regime in Australia.

In December 2024, Treasury published a proposals paper outlining Government's proposal for a new digital competition regime.⁶³⁹ Noting the importance of apps in the daily lives of Australians and the extent of harms identified, the ACCC agrees with Treasury that competition issues arising in app marketplaces are priority concerns.⁶⁴⁰ Pending regulatory reforms, the ACCC will give further consideration to potential obligations that could be included in an app marketplace service-specific code, including to prevent the conduct examined in this section.

639 The Treasury, [A new digital competition regime, proposal paper](#), December 2024.

640 The Treasury, [A new digital competition regime, proposal paper](#), December 2024.

Terms relating to app payments

The ACCC's Report on App Marketplaces noted that app developers use a range of business models to monetise their apps, such as paid apps (requiring upfront payment), generating revenue from in-app advertising or providing apps that are free to download and use while offering additional features via in-app payments. The analysis focused largely on apps that use in-app payments.

In-app payments are made by users within apps and are paid on either a one-off or subscription basis.⁶⁴¹ For digital goods and services, Apple and Google charge developers for access to their user base, with the primary charge being a percentage commission on revenue earned via the app. It is collected by retaining a commission from revenue collected via their in-app payment system, with the remainder remitted to the app developer.⁶⁴² Apps that supply or facilitate the supply of physical goods and services are not charged a commission and are unable to use Apple and Google's in-app payment system. For example, purchases made through Amazon's marketplace app for shoes would not use Apple or Google's in-app payment system. Instead, the payment would be processed through a third-party provider and Apple and Google would not charge any commission to Amazon.⁶⁴³

The Report on App Marketplaces found that Apple and Google both require that payments for digital goods and services provided through apps be made using their respective in-app payment processing systems and that a commission be paid by app developers on these payments.⁶⁴⁴ The commission applied on in-app payments is a key way in which Apple⁶⁴⁵ and Google recover the costs of creating and maintaining their app marketplaces, and generate profits.

The Report found that it is highly likely that the commission rates applied on in-app payments are inflated by Apple and Google's market power in their dealings with app developers.⁶⁴⁶ Apple and Google's requirements on app developers to use their respective payment systems may also affect downstream competition between apps that are subject to such requirements and apps that are not subject to such requirements.

The ACCC also considered that Apple and Google's control over their respective app marketplaces enabled each of them to bundle developer access to the app marketplace with a requirement to use their respective in-app payment systems, and to charge a commission on transactions using those systems.⁶⁴⁷

641 Examples of in-app payments include subscriptions, ad-free versions of apps and in-game currencies, among others. ACCC, [Digital Platform Services Inquiry Second Interim Report](#), March 2021, p 64; eSafety Commissioner, [In-app purchasing](#), 26 March 2024, accessed 13 March 2025.

642 According to reporting by the Financial Times 'Apple draws between [US\$] \$6bn and \$7bn in commission fees from the App Store globally each quarter, according to Sensor Tower estimates', with games accounting 'for more than half of that revenue'. Google has been reported to have 'made an operating profit of [US\$] \$12bn' from the Play Store in 2021. See M Acton, [Apple's \\$85bn-a-year services business faces legal reckoning](#), *Financial Times*, 1 January 2024, accessed 13 March 2025; M Acton, [Google loses antitrust lawsuit against Epic over its app store](#), *Financial Times*, 12 December 2023, accessed 13 March 2025.

643 J Kastrenakes, 'Here's the new Apple tax every developer is going to hate', *The Verge*, 27 January 2025, accessed 13 March 2025; Google, [Payments](#), Policy Center, 2025, accessed 13 March 2025.

644 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 63.

645 Apple's gross operating margins for the App Store were reportedly over 75% for 2018 and 2019. Since then, Apple's revenue derived from services, which includes App Store revenue, have grown, reaching US\$96.2 billion in the twelve months ended September 28 2024. See M E Stucke and A Ezrachi, [The Tech Barons' Ideological Platter](#), ProMarket, Stigler Center, University of Chicago Booth School of Business, 29 August 2022, accessed 13 March 2025; Apple Inc., [Condensed Consolidated Statements of Operations \(Unaudited\)](#), 31 October 2024, accessed 13 March 2025.

646 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 63.

647 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 77.

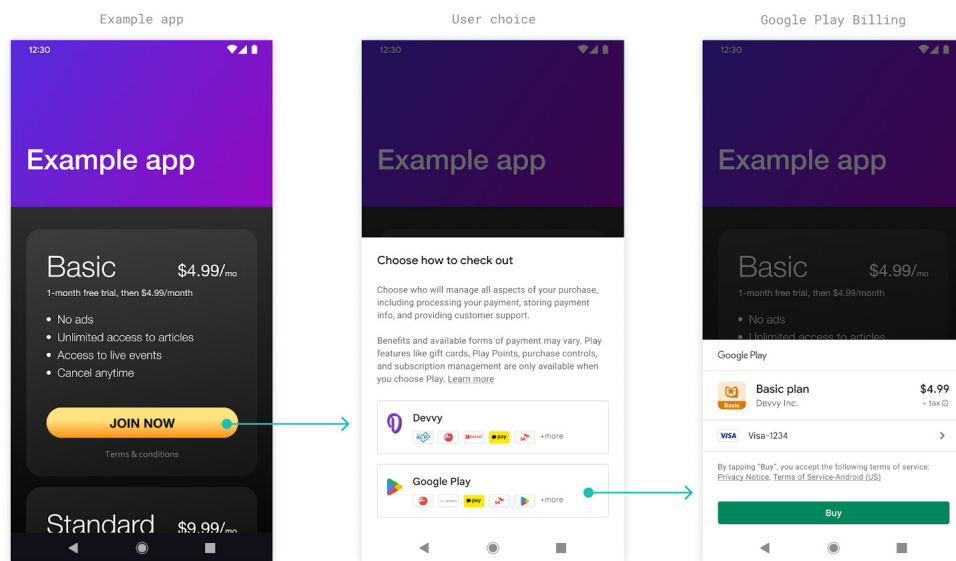
Apple and Google have made changes to in-app payments

Apple and Google have made changes to their respective terms related to in-app payments over time. Since March 2021, there have been several developments in Australia and globally with respect to terms relating to in-app payments and related services. One key development has been Google's introduction of its User Choice Billing System, an option for app developers to offer alternative third-party in-app payment systems to app users.⁶⁴⁸ There have also been changes to the fee structures imposed by Apple and Google on in-app payments.

Google's User Choice Billing System

In September 2022, Google introduced its User Choice Billing pilot programme in Australia (limited to non-gaming apps).⁶⁴⁹ The User Choice Billing System allows participating developers to test offering app users an alternative billing option alongside Google's own payment system via a choice screen.⁶⁵⁰ Under the alternative billing system, when a user goes to make an in-app payment, they are presented with a choice to make the payment using either a third-party payment system or Google's payment system. Figure 3.21 shows a stylised version of the choice screen presented to app users under the User Choice Billing System.⁶⁵¹ Where a consumer pays with an alternative billing system, Google's commission is reduced by 4 percentage points.⁶⁵²

Figure 3.21: Stylised example of the choice screen shown to a user under Google's User Choice Billing System



As of 13 March 2025, the alternative billing system has been made available in several jurisdictions in addition to Australia, including Brazil, Indonesia, Japan, South Africa, the US, the European Economic Area, South Korea and India.⁶⁵²

648 Google, [Understanding user choice billing on Google Play](#), Play Console Help, 2024, accessed 13 March 2025.

649 Google, [Submission to the Final Report](#), 11 October 2024, p 26; See also Google, [Enrolling in the User Choice Billing Pilot](#), accessed 13 March 2025.

650 Google, [Play User Choice Billing Pilot](#), Google Play, accessed 13 March 2025.

651 Google, [Understanding user choice billing on Google Play](#), Play Console Help, 2024, accessed 13 March 2025.

652 Google, [Understanding user choice billing on Google Play](#), Play Console Help, 2024, accessed 13 March 2025.

Fee and commission structures

Since March 2021, Google, and to a lesser extent, Apple have introduced some changes to their respective fees and commissions charged to app developers in Australia. Apple and Google have introduced changes that have reduced commission fees from 30% to 15% in some circumstances (including Google's Play Media Experience Program, its reduced fees for the first US\$1 million of developer earnings and automatically renewing subscriptions, as well as Apple's News Partner Program).⁶⁵³ As noted above, Google reduced the commission applied to in-app purchases for app developers of non-gaming apps who use alternative in-app payment systems as part of its User Choice Billing System in Australia (receiving a 4 percentage point reduction). The ACCC understands that payment processing fees are approximately 3–4%, and switching to an alternative payment processing provider would not meaningfully reduce the overall fees paid by developers to distribute apps.⁶⁵⁴ In these circumstances, there is minimal (if any) economic incentive for developers to switch payment processing providers.

Apple submitted to this Report that 'more than 90% of developers pay no more than 15% commission to Apple' in 2024.⁶⁵⁵ Google submitted to this report that 97% of developers do not pay fees and 99% of developers subject to a fee qualify for a fee of 15% or less.⁶⁵⁶

A number of international regulatory developments related to app payment terms have also occurred since 2021 (see box 3.6).

653 Google, [Submission to the Final Report](#), 11 October 2024, p 24–25; Apple, [Apple introduces the News Partner Program](#), Newsroom, 27 August 2021, accessed 13 March 2025.

654 For example, in the UK, stakeholders raised concerns with the CMA that reductions in commission rates of 3–4% may be insufficient to cover the total costs of developers offering alternative billing. See CMA, [Decision not to accept commitments: Google Play Billing](#), 21 August 2024, p 5.

655 Apple, [Submission to the Final Report](#), 11 October 2024, p 16.

656 See footnote 16 in Google, [Submission to the Final Report](#), 11 October 2024, p 6.

Box 3.6: International regulatory developments related to app payment terms

Since 2021, Apple and Google have allowed alternative payment methods and reduced commission rates in several jurisdictions following regulatory developments or litigation. This includes in the EU, South Korea and the Netherlands.⁶⁵⁷ Google has also reached a settlement in the US to make similar changes (which is awaiting court approval).⁶⁵⁸ These changes have typically resulted in a 3–4% reduction in commission rates when in-app payments are made using a third-party payment provider.⁶⁵⁹

A new law in Japan, that will come into force in December 2025, will also prohibit designated firms from preventing app developers in Japan from using third-party billing systems.⁶⁶⁰

In the UK, the CMA has also investigated Apple's and Google's requirements for app developers to use their respective payment systems for in-app payments.⁶⁶¹ The CMA rejected a commitment from Google to give app developers the ability to use alternative payment options because it was not satisfied app developers would not remain tied to Google's payment system.⁶⁶² While the CMA closed both investigations in August 2024, it noted that should Apple and Google be designated under the Digital Markets Competition and Consumers Act, the CMA could use its new powers to consider a range of issues more holistically than it could under specific investigations.⁶⁶³ In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems and will at the same time consider whether conduct requirements should be imposed in the event of a final designation decision.⁶⁶⁴

Investigations in relation to Google are also reportedly ongoing in India.⁶⁶⁵

- 657 Apple and Google have made changes in response to regulatory developments in Europe and South Korea and litigation in the US (Google) and the Netherlands (Apple). Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, pp 157–164; Apple, [Apple's Non-Confidential Summary of DMA Compliance Report](#), 7 March 2024, pp 7–9; K Hyun Ryoo, J Park and J Yoon, [Korean telecom law amended to regulate practices of "app market service providers" such as app stores](#), Lexology, 30 August 2021, accessed 13 March 2025; See 'Commission and sales reporting' in Apple, [Distributing dating apps in the Netherlands](#), Support, 2024, accessed 13 March 2025.
- 658 *In re Google Play Store Antitrust Litigation*, [Settlement Agreement and Release](#), 18 December 2023; A Wilts, [Google, US states, consumers say settlement doesn't dilute Epic injunction](#), *Mlex*, 11 February 2025, accessed 13 March 2025.
- 659 See 'Commission and sales reporting' in Apple, [Distributing apps using a third-party payment provider in South Korea](#), Support, 2024, accessed 13 March 2025; S R Choudhury and S Shead, [South Korea passes bill limiting Apple and Google control over app store payments](#), *CNBC*, 31 August 2021, accessed 13 March 2025; K Leswing, [Apple opens up third-party app payments in South Korea, will still take 26% cut](#), *CNBC*, 30 June 2022, accessed 13 March 2025; See 'Commission and sales reporting' in Apple, [Distributing dating apps in the Netherlands](#), Support, 2024, accessed 13 March 2025;
- 660 JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024, accessed 13 March 2025, pp 2–3. The legislation comes into force 'one and a half years' after the date of its promulgation (excluding certain provisions).
- 661 CMA, [CMA looks to new digital markets competition regime to resolve app store concerns](#), Press release, Competition Act and cartels, 21 August 2024, accessed 13 March 2025.
- 662 CMA, [CMA looks to new digital markets competition regime to resolve app store concerns](#), Press release, Competition Act and cartels, 21 August 2024, accessed 13 March 2025; CMA, [Decision not to accept commitments: Google Play Billing](#), 21 August 2024.
- 663 CMA, [CMA looks to new digital markets competition regime to resolve app store concerns](#), Press release, Competition Act and cartels, 21 August 2024, accessed 13 March 2025.
- 664 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.
- 665 A Kalra, [India starts inquiry into Google app payments antitrust compliance](#), *Reuters*, 13 May 2023, accessed 13 March 2025; A Kalra and T Mehta, [India antitrust body to probe Google's in-app billing amid dispute with startups](#), *Reuters*, 16 March 2024, accessed 13 March 2025.

Stakeholders remain concerned about app payment terms

Match Group, Spotify and the Coalition for App Fairness raised concerns about the tying of in-app payment system to the mobile OS.⁶⁶⁶ For example, Match Group argued that Apple's tying of in-app payments has continued to have deleterious effects on consumers, including by stifling consumer payment provider choice, and raising the prices of apps.⁶⁶⁷

The International Social Games Association submitted that app marketplaces are essential distribution channels for its members and that significant market power held by app marketplaces enables them to impose a 30% commission on in-app payments.⁶⁶⁸ The Coalition for App Fairness and Match Group submitted that in several jurisdictions where decisions have enabled alternative payment systems to be used, Apple and Google's approach has limited the impact in practice.⁶⁶⁹ It has been argued that while use of alternative in-app payment systems result in a slight reduction in commission rates payable to Apple or Google, the payment made for a third-party payment service provider could end up costing an app developer either the same or more than what it would be charged to use app marketplace operators' in-app payment systems.⁶⁷⁰

Apple submitted to this Report that existing competition in app marketplaces is sufficient to constrain any purported exercise of market power by Apple having regard to the currently observable fee benchmarks and fee structures across platforms.⁶⁷¹

Restrictive app marketplaces payment terms continue to hinder competition

The ACCC retains its view that it is highly likely that the commission rates applied on in-app payments are inflated by Apple and Google's market power in their dealings with app developers, with some app developers continuing to pay a 30% commission to Apple and Google.

If these commission rates were lower, app developers would retain a higher proportion of the revenue generated from sales of their apps, potentially resulting in greater investment in the development of future apps and further innovation.

It is notable that competition authorities and policymakers across a number of jurisdictions have taken measures to address these concerns, underscoring the degree of harm this conduct is considered to cause internationally. However, concerns have been raised in submissions that measures taken have not sufficiently addressed competition concerns.

It is notable that, in the context of its investigation into Google's rules relating to in-app payments, the CMA has refused commitments from Google that would make alternative payment systems available as feedback suggested that app developers would not be provided a viable alternative and in practice remain tied to the Google payment system.⁶⁷² In particular, app developers referred to the level of commission they would still be paying to Google, and to the proposed 'pop-up screens' that might put users off completing a transaction if they used an alternative system, making switching ineffective.⁶⁷³

666 Match Group, [Submission to the Final Report](#), 11 October 2024, p 23; Spotify, [Submission to the Final Report](#), 11 October 2024, p 4; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 7.

667 Match Group, [Submission to the Final Report](#), 11 October 2024, p 25.

668 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 1.

669 Match Group, [Submission to the Final Report](#), 11 October 2024, p 7; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 6.

670 For example, see Match Group, [Submission to the Final Report, 11 October 2024](#), pp 8–14; see also S Sinha, [Choices under Google's user-choice billing program are illusory, Epic Games tells Australian antitrust trial](#), *Mlex*, 26 June 2024, accessed, accessed 13 March 2025.

671 Apple, [Submission to the Final Report](#), 11 October 2024, p 3.

672 CMA, [CMA looks to new digital markets competition regime to resolve app store concerns](#), Press release, Competition Act and cartels, 21 August 2024, accessed 13 March 2025.

673 CMA, [Decision not to accept commitments: Google Play Billing](#), 21 August 2024, p 5.

Should Apple or Google be designated under its new digital regime, the CMA considers that it will be able to use its new powers to consider the range of issues raised by parties more holistically than it otherwise could under a specific Competition Act investigation.⁶⁷⁴ In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems and will at the same time consider whether conduct requirements should be imposed in the event of a final designation decision.⁶⁷⁵

Communication of payment options

Some app developers offer users the ability to pay for goods and services outside the app, for example, via their website. Many apps offer this in addition to the in-app payment option provided by app marketplaces. Generally, payments made outside the app are not subject to app marketplace requirements regarding which payment system to use, and do not attract a commission. Where app developers pass on the 30% or 15% commission to consumers for payments made in-app, it can be cheaper to buy content or products outside the app.

The Report on App Marketplaces identified concerns about restrictions app marketplaces placed on app developers informing consumers about alternative payment options outside an app.⁶⁷⁶ Restrictions can prevent app developers from steering consumers off the app (for example, by providing a hyperlink for consumers which takes them to a website). The ACCC considered restrictions that prevent app developers from informing consumers about alternative payment systems outside of the app mean consumers are not fully informed about the payment options available, including possibly cheaper options.⁶⁷⁷

Since 2021, there have been a range of regulatory interventions in relation to communication of payment options (see box 3.7).

Box 3.7: International regulatory developments related to communication of payment options

In response to the DMA in Europe, Apple and Google have made changes to allow developers in the EU to promote offers within their apps and show hyperlinks to their external sites to conclude contracts.⁶⁷⁸ Both Apple and Google charge commission on these transactions that are completed outside of their app marketplaces, with commission rates varying depending on circumstances (for example, up to 27% in the case of Google).⁶⁷⁹

674 CMA, [CMA looks to new digital markets competition regime to resolve app store concerns](#), Press release, Competition Act and cartels, 21 August 2024, accessed 13 March 2025.

675 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

676 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 79–83.

677 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 63.

678 Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, pp 151–156; Apple, [Apple's non-confidential summary of DMA compliance report](#), 7 March 2024, pp 7–9. See also Apple Developer, [Using alternative payment options on the App Store in the European Union](#), accessed 13 March 2025.

679 Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, pp 151–156; Apple, [Apple's non-confidential summary of DMA compliance report](#), 7 March 2024, pp 7–9. See also Apple Developer, [Using alternative payment options on the App Store in the European Union](#), accessed 13 March 2025.

In March 2024, the European Commission opened proceedings to assess whether the measures implemented by Google and Apple breach the requirement to allow app developers to 'steer' consumers free of charge.⁶⁸⁰ In June 2024, the European Commission informed Apple of its preliminary view that its App Store rules are in breach of the DMA.⁶⁸¹ In August 2024, Apple announced proposed changes⁶⁸² to address the European Commission's concerns though, as noted below, app developers have raised concerns with Apple's revised approach. The commencement date for this new arrangement has not yet been announced. On 19 March 2025, the European Commission issued preliminary findings in respect of its non-compliance investigation into Google, providing its preliminary view that Google Play does not comply with the DMA, as app developers are prevented from freely steering consumers to other channels for better offers.⁶⁸³ The non-compliance investigations into Apple and Google are ongoing.

Antitrust cases in the US, Netherlands, India and Europe have also led to fines and prohibitions of anti-steering provisions used by app marketplaces.⁶⁸⁴ However, as noted below, stakeholders have raised concerns about the effectiveness of the measures taken by app marketplaces to address these concerns. Approaches taken by app marketplaces to comply with court orders have also prompted further legal action in the US and Netherlands.⁶⁸⁵

Competition authorities and policymakers in other jurisdictions have also signalled future or potential obligations on these issues through reports or the passing of laws targeted at app marketplaces. In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems, noting that potential conduct requirements could require Apple and Google to make it possible for users to download apps and pay for in-app content more easily outside of their own app stores.⁶⁸⁶ A new law in Japan will include a prohibition on anti-steering while a bill proposed in India includes a similar prohibition.⁶⁸⁷

680 European Commission, [Commission opens non-compliance investigations against Alphabet, Apple and Meta under the Digital Markets Act](#), 25 March 2024, accessed 13 March 2025.

681 European Commission, [Commission sends preliminary findings to Apple and opens additional non-compliance investigation against Apple](#), 24 June 2024, accessed 13 March 2025.

682 N Lomas, [Apple revises DMA compliance for App Store link-outs, applying fewer restrictions and a new fee structure](#), *TechCrunch*, 8 August 2024, accessed 13 March 2025.

683 European Commission, [Commission sends preliminary findings to Alphabet under the Digital Markets Act](#), Press Release, 19 March 2025, accessed 20 March 2025.

684 B Heater, [Apple prohibited from blocking outside payment in Epic ruling](#), *TechCrunch*, 10 September 2021, accessed 13 March 2025; Netherlands Authority for Consumers and Markets, [Summary of decision on objection in connection with the Apple App Store](#), ACM/21/053587, 13 July 2023, accessed 13 March 2025; Competition Commission of India, [CCI imposes a monetary penalty of Rs. 936.44 crore on Google for anti-competitive practices in relation to its Play Store policies](#), Press Release, 25 October 2022, accessed 13 March 2025; European Commission, [Commission fines Apple over €1.8 billion over abusive App store rules for music streaming providers](#), Press Release, 4 March 2024, accessed 13 March 2025.

685 A Wilts, [Epic Games, Apple brace for restart of hearing next year on App Store injunction compliance](#), *MLex*, 5 November 2024, accessed 13 March 2025; D Măndrescu, [The ACM vs. Apple App Store – A Second Chance At Getting it Right](#), *Kluwer Competition Law Blog*, 7 November 2023, accessed 13 March 2025.

686 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

687 See Ministry of Corporate Affairs Government of India, [Report of the Committee on Digital Competition Bill](#), 27 February 2024, p 160; JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024, p 3.

App developers are concerned app marketplaces have limited the effectiveness of changes internationally

App developers have made submissions to this Report raising concerns that the approaches adopted by app marketplaces internationally have sought to undermine regulatory reforms and court orders in those jurisdictions. The Coalition for App Fairness argued that under the DMA, gatekeepers have shifted the application of regulated fees ‘elsewhere in their ecosystem’ or changed the name of the regulated fees to avoid compliance.⁶⁸⁸ The Coalition for App Fairness considered that regulatory reform should enable free communication about ‘offers, discounts, and other features’ between app developers and users without restriction or the imposition of fees.⁶⁸⁹

Match Group submitted that Apple’s approach to link outs, including its August updates to link outs, are not compliant with the DMA, imposing financial and technical barriers that disincentivise competition.⁶⁹⁰ Match Group similarly raised concerns regarding Apple’s approach to compliance with court orders in the Netherlands and the US.⁶⁹¹ The International Social Games Association also noted its concern with Apple’s approach to compliance with a court order in the US.⁶⁹²

Spotify submitted that Apple has responded to new legal requirements internationally with new anti-competitive fees, obfuscation and delay.⁶⁹³ Spotify also submitted that Apple’s approach inhibits it from serving its customers in new and innovative ways.⁶⁹⁴

Google submitted that it already provides developers with significant flexibility.⁶⁹⁵ Outside their app, developers can freely communicate with users, including about alternative purchase options.⁶⁹⁶ Within their app, developers can include links to web pages outside of their app, such as an account management page, privacy policy or a help centre, as long as the link does not lead to alternative payment options.⁶⁹⁷ For consumption-only apps, developers can communicate with users about purchasing options and can direct users to such alternatives on their website by including in-app language such as ‘you can purchase the book directly on our website’, as long as they do so without direct links.⁶⁹⁸ Google submitted that this approach balances providing a seamless and safe user experience and developers flexibility to communicate with users, while allowing Google to cover ongoing investments in the Play Store.⁶⁹⁹

Google submitted that the European Commission’s interpretation of the DMA’s alternative billing requirements and link outs obligations may create consumer protection and user experience risks.⁷⁰⁰ Google notes that its system provides a protected and secure environment for users and developers to connect making in-app purchases, while alternative billing systems may not offer the same protections. Google argues that artificially splitting Play’s service fee (as it has done to comply with the DMA in the EU) is not in developers’ or users’ best interests.⁷⁰¹

688 For example, under the South Korea Telecommunications Business Act, Apple and Google ‘introduced a new 26% fee for using third-party payment systems’ while claiming ‘to comply with the law’. See Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 5.

689 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 7.

690 Match Group, [Submission to the Final Report](#), 11 October 2024, pp 6–7.

691 Match Group, [Submission to the Final Report](#), 11 October 2024, pp 15–21.

692 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 2.

693 Spotify, [Submission to the Final Report](#), 11 October 2024, pp 2–3.

694 Spotify, [Submission to the Final Report](#), 11 October 2024, pp 3–4.

695 Google, [Submission to the Final Report](#), 11 October 2024, p 26.

696 Google, [Submission to the Final Report](#), 11 October 2024, p 25.

697 Google, [Submission to the Final Report](#), 11 October 2024, p 25.

698 Google, [Submission to the Final Report](#), 11 October 2024, p 25.

699 Google, [Submission to the Final Report](#), 11 October 2024, p 25.

700 Google, [Submission to the Final Report](#), 11 October 2024, p 4.

701 Google, [Submission to the Final Report](#), 11 October 2024, p 4.

App marketplaces restrictions continue to hinder informed choice

The ACCC has previously noted that restrictions by Google and Apple result in insufficient information for informed choice as consumers are not fully informed about the payment options available to them, including possibly cheaper options for content that they will access in an app.⁷⁰² While Google allows communication between developers and consumers outside and within apps, the ACCC remains concerned about restrictions by Google and Apple restricting developers from providing links to lead consumers to alternative payment options outside of their app.

These restrictions mean consumers may be unaware that some apps are available for a cheaper price on an app developer's website compared to app marketplaces. Restrictions of this kind can hinder consumer choice. Analysis conducted by the ACCC of app subscription prices (current between July 2023 and June 2024) found that 12 out of 44 examined apps on the Apple App Store and 6 out of the same 44 examined apps on the Google Play Store were offered for a cheaper price on the app developer's website. For those apps that were cheaper on the developer website, subscription prices on the app marketplaces were observed to be between 3% and 40% higher than compared to the relevant developer website.⁷⁰³ We note this is a small sample, however, it illustrates the potential for more price competition.

As another example, Roblox gives users 25% more of its in-game currency if they purchase the currency from its website or via gift cards rather than from the App Store or Google Play Store.⁷⁰⁴ Similarly, small businesses can 'boost' their posts on Instagram and Facebook using the respective websites directly at a cheaper price than doing so through the Facebook or Instagram app.⁷⁰⁵ In February 2025, Google announced that users of Google Play Books on iOS will now be able to click on a new 'Get book' button in their app which will take them to the Google Play website to complete a purchase,⁷⁰⁶ allowing Google to bypass the in-app payment commission fee to Apple for sales of digital goods and services.⁷⁰⁷

The ACCC's Regulatory Reform Report noted that a service-specific code could prohibit Designated Digital Platforms from restricting an app developer's ability to communicate with consumers about alternative payment options.⁷⁰⁸

This could potentially result in consumers paying less for apps and in-app features if it encourages competition between app offerings on app marketplaces and developer websites. It could also make some business models, such as offering 'read only' apps more viable for app developers,⁷⁰⁹ if information about payment options outside the app are displayed to users within the app.

702 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 81.

703 ACCC analysis conducted in August 2024. This analysis considered the top 200 apps by net revenue in each of the App Store (iPhone only) and the Play Store as estimated by Sensor Tower for the period 1 July 2023 to 30 June 2024 in Australia. A sample of 44 was determined by assessing whether these apps offered a subscription to users available to purchase within the app and whether the developer website offered the same subscription.

704 I Mehta, [Roblox will now give users 25% more of its in-game currency if you buy Robux on its website](#), *TechCrunch*, 26 November 2024, accessed 13 March 2025.

705 Facebook, [New ways for small businesses to boost and avoid Apple service fees](#), 15 February 2024, accessed 13 March 2025. 'Boosted posts' are a low-barrier-to-entry advertising product that businesses can use on Facebook and Instagram to quickly promote a piece of content without needing to set up a full ad campaign.

706 Google, [Buying books is now easier in the Google Play Books iOS app](#), *The Keyword*, 18 February 2025, accessed 13 March 2025.

707 S Perez, [Google Play Books purchases on iOS now skirt the App Store's commission](#), 18 February 2025, accessed 13 March 2025.

708 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 154.

709 A read-only app is an app that allows users to view or consume content purchased outside the app, but does not enable users to purchase content within the app. ACCC, [Digital Platform Services Inquiry Second Interim](#), 28 April 2021, p 82.

Interoperability

Apple and, to a lesser but still significant extent Google, control the OS and device functionality that third-party apps can access.⁷¹⁰ Third parties such as app developers, alternative app marketplaces or businesses selling connected devices rely heavily on the ability to interoperate with Apple and Google's mobile OS to create valuable products and services.

As explored in the ACCC's Regulatory Reform Report, the ACCC is concerned that Apple and Google have restricted interoperability between their own services and those provided by third parties.⁷¹¹ This includes in relation to restrictions on third-party app marketplaces as well as other hardware, software and functionality of mobile OS. Such restrictions can inhibit the ability of third parties to innovate and compete in related markets. As noted in the ACCC's Regulatory Reform Report, the ACCC considers that codes of conduct for mobile OS services and app marketplaces could include obligations to address interoperability restrictions.⁷¹²

The below sections consider developments across a range of interoperability issues related to mobile OS and app marketplaces.

Third-party app marketplaces and sideloading

Apple does not allow the installation of third-party app marketplaces or sideloading of apps on iOS mobile devices in Australia. This prevents app developers from providing or using competing app marketplaces to distribute apps to iOS device users. Google allows third-party app marketplaces on Android, however, third-party app marketplaces are not available to be downloaded through the Google Play Store and must either be pre-installed by device manufacturers or sideloaded by users. While permitted on Android, sideloading requires lowering Android's security settings, which generates warnings about making the device less secure, and is likely to deter many consumers.

Concerns have also been raised about the degree of interoperability between Android and apps downloaded from third-party app marketplaces (relative to apps downloaded from the Play Store).⁷¹³ Android apps crucially rely on Google Play Services for full functionality. Google Play Services allow developers to use basic features such as push notifications, advertising, and security features to communicate with Google first-party apps and create rich features compatible with Android.⁷¹⁴ The CMA has noted that where an app developer decides to distribute its app via a third-party app marketplace only, they would not be able to call on Google Play Services APIs and instead need to rely on APIs offered by the third-party app marketplace.⁷¹⁵ This may reduce the ability of alternative app marketplaces to compete with the Google Play Store, as developing these alternative APIs will require substantial investment from third-party app marketplaces and come with switching costs for app developers.⁷¹⁶

The Report on App Marketplaces found that a lack of competitive constraint faced by Apple's App Store and Google's Play Store, including through a lack of constraint by third-party app marketplaces and sideloading, provides Apple and Google with market power in the distribution of mobile apps. This market power particularly affects Apple and Google's dealings with app developers in Australia.⁷¹⁷

710 ACCC, [Digital Platform Services Inquiry Second Interim](#), 28 April 2021, p 44.

711 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 156.

712 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 157–165.

713 CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, pp 199–200.

714 CMA, [Mobile Ecosystems Market Study, Appendix E: Google's agreements with device manufacturers and app developers](#), 10 June 2022, p E2.

715 CMA, [Mobile Ecosystems Market Study, Appendix E: Google's agreements with device manufacturers and app developers](#), 10 June 2022, pp E15–17.

716 CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, p 78; European Commission, [Case AT.40099 Google Android](#), 18 July 2018, pp 137–138.

717 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 23.

Internationally, since March 2021, in response to the EU's DMA, Apple now allows third-party app marketplaces and sideloading in limited circumstances,⁷¹⁸ and reportedly 5 third party marketplaces are now available on iOS in Europe.⁷¹⁹ However, the European Commission has opened non-compliance proceedings against Apple in relation to the new contractual terms developers must accept to access these alternative channels.⁷²⁰

The International Social Games Association and Match Group submitted that while third-party app marketplaces have launched on mobile devices following the DMA's introduction, concerns remain about the financial and technical barriers imposed by Apple inhibiting third-party app marketplaces from competing on iOS.⁷²¹ Spotify also noted concern with Apple's fee structure for app developers who participate in alternative app marketplaces.⁷²² Match Group and Spotify were also a co-signatory on a recent open letter by a range of co-signatories representing over 65,000 business and app developers to members of the European Parliament noting concerns with Apple and Google's 'sham compliance strategies' with respect to the DMA.⁷²³ The letter argues that with new fees and complex install procedures, it is impossible for any alternative app store, web app, or independent distribution channel to compete fairly with Apple and Google.⁷²⁴

In the US, several antitrust cases have had implications for third party app marketplaces and sideloading on Google. Attorneys-General of all 50 US states and 3 territories in the US who had taken a case against Google published settlement terms in December 2023, which include requirements for Google to simplify the process for sideloading and reduce warnings in relation to app downloads from outside the Play Store.⁷²⁵ The settlement is awaiting court approval.⁷²⁶ Another case (Epic v Google) could have implications for interoperability of third-party app marketplaces on Google as the Judge ordered Google to provide access to its Play Store app catalogue to rival Android app marketplaces for 3 years and prohibited Google from excluding competitor app marketplaces from its Play Store through an injunction.⁷²⁷ However, the order has been stayed pending Google's appeal.⁷²⁸

718 See 'Operating an alternative app marketplace' in Apple, [Apple's Non-Confidential Summary of DMA Compliance Report](#), 1 November 2024, p 3.

719 S Perez, [Move over, Apple: Meet the alternative app stores coming to the EU](#), *TechCrunch*, 20 August 2024, accessed 13 March 2025; Epic Games, [Epic Games Store Mobile – Epic Games](#), accessed 13 March 2025; M Meaker, [Fortnite Maker Epic Games Challenges Apple's Dominance With New iOS App Store](#), 16 August 2024, accessed 13 March 2025.

720 European Commission, [Commission sends preliminary findings to Apple and opens additional non-compliance investigation against Apple under the Digital Markets Act](#), Press Release, 24 June 2024, accessed 13 March 2025.

721 Match Group, [Submission to the Final Report](#), 11 October 2024, p 23; International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 3.

722 Spotify, [Submission to the Final Report](#), 11 October 2024, pp 2–4.

723 See open letter addressed to Members of the European Parliament, Internal Market and Consumer Protection and Economic and Monetary Affairs Committees of the European Parliament in Actualités Alliance Digitale, [Alliance Digitale s'associe pour appeler à une meilleure application de la DMA](#), 24 October 2024, accessed 13 March 2025. Co-signatories include Alliance Digitale, Coalition for App Fairness, European Games Developer Federation, European Digital SMA Alliance, Open Web Advocacy, Epic Games, Match Group, Spotify, among others.

724 Actualités Alliance Digitale, [Alliance Digitale s'associe pour appeler à une meilleure application de la DMA](#), 24 October 2024, accessed 13 March 2025.

725 Office of the Attorney General for the District of Columbia, [Attorney General Schwalb Announces \\$700 Million Multistate Settlement With Google Over Play Store Misconduct](#), Newsroom, 19 December 2023, accessed 13 March 2025.

726 A Wilts, [Google, US states, consumers say settlement doesn't dilute Epic injunction](#), *Mlex*, 11 February 2025, accessed 13 March 2025.

727 Mlex, [Google forced to allow third-party app stores on Play Store by order in Epic Games' antitrust case](#), 7 October 2024, accessed 13 March 2025. 'Google is entitled to take reasonable measures to ensure that the platforms or stores, and the apps they offer, are safe from a computer systems and security standpoint. If challenged, Google will bear the burden of proving that its technical and content requirements and determinations are strictly necessary and narrowly tailored. Google may require app developers and app store owners to pay a reasonable fee for these services, which must be based on Google's actual costs.' The court requested the parties, Epic and Google, recommend a three-person technical committee to review disputes or issues relating to 'the technology and processes required' in adherence to the injunction. See *In re Google Play Store Antitrust Litigation*, [Permanent Injunction](#), 7 October 2024, p 3.

728 M Scarcella, [Google granted request to pause order on Play store overhaul](#), *Reuters*, 19 October 2024, accessed 13 March 2025.

Competition authorities and policymakers in other jurisdictions have also signalled future potential obligations through reports or the passing of laws targeted at app marketplaces. The CMA has noted potential competition benefits of these measures and considers security measures are likely to be surmountable,⁷²⁹ while a new law in Japan will prohibit restriction of third-party app marketplaces (but not sideloading), subject to justifiable measures.⁷³⁰ Epic has also signalled its intention to launch a new app marketplace in Japan once the new Japanese law comes into effect.⁷³¹ Other jurisdictions such as India have also proposed laws to prohibit designated digital platforms from restricting third-party app marketplaces.⁷³²

App developers are concerned by a lack of alternatives

Match Group raised concerns regarding a lack of alternative app marketplaces and sideloading in Australia.⁷³³ Match Group argued that in Australia there continues to be no significant suppliers of mobile app marketplaces other than Apple and Google.⁷³⁴ Apple's App Store remains the only marketplace currently available for iOS users to download apps everywhere except in the EU.⁷³⁵ Match Group noted that restrictions imposed by the Apple Developer Program on the direct distribution of apps from websites by developers do not appear to be 'strictly necessary and proportionate'.⁷³⁶ The Coalition for App Fairness argued that new ex ante legislation should ensure consumer choice by enabling consumers to choose to download apps from a gatekeeper's app marketplace or from a third-party app marketplace or website.⁷³⁷

Google noted that user choice on Android in Australia is greater than iOS as consumers can access third-party Android app stores and sideloaded apps, among others such as web apps and pre-installed apps.⁷³⁸

Notably, in February 2025, it was reported that Amazon will discontinue its app marketplace on Android in August 2025.⁷³⁹

App marketplaces contend that restrictions provide greater security and privacy

Google, Apple and the Centre for Cybersecurity Policy and Law raised concerns about privacy and security issues related to third-party app marketplaces.⁷⁴⁰ Apple and the Centre for Cybersecurity Policy and Law raised concerns that third-party app marketplaces carry greater security risks than first-party app marketplaces⁷⁴¹ and security risks associated with sideloading.⁷⁴² Google raised particular concern about requirements for the Play Store to carry third-party app stores.⁷⁴³

729 CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, pp 301–302.

730 JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024, p 3.

731 S Sakamaki, [Epic Games to launch new app store on iPhones in Japan, once new law takes effect](#), *MLex*, 10 December 2024, accessed 13 March 2025.

732 Ministry of Corporate Affairs Government of India, [Report of the Committee on Digital Competition Law](#), 27 February 2024, p 163.

733 Match Group, [Submission to the Final Report](#), 11 October 2024, p 22.

734 Match Group, [Submission to the Final Report](#), 11 October 2024, p 22.

735 Match Group, [Submission to the Final Report](#), 11 October 2024, p 22.

736 Match Group, [Submission to the Final Report](#), 11 October 2024, p 10.

737 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 7.

738 Google, [Submission to the Final Report](#), 11 October 2024, pp 22, 32.

739 I Mehta, [Amazon is shutting down its app store on Android](#), *TechCrunch*, 20 February 2025, accessed 13 March 2025.

740 Google, [Submission to the Final Report](#), 11 October 2024, p 33; Apple, [Submission to the Final Report](#), 11 October 2024, p 8; Centre for Cybersecurity Policy and Law, [Submission to the Final Report](#), 11 October 2024, pp 8–9.

741 Apple, [Submission to the Final Report](#), 11 October 2024, p 8; Centre for Cybersecurity Policy and Law, [Submission to the Final Report](#), 11 October 2024, pp 8–9.

742 Apple, [Submission to the Final Report](#), 11 October 2024, pp 3–8.

743 Google, [Submission to the Final Report](#), 11 October 2024, p 33.

In contrast, the Coalition for App Fairness noted security and privacy have been misused as justifications to block sideloading and alternative app marketplaces.⁷⁴⁴ The Coalition for App Fairness submitted that privacy and security exceptions to ex ante rules should not be abused to circumvent pro-competition measures, and that the gatekeeper should bear the burden of proof when seeking to rely on such an exception.⁷⁴⁵

Third-party app marketplaces could bring competition benefits

Restrictions placed on third party app marketplaces and sideloading prevent developers from using effective alternative channels to reach consumers with their apps. Enabling third-party app marketplaces to compete as effective alternative channels would have benefits for competition and innovation.

This could facilitate greater competition in relation to fees for app marketplaces services (including in-app payments) and the quality of app developer services (including faster review times). For example, in Europe, Epic has announced that its new app marketplace will charge developers 12% commission on in-app purchases, compared to rates of 15–30% typically charged on the App Store and Play Store.⁷⁴⁶ It will also reportedly not charge commission where app developers use alternative payment systems.⁷⁴⁷

Alternative app marketplaces could also enter and provide new service offerings, such as a ‘green marketplace’ (containing apps that help users lower their carbon footprint), an age-appropriate marketplace or a game marketplace etc. Alternative app marketplaces could also take alternative approaches to fee structures, for example, charging commission on physical goods and services and lowering commission rates on digital goods and services.

Third party browser engines

A browser engine is a critical piece of software required by all browsers to run, which interprets the code behind a website and presents it in the graphical format the user sees and interacts with. There are 3 main browser engines: WebKit (used by all browsers on iOS), Blink (used by Google’s Chrome browser and a range of other mobile browsers available on Android) and Gecko (used by Mozilla’s browser Firefox on Android). The vast majority of browsers use WebKit or Blink.⁷⁴⁸

The ACCC’s Regulatory Reform Report noted that Apple requires all browsers on iOS to be built using its WebKit browser engine.⁷⁴⁹ Further, Apple prevents WebKit from accessing certain APIs and iOS functionality, which restricts the functionality of web apps compared to native apps.⁷⁵⁰ As a result, the Regulatory Reform Report noted that Apple iOS users do not have the option to use browsers that can offer a wider range of innovative features and functionality.⁷⁵¹ Instead, they are limited to using browsers built using Apple’s WebKit browser engine.⁷⁵² The ACCC noted its concern that this limits the ability for web apps (which are accessible through browsers rather than through the Apple App Store) to impose a competitive constraint on native apps.⁷⁵³

Box 3.8 notes international regulatory developments related to third-party browser engines.

744 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 5.

745 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 5–6.

746 K Eaton, [Epic Games Reveals EU App Store for Apple Devices, Keeps Its Third-Party Fee](#), *Inc.com*, 21 March 2024, accessed 13 March 2025.

747 K Eaton, [Epic Games Reveals EU App Store for Apple Devices, Keeps Its Third-Party Fee](#), *Inc.com*, 21 March 2024, accessed 13 March 2025.

748 See ACCC, [Digital Platform Services Inquiry Third Interim Report](#), 28 October 2021, p 37.

749 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 157.

750 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 157.

751 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

752 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

753 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

Box 3.8: International regulatory developments related to third-party browser engines

Competition authorities and policymakers in some jurisdictions have taken measures to address this concern. In Europe, in response to the DMA, Apple has introduced new capabilities for app developers to use alternative browser engines (i.e. other than Apple's own WebKit) for browser apps and apps providing in-app browsing experiences in the EU.⁷⁵⁴ Apple only authorises developers to implement alternative browser engines after they meet specific criteria and commit to ongoing functional, privacy and security requirements, including timely security updates to address emerging threats and vulnerabilities.⁷⁵⁵ This functionality is not currently offered in Australia.

A new law in Japan will similarly prohibit designated platforms from preventing app developers from using other browser engines.⁷⁵⁶ However, exemptions may apply where 'justifiable measures' are required to achieve the objectives of security, privacy, youth protection, among others.⁷⁵⁷

In the UK, a final decision report by the CMA concluded that Apple's Webkit restriction harms competition in the market for mobile browser engines on iOS.⁷⁵⁸ In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems.⁷⁵⁹ The CMA's final decision report concluded that an effective and comprehensive means of addressing the concerns it identified is to recommend that, if the CMA Board decides to designate Apple and/or Google with strategic market status, it should consider imposing appropriate interventions,⁷⁶⁰ including remedies to address adverse effects on competition in the supply of mobile browsers on iOS.⁷⁶¹

Innovation potential of third-party browser engines

Removing restrictions on third-party browser engines could create opportunities for innovation for browser developers on iOS. For example, the CMA considers that current restrictions on iOS limits the ability of browser vendors to add privacy features to offer an improved or differentiated implementation of WebKit's privacy features.⁷⁶² The CMA concluded that the WebKit restriction limits the features available to users and decreases competition between mobile browsers on privacy features on iOS.⁷⁶³

The CMA found that Apple's own mobile browser Safari has or has had greater or earlier access to key functionalities from Apple's WebKit browser engine, compared to competing mobile browsers, which has a negative impact on competition and innovation.⁷⁶⁴ Meta submitted to the CMA that it wants to build an in-app browser⁷⁶⁵ to develop new features that could improve user experience,

754 Apple, [Apple's Non-Confidential Summary of DMA Compliance Report](#), 1 November 2024, pp 5–6.

755 Apple, [Using alternative browser engines in the European Union](#), Support, Developer, accessed 13 March 2025.

756 JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024, p 3.

757 JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024, p 3.

758 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 234.

759 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

760 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 14.

761 CMA, [Mobile browsers and cloud gaming, Final decision report](#), [Appendix D: Remedies not taken forward in this market investigation](#), 12 March 2025, p 2.

762 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 162.

763 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 162.

764 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 12.

765 In-app browsing refers to the situation in which a user accesses web content while they are already in a native app that is not a dedicated mobile browser.

security and performance on iOS (as it has done on Android) but has been restricted from doing so by Apple.⁷⁶⁶

In the Regulatory Reform Report, the ACCC also raised concerns that restrictions on third party browser engines on iOS limits the ability for web apps (which are accessible through browsers rather than through the Apple App Store) to impose a competitive constraint on native apps.⁷⁶⁷ With these restrictions removed, developers would be able to innovate to improve the quality and functionality of their web apps, allowing them to compete more effectively with each other and with native apps.⁷⁶⁸

Near field communication

The ACCC's Regulatory Reform Report noted that Apple prevented third parties from accessing the Near Field Communication (NFC) components in Apple-branded mobile devices to facilitate contactless payments, meaning that any contactless payments needed to be made using Apple's own mobile wallet products.⁷⁶⁹

Apple opens up access to NFC in various jurisdictions

In August 2024, Apple announced that its iOS 18.1 update in Australia and certain other jurisdictions will enable developers to offer NFC contactless transactions using the Secure Element APIs⁷⁷⁰ from within their own apps on iPhone, separate from Apple Pay and Apple Wallet.⁷⁷¹ The update supports contactless transactions for in-store payments, student ID, home keys, hotel keys, merchant loyalty and rewards, and event tickets, with government IDs to be available at a later date.⁷⁷² Users of eligible iOS apps can:

- initiate NFC transactions from within the app with compatible NFC terminals
- choose any eligible app as their default contactless app which will enable the app to support Field-detect and Double-click features.⁷⁷³

The account holder of Apple Developer Program membership can request access to the NFC and secure element platform by submitting a request to Apple.⁷⁷⁴

In addition to opening up access to NFC in Australia and other jurisdictions using the secure element APIs, in July 2024, the European Commission accepted commitments by Apple to open access to NFC in Europe (using a different technological approach) to address its concerns that Apple restricted NFC access to Apple Pay.⁷⁷⁵ In the context of the DMA, the European Commission has also adopted a decision specifying that Apple further open access to the NFC in Europe, allowing apps on an iPhone to communicate with connected devices, such as rings or bracelets, to provide them with information

766 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 23.

767 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

768 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 161.

769 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 158.

770 APIs are 'a set of rules or protocols that enables software applications to communicate with each other to exchange data, features and functionality'. See IBM, [What is an API \(application programming interface\)?](#), API, 9 April 2024, accessed 13 March 2025.

771 Apple, [Developers can soon offer in-app NFC transactions using the Secure Element](#), Apple Newsroom, 15 August 2024, accessed 13 March 2025.

772 Apple, [NFC & SE Platform for secure contactless transactions](#), Apple Support, accessed 13 March 2025.

773 Apple, [NFC & SE Platform for secure contactless transactions](#), Apple Support, accessed 13 March 2025.

774 Apple, [NFC & SE Platform for secure contactless transactions](#), Apple Support, accessed 13 March 2025.

775 European Commission, [Commission accepts commitments by Apple opening access to 'tap and go' technology on iPhones](#), Press Release, 11 July 2024, accessed 13 March 2025.

such as a user's payment card details.⁷⁷⁶ The specification decision requires Apple to implement the specified measures relating to NFC by the end of 2025.⁷⁷⁷

The Commonwealth Bank of Australia noted that international regulatory developments have prompted digital platforms to take steps to enhance competition and fairness.⁷⁷⁸ For example, following investigations and concerns raised by competition regulators globally, Apple has announced that NFC access will become available on Apple handsets in a number of countries including Australia. The Commonwealth Bank of Australia also emphasised the rapid growth of digital wallet use since 2021.⁷⁷⁹ It also noted that the details of Apple's commitment to offer NFC access outside of Europe are not yet available to assess the benefits.⁷⁸⁰ Some market participants are concerned the commitment will not provide a genuine opportunity to compete.⁷⁸¹ The Commonwealth Bank of Australia encouraged the ACCC to scrutinise this development to ensure that the terms offered enable effective competition and that there is a mechanism allowing access to keep pace with further developments in a dynamic environment.⁷⁸²

Interoperability with other hardware, software and functionality of mobile OS

The ACCC has previously identified that other issues can arise relating to interoperability provided by Apple, and to a lesser extent Google, with hardware, software and functionality of their mobile OS.⁷⁸³ For example, the ACCC's Digital Platform Ecosystems Report noted that an Apple Watch cannot be used in conjunction with Android and some functionalities of other Apple products are limited when used with Android (e.g., AirPods).⁷⁸⁴

Box 3.9 notes international developments relating to interoperability of hardware, software and functionality of mobile OS.

776 European Commission, [Commission provides guidance under Digital Markets Act to facilitate development of innovative products on Apple's platforms](#), Press Release, 19 March 2025, accessed 20 March 2025; European Commission, [Interoperability \(Questions and Answers\)](#), accessed 20 March 2025; See also European Commission, [DMA.100203 – Apple – Operating Systems – iOS – Article 6\(7\) – SP – Features for Connected Physical Devices: Decision of 19 March 2025 – Final Measures](#), 20 March 2025.

777 European Commission, [Interoperability \(Questions and Answers\)](#), accessed 20 March 2025; European Commission, [DMA.100203 – Apple – Operating Systems – iOS – Article 6\(7\) – SP – Features for Connected Physical Devices: Decision of 19 March 2025 – Final Measures](#), 20 March 2025, p 21.

778 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 1.

779 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 3.

780 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 2.

781 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 2.

782 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, p 2.

783 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 159; ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 113.

784 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 113.

Box 3.9: International developments relating to interoperability of hardware, software and functionality of mobile OS

In the context of the DMA in Europe, in March 2025, the European Commission adopted 2 decisions specifying the measures that Apple has to take to comply with certain aspects of its interoperability obligation.⁷⁸⁵ The first set of measures concerns 9 iOS connectivity features, predominantly used for connected devices such as smartwatches, headphones or TVs. The measures will grant device manufacturers and app developers further access to iPhone features that interact with such devices (e.g. displaying notifications on smartwatches), faster data transfers (e.g. peer-to-peer Wi-Fi connections, and NFC) and easier device set-up (e.g. pairing). The European Commission considers that the second set of measures improves the transparency and effectiveness of the process that Apple devised for developers interested in obtaining interoperability with iPhone and iPad features. The specification decisions require Apple to implement the specified measures within particular timeframes, varying by measure between May 2025 and June 2027.⁷⁸⁶

Prior to those decisions, in 20 December 2024, Apple raised concerns about the potential abuse of the DMA's interoperability requirements by companies such as Meta seeking access to Apple's user data.⁷⁸⁷ Apple noted Meta's requests for access to Apple's technology stack, if granted, have the potential to jeopardise user privacy and security.⁷⁸⁸

In the US, a complaint made by the US DOJ and a coalition of states and territories in March 2024 against Apple alleges a range of conduct relating to restrictions of interoperability. This includes diminishing the functionality of non-Apple smartwatches, blocking innovative super apps, excluding cross-platform messaging apps and limiting third-party digital wallets.⁷⁸⁹

Competition authorities in Japan and the UK have also taken issue with interoperability restrictions by app marketplaces,⁷⁹⁰ and have recently been empowered to address these concerns under new laws in their jurisdiction. In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems noting that potential conduct requirements could include requiring Apple and Google to open up access to key functionality needed by other apps to operate on mobile devices.⁷⁹¹

Importance of interoperability with hardware, software and functionalities of mobile OS noted by stakeholders

Meta noted that wearable devices (e.g. smartwatches, smart glasses and augmented reality glasses) depend on smartphones for internet connectivity and computational offload. This dependence creates an opportunity for providers of dominant mobile smartphone OS to leverage their dominance

785 European Commission, [Commission provides guidance under Digital Markets Act to facilitate development of innovative products on Apple's platforms](#), Press Release, 19 March 2025, accessed 20 March 2025; European Commission, [DMA.100203 – Apple – Operating Systems – iOS – Article 6\(7\) – SP – Features for Connected Physical Devices: Decision of 19 March 2025 – Final Measures](#), 20 March 2025; European Commission, [DMA.100204 – Apple – Operating Systems – iOS – Article 6\(7\) – SP – Process: Decision of 19 March 2025 – Final Measures](#), 20 March 2025.

786 European Commission, [Interoperability \(Questions and Answers\)](#), accessed 20 March 2025.

787 Apple, [It's getting personal. How abuse of the DMA's interoperability mandate could expose your private information](#), December 2024, accessed 13 March 2025, pp 3–4.

788 Apple, [It's getting personal. How abuse of the DMA's interoperability mandate could expose your private information](#), December 2024, accessed 13 March 2025, pp 3–4.

789 *United States, et al v Apple*, [Complaint filed in the United States District Court for the District of New Jersey](#), 21 March 2024, pp 8–10.

790 JFTC, [Market Study Report on Mobile OS and Mobile App Distribution \(Summary\)](#), February 2023, accessed 13 March 2025, p 19; CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, pp 186–193.

791 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

to hamper competition and innovation.⁷⁹² By providing its own wearable devices with access to smartphone functionality that it denies to third-party devices, a mobile OS provider can degrade the functionality of competitors' devices. Meta also noted it is not clear that regulatory interventions have been successful in promoting competition and innovation in hardware/software interoperability.

The Coalition for App Fairness noted that new ex ante legislation should level the playing field for interoperability interfaces between developers' and gatekeepers' internal teams.⁷⁹³

Interoperability is key to unlocking innovation

The ACCC considers that restrictions to interoperability with hardware, software and functionality through mobile OS may have reduced competition in related markets. Issues can arise as digital platforms may have the ability and incentive to limit interoperability with rivals to inhibit innovation to protect their core markets from being disrupted.⁷⁹⁴ For example, Apple may be able to foreclose potential future rival apps by denying access to certain functions, or benefit from time to test the market before releasing access to third-party app developers.⁷⁹⁵

Developers may also have less incentive to invest in research and development for an app that uses a new mobile OS software or hardware feature if they perceive a risk that the mobile OS provider will limit or frustrate access, which may result in less innovation in related markets. These outcomes may lead to poor outcomes for consumers such as lower quality apps, restricted choice of apps, and fewer innovative new apps.⁷⁹⁶ As discussed in the Report on the Expanding Ecosystems of Digital Platforms, limitations on interoperability may also have the potential for 'locked-in' consumers to be subject to more onerous terms or prices within an ecosystem.⁷⁹⁷

Ensuring effective interoperability would improve the incentives for third parties to innovate and compete. For example, developers of connected devices or accessories would be able to compete on equal footing with Apple's own connected devices,⁷⁹⁸ resulting in subsequent competition over price and quality.

Restrictions on cloud gaming

Cloud gaming services allow users to browse, select and play games from the cloud rather than having to download individual games to a user's device.⁷⁹⁹ Cloud gaming brings potential for innovation in how consumers play games. For example, cloud gaming enables a 'Netflix-like' experience as it can present a catalogue of available games that can be streamed and played.⁸⁰⁰ Relying on the cloud, consumers may be able to access and play advanced games without needing to purchase advanced or expensive hardware. For example, games with richer graphics or more complexity can be played on mobile devices rather than being limited by the processing and storage capacity of the device.⁸⁰¹ Cloud gaming also enables cross-device playing and expands opportunities for cross-platform playing. With cross-device playing, a consumer can play a game on one device (e.g., on mobile during their commute) and resume play from 'where they left off' on another device

792 Meta, [Submission to the Final Report](#), 11 October 2024, p 15.

793 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, pp 7–8.

794 A Ezrachi and M Stucke, [The Darker Sides of Digital Platform Innovation](#), *Network Law Review*, 18 August 2022, accessed 13 March 2025.

795 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 60.

796 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 60.

797 See also discussion of interoperability in ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 116.

798 See for example, Garmin Rumors, [EU Warns Apple to Open iOS to Third-Party Connected Devices: What it Means for Garmin](#), 27 September 2024, accessed 13 March 2025.

799 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 54.

800 Microsoft, [Submission to the ACCC Digital Platform Services Inquiry Second Interim Report](#), 16 October 2020, p 2.

801 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 7.

(e.g., on a console once home). With cross-platform play, consumers can also play a game online with friends who are using different devices.⁸⁰²

In its submission to the Report on App Marketplaces, Microsoft argued that Apple's App Store policies have prevented it and other cloud game streaming providers from offering game streaming apps to consumers on iOS devices.⁸⁰³

Developments impacting cloud gaming potential

In Australia, Microsoft's Xbox Cloud Gaming (Beta) and NVIDIA's GeForce NOW cloud gaming platform are examples of cloud gaming platforms available to consumers.⁸⁰⁴ Apple highlighted the rise of cross-platform play and cloud gaming as major developments in app marketplaces⁸⁰⁵ and noted it continues to support cloud streaming on its platform.⁸⁰⁶ Apple considered that adoption has been relatively slow due to technical challenges, but performance and popularity are expected to increase in future.⁸⁰⁷

Prior to January 2024, Apple's App Store Review Guidelines required each streaming game to be submitted to the App Store as an individual app.⁸⁰⁸ This prevented cloud gaming service providers from offering a native app with access to multiple streaming games.⁸⁰⁹ Another guideline also precluded apps where code distribution was the main purpose and code was offered in a store or store-like interface.⁸¹⁰

In January 2024, Apple made changes to its App Store Review Guidelines globally and has stated that developers can now submit a single app with the ability to stream all games offered in their catalogue.⁸¹¹ The guidelines have also been amended to no longer restrict code distribution.⁸¹²

In March 2024, the US DOJ and a coalition of 16 states and territories filed a complaint against Apple for allegedly illegally maintaining a monopoly over smartphones. The complaint alleges a range of anticompetitive conduct, including Apple suppressing mobile cloud streaming services.⁸¹³

While a 2022 CMA market study had identified concerns that Apple's rules were blocking the development of cloud gaming apps on iOS devices, a final decision report in March 2025 by the CMA considered that Apple has since made significant rule changes, which look to have positive implications for competition in this market.⁸¹⁴ Therefore, the CMA did not find concerns in its final decision report.

802 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 7. However, cross-platform play is not unique to cloud gaming. See for example J Lennox, [All cross-platform games \(PS5, Xbox Series X, PS4, Xbox One, Switch, PC\)](#), *Digital Trends*, 21 January 2025, accessed 13 March 2025.

803 Microsoft, [Submission to the ACCC Digital Platform Services Inquiry Second Interim Report](#), 16 October 2020, p 6.

804 Pentanet, [Unleashing Ultra – Pentanet unveils a new era in Australian Cloud Gaming](#), 20 September 2023, accessed 13 March 2025.

805 Apple, [Submission to the Final Report](#), 11 October 2024, p 14.

806 Apple, [Submission to the Final Report](#), 11 October 2024, p 17.

807 Apple, [Submission to the Final Report](#), 11 October 2024, p 17.

808 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 28.

809 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 589.

810 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 28.

811 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 28; Apple, [Apple introduces new options worldwide for streaming game services and apps that provide access to mini apps and games](#), *Apple Developer news*, 25 January 2024, accessed 13 March 2025.

812 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, p 589.

813 *United States, et al v Apple*, [Complaint filed in the United States District Court for the District of New Jersey](#), 21 March 2024, pp 8–10.

814 CMA, [Mobile browsers and cloud gaming, Final decision report](#), 12 March 2025, pp 14–15.

With respect to cloud gaming streaming apps, Microsoft argued in its submission to this Report that innovation has either been entirely banned or severely restricted by app marketplaces.⁸¹⁵ Google noted that the concerns considered in the CMA's working papers relating to the impact of the App Store's policies on cloud gaming services do not arise in respect of Android or the Play Store.⁸¹⁶

Pre-installation and default agreements

The ACCC's Report on App Marketplaces noted that the Apple App Store is pre-installed on all iOS mobile devices and Google's Play Store is pre-installed and has prominent placement on the vast majority of Android devices.⁸¹⁷ The Report on App Marketplaces also noted that a number of first-party apps come pre-installed on iOS (e.g., Apple Music, Apple News) and Android devices (e.g., Google Chrome, Google Search, Gmail, Google Maps and YouTube) and may also be displayed on prominent locations on the device such as the on the first page of the home screen.⁸¹⁸ Third-party apps may also come pre-installed on Android devices.

Pre-installed apps are typically displayed on prominent locations (such as the home screen) and therefore bypass the need to be 'discovered' by consumers on app marketplaces. The Report on App Marketplaces also noted that pre-installed apps are also, in some cases, set as default apps,⁸¹⁹ which may impact consumer choice. The Report on App Marketplaces noted that preinstallation of apps can limit consumer choice to the detriment of competition in related app markets.⁸²⁰

The Report on App Marketplaces also noted that pre-installed apps on iPhones and Google Pixel devices cannot be permanently removed from the device (though, users may be able to disable and hide these apps).⁸²¹

Scrutiny of pre-installation and default agreements continues internationally

In response to the DMA, Apple has made a number of changes in Europe, such as allowing users to remove pre-installed apps from their home screen on iOS,⁸²² delete certain Apple apps⁸²³ and use new default controls.⁸²⁴

In the US, 2 recent antitrust cases have implications for Google's pre-installation and default agreements. In one case, a settlement agreed with Attorneys-General from all 50 US states and 3 territories includes conduct requirements relating to exclusivity and pre-installation (the settlement is awaiting final court approval).⁸²⁵ Secondly, in the Epic v Google case, in October 2024 Judge James Donato ordered limits to be placed on Google's conditioning of payments, revenue sharing and access to Google products in agreements with app developers for a period of 3 years.⁸²⁶ However, a temporary stay of the order has been granted pending appeal.⁸²⁷

815 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 3.

816 Google, [Submission to the Final Report](#), 11 October 2024, p 38.

817 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 20–26.

818 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 84, 101.

819 See ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 103.

820 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 84.

821 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 106.

822 Apple, [Apple's Non-Confidential Summary of DMA Compliance Report](#), 1 November 2024, p 7.

823 Apple, [Upcoming changes to the browser choice screen, default apps, and app deletion for EU users](#), Apple News, Developer, 22 August 2024, accessed 13 March 2025.

824 Apple, [Update on apps distributed in the European Union](#), Support, Developer, accessed 13 March 2025.

825 *State of Utah et al. v. Google LLC et al.* (2023); A Wilts, [Google, US states, consumers say settlement doesn't dilute Epic injunction](#), *Mlex*, 11 February 2025, accessed 13 March 2025.

826 C May and K Vasant, [Google Play Store's app catalog to be available to developers after US judge's antitrust order following Epic Games trial win](#), *Mlex*, 7 October 2024, accessed 13 March 2025.

827 M Scarcella, [Google granted request to pause order on Play store overhaul](#), *Reuters*, 19 October 2024, 13 March 2025.

Competition authorities in Japan and the UK have also taken issue with Google's pre-installation and default agreements,⁸²⁸ and have recently been empowered to address these concerns under new laws in their jurisdiction. In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems.⁸²⁹

Google argues for its approach to pre-installation and default agreements

In its submission, Google argued that it complied with potential measure 4 from the ACCC's Report on App Marketplaces at the time of publication.⁸³⁰ That is, on Android, users can easily move, delete or disable pre-installed apps and change default settings.

Google noted that its first-party apps compete against third-party apps fairly and on the merits. Google disagreed 'that providing...OEMs with the option to pre-install first-party Google apps on Android devices reduces consumer choice and heightens barriers to entry and expansion in app stores and downstream app marketplaces.'⁸³¹ Google argued OEMs have freedom 'before and after entering the Mobile Application Distribution Agreement' and users can 'delete or hide pre-installed apps'.⁸³²

Meta argued OS providers should also allow entrants to work with OEMs and wireless carriers to pre-install their app-distribution solutions on mobile devices.⁸³³

Monitoring developments and further consideration of potential obligations

The ACCC is concerned that mobile OS providers can use pre-installation (and especially exclusive pre-installation) and default apps to further entrench market power in core markets and reduce innovation in related markets. Further, limitations on device and OS functionality in relation to pre-installed apps (including the inability to delete and un-install apps and to change default settings to third-party apps) can impact consumer choice and act as a barrier to consumers switching to alternative services. In addition, where it is possible to change default settings, the ACCC considers that app marketplaces should not make it difficult for consumers to change default settings.

It is notable that developments in other jurisdictions, such as Apple making pre-installed apps able to be deleted for EU users or restrictions on Google's agreements with OEMs in the US will not have direct impacts in Australia.

The ACCC's Regulatory Reform Report provided indicative examples of the kinds of obligations that new service-specific codes of conduct could potentially include, such as:⁸³⁴

- prohibiting Designated Digital Platforms from requiring device manufacturers to pre-install other first-party apps as a condition of pre-installing their app marketplaces
- requiring Designated Digital Platforms to allow consumers to delete or uninstall certain pre-installed apps
- allowing users to change their default settings to a third-party app.

828 JFTC, [Market Study Report on Mobile OS and Mobile App Distribution \(Summary\)](#), February 2023, p 19, accessed 13 March 2025; CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, p 181; CMA, [Mobile Ecosystems Market Study, Appendix C: pre-installation, default settings and choice architecture for mobile browsers](#), 10 June 2022, p 1.

829 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

830 Google, [Submission to the Final Report](#), 11 October 2024, p 28.

831 Google, [Submission to the Final Report](#), 11 October 2024, p 31.

832 Google, [Submission to the Final Report](#), 11 October 2024, p 31.

833 Meta, [Submission to the Final Report](#), 11 October 2024, p 14.

834 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 140.

Risk of anti-competitive self-preferencing

Apple and Google each offer their own apps (first-party apps), which compete directly with apps developed by third parties (third-party apps) reliant on Apple and Google's app marketplaces. This can lead to competition concerns where a digital platform has the ability and incentive to use its control over access to its platform to affect competition with third-party services.

The ACCC's Report on App Marketplaces identified multiple ways that an app marketplace could treat its first-party apps more favourably than third-party apps, including by:

- ranking first-party apps more favourably in app marketplace search results⁸³⁵
- removing consumers' ability to rate and review first-party apps, which may result in a more positive ranking of first-party apps than otherwise⁸³⁶
- providing first-party app developers with superior access to data, including information about rival apps. This includes information collected through app review processes, the operation of the app marketplaces, and app developers' use of in-app payment systems⁸³⁷
- delaying or blocking competing third-party apps' access to their app marketplaces.⁸³⁸

Box 3.10 notes international regulatory developments in relation to self-preferencing.

835 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 92–95.

836 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 92–95.

837 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 8–9, 129–136.

838 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 54–55.

Box 3.10: International regulatory developments in relation to self-preferencing

In response to the DMA, both Apple and Google have updated internal policies to prevent misuse of business user data.⁸³⁹ While the DMA includes an obligation in relation to self-preferencing with respect to ranking of results, Apple and Google's compliance reports do not refer to any changes implemented to address this issue. It therefore appears that Apple and Google consider that no changes were required for them to comply with the DMA in this regard.

Competition authorities in Japan and the UK have also raised concerns regarding self-preferencing and have recently been empowered to address these concerns under new laws in their jurisdiction.⁸⁴⁰ In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems.⁸⁴¹ A bill in India has similarly proposed measures to address self-preferencing and data usage.⁸⁴²

In April 2021, Apple released its App Tracking Transparency (ATT) framework, an initiative that Apple argues is to address privacy risks that online advertising poses to consumers.⁸⁴³ The ATT framework requires apps to show a specific prompt (the ATT prompt) to request users' permission for the app to 'track' them. Apple does not surface the ATT prompt for its own apps, but it does issue a Personalised Ads prompt which asks users to choose between allowing personalised advertising by Apple or not.

A range of competition authorities have raised concerns regarding the implementation of ATT by Apple, including in the UK, Germany, France, Italy and Japan.⁸⁴⁴

Diverging views on self-preferencing

Three submissions (SBS, Coalition for App Fairness and Spotify) raised concerns about self-preferencing practices by app marketplaces.⁸⁴⁵ In its submission, the Coalition for App Fairness argued that regulatory reform should ban gatekeepers' use of developer's data and non-public information and afford timely access to end user data for developers.⁸⁴⁶

The App Association, an industry body, argued that blanket characterisations of self-preferencing should be avoided for app marketplaces because, considering the unique nature of software distribution platforms, self-preferencing can be a pro-competitive example of vertical integration.⁸⁴⁷ It urged policymakers to conclude that where vertical integration or self-preferencing can lead to

839 Apple, [Apple's Non-Confidential Summary of DMA Compliance Report](#), 1 November 2024, p 7; Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, p 187.

840 CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, p 184; JFTC, [Market Study Report on Mobile OS and Mobile App Distribution \(Summary\)](#), February 2023, pp 16–18, accessed 13 March 2025.

841 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

842 Ministry of Corporate Affairs Government of India, [Report of the Committee on Digital Competition Law](#), 27 February 2024, p 163.

843 Apple, [App Tracking Transparency](#), Documentation, Apple Developer, accessed 13 March 2025.

844 Bundeskartellamt, [Bundeskartellamt reviews Apple's tracking rules for third-party apps](#), Press Releases, 14 June 2022, accessed 13 March 2025; Bundeskartellamt, [Bundeskartellamt has concerns about the current form of Apple's App Tracking Transparency Framework \(ATTf\)](#), Press releases, 13 February 2025, accessed 13 March 2025; N Lomas, [Apple's ATT faces competition probe in Italy](#), *TechCrunch*, 11 May 2023, accessed 13 March 2025; French Competition Authority, [Advertising on iOS mobile applications: the General Rapporteur confirms having notified the Apple group of an objection](#), Press Releases, 27 July 2023, accessed 13 March 2025; CMA, [Mobile Ecosystems Market Study, Appendix M: examples of practices that could be addressed by SMS Conduct Requirements](#), 10 June 2022, p M13.

845 SBS, [Submission to the Final Report](#), 11 October 2024, p 3; Spotify, [Submission to the Final Report](#), 11 October 2024, p 3; Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 7.

846 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 8.

847 The App Association, [Submission to the Final Report](#), 11 October 2024, p 12.

greater efficiency, better quality, or lower costs for consumers, there are minimal antitrust issues when users can easily switch to another platform.⁸⁴⁸

Google submitted that concerns raised in relation to Google Play and the App Store's alleged market power and the risk that they will engage in self-preferencing do not reflect the competitive constraint that Google faces from Apple's iOS ecosystem and within Android.⁸⁴⁹ Google considered that it was already compliant with potential measure 3 and 6 included in the ACCC's Report on App Marketplaces in relation to allowing rating and reviews of its first-party apps⁸⁵⁰ and to ring-fence information collection in its capacity as an app marketplace from other operations and business decisions.⁸⁵¹ Google noted that it prohibits the sharing of non-public, identifiable third-party developer data derived from Play with other parts of Google, except where it would benefit the Play ecosystem.⁸⁵² Google also noted it had created a set of central standards for handling such data in connection with its compliance under the DMA.⁸⁵³ Google also noted this practice addresses the concern raised in the ACCC's Regulatory Reform report regarding first-party apps competing against third-party apps fairly and on the merits.⁸⁵⁴

Anti-competitive self-preferencing concerns remain

The ACCC has noted its concern about Apple and Google using data collected in the provision of app marketplace services (i.e. non-public information) to inform the development of their own apps,⁸⁵⁵ when competing directly with apps developed by third parties. Such conduct has the potential to impede competition in related app markets by reducing incentives for third-party app developers to innovate and pursue novel ideas for apps, given the risk of Apple and/or Google free-riding on their development and potentially limiting the success of their app.⁸⁵⁶ For example, the ACCC has previously cited examples of these practices by software platforms, such as app marketplaces where they have successfully copied third-party apps on their app marketplaces. For example, Apple's launch of Memoji and integration within iMessage that was in competition with popular app, Bitmoji.⁸⁵⁷

In such circumstances, there are also potential downsides for consumers if there are fewer apps in the market and/or if the quality and user experience of apps declines as a result of third-party app developers having reduced incentive to invest in and improve their apps.

The ACCC's Report on App Marketplaces noted there is a need for information collected by Apple and Google in their capacity as app marketplace operators to be ring-fenced from their other operations and business decisions.⁸⁵⁸ This would minimise the risk of this information being used to provide Apple and Google with an unfair competitive advantage over third-party app developers in related markets for apps.⁸⁵⁹

The ACCC's Regulatory Reform Report noted service-specific codes of conduct could potentially prohibit Designated Digital Platforms from using commercially sensitive data collected from the app

848 The App Association, [Submission to the Final Report](#), 11 October 2024, p 12.

849 Google, [Submission to the Final Report](#), 11 October 2024, p 22.

850 Google, [Submission to the Final Report](#), 11 October 2024, p 27.

851 Google, [Submission to the Final Report](#), 11 October 2024, p 30.

852 Google, [Submission to the Final Report](#), 11 October 2024, p 30.

853 Google, [Submission to the Final Report](#), 11 October 2024, p 30.

854 Google, [Submission to the Final Report](#), 11 October 2024, p 31.

855 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 124; See also ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 135.

856 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 135.

857 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 132–133.

858 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 9.

859 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 9.

review process to develop their own apps, for example, through data separation requirements.⁸⁶⁰ Another relevant example is that a service-specific code for app marketplaces could prohibit Designated Digital Platforms from providing favourable treatment to their own apps in app marketplace search result rankings.⁸⁶¹

It is notable that some obligations have been implemented in the EU through the DMA and has resulted in Google and Apple strengthening internal policies to address data sharing practices, with Google applying these changes globally.⁸⁶²

While app marketplaces may contend that they do not self-preference, greater transparency about the approaches and policies that they use to ensure this is the case would be beneficial. The ACCC remains of the view that such obligations could be considered in the context of service-specific codes, to ensure that app developers' commercially sensitive information gained through the app marketplace is not shared inappropriately to inform app development by the app marketplace operator.

In relation to Google's view that it is already compliant with potential measures, the ACCC notes the potential measures and recommendations in this Inquiry reports reflect concerns and issues identified across digital platform services and are app marketplace agnostic. In the event Google already complies with measures, it would reduce its compliance burden under a code that contains the relevant obligation.

Terms and conditions of access

The ACCC previously identified concerns with the application of app marketplace terms and conditions

The ACCC's Report on App Marketplaces found that Apple and Google control access to their respective app marketplaces and act as gatekeepers, unilaterally setting, interpreting and enforcing the terms and conditions that app developers must follow to access Australian users of Apple's iOS and Google's Android ecosystems.⁸⁶³

The Report on App Marketplaces found app developers reported difficulties in resolving issues with Apple and Google during the app review process, as well as an inconsistent application of rules in the app review process.⁸⁶⁴

The Report on App Marketplaces raised concerns about a lack of transparency in the policies and processes governing Apple's (and to a lesser extent Google's) app review and approval processes.⁸⁶⁵ This can raise app developers' costs, and limit developers' incentives to invest and innovate.

App developers submitted that when feedback for apps is provided, it can be vague and lack specificity. This means app developers face difficulties understanding why their app has not been approved or has been removed from the app marketplace, and what can be done to resolve it.⁸⁶⁶ Concerns have also been raised about the ability of Apple and Google to exercise sole discretion either when making amendments to terms and conditions or limiting the extent to which an app developer can develop and distribute their app on the Apple App Store or Google Play Store.⁸⁶⁷

860 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 124.

861 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 124.

862 Google, [Submission to the Final Report](#), 11 October 2024, p 30; Apple, Apple's Non-Confidential Summary of DMA Compliance Report, 7 March 2024, p 11.

863 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 44.

864 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 44.

865 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 5–6; ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 180.

866 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 53.

867 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 46.

The Report on App Marketplaces also noted concerns raised about app review policies being applied inconsistently and arbitrarily by Apple, and to a lesser extent, Google.⁸⁶⁸ The ACCC's Regulatory Reform Report also noted restrictive terms in Apple's developer program licence agreements that restrict developers' intellectual property rights.⁸⁶⁹

The ACCC's Report on App Marketplaces noted there may be an opportunity for both Apple and Google to improve how they interpret and enforce terms and conditions during their respective app review processes.⁸⁷⁰ This includes their respective approaches when communicating with app developers, for example, the extent to which information provided to app developers is constructive and allows app developers to understand and address Apple and Google's concerns.

International regulatory efforts to address risks regarding terms of access

In response to the DMA in Europe, both Apple and Google have implemented mediation mechanisms for developers established in the EU.⁸⁷¹

Competition authorities in Japan and the UK have also raised concerns regarding terms and conditions of access and have recently been empowered to address these concerns under new laws in their jurisdiction.⁸⁷² In January 2025, the CMA opened strategic market status investigations into Apple and Google's mobile ecosystems, including noting it will investigate whether Apple or Google are requiring app developers to sign up to unfair terms and conditions as a condition of distributing their apps on Apple's and Google's app marketplaces.⁸⁷³ A bill in India has similarly proposed measures to address self-preferencing and data usage.⁸⁷⁴

App developer concerns about app review processes

The Coalition for App Fairness noted that regulators internationally have identified harms arising from unpredictable app review processes whereby Apple and Google have unique power over app developers wishing to reach mobile users because they can reject their apps, sometimes for spurious reasons.⁸⁷⁵ Match Group and the Coalition for App Fairness argued that regulatory reform should include an obligation on app marketplaces to ensure that the terms and conditions of access to app marketplaces are fair, reasonable and non-discriminatory.⁸⁷⁶ Spotify similarly argued that service-specific codes of conduct could be an effective way of restoring competition with regard to fair treatment of business users.⁸⁷⁷ The developer IA has also recently publicly raised concerns about its issues with Google's app review process.⁸⁷⁸

Google submitted that the Play Store's app review processes and policies are clearly set out (with step-by-step instructions) and easily accessible on their public help pages.⁸⁷⁹ Where enforcement

868 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 44–56.

869 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 180–183.

870 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 56.

871 Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, p 168; Apple, [Apple's non-confidential summary of DMA compliance report](#), 7 March 2024, p 12.

872 JFTC, [Market Study Report on Mobile OS and Mobile App Distribution \(Summary\)](#), February 2023, p 17, accessed 13 March 2025; JFTC, [Outline of the Act on Promotion of Competition for Specified Smartphone Software](#), June 2024; See [Report of the Committee on Digital Competition Bill](#), Clause 10–15 of the DCB (at page 161–164); CMA, [Mobile Ecosystems Market Study, Final Report](#), 10 June 2022, pp 320–321.

873 CMA, [CMA to investigate Apple and Google's mobile ecosystems](#), 23 January 2025, accessed 13 March 2025.

874 See Ministry of Corporate Affairs Government of India, [Report of the Committee on Digital Competition Bill](#), 27 February 2024, p 161.

875 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 7.

876 Coalition for App Fairness, [Submission to the Final Report](#), 11 October 2024, p 8; Match Group, [Submission to the Final Report](#), 11 October 2024, p 28.

877 Spotify, [Submission to the Final Report](#), 11 October 2024, p 2.

878 iA, [Our android app is frozen in carbonite](#), 26 September 2024, accessed 13 March 2025.

879 Google, [Submission to the Final Report](#), 11 October 2024, p 28.

action is taken, Google strives to provide individualised information such as evidence of the relevant policy violation through screenshots to provide developers with guidance and information. Developers that wish to appeal enforcement decisions can do so by filing an appeals form. Google also noted that it reinstates apps in appropriate circumstances, including if an error was made in enforcement.⁸⁸⁰

Improvements by app marketplaces could increase app developers' incentives to invest

The ACCC's Regulatory Reform Report provided indicative examples of the kinds of obligations that new service-specific codes of conduct could potentially include, such as:⁸⁸¹

- having terms and conditions and/or guidelines that describe in detail the requirements app developers must meet in listing an app (or making any app updates) in the Designated Digital Platform's app marketplace. Such terms and conditions should list all requirements, as reasonably practicable, required for app and app update submission
- having public-facing documents that describe, in detail, the process for app review
- providing app developers with reasonable notice of changes to app marketplace terms, conditions and/or guidelines.

The ACCC remains of the view that such obligations could increase app developers' incentives to invest in apps and app features.

Other indicative examples noted in the report to address unfair dealing with business users included:⁸⁸²

- Designated Digital Platforms that provide app marketplaces to apply app review processes fairly and consistently.
- Designated Digital Platforms that offer intermediary services connecting business users and consumers to:
 - ensure that their terms and conditions do not unreasonably prevent business users from exercising or enforcing their legal rights
 - address any significant and unwarranted deterioration in the terms of service due to a unilateral change made by the platform.

3.2.4 Consumer issues

Previous ACCC reports have examined the presence of consumer issues on app marketplaces, identifying concerns about the prevalence of manipulative design practices, harmful apps and fake and manipulated reviews on app marketplaces.⁸⁸³ This section reconsiders these concerns and what steps have been taken by app marketplaces to address them. It concludes by recommending further steps by digital platforms to address consumer issues on app marketplaces.

880 Google, [Submission to the Final Report](#), 11 October 2024, p 29.

881 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 178.

882 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 180.

883 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 8–128; ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 73–87.

Manipulative design practices

The Report on App Marketplaces found that a range of potentially unfair trading practices including manipulative practices ('dark patterns'), which can include the use of negative choice architecture such as forced action and friction which significantly impedes consumer choice and autonomy,⁸⁸⁴ have been observed on app marketplaces. For example, the Report on App Marketplaces noted a 2020 analysis of manipulative practices in 240 'free' apps on the Play Store which found that 95% contained one or more type of manipulative practice, with an average of at least 7 different types of deceiving interfaces per app.⁸⁸⁵ Manipulative practices also include subscription traps (i.e. providers making it difficult for consumers to cancel their subscriptions with manipulative interfaces).⁸⁸⁶ The Report on App Marketplaces also identified concerns about potential subscription traps on the App Store and Play Store, including through analysing consumer reviews left on these app marketplaces.⁸⁸⁷

The Report on App Marketplaces considered that while Apple and Google have developer policies to address these issues, their respective policies, or marketplace enforcement of those policies, are not preventing the listing of subscription traps, which remain present on both marketplaces despite consumer concerns.⁸⁸⁸ The Report on App Marketplaces considered that both Apple and Google could do more to protect consumers from the risk of potentially ongoing financial harm caused by subscription traps.⁸⁸⁹

The ACCC notes continued concerns regarding the use of manipulative practices on apps. For example, a review of 642 mobile apps and websites by the International Consumer Protection and Enforcement Network's (ICPEN) published in July 2024 found that nearly 76% of apps and websites employed at least one possible dark pattern, and nearly 67% used multiple possible dark patterns.⁸⁹⁰ Not all such harms are covered by existing ACL provisions, which is why the ACCC is advocating for an economy-wide prohibition against unfair trading practices (see earlier discussion in section 2.2).

Scams, harmful apps and fake reviews

Scams

The ACCC's Report on App Marketplaces identified a significant and sustained increase in scams on the App Store and Play Store, such as 'real prize' scams and fake product or service scams.⁸⁹¹ The ACCC's Regulatory Reform Report also noted that scammers have found the app marketplaces of digital platforms to be an effective means of accessing consumers, particularly as more consumers spend time online.⁸⁹²

884 ACCC, [Unfair trading practices, Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 10.

885 L Geronimo et al., [UI Dark Patterns and Where to Find Them: A Study on Mobile Applications and User Perception](#), *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, Honolulu, 25–30 April 2020, p 1.

886 ACCC, [Unfair trading practices, Consultation Regulation Impact Statement – ACCC submission to Treasury](#), November 2023, p 8.

887 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 110–112.

888 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 111.

889 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 112.

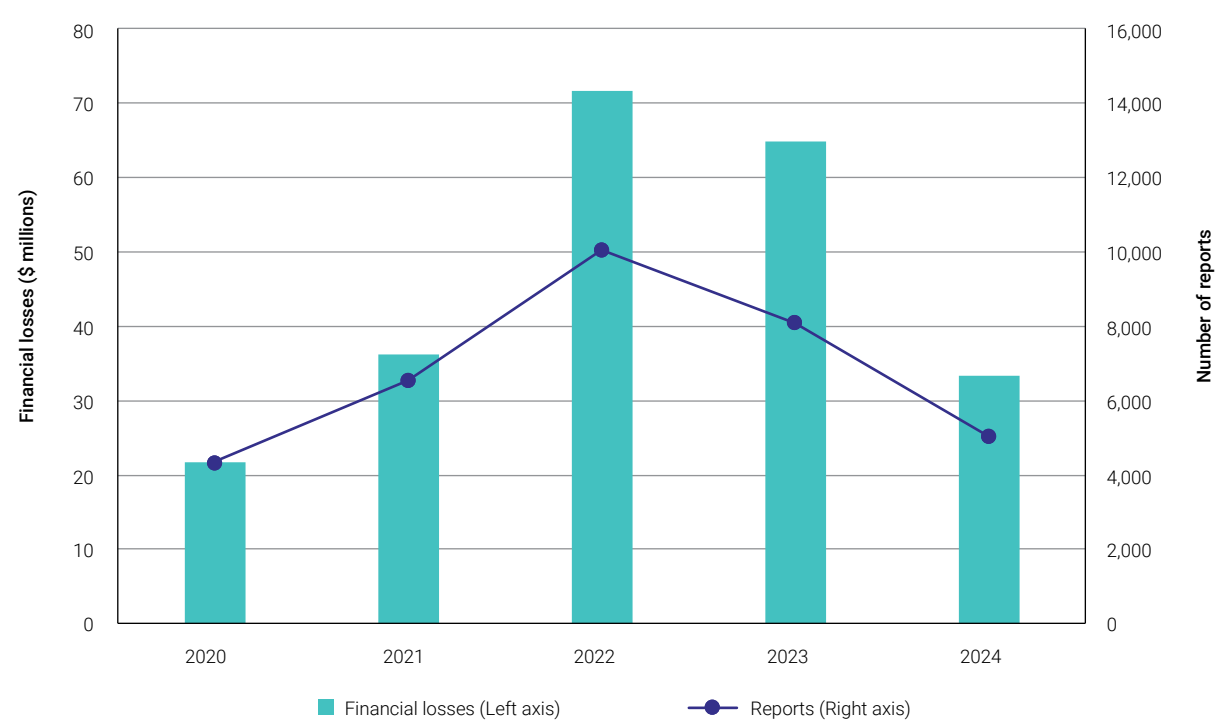
890 ICPEN, [ICPEN Sweep finds majority of websites and mobile apps use dark patterns in the marketing of subscription services](#), 9 July 2024, accessed 13 March 2025.

891 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 112–113. As noted in the Report on App Marketplaces, real prize scams are apps that represent users can earn or win real money or prizes in order to encourage app use or spending, when in fact the user cannot obtain any such rewards, or the odds of winning are significantly misrepresented; and fake product or service scams refer to apps that facilitate fake product or service scams by representing they have particular features, functions or services, when in fact once a user pays for the app or makes the required in-app purchase, the app does not provide the feature, function or service.

892 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 8.

The number of reported scams via mobile apps and the financial losses attributable to such scams are higher than when the ACCC examined the issue in its Report on App Marketplaces.⁸⁹³ In 2024, total losses from scams through mobile apps were \$33.3 million; the total losses from scams through mobile apps in 2020 were \$21.7 million.⁸⁹⁴ Figure 3.22, below, shows the number of reported scams via mobile apps and the associated financial losses between 2020 and 2024.⁸⁹⁵ While financial losses and reported scams are higher in 2024 than in 2020, it is encouraging that these numbers have decreased since 2022.

Figure 3.22: Annual number of reported scams via mobile apps and total losses between 2020 and 2024



Source: National Anti-Scam Centre.

Mobile apps supplied through app marketplaces may facilitate different kinds of scams.⁸⁹⁶ Romance scams, including through dating apps, can result in investment scams.⁸⁹⁷ These scams are sometimes conducted via fraudulent apps distributed on the App Store and Play Store.⁸⁹⁸ Romance

893 ACCC, Targeting scams, [Report of the National Anti-Scam Centre on scams activity 2023](#), April 2024, p 14; ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 115. The National Anti-Scam Centre notes that not all Australians report scams, and the published data about such scams may understate their prevalence of in the community. See ACCC, Targeting scams, [Report of the National Anti-Scam Centre on scams activity 2023](#), April 2024, p 6.

894 Australian Government, [Scam statistics](#), National Anti-Scam Centre, Month/Year – 2020, Contact – Mobile apps, accessed 13 March 2025.

895 Data compiled by the ACCC using the National Anti-Scam Centre’s Scam statistics. See Australian Government, [Scam statistics](#), National Anti-Scam Centre, accessed 13 March 2025.

896 See, for example, S Hollister, [Apple’s \\$64 billion-a-year App Store isn’t catching the most egregious scams](#), *The Verge*, 21 April 2021, accessed 13 March 2025; Z Hall, [LastPass alerting customers to imposter ‘LassPass’ password manager currently in App Store \[U: Pulled\]](#), *9to5Mac*, 8 February 2024, accessed 13 March 2025; S Fathi, [Apple’s App Store Comes Under the Spotlight for How It Handles Fake Crypto Apps](#), *MacRumors*, 29 July 2022, accessed 13 March 2025; US Committee on Banking, Housing, and Urban Affairs, [Brown Presses Apple And Google On Protections Against Crypto App Fraud](#), 28 July 2022, accessed 13 March 2025. In a submission to this Report, the Center for Cybersecurity Policy & Law, a non-profit in the US, whose funding is not made public, noted that ‘instant loan app scams have been circulating’ in several jurisdictions internationally. See Center for Cybersecurity Policy & Law, [Submission to the Final Report](#), 11 October 2024.

897 A Polovinkin, [Pig Butchering Alert: Fraudulent Trading App targeted iOS and Android users](#), *Group-IB*, 2 October 2024, accessed 13 March 2025.

898 A Polovinkin, [Pig Butchering Alert: Fraudulent Trading App targeted iOS and Android users](#), *Group-IB*, 2 October 2024, accessed 13 March 2025.

baiting, where dating app users are lured from dating apps to an encrypted chat website, led to over \$15.2 million in losses for Australians in 2020.⁸⁹⁹ In 2023, the National Anti-Scam Centre also found that the accumulated losses from romance scams, which can occur through dating apps available on app marketplaces, were \$201.1 million.⁹⁰⁰

The nature of scams apps has evolved since the ACCC's Report on App Marketplaces.⁹⁰¹ Since the emergence of consumer-facing generative AI services, apps falsely claiming to provide access to OpenAI's ChatGPT service have appeared on the App Store and Play Store.⁹⁰² These apps, known as 'fleeceware', have reportedly offered 'access' to ChatGPT through free trials, however, eventually charge subscriptions fees.⁹⁰³ The apps, which have the potential to deceive users into paying periodic fees, are difficult to detect, because they do not initially exhibit malware-like behaviour that would typically ensure their detection and removal from an app marketplace.⁹⁰⁴ According to researchers from Sophos, a security firm, scammers may not include full details of subscription pricing when they submit their apps for review to app marketplaces, which enables them to evade detection.⁹⁰⁵

Apple and Google have attempted to mitigate scams facilitated by apps on their app marketplaces. Apple, for example, has noted that it has stopped fraudulent transactions on the App Store.⁹⁰⁶ From 2020 through 2023, Apple claimed that it had prevented over US\$7 billion in potentially fraudulent transactions globally, including more than US\$1.8 billion in 2023.⁹⁰⁷ Apple found that in 2023, it rejected more than 1.7 million app submissions for failing to meet the App Store's standards for privacy, security and content and terminated close to 118,000 developer accounts.⁹⁰⁸

Google, as noted in the earlier sub-section on online private messaging, has worked to combat scams in its online private messaging services.⁹⁰⁹ In its submission to this Report, Google also noted that it dedicates resources to 'keep users safe' from harmful and malicious apps on its Play Store, including 'apps that entice consumers' into scams.⁹¹⁰ Google also noted that it may prevent apps downloaded from the Play Store that are unverified and use sensitive device permissions from being installed on a user's device – attributes of apps and information which scammers may target to commit financial fraud.⁹¹¹ In April 2024, Google also initiated litigation in the US against app developers for allegedly uploading apps to the Play Store that facilitated a crypto-investment scam.⁹¹²

899 ACCC, [Romance baiting scams on the rise](#), Media releases, 12 February 2021, accessed 13 March 2025.

900 ACCC, Targeting scams, [Report of the National Anti-Scam Centre on scams activity 2023](#), April 2024, p 6.

901 OECD, [Consumer vulnerability in the Digital Age](#), OECD Digital Economy Papers, June 2023, No. 355, p 16.

902 L H Newman, [ChatGPT scams are infiltrating the App Store and Google Play](#), *Wired*, 17 May 2023, accessed 13 March 2025.

903 L H Newman, [ChatGPT scams are infiltrating the App Store and Google Play](#), *Wired*, 17 May 2023, accessed 13 March 2025.

904 L H Newman, [ChatGPT scams are infiltrating the App Store and Google Play](#), *Wired*, 17 May 2023, accessed 13 March 2025.

905 L H Newman, [ChatGPT scams are infiltrating the App Store and Google Play](#), *Wired*, 17 May 2023, accessed 13 March 2025.

906 Apple, [App Store stopped over US\\$7 billion in potentially fraudulent transactions in four years](#), Apple Newsroom, 15 May 2024, accessed 13 March 2025.

907 Apple, [App Store stopped over US\\$7 billion in potentially fraudulent transactions in four years](#), Apple Newsroom, 15 May 2024, accessed 13 March 2025.

908 Apple, [App Store stopped over US\\$7 billion in potentially fraudulent transactions in four years](#), Apple Newsroom, 15 May 2024, accessed 13 March 2025.

909 Google, [Submission to the Final Report](#), 11 October 2024, pp 18–21.

910 Google, [Submission to the Final Report](#), 11 October 2024, p 28.

911 Google, [Use Google Play Protect to help keep your apps safe & your data private](#), Google Account Help, 2024, accessed 13 March 2025.

912 M Swift, [Google sues alleged crypto-scammers, hoping to set US legal precedent against illegal activity](#), MLex, 4 April 2024, accessed 13 March 2025; [Google LLC v Sun et al](#) (2024). The case was filed in the Southern District of New York, New York, US against Yunfeng Sun and Hongnam Cheung, based in mainland China and Hong Kong.

Harmful apps

The ACCC has identified that despite Apple and Google's app review processes, harmful, malicious and exploitative apps continue to appear on their app marketplaces.⁹¹³ Some harmful apps are essentially scams, relying on fraudulent representations to harm consumers and benefit the developer or a third party.⁹¹⁴ Other apps are not outright scams but are nonetheless harmful, for example, apps with age-inappropriate functions that target children.⁹¹⁵ The ACCC also found that children continued to be exposed to age-inappropriate apps and apps that mimic gambling.⁹¹⁶

The Report on App Marketplaces noted that while Apple and Google protect consumers from many apps with the potential for harm, their marketplaces also provide singular targets for persistent bad actors to get malicious apps past the initial review processes of each marketplace.⁹¹⁷ The ACCC considered that given these platforms' gatekeeper roles, the representations they make to consumers about the safety of their stores, and their ability to monitor apps on their app marketplaces, both firms should take more proactive steps to prevent and remove harmful apps.⁹¹⁸

The ACCC's Regulatory Reform Report considered that further protections are necessary to address scams and harmful apps. These include a notice-and-action mechanism, verification of certain business users and public reporting on mitigation efforts.⁹¹⁹

Many Australian children have their own smartphone. Research conducted by the eSafety Commissioner in September 2024 estimated that 50% of children aged 8 to 15 years old had their own smartphone (93% of those aged 13–15 and 32% of those aged 8–12),⁹²⁰ meaning that a significant proportion of children could be exposed to age-inappropriate content accessible via app marketplaces. Issues have continued to arise with children's access to age-inappropriate content. For example, in June 2024, Apple committed to fix a reportedly years-old bug in its parental controls that allowed children to effectively disable the company's Screen Time parental control system for Safari.⁹²¹

Research conducted in the US suggested continued challenges with age-inappropriate content being accessed by children. Of 1,007 parents surveyed, 28% noted their child had downloaded apps not approved for their age and 1-in-3 had received an ad for an adult game or app. 48% of parents said parental controls don't always work and 45% said they don't cover all apps and websites.⁹²²

913 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 109.

914 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 76.

915 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 76. Separate to the remit of the ACCC, the eSafety Commissioner works to protect Australians from online harms. In June 2024, the eSafety Commissioner issued notices under the Online Safety Act 2021 to industry associations representing 8 sections of the online industry to develop enforceable industry codes. The codes are intended to provide new online safety measures to prevent children from accessing or encountering age-inappropriate material via app distribution services, designated internet services, equipment providers, hosting services, internet carriage services, relevant electronic services, search engines and social media services. The codes also aim to introduce user empowerment measures to allow users on these services to opt-out of seeing certain types of harmful material. The eSafety Commissioner is assessing the industry-drafted codes to determine if they meet the legislative threshold of providing 'appropriate community safeguards' to be registered. If the codes do not meet this test, the eSafety Commissioner can elect to determine enforceable Standards. Further information is available on the eSafety Commissioner website. See eSafety Commissioner, [Industry codes and standards](#), accessed 13 March 2025.

916 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 116–118.

917 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 109.

918 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 119–120.

919 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 10.

920 eSafety Commissioner, [How children use internet-enabled devices – infographic](#), accessed 13 March 2025.

921 A Hern, [Apple to close years-old loophole that lets children bypass parental controls](#), *The Guardian*, 7 June 2024, accessed 13 March 2025.

922 Heat Initiative and Parents Together, [Key findings, Bellwether Research](#), 2024, accessed 13 March 2025, p 4.

In February 2025, Apple announced that it will introduce new features in 2025 that:⁹²³

- make it easier for parents to set up child accounts
- allow parents to share information about their children's age range with apps so app developers can provide only age-appropriate content
- enhance the insight and control of parents over their children's experiences by updating age ratings, adding information on product pages, and making App Store browsing safer.

Google submitted that it commits significant resources and is continually working on ways to weed out harmful apps and keep users and developers safe.⁹²⁴ Google noted that the steps and processes it takes to shut down harmful apps include its app review process, Google Play Protect (which runs on devices and conducts a safety check on apps before it is installed) and reviewing reports submitted by users.⁹²⁵

Google further noted that consistent with the Report on App Marketplaces, Google Play continues to take more steps to proactively monitor apps' compliance with policies. Google highlighted developments in 2023, including that it:⁹²⁶

- partnered with Microsoft and Meta through the App Defense Alliance to support industry-wide adoption of app security best practices and guidelines
- enhanced Google Play Protect's security capabilities with real-time scanning at the code level to combat novel malicious apps
- updated Play's policies around generative AI apps, requiring developers to provide users with the ability to report or flag offensive AI generated content within the app
- announced expansions to privacy protections so that apps can only access a user's photos and videos for purposes directly related to app functionality
- introduced new testing requirements developers must satisfy before they can make their app available on Play.

Malicious apps appear to remain on app marketplaces. For example, in May 2024, security researchers identified more than 90 malicious apps present on the Google Play Store which had been downloaded more than 5 million times.⁹²⁷ In September 2022, security researchers also identified a malicious advertising app operation with apps on both the App Store and Play Store downloaded 13 million times.⁹²⁸

ACCAN submitted that while the mandatory scam codes may help with scam problems, they still do not address other key harms from harmful apps and fake reviews.⁹²⁹ ACCAN urged the government to introduce all the targeted digital platform measures to prevent and remove scams, harmful apps and fake reviews as recommended by the ACCC's Regulatory Reform Report.

923 Apple, [Helping Protect Kids Online](#), February 2025, p 2.

924 Google, [Submission to the Final Report](#), 11 October 2024, p 28.

925 Google, [Submission to the Final Report](#), 11 October 2024, pp 28–29.

926 Google, [Submission to the Final Report](#), 11 October 2024, p 29.

927 H Sharma and G Khond, [Technical Analysis of Anatsa Campaigns: An Android Banking Malware Active in the Google Play Store](#), *Zscaler Blog*, 27 May 2024, accessed 13 March 2025.

928 B Bracken, [Malicious Apps With Millions of Downloads Found in Apple App Store, Google Play](#), *Dark Reading*, 24 September 2022, accessed 13 March 2025.

929 ACCAN, [Submission to the Final Report](#), 11 October 2024, p 4.

Fake and manipulated reviews

App marketplaces typically rank apps based on consumer ratings and reviews among a range of parameters.⁹³⁰ The ranking of apps, in part, by ratings and reviews has the potential to incentivise the production of fake and/or manipulated reviews by app developers and/or for developers to induce app users to leave favourable ratings and reviews, to improve an app's rankings.

The ACCC's Regulatory Reform Report found that the practice of creating, buying and selling fake reviews and otherwise engaging in review manipulation is distorting competition in related markets and undermining trust in digital platforms.⁹³¹ Fake and misleading online reviews on digital platform services reduce the ability of consumers to make informed choices, undermine trust in the digital economy and cause financial and reputational damage to businesses.⁹³²

The ACCC's Regulatory Reform Report noted that obligations regarding fake reviews should apply to app marketplaces, among other digital platform services.⁹³³ In the Regulatory Reform Report, the ACCC also noted that the proliferation of fake ratings and reviews on platforms, and their intermediary role in transactions places onus on platforms to ensure fake reviews are addressed in an effective and efficient way, alongside enforcement action by regulators.⁹³⁴ The ACCC noted that digital platforms that host ratings and reviews, such as those providing app marketplace services, among others, have a role to play in addressing fake reviews.⁹³⁵ The ACCC considered that these digital platforms should be required to:

- provide an accessible avenue for consumers to report fake reviews and respond to such reports
- publish information on their review verification processes, including where no verification is undertaken
- report on their mitigation efforts.⁹³⁶

Since the ACCC examined fake reviews in its Regulatory Reform Report, there is evidence to suggest fake and manipulated reviews remain prevalent on app marketplaces. According to an analysis of app marketplace reviews by Which?, the UK membership organisation for consumers, 17 of the top 100 apps on the Apple App Store and 25 of the top 100 apps on the Google Play Store were found likely to have fake reviews.⁹³⁷ The analysis identified patterns in reviews across apps to identify reviews likely to have been fake. For example, while well-known and trusted apps consistently received reviews with few big spikes in activity, some apps received clusters of 4- and 5-star reviews followed by periods of weeks or months with very few reviews before another spike (attributed to the app employing a review broker).⁹³⁸

The emergence of consumer-facing generative AI provides another avenue for the generation of fake reviews. DoubleVerify, a digital advertising verification service provider, observed a threefold increase in the number of fake reviews on app marketplaces in 2024 from 2023, with artificial intelligence-based tools facilitating the production of these reviews.⁹³⁹

930 Apple, [Apple Developer Program License Agreement](#), Apple Support, 6 December 2024, accessed 13 March 2025; Google, [App Discovery and Ranking](#), Policy Center, Play Console Help, 2024, accessed 13 March 2025.

931 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 8.

932 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 46.

933 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 105.

934 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 10.

935 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 10.

936 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 10.

937 H Walsh, [Apple App store and Google Play flooded with fake reviews](#), *Which?*, 9 March 2023, accessed 13 March 2025. The survey investigated more than 18,000 reviews.

938 H Walsh, [Apple App store and Google Play flooded with fake reviews](#), *Which?*, 9 March 2023, accessed 13 March 2025. The survey investigated more than 18,000 reviews.

939 DoubleVerify, [The Hidden Threat of AI-Powered Fake App Reviews](#), *Marketing Blog*, 29 August 2024, accessed 13 March 2025.

On 14 August 2024, the US FTC announced a rule prohibiting fake reviews and testimonials.⁹⁴⁰ The rule prohibits ‘fake or false consumer reviews, consumer testimonials, and celebrity testimonials’, ‘buying positive or negative reviews’, ‘insider reviews and consumer testimonials’, ‘company-controlled review websites’, ‘review suppression’ and ‘misuse of fake social media indicators’.⁹⁴¹ In the UK, the CMA’s draft guidance on unfair commercial practices published for consultation in December 2024 includes guidance on fake reviews,⁹⁴² with the final version expected to be published in 2025.⁹⁴³

On 15 September 2024, the US FTC, announced it would take legal action against deceptive AI claims and schemes.⁹⁴⁴ As part of the legal action, Rytr, an AI writing assistant targeted at testimonial and review generation, was investigated by the FTC, which alleged Rytr engaged in unfair practices and enabled its users and subscribers to generate false and deceptive content.⁹⁴⁵

The FTC alleged reviews generated by Rytr were ‘almost certainly’ false and in many cases the reviews ‘featured information that would deceive potential consumers who were using them to make purchasing decisions.’⁹⁴⁶ On 18 December 2024, the FTC approved a final consent order against Rytr which prohibits the company from advertising, promoting, marketing, or selling any service dedicated to – or promoted as – generating consumer reviews or testimonials.⁹⁴⁷

In the UK, the CMA announced in January 2025 it had secured commitments from Google to address fake reviews on Google Search and Google Maps.⁹⁴⁸ While not targeted at the Play Store, these commitments indicate additional measures Google will take to address fake reviews, including rigorous steps to detect and remove fake reviews, consequences for rogue reviewers and businesses found to be boosting their star ratings as well as easier reporting mechanisms for users.⁹⁴⁹

Apple and Google claim to have implemented mechanisms on the Apple App Store and Google Play Store respectively to mitigate the prevalence of fake and manipulated reviews. Google, for example, claims that it uses ‘automated and human review processes to identify ... fake reviews.’⁹⁵⁰ Google’s ‘ratings and review policy’, which govern ratings and reviews on Google’s Play Store, requires that reviews should reflect a user’s experience of the content or service being reviewed, and suggests users do not ‘post fake or inaccurate reviews’ among other forms of conduct that has the potential to be misleading.⁹⁵¹ Google notes that it may remove reviews it finds to be in violation of the law or its policies.⁹⁵² App developers that are subject to Apple’s Apple Developer Program License Agreement

940 ICPEN, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), News, 16 August 2024, accessed 13 March 2025.

941 ICPEN, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), News, 16 August 2024, accessed 13 March 2025.

942 CMA, [Unfair commercial practices: Draft guidance on the protection from unfair trading provisions in the Digital Markets, Competition and Consumer Act 2024](#), 11 December 2024, see Annex B.

943 CMA, [CMA secures important changes from Google to tackle fake reviews](#), Press release, 24 January 2025, accessed 13 March 2025.

944 US FTC, [FTC Announces Crackdown on Deceptive AI Claims and Schemes](#), 25 September 2024, accessed 13 March 2025; US FTC, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), 14 August 2024, accessed 13 March 2025.

945 US FTC, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), Press release, 14 August 2024, accessed 13 March 2025.

946 US FTC, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), Press release, 14 August 2024, accessed 13 March 2025.

947 US FTC, [FTC Approves Final Order against Rytr, Seller of an AI “Testimonial & Review” Service, for Providing Subscribers with Means to Generate False and Deceptive Reviews](#), Press release, 18 December 2024, accessed 13 March 2025.

948 CMA, [CMA secures important changes from Google to tackle fake reviews](#), Press release, 24 January 2025, accessed 13 March 2025.

949 CMA, [CMA secures important changes from Google to tackle fake reviews](#), Press release, 24 January 2025, accessed 13 March 2025.

950 Google, [About Google Play Reviews](#), Google Play Help, Help Center, 2024, accessed 13 March 2025.

951 Google Play, [Ratings & Review on the Play Store](#), accessed 13 March 2025.

952 Google, [About Google Play Reviews](#), Google Play Help, Help Center, 2024, accessed 13 March 2025.

agree not to submit fraudulent reviews of their own apps or any third-party app on the App Store.⁹⁵³ The agreement will terminate upon notice from Apple that a developer has falsified consumer reviews of their own app.⁹⁵⁴

The Play Store provides a dedicated avenue for reporting inappropriate app reviews.⁹⁵⁵ The Apple App Store does not appear to have a dedicated avenue for reporting fake and/or manipulated reviews.

Platforms should take further steps to mitigate scams, harmful apps and fake reviews on app marketplaces

While the ACCC welcomes the efforts by app marketplaces on combatting scams, harmful apps and fake reviews, the ACCC remains of the view that further protections are necessary to address these issues. As these harmful practices are prevalent on app marketplaces, the ACCC continues to maintain the view, as noted in its Regulatory Reform Report, that digital platforms should be required to implement processes to prevent and remove scams, harmful apps, and fake reviews on the platforms' services.⁹⁵⁶

While the National Anti-Scam Centre collaborates with stakeholders to disrupt scams and increase community awareness about scams, obligations on digital platforms with respect to scams have the potential to contribute to this end.⁹⁵⁷ Such measures should apply to a range of services, including app marketplaces, in respect of scams. The ACCC welcomes the introduction of the Scams Prevention Framework, which establishes new mandatory industry codes to outline the responsibilities of the private sector to prevent, detect, disrupt, respond to and report on scams.⁹⁵⁸ This development is discussed in further detail in section 3.1.4.

Dispute resolution

In the Report on App Marketplaces, the ACCC identified a number of apparent deficiencies with the complaints handling processes of both the App Store and the Play Store.⁹⁵⁹ The deficiencies related to:⁹⁶⁰

- app removal processes
- the provision of refunds
- the ability of developers to access information to support their complaints.

The ACCC's Regulatory Reform Report reiterated support for the introduction of positive obligations mandating minimum internal dispute resolution standards to be imposed on digital platforms and enabling users (consumers and small businesses) to escalate complaints to an independent external ombuds scheme.⁹⁶¹ The Regulatory Reform Report also noted that mandatory minimum standards

953 Apple, [Apple Developer Program License Agreement](#), Apple Support, 6 December 2024, accessed 13 March 2025.

954 Apple, [Apple Developer Program License Agreement](#), Apple Support, 6 December 2024, accessed 13 March 2025.

955 Google, [Report inappropriate reviews](#), Help Center, Play Console Help, 2024, accessed 13 March 2025.

956 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 73. The Regulatory Reform Report noted that such processes should include a notice-and-action mechanism; verification of certain business users; additional verification of advertisers of financial services and products; improved review verification disclosures; public reporting on mitigation efforts.

957 Australian Government, [Awareness and protection](#), National Anti-Scam Centre, What we do, accessed 13 March 2025; Australian Government, [Collaboration](#), National Anti-Scam Centre, What we do, accessed 13 March 2025; Australian Government, [Disruption](#), National Anti-Scam Centre, What we do, accessed 13 March 2025.

958 The Hon Stephen Jones MP and the Hon Michelle Rowland MP, [Parliament passes world-leading scams prevention framework](#), Press Release, 13 February 2025, accessed 13 March 2025.

959 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 122.

960 ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, p 122.

961 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 10–11, 16, 89.

for internal dispute resolution processes would assist with complaints and disputes relating to apps and app marketplaces, among other complaints and disputes on relevant digital platforms.⁹⁶²

Since March 2021, Apple has made some changes to the complaints handling processes and related mechanisms. Apple clarified criteria and a new timing extension for App Store improvement processes, including to remove apps from the App Store that no longer function as intended.⁹⁶³ Developers were granted up to 90 days to update their apps in the event they receive a notice of removal from Apple.⁹⁶⁴ While these changes are welcomed by the ACCC, as discussed above, the harmful apps, including apps facilitating scams, remain prevalent and third-party app developers continue to raise concerns about available avenues for dispute resolution with platforms.

In addition, in response to the DMA in Europe, both Apple and Google provide developers in the EU with access to independent mediation mechanisms to settle disputes.⁹⁶⁵

While not specific to app marketplaces, several submissions to this Report raised concerns about inadequate avenues for dispute resolution with digital platforms.⁹⁶⁶ For example, the NSW Small Business Commissioner submitted that resolving complaints with digital platforms is becoming ‘more challenging and complex’.⁹⁶⁷ The Australian Small Business and Family Enterprise Ombudsman also submitted that the number of cases involving small businesses having problems with digital platforms it has seen has more than doubled since July 2022.⁹⁶⁸ The App Association submitted that software developers and copyright holders benefit from cost effective avenues for dealing with piracy concerns via dispute resolution schemes on app marketplaces.⁹⁶⁹ The Digital Industry Group Inc noted that its draft Internal Complaints Handling Code, which it developed by convening digital platforms within in its membership after a request from the Australian Government, was submitted to the Government for consideration on 31 July 2024.⁹⁷⁰

Evidence from the consumer survey commissioned by the ACCC as part of this Report suggests users want improved complaints handling processes related to app marketplaces. The majority of respondents (63%) thought it was either extremely or very important to have a specialised, independent, external dispute resolution body to raise complaints to if a dispute with app stores cannot be resolved. A further 25% thought it was quite important while just 8% thought it was not very important or not at all important.⁹⁷¹

Notably, respondents who had a high degree of confidence in technology were statistically significantly more supportive of a specialised independent external dispute resolution body for app

962 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 91.

963 Apple, [Clarifying criteria & new timing extension for App Store Improvements process](#), Apple News, 29 April 2022, accessed 13 March 2025.

964 Apple, [Clarifying criteria & new timing extension for App Store Improvements process](#), Apple News, 29 April 2022, accessed 13 March 2025.

965 Google, [EU Digital Markets Act \(EU DMA\) Compliance Report non-confidential summary](#), 7 March 2024, p 146; Apple, [Apple's non-confidential summary of DMA compliance report](#), 7 March 2024, p 12. See, CEDR, [Apple EU Mediation](#), accessed 13 March 2025; CEDR, [The Google Play Mediation Scheme](#), accessed 13 March 2025.

966 SBS, [Submission to the Final Report](#), 11 October 2024, p 8; New South Wales Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 2; ACCAN, [Submission to the Final Report](#), 11 October 2024, pp 1–3; Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, pp 1–3.

967 New South Wales Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 2.

968 Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

969 The App Association, [Submission to the Final Report](#), 11 October 2024, p 16.

970 Digital Industry Group Inc, [Submission to the Final Report](#), 11 October 2024, p 3.

971 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12. Question H2 (‘How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?’). Note that question H2 measured the intensity (or lack thereof) of consumers’ support for an external dispute resolution body across various digital platform services, by using a unipolar scale which ranged from zero importance (‘not at all important’) to maximum importance (‘extremely important’).

stores than those who did not (68% of respondents, versus 54% and 61% for respondents with low and medium levels of confidence with technology, respectively).⁹⁷²

More effective internal dispute resolution and an external dispute resolution body are needed for app marketplaces

The ACCC continues to have concerns about app marketplaces approach to resolving disputes. For example, it continues to be the case that while both Apple and Google provide avenues for raising initial complaints with the marketplace or developers, which assists users to report apps that may be harmful, neither marketplace provides clear guidance about anticipated timeframes for the resolution of complaints, nor do they commit to updating a user about the status or outcome of their request.⁹⁷³ The ACCC is concerned that, if users are not informed of the status or outcome of their complaint, they may be discouraged from making subsequent reports about other apps or developers.

The ACCC retains its view from the Regulatory Reform Report which reiterated support for the introduction of positive obligations mandating minimum internal dispute resolution standards to be imposed on digital platforms and enabling users to escalate complaints to an independent external ombuds scheme.⁹⁷⁴ The ACCC considers that applying these dispute resolution proposals to app marketplaces would help address deficiencies in the available app marketplace dispute resolution mechanisms. As illustrated earlier in section 2.3, in Australia there already exist internal dispute resolution mechanisms in the telecommunications, energy and water sectors.

In December 2023, the Australian Government agreed in principle to address consumer harms caused by scams, harmful apps and fake reviews.⁹⁷⁵ This included requesting that digital platforms develop voluntary internal dispute resolution standards by July 2024 and doing further work to develop internal and external dispute resolution requirements for platforms.⁹⁷⁶ As of 13 March 2025, these voluntary standards have not been published.

972 ACCC analysis of consumer survey results data. Questions H2 (How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?) and Z12 (On a scale of 1 to 10, where 1 is not confident at all and 10 is extremely confident, how would you rate your confidence using and navigating devices and the internet?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 7, 12, 123, 128.

973 See, for example, Google, [Flag an app or review on Google Play](#), Help Center, Google Play Help, 2024, accessed 13 March 2025; Google, [Report a Policy Violation](#), Help Center, Play Console Help, 2024, accessed 13 March 2025; Apple, App doesn't work as expected, Billing & Subscriptions, [Get Support](#), 2024, accessed 13 March 2025; Apple, [How to contact an app developer](#), Apple Support, 4 November 2024, accessed 13 March 2025.

974 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 10–11, 16, 89.

975 ACCC, [Consumers and small businesses to benefit from proposed new regulation of digital platforms](#), Media releases, 8 December 2023, accessed 13 March 2025; The Treasury, [Government's response to the ACCC Digital Platform Service's Inquiry](#), 8 December 2023, pp 2–3.

976 The Treasury, [Government's response to the ACCC Digital Platform Service's Inquiry](#), 8 December 2023, pp 2–3.

3.3 General online retail marketplaces

Key points

- General online retail marketplaces such as Amazon, eBay and Kogan connect Australian consumers with access to a wide selection of products offered by businesses, leading to greater choice and likely greater value when shopping online.
- Amazon Australia's revenue grew 18% in calendar year 2023, with the revenue for the Amazon Marketplace growing 22% to \$1.567 billion and third-party seller services (such as commissions and delivery charges paid by sellers) growing 79% to \$569 million.
- New entrants Temu and Shein have also grown their customer bases. In the 12 months to August 2024, 3.8 million Australians purchased from Temu and 2 million purchased from Shein.
- The ACCC does not consider any general online retail marketplace currently holds a dominant position in Australia, and at this time these services need not be a priority for the proposed digital competition regime. However, the services provided feature high capital investments, strong economies of scale and network effects, which limit new entry and could lead to positions of dominance by existing participants. The ACCC remains concerned about the potential for self-preferencing of a marketplace's own products in ranking, search, or display. Accordingly, it is critical that the proposed regime enable the ACCC to continue to monitor competition issues in general online retail marketplaces.
- 72% of consumers in the ACCC's recent survey who had used a general online retail marketplace in the 12 months before the survey reported they had experienced at least one potentially manipulative or deceptive practice during that time. Consumers using online marketplaces are also at risk of purchasing goods that are unsafe when online marketplaces do not take steps to monitor or address product safety issues.
- Consumers are also encountering fake reviews that may be impacting their shopping decisions. Based on ACCC consumer survey data, 45% of respondents who used general online retail marketplaces encountered reviews that they knew or strongly suspected were fake at least half the time they used a marketplace.
- 91% of Australian consumers consider it is either quite, very or extremely important to have a specialised, independent, and external dispute resolution body to resolve disputes with general online retail marketplaces.

General online retail marketplaces are online platforms that facilitate the supply of general goods between suppliers and Australian consumers, excluding platforms which operate only as classified services. Online marketplaces play an increasingly significant role in connecting consumers and businesses.⁹⁷⁷ These platforms provide consumers with access to a wide selection of products, leading to greater choice and likely greater value when shopping online.⁹⁷⁸ Online marketplaces can also create an efficient channel for Australian businesses to distribute their products to a large consumer base.⁹⁷⁹ However, many suppliers of online marketplaces are based overseas. For example, more than 50% of third-party suppliers of Amazon's US website are based in China.⁹⁸⁰

977 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 2.

978 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 24.

979 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 54.

980 Marketplace Pulse, [American Sellers Lost Amazon to China](#), 8 January 2025, accessed 13 March 2025.

Australian consumers are increasingly shopping online.⁹⁸¹ In the March 2022 Report of the Digital Platform Services Inquiry (the Report on General Online Retail Marketplaces), the ACCC examined competition and consumer issues associated with online marketplaces. In that report, the ACCC focused on 4 major online marketplaces – eBay Australia, Amazon Australia, Catch and Kogan – which were the largest in Australia in terms of the percentage of Australians using them in 2020 and 2021.⁹⁸²

This section of this current Report will revisit the consumer issues examined in the Report on General Online Retail Marketplaces and note some key changes in the competitive landscape since 2022, particularly the entry of Temu and Shein.

The ACCC also notes that some other digital platforms may incorporate features which resemble those commonly found on online retail marketplaces. For example, TikTok launched its TikTok Shop feature in the US in September 2023, but as of 13 March 2025, it has not been released in Australia.⁹⁸³ Instagram Shopping is a shopping tool available for business users to tag products in their photos or stories, and direct customers to a web page without leaving Instagram to a browser.⁹⁸⁴ Instagram has a check out function available in the US but not Australia, which allows customers to complete purchases from businesses in-app.⁹⁸⁵ Instagram removed the separate Shop tab in 2023, but businesses can still run their shop on Instagram and promote products using posts and reels.⁹⁸⁶

Brick-and-mortar stores have also expanded their online shopping presence in Australia and launched online marketplaces which host products from selected third-party suppliers. For example, Big W launched an online marketplace called Big W Market in November 2023.⁹⁸⁷ Bunnings also runs an online marketplace called Bunnings Marketplace, which sells and delivers products from third-party suppliers that Bunnings has partnered with.⁹⁸⁸ It was launched in 2019 and was initially called MarketLink.⁹⁸⁹

This section is structured as follows:

- **Section 3.3.1** revisits the ACCC's previous analysis of competition and consumer issues in the context of the March 2022 Report on General Online Retail Marketplaces.
- **Section 3.3.2** considers recent developments in general online retail marketplaces. This includes analysis on revenue and consumer use of general online retail marketplaces. This is followed by discussion of recent market entry and expansion, as well as recent trends in the use of direct-to-consumer business models and integration of AI into general online retail marketplaces.
- **Section 3.3.3** considers competition concerns in the market for general online retail marketplaces, namely the issue of potential self-preferencing by hybrid marketplaces.
- **Section 3.3.4** considers concerns relating to consumer harms on general online retail marketplaces. This section considers manipulative design practices, issues relating to fake reviews and review manipulation, product safety concerns and consumer views in respect of dispute resolution on general online retail marketplaces.

981 Australia Post, [Inside Australia Post eCommerce Report 2025](#), 2025, accessed 13 March 2025, pp 6, 8.

982 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 19–20.

983 J Pollock, [TikTok Shop absent in Australia](#), *AdNews*, 9 September 2024, accessed 13 March 2025.

984 L Clark, [Instagram's new feature will change the way you shop forever](#), *Vogue*, 21 March 2018, accessed 13 March 2025; Instagram, [Instagram Shopping](#), Discover and buy more from brands and creators you love, accessed 13 March 2025.

985 Instagram, [Shopping on Instagram](#), accessed 13 March 2025.

986 M Sato, [Instagram is kicking the shopping tab out of the home feed](#), *The Verge*, 10 January 2023, accessed 13 March 2025.

987 Woolworths Group, [Woolworths Group F24 Profit Announcement](#), 28 August 2024, p 3.

988 See 'Frequently asked questions' in Bunnings Warehouse, [Bunnings Marketplace](#), accessed 13 March 2025.

989 F Noble, [End of the sausage-sizzle? Bunnings launches online shopping for 'everything from the front gate to the back fence'](#), *Nine News*, 5 December 2019, accessed 13 March 2025.

3.3.1 The ACCC has previously considered competition and consumer issues in general online retail marketplaces

The Report on General Online Retail Marketplaces found that, at the time, no single marketplace examined held a dominant position in Australia.⁹⁹⁰ Of the main online marketplaces, eBay Australia recorded the most online sales, with around \$5.3 billion in 2020–21, while Amazon Australia was second with approximately \$1.3 billion in online sales.⁹⁹¹

The Report on General Online Retail Marketplaces noted that network effects and data collection were important to online marketplaces' business models and can confer competitive advantages.⁹⁹² It also considered that network effects can create barriers to entry, although several new online marketplaces were recently established.⁹⁹³

The Report on General Online Retail Marketplaces also raised concerns relating to how products were displayed on online marketplaces, either through search, features or badges.⁹⁹⁴ The ACCC found it was important for customers to know how products were ranked, including whether they are being ranked by relevance or whether there is any other preference being overlaid in the search results (for example, where a particular product is sold by the marketplace's own related retail arm).⁹⁹⁵ The ACCC also noted that consumers were not being given the opportunity to make informed choices about how their data is collected and used.⁹⁹⁶

The ACCC also raised concerns about product safety, misleading reviews and scams on online marketplaces,⁹⁹⁷ and considered how consumer protection could be improved through a prohibition against unfair trading practices and improved dispute resolution processes.⁹⁹⁸

3.3.2 Developments in general online retail marketplaces

Since March 2022, Amazon has increased its Australian revenue and traffic to its website. Other online marketplaces considered in the Report on General Online Retail Marketplaces have declined both in revenue and consumer visits. Amazon Australia's revenue grew 18% in 2023, with the revenue for the Amazon Marketplace growing 22% to \$1.567 billion and third-party seller services (such as commissions and delivery charges paid by sellers) growing 79% to \$569 million.⁹⁹⁹ Amazon Australia's revenue was reported to be \$3.1 billion in 2024.¹⁰⁰⁰ Kogan's revenue dropped by 6.1% in 2024 to \$459.7 million, but its gross profit increased by 23.3% to \$168.4 million.¹⁰⁰¹ Catch, which is due to close down on 30 April 2025, recorded revenue of \$524 million in 2024, a drop of 28.5% from

990 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 11.

991 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 11–12.

992 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 74–76.

993 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 75–76.

994 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 24–27. Badges are markers on a product that indicate the marketplace has given it a special classification. Examples include 'Amazon's Choice' on Amazon Australia or 'Kogan's Choice' on Kogan.

995 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 26.

996 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 36.

997 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 40–45.

998 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 52.

999 A Birmingham, 'Prime time: Amazon's Australian advertising revenue tops \$153m, subscribers soar 40% ahead of streaming ads launch; ecom marketplace eats eBay share as analysts predict massive 2024, pressure cooker for local rivals', *Mi3*, 27 February 2024, accessed 13 March 2025.

1000 M Elmas, 'Big change: Amazon Australia gains 1.1 million customers as traditional retailers struggle', *The New Daily*, 30 July 2024, accessed 13 March 2025.

1001 Mi3, [Kogan.com returns to profit from 2.6m customers, subscribers surge but revenues drop 6.1%](#), 26 August 2024, accessed 13 March 2025.

the previous year.¹⁰⁰² Wesfarmers' chief executive Rob Scott noted that a 'significant increase in competitive intensity' had 'impacted Catch's ability to generate satisfactory returns over the long term'.¹⁰⁰³

Since 2022, there has been further market entry. Temu launched in Australia in March 2023¹⁰⁰⁴ and Roy Morgan has estimated its Australian annual revenue at \$1.7 billion in 2024.¹⁰⁰⁵ Shein launched in Australia in 2021,¹⁰⁰⁶ and in 2023 it had a reported Australian annual revenue of \$978.9 million.¹⁰⁰⁷

Consumers can access online marketplaces in different ways, and there are different levels of consumer use across platforms and systems. Consumers typically access online marketplaces through the marketplaces' websites or apps. Some online marketplaces may direct customers to their app, whilst others have a larger customer base using their webpage. Figures 3.23 and 3.24 show Temu is the largest marketplace by app usage, but Amazon is used more than other marketplaces on web browsers. Web browsers were used more than apps for online shopping via mobile in 2023.¹⁰⁰⁸

The following Sensor Tower data in figure 3.23 shows that monthly average users in Australia of the Temu, Shein and Amazon mobile apps have increased since 2023, while Catch and eBay app use has decreased.¹⁰⁰⁹ Figure 3.24 shows, through SimilarWeb data, that Amazon and Temu website visits in Australia have increased from October 2021 to October 2024, but Amazon and eBay are the 2 most visited sites.¹⁰¹⁰

1002 D Richards, '[Wesfarmers Online Catch Slumps From \\$1B Valuation To Just \\$18M](#)', *ChannelNews*, 29 August 2024, accessed 13 March 2025; J Yun, '[Online retailer Catch.com.au to shut down; 190 jobs to go](#)', *Sydney Morning Herald*, 21 January 2025, accessed 13 March 2025.

1003 C LaFrenz, '[Westfarmers to shut Catch amid stiff competition from Temu, Amazon](#)', *Australian Financial Review*, 21 January 2025, accessed 13 March 2025.

1004 W Kuang, '[TEMU's business model could only work in China. But they're racing to replace Amazon in the global market](#)', *Australian Broadcasting Corporation*, 29 August 2023, accessed 13 March 2025.

1005 Roy Morgan, '[Temu & Shein's Australian customer base keeps growing – as more Australians continue to trade down in the first half of 2024 in response to the cost-of-living crisis](#)', Press Release, 6 August 2024, accessed 13 March 2025.

1006 R Scanlan, '[Fashion e-tailer Shein marks launch in Australia with Sydney runway show](#)', *News.com.au*, 19 November 2021, accessed 13 March 2025.

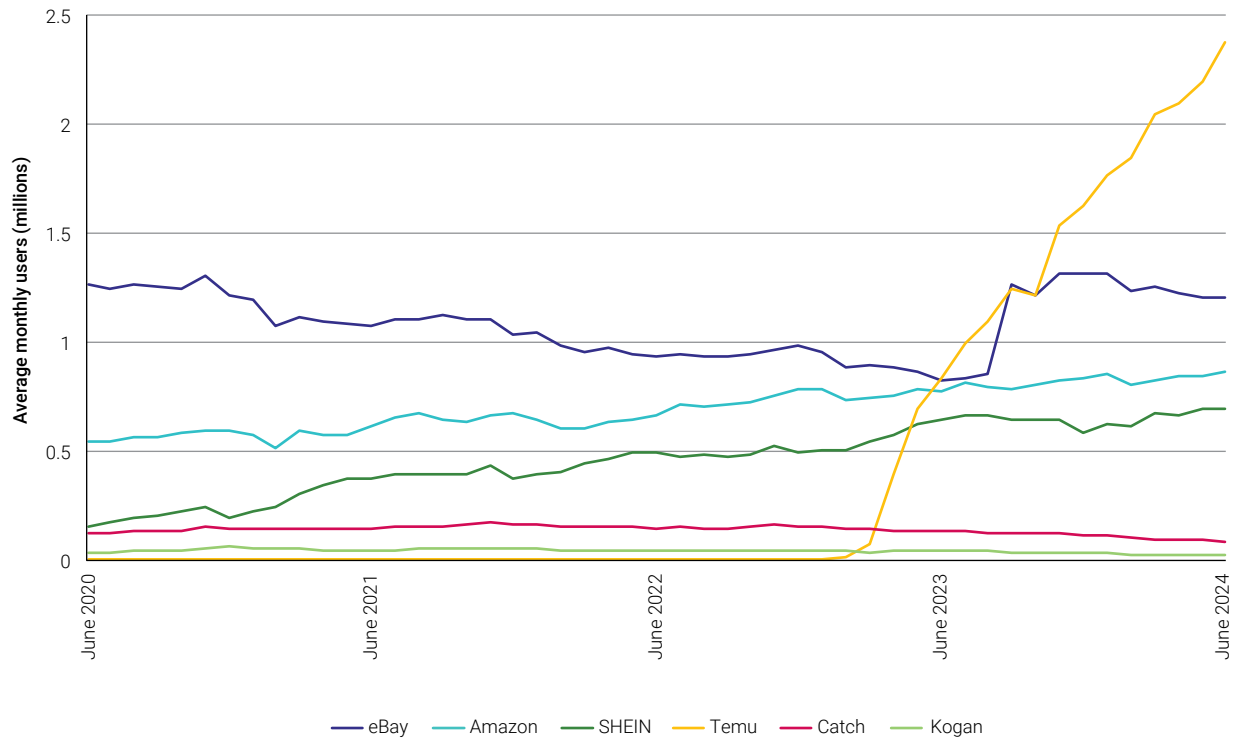
1007 J Yun, '[Extraordinary: Shein Australia hits nearly \\$1 billion in sales and triples profits](#)', *Sydney Morning Herald*, 1 May 2024, accessed 13 March 2025; Shein Distribution Australia Pty Ltd, ASIC Form 388, 29 April 2024, p 3.

1008 S Tan, '[Charting Australia's mobile commerce landscape: mobile shopping apps use & top m-commerce purchases](#)', *YouGov*, 12 July 2023, accessed 13 March 2025.

1009 Source: ACCC analysis of Sensor Tower data. This chart is based on data which captures Australian monthly active users who downloaded the selected general online retail marketplace app on their mobile device through the Apple App Store (iOS devices only) or Google Play Store. The range in Australian user numbers refers to the average figures for monthly active users on the relevant mobile apps across the years 2020–2024. The data set has been captured as of a specific point in time (as of October 2024). The ACCC notes that this does not include data on users aged under 18.

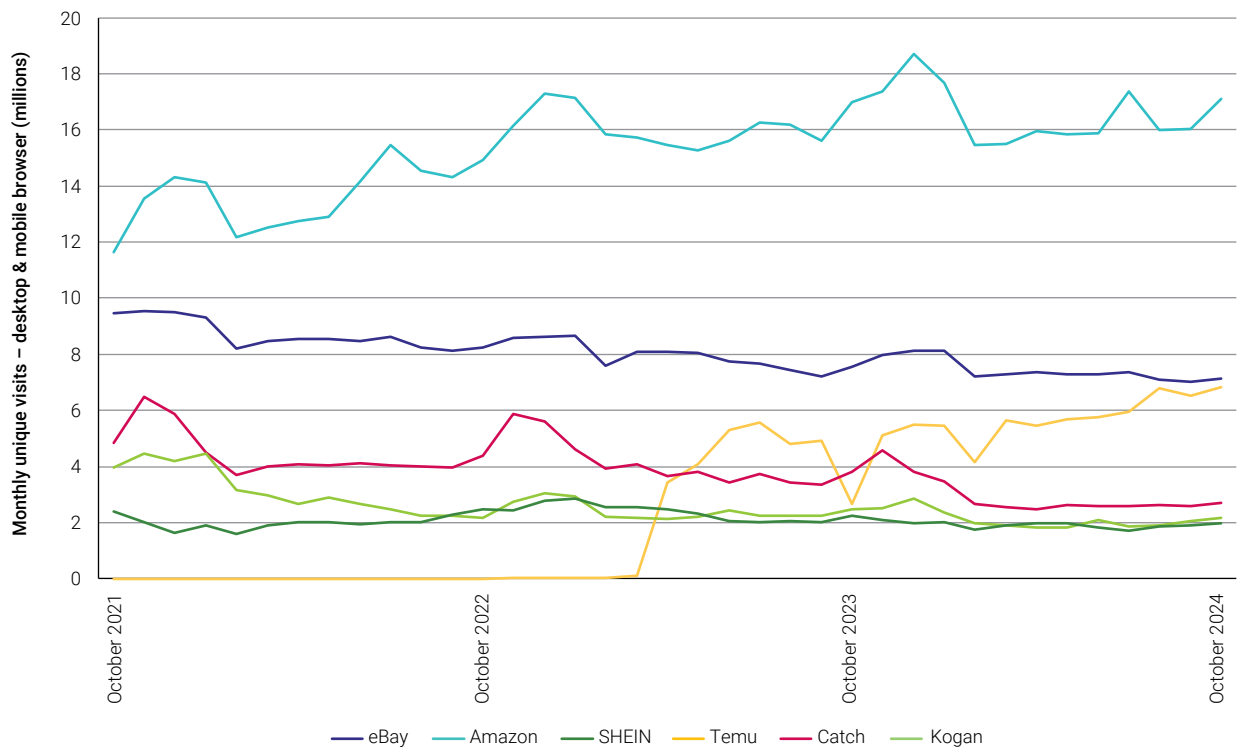
1010 Source: ACCC analysis of SimilarWeb data. This chart is based on data which captures unique Australian monthly visits to the selected general online retail marketplace website on their browser (mobile and desktop). The range in Australian user numbers refers to the average figures for monthly visits on the relevant website across the years 2021–2024. The data set has been captured as of a specific point in time (as of October 2024). The ACCC notes that this does not include data on users aged under 18.

Figure 3.23: Monthly average users of general online retail marketplace apps, June 2020 to June 2024



Source: Sensor Tower data.

Figure 3.24: Monthly average users of general online retail marketplace websites, October 2021 to October 2024



Source: SimilarWeb data.

The increase in use of multiple online retail marketplace apps and websites reflects the purchasing behaviour of Australian consumers, who may use multiple online marketplaces to purchase products online. According to the ACCC's consumer survey of Australians aged 14 and older, Amazon was the most used general online retail marketplace for 38% of those who had purchased from multiple marketplaces in the past 12 months.¹⁰¹¹

Recent growth and expansion of new entrants in Australia

While the ACCC considers that barriers to entry are high due to network effects, new entry and expansion has occurred in online marketplaces, with Temu and Shein successfully entering the Australian market.¹⁰¹²

Temu has a business model of selling low-cost products from suppliers in China and shipping them directly to customers overseas.¹⁰¹³ Temu is owned by Chinese ecommerce site Pinduoduo.¹⁰¹⁴ Shein was founded in China in 2012 and is a private company currently headquartered in Singapore.¹⁰¹⁵ The company initially expanded by selling its own brand of low-cost apparel, with a focus on small orders of a large range of apparel.¹⁰¹⁶ In May 2023, it launched its marketplace to sell a wider range of products from third-party sellers, becoming a hybrid marketplace.¹⁰¹⁷ Shein recorded a monthly average of 4.7 million site visits in Australia from October to December 2023.¹⁰¹⁸

These new entrants have quickly been adopted by many consumers. Roy Morgan has reported that in the 12 months to August 2024, 3.8 million Australians purchased from Temu and 2 million purchased from Shein.¹⁰¹⁹ According to ACCC consumer survey data, and as shown in figure 3.25, 32% of respondents had used Temu and 17% had used Shein to make a purchase in the previous 12 months.¹⁰²⁰ Temu and Shein were more popular among females (37% and 26% of whom had used Temu and Shein, respectively) than males (27% and 8%).¹⁰²¹

1011 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 71.

1012 S Mitchell, '[Online winners and losers emerge as Amazon, Temu and Shein ramp up](#)', *Australian Financial Review*, 15 February 2024, accessed 13 March 2025.

1013 J Conrad, '[How retail app Temu lures US shoppers with mind-bending prices](#)', *Wired*, 26 October 2022, accessed 13 March 2025.

1014 D M Sophia and C Hall, '[Temu owner PDD misses revenue and profit estimates as consumers struggle](#)', *Reuters*, 22 November 2024, accessed 13 March 2025.

1015 M Kim, '[How China's Shein became a fast-fashion giant](#)', *Reuters*, 28 November 2023, accessed 13 March 2025.

1016 J Zenderoudi, '[Shein is trying to take on Amazon. Some say it should be cleaning up its act instead](#)', *CBC*, 29 July 2023, accessed 13 March 2025.

1017 M Meisenzahl, '[Shein seeks Amazon sellers for its online marketplace](#)', *Digital Commerce 360*, 26 July 2023, accessed 13 March 2025.

1018 Pattern, [2024 Marketplace Consumer Trends Report](#), Ecommerce in Australia: How existing and emerging marketplaces are reshaping consumer habits, 6th Edition, February 2024, p 17.

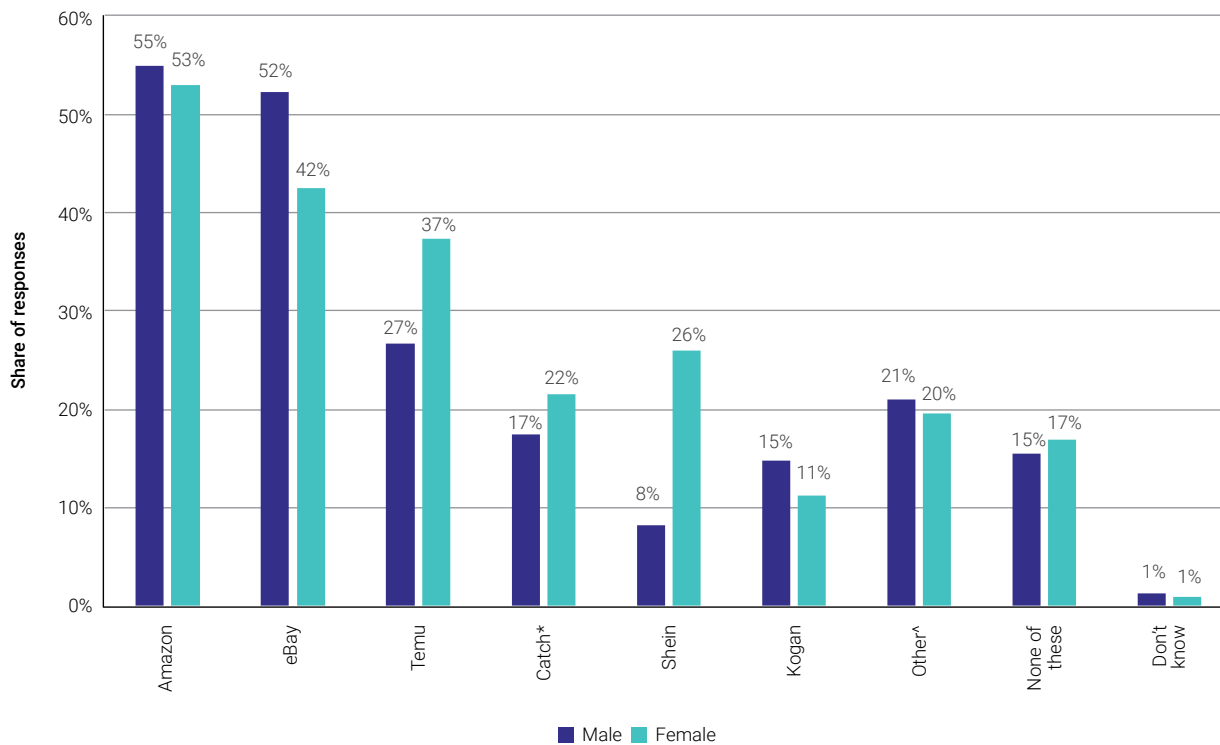
1019 C Enciso, '[Chinese retailers Shein, Temu set to lose customers in 2025 as Australians lose trust](#)', *The Nightly*, 6 February 2025, accessed 13 March 2025.

1020 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 70.

1021 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 70.

Figure 3.25: Use of general online retail marketplaces by Australian consumers

From which of the following general online retail marketplaces have you made a purchase within the last 12 months?



Source: ACCC analysis of consumer survey results data, questions G1 (From which of the following general online retail marketplaces have you made a purchase within the last 12 months?) and A3 (What is your gender?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 116. Survey of Australian consumers aged 14+, conducted October–November 2024. *Catch will cease trading on 30 April 2025. ^In this chart, 'Other' includes AliExpress, MyDeal, Wish and 'Other (please specify)'.

New entry has been facilitated by direct-to-consumer shipping business models

New entrants have benefited from an alternative business model, whereby products are shipped directly and individually from suppliers in China to consumers in Australia (rather than being stored in the online marketplace's warehouse).¹⁰²² This model is called 'direct-to-consumer shipping' and reduces import costs, though slows delivery times. Temu and Shein purchases are rarely subject to import taxes, because products shipped individually to consumers have a low dollar value.¹⁰²³ Temu and Shein are reportedly responsible for 30% of all duty-free shipments in the US.¹⁰²⁴ According to the European Commission, in 2023 there were 2.3 billion items under the import duty threshold imported to the EU.¹⁰²⁵ Australia generally has no import taxes, duties or charges in place for most products \$1,000 or less.¹⁰²⁶

¹⁰²² V Choudhary, '[How Shein and Temu are approaching expansion beyond the U.S.](#)', *Modern Retail*, 14 March 2023, accessed 13 March 2025.

¹⁰²³ A Bounds and P Tamma, '[EU takes aim at China's Temu and Shein with proposed import duty](#)', *Financial Times*, 3 July 2024, accessed 13 March 2025; A Selyukh, '[Shein and Temu face a big change to how they ship cheap Chinese goods](#)', *National Public Radio*, 13 September 2024, accessed 13 March 2025.

¹⁰²⁴ A Nova and G Fonrouge, '[Biden targets Shein, Temu with new rules to curb alleged 'abuse' of U.S. trade loophole](#)', *CNBC*, 13 September 2024, accessed 13 March 2025.

¹⁰²⁵ A Bounds and P Tamma, '[EU takes aim at China's Temu and Shein with proposed import duty](#)', *Financial Times*, 3 July 2024, accessed 13 March 2025.

¹⁰²⁶ Australian Border Force, '[Buying Online](#)', 22 September 2024, accessed 13 March 2025.

However, for the low taxation costs currently associated with direct-to-consumer shipping may not be available for future new entrants in some jurisdictions. The EU has expressed its intention to reform the import duty threshold, which would limit the financial benefit of direct-to-consumer shipping by overseas-based online retail marketplaces.¹⁰²⁷ In September 2024, the US proposed changes to its import duties which would remove the duty exemption applied to imported products from China worth less than US\$800.¹⁰²⁸ On 14 March 2024, the French legislature approved a bill that would apply advertising restrictions and an environmental levy to purchases of ‘ultra-fast fashion’ from Shein and Temu, among other retailers.¹⁰²⁹ The bill is still to be scrutinised by the French senate.¹⁰³⁰

In addition, sustainability advocates have argued that the commercial success of business models using ‘direct-to-consumer’ shipping raises environmental concerns.¹⁰³¹ While ‘direct-to-consumer’ shipping can be a competitive advantage, there are concerns this shipping method can have a more significant environmental impact than other distribution strategies. This is because overseas air cargo shipping has a greater environmental impact than local delivery of products shipped in bulk to local warehouses.¹⁰³² Generally, expedited shipping of parcels ‘as soon as possible’ can result in ‘additional vehicle detours to accommodate real time demand’, causing increased fuel consumption and emissions.¹⁰³³

Amazon’s business model differs from Temu and Shein in their storage, processing and shipment of purchased products. Amazon provides a ‘Fulfilment by Amazon’ service to all sellers on the Amazon store, where sellers store their products at an Amazon fulfilment centre. Amazon then packs, ships and delivers the product to the customer.¹⁰³⁴ Amazon developed its first Australian-based robotic fulfilment site in Western Sydney, and is constructing a second site in Melbourne.¹⁰³⁵ This enables faster delivery times, with Amazon Prime members eligible for same-day delivery of products shipped by Amazon. Customers can also pay for expedited or priority delivery in the same time frame.¹⁰³⁶ This faster shipping time can act as a competitive advantage over new entrants using direct-to-consumer shipping.

1027 A Bounds and P Tamma, ‘[EU takes aim at China’s Temu and Shein with proposed import duty](#)’, *Financial Times*, 3 July 2024, accessed 13 March 2025.

1028 N Sherman, ‘[New US shipping rules target China’s Shein and Temu](#)’, *BBC News*, 14 September 2024, accessed 13 March 2025.

1029 Environnement Magazine, [Proposition de loi contre l’ultra-fast fashion : ce que contient le texte \[in French\]](#), 15 March 2024, accessed 13 March 2025.

1030 Environnement Magazine, [Proposition de loi contre l’ultra-fast fashion : ce que contient le texte \[in French\]](#), 15 March 2024, accessed 13 March 2025.

1031 E St Martin, ‘[What France’s crackdown on Shein and Temu means for global ultra-fast fashion](#)’, *BBC News*, 21 March 2024, accessed 13 March 2025.

1032 A Langford, ‘[Air freight greenhouse gas emissions up 25% since 2019, analysis finds](#)’, *The Guardian*, 26 June 2024, accessed 13 March 2025; C Farivar, ‘[You’re Buying so much from Temu and Shein the air cargo industry can’t keep up](#)’, *Forbes Australia*, 22 May 2024, accessed 13 March 2025; OECD International Transport Forum, [The Carbon Footprint of Global Trade: Tackling Emissions from International Freight Transport](#), 2015, accessed 13 March 2025, p 8.

1033 J Lin et al., [Is on-demand same day package delivery service green?](#), *Transportation Research Part D: Transport and Environment*, Volume 61 Part A, June 2018, pp 118–139.

1034 Amazon, [Fulfilment by Amazon](#), FBA, accessed 13 March 2025.

1035 Amazon, [Construction has begun in Melbourne as Amazon Australia announces second robotics fulfilment centre](#), Amazon News, 9 August 2023, accessed 13 March 2025.

1036 Amazon, [Delivery Speeds and Charges for Metro Areas of Sydney, Melbourne, Brisbane, Adelaide and Canberra](#), Help and customer service, accessed 13 March 2025.

In response to the competitive threat of new entrants using 'direct-to-consumer' shipping to provide lower-cost products, Amazon announced a new website and app called 'Amazon Haul' in November 2024.¹⁰³⁷ The new platform will allow Chinese sellers of low-cost apparel and home goods to ship directly from China to their US-based customers.¹⁰³⁸ This is a departure from Amazon's historic business model of shipping Chinese-manufactured products in bulk by sea cargo and storing them in US-based warehouses to enable fast local delivery.¹⁰³⁹

AI is being incorporated into general online retail marketplaces

While online marketplaces have utilised artificial intelligence (AI) in their businesses for some time, there is an emerging trend of launching public-facing AI products on marketplaces. These new AI products are for use by both consumers, in the form of chatbots, and by online marketplace sellers. For example:

- In May 2023, eBay announced it was launching a plug-in generative AI product that allows sellers to auto-generate item descriptions based on existing information on the internet.¹⁰⁴⁰ The product was made available in eBay's iOS app in September 2023.¹⁰⁴¹ In December 2023, eBay's Australian news team said this feature was now available 'across the eBay experience'.¹⁰⁴²
- In January 2024, Shein's head of global strategy and corporate affairs said that Shein used a machine learning platform to predict demand and give real-time updates on consumer preferences to its suppliers.¹⁰⁴³
- Amazon launched its consumer-facing generative AI chatbot service called 'Rufus' in the US in September 2024 but has not yet launched the service in Australia.¹⁰⁴⁴ The chatbot is available to shoppers in the Amazon App in the US, and customers can ask about the nature of searched-for products and about what other customers have said about the products.¹⁰⁴⁵
- Amazon has also launched a generative AI assistant called 'Project Amelia', which is designed for sellers on Amazon.¹⁰⁴⁶ The tool was rolled out to some US-based sellers on Amazon in September 2024 and will become available in other countries later this year.¹⁰⁴⁷ The tool can be used to retrieve information about customer traffic and sales data for a store or specific product.
- The CEO of Kogan, Ruslan Kogan, said in a June 2023 interview that Kogan had used AI 'for years' and it is one of the ways it is able to 'secure remarkable value for Australian shoppers'.¹⁰⁴⁸

1037 Amazon, [Introducing Amazon Haul—a broad selection of products \\$20 or less, with most under \\$10](#), Retail, 13 November 2024, accessed 13 March 2025.

1038 S Soper, [Amazon takes a page from Temu's bargain playbook](#), *Bloomberg*, 5 July 2024, accessed 13 March 2025.

1039 S Soper, [Amazon takes a page from Temu's bargain playbook](#), *Bloomberg*, 5 July 2024, accessed 13 March 2025.

1040 A Ireland, [eBay's Quarterly Business Results](#), eBay, 3 May 2023, accessed 13 March 2025.

1041 K Wiggers, [eBay rolls out a tool that generates product listings from photos](#), *TechCrunch*, 7 September 2023, accessed 13 March 2025.

1042 eBay, [List faster and easier with AI-powered item descriptions](#), eBay Announcements, 4 December 2023, accessed 13 March 2025.

1043 See S Mulkey, [AI has helped Shein become fast fashion's biggest polluter](#), *Wired*, 14 September 2024, accessed 13 March 2025 and P Pernot-Day quoted in K5 – Future Retail, [SHEIN – Consumer 2 Manufacturer – Disrupting the fashion industry with AI](#), *K5 Future Retail Conference*, 20 January 2024, accessed 13 March 2025.

1044 R Mehta, [How customers are making more informed shopping decisions with Rufus, Amazon's generative AI-powered shopping assistant](#), Retail, 18 September 2024, accessed 13 March 2025.

1045 J Joseph, [Amazon's In-App Rufus AI Will \(Try To\) Answer Your Shopping Questions](#), *PC Mag Australia*, 13 July 2024, accessed 13 March 2025.

1046 S Perez, [Amazon debuts Project Amelia, an AI assistant for sellers](#), *TechCrunch*, 19 September 2024, accessed 13 March 2025.

1047 M B Westmoreland, [Amazon launches a powerful new generative AI-based selling assistant codenamed Project Amelia](#), Innovation at Amazon, 19 September 2024, accessed 13 March 2025.

1048 E Keating, [The Kogan job application question an AI struggled to answer](#), *Smart Company*, 14 June 2023, accessed 13 March 2025.

3.3.3 Potential competition issues in general online retail marketplaces

Consistent with the previous Report on General Online Retail Marketplaces, at this time the ACCC does not consider that a single marketplace holds a dominant position in Australia. As discussed in section 3.3.2, while Amazon continues to grow revenue and consumer engagement, new entrants such as Temu and Shein have entered and expanded. Meanwhile, local marketplace Catch will cease trading on 30 April 2025.¹⁰⁴⁹

Despite this new entry, harm to competition could still occur in the supply of online marketplaces. The Report on General Online Retail Marketplaces expressed concern relating to hybrid marketplaces,¹⁰⁵⁰ noting that harm to competition could stem from preferential treatment of these marketplaces' own products over third-party sellers' products.¹⁰⁵¹ These marketplaces may have the ability and incentive to favour their own products in ranking or display of products using algorithms or policies.

Consumers may not be aware of this self-preferencing and may assume that rankings are based on their search criteria or needs.¹⁰⁵² In the ACCC's consumer survey and as shown in figure 3.26, only 29% of recent online marketplace users believed online marketplaces clearly explained how product search results were sorted and displayed by default. This figure was even lower for older Australians (14% of online marketplace users aged 75+) and people who rated their own confidence with technology as 5 or below out of 10 (20%).¹⁰⁵³

1049 In announcing Catch's closure, Rob Scott, the CEO of its parent company Wesfarmers, cited the 'entry and expansion of international competitors' as having 'impacted Catch's ability to generate satisfactory returns over the long term.' See J Yun, '[Online retailer Catch.com.au to shut down; 190 jobs to go](#)', *Sydney Morning Herald*, 21 January 2025, accessed 13 March 2025.

1050 A 'hybrid marketplace' is one that retails its own goods in addition to facilitating trade between third-party sellers and consumers.

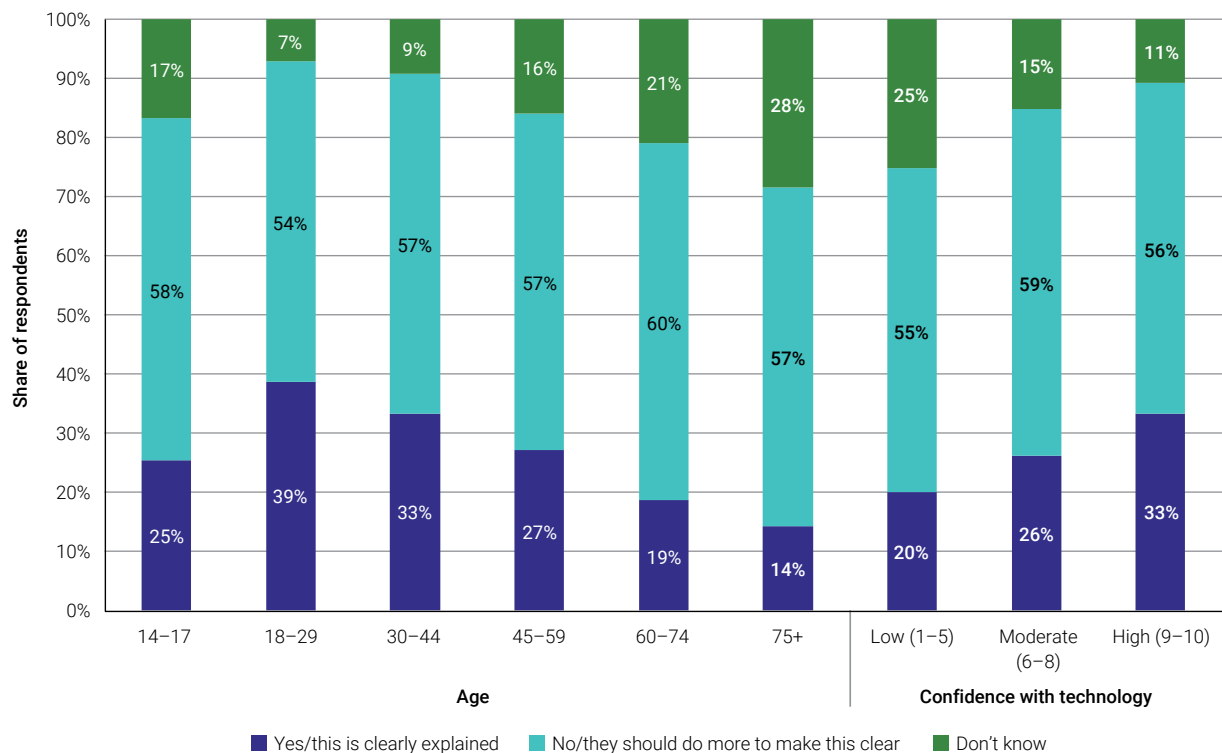
1051 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 73.

1052 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 80–81.

1053 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 82.

Figure 3.26: Australian consumer views on whether online marketplaces clearly explain how search results are sorted and displayed by default

Do you think online marketplaces clearly explain how product search results are sorted and displayed by default?



Source: ACCC analysis of consumer survey results data, questions G14 (Do you think online marketplaces clearly explain how product search results are sorted and displayed by default?), A2 (How old are you?) and Z12 (On a scale of 1 to 10, where 1 is not confident at all and 10 is extremely confident, how would you rate your confidence using and navigating devices and the internet?). Filtered to consumers who purchased from a general online marketplace in the last 12 months. See Loneragan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 121, 128. Survey of Australian consumers aged 14+, conducted, October–November 2024.

The ACCC notes that several international regulators have considered the issue of self-preferencing, including:

- On 10 November 2020, the European Commission opened an investigation into Amazon’s business practices that might artificially favour its own retail offers and offers of marketplace sellers that use Amazon’s logistics and delivery services. On 20 December 2022, the European Commission announced Amazon had made legally binding commitments under EU antitrust rules, which addressed competition concerns over Amazon’s use of non-public marketplace seller data and possible bias in granting sellers access to its Buy Box (now Featured Offer) and its Prime programme.¹⁰⁵⁴
- On 5 July 2022, the UK CMA also opened an investigation into Amazon’s use of non-public third-party seller data and how it selects products available in the Amazon Buy Box and Prime label.¹⁰⁵⁵ On 3 November 2023, the CMA accepted commitments from Amazon that it would not use rival sellers’ Marketplace data to gain an advantage over other sellers, that it would treat products

¹⁰⁵⁴ The final commitments will remain in force for 7 years in relation to Prime and the display of the second competing Buy Box offer, and 5 years for the remaining parts of the commitments. See European Commission, [Antitrust: Commission accepts commitments by Amazon barring it from using marketplace seller data, and ensuring equal access to Buy Box and Prime](#), 20 December 2022, accessed 13 March 2025.

¹⁰⁵⁵ CMA, [Investigation into Amazon’s Marketplace](#), Competition and Markets Authority cases and projects, 6 July 2022, accessed 13 March 2025.

equally when deciding what products to feature, and that it would allow third parties to negotiate directly with independent providers of Prime delivery services.¹⁰⁵⁶

- Two separate class actions were filed in the UK's Competition Appeal Tribunal in 2022 and 2023, alleging Amazon had unlawfully abused its dominance in online marketplace services in relation to its 'Buy Box' shopping function. These claims alleged Amazon used self-preferential algorithms to ensure the Buy Box featured goods sold directly by Amazon or a third-party retailer paying storage and delivery fees to Amazon.¹⁰⁵⁷ The litigation is ongoing.¹⁰⁵⁸
- In July 2023, Spain's National Commission of Markets and Competition fined Apple and Amazon for a 2018 agreement, whereby Amazon removed 90% of Apple resellers and permitted only Apple-approved distributors.¹⁰⁵⁹ The agreement also limited third-party Apple resellers from acquiring advertising space on Amazon's Spanish site. The Commission said that the conduct concentrated the sale of Apple products and reduced competition, fining Apple €143.64 million and Amazon €50.5 million.¹⁰⁶⁰

Amazon has also been designated as a gatekeeper in respect of its online marketplace under the EU's DMA (see box 3.11).

1056 CMA, [Investigation into Amazon's Marketplace](#), Competition and Markets Authority cases and projects, 6 July 2022, accessed 13 March 2025.

1057 UK Competition Appeal Tribunal, [Hunter & Hammond \(1568 & 1595\) – Judgment \(Carriage\) \[2024\] CAT 8](#), 5 February 2024, p 4.

1058 UK Competition Appeal Tribunal, [1595/7/7/23 Robert Hammond v Amazon.com, Inc. & Others](#), accessed 13 March 2025; UK Competition Appeal Tribunal, [1568/7/7/22 Julie Hunter v Amazon.com, Inc. and others](#), accessed 13 March 2025.

1059 A Bagley, '[Spain fines Apple and Amazon €194 million for marketplace restrictions](#)', *Global Competition Review*, 18 July 2023, accessed 13 March 2025.

1060 National Commission of Markets and Competition (Spain), [The CNMC fines Apple and Amazon €194 million for restricting competition on Amazon's website in Spain](#), Press Release, 18 July 2023, accessed 13 March 2025.

Box 3.11: Amazon's designation under the DMA

On 6 September 2023, the European Commission designated Amazon (along with 5 other digital platforms) as a gatekeeper under the DMA.¹⁰⁶¹ DMA obligations apply in relation to online marketplace and online advertising services¹⁰⁶² which are Amazon's designated core platform services. In respect of its online marketplace, Amazon noted in the published summary of its March 2024 DMA compliance report that it has taken measures such as:

- introducing 2 new prompts in its EU stores, pursuant to Article 5(2) of the DMA, that ask customers to grant consent to the use of their data between the Amazon Store and other Amazon services, and for Amazon to use personal data from a specific Amazon service (or third parties) to personalise the ads it shows them on other Amazon services¹⁰⁶³
- building a number of 'technical portability solutions' to enable EU customers to easily download, control and port their data over to other services and third parties, to meet Amazon's data portability obligation under Article 6(9) of the DMA¹⁰⁶⁴
- offering a range of tools to help sellers manage and monitor their business operations with Amazon. Amazon said this goes beyond the requirements of Article 6(10) of the DMA.¹⁰⁶⁵

Finally, regarding the self-preferencing prohibition under Article 6(5) of the DMA, Amazon stated in its compliance report that its ranking processes 'operate in an unbiased manner, using objective inputs and weighing them neutrally to facilitate the best possible customer choice', irrespective of whether a product is offered by Amazon or a third-party seller.¹⁰⁶⁶

3.3.4 Consumers continue to experience harms on general online retail marketplaces

This section outlines a range of potential harms that the ACCC considers Australian consumers may experience when using general online retail marketplaces. It focuses on the risks posed by manipulative design practices, fake reviews and review manipulation, unsafe products and inadequate dispute resolution processes, drawing on the ACCC's past work and the results of its recent consumer survey. It also provides some examples of overseas legislation and regulatory enforcement action aimed at addressing these issues.

Manipulative design practices

In the March 2022 Report on General Online Retail Marketplaces, the ACCC expressed concern about a range of potentially harmful practices that Australian consumers may experience when using these platforms.¹⁰⁶⁷ The practices of most concern for the ACCC on general online retail marketplaces are manipulative design practices (also referred to as 'dark patterns' or nudges) which may confuse users, make it difficult for them to express their actual preferences, or manipulate them into taking

1061 Alphabet, Apple, ByteDance, Meta and Microsoft were the other platforms designated on the same date, and Booking was subsequently designated in May 2024. See European Commission, [Digital Markets Act \(DMA\) – Gatekeepers](#), Digital Markets Act, accessed 13 March 2025.

1062 European Commission, [Digital Markets Act: Commission designates six gatekeepers](#), Press Release, 6 September 2023, accessed 13 March 2025; European Commission, [Digital Markets Act – Gatekeepers](#), Digital Markets Act, accessed 13 March 2025.

1063 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, accessed 13 March 2025, pp 3–8.

1064 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, accessed 13 March 2025, pp 9–12.

1065 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, accessed 13 March 2025, pp 13–16.

1066 Amazon, [Public Digital Markets Act Compliance Report](#), March 2024, accessed 13 March 2025, pp 17–20.

1067 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 3–6.

certain actions.¹⁰⁶⁸ In some cases, manipulative design practices may encourage consumers to make choices that are not in their best interests, and hinder consumers from exercising informed choice or making their preferred purchase.¹⁰⁶⁹

The ACCC has also previously highlighted potentially problematic data collection and usage practices on online marketplaces, such as take-it-or-leave-it privacy policies and bundled consents which leave consumers who want to use a marketplace with little effective choice in how much data they share.¹⁰⁷⁰

In the ACCC's consumer survey, a significant majority (72%) of respondents who had made a purchase through a general online retail marketplace in the past 12 months said they had experienced at least one of the following practices:

- clicking on a product or service that they did not realise was an advertisement (20%)¹⁰⁷¹
- receiving repeated reminders to sign up for marketing communications, repeated reminders to purchase additional services at the checkout such as a paid subscription or insurance, or marketing emails after a purchase or visit about things the consumer didn't purchase (18%, 19% and 42%, respectively)¹⁰⁷²
- being required to sign up for marketing communications to complete a purchase (16%), or marketing emails that they didn't sign up for or felt tricked into signing up for because of the way the option was worded (23%)¹⁰⁷³
- accidentally signing up for a paid subscription because of the way the option was worded (10%)¹⁰⁷⁴
- discovering fees or charges at the checkout that were not disclosed beforehand (21%).¹⁰⁷⁵

The ACCC's consumer survey found that consumers using certain marketplaces experienced some of these practices at higher rates. For example, Shein, Kogan, and Catch customers were statistically

1068 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 5.

1069 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 24.

1070 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 36–40.

1071 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. This may create additional search costs for consumers or contribute to them mistakenly purchasing particular products or services. See, for example, CPRC, [Duped by design – Manipulative online design: Dark patterns in Australia – Final report](#), 8 June 2022, p 13.

1072 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. This practice may also be referred to as 'nagging' or 'repeated interference'. See, for example, Annex I in EU, [Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation \(EC\) No 2006/2004 of the European Parliament and of the Council \(Unfair Commercial Practices Directive\) \(Text with EEA relevance\)](#), 11 May 2005, accessed 13 March 2025; Lexology, [Korea Fair Trade Commission announces guidelines on 'dark pattern' advertising](#), 4 August 2023, accessed 13 March 2025; CPRC, [Duped by design – Manipulative online design: Dark patterns in Australia – Final report](#), 8 June 2022, pp 23–24.

1073 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. These experiences are consistent with the Report on General Online Marketplaces, where the ACCC found online marketplaces collect consumer data beyond what is necessary to fulfil an order. The ACCC also noted that excessive collection of consumer data can lead to harms such as decreased consumer welfare from decreased privacy, risks to consumers from increased profiling, and risks to consumers from discrimination and exclusion. See ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 32–35.

1074 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. Depending on the context, this may be considered an unfair trading practice if the option was deliberately framed as a trick question. See, for example, CPRC, [Duped by design – Manipulative online design: Dark patterns in Australia – Final report](#), 8 June 2022, p 13; Deceptive Patterns, [Trick wording](#), Types, 25 April 2023, accessed 13 March 2025. The ACCC has also previously expressed concern about the related unfair practice of subscription traps. See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 53; ACCC, [Digital Platform Services Inquiry Second Interim Report](#), 28 April 2021, pp 110–111.

1075 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. So-called 'drip pricing' may already be illegal in Australia if it is misleading. See ACCC, [Price displays](#), Pricing, accessed 13 March 2025. The Australian Government has also noted drip pricing as an example of an unfair trading practice that future legislative reform will address. See Prime Minister of Australia, [Albanese Government to stop the rip offs from unfair trading practices](#), 16 October 2024, accessed 13 March 2025.

significantly more likely than customers of other online marketplaces to have received marketing emails they had never signed up for or felt “tricked” into signing up for (Shein 31%, Kogan 29%, Catch 28%; overall average 23%).¹⁰⁷⁶

Figure 3.27: Rates at which online marketplace shoppers have experienced certain potentially unfair practices

Which of the following experiences, if any, have you had when using a general online retail marketplace in the last 12 months?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 73. Question G10 (Which of the following experiences, if any, have you had when using a general online retail marketplace in the last 12 months?). Filtered to consumers who purchased from a general online marketplace in the last 12 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

International regulators are seeking to address the issue of manipulative practices on general online retail marketplaces

As box 3.12 shows, regulators several jurisdictions have taken measures in recent years to address manipulative practices on online marketplaces.

¹⁰⁷⁶ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 72–73.

Box 3.12: International regulatory efforts to address manipulative practices on general online retail marketplaces

- The EU's Unfair Commercial Practices Directive Annex I deems a range of online marketplace practices to be unfair commercial practices, such as false urgency,¹⁰⁷⁷ false prize representations and unwanted solicitation.¹⁰⁷⁸ Article 25 of the Digital Services Act contains an obligation that equates to a ban on using 'dark patterns', should the Unfair Commercial Practices Directive or General Data Protection Regulation not apply.¹⁰⁷⁹
- In November 2024, the European Commission and national consumer authorities of the EU (the Consumer Protection Cooperation or 'CPC' network) notified Temu of several 'problematic practices' on its marketplace that were considered to infringe EU consumer protection laws,¹⁰⁸⁰ namely fake discounts,¹⁰⁸¹ pressure selling,¹⁰⁸² forced gamification,¹⁰⁸³ missing and misleading information,¹⁰⁸⁴ fake reviews,¹⁰⁸⁵ and hidden contact details.¹⁰⁸⁶ Temu was given one month to reply to the findings and propose commitments to address them.¹⁰⁸⁷ The action is currently ongoing and the CPC network advised that 'national authorities can take enforcement measures' if Temu fails to address the concerns.¹⁰⁸⁸ The notification followed a complaint in May 2024, when the European Consumer Organisation complained to the European Commission and national authorities that Temu allegedly breached Article 25 of the Digital Services Act.¹⁰⁸⁹

1077 Creating urgency by falsely stating a product will only be available for a very limited time (e.g. fake timers or fake 'limited stock' claims).

1078 See Annex I in EU, [Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation \(EC\) No 2006/2004 of the European Parliament and of the Council \(Unfair Commercial Practices Directive\) \(Text with EEA relevance\)](#), 11 May 2005, accessed 13 March 2025.

1079 European Commission, [Digital Services Act: Questions and Answers – What are dark patterns?](#), 16 July 2024, accessed 13 March 2025; EU, [Regulation \(EU\) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC \(Digital Services Act\) \(Text with EEA relevance\)](#), Article 25, accessed 13 March 2025.

1080 European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025. The relevant consumer law obligations in this case are found in the EU's Unfair Commercial Practices Directive, Consumer Rights Directive, Price Indication Directive, e-Commerce Directive and Unfair Contract Terms Directive.

1081 Giving the false impression that products are offered with a discount where there is none. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1082 Putting consumers under pressure to complete purchases using tactics like false claims about limited supplies or false purchase deadlines. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1083 Forcing consumers to play a 'spin the fortune wheel' game to access the online marketplace, while hiding essential information about the conditions of use linked to the rewards of the game. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1084 Displaying incomplete and incorrect information about consumers' legal rights to return goods and receive refunds, and failing to inform consumers in advance that their order needs to reach a certain minimum value before they can complete their purchase. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1085 Giving inadequate information about how Temu ensures the authenticity of reviews published on its website. National authorities found reviews which they suspect to be unauthentic. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1086 Consumers cannot easily contact Temu for questions or complaints. See European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1087 European Commission, [Commission and national authorities urge Temu to respect EU consumer protection laws](#), 8 November 2024, accessed 13 March 2025.

1088 European Commission, [Market places and digital services](#), Coordinated actions, accessed 13 March 2025.

1089 European Consumer Organisation, [Taming Temu](#), accessed 13 March 2025.

- In April 2021, the European Commission took enforcement action against Amazon for alleged non-compliance with the Unfair Commercial Practices Directive, due to challenges consumers faced cancelling their Amazon Prime subscriptions.¹⁰⁹⁰ In July 2022, Amazon committed to bringing its cancellation practices in line with EU rules, by enabling consumers to unsubscribe from Prime with 2 clicks and a prominent and clear ‘cancel button’.¹⁰⁹¹
- In November 2023, India’s Central Consumer Protection Authority published Guidelines for Prevention and Regulation of Dark Patterns,¹⁰⁹² which apply to any ‘platforms systematically offering goods or services in India, advertisers, and sellers’.¹⁰⁹³ These guidelines prohibited 13 practices, including subscription traps, drip pricing, disguised advertisements, nagging and trick questions.¹⁰⁹⁴
- In July 2023, the KFTC issued Guidelines for the Voluntary Management of Online Dark Patterns. These Guidelines describe 19 manipulative design practices, including several disguised advertisements, repeated interference, and trick questions, and provide guidance on how companies can avoid using them.¹⁰⁹⁵
- As mentioned in section 2.2, the UK’s Consumer Protection from Unfair Trading Regulations prohibit unfair commercial practices, including misleading actions or omissions, and aggressive commercial practices.¹⁰⁹⁶

1090 European Commission, [Consumer protection: Amazon Prime changes its cancellation practices to comply with EU consumer rules](#), Press Release, 1 July 2022, accessed 13 March 2025.

1091 European Commission, [Consumer protection: Amazon Prime changes its cancellation practices to comply with EU consumer rules](#), Press Release, 1 July 2022, accessed 13 March 2025.

1092 Central Consumer Protection Authority (India), [The Guidelines for Prevention and Regulation of Dark Patterns, 2023](#), The Gazette of India, 30 November 2023.

1093 Central Consumer Protection Authority (India), [The Guidelines for Prevention and Regulation of Dark Patterns, 2023](#), The Gazette of India, 30 November 2023, p 8.

1094 Central Consumer Protection Authority (India), [The Guidelines for Prevention and Regulation of Dark Patterns, 2023](#), The Gazette of India, 30 November 2023, pp 8–11; Singhania & Partners LLP, [Dark Patterns in India](#), Lexology, 17 April 2024, accessed 13 March 2025.

1095 The Guidelines apply to e-commerce transactions subject to South Korea’s E-Commerce Act (discussed in section 2.2) and online labelling and advertising regulated under the Fair Labelling and Advertising Act. See KFTC, [Terms and Conditions, Guideline for the Voluntary Management of Online Dark Patterns](#), 10 September 2024, accessed 13 March 2025.

1096 See Regulations 5–7, [Consumer Protection from Unfair Trading Regulations 2008 \(UK\)](#), accessed 13 March 2025. These regulations will be repealed and replicated in Part 4, Chapter 1 of the recently passed Digital Markets, Competition and Consumers Act (UK). Chapter 2 will create new obligations for businesses that offer subscription contracts to protect consumers against subscription traps. See Part 4, Chapter 2, [Digital Markets, Competition and Consumers Act 2024 \(UK\)](#), accessed 13 March 2025; Department for Business & Trade and Department for Science, Innovation & Technology, [Digital Markets, Competition and Consumers Bill Impact Assessment](#), November 2023, pp 16–21.

- On 21 June 2023, the US FTC brought enforcement action against Amazon for allegedly enrolling consumers in Amazon Prime subscriptions without their consent, and frustrating their attempts to cancel using ‘dark patterns’.¹⁰⁹⁷ The US FTC’s complaint alleges that Amazon violated the Federal Trade Commission Act and the Restore Online Shoppers’ Confidence Act,¹⁰⁹⁸ by deliberately designing its Prime cancellation process to be ‘labyrinthine’, and slowing or rejecting user experience changes that would simplify the process because those changes would have adversely affected Amazon’s profits.¹⁰⁹⁹ The US FTC’s complaint includes excerpts from an internal Amazon document that used the word ‘misdirection’ to describe the company’s practice of forcing consumers to find a small blue-text link to make a purchase on Amazon’s online marketplace without joining Prime, while using a far more prominent button saying ‘Get FREE Two-Day Shipping’ that enrolled consumers in Prime.¹¹⁰⁰ Amazon has said it disputes the US FTC’s allegations.¹¹⁰¹

An unfair trading practices prohibition could benefit users of online marketplaces

The ACCC continues to support the addition of an economy-wide unfair trading practices prohibition to the ACL, to help address a range of online and offline business practices, including some which may occur on general online retail marketplaces.¹¹⁰² While some practices consumers find concerning may be addressed through existing provisions of the ACL, not all of them are likely to be covered by these existing laws. The ACCC submission to the Treasury’s Unfair Trading Practices: Consultation Regulation Impact Statement noted existing provisions may not cover conduct that distorts consumer and small business choice without being misleading (e.g. obfuscating relevant information). Provisions also do not apply to conduct that is significantly harmful but does not meet the threshold of unconscionability.¹¹⁰³ However, these practices are likely to result in significant consumer detriment.¹¹⁰⁴

1097 US FTC, [FTC Takes Action Against Amazon for Enrolling Consumers in Amazon Prime Without Consent and Sabotaging Their Attempts to Cancel](#), Press Release, 21 June 2023, accessed 13 March 2025.

1098 US FTC, [FTC Takes Action Against Amazon for Enrolling Consumers in Amazon Prime Without Consent and Sabotaging Their Attempts to Cancel](#), Press Release, 21 June 2023, accessed 13 March 2025; US District Court Western District of Washington, [Complaint for Permanent Injunction, Civil Penalties, Monetary Relief, and Other Equitable Relief](#), Case 2:23-cv-00932, 21 June 2023, accessed 13 March 2025, p 3.

1099 US District Court Western District of Washington, [Federal Trade Commission, Plaintiff, v Amazon.com, Inc, a corporation, Defendant](#), Complaint for Permanent Injunction, Civil Penalties, Monetary Relief, and Other Equitable Relief, Case 2:23-cv-00932, 21 June 2023, accessed 13 March 2025, p 3.

1100 US FTC, [FTC Adds Senior Executives Who Played Key Roles in Prime Enrollment Scheme to Case Against Amazon](#), Press Release, 20 September 2023, accessed 13 March 2025.

1101 MLex, [Amazon disputes US FTC’s allegations about dark patterns](#), MLex, 21 June 2023, accessed 13 March 2025.

1102 The ACCC has previously advocated for an unfair trading practices prohibition in a 2023 submission to Treasury’s Unfair trading practices consultation regulation impact statement. See ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC Submission to Treasury](#), November 2023. The ACCC has also advocated for the prohibition in the original Digital Platforms Inquiry and several previous reports of this Inquiry. See, for example, ACCC, [Digital Platforms Inquiry Final Report](#), 26 July 2019, p 26; ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 5, 39–40, 52, 72; ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 64–71.

1103 See ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC Submission to Treasury](#), November 2023, p 5.

1104 See ACCC, [Unfair trading practices: Consultation Regulation Impact Statement – ACCC Submission to Treasury](#), November 2023, p 6.

As discussed in section 2.2, the ACCC welcomes the Government's October 2024 announcement of forthcoming legislative reform to create a general prohibition on unfair trading practices, including to address subscription traps, manipulative online practices, and practices requiring consumers to provide more information than necessary to make an online purchase.¹¹⁰⁵

Fake reviews and review manipulation remain a concern on general online retail marketplaces

As it is often impractical or unfeasible for consumers to physically examine products for sale on online retail marketplaces, consumers rely on other indicators such as online reviews to determine the quality of goods. This means manipulated or fake reviews can erode trust and lead to consumers purchasing unsuitable or harmful products.¹¹⁰⁶

Truthful online reviews can be beneficial for consumers in many ways, including as an important source of information and a way of regulating the quality of goods sold on an online marketplace. However, there is a risk that online reviews may be manipulated, leading to negative outcomes for business users, consumers and online marketplaces themselves.¹¹⁰⁷

Review manipulation is likely to affect a significant number of Australian consumers who use online marketplaces. According to the ACCC consumer survey and as shown in figure 3.28, more than half (54%) of respondents who had made a purchase on at least one general online retail marketplace in the past 12 months said product reviews on these marketplaces had either a large or very large influence on their decision to purchase a product, with only 13% saying reviews had a very small influence or none at all.¹¹⁰⁸

1105 Prime Minister of Australia, [Albanese Government to stop the rip offs from unfair trading practices](#), Press Release, 16 October 2024, accessed 13 March 2025.

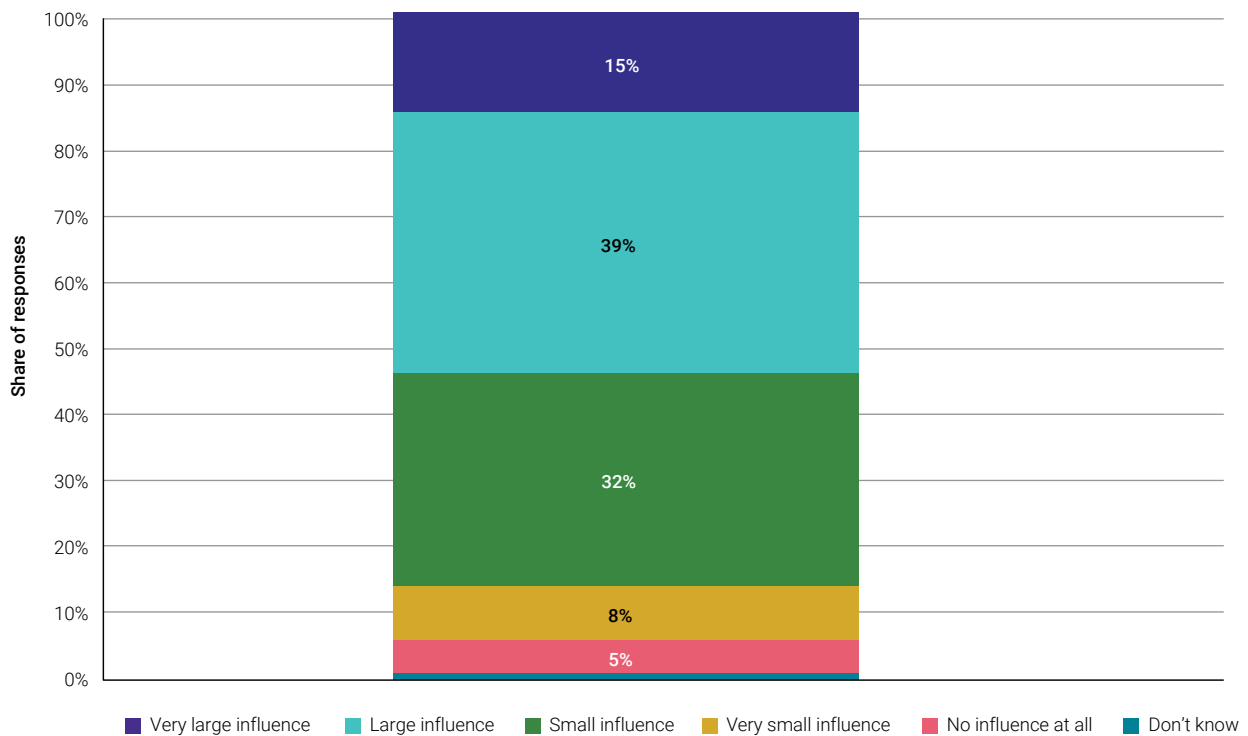
1106 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 43–44. Review manipulation can include intentionally creating misleading or false positive reviews for a business or false negative reviews of its competitors, removing negative reviews for the business, or otherwise manipulating reviews in a negative way (such as by offering rewards to genuine consumers but only if they remove a negative review or post a 5-star review).

1107 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 28.

1108 A further 32% of online marketplace shoppers said product reviews had a small influence on their decision to purchase a product, and 1% didn't know. Loneragan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 84–85.

Figure 3.28: Influence of consumer product reviews on online marketplace shoppers' purchasing decisions

How much influence do product reviews published and visible on general online marketplaces have on your decision to purchase a product?



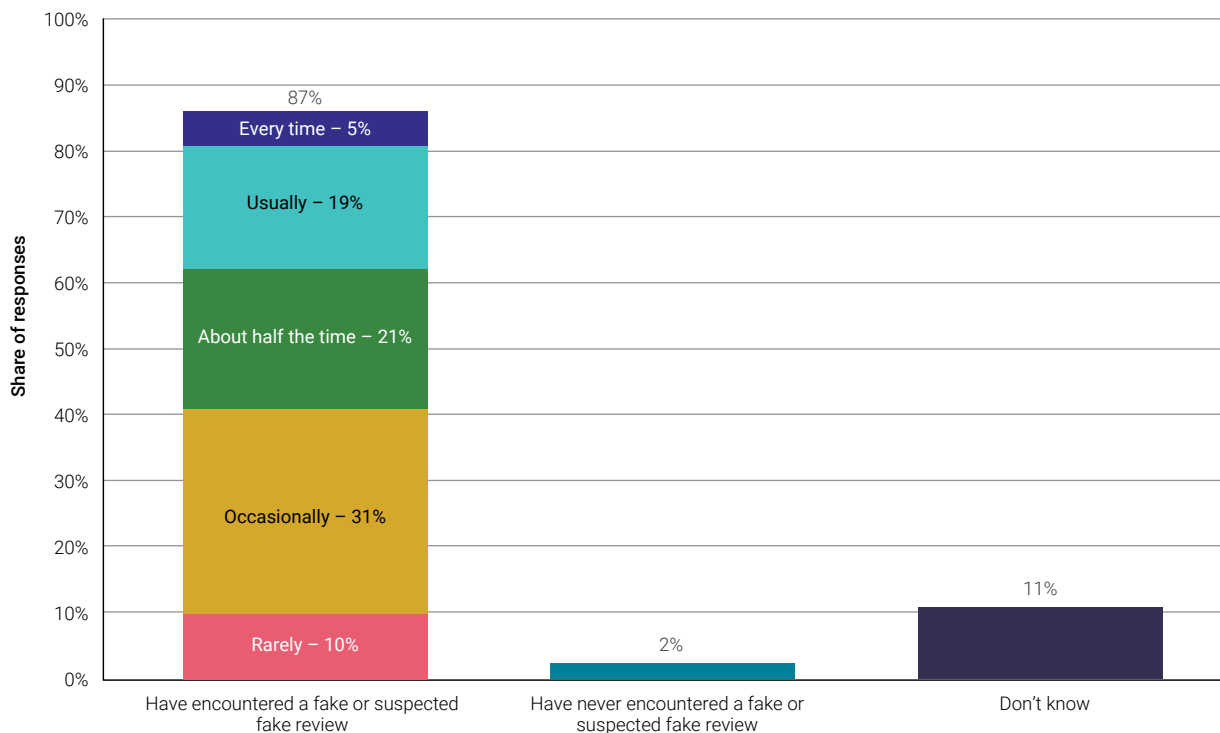
Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 84. Question G16 (How much influence do product reviews published and visible on general online marketplaces have on your decision to purchase a product?). Filtered to consumers who purchased from a general online marketplace in the last 12 months. Survey of Australian consumers aged 14+, conducted October–November 2024. Note that question G16 used a unipolar scale to measure the extent to which online marketplace users surveyed were influenced by product reviews, on a scale of 'no influence at all' to 'very large influence'.

In addition, as shown in figure 3.29, 45% of those online marketplace users indicated they had encountered reviews which they knew or strongly suspected were fake at least half the time they used general online retail marketplaces. A further 41% said they had encountered such reviews rarely or occasionally, and only 2% said they had never encountered them.¹¹⁰⁹

¹¹⁰⁹ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 85.

Figure 3.29: Frequency with which consumers encounter fake or suspected fake reviews

How often do you encounter reviews which you know, or strongly suspect are fake reviews when using general online marketplaces?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 85. Question G17 (How often do you encounter reviews which you know, or strongly suspect are fake reviews when using general online marketplaces?). Filtered to consumers who purchased from a general online marketplace in the last 12 months. Survey of Australian consumers aged 14+, conducted in October–November 2024.

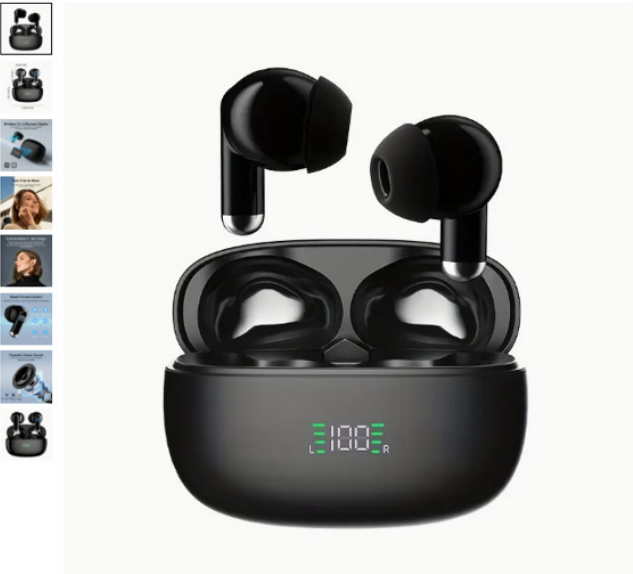
The ACCC notes these survey results may include some genuine reviews that consumers mistakenly perceived as fake. However, they do not include other types of review manipulation, such as businesses choosing to only publish positive reviews and delete negative ones, because consumers would typically have little or no way of ascertaining whether this has occurred. Accordingly, it is possible that fake reviews and review manipulation are more prevalent on online marketplaces than consumers realise.

In addition, the ACCC has observed that Temu may display customer reviews and ratings for ‘similar items’ if reviews for a specific item are not available, as shown in figure 3.30 below.¹¹¹⁰ It is not clear to the ACCC how Temu determines similarity between items, but the ACCC is concerned that consumers may suffer financial or other harm if they purchase a product based on customer reviews for a different product.

¹¹¹⁰ Temu, [Wireless Headphones, LED Power Display Screen, Bass Stereo Sound, In-Ear Wireless Headset, Long Working Time, Built-in Microphone, Suitable for iPhone and Android Phones, TV, Tablet PC, Delivery, Gaming](#), Headphones, Earbuds & Accessories, accessed 13 March 2025.

Figure 3.30: Example of reviews for ‘similar items’ being displayed on Temu

Home > Electronics > Headphones, Earbuds & Accessories > Wireless Headphones, LED P...



No item reviews yet

But we found 992 reviews from similar items on Temu.

Reviews from similar items on Temu

Allen Rigby on July 18, 2024

★★★★★

Wireless Headphones, LED Power Display Screen, Bass Stereo Sound, In-Ear Wireless Headset, Long Working Time, Built-in Microphone, Suitable for iPhone and Android Phones, TV, Tablet PC, Delivery, Gaming, Black

10 sold | Provided by

AU\$12.76 ~~73.07~~ -82% Almost sold out Pay AU\$3.19 today **Wen**

Free shipping special for you Exclusive offer

Color: Black

Qty 1

Add to cart 82% OFF

Free shipping

Standard: FREE

Delivery: Mar 19-27

Get a AU\$5.00 credit for late delivery

Courier company: Australia Post iMile ...

Express: AU\$29.95 or AU\$19.95 (or AU\$89.00)

Delivery: Mar 19-25

Get a AU\$30.00/AU\$20.00 credit w delivery

Courier company: Australia Post

Free returns • Price adjustment

Temu's Tree Planting Program (18M+ trees)

Shopping security

Safe Payment Options

Secure logistics

Secure privacy

Purchase protection

Source: Screenshot from Temu.

International regulators are seeking to address the issue of fake reviews and review manipulation

As box 3.13 shows, several jurisdictions have legislated prohibitions on fake reviews, often as a type of unfair trading practice.

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Box 3.13: Examples of international regulatory action on fake reviews

- The EU's Unfair Commercial Practices Directive prohibits practices such as: stating product reviews are submitted by consumers who have used or purchased the product, without taking reasonable and proportionate steps to verify this; submitting or commissioning false consumer reviews or endorsements; and misrepresenting consumer reviews or endorsements to promote products.¹¹¹¹
- Part 4, Chapter 1 of the UK's Digital Markets, Competition and Consumers Act 2024 deems certain practices related to fake, incentivised or misleading consumer reviews as prohibited unfair commercial practices.¹¹¹² This covers: submitting or commissioning fake reviews; publishing consumer reviews in a misleading way; and publishing consumer reviews without taking reasonable and proportionate steps to avoid publishing fake reviews, reviews that conceal that they are incentivised, or reviews containing false or misleading information.¹¹¹³
- On 14 August 2024, the US FTC banned a number of fake review practices on online marketplaces and other digital platforms, including creating, selling, buying or publishing fake reviews; buying positive or negative reviews; publishing insider reviews (e.g. reviews by an employee) without disclosing the insider's connection to the business; review suppression; and misleading company-controlled review websites.¹¹¹⁴

Stakeholders and consumer groups support strengthened action against fake reviews and review manipulation

In its submission to this Report, the Australian Communications Consumer Action Network (ACCAN) said that while mandatory scam codes may help address scams, they do not address other harms from harmful apps and fake reviews. ACCAN urged the Australian Government 'to introduce all the targeted digital platform measures to prevent and remove scams, harmful apps and fake reviews' that the ACCC recommended in the Regulatory Reform Report.¹¹¹⁵

The Commonwealth Bank of Australia likewise stated that it 'supports the targeted measures recommended by the ACCC to protect users of digital platforms, including mandatory processes to prevent and remove scams, harmful apps and fake reviews.'¹¹¹⁶

Booking.com submitted that it 'supports a code of conduct which would include reasonable measures to verify users and reviews and a transparent process for addressing fake listings within the digital economy.'¹¹¹⁷

The NSW Small Business Commissioner noted it had received complaints from small businesses about several '[p]ersistent issues' on digital platforms which posed ongoing detriments to businesses.

1111 See Annex I, paragraphs 23b–23c in EU, [Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation \(EC\) No 2006/2004 of the European Parliament and of the Council \(Unfair Commercial Practices Directive\) \(Text with EEA relevance\)](#), Annex I, accessed 13 March 2025.

1112 See section 225(4)(c) and Schedule 20, paragraph 13, [Digital Markets, Competition and Consumers Act 2024 \(UK\)](#), accessed 13 March 2025.

1113 See Schedule 20, paragraph 13, [Digital Markets, Competition and Consumers Act 2024 \(UK\)](#), accessed 13 March 2025.

1114 US FTC, [Federal Trade Commission Announces Final Rule Banning Fake Reviews and Testimonials](#), Press Release, 14 August 2024, accessed 13 March 2025.

1115 ACCAN, [Submission to the Final Report](#), 11 October 2024, pp 3–4.

1116 Commonwealth Bank of Australia, [Submission to the Final Report](#), 11 October 2024, pp 3–4.

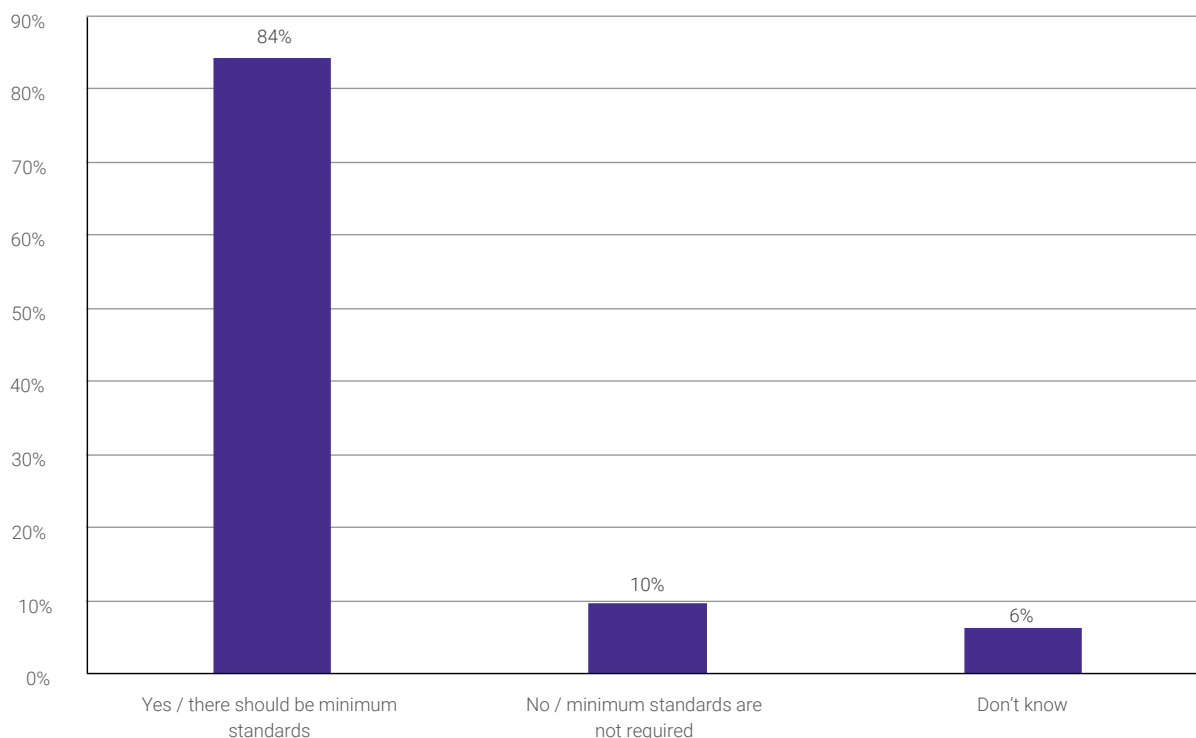
1117 Booking.com, [Submission to the Final Report](#), 11 October 2024, p 4.

These issues included fake reviews, as well as payment delays, loss of access to accounts, difficulties understanding terms and conditions, and scams.¹¹¹⁸

In the ACCC's consumer survey, a significant majority of Australian consumers who had made at least one general online retail marketplace purchase in the past 12 months (84%) said they believed there should be minimum standards or obligations for marketplaces to prevent fake customer reviews, compared to only 10% who considered this unnecessary.¹¹¹⁹

Figure 3.31: Consumer support for minimum standards to prevent fake reviews on online marketplaces

In your opinion, should there be minimum obligations on general online marketplaces that use customer reviews to prevent fake reviews?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 86. Question G19 (In your opinion, should there be minimum obligations on general online marketplaces that use customer reviews to prevent fake reviews?). Filtered to consumers who purchased from a general online marketplace in the last 12 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

Online marketplaces should be subject to minimum obligations to address fake reviews

The ACL sets out that it is against the law in certain circumstances to make false or misleading representations, such as create fake or misleading reviews, or to arrange for others to create such reviews.¹¹²⁰

1118 NSW Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 1.

1119 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 86.

1120 See sections 29(1)(e)-(f) of Schedule 2 ('Australian Consumer Law'), [Competition and Consumer Act 2010 \(Cth\)](#), accessed 13 March 2025.

The ACCC has previously taken enforcement action to address fake reviews on online marketplaces or other digital platforms.¹¹²¹ The ACCC also continues to monitor for review manipulation and potentially fake reviews. For example, in December 2023, it announced the results of an internet sweep to identify fake or misleading online reviews, which found 37% of the 137 businesses reviewed had engaged in concerning conduct.¹¹²² The sweep reviewed 24 businesses that offer services to create fake positive or negative reviews, remove negative reviews and manage the collection and display of reviews.¹¹²³

The impact of reviews on consumer purchasing behaviour, as well as the importance of search result rankings or having products ‘featured’ on online marketplaces, can create an incentive for fraudulent actors to engage in review manipulation, such as paying consumers or others to write fake reviews to enhance the credibility of their own products and services or degrade competitors’ reputations.¹¹²⁴ This means it is important for sellers on online marketplaces to have access to robust internal and external dispute resolution processes, to help ensure fake or manipulated reviews can be identified and taken down promptly. The ACCC’s recommended internal and external dispute resolution measures are discussed under ‘dispute resolution issues’ below.

The ACCC notes that some general online retail marketplace operators have taken action to reduce the number of fake reviews on their platform. For example, Amazon has taken legal action against ‘fake review brokers’ and has said it blocked more than 250 million suspected fake reviews from its stores worldwide in 2023.¹¹²⁵ Nonetheless, the results of the ACCC’s 2023 internet sweep and its consumer survey for this Report suggest Australian consumers are continuing to regularly encounter fake or manipulated reviews when they use general online retail marketplaces.

Accordingly, and as noted in the September 2022 Regulatory Reform Report, the ACCC continues to support requirements for online marketplaces to, at a minimum:

- implement processes to prevent and remove scams and fake reviews, such as having a ‘notice-and-action’ mechanism allowing users to report these issues and verifying advertisers and merchants
- publish review verification processes
- report on scams, fake reviews, and measures taken to address them.¹¹²⁶

Unsafe products on general online marketplaces remain a concern

The 2022 Report on General Online Marketplaces noted that the harm unsafe products can cause to consumers includes both monetary and non-monetary detriment, including a loss of wellbeing, medical expenses, reduced productivity, property damage, and in extreme cases, loss of life.¹¹²⁷

In this context and considering the high proportion of Australian consumers who use general online retail marketplaces, it is important that marketplaces which sell products to Australian consumers take steps to minimise the risk of such harms. The ACCC encourages all online marketplaces to:

- implement effective pre-listing and supplier vetting measures to block unsafe products from appearing or being re-listed on their platforms

1121 See, for example, Federal Court of Australia, [Australian Competition and Consumer Commission v Service Seeking Pty Ltd](#), [2020] FCA 1040, 22 July 2020, accessed 13 March 2025; Federal Court of Australia, [Australian Competition and Consumer Commission v Meriton Property Services Pty Ltd](#), [2017] FCA 1305, 10 November 2017, accessed 13 March 2025.

1122 ACCC, [Online reviews and testimonials](#), 7 December 2023, p 1.

1123 ACCC, [Online reviews and testimonials](#), 7 December 2023, p 6.

1124 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 44.

1125 Amazon, [Amazon’s latest actions against fake review brokers: New lawsuits target bad actors attempting to deceive customers](#), 14 October 2024, accessed 13 March 2025.

1126 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 10.

1127 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 42.

- ensure they take effective action to address unsafe product listings in a timely manner
- invest in their technology over time to improve the detection and removal of unsafe products.¹¹²⁸

While certain high-risk products have mandatory safety standards in Australia,¹¹²⁹ the ACCC has observed that unsafe products are being made available to Australian consumers via online marketplaces. The ACCC is also aware of cases where Australian consumers have suffered physical injury as a result of unsafe products purchased from online marketplaces (see box 3.14).¹¹³⁰

Box 3.14: Reports of product safety injury – hooded jumpers sold on Temu

In September 2024, the ACCC became aware through a media article of a tragic incident involving a child being seriously injured after sparks from a bonfire blew onto the hooded jumper she was wearing, causing it to ignite. The child reportedly suffered burns to 13% of their body including the face, arm, and chest.¹¹³¹

The glow in the dark hooded jumper was reportedly purchased from Temu, who notified a voluntary recall to the ACCC on behalf of the supplier. The product was recalled because it did not include the warning labels required for it to comply with the mandatory standard for children's nightwear and limited daywear. As Temu had the contact details of all consumers that purchased the product, it was able to alert them to the safety issue and provide them with a full refund. The voluntary recall was published on the ACCC's Product Safety website.¹¹³²

Although Temu voluntarily recalled the product after the incident, the ACCC would like to see businesses (including Australian Product Safety Pledge signatories) do more to prevent unsafe products being made available to Australian consumers. This includes products that do not meet mandatory safety standards, or that have been recalled, banned, or otherwise identified as unsafe in Australia or elsewhere.

The ACCC notes that some general online retail marketplaces, including Amazon Australia and eBay Australia, as well as online retailers such as AliExpress and MyDeal are signatories to the ACCC's voluntary Australian Product Safety Pledge (the Pledge), which aims to protect consumers from product safety risks when shopping online.¹¹³³ As signatories, these platforms have committed to 12 product safety-related actions (listed in box 3.15) and to reporting annually on their performance against 3 key performance indicators.¹¹³⁴ In the year to 30 June 2024, signatories collectively reported that they voluntarily removed over 20,000 potentially unsafe products from their marketplaces.¹¹³⁵

1128 ACCC, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 12.

1129 In addition, the Australian Consumer Law's consumer guarantee as to acceptable quality already includes a minimum requirement as to the safety of goods supplied in trade or commerce in Australia. See Schedule 2 ('Australian Consumer Law'), s 54(2) in Federal Register of Legislation, [Competition and Consumer Act 2010 \(Cth\)](#), accessed 13 March 2025. Where there is a major failure with a good (such as where it is unsafe), a consumer can choose to return the good for a refund or replacement, or keep it and seek compensation for the drop in value caused by the problem. See The Treasury, [Consumer guarantees and supplier indemnification under the Australian Consumer Law, Consultation on the design of proposed new civil prohibitions and penalties](#), 16 October 2024, p 6.

1130 See, for example, J Taylor, 'Temu recalls flammable glow-in-the-dark jumper after 8yo girl suffers burns', *ABC News*, 7 January 2025, accessed 13 March 2025; ACCC Product Safety, [Glow in the dark hooded jumper – sold on Temu](#), 14 November 2024, accessed 13 March 2025.

1131 S Swain, 'Skin just falling off: Temu jumper recalled after girl horrifically burnt', *Nine.com.au*, 7 January 2025, accessed 13 March 2025.

1132 ACCC Product Safety, [Glow in the dark hooded jumper – sold on Temu](#), 14 November 2024, accessed 13 March 2025.

1133 ACCC Product Safety, [Online product safety pledge](#), accessed 13 March 2025; ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 48–49.

1134 ACCC Product Safety, [Online product safety pledge](#), accessed 13 March 2025.

1135 ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 1.

Box 3.15: Australian Product Safety Pledge (the Pledge)

Signatories to the Pledge commit to 12 product safety-related actions. The ACCC also publishes an annual report outlining the signatories' overall performance on the following Pledge commitments:

1. Regularly consult the ACCC Product Safety website and other relevant sources for information on recalled or unsafe products. Take appropriate action on identified products. This could include removing product listings, blocking the sale of a product into Australia, and telling consumers and sellers.
2. Have a dedicated contact for Australian regulatory authorities to notify and request take-downs of recalled or unsafe products.
3. Remove identified unsafe product listings within 2 business days of receiving a take-down request from Australian regulatory authorities. Tell authorities about the action taken and any relevant outcomes.
4. Cooperate with Australian regulatory authorities in identifying, as far as possible, the supply chain of unsafe products. Respond to data or information requests within 10 business days if this information isn't publicly available.
5. Have an internal system for processing data or information requests and take-downs of unsafe products.
6. Have a clear pathway for consumers to notify the Pledge signatory of unsafe product listings. Such notifications are treated according to the signatory's processes. Give responses to consumers, where appropriate, within 5 business days.
7. Help sellers comply with Australian product safety laws. Share information with sellers on compliance training and guidance.
8. Cooperate with Australian regulatory authorities and sellers to tell consumers about relevant recalls or corrective actions on unsafe products. This could include requesting sellers to contact concerned buyers.
9. Set up processes to prevent or restrict the sale of banned, non-compliant and recalled products.
10. Have reasonable measures to act against repeat offenders selling unsafe products, including in cooperation with Australian regulatory authorities.
11. Take measures to prevent the reappearance of unsafe product listings already removed.
12. Explore the use of new technologies and innovation to improve the detection and removal of unsafe products.

However, the ACCC has recently expressed concerns that some platforms, including Pledge signatories, are yet to implement effective pre-listing measures to protect consumers from unsafe products online, and that in some cases, signatories are not responding to requests for information or to take effective action to address unsafe product listings in a timely manner.¹¹³⁶ For example, the ACCC's 2023–24 Product Safety Pledge Annual Report noted that although there was overall a significant increase in signatories responding to take-down requests, some signatories did not perform a sweep for the same product listed by different suppliers.¹¹³⁷ The report also urges signatories to invest in improving measures to prevent, detect and remove re-listings promptly. These

¹¹³⁶ ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 1.

¹¹³⁷ ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 6.

measures must be complemented by clear compliance and enforcement processes, and strong sanctions to respond to, and deter, non-compliance.¹¹³⁸

Given the investment that marketplaces are making in artificial intelligence to optimise their business models (discussed above at section 3.3.2), the ACCC expects platforms to invest in new technologies, or prioritise the application of existing technologies being utilised on platforms for other purposes, to improve consumer product safety outcomes online.¹¹³⁹

The 2023–24 Pledge Annual Report signals the ACCC’s intention to strengthen existing Pledge commitments and reporting requirements.¹¹⁴⁰ The ACCC expects all online marketplaces to take active and effective steps to mitigate risks to consumers from unsafe products available on their platforms. The ACCC will be discussing options to improve product safety outcomes with signatories in the first part of 2025.

In addition, the ACCC notes that as of 13 March 2025, some general online retail marketplaces such as Kogan, Shein and Temu are not signatories to the Product Safety Pledge.

International regulators seek to address product safety concerns

Box 3.16 shows some examples of international legislative and regulatory action to address product safety concerns on online marketplaces.

Box 3.16: International legislation and enforcement action regarding product safety concerns on general online retail marketplaces

- The EU’s Digital Services Act requires online marketplaces to have procedures for removing illegal goods, verify information on traders, enable sellers to comply with information requirements, and randomly check for illegal products.¹¹⁴¹ Platforms designated as a Very Large Online Platform under the Digital Services Act¹¹⁴² are also subject to audited risk assessments, including analysis of their vulnerability to illegal goods on their platforms, and annual audits of their risk mitigation measures.¹¹⁴³
- In December 2024, the EU’s General Product Safety Regulation came into effect.¹¹⁴⁴ It includes specific product safety obligations for online marketplaces (amongst others).¹¹⁴⁵

1138 ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 11.

1139 ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 12.

1140 ACCC Product Safety, [Australian Product Safety Pledge – Annual Report 2024](#), 17 December 2024, p 13.

1141 European Commission, [Questions and answers on the Digital Services Act](#), How does the DSA protect people from unsafe or counterfeit goods?, Press corner, 23 February 2024, accessed 13 March 2025; EU, [Regulation \(EU\) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC \(Digital Services Act\) \(Text with EEA relevance\)](#), 19 October 2022, accessed 13 March 2025.

1142 Such marketplaces include 4 online marketplaces which also operate in Australia: AliExpress, Amazon, Shein and Temu. See European Commission, [Supervision of the designated very large online platforms and search engines under DSA](#), 18 October 2024, accessed 13 March 2025.

1143 European Commission, [Questions and answers on the Digital Services Act](#), How does the DSA protect people from unsafe or counterfeit goods?, Press corner, 23 February 2024, accessed 13 March 2025.

1144 EU, [General product safety regulation \(2023\)](#), accessed 13 March 2025.

1145 EU, [Regulation \(EU\) 2023/988 of the European Parliament and of the Council of 10 May 2023 on general product safety, amending Regulation \(EU\) No 1025/2012 of the European Parliament and of the Council and Directive \(EU\) 2020/1828 of the European Parliament and the Council, and repealing Directive 2001/95/EC of the European Parliament and of the Council and Council Directive 87/357/EEC \(Text with EEA relevance\)](#), 10 May 2023, accessed 13 March 2025.

- On 31 October 2024, the European Commission opened formal proceedings to assess whether Temu may have breached the Digital Services Act, focusing on Temu's systems to limit the sale of non-compliant products in the EU. Assessment will consider addictive design, recommended content and products to users, and researcher access to publicly accessible data.¹¹⁴⁶
- In July 2024, the US Consumer Product Safety Commission (US CPSC) issued a Decision and Order against Amazon. Under the US CPSC legal framework, the US CPSC decision determined that Amazon was a 'distributor' of certain products that are defective/fail to meet consumer product safety standards, and therefore bears legal responsibility for their recall. Amazon concluded litigation on 17 January 2025, with the US CPSC issuing an order that Amazon notify purchasers about hazardous products for which Amazon was a distributor.¹¹⁴⁷
- The Canada Consumer Product Safety Act makes it illegal to knowingly advertise or sell a consumer product that is a danger to human health or safety.¹¹⁴⁸ It also prohibits manufacturers and importers from manufacturing, importing, advertising or selling a consumer product that is a danger to human health or safety.¹¹⁴⁹
- The US Integrity, Notification and Fairness in Online Retail Marketplaces for Consumers Act came into effect on 27 June 2023. This requires online marketplaces to protect consumers from counterfeit, unsafe and stolen goods by verifying high-volume third-party sellers' identities and 'making it easier for consumers to report suspicious marketplace activity'.¹¹⁵⁰

Unlike most OECD countries, Australia does not have a general safety provision that prohibits the sale of unsafe goods. Instead, the ACCC identifies safety issues once they are already in market or reacts to reports from suppliers or consumers when in some instances consumers have already been harmed.¹¹⁵¹ The introduction of new laws to prohibit the sale of unsafe goods and to protect consumers from unsafe consumer products online could put a clear obligation on businesses to ensure a product is safe before it enters the market. In the Report on General Online Retail Marketplaces, the ACCC noted that online marketplaces could be subject to a 'general safety provision' under the ACL, with clear obligations for online and offline retailers, including online marketplaces.¹¹⁵² The Australian Government's Department of the Treasury in 2019 also considered a range of options that may be effective in addressing the issue including additional enforcement and protection powers.¹¹⁵³

1146 European Commission, [Commission opens formal proceedings against Temu under the Digital Services Act](#), Press corner 31 October 2024, accessed 13 March 2025.

1147 US Consumer Product Safety Commission, [CPSC Issues Final Order to Amazon.com Outlining Remediation Plans for Hazardous Products](#), Press release, 17 January 2025.

1148 Section 8, [Canada Consumer Product Safety Act](#), S.C. 2010, c.21.

1149 Section 7, [Canada Consumer Product Safety Act](#), S.C. 2010, c.21.

1150 US FTC, [FTC Puts Online Marketplaces on Notice About Their Responsibilities Under the New INFORM Consumers Act](#), Press Release, 20 June 2023, accessed 13 March 2025.

1151 ACCC, Transcript of speech by ACCC Chair Gina Cass-Gottlieb, [ACCC Product Safety Priorities announced at National Consumer Congress speech](#), 16 June 2022, accessed 13 March 2025.

1152 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 6.

1153 The Treasury, [Consultation Regulation Impact Statement](#), Improving the Effectiveness of the Consumer Product Safety System, Consumer Affairs Australia and New Zealand, October 2019, accessed 13 March 2025, p 8.

Australian consumers and small businesses want better dispute resolution processes on and with general online retail marketplaces

In the Report on General Online Retail Marketplaces, the ACCC noted that effective dispute resolution on online marketplaces builds trust in the digital economy and is critical to ensuring consumers and sellers can exercise their rights.¹¹⁵⁴ One factor underpinning the importance of effective dispute resolution for consumers and businesses on online marketplaces is the fact that buyer-seller transactions on these platforms tend to be high in volume but low in individual value and often cross-jurisdictional, so enforcement of individual disputes through the courts is often impracticable or not cost-effective.¹¹⁵⁵

Small businesses who operate on online marketplaces can face difficulties in resolving disputes, with delayed dispute resolution affecting small business revenue.¹¹⁵⁶ The types of disputes experienced by small businesses include payment delays, loss of access to accounts, difficulties understanding terms and conditions, fake reviews and scams.¹¹⁵⁷

Small businesses are experiencing increased challenges with resolving disputes, as dispute resolution methods change. The Australian Small Business and Family Enterprise Ombudsman submitted that cases of small businesses experiencing problems with a digital platform have doubled since July 2022,¹¹⁵⁸ while the NSW Small Business Commissioner observed a trend of dispute resolution becoming more challenging and complex.¹¹⁵⁹ The Ombudsman stated that digital platforms use automated systems as complaint handling mechanisms and small businesses must spend time to navigate an ‘elaborate maze’.¹¹⁶⁰ The NSW Small Business Commissioner stated that contact with offshore customer service representatives to resolve disputes can be problematic, as they may not have a good understanding of obligations under Australian law.¹¹⁶¹

Consumers also experience challenges navigating disputes relating to online marketplace purchases. The ACCC has previously observed that one barrier consumers face when using online marketplaces is in working out who they have purchased an item from, and how to effectively engage with that seller to resolve their dispute.¹¹⁶² Marketplaces generally have processes in place for consumers to resolve disputes and obtain remedies, including communication tools for consumers and sellers to negotiate, marketplace-provided money-back guarantees, and escalation pathways.¹¹⁶³

However, the effectiveness of these processes relies on consumers being able to easily identify and act on their rights in digital environments where it is not always clear exactly who they are transacting with.¹¹⁶⁴ Among the 42% of general online retail marketplace users in the ACCC’s consumer survey who had experienced an issue on an online marketplace where they felt entitled to a refund, 86% said they had attempted to resolve a dispute of this type with a marketplace.¹¹⁶⁵ Smaller but still significant majorities of these consumers said they felt satisfied with the outcomes of such attempts, though, as shown in figure 3.32, this varied somewhat across different marketplaces.¹¹⁶⁶

1154 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 4.

1155 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 49–50.

1156 NSW Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 2.

1157 NSW Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 1.

1158 Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

1159 NSW Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 1.

1160 Australian Small Business and Family Enterprise Ombudsman, [Submission to the Final Report](#), 11 October 2024, p 2.

1161 NSW Small Business Commissioner, [Submission to the Final Report](#), 11 October 2024, p 2.

1162 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 4.

1163 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 50.

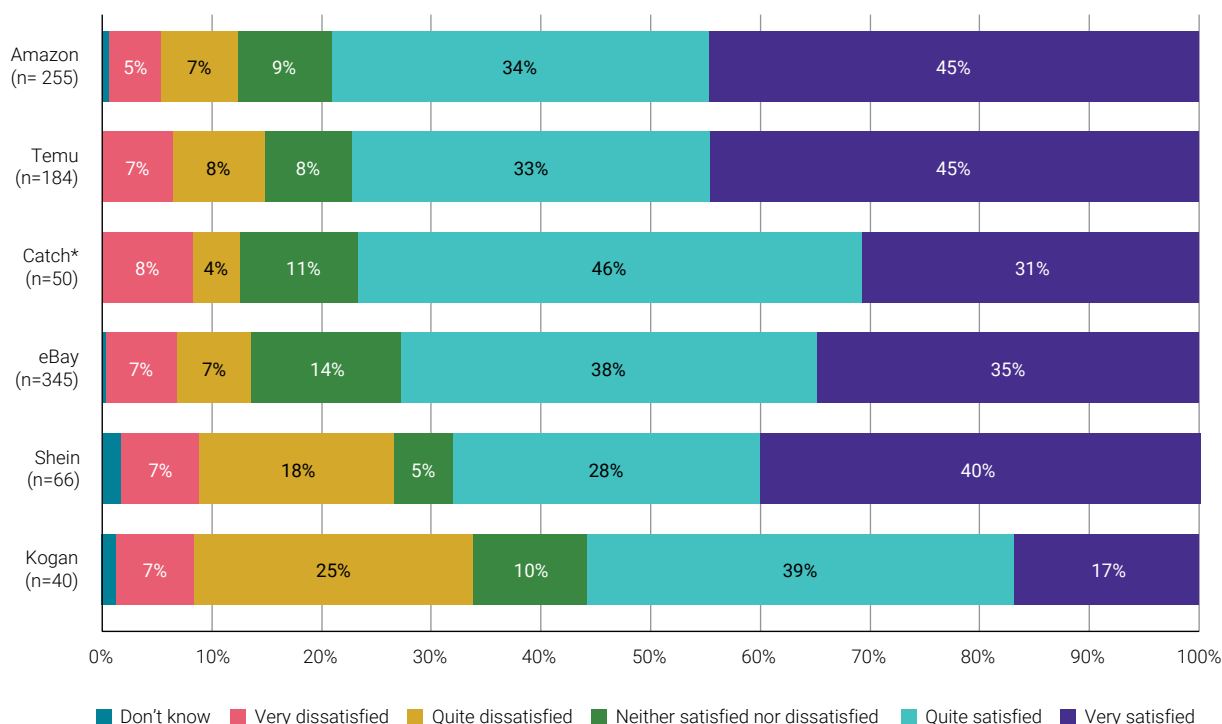
1164 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 50–51.

1165 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 75.

1166 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 75–76.

Figure 3.32: Consumers' levels of satisfaction when attempting to resolve disputes with online marketplaces

How satisfied were you with your experience attempting to resolve a dispute with...



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 79. Question G6 (How satisfied were you with your experience attempting to resolve a dispute with...). Filtered to consumers who purchased from a general online marketplace in the last 12 months and attempted to resolve a dispute with a marketplace. Survey of Australian consumers aged 14+, conducted October–November 2024. *Catch will cease trading on 30 April 2025.

These results suggest many Australians who buy products on online marketplaces are happy with how their disputes were resolved on these platforms. However, as the ACCC has previously observed, sellers may experience negative outcomes from online marketplaces' processes for resolving buyer-seller disputes.¹¹⁶⁷ Online marketplaces have an incentive to make a consumer's experience as streamlined and positive as possible, and this may include consumer-centric dispute resolution processes.¹¹⁶⁸

As shown in table 3.1, online marketplaces have varied refund and return policies for Australian consumers. Refunds and returns are one area where consumer disputes may arise. As such, refund and return policies may affect consumer satisfaction with dispute resolution and with online marketplaces more generally. Research has shown that effective and efficient refund policies can affect consumer loyalty to a retailer, and lenient return policies can increase purchases.¹¹⁶⁹

¹¹⁶⁷ ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 71–72.

¹¹⁶⁸ ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 30.

¹¹⁶⁹ T Rintamaki et al., [Customers' perceptions of returning items purchased online: planned versus unplanned product returners](#), *International Journal of Physical Distribution & Logistics Management*, Vol. 51 No. 4, (2021), pp 404, 416.

Table 3.1: Comparison of general online retail marketplaces' returns policies

	Amazon	eBay	Kogan	Shein	Temu
Refund and Return Policy	Most items fulfilled by Amazon AU or Amazon Global ¹¹⁷⁰ can be returned for a full refund if you change your mind.	If the item arrives faulty or damaged, or doesn't match the listing, you can return it regardless of the seller's return policy. ¹¹⁷¹	If the product isn't what you ordered, Kogan provides a replacement or refund. ¹¹⁷² Returns may be available for store credit.	You can return an item because you have changed your mind or ordered the wrong size. ¹¹⁷³	If you are not satisfied with an item you bought on Temu, you may be eligible to return it and get a refund. ¹¹⁷⁴
Refund and Return Policy – 3rd Party Goods	The above policy does not apply to items from third party sellers, or the Amazon global store. ¹¹⁷⁵	The seller decides whether they accept returns if you change your mind.	Kogan does not offer a return for third-party items. ¹¹⁷⁶		
When can items be returned?	Within 30 days of receipt of delivery.	At discretion of the seller.	Within 14 days of taking delivery.	Within 45 days of the purchase date.	Within 90 days of purchase for most items.
Who pays to return goods?	Items may be eligible for free returns. Most change of mind returns have return shipping fees. Amazon AU offers Free Return shipping on some Amazon AU fashion items.	In many cases, including eBay Plus orders, sellers may offer free returns.	Customers may have to pay for return postage.	The first 'return label' is free. Subsequent returns have postage fees.	The first return from an order is free. Subsequent returns have postage fees.
Store Credit	Amazon also offers refunds via Amazon gift card balances. ¹¹⁷⁷	N/A.	You can organise to return the product for an account credit of the purchase price of your product.	SHEIN Wallet can be used to receive a refund, however the original payment method can also be used.	Temu credits are available instead of a refund. Temu advertises that 'Refunds to Temu credits are faster than your original payment method.'

1170 AmazonGlobal is an expedited shipping program which allows purchases from the Australian Amazon online store to international customers outside Australia. This is separate to the Amazon Global Store. See Amazon, [About our returns policies](#), accessed 13 March 2025.

1171 eBay, [Returns made simple](#), Returns, accessed 13 March 2025.

1172 Kogan, [The Kogan.com guarantee & returns policy](#), accessed 13 March 2025.

1173 Shein, [Return Policy](#), accessed 13 March 2025.

1174 Temu, [Return and Refund Policy](#), 4 January 2025, accessed 13 March 2025.

1175 Amazon, [About our returns policies](#), accessed 13 March 2025.

1176 Kogan, [What is your change of mind policy?](#), General product help, 19 March 2024, accessed 13 March 2025.

1177 Amazon, [Refund Timelines](#), Help and customer service, accessed 13 March 2025.

While marketplaces can differ in their approaches to resolving buyer-seller disputes, the ACCC has noted instances of sellers being dissatisfied with the policies of particular marketplaces. For example, in July 2024, hundreds of Temu sellers reportedly protested at the marketplace's headquarters in Guangzhou, due to being unhappy with Temu requiring them to pay fines of up to 5 times the value of a sale when customers returned their purchases for a refund. At the time, Temu said it was working with the sellers to resolve the situation.¹¹⁷⁸

International regulators are seeking to provide consumers with dispute resolution mechanisms

Box 3.17: Examples of international legislation and regulatory action to establish dispute resolution mechanisms on online marketplaces

- As noted in section 2.3, in October 2023, the European Commission announced proposed reforms to expand the EU's Alternative Dispute Resolution Framework.¹¹⁷⁹ The European Commission has recommended that online marketplaces align with the quality criteria of the EU Alternative Dispute Resolution Directive,¹¹⁸⁰ make details of automated dispute resolution procedures public, grant disputing parties the right to request that dispute outcomes be reviewed by a natural person, and publish self-assessment reports every 2 years on quality criteria implementation.¹¹⁸¹
- As also discussed in section 2.3.2, the EU Platform-to-Business Regulation applies to online marketplaces in the EU and UK,¹¹⁸² with specific requirements to:
 - provide a free, accessible internal system for handling business users' complaints, which acts within a reasonable period
 - name at least 2 external mediators the platform is willing to engage to attempt settlement of disputes with business users.¹¹⁸³
- Japan's Act on Improving Transparency and Fairness of Digital Platforms came into effect on 1 February 2021.¹¹⁸⁴ It requires specified digital platforms¹¹⁸⁵ to take 'voluntary and proactive efforts toward improving the transparency and fairness' of their platforms, including by developing systems and procedures for settling complaints.¹¹⁸⁶

1178 Reuters, '[China's Temu vendors protest over penalty policy](#)', *Reuters*, 31 July 2024, accessed 13 March 2025.

1179 European Commission, '[Alternative dispute resolution for consumers](#)', accessed 13 March 2025.

1180 See Chapter II in EU, [Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation \(EC\) No 2006/2004 and Directive 2009/22/EC \(Directive on consumer ADR\)](#), 21 May 2013, accessed 13 March 2025.

1181 European Commission, '[Alternative dispute resolution for consumers](#)', accessed 13 March 2025; European Commission, '[Recommendation on quality requirements for dispute resolution procedures offered by online marketplaces and Union trade associations](#)', 17 October 2023, accessed 13 March 2025.

1182 CMA, '[Mobile ecosystems market study, Appendix A: the relevant legal framework](#)', 10 June 2022, p A2.

1183 See Article and Article 12 in EU, [Regulation \(EU\) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services \(Text with EEA relevance\)](#), 20 June 2019, accessed 13 March 2025.

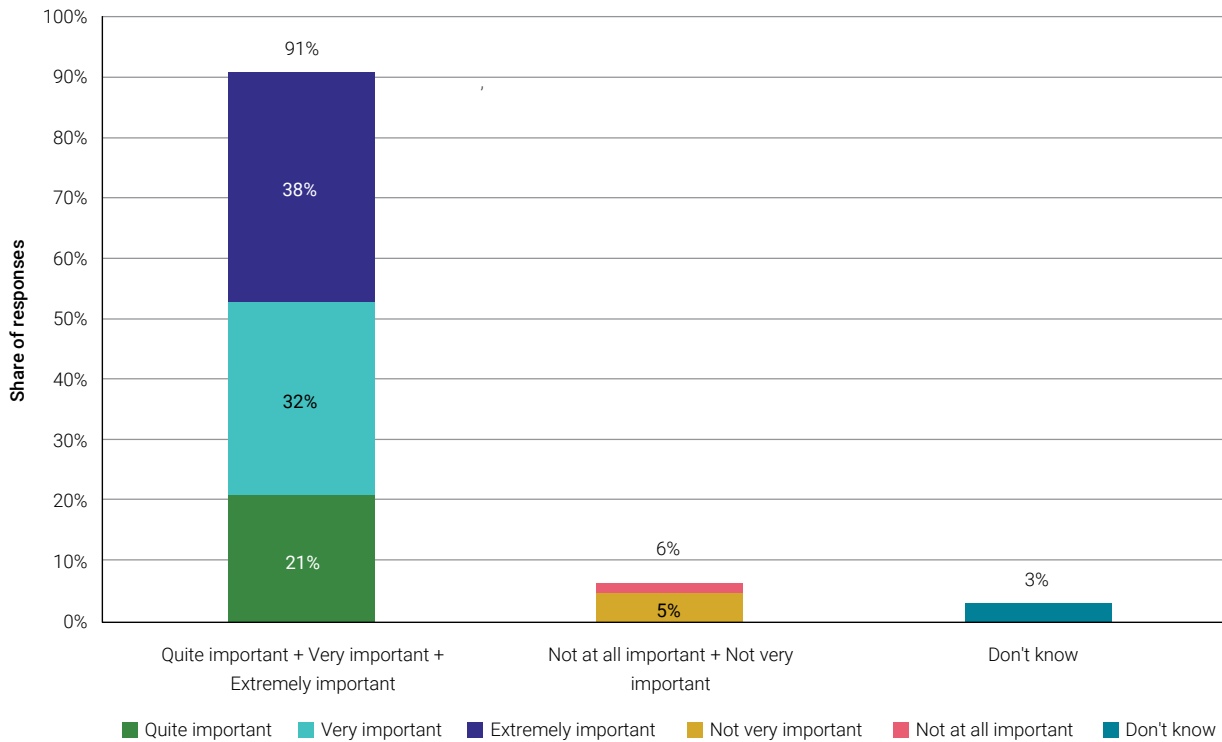
1184 Japanese Ministry of Economy, Trade and Industry, '[Key Points of the Act on Improving Transparency and Fairness of Digital Platforms \(TFDPA\)](#)', 16 April 2021, accessed 13 March 2025.

1185 At the time of writing, Japan has designated 3 so-called 'general online shopping malls' under this legislation – Amazon Japan, Rakuten and Yahoo! Shopping. Japanese Ministry of Economy, Trade and Industry, '[Toward Sound Development of Markets Surrounding Digital Platforms](#)', 2 February 2024, accessed 13 March 2025.

1186 Japanese Ministry of Economy, Trade and Industry, '[Key Points of the Act on Improving Transparency and Fairness of Digital Platforms \(TFDPA\)](#)', 16 April 2021, accessed 13 March 2025.

Australian consumers and small businesses express strong support for dispute resolution for general online retail marketplaces. Australian consumers who participated in the ACCC’s consumer survey expressed a high degree of support for a specialised, independent external dispute resolution body to resolve disputes between consumers and digital platforms. Consumers surveyed considered such a body was particularly important for general online retail marketplaces, as shown in the top panel of figure 3.33. Submissions from the NSW Small Business Commission and Australian Small Business and Family Enterprise Ombudsman also highlight how current dispute resolution processes lead to loss of revenue and resources.

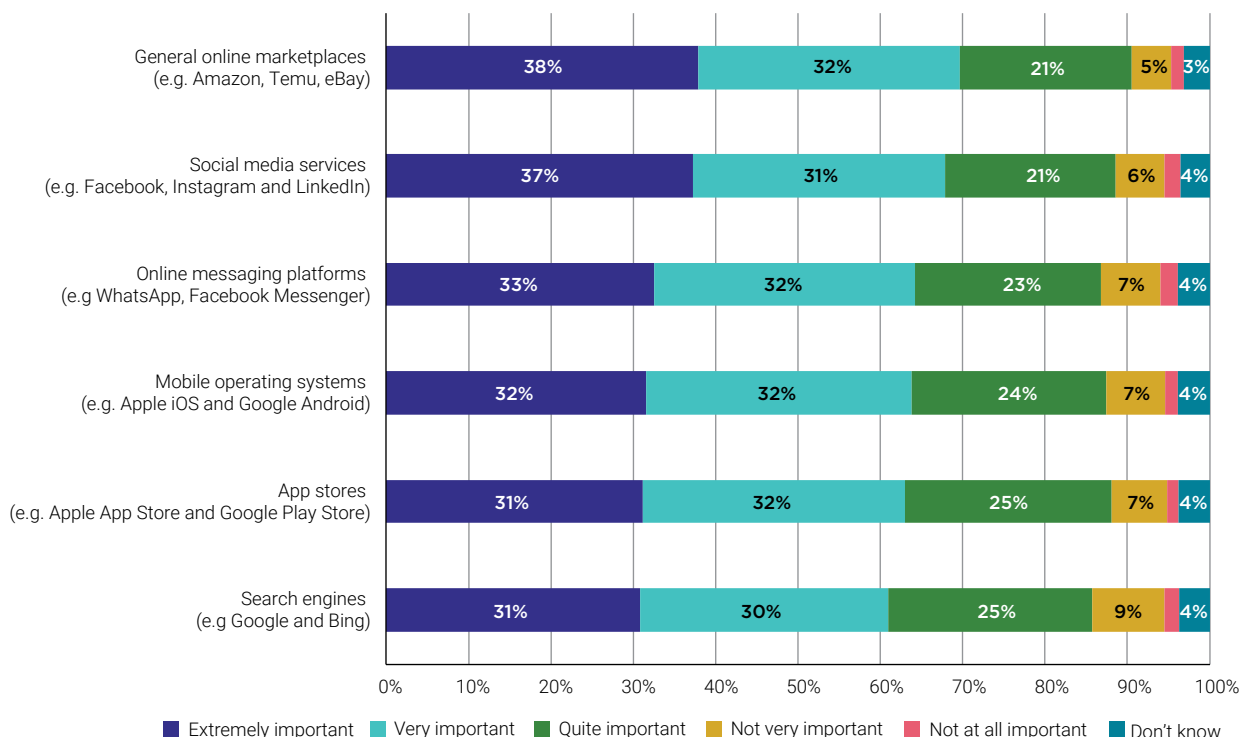
Figure 3.33: Consumer views on the importance of an independent, external dispute resolution body for general online retail marketplaces, compared to other types of digital platform services



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12. Question H2 (How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?). Survey of Australian consumers aged 14+, conducted October–November 2024. Note that question H2 measured the intensity (or lack thereof) of consumers’ support for an external dispute resolution body across various digital platform services, by using a unipolar scale which ranged from zero importance (‘not at all important’) to maximum importance (‘extremely important’).

Figure 3.34: Consumer support for an external dispute resolution body by digital platform service

How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12. Question H2 (How important do you think it is to have a specialised, independent external dispute resolution body to raise complaints to if you cannot resolve a dispute with the following types of digital services?). Survey of Australian consumers aged 14+, conducted October–November 2024.

There is an ongoing need for improved internal and independent, external dispute resolution mechanisms for online marketplaces

The ACCC considers that online marketplaces' current internal dispute resolution tools, such as money-back guarantees which place limits on how much consumers can claim, may be sufficient for many disputes that occur on online marketplaces, and indeed for many consumers, as suggested by the consumer survey results in figure 3.33.

However, as the ACCC has previously noted, these measures may be less useful for some disputes, which may include those disputes regarding problems with a product that do not arise immediately, disputes of higher value than the cost of the product and its postage or return costs, and disputes where replacement or repair is the preferred remedy.¹¹⁸⁷ Small business sellers also raise concerns about online marketplaces' money-back guarantees, as the processes can be exploited or misused by customers to the small businesses' detriment.¹¹⁸⁸

As also noted in the Report on General Online Retail Marketplaces, the ACCC sees an ongoing need for sellers to have adequate avenues for redress when they have disputes with either a consumer or a marketplace.¹¹⁸⁹

¹¹⁸⁷ ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 50.

¹¹⁸⁸ ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 71.

¹¹⁸⁹ ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 8.

Finally, in respect of disputes involving online marketplaces themselves, the ACCC is concerned that some online marketplaces' dispute resolution policies contain terms that may confuse consumers or sellers or discourage them from seeking to resolve their disputes with these marketplaces. For example, Temu's terms of use for users in Australia state that disputes between a user and Temu will be governed by the laws of the State of New York and applicable federal US laws, but that certain court disputes will be decided 'exclusively by a court of competent jurisdiction in Singapore'.¹¹⁹⁰

According to ACCC consumer survey data, 91% of surveyed consumers consider it is either quite, very or extremely important to have an independent and external dispute resolution body to resolve disputes with general online retail marketplaces.¹¹⁹¹ To help improve consumers' and sellers' experiences with general online retail marketplaces, the ACCC continues to recommend that:

- digital platforms, including online retail marketplaces, should be obliged to meet mandatory minimum internal dispute resolution standards, which should ensure accessibility, timeliness, accountability, the ability to escalate to a human representative, and transparency¹¹⁹²
- an independent external dispute resolution scheme should be established to handle any complaints which are subject to these mandatory minimum internal dispute resolution standards, and which have not been resolved to a consumer or business user's satisfaction¹¹⁹³
- these internal and external dispute resolution mechanisms should be developed in a way that would also assist sellers with resolving disputes with consumers and online marketplaces and provide them with an avenue to challenge or appeal decisions.¹¹⁹⁴

1190 See paragraphs 18.3 and 18.4 in Temu Australia, [Temu | Terms of Use](#), paras 18.3–18.4, 21 October 2024, accessed 13 March 2025.

1191 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 12.

1192 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 88–97.

1193 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 98–104.

1194 ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, p 92.

3.4 Ad tech services

Key points

- The ACCC has examined competition issues in the supply of advertising technology (ad tech) services through the Digital Platforms Inquiry, Ad Tech Inquiry, and Digital Platform Services Inquiry. The ACCC found that competition for ad tech services in Australia is ineffective, with Google dominating the ad tech supply chain. Google is the largest supplier, with no other provider having comparable scale or reach.
- The ACCC's Ad Tech Inquiry and Regulatory Reform Report considered that Google has a dominant position in the ad tech supply chain, and identified competition concerns around self-preferencing, tying conduct (including tying ad inventory to the use of ad tech services), lack of transparency (including auction, ad verification and pricing transparency) and conflicts of interest.
- Through the Ad Tech Inquiry and Regulatory Reform Report, the ACCC has recommended that sector-specific rules apply to the supply of ad tech services. The Australian Government and the ACCC consider that ad tech services should be a priority service for designation under a proposed digital competition regime applicable in Australia.
- Several jurisdictions are addressing the same or similar competition concerns in ad tech services that have been identified by the ACCC. Enforcement cases in the US, the EU and Canada are seeking to require Google to divest certain ad tech products or services. These cases may have flow-on effects for publishers and advertisers in Australia. The ACCC will continue to monitor developments in international enforcement cases.

Ad tech services relate to products and services that facilitate the buying and selling of digital display advertising, often involving the automated use of complex algorithms and systems to trade digital ads in a matter of milliseconds. Ad tech services allow publishers of web content to sell digital ad spaces on their websites to a range of online advertisers.

This section provides an overview of the ACCC's consideration and findings in respect of ad tech services, as well as an overview of how ad tech services have been considered in investigations and enforcement cases by international competition agencies. It is structured as follows:

- **Section 3.4.1** examines the ACCC's previous consideration and findings in relation to ad tech services through the Digital Platforms Inquiry, Digital Platform Services Inquiry and Ad Tech Inquiry. It then considers the ACCC's recommendations made in the Ad Tech Inquiry and Digital Platform Services Inquiry for service-specific rules in ad tech, as well as recent submissions on this issue.
- **Section 3.4.2** highlights key enforcement cases that identify the same or similar competition concerns in ad tech services in the US, the EU, Canada, France and the UK.

3.4.1 Significant competition harm in ad tech services

In the original Digital Platforms Inquiry (DPI) Final Report, the ACCC expressed concerns that there was a lack of transparency in the supply of ad tech services.¹¹⁹⁵ Given the opacity and complexity of the industry, and to consider issues more comprehensively, the original DPI Final Report recommended that the ACCC be directed to hold a separate inquiry into ad tech services.¹¹⁹⁶

¹¹⁹⁵ ACCC, [Digital Platforms Inquiry Final Report](#), 26 July 2019, p 14.

¹¹⁹⁶ ACCC, [Digital Platforms Inquiry Final Report](#), 26 July 2019, p 14.

In 2020–21, the ACCC undertook an inquiry into the markets for the supply of ad tech services and ad agency services and published its Final Report (Ad Tech Report) on 28 September 2021. The Ad Tech Report focuses on the use of ad tech to deliver digital display ads through open display channels, a critical route for Australian online publishers to reach advertisers and vice-versa. The ACCC found that competition for ad tech services in Australia is ineffective, with Google dominating the ad tech supply chain.¹¹⁹⁷ Google is the largest supplier, with no other provider having comparable scale or reach.¹¹⁹⁸

Table 3.2: ACCC’s estimates of Google’s share of revenue and impressions for main ad tech services, Australia, 2020

	Share of revenue	Share of impressions
Publisher ad servers	Insufficient data available	90–100%
SSPs only	40–50%	70–80%
SSPs and ad networks	50–60%	70–80%
DSPs	60–70%	80–90%
Advertiser ad servers	Insufficient data available	80–90%

Source: ACCC’s analysis of data obtained from ad tech providers. Originally published in ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 5.

The ACCC found that Google’s dominance is underpinned by multiple factors including its data advantage,¹¹⁹⁹ access to exclusive inventory and advertiser demand,¹²⁰⁰ and integration across its services.¹²⁰¹ The ACCC noted that over the years, Google’s vertical integration and dominance across the ad tech supply chain and in related services have allowed it to engage in a range of conduct which has lessened competition over time and entrenched its dominant position. This includes self-preferencing conduct, which has likely interfered with the competitive process.¹²⁰² The ACCC estimated that in 2020, around 27% of advertiser expenditure went to fees for the 4 main ad tech services.¹²⁰³ The ACCC also noted that the total amount of advertiser expenditure retained by ad tech providers was likely to be higher than this, given that advertisers and publishers often use additional ad tech services.¹²⁰⁴

Since the ACCC’s analysis of competition harms in ad tech, 3 class actions have either been filed or proposed in Australia. These class actions seek to recover compensation for advertisers and/or publishers who have incurred losses in revenue because of Google’s alleged conduct. See box 3.18 for further details.

1197 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 1.

1198 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 5.

1199 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 6.

1200 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 5.

1201 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 5.

1202 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 7.

1203 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 9.

1204 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 9.

Box 3.18: Australian class actions in relation to competition harms in ad tech services

As of March 2025, there are currently 3 Australian-based class actions, either filed or proposed, in relation to competition harms in ad tech services:

- On 16 December 2024, a class action was filed in the Federal Court on behalf of QNews Pty Ltd and Sydney Times Media Pty Ltd against Google LLC & Ors.¹²⁰⁵ It is reported that the class action is on behalf of all publishers who had websites or apps and sold advertising using Google's ad tech platforms available in Australia. The class action alleges that publishers would have had significantly higher revenues (and thus greater profits) from selling advertising space if not for Google's misuse of market power.¹²⁰⁶
- On 29 November 2024, Australian law firm Phi Finney McDonald announced it was preparing a class action against Google. The proposed class action will allege that Google's control of the dominant tools used in ad tech, for both publishers and advertisers, has substantially lessened competition in the market for ad tech. The proposed class action will seek compensation for advertisers (who purchased ads through Google's ad tech products) or publishers (who received revenue from ads on their websites) who suffered financial loss because of Google's alleged anti-competitive conduct.¹²⁰⁷
- On 14 February 2025, Australian law firm Maurice Blackburn filed a class action against Google for alleged anti-competitive conduct in the display digital advertising market in Australia. The class action seeks to recover compensation for publishers of digital ad inventory whose revenue for ad space sold was impacted because of Google's alleged conduct.¹²⁰⁸

Service-specific codes can address competition harms in ad tech

The Ad Tech Report's recommendations included that:

- Google should amend its public material to clearly describe how it uses first-party data to provide ad tech services.¹²⁰⁹
- The power to introduce sector-specific rules should allow the ACCC to address competition issues caused by an ad tech provider's data advantage.¹²¹⁰
- Industry should establish standards to require ad tech providers to publish average fees and take rates for ad tech services, and to enable full, independent verification of demand-side platform services.¹²¹¹
- Google should provide publishers with additional information about the operation and outcomes of its publisher ad server auctions.¹²¹²
- The ACCC should be given powers to develop and enforce rules to improve transparency of the price and performance of ad tech services.¹²¹³

1205 Commonwealth Courts Portal, [Q News Pty Ltd & Anor v Google LLC & Ors](#), VID1375/2024, accessed 13 March 2025.

1206 Piper Alderman, [Google AdTech Class Action](#), 17 December 2024, accessed 13 March 2025.

1207 Phi Finney McDonald, [Google Ad Tech](#), 29 November 2024, accessed 13 March 2025.

1208 Commonwealth Courts Portal, [Riverine Grazier Pty Ltd & Anor v Google LLC & Ors](#), VID164/2025, accessed 13 March 2025; Maurice Blackburn Lawyers, [Rural publisher Riverine Grazier to launch David vs Goliath class action against tech giant Google over advert rip offs](#), 31 January 2025, accessed 13 March 2025.

1209 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 6.

1210 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 12.

1211 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 13.

1212 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 14.

1213 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 14.

Box 3.19: Recommendations for service-specific rules in ad tech

The Ad Tech Report also recommended that the ACCC be given powers to develop sector-specific rules that apply to Google's supply of ad tech services to address:

- conflicts of interest
- prevent anti-competitive self-preferencing
- ensure rivals can compete on their merits by having non-discriminatory access to certain services
- address transparency concerns.¹²¹⁴

The ACCC recommended that service-specific rules be developed in consultation with industry, proportionate to the competition issues and conflict of interest issues they are aimed at addressing, and enforceable by the ACCC with penalties for non-compliance.¹²¹⁵

The ACCC also considered the need for ex ante regulation of ad tech services in its Regulatory Reform Report, which reiterated concerns previously identified in the DPI Final Report and the Ad Tech Report, including:

- that Google has market dominance in the ad tech supply chain¹²¹⁶
- concerns around self-preferencing by ad tech providers, in their treatment of third-party ad tech providers¹²¹⁷
- concerns around tying conduct, particularly tying ad inventory to the use of ad tech services¹²¹⁸
- concerns around the lack of transparency in ad tech (specifically, auction, ad verification and pricing transparency).¹²¹⁹

In its recommendations for ex ante regulation of digital platforms, the ACCC noted the capacity for the ad tech industry to be subject to service-specific codes addressing the following.

1214 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 11.

1215 ACCC, [Digital Advertising Services Inquiry Final Report](#), 28 September 2021, p 11.

1216 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 7.

1217 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 12–13.

1218 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 13.

1219 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 13.

Table 3.3: Potential application of service-specific code measures to ad tech concerns

Competition concerns	Potential service-specific code measures
Google giving its own ad tech services favourable treatment compared to ad tech services of third parties (self-preferencing).	A measure that could prohibit Designated Digital Platforms from treating their own ad tech services more favourably than ad tech services provided by third parties. ¹²²⁰
Google requiring advertisers to use Google's own demand-side platforms to programmatically purchase ad inventory on YouTube (anti-competitive tying).	A measure that could prohibit Designated Digital Platforms from requiring advertisers to use their own ad tech services to purchase ad inventory that they supply. ¹²²¹
A lack of access to relevant data is a substantial barrier to entry and expansion in the supply of ad tech services.	A measure that could require Designated Digital Platforms to share third party data (and/or facilitate data portability in respect of that data) or could impose data limitations on a Designated Digital Platform (e.g. to keep certain data separate). ¹²²²
A lack of transparency in relation to Google's ad tech services, including price, auction and ad performance information.	A measure that could require Designated Digital Platforms to: <ul style="list-style-type: none"> ■ provide publishers with the ability to compare bids received from all sources in an auction (auction transparency) ■ facilitate independent assessment of the performance of their services (ad verification transparency) ■ provide average fees and take rates for their services (pricing transparency).¹²²³

Stakeholder submissions on service-specific codes for ad tech

In its recent submission to this Report, SBS noted its support for additional measures addressing vertical integration, self-preferencing and the lack of transparency for publishers acquiring ad tech services (including uniform reporting requirements among supply-side platforms, demand-side platforms, data management platforms and other market intermediaries).¹²²⁴ Free TV Australia and Commercial Radio and Audio Australia also noted their support for service-specific codes for ad tech to be a priority under ex ante digital competition laws in Australia, including the imposition of transparency requirements for ad tech services.¹²²⁵

As noted in section 2.1.4, the Australian Government announced on 2 December 2024 that ad tech services should be a priority under the proposed framework for digital competition regulation in Australia.¹²²⁶ The ACCC agrees that ad tech should be a priority service under the proposed regime.¹²²⁷

3.4.2 There is international momentum towards addressing competition harms in ad tech

Several jurisdictions have sought to address the same concerns the ACCC identified around Google's dominant position and anti-competitive practices in the ad tech services. Enforcement cases in

¹²²⁰ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 124.

¹²²¹ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 132.

¹²²² ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 165.

¹²²³ ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 174.

¹²²⁴ SBS, [Submission to the Final Report](#), 11 October 2024, pp 6–7.

¹²²⁵ Free TV Australia, [Submission to the Final Report](#), 11 October 2024, p 4; Commercial Radio and Audio Australia, [Submission to the Final Report](#), 11 October 2024, p 9.

¹²²⁶ The Treasury, [A new digital competition regime: Proposal paper](#), 2 December 2024, pp 9–10.

¹²²⁷ ACCC, [ACCC welcomes consultation on new digital competition regime](#), Press Release, 3 December 2024, accessed 13 March 2025.

the US, the EU and Canada are seeking divestiture of some of Google's ad tech services to remedy alleged anti-competitive conduct. The ACCC acknowledges that structural remedies sought through enforcement cases in international jurisdictions may have flow-on effects in relation to advertiser and publisher access to ad tech services in other jurisdictions, including Australia.

In addition to the regulatory actions noted below, the ACCC also understands that:

- The Turkish Competition Authority has fined Google LLC and related entities TRY2.61 billion (around \$109 million as of March 2025) for violating Article 6 of the Law on Protection of Competition, by restricting access to YouTube advertising inventory and using its dominance in the publisher ad server market to favour its supply-side platform over competitors.¹²²⁸
- The Competition Commission of India is currently investigating Google's ad tech practices following a complaint filed by a mobile app developer, alleging that Google's dominance in the ad tech market has led to anti-competitive conduct including tying and unfair pricing.¹²²⁹

The ACCC will continue to monitor developments from these enforcement cases.

US regulators take action against alleged anti-competitive conduct

In the US, cases led by the US DOJ and State Attorneys General are seeking to address concerns that Google has maintained a monopoly in the ad tech market and has engaged in anti-competitive conduct to maintain its monopoly position. These cases seek structural relief such as the divestiture by Google of components of its ad tech businesses. These cases also seek monetary relief, such as equitable relief on behalf of the American public and damages in relation to alleged overpayment for ad tech services.

Box 3.20: Action against alleged anti-competitive conduct in the US

Department of Justice and Virginia-led State Attorneys General v Google LLC

On 24 January 2023, the US DOJ and Attorneys General of California, Colorado, Connecticut, New Jersey, New York, Rhode Island, Tennessee, and Virginia, filed a civil antitrust lawsuit against Google for monopolising the markets for multiple digital advertising technology products in violation of Sections 1 and 2 of the Sherman Act. The complaint alleges that Google monopolised key digital advertising technologies, collectively referred to as the 'ad tech stack', that website publishers depend on to sell ads and advertisers rely on to buy ads to reach potential customers.¹²³⁰

1228 Reuters, '[Turkey fines Google \\$75 million for violating competition law](#)', *Reuters*, 14 December 2024, accessed 13 March 2025.

1229 F Patel, '[Google faces wider antitrust probe of its ad tech practices in India](#)', *MLex*, 21 January 2025, accessed 13 March 2025.

1230 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, pp 30–31.

This includes alleged anticompetitive conduct over a period of 15 years of:

- eliminating ad tech competitors through acquisitions¹²³¹
- exerting its dominance across digital advertising markets to require publishers and advertisers to use its products and services including:
 - making Google’s ad exchange platform available only to publishers using its publisher ad server¹²³²
 - restricting the purchasing of display inventory to sources controlled by Google, ultimately locking publishers into its ad exchange and publisher ad server and limiting rival ad exchange and publisher ad servers from accessing Google’s pool of advertiser demand¹²³³
 - manipulating auction mechanics across several products to insulate Google from competition, deprive rivals of scale and constrain new entry.¹²³⁴

The plaintiffs are seeking the divestiture of the Google Ad Manager suite, including Google’s publisher ad server, DoubleClick for Publishers, and Google’s ad exchange, AdX, along with any additional structural relief to cure any anticompetitive harm.¹²³⁵

The trial commenced on 10 September 2024 and was heard by US District Judge Brinkema of the Eastern District of Virginia.¹²³⁶

State Attorney General of Texas v Google LLC

In 2020, the State of Texas and a coalition of 15 States and Territory Attorneys General¹²³⁷ filed a suit against Google alleging anti-competitive conduct in the supply of ad tech services. The plaintiffs allege that Google is in breach of Sections 1 and 2 of the Sherman Act, as well as applicable state antitrust laws, by maintaining or seeking to acquire a monopoly in the market for online display advertising.¹²³⁸ The plaintiffs seek structural relief as well as damages, civil penalties and other relief.¹²³⁹ The trial is scheduled to commence on 31 March 2025.¹²⁴⁰

European Commission investigates Google’s self-preferencing conduct and restrictions on third-party access to data

As discussed in box 3.21, the European Commission has sought to address Google’s self-preferencing of its own ad exchange platform by its demand-side products and services, as well as the alleged restrictions Google has placed on advertisers, publishers and display advertising intermediaries to access data about user identity or behaviour. The European Commission is also seeking divestiture by Google of part of its online display advertising business.

1231 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, pp 32–35.

1232 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, pp 35–36.

1233 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, p 37.

1234 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, pp 61–64.

1235 *United States of America et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 24 January 2023, p 140.

1236 R Shields and S Joseph, [‘Assessing the fallout of Google’s ad tech antitrust trial’](#), *Digiday*, 2 December 2024, accessed 13 March 2025.

1237 In conjunction with the Attorneys General of Alaska, Arkansas, Florida, Idaho, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Montana, Nevada, North Dakota, Puerto Rico, South Carolina, South Dakota, and Utah.

1238 *State of Texas et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 16 December 2020, pp 2–3.

1239 *State of Texas et al., Plaintiffs, v. Google LLC, Defendant*, [Complaint](#), 16 December 2020, pp 114–116.

1240 *State of Texas et al., Plaintiffs, v. Google LLC, Defendant*, [Scheduling Order](#), 4 January 2024, p 4.

Box 3.21: European Commission investigation into Google Ad Tech

On 22 June 2021, the European Commission launched a formal antitrust investigation to assess whether Google has abused its dominant position by favouring its own advertising technology services in the ad tech supply chain, to the detriment of competing providers of advertising technology services, advertisers and online publishers.¹²⁴¹ The investigation sought to examine a range of conduct including:

- the apparent favouring of Google's ad exchange 'AdX' by its demand-side platforms (Display and Video 360 (DV360) and/or Google Ads) and the potential favouring of DV360 and/or Google Ads by AdX
- the restrictions placed by Google on the ability of third parties, such as advertisers, publishers or competing online display advertising intermediaries, to access data about user identity or user behaviour which is available to Google's own advertising intermediation services.¹²⁴²

The European Commission's preliminary view in its Statement of Objections is that Google favours its own technology services for online display advertising at the expense of competing providers of such services as well as advertisers and online publishers.¹²⁴³ The European Commission also provisionally considers that the only effective remedy to address competition concerns would be the mandatory divestment by Google of part of its online display advertising services, noting that Google operates on both the demand and supply side of the market which leads to inherent conflicts of interest for Google.¹²⁴⁴

Ad tech transparency measures in the EU's DMA

The EU's DMA contains 3 obligations for designated gatekeepers that aim to improve transparency in the ad tech supply chain. A gatekeeper whose advertising service is designated as a core platform service is required to provide:

- advertisers with information about publishers' remuneration (Article 5.9)
- publishers with information about the price advertisers pay (Article 5.10), subject to consent from relevant parties
- advertisers and publishers, free of charge, with access to its performance measuring tools, and sufficient information to enable independent verification of ad inventory (Article 6.8).¹²⁴⁵

Google, whose online advertising services were designated as a core platform service under the DMA,¹²⁴⁶ was required to comply with DMA obligations by 6 March 2024.¹²⁴⁷ The transparency obligations in the DMA apply to Google's online advertising core platform services, which cover

1241 European Commission, [Initiation of Proceedings Notice](#), 22 July 2021, p 1.

1242 European Commission, [Commission opens investigation into possible anticompetitive conduct by Google in the online advertising technology sector](#), Press Release, 22 June 2021, accessed 13 March 2025.

1243 European Commission, [Commission sends Statement of Objections to Google over abusive practices in online advertising technology](#), Press Release, 14 June 2023, accessed 13 March 2025.

1244 European Commission, [Commission sends Statement of Objections to Google over abusive practices in online advertising technology](#), Press Release, 14 June 2023, accessed 13 March 2025.

1245 [Regulation \(EU\) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives \(EU\) 2019/1937 and \(EU\) 2020/1828 \(DMA\)](#).

1246 European Commission, [Digital Markets Act, Regulation \(EU\) 2022/1925 of the European Parliament and of the Council](#), 5 September 2023, p 5.

1247 Note the designation applied to Google's parent Alphabet. European Commission, [Designated gatekeepers must now comply with all obligations under the Digital Markets Act](#), Press Release, 7 March 2024, accessed 13 March 2025.

Google's ad buying, selling and intermediation services. These 3 services optimise the use of online ad services and ad targeting and efficiency.

Google's Compliance Report noted that, as of 6 March 2024, Google considered itself in compliance with Articles 5.9,¹²⁴⁸ 5.10¹²⁴⁹ and 6.8¹²⁵⁰ of the DMA.

Canadian regulator investigates Google's alleged abuse of dominant position in ad tech

On 28 November 2024, the Canadian Competition Bureau filed an application with the Competition Tribunal, alleging that Google has abused its dominant position in the market for online advertising technology services in Canada.¹²⁵¹

Box 3.22: Canadian Competition Bureau case into Google ad tech

The Canadian Competition Bureau alleges that Google has sought to tie its ad tech products, including Google Ads, AdExchange (AdX) and DoubleClick for Publishers, together to maintain its dominance in the online advertising technology services market in Canada.¹²⁵² The application alleges that Google has given AdX preferential access to ad inventory, and has artificially increased Google Ads' win rate on AdX by incurring losses on certain transactions which deprived rival ad-buying tools of scale.¹²⁵³ The application also alleges that Google sought to remove publishers' ability to set lower price floors for rival (i.e., non-Google) ad exchanges compared to AdX.¹²⁵⁴ The Canadian Competition Bureau argues that, as a result of the above anticompetitive policies and practices, Google has sought to maintain, entrench and increase its market power by raising barriers to entry and expansion, excluding the capacity for rivals to compete effectively, and insulated itself from competition.¹²⁵⁵

The Canadian Competition Bureau is seeking that the Competition Tribunal make an order requiring that Google divest its publisher ad server (DoubleClick for Publishers) as well as its ad exchange platform (AdX),¹²⁵⁶ to prohibit Google from continuing the alleged conduct.¹²⁵⁷

Enforcement cases in France seek to address self-preferencing conduct

In France, a case commenced by the competition regulator, the French Competition Authority, and a private case commenced by a rival ad server business, Equativ, have sought to address Google's alleged self-preferencing of its own advertising services over competitors.

1248 Alphabet, [EU Digital Markets Act \(EU DMA\) Compliance Report Non-Confidential Summary](#), 7 March 2024, p 74.

1249 Alphabet, [EU Digital Markets Act \(EU DMA\) Compliance Report Non-Confidential Summary](#), 7 March 2024, p 92.

1250 Alphabet, [EU Digital Markets Act \(EU DMA\) Compliance Report Non-Confidential Summary](#), 7 March 2024, p 99.

1251 Competition Bureau Canada, [Competition Bureau sues Google for anti-competitive conduct in online advertising in Canada](#), 28 November 2024, accessed 13 March 2025.

1252 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 6.

1253 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 67.

1254 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 57.

1255 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 7.

1256 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 2.

1257 Commissioner of Competition, Applicant, Google Canada Corporation and Google LLC, Respondents, [Notice of Application](#), 28 November 2024, p 2.

Box 3.23: Enforcement cases in France seeking to address self-preferencing conduct

French Competition Authority's fines for Google Ad Manager

On 7 June 2021, the French Competition Authority fined Google €220 million for abusing its dominant position in the online advertising market by unfairly favouring its own advertising services (particularly its ad server, Google Ad Manager) over competitors. The Authority found that Google's practices hampered the development of competing ad technologies and created an uneven playing field in digital advertising.¹²⁵⁸

The Authority also accepted binding commitments from Google, which aim to improve the interoperability of Google Ad Manager services with third-party ad server and advertising space sales platform solutions and terminate provisions that favour Google.¹²⁵⁹

Equativ v Google proceedings

On 25 October 2024, the Paris Commercial Court ordered Google to pay €26.5 million to rival French ad tech firm Equativ for unlawful self-preferencing.¹²⁶⁰

Equativ operates a publisher ad server as well as a supply-side platform, connecting advertisers with publishers selling advertising space. Google's supply-side AdX exchange may be offered to publishers independently or with Google's DoubleClick ad server, allowing advertisers to manage their campaigns.¹²⁶¹

The Court found that Equativ had been harmed by preferential treatment Google gave to its own services on the AdX exchange and DoubleClick platforms. It noted that a lack of interoperability between DoubleClick and other rival platforms caused Equativ to lose publisher customers to Google, who wished to retain access to Google's AdX exchange. The limited interoperability between DoubleClick and Equativ's services caused publishers to leave Equativ's services, or not sign up as new customers. At trial, Equativ had demonstrated a decline in server revenue between 2015 (€13.1 million) and 2022 (€4.7 million), as well as a reduction in its customer base by more than 50%.¹²⁶²

UK regulators investigate Google's alleged abuse of dominant position and Privacy Sandbox proposals

The UK CMA is also investigating similar competition concerns around Google's alleged self-preferencing of its ad tech products and services.

1258 French Competition Authority, [The Autorité de la concurrence hands out a €220 millions fine to Google for favouring its own services in the online advertising sector](#), Press Release, 7 June 2021, accessed 13 March 2025.

1259 French Competition Authority, [The Autorité de la concurrence hands out a €220 millions fine to Google for favouring its own services in the online advertising sector](#), Press Release, 7 June 2021, accessed 13 March 2025.

1260 B John, ['Google forced to pay damages in adtech abuse claim'](#), *Global Competition Review*, 25 October 2024, accessed 13 March 2025.

1261 B John, ['Google forced to pay damages in adtech abuse claim'](#), *Global Competition Review*, 25 October 2024, accessed 13 March 2025 January 2025.

1262 B John, ['Google forced to pay damages in adtech abuse claim'](#), *Global Competition Review*, 25 October 2024, accessed 13 March 2025 January 2025.

Box 3.24: CMA investigation into ad tech¹²⁶³

On 25 May 2022, the CMA opened an investigation under Chapter II of the Competition Act 1998 (UK) into suspected breaches of competition law by Google.

The investigation focusses on Google's role as an intermediary on the supply side (publishers) and demand side (advertisers) as well as in facilitating its ad exchange platform where Google charges the highest fees (20% of the bid amount for an ad placement) in the ad tech stack. In September 2024, the CMA issued a statement of objections. Its provisional view is that, since at least 2015, Google has abused its dominant positions through the operation of its buying tools and publisher ad server, to strengthen the position of its ad exchange platform as well as by preventing rival supply-side products from competing with Google by:

- providing its ad exchange platform with exclusive or preferential access to advertisers that use Google products and services
- manipulating advertiser bids so they have a higher value when submitted to Google's ad exchange platform than when submitted to a rival exchange
- allowing Google's ad exchange platform to bid first in auctions run by Google's publisher ad server for online advertising space and giving it a 'right of first refusal', effectively locking out rival platforms from submitting bids.

In March 2023, the CMA combined this investigation with a separate investigation it had commenced into whether Google may have abused its dominant position in relation to its conduct concerning header bidding services.

Separately since 2021, the CMA and the Information Commissioner's Office, the UK privacy regulator, have consulted with Google on development and implementation of changes to its data collection and use policy via Privacy Sandbox proposals. These proposals relate to the proposed removal of third-party cookies on Google's Chrome browser and Chromium browser engine, which would be replaced by various tools for targeted advertising.¹²⁶⁴

The ACCC acknowledges that the use of third-party cookies (which allow for the tracking of online consumer engagement across websites) may give rise to privacy concerns. At the same time, the removal of third-party cookies by an incumbent firm with established ad tech tools may give rise to competition concerns, where there may be few effective alternatives for competitors to track users, and the removal of third-party cookies has the effect of potentially entrenching an incumbent firm's market power.¹²⁶⁵

1263 CMA, [CMA objects to Google's ad tech practices in bid to help UK advertisers and publishers](#), Press Release, 6 September 2024, accessed 13 March 2025.

1264 S Faber, '[ICO, CMA and Google Reach Agreement on Privacy Sandbox Proposals](#)', *National Law Review*, 28 February 2022, accessed 13 March 2025.

1265 T West, '[CMA says Google cannot phase out third-party cookies until its concerns are addressed](#)', *Marketing/Beat*, 6 February 2024, accessed 13 March 2025. See also CMA, [Notice of intention to accept commitments offered by Google in relation to its Privacy Sandbox Proposals](#), 11 June 2021, p 22.

Box 3.25: Google's Privacy Sandbox proposal

In August 2019, Google launched its Privacy Sandbox proposals that seek to phase out third-party cookies on Chrome and replace them with a set of new standards for targeted advertising, without compromising user privacy.¹²⁶⁶ Stakeholders in the ad tech industry subsequently raised a formal complaint around the proposals to the CMA, noting the capacity for the proposals to shut out competing publishers and ad tech providers.¹²⁶⁷

On 8 January 2021, the CMA launched an investigation into the Privacy Sandbox proposals, raising concerns that the proposals could potentially strengthen Google's market position by restricting the ability of competitors to target ads, as alternative methods for tracking users would be less effective without cookies.¹²⁶⁸

On 11 February 2022, the CMA accepted Google's Privacy Sandbox commitments.¹²⁶⁹ The commitments involved the CMA working with Google on the design and assessment of the Privacy Sandbox proposals before a final decision would be taken to remove third-party cookies from Chrome.¹²⁷⁰

On 22 July 2024, Google announced that it is changing its approach to its Privacy Sandbox. Instead of removing third-party cookies from Chrome, it will allow users to choose whether to retain third-party cookies.¹²⁷¹

On 19 December 2024, Google announced that businesses using its ad tech products would no longer be prohibited from employing fingerprinting techniques – 'the collection of pieces of information about a device's software or hardware' which can be combined to uniquely identify a particular device or user.¹²⁷² This change in policy could allow for fingerprinting techniques to replace the function of third-party cookies. The UK Information Commissioner's Office has noted that fingerprinting techniques do not meet users' expectations for privacy in circumstances where they cannot readily consent to the practice.¹²⁷³

Google has previously submitted to the ACCC's Ad Tech Inquiry that one of the aims of its Privacy Sandbox is to prevent tracking as users browse the web, including to 'block covert techniques' such as fingerprinting.¹²⁷⁴

1266 N Figas, '[The Evolution of Google's Privacy Sandbox](#)', 21 October 2024, accessed 13 March 2025. See also J Trotz, '[Maximise ad relevance without third-party cookies](#)', *The Privacy Sandbox*, 14 December 2022, accessed 13 March 2025.

1267 S Faber, '[ICO, CMA and Google Reach Agreement on Privacy Sandbox Proposals](#)', *National Law Review*, 28 February 2022, accessed 13 March 2025.

1268 CMA, '[CMA to investigate Google's 'Privacy Sandbox' browser changes](#)', Press Release, 8 January 2021, accessed 13 March 2025.

1269 CMA, '[Decision to accept commitments offered by Google in relation to its Privacy Sandbox Proposals](#)', Case number 50972, 11 February 2022, accessed 13 March 2025, pp 5–10.

1270 CMA, '[Decision to accept commitments offered by Google in relation to its Privacy Sandbox Proposals](#)', Case number 50972, 11 February 2022, accessed 13 March 2025, pp 6–7.

1271 CMA, '[Investigation into Google's 'Privacy Sandbox' browser changes](#)', Competition and Markets Authority cases and projects, 8 January 2021, accessed 13 March 2025.

1272 S Almond, '[Our response to Google's policy change on fingerprinting](#)', *ICO*, 19 December 2024, accessed 13 March 2025.

1273 S Almond, '[Our response to Google's policy change on fingerprinting](#)', *ICO*, 19 December 2024, accessed 13 March 2025.

1274 Google, '[Supplementary submission 1 to Ad Tech Inquiry Interim Report](#)', 2 July 2021, p 4.

4

Emerging issues



4. Emerging issues

4.1 Cloud computing

Key points

- Cloud computing refers to providing global, on-demand network access to computing resources such as networks, servers, storage, applications and services. Cloud computing can be contrasted with traditional on-premises computing, where an organisation installs and maintains their own IT infrastructure for private use.
- Cloud computing has several benefits for organisations in comparison to on-premises computing. Businesses can avoid the need for significant upfront expenditure on computing infrastructure, allowing them to scale their usage according to need and avoid the costs of excess capacity. Cloud computing also enables smaller firms to quickly access new technologies that would otherwise be cost-prohibitive.
- Use of cloud services is continuing to grow both globally and in Australia, and this growth is likely to continue with the rise of generative AI.
- The main cloud providers in Australia – Amazon Web Services, Microsoft, and Google – are vertically integrated, providing services across the entire cloud stack, while also investing in generative AI foundation models and integrated AI products.
- Some cloud providers submitted that prices have generally decreased over time, however these claims are difficult to assess due to the complex cost structure of cloud services.
- There are some emerging potential competition concerns in the provision of cloud computing services, particularly at the Infrastructure-as-a-Service and Platform-as-a-Service levels:
 - There may be high barriers to entry in the provision of cloud services. Large incumbent cloud providers may benefit from economies of scale and scope, as well as network effects from their existing software and hardware products. New cloud providers also face significant upfront investment costs.
 - The vertical integration of some large cloud providers may give rise to risks of anti-competitive bundling, tying or self-preferencing of their own cloud products to the detriment of competitors.
 - Overseas regulators have raised concerns about impediments to switching, which could make it more difficult for new entrants to obtain users. These impediments may take the form of technical or interoperability barriers, as well as egress fees and committed spend agreements.
 - There is some indication of information asymmetries between cloud providers and their customers, which may distort competition.
 - Given cloud services are a key input across the entire generative AI value chain, dynamics in the cloud computing sector may influence competition in the generative AI sector and vice versa.

This section explores potential emerging competition issues in cloud computing services. It is structured as follows:

- **Section 4.1.1** provides an overview of cloud computing services, including the different layers of the cloud computing stack.
- **Section 4.1.2** discusses the usage of cloud infrastructure services in Australia.
- **Section 4.1.3** outlines the key providers of cloud infrastructure services.
- **Section 4.1.4** describes dynamics and key trends in cloud infrastructure services.
- **Section 4.1.5** examines potential risks to competition in the supply of cloud infrastructure services.
- **Section 4.1.6** analyses the potential impacts of cloud services on competition in the generative AI sector and vice versa.

4.1.1 Introduction to cloud computing services

What are cloud computing services?

Cloud computing services provide businesses and consumers with remote and on-demand access to computing resources such as networks, servers, storage, applications, and software.¹²⁷⁵ These resources are a shared pool hosted by the cloud computing provider.¹²⁷⁶ Cloud computing can be considered in contrast to traditional on-premises computing, in which traditional IT infrastructure (including data centres, servers, networking hardware, computers and applications) are installed and maintained by an organisation at a location maintained by the organisation for their own private use.¹²⁷⁷

Cloud computing has several benefits for organisations in comparison to on-premises computing. This includes removing the need for significant upfront investments in computing infrastructure, and allowing businesses to scale their usage up or down as needed and avoid having to pay for excess capacity. Cloud computing also enables smaller firms to quickly access new technologies and innovations that may otherwise be unaffordable,¹²⁷⁸ and assists businesses to efficiently work across separate locations and engage with customers in new ways (for example, telehealth).¹²⁷⁹

There are 3 ways to deploy cloud computing services – public, private and hybrid.¹²⁸⁰

- **Public cloud** computing refers to where multiple customers share a pool of computer resources leased out by a cloud computing services provider. Customers can rapidly scale their usage of the public cloud as needed, and generally pay for services on a per-use basis.
- **Private cloud** refers to where the provider's computing resources are not shared between customers and are instead dedicated to a single large-scale customer. The private cloud is closer to traditional corporate IT systems, where computing resources are only available to a single firm's end users rather than being potentially shared or used by many firms' end users.

¹²⁷⁵ US National Institute of Standards and Technology, [The NIST Definition of Cloud Computing](#), 28 September 2011, p 2.

¹²⁷⁶ US National Institute of Standards and Technology, [The NIST Definition of Cloud Computing](#), 28 September 2011, p 2.

¹²⁷⁷ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 20.

¹²⁷⁸ H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 5; Microsoft, [Submission to the Final Report](#), 11 October 2024, p 6.

¹²⁷⁹ H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 5.

¹²⁸⁰ French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 21; Google, [Submission to the Final Report](#), 11 October 2024, p 42.

- **Hybrid cloud** refers to where a customer uses a mix of services, including public cloud, private cloud, and on-premises data centres.¹²⁸¹ For example, a company may choose to store sensitive data in a private cloud while still using the public cloud for other business activities.

The focus of this Report is on public cloud computing which, according to Google, is the most common way cloud computing services are deployed to users.¹²⁸²

Public cloud services have experienced a high level of growth globally in recent years. Estimates have suggested that global spending on public cloud was US\$87 billion in 2015¹²⁸³ and US\$595.7 billion in 2024.¹²⁸⁴ Global spending on public cloud has been projected to grow by 21.5% to US\$723.4 billion in 2025, driven in part by the rising use of AI.¹²⁸⁵ Gartner has also predicted that cloud computing will become a 'business necessity' by 2028.¹²⁸⁶

1281 Google, [What is a Hybrid Cloud?](#), Google Cloud, accessed 13 March 2025.

1282 See 'Shared cloud' in Google, [Submission to the Final Report](#), 11 October 2024, p 42. The French Competition Authority observed that 'the public cloud is seen as the model destined to become dominant in the future, while the private cloud is seen more as a transitional model or one designed for certain specific uses.' See French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, pp 21–22.

1283 M Song, [Trends and Developments in Cloud Computing and On-Premise IT Solutions](#), *Alliance for Digital Innovation*, December 2021, pp 15–16.

1284 Gartner, [Gartner Forecasts Worldwide Public Cloud End-User Spending to Total \\$723 Billion in 2025](#), Press release, 19 November 2024, accessed 13 March 2025.

1285 Gartner, [Gartner Forecasts Worldwide Public Cloud End-User Spending to Total \\$723 Billion in 2025](#), Press release, 19 November 2024, accessed 13 March 2025.

1286 Gartner, [Gartner Says Cloud Will Become a Business Necessity by 2028](#), Press release, 29 November 2023, accessed 13 March 2025.

Box 4.1: Previous ACCC consideration of cloud computing services

Communications Sector Market Study (2018)

As part of the ACCC's 2018 market study on the communications sector, the ACCC considered the role of cloud computing as an emerging technology in the sector. The report highlighted that cloud computing had increased the amount of data and the need for cost effective data transmission, storage and management.¹²⁸⁷

The report raised competition concerns that cloud computing services carried a risk of lock-in, through proprietary standards, service agreements, and a lack of interoperability with competing cloud services. The report considered that this could limit data portability for customers and result in challenges for switching between providers. The report also raised concerns about the high entry costs to the cloud computing market, noting that this had resulted in the market being dominated by global providers, with more mature markets (for example, the US) becoming more concentrated.¹²⁸⁸

Report on the Expanding Ecosystems of Digital Platforms (2023)

As part of the Digital Platform Services Inquiry (DPSI) Report on the Expanding Ecosystems of Digital Platforms, the ACCC considered the relevance of consumer cloud storage services to Apple, Google, and Microsoft's broader ecosystems.¹²⁸⁹ The services considered (Apple iCloud, Google Drive, and Microsoft OneDrive) represent a specific portion of the Software-as-a-Service segment of the cloud stack, and overall a narrow segment of the broader cloud computing services category.

The report noted that consumer cloud storage is commonly bundled with other services and is closely integrated with devices.¹²⁹⁰ Some consumer cloud storage services are not offered as a standalone product. Consumers may decide to use bundled cloud storage services despite more innovative or higher-quality standalone alternatives.¹²⁹¹ Further, lock-in effects associated with the cost and inconvenience of moving data can deter switching.¹²⁹²

The cloud computing services 'stack'

Many industry participants, and competition regulators who have conducted inquiries into cloud computing, typically describe the types of cloud computing services available to users as fitting within 3 broad categories – Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).¹²⁹³ These services represent a spectrum of cloud-based computing services which can be distinguished by the level of control that the customer has over elements of the product offering, including the hardware, operating system, data, and applications. However,

1287 ACCC, [Communications Sector Market Study: Final Report](#), April 2018, p 78.

1288 ACCC, [Communications Sector Market Study: Final Report](#), April 2018, p 86.

1289 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 4.

1290 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 5.

1291 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 5.

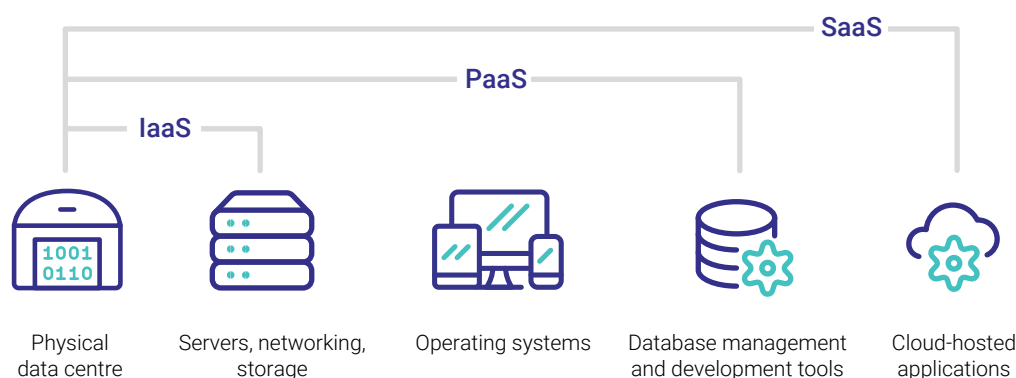
1292 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 6.

1293 Google, [Submission to the Final Report](#), 11 October 2024, p 41; Microsoft, [Submission to the Final Report](#), 11 October 2024, p 4; Amazon, [Types of Cloud Computing](#), Amazon Web Services, accessed 13 March 2025; IBM, [What are IaaS, PaaS and SaaS?](#), 20 October 2021, accessed 13 March 2025; Akamai, [What Are Cloud Computing Models?](#), *Glossary*, accessed 13 March 2025; Oracle, [What is Cloud Computing?](#), 29 April 2020, accessed 13 March 2025; French Competition Authority, [The Autorité de la concurrence issues its market study on competition in the cloud sector](#), *News & Insights*, 29 June 2023; CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, pp 6–7; Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, pp 23–27; JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, pp 16–18.

some services may not neatly fit into these categories, and some suppliers of cloud services seek to characterise their offerings under other categories.¹²⁹⁴

Although SaaS, PaaS, and IaaS services describe different points of the cloud-based computing spectrum, these services tend to appeal to different customer bases. For reasons discussed further below, the focus of this Report is on IaaS and PaaS (together referred to as ‘cloud infrastructure services’).

Figure 4.1: The cloud computing stack



Source: Based on Cloudflare, [What is the cloud?](#), accessed 13 March 2025.

Software as a Service (SaaS)

SaaS products are complete applications hosted in the cloud.¹²⁹⁵ The provider of the SaaS product manages all of the hardware and software that underpins the cloud service.¹²⁹⁶ SaaS can include productivity and communication software¹²⁹⁷ like the Microsoft 365 suite, Zoom, and Gmail, consumer cloud storage services¹²⁹⁸ such as Google Drive and Apple iCloud, enterprise software¹²⁹⁹ such as Salesforce Sales Cloud and Jira, streaming services¹³⁰⁰ such as Netflix and Amazon Prime Video,¹³⁰¹ and messaging services¹³⁰² such as WhatsApp.

SaaS differs from traditional software offerings by operating on the cloud rather than on-premises, with SaaS vendors often using IaaS and PaaS providers’ services to host their products. IaaS and PaaS providers generally offer both first- and third-party SaaS products to their customers via their cloud marketplaces, and the SaaS products can be added to the end user customer’s existing cloud

¹²⁹⁴ According to Ofcom, such services may include ‘storage as a service’, ‘container as a service’ (CaaS), ‘database as a service’ (DBaaS), and disaster recovery as a service (DRaaS) – see Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, pp 23, 26; Oracle, for example, offers ‘Data as a Service’ in addition to SaaS, PaaS and IaaS services – see Oracle, [Oracle Cloud Infrastructure Documentation: Managing Oracle Cloud Infrastructure](#), accessed 13 March 2025; Amazon Web Services notes that ‘[w]hile the industry has traditionally used terms like IaaS, PaaS and SaaS to group cloud services’, Amazon Web Services focuses on ‘solutions’ to the needs of users – see Amazon, [Types of Cloud Computing](#), Amazon Web Services, accessed 13 March 2025. Amazon Web Services’ views on the nature of cloud services and how they might be classified are discussed later in this sub-section.

¹²⁹⁵ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25; CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, p 7; Google, [Submission to the Final Report](#), 11 October 2024, p 42.

¹²⁹⁶ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

¹²⁹⁷ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

¹²⁹⁸ ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, pp 61–65.

¹²⁹⁹ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

¹³⁰⁰ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

¹³⁰¹ Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

¹³⁰² Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25.

stack. Google's submission to this Report notes that '[m]ost modern consumer and business facing applications are SaaS'.¹³⁰³

Traditional software deployed on-premise requires an upfront investment to purchase the software (generally via a one-time fee for a perpetual licence) and any necessary hardware, and may require ongoing or ad-hoc investment for maintenance.¹³⁰⁴ By contrast, SaaS fees are typically charged on a subscription-based model, where fees are billed periodically to individuals and businesses, and priced according to the level of service access (for example, the number of users) or storage demanded by a customer.¹³⁰⁵ This allows companies to easily scale up or down their use of a software.

Platform as a Service (PaaS)

PaaS services provide developers and enterprises with access to a virtual environment to develop, test, deploy, and run their own applications.¹³⁰⁶ Those applications must use programming language, libraries, services and tools supported by the PaaS provider.¹³⁰⁷ These services include machine learning, analytics and business intelligence, databases and application development platforms.¹³⁰⁸ The user manages and maintains the deployed applications but does not have control over the PaaS computing platform itself.¹³⁰⁹ Amazon Web Services Elastic Beanstalk, Microsoft Azure DevOps and Google App Engine are examples of PaaS.¹³¹⁰

Generally, the same cloud provider owns and manages both the overall virtual environment at the PaaS level and the underlying computing resources at the IaaS level. However, individual PaaS services, such as computing platforms of application components/tools, may be supplied either by the same cloud provider or by an independent software vendor.¹³¹¹

PaaS fees are typically charged on a pay-as-you-go basis, calculated using unit prices corresponding to a customer's usage per hour (including a customer's selected level of CPU performance and storage capacity requirements), the volume of data transferred, and the volume of information processed.¹³¹²

Infrastructure as a Service (IaaS)

IaaS services represent the base layer of cloud computing services. Users of IaaS services lease access to servers, storage, processing, networks and other fundamental computing resources,¹³¹³ which are managed and maintained by the IaaS provider in the provider's data centres. This enables businesses and developers to forgo investing in their own servers and networking equipment, while still being able to choose their preferred operating systems, storage, applications and data.¹³¹⁴

¹³⁰³ Google, [Submission to the Final Report](#), 11 October 2024, p 42; see also Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 25. Also, note, in some instances, users may not be aware that they are using cloud-based software, as noted in H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 8.

¹³⁰⁴ M Song, [Trends and Developments in Cloud Computing and On-Premise IT Solutions](#), December 2021, pp 17–18.

¹³⁰⁵ Microsoft, [Submission to the Final Report](#), 11 October 2024, p 4. See, for example, Google, [Pricing](#), Google Workspace, accessed 13 March 2025; Microsoft, [Maximize the everyday](#), Microsoft 365, accessed 13 March 2025; and Apple, [For the love of music](#), Apple Music, accessed 13 March 2025.

¹³⁰⁶ Ofcom, [Cloud services market study interim report](#), 5 April 2023, p 20.

¹³⁰⁷ US National Institute of Standards and Technology, [The NIST Definition of Cloud Computing](#), 28 September 2011, pp 2–3.

¹³⁰⁸ Ofcom, [Cloud services market study interim report](#), 5 April 2023, p 20.

¹³⁰⁹ Ofcom, [Cloud services market study interim report](#), 5 April 2023, p 21.

¹³¹⁰ Ofcom, [Cloud services market study interim report](#), 5 April 2023, p 21.

¹³¹¹ Ofcom, [Cloud services market study interim report](#), 5 April 2023, p 21.

¹³¹² JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 35; Microsoft, [Submission to the Final Report](#), 11 October 2024, p 4.

¹³¹³ US National Institute of Standards and Technology, [The NIST Definition of Cloud Computing](#), 28 September 2011, p 3.

¹³¹⁴ US National Institute of Standards and Technology, [The NIST Definition of Cloud Computing](#), 28 September 2011, p 3; Google, [PaaS vs. IaaS vs. SaaS vs. CaaS: How are they different?](#), Google Cloud, accessed 13 March 2025.

Although this option offers greater flexibility to users, there is a greater degree of complexity when using these services.

Like PaaS, IaaS fees are typically charged on a pay-as-you-go basis, calculated using unit prices corresponding to a customer's usage.¹³¹⁵ For example, providers generally charge fees for the movement of data into, out of, and between cloud products or regions.

Table 4.1: Examples of SaaS, PaaS, and IaaS

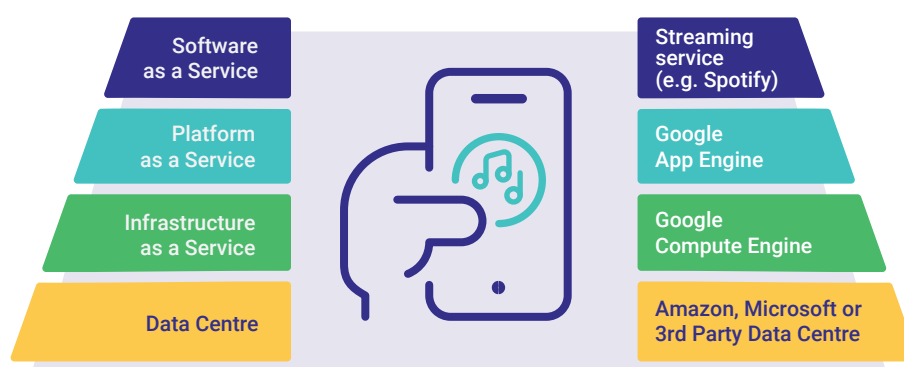
Model	User control and access	Customer type	Examples of services
SaaS	Web interface, software application	End user consumers and businesses	iCloud, Dropbox, OneDrive, Spotify, Gmail, Microsoft 365
PaaS	Software development platform and tools, operating systems and web servers	Developers and enterprises	Amazon Elastic Beanstalk, Microsoft Azure App Services, Google App Engine
IaaS	Virtual machines, network development, servers and storage	Developers and enterprises	Amazon EC2, Rackspace, IBM Cloud, Google Compute Engine, Azure Virtual Machines

Source: Based on ACCC, [Communications Sector Market Study: Final Report](#), April 2018, p 83.

How SaaS, PaaS and IaaS work together

When cloud-based software is provided to an end user, or developed by a company for internal use, the final offering will generally be composed of products from all elements of the cloud computing 'stack'. For example, a consumer might use a streaming service (SaaS), that was built using a cloud-based app development platform (PaaS). This cloud-based app development platform is built on top of the same provider's infrastructure platform (IaaS).

Figure 4.2: An example of a streaming service in the SaaS, PaaS, and IaaS stack



Note: The ACCC notes that this is a simplification of how a SaaS software vendor may rely on different products across the cloud stack. It is likely that a software vendor would use a number of services that can rest at different points of the stack.

Firms may use a range of cloud services from across the stack to fulfil their computing requirements. In some instances, firms may choose to obtain cloud products from multiple vendors – this is

¹³¹⁵ JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 35.

referred to as multi-clouding.¹³¹⁶ However, firms may face barriers or friction in seeking to use services from multiple cloud providers, or in switching between providers (discussed further in section 4.1.5).

This Report focuses on potential competition issues in the supply of cloud infrastructure services (IaaS and PaaS)

In exploring emerging competition issues for cloud computing services, this Report is limited to competition issues arising in the provision of IaaS and PaaS services (together referred to as ‘cloud infrastructure services’). As noted above:

- IaaS and PaaS services are generally targeted at businesses, enterprises, and developers that seek to implement and develop their own software solutions, including businesses that offer SaaS services to consumers. Cloud infrastructure services are generally not finalised front-end software products targeted at end users, and the provision of these services tends to be concentrated into a smaller number of firms (as discussed further at section 4.1.3).
- In comparison, SaaS services are generally targeted at end user consumers or businesses and cover a broad category of differentiated software products with a large number of competitors.

Given these distinctions between cloud infrastructure services and SaaS services, this Report does not consider SaaS services in detail.

The ACCC notes that, for similar reasons to the above, many international competition regulators describe cloud infrastructure services (IaaS and PaaS) and SaaS cloud services as distinct service offerings, which may be considered complementary services.¹³¹⁷ As part of its ongoing cloud services market investigation, the UK CMA has found that there is ‘mixed and limited’ evidence that SaaS and PaaS cloud service offerings are substitutable, and their emerging view is that the competitive conditions for these products differ greatly.¹³¹⁸

Some stakeholders submitted that cloud services should be considered as a segment of the broader IT sector

In their submissions to this Report, Amazon and the Software & Information Industry Association both contended that cloud computing is merely one segment of the broader IT sector, and should not be viewed in isolation from other IT services ‘such as computer processing, storage, databases and other services’¹³¹⁹ (including on-premises IT services).¹³²⁰ In particular, Amazon submitted that:

- customers can acquire IT services ‘from multiple types of IT providers’ and ‘AWS and the many other cloud providers compete fiercely with each other and also with other IT service providers, including on-premises providers’¹³²¹
- customers see other IT services, like on-premises services, as ‘competitive substitutes’ for cloud services¹³²²

¹³¹⁶ Google, [What is Multicloud?](#), Google Cloud, accessed 13 March 2025.

¹³¹⁷ See, for example, French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, pp 2–3; Ofcom, [Cloud services market study \(Final Report\)](#), 5 October 2023, p 3; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 20; Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 9.

¹³¹⁸ CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, p 89; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 63–64.

¹³¹⁹ Amazon, [Submission to the Final Report](#), 11 October 2024, p 14.

¹³²⁰ Amazon, [Submission to the Final Report](#), 11 October 2024, pp 17–18; Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 11; Software and Information Association, [Submission to the Final Report](#), 11 October 2024, p 4.

¹³²¹ Amazon, [Submission to the Final Report](#), 11 October 2024, p 17.

¹³²² Amazon, [Submission to the Final Report](#), 11 October 2024, p 18.

- '[o]n-premises, hybrid, and cloud services generally address the same underlying IT needs (compute, storage, database services, etc.) and as such can be substitutable for many workloads and use cases'¹³²³
- 'When assessing their IT needs, companies typically define their objectives for a specific workload, or a set of workloads, and look at providers that can meet those objectives. Companies do not face a single, binary choice between cloud and on-premises for all their workloads. Instead, companies can choose their preferred providers and delivery methods on a workload-by-workload basis'¹³²⁴
- 'Cloud services are characterised by supply-side substitutability, as evidenced by the long list of companies from adjacent industries that have started providing cloud and/or hybrid services', including traditional IT hardware companies, telecommunications companies, data centre operators and others.¹³²⁵

Currently, the ACCC does not accept this position, noting the extremely broad range of products and services that comprise 'IT services'. In particular, as part of its ongoing cloud services market investigation, the CMA has provisionally found that traditional on-premises IT and private cloud should both be treated as separate from the markets for public IaaS and PaaS cloud services for the purposes of their investigation,¹³²⁶ because:

- Evidence collected by the CMA indicated that 'most customers do not consider alternative IT models like private clouds and traditional IT to be a good substitute for public cloud' as the public cloud has different characteristics (such as advanced functionality, cost, scalability, flexibility and resiliency), and the customers' relevant requirements would not be well met by alternative IT models.¹³²⁷
- While public cloud workloads can technically be hosted on private cloud, 'evidence from customers shows that there would be significant costs and time associated with switching to private cloud and only 2 customers indicated that they had previously switched'.¹³²⁸
- Where customers had switched workloads from the public cloud to another type of IT model, 'they generally indicated that they had done so because the workloads were not well suited for public cloud in the first place'.¹³²⁹ This form of switching reflects that the customers' needs were not satisfied by the public cloud, rather than reflecting the substitutability of the public cloud with other IT models.¹³³⁰
- The fact that customers use the public cloud as part of hybrid solutions with on-premises IT and the private cloud 'provides little evidence of substitutability', and 'the alternative IT models may better be considered as complementary than substitutable'.¹³³¹

4.1.2 Use of cloud infrastructure services is continuing to grow in Australia

Cloud computing has experienced growth in Australia in recent years, and this is expected to continue in the short-term. At the IaaS level, Gartner estimates that spending in Australia will rise by 24.5%

¹³²³ Amazon, [Supplementary Submission to the Final Report](#), 22 October 2024, p 11.

¹³²⁴ Amazon, [Supplementary Submission to the Final Report](#), 22 October 2024, p 4.

¹³²⁵ Amazon, [Supplementary Submission to the Final Report](#), 22 October 2024, p 17.

¹³²⁶ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 76–77.

¹³²⁷ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 75.

¹³²⁸ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 75.

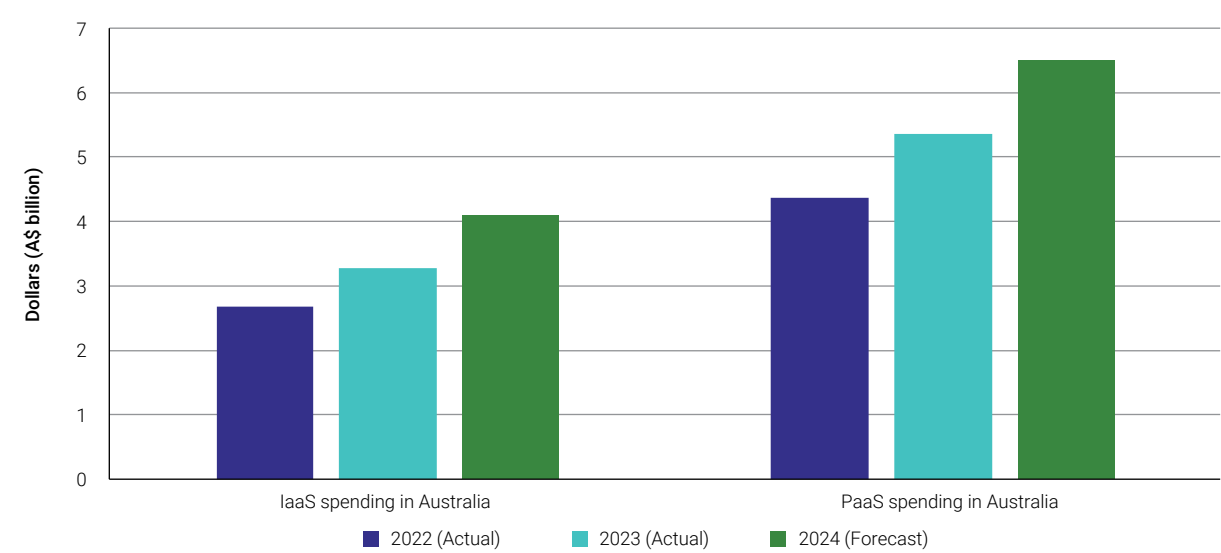
¹³²⁹ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 75.

¹³³⁰ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 76.

¹³³¹ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 76.

from \$3.3 billion to \$4.1 billion from 2023 to 2024.¹³³² In the same period, Gartner estimates that PaaS spend will increase by 22.4% from \$5.4 billion to \$6.6 billion. These trends are shown in figure 4.3.¹³³³ Similarly, Telsyte estimates that Australian organisations’ spend on cloud infrastructure increased 25% from 2022 to 2023, reaching \$4.4 billion in 2023.¹³³⁴ This trend seems likely to continue as more businesses migrate onto the cloud and, once migrated, run more workloads on cloud.¹³³⁵ Growth may also be driven by factors like the increasing importance of data for Australian businesses,¹³³⁶ and increasing demand driven by generative AI.¹³³⁷ In a survey conducted by Telsyte, 40% of Australian organisations indicated they intend to increase their cloud spending in 2024 by 20–70%.¹³³⁸

Figure 4.3: Actual and forecast spending on IaaS and PaaS in Australia



Source: ACCC analysis of Gartner data.

Major organisations are adopting cloud services in Australia, including banks, major supermarkets, energy companies, and government agencies, potentially showing that these services are becoming increasingly important to the Australian economy.¹³³⁹

Businesses that choose to use cloud computing may either be transitioning their existing on-premises services onto cloud computing, or establishing new services on cloud computing platforms in the first instance. The Productivity Commission’s 2022 conference paper on Firm Performance and Cloud Service noted that firms are ultimately driven to adopt cloud services

1332 Gartner, [Gartner Forecasts Australian Public Cloud End-User Spending to Reach \\$23.3 Billion in 2024](#), Press release, 20 May 2024, accessed 13 March 2025.

1333 Created based on ACCC analysis of data from Gartner, [Gartner Forecasts Australian Public Cloud End-User Spending to Reach \\$23.3 Billion in 2024](#), Press release, 20 May 2024, accessed 13 March 2025. Actual (2022) data was derived from 2023 (Actual) data and the 2023 growth rate reported by Gartner.

1334 Telsyte, [‘Generative AI fuels Australia’s booming IaaS market’](#), News, 5 March 2024, accessed 13 March 2025.

1335 Google, [Submission to the Final Report](#), 11 October 2024, p 43.

1336 In the Report on the Data Products and Services of Data Firms, the ACCC observed that data is considered a key or even essential input for many products and services in today’s world. See ACCC, [Digital Platform Services Inquiry Eighth Interim Report](#), 21 May 2024, p 43.

1337 Telsyte, [‘Generative AI fuels Australia’s booming IaaS market’](#), News, 5 March 2024, accessed 13 March 2025.

1338 Telsyte, [‘Generative AI fuels Australia’s booming IaaS market’](#), News, 5 March 2024, accessed 13 March 2025.

1339 Amazon Web Services, [Customer stories – Banking on great expectations](#), APJ Enterprise Hub, accessed 13 March 2025; Microsoft, [Coles accelerates from monthly to weekly application deployments with Azure](#), Customer Stories, 11 September 2023, accessed 13 March 2025; Amazon Web Services, [Customer stories – Leading energy company slash maintenance costs](#), APJ Enterprise Hub, accessed 13 March 2025; Microsoft, [Transport for NSW uses Agile Analytics and Azure to harness the power of data and improve customer services across New South Wales](#), Customer Stories, 16 September 2020, accessed 13 March 2025.

by the expected commercial advantages in doing so.¹³⁴⁰ Several stakeholders have noted that cloud computing can be faster, more flexible and cheaper than businesses maintaining their own computing resources.¹³⁴¹

The Productivity Commission found that adoption of cloud services is ‘positively associated with firm performance’, and noted that the greatest benefits accrue to firms using IaaS services for cloud-based processing activities.¹³⁴² However, the type of cloud services a firm adopts tends to vary depending on the firm’s size and technical sophistication. The Productivity Commission noted:

- SaaS is the most widely used cloud technology type by all sizes of businesses, generally in the form of cloud-based finance or accounting software.¹³⁴³
- However, larger firms tend to dominate the use of IaaS services. For example, firms that employed 200 or more employees had a nearly 4 times higher rate of using cloud processing power to run software than the smallest firms. This is likely due to larger firms having more in-house expertise and sophistication in managing information and communications technology.¹³⁴⁴
- Larger businesses also appear to be more likely than small businesses to realise cost savings and scalability benefits from their use of cloud, which again is likely due to their more extensive and sophisticated use of cloud technologies, particularly IaaS.¹³⁴⁵
- Some firms underestimate the complexity and costs of moving from conventional IT arrangements towards cloud services, and consequently may perceive that their productivity has not improved or has worsened as a result of their move to cloud.¹³⁴⁶ However, there are likely sizeable benefits for most adopters of cloud.¹³⁴⁷

4.1.3 Key providers of cloud infrastructure services

Amazon (through its subsidiary, Amazon Web Services), Microsoft and Google are the 3 leading providers of cloud infrastructure services globally.¹³⁴⁸ Sometimes these providers are referred to as

1340 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 20.

1341 Amazon, [Submission to the Final Report](#), 11 October 2024, p 15; Microsoft, [Submission to the Final Report](#), 11 October 2024, p 6; Software and Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 4; Google, [Advantages and disadvantages of cloud computing](#), Google Cloud, accessed 13 March 2025.

1342 While the Productivity Commission noted that some businesses may purchase excess cloud services capacity, which may imply a net benefit from adoption of the technology does not accrue to those firms, it noted that its finding that the share of businesses that had taken up the technology, but where the technology had adversely affected their performance was ‘implausibly high and should not be interpreted as reliable’. H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, pp 7, 22.

1343 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 8.

1344 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 10.

1345 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 6.

1346 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, pp 6–7.

1347 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 6.

1348 Google, [Submission to the Final Report](#), 11 October 2024, p 44. CRN, [Australian IaaS market grew 20.76% in 2023: Gartner](#), 23 July 2024, accessed 13 March 2025.

‘hyperscalers’ in the supply of cloud infrastructure services.¹³⁴⁹ These platforms offer services at each level of the cloud computing stack and are some of the largest providers of IaaS and PaaS.

Box 4.2: What are ‘hyperscalers’?

The term ‘hyperscalers’ is frequently used to describe the largest cloud service providers operating globally: Amazon Web Services, Microsoft and Google.¹³⁵⁰ The term is derived from hyperscale computing, which refers to a data processing method that allows workloads to rapidly scale with demand.¹³⁵¹ Hyperscale providers operate vast networks of large data centres for data processing and storage with millions of users globally.¹³⁵²

Hyperscalers are well positioned to meet large enterprises’ demand for computing, as they can flexibly and reliably develop and deploy technologies which require substantial computing workloads, including AI applications, connected internet-of-things devices and machine learning.¹³⁵³

Investigations and market inquiries by international competition and communications regulators such as the JFTC, the UK’s Office of Communications (Ofcom), and the French Competition Authority, have each found that Amazon Web Services, Microsoft and Google hold leading positions in their respective country’s cloud markets.¹³⁵⁴ The French Competition Authority has noted that these firms possess ‘considerable financial muscle’ and benefit from economies of scale and scope.¹³⁵⁵

This is supported by public estimates of global market share for cloud infrastructure services, with Statista estimating that in Q4 2024, Amazon Web Services held 30% market share, Microsoft Azure held 21%, and Google Cloud held 12%. The next largest was Alibaba Cloud, with 4% market share.¹³⁵⁶

Similarly in Australia, Amazon Web Services, Microsoft and Google appear to hold significant positions in the supply of cloud infrastructure services. Gartner estimated in 2023 that Microsoft held 30.9% of the Australian IaaS market, Amazon held 30.1%, and Google held 20.6%. In contrast, smaller providers IBM and Oracle (included within ‘Others’ in the chart below) held 4.7% and 2.4% respectively.¹³⁵⁷

1349 See, for example, French Competition Authority, [Cloud computing: the Autorité de la concurrence issues its market study on competition in the cloud sector](#), Press release, 29 June 2023, accessed 13 March 2025; Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 35; Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 3.

1350 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 4.

1351 Red Hat, [What is a hyperscaler?](#), 20 December 2022, accessed 13 March 2025.

1352 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 198; IBM, citing the International Data Corporation, a market intelligence provider, suggests that to be considered a hyperscaler, a company must use at least 5,000 servers occupying at least the equivalent 929 square meters of space. See IBM, [What is hyperscale?](#), 12 March 2024, accessed 13 March 2025.

1353 Red Hat, [What is a hyperscaler?](#), 20 December 2022, accessed 13 March 2025.

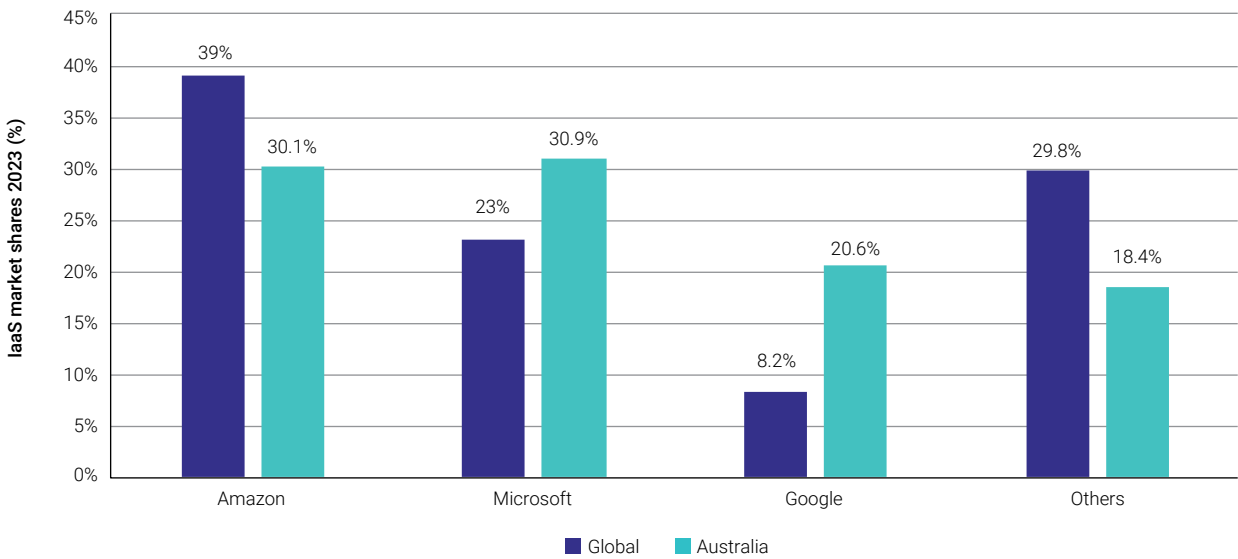
1354 French Competition Authority, [Cloud computing: the Autorité de la concurrence issues its market study on competition in the cloud sector](#), Press release, 29 June 2023, accessed 13 March 2025; JFTC, [Report on Trade Practices in Cloud Services Sector \(Summary\)](#), June 2022, p 5; Ofcom, [Cloud services market study \(Final Report\)](#), 5 October 2023, p 3.

1355 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 5.

1356 F Richter, [‘Amazon and Microsoft Stay Ahead in Global Cloud Market’](#), Statista, 27 February 2025, accessed 13 March 2025.

1357 This is according to researchers at Gartner – see CRN, [Australian IaaS market grew 20.76% in 2023: Gartner](#), 23 July 2024, accessed 13 March 2025. According to Gartner, IaaS is a ‘standardi[s]ed, highly automated offering in which computing resources owned by a service provider, complemented by storage and networking capabilities, are offered to customers on demand’. The ‘Australian IaaS market’ refers to IaaS services supplied in Australia. Australian market shares refer to the proportion of revenue earned by each firm supplying IaaS services in Australia. See Gartner, [Glossary – Infrastructure as a Service \(IaaS\)](#), accessed 13 March 2025.

Figure 4.4: Estimates of global and Australian IaaS market shares



Source: ACCC analysis of Gartner data.

In coming years, major cloud providers are planning substantial investments in data centres (used to supply cloud services) both in Australia (see box 4.3) and globally, particularly for AI-related cloud services (see section 4.1.4). According to research by Statista, Australia has the seventh-most data centres in the world (306), while the US has the most (5,388).¹³⁵⁸

¹³⁵⁸ P Taylor, 'Leading countries by number of data centers as of March 2024', Statista, 11 October 2024, accessed 13 March 2025. The ACCC notes that the size and capacity of data centres can vary greatly, so the number of data centres in a jurisdiction may not accurately reflect that jurisdiction's total data centre capacity.

Box 4.3: Data centre investments by key cloud providers in Australia

Amazon Web Services (AWS)

- AWS has had data centres in Sydney since 2012, and Melbourne since 2023.¹³⁵⁹
- In 2023, AWS announced it planned to invest \$13.2 billion into its Australian cloud computing business in the next 5 years.¹³⁶⁰

Microsoft

- Microsoft has had data centres in New South Wales and Victoria since 2014, and in the Australian Capital Territory since 2018.¹³⁶¹
- In October 2023, Microsoft committed to investing \$5 billion into its Australian cloud computing and AI infrastructure, including by increasing its number of data centres in Australia from 20 to 29.¹³⁶²

Google

- According to Google's website, it does not own any data centres in Australia.¹³⁶³

IBM

- IBM's website notes that it operates a 'multizone region' consisting of 3 data centres in Sydney.¹³⁶⁴

Oracle

- Oracle's website does not have information on its data centre locations, but it reportedly leases its data centre facilities in Australia.¹³⁶⁵

Amazon

Amazon Web Services (AWS) is Amazon's subsidiary that supplies cloud infrastructure services worldwide. Between 2000 and 2002, Amazon introduced several services that enabled third parties to integrate Amazon's marketplace technologies into their own websites.¹³⁶⁶ In 2006, AWS began

1359 Amazon, [AWS Global Infrastructure](#), Amazon Web Services, accessed 13 March 2025; Amazon, [AWS Launches Second Infrastructure Region in Australia](#), Press release, 23 January 2023, accessed 13 March 2025.

1360 T Bennett, ['Amazon's \\$13b Aussie investment plan revealed'](#), *The Australian Financial Review*, 4 April 2023, accessed 13 March 2025.

1361 Microsoft, [Microsoft Datacenters – Globe Explorer](#), accessed 13 March 2025.

1362 Prime Minister of Australia, [Microsoft investment in Australian innovation](#), Press release, 24 October 2023, accessed 13 March 2025.

1363 Google, [Discover where the internet lives](#), Google Data Centers, accessed 13 March 2025.

1364 IBM Cloud, [IBM Cloud region and data center locations for resource deployment](#), last updated 12 February 2025, accessed 13 March 2025.

1365 D Swinhoe, ['Oracle launches government cloud region in Australia'](#), *Data Center Dynamics*, 8 August 2023, accessed 13 March 2025.

1366 For example, Merchant.com and Amazon.com Web Services. See R Miller, ['How AWS came to be'](#), *Tech Crunch*, 2 July 2016, accessed 13 March 2025; Amazon, [Amazon.com Launches Web Services; Developers Can Now Incorporate Amazon.com Content and Features into Their Own Web Sites; Extends "Welcome Mat" for Developers](#), Press release, 16 July 2002, accessed 13 March 2025.

offering cloud infrastructure services, launching its Simple Storage Service (S3) cloud storage and Elastic Compute Cloud (EC2) products.¹³⁶⁷

In the 2024 calendar year, AWS earned US\$107.556 billion in net sales revenue, representing a 19% increase year-on-year from 2023.¹³⁶⁸ AWS's operating income for the year was US\$39.834 billion, around 62% higher than the 2023 figure of US\$24.631 billion.¹³⁶⁹

The Report on Expanding Ecosystems of Digital Platforms noted that AWS has become one of Amazon's core revenue-generating services, with the share of overall revenues (measured as net sales, which include product and service sales) growing from 5% in 2014 to 16% in 2022.¹³⁷⁰ In the 2024 calendar year, AWS generated around 17% of Amazon's revenue.¹³⁷¹

Several international competition regulators have found that AWS has a significant presence in cloud infrastructure services in their respective jurisdictions. For example:

- In January 2025, the UK CMA provisionally found that AWS is one of the 2 largest providers of cloud services in the UK, with a 40–50% share of the IaaS market and a 30–40% share of the combined IaaS/PaaS market in 2023.¹³⁷² The CMA's cloud services market inquiry team said it proposed recommending that the CMA board use its new digital markets powers to prioritise commencing investigations to consider designating AWS with 'strategic market status' in relation to its digital activities in cloud services.¹³⁷³
- The UK Ofcom noted that AWS was 'considered as the overall market leader in cloud in the UK' in 2022, accounting for 30–40% of UK's public cloud infrastructure revenue.¹³⁷⁴
- In 2020, the US House Subcommittee on Antitrust 'found that Amazon ha[d] a dominant position in cloud computing'.¹³⁷⁵
- In 2022, the Netherlands Authority for Consumers and Markets' market study into cloud services noted that AWS had a large market share of the IaaS and PaaS layers, holding 35–40% in the Netherlands and Europe.¹³⁷⁶
- The French Competition Authority found that in 2021, Amazon captured 46% of revenues in IaaS and PaaS services in France.¹³⁷⁷
- The JFTC found that in Japan, AWS grew from a 5–10% market share in IaaS and PaaS services in FY 2011 to a 40–50% market share in FY 2020.¹³⁷⁸

Microsoft

Microsoft began supplying cloud computing services in 2008 with its Windows Azure product, which initially offered service hosting and management, low-level scalable storage, computation and

1367 Amazon, [Amazon Web Services Launches](#), Press release, 14 March 2006, accessed 13 March 2025; J Barr, 'Amazon EC2 Beta', AWS News Blog, 25 August 2006, accessed 13 March 2025.

1368 Amazon, [Amazon.com announces fourth quarter results](#), About Amazon, 6 February 2025, accessed 13 March 2025.

1369 Amazon, [Amazon.com announces fourth quarter results](#), About Amazon, 6 February 2025, accessed 13 March 2025.

1370 ACCC, [Digital Platform Services Inquiry Seventh Interim Report](#), 27 November 2023, p 33.

1371 Amazon, [Amazon.com announces fourth quarter results](#), About Amazon, 6 February 2025, accessed 13 March 2025.

1372 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 46.

1373 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 16–17.

1374 Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 35.

1375 Subcommittee on Antitrust, Commercial and Administrative Law of the Committee of the Judiciary, [Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations](#), 6 October 2020, p 319. In the report, cloud computing is defined as 'the service that enables remote storage and software programs on demand through the Internet' (see p 109).

1376 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 4.

1377 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 5.

1378 JFTC, [Report on Trade Practices in Cloud Services Sector](#), June 2022, p 29.

networking services.¹³⁷⁹ In February 2010, Microsoft made Azure generally available to the public.¹³⁸⁰ In 2011, Microsoft launched its cloud-based Office 365 product globally.¹³⁸¹

Microsoft's 2024 annual report stated that, for the 2023–2024 financial year, its Intelligent Cloud business segment (which includes server products and cloud services, as well as enterprise services) earned US\$105.362 billion in revenue, representing a 20% increase from the 2022–2023 financial year. The Intelligent Cloud business segment had an operating income for the year of US\$49.584 billion, an increase of 31% on the year prior.¹³⁸²

International competition regulators have also found that Microsoft, through its Azure product, has a large presence in infrastructure and platform cloud services in their respective jurisdictions. For example:

- In January 2025, the UK CMA provisionally found that Microsoft is one of the 2 largest providers of cloud services in the UK, with a 30–40% share of the IaaS market and a 30–40% share of the combined IaaS/PaaS market in 2023.¹³⁸³ The CMA's cloud services market inquiry team is proposing to recommend that the CMA board use its new digital markets powers to prioritise commencing investigations to consider designating Microsoft with 'strategic market status' in relation to its digital activities in cloud services.¹³⁸⁴
- The UK Ofcom noted that Microsoft accounted for 30–40% of public cloud infrastructure revenue in the UK in 2022.¹³⁸⁵
- In 2022, the Netherlands Authority for Consumers and Markets' market study into cloud services noted that, like AWS, Microsoft also had a large market share of the IaaS and PaaS layers, holding 35–40%.¹³⁸⁶
- In 2021, France's French Competition Authority noted that Microsoft had captured 17% of revenues from IaaS and PaaS services in France.¹³⁸⁷
- From 2014 to 2020, the JFTC reported that Microsoft's market share by sales revenue of IaaS and PaaS services in Japan increased from approximately 5–10% to 10–20%.¹³⁸⁸

Google

Google's entry into cloud computing was facilitated by years of development from 1999 to increase the scale and stability of Google Search.¹³⁸⁹ During this period, Google developed several key technologies and designs for its data centres that continue to be used for its cloud infrastructure offering.¹³⁹⁰ In 2008, Google began to offer cloud infrastructure services with the launch of App

1379 Microsoft, [Microsoft Unveils Windows Azure at Professional Developers Conference](#), Microsoft Source, 27 October 2008, accessed 13 March 2025.

1380 Microsoft, [Windows Azure General Availability](#), Official Microsoft Blog, 1 February 2010, accessed 13 March 2025.

1381 Microsoft, [Microsoft Launches Office 365 Globally](#), Microsoft Source, 28 June 2011, accessed 13 March 2025.

1382 Microsoft, [Annual Report 2024](#), 18 October 2024, p 31.

1383 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 46.

1384 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 16–17.

1385 Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 35.

1386 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 4.

1387 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, accessed 13 March 2025.

1388 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 29.

1389 P Ranganathan and U Hölzle, [Twenty Five Years of Warehouse-Scale Computing](#), *IEEE Micro*, Vol 44:5, 2024, pp 11–22.

1390 P Ranganathan and U Hölzle, [Twenty Five Years of Warehouse-Scale Computing](#), *IEEE Micro*, Vol 44:5, 2024, pp 11–22. For example, Google developed technology to reduce the power consumption of under-utilised servers and the ability to track and optimise power delivery efficiency and data centre cooling.

Engine, a PaaS service on which developers can build and host web and mobile applications at scale.¹³⁹¹

Google Cloud now offers several cloud services, including infrastructure and platform services, collaboration tools, and services for enterprise customers.¹³⁹² Google Cloud generates revenues primarily from consumption-based fees and subscriptions received for Google Cloud Platform services, Google Workspace communication and collaboration tools, and other enterprise services.¹³⁹³

In the 2024 calendar year, Google Cloud earned US\$43.229 billion in revenue, representing a 31% increase year-on-year from 2023.¹³⁹⁴ Google Cloud's operating income for the year was US\$6.112 billion, indicating a margin of 14%.¹³⁹⁵

International regulators have observed that Google Cloud holds a smaller position in the supply of cloud infrastructure services than AWS and Microsoft in their respective jurisdictions. For example:

- In January 2025, the UK CMA provisionally found that Google was the third-largest provider of cloud services in the UK, with 'much lower shares of supply' than AWS and Microsoft.¹³⁹⁶
- The UK Ofcom noted that Google accounted for 5–10% of public cloud infrastructure revenue in the UK in 2022.¹³⁹⁷
- In 2022, the Netherlands Authority for Consumers and Markets' market study into cloud services noted that Google was the third competitor in the market behind AWS and Microsoft, but was 'very strong'.¹³⁹⁸
- In 2021, the French Competition Authority found Google's combined market share of IaaS and PaaS services in France was about 8%.¹³⁹⁹
- The JFTC found Google held a 0–5% market share in IaaS and PaaS services in Japan in FY 2020.¹⁴⁰⁰

Other providers

IBM

IBM is one of the world's oldest computing companies,¹⁴⁰¹ focused on providing software to enterprises, including cloud computing and AI platforms. IBM reportedly had 4.7% of the market

1391 M Ross, '[Reflecting on our ten year App Engine journey](#)', *Google Cloud Blog*, 14 April 2018, accessed 13 March 2025; M Arrington, '[Google Jumps Head First Into Web Services With Google App Engine](#)', *Tech Crunch*, 7 April 2008, accessed 13 March 2025; Google, [App Engine documentation](#), Google Cloud, accessed 13 March 2025; Google, [App Engine Documentation – an overview of App Engine](#), Google Cloud, accessed 13 March 2025.

1392 Alphabet Inc., [Form 10-Q lodged with the US Securities and Exchange Commission](#), for the quarterly period ended September 30, 2024, 22 October 2024, p 31.

1393 Alphabet Inc., [Form 10-Q lodged with the US Securities and Exchange Commission](#), for the quarterly period ended September 30, 2024; 22 October 2024, p 31.

1394 Alphabet Inc., [Form 10-K lodged with the US Securities and Exchange Commission](#), for the fiscal year ended December 31, 2024, 4 February 2025, p 36.

1395 Alphabet Inc., [Form 10-K lodged with the US Securities and Exchange Commission](#), for the fiscal year ended December 31, 2024, 4 February 2025, p 39.

1396 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 46.

1397 Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 36.

1398 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 4.

1399 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 49.

1400 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 29.

1401 IBM, [The origins of IBM](#), accessed 13 March 2025.

share for IaaS in Australia in 2023.¹⁴⁰² In 2019, IBM purchased Red Hat, which is a provider of Linux-based software and cloud products, and has reportedly enabled IBM to pivot to a cloud strategy.¹⁴⁰³ IBM's cloud strategy is focused on providing hybrid cloud services, leveraging its existing presence in enterprise computing products and services.¹⁴⁰⁴

IBM has also entered an AI-focused partnership with AWS, which initially provided users of Amazon Cloud and AWS Bedrock (AWS's platform for building generative AI apps) with access to IBM's AI platform, watsonx, as well as IBM Consulting services.¹⁴⁰⁵ In November 2024, the partnership was deepened to enable IBM software to be sold on AWS Marketplace and IBM Granite models to be made available on Amazon SageMaker JumpStart (a machine learning platform), in addition to Amazon Bedrock.¹⁴⁰⁶ Granite models are IBM's third-generation AI models.¹⁴⁰⁷

Oracle

Oracle is a software provider historically focused on database management and developer tools, which expanded into cloud services and infrastructure in 2016.¹⁴⁰⁸ Oracle reportedly had 2.4% of the market share for IaaS in Australia in 2023.¹⁴⁰⁹ As of 2024, cloud services have become Oracle's largest source of revenue,¹⁴¹⁰ having grown by 24% to US\$5.1 billion as of Q3 2024.¹⁴¹¹ On 11 June 2024, Oracle and Google announced a partnership facilitating the integration of Oracle's database services with Google Cloud.¹⁴¹² Oracle also provides computing infrastructure to OpenAI.¹⁴¹³

Alibaba Cloud

Alibaba Cloud is a major cloud provider globally, reportedly generating US\$11.12 billion in IaaS revenue and holding a 7.9% global market share in IaaS in 2022–23.¹⁴¹⁴ On 30 September 2024, Alibaba Cloud ceased operations of its data centres in Australia, noting that it would be growing its investment in Southeast Asia and Mexico.¹⁴¹⁵ Alibaba Cloud encouraged its Australian customers to migrate their data to another Alibaba Cloud region.¹⁴¹⁶

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- 1402 This is according to researchers at Gartner – see CRN, [Australian IaaS market grew 20.76% in 2023: Gartner](#), 23 July 2024, accessed 13 March 2025.
- 1403 A Adshead, 'IBM reorients to offset historic storage hardware decline', *ComputerWeekly.com*, 26 September 2023, accessed 13 March 2025.
- 1404 A Adshead, 'IBM reorients to offset historic storage hardware decline', *ComputerWeekly.com*, 26 September 2023, accessed 13 March 2025.
- 1405 Amazon, [AWS and IBM Partners](#), Amazon Web Services, accessed 13 March 2025; IBM, [IBM and AWS partnership](#), accessed 13 March 2025.
- 1406 IBM, [IBM and AWS Accelerate Partnership to Scale Responsible Generative AI](#), IBM Newsroom, 25 November 2024, accessed 13 March 2025.
- 1407 IBM, [IBM Granite AI](#), accessed 13 March 2025.
- 1408 J Waters, 'Oracle Launches 'Bare Metal Cloud' in Major IaaS Play', *Redmond Channel Partner*, 24 October 2016, accessed 13 March 2025.
- 1409 This is according to researchers at Gartner – see CRN, [Australian IaaS market grew 20.76% in 2023: Gartner](#), 23 July 2024, accessed 13 March 2025.
- 1410 R Fysher, 'Oracle Has "Crossed Over" – Cloud Becomes Top Revenue Driver', *CX Today*, 13 March 2024, accessed 13 March 2025.
- 1411 R Fysher, 'Oracle Has "Crossed Over" – Cloud Becomes Top Revenue Driver', *CX Today*, 13 March 2024, accessed 13 March 2025.
- 1412 Oracle, [Oracle and Google Cloud Announce a Groundbreaking Multicloud Partnership](#), Press release, 11 June 2024, accessed 13 March 2025.
- 1413 J Peters, 'OpenAI to use Oracle's chips for more AI compute', *The Verge*, 13 June 2024, accessed 13 March 2025.
- 1414 Gartner, [Gartner Says Worldwide IaaS Public Cloud Services Revenue Grew 16.2% in 2023](#), Press release, 22 July 2024, accessed 13 March 2025.
- 1415 Alibaba Cloud, [Notice on the ceasing operation of Alibaba Cloud data centers in Australia and India](#), 27 June 2024, accessed 13 March 2025.
- 1416 Alibaba Cloud, [Notice on the ceasing operation of Alibaba Cloud data centers in Australia and India](#), 27 June 2024, accessed 13 March 2025.

Other potential entrants

Two major cloud providers submitted to the ACCC that other companies are beginning to, or are well positioned to, provide cloud services.¹⁴¹⁷ Microsoft submitted that competitive constraints are imposed by the potential entry of 'well-resourced organizations with the ability and incentive to develop an at-scale cloud for their own use', noting that companies such as Meta, Salesforce and Apple all run their own large-scale data centres for their own services and are well-positioned to expand into public cloud.¹⁴¹⁸ Amazon submitted that 'it is highly attractive for existing IT firms to expand into' the cloud sector,¹⁴¹⁹ facilitated by supply-side substitutability which makes provision of cloud services easier than companies starting cloud products from scratch.¹⁴²⁰ Amazon noted that companies in adjacent industries such as Dell, IBM, SAP and Nvidia, among others, have started providing cloud products.¹⁴²¹

Nvidia currently specialises in providing AI accelerator chips for use in AI development and deployment (discussed in more detail in section 4.2.2). However, in March 2023, Nvidia launched its own AI cloud service called DGX Cloud,¹⁴²² which runs on top of other companies' cloud platforms: rival cloud providers (currently AWS, Google, Microsoft and Oracle) lease servers powered by Nvidia chips that are located in the cloud providers' data centres to Nvidia, which then leases those servers out to AI developers.¹⁴²³ Nvidia stated in a presentation in August 2024 that the 'long-term available market opportunity' for DGX Cloud and Nvidia AI Enterprise (its SaaS platform for AI development and deployment)¹⁴²⁴ was expected to be US\$150 billion.¹⁴²⁵ In a November 2024 investor presentation, Nvidia noted that it expected its software, service and support business would exceed US\$2 billion in annualised revenue by the end of 2024¹⁴²⁶ (although Nvidia has not confirmed whether this figure includes DGX Cloud revenue).¹⁴²⁷

4.1.4 Dynamics and key trends in cloud infrastructure services

Large cloud infrastructure firms are often vertically integrated

As noted above, many major cloud providers are vertically integrated, meaning that they offer complementary services across layers of the cloud stack. Notably, AWS, Microsoft and Google's IaaS services host popular vertically integrated SaaS offerings (such as Amazon Prime Video, Microsoft 365, and Gmail) and first-party PaaS products, in addition to SaaS and PaaS products developed by independent software vendors (ISVs).¹⁴²⁸ Their cloud systems also act as channels for customers to purchase those services.¹⁴²⁹

1417 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 5; Amazon, [Submission to the Final Report](#), 11 October 2024, p 19.

1418 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 5.

1419 Amazon, [Submission to the Final Report](#), 11 October 2024, p 19.

1420 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 17.

1421 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 17.

1422 Nvidia, [NVIDIA Launches DGX Cloud, Giving Every Enterprise Instant Access to AI Supercomputer From a Browser](#), Press release, 21 March 2023, accessed 13 March 2025.

1423 Nvidia, [NVIDIA DGX Cloud](#), accessed 13 March 2025.

1424 Nvidia, [NVIDIA AI Enterprise](#), accessed 13 March 2025.

1425 Nvidia, [Investor Presentation – Company Overview](#), 29 August 2024, p 34, accessed 13 March 2025.

1426 Nvidia, [Investor Presentation Q3 FY25](#), November 2024, p 7, accessed 13 March 2025.

1427 A Gardizy and K McLaughlin, 'Nvidia Says It Could Build a Cloud Business Rivaling AWS. Is That Possible?', *The Information*, 17 December 2024, accessed 13 March 2025.

1428 ISVs are suppliers of cloud services, typically PaaS and/or SaaS, that do not usually own the underlying infrastructure. See, for example, Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 39.

1429 Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 5.

AI products are also being integrated into the services of cloud providers. For example, AI tools from OpenAI (which has a partnership with Microsoft) are available on Microsoft Azure for Microsoft customers to develop their own AI applications.¹⁴³⁰ Vertical integration of AI products in cloud computing is discussed in further detail in section 4.2.

Box 4.4: Vertical integration in cloud through agreement, joint venture or merger

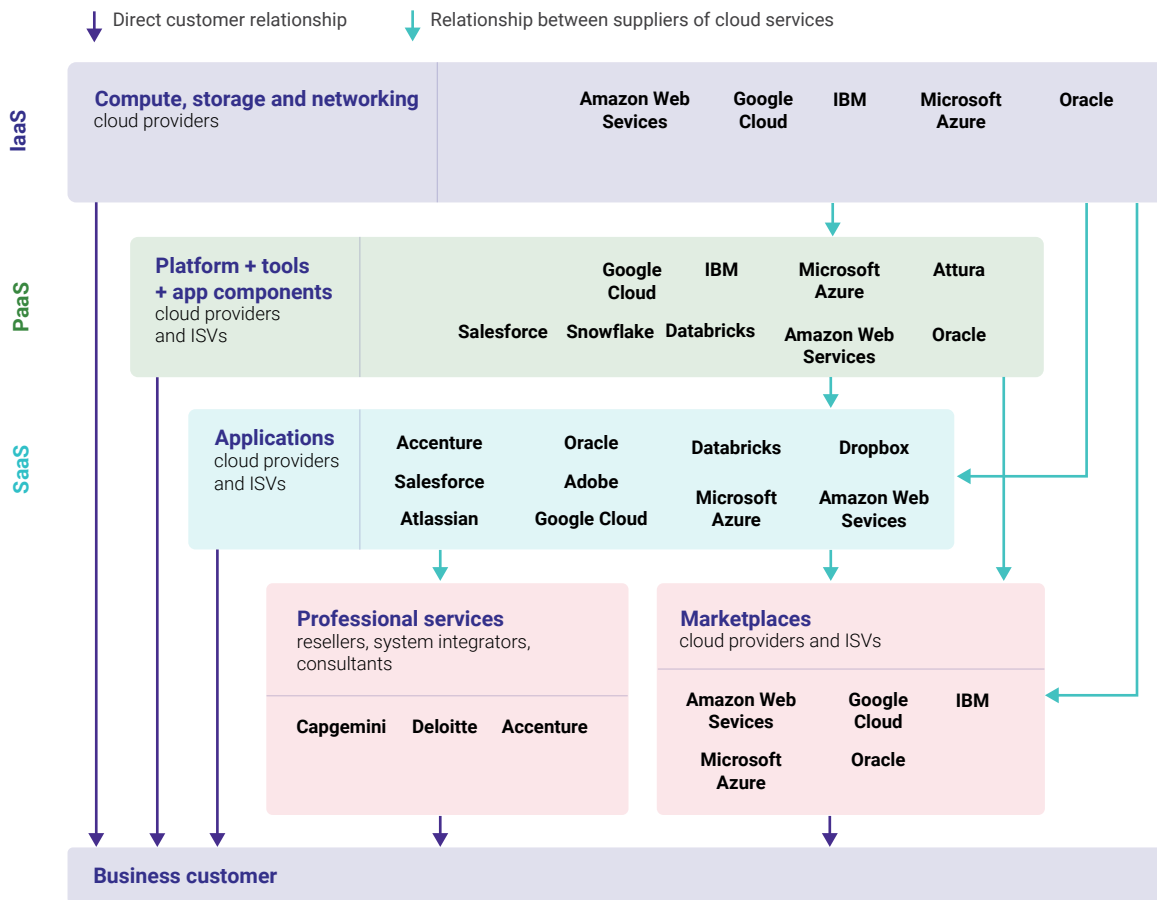
In addition to a cloud provider developing its own products across different layers of the stack, vertical integration of cloud products can occur through agreement, joint venture, or merger. The French Competition Authority raised concerns in its market study of cloud computing regarding joint ventures, mergers, and technological partnerships (whether they are horizontal or vertical agreements) between the 3 largest cloud providers or other major players in the cloud sector, noting that these activities could lead to limitations on the ability for smaller cloud providers to compete, including if bundling or tied selling occur.¹⁴³¹ However, the French Competition Authority also considered that merger control and other regulatory tools could meet some of these challenges.¹⁴³²

1430 C Carugati, '[The competitive relationship between cloud computing and generative AI](#)', *Bruegel*, 11 December 2023, accessed 13 March 2025.

1431 French Competition Authority, '[Cloud computing: the Autorité de la concurrence issues its market study on competition in the cloud sector](#)', Press release, 29 June 2023, accessed 13 March 2025.

1432 French Competition Authority, '[Cloud computing: the Autorité de la concurrence issues its market study on competition in the cloud sector](#)', Press release, 29 June 2023, accessed 13 March 2025.

Figure 4.5: Stylised representation of the vertical cloud stack



Source: Based on Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 34.

The rise of generative AI is increasing demand for cloud services

In recent years, increased demand for cloud services has been driven by the rise of generative AI. This is because, as explored further in section 4.2.1, computing power is an essential input into generative AI products,¹⁴³³ with significant amounts required to train and deploy the large foundation models that power generative AI products and services.¹⁴³⁴ There is a high cost involved in building data centres that are configured for AI, including purchasing the large quantities of AI chips required to train advanced foundation models. For example:

- Microsoft, Meta, Google and Amazon are estimated to have collectively spent US\$125 billion on building and running their AI data centres between January and August 2024.¹⁴³⁵
- Microsoft's Vice Chair & President, Brad Smith, has stated that Microsoft is on track to spend US\$80 billion on new AI data centres in the 2024/2025 financial year.¹⁴³⁶

1433 B Coeuré, 'Artificial intelligence: making sure it's not a walled garden', Keynote address at the Bank for International Settlements – Financial Stability Institute policy implementation meeting on big techs in insurance, Basel, 19 March 2024, p 4; US FTC, [Cloud Computing RFI: What we heard and learned](#), 16 November 2023, accessed 13 March 2025.

1434 B Coeuré, 'Artificial intelligence: making sure it's not a walled garden', Keynote address at the Bank for International Settlements – Financial Stability Institute policy implementation meeting on big techs in insurance, Basel, 19 March 2024 p 4.

1435 M Cembalest, 'A severe case of COVIDIA: prognosis for an AI-driven US equity market', JP Morgan, 3 September 2024, p 10.

1436 B Smith, 'The Golden Opportunity for American AI', Microsoft on the Issues, 3 January 2025, accessed 13 March 2025.

- Meta's CEO, Mark Zuckerberg, has stated that Meta is planning to invest US\$60 billion to US\$65 billion in capital expenditure in 2025 as part of 'a defining year for AI'.¹⁴³⁷
- Samsung announced in December 2024 its plans to build its first AI data centre, with the aim to expand its current cloud service offerings to include AI computing capability, and reportedly spent US\$15 million purchasing the land and infrastructure.¹⁴³⁸
- Macquarie Data Centres, an Australian data centre operator, is spending \$350 million to construct a new AI data centre in Sydney and announced in June 2024 that construction had begun.¹⁴³⁹

Due to these significant costs, most developers of foundation models instead access computing power required to train and deploy their generative AI models and applications through cloud services, rather than investing in their own AI data centres.¹⁴⁴⁰ Small AI firms devote much of their cashflow to paying for this computing power.¹⁴⁴¹

The growth of the generative AI sector has consequently translated to an increase in demand for cloud computing, and an increase in major cloud providers' revenues. Figure 4.6 shows that the global revenue of Amazon Web Services, Microsoft and Google from their cloud segments has been steadily growing since the end of 2022 (noting that OpenAI's ChatGPT was publicly released in November 2022).¹⁴⁴²

1437 M Zuckerberg, [Threads post](#), 25 January 2025, accessed 13 March 2025. See also, Meta, [Meta Reports Fourth Quarter and Full Year 2024 Results](#), Press release, 29 January 2025, accessed 13 March 2025.

1438 R Kelly, '[Samsung wants to build its first AI data center as it seeks to crack \\$1 billion dollar annual sales in cloud services](#)', *TechRadar*, 20 December 2024, accessed 13 March 2025.

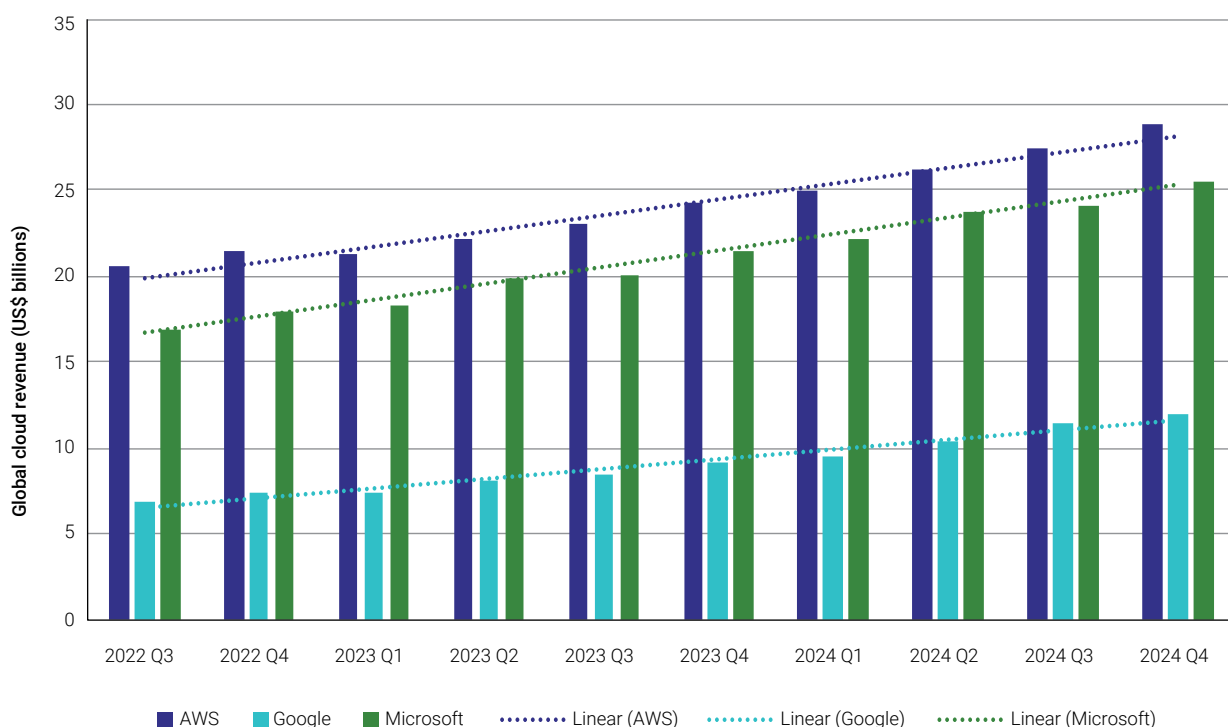
1439 Macquarie Data Centres, [Macquarie Data Centres starts construction on its AI and Cloud data centre in Sydney](#), 13 June 2024, accessed 13 March 2025.

1440 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 143.

1441 Z Meyers, '[Big tech rivalry could be the key to competition in AI](#)', *Centre for European Reform*, 30 May 2024, accessed 13 March 2025.

1442 Based on ACCC analysis of the US Securities and Exchange Commission Form 10-Q quarterly reports and Form 10-K annual reports filed by Alphabet Inc. (available at [Alphabet Investor Relations](#), accessed 13 March 2025), Amazon (available at [Amazon Investor Relations: Quarterly Results](#), accessed 13 March 2025) and Microsoft (available at [Microsoft Investor Relations: Browse Prior Earnings Releases](#), accessed 13 March 2025). The quarterly periods in the chart are based on a calendar year (Q1: January to March; Q2: April to June; Q3: July to September; Q4: October to December).

Figure 4.6: Global cloud revenue of Amazon Web Services, Google and Microsoft from Q3 2022 to Q4 2024 (US\$ billions)



Source: ACCC analysis of Form 10-Q quarterly reports and Form 10-K annual reports.

In recent earnings calls, the CEOs of each of these companies have attributed much of their cloud business growth to AI-related demand:

- 'AWS's AI business is a multibillion-dollar revenue run rate business that continues to grow at a triple-digit year-over-year percentage and is growing more than 3 times faster at this stage of its evolution as AWS itself grew' (Amazon CEO Andy Jassy at Amazon's 2024 Q3 earnings call).¹⁴⁴³
- 'All-up, our AI business is on track to surpass an annual revenue run rate of US\$10 billion next quarter, which will make it the fastest business in our history to reach this milestone' (Microsoft CEO Satya Nadella at Microsoft's 2024 Q1 earnings call).¹⁴⁴⁴
- 'Year to date, our AI infrastructure and generative AI solutions for cloud customers have already generated billions in revenues and are being used by more than 2 million developers.' (Alphabet and Google CEO Sundar Pichai at Alphabet's 2024 Q2 earnings call).¹⁴⁴⁵

In addition, the CMA has stated that its analysis of cloud providers' internal documents shows that providers recognise the importance of AI to their recent and future global growth,¹⁴⁴⁶ and that AWS's and Microsoft's internal documents show that the provision of AI cloud services to AI developers is becoming an increasingly sizeable source of revenue for their public cloud infrastructure businesses.¹⁴⁴⁷

¹⁴⁴³ L Wilkinson, 'AWS earnings round out a quarter of hyperscaler AI wins', *CIO Dive*, 1 November 2024, accessed 13 March 2025.

¹⁴⁴⁴ Microsoft, [Microsoft FY25 First Quarter Earnings Conference Call](#), 30 October 2024, p 3.

¹⁴⁴⁵ Alphabet, [Q2 2024 Earnings Call Transcript](#), 23 July 2024, p 2.

¹⁴⁴⁶ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 141.

¹⁴⁴⁷ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 144.

Major cloud providers submitted that cloud prices have decreased over time

Several cloud providers submitted to the ACCC that cloud prices have decreased over time. Amazon and Microsoft submitted that competition has driven efficiency gains that decrease prices for consumers.¹⁴⁴⁸ Amazon submitted that, as of September 2023, AWS has reduced its prices 134 times since it began operations, however it did not indicate the overall price reduction.¹⁴⁴⁹ Google submitted that, generally, the 'market is capable of delivering good outcomes for customers in terms of quality, price and innovation'.¹⁴⁵⁰

The ACCC has not had access to historical pricing information to verify whether Australian customers' cloud costs have reduced over time. The ACCC also notes that the complexity of combined pay-as-you-go pricing, fees, and licensing costs, as well as the variety of products available, creates challenges in assessing the current and historical prices of cloud products. For example:

- In January 2025, the UK CMA provisionally found that real prices for different cloud services have moved in different directions and that there is no clear trend, with some services and products increasing in price over time, while others are falling.¹⁴⁵¹ The CMA also noted that pricing analysis does not account for changes in providers' costs or changes in product quality.¹⁴⁵²
- Ofcom did not undertake its own analysis of pricing trends across the cloud market, but noted in its 2023 market study that evidence submitted by AWS and Microsoft suggested that their list prices for IaaS had either remained stable or reduced in recent years, and their net prices for IaaS (incorporating discounts) had decreased.¹⁴⁵³ However, Ofcom also noted that Microsoft, AWS, Google and IBM charged egress fees that were about 5 to 10 times higher than other cloud providers such as OVHCloud and Oracle.¹⁴⁵⁴
- Ofcom suggested that cloud providers compete for new customers by providing pricing benefits in the form of discounts, which may take the form of committed spend agreements or free trials,¹⁴⁵⁵ and Google Cloud is identified by other cloud providers as having aggressive pricing and large discounts to attract new customers.¹⁴⁵⁶ Ofcom, though, also noted that leading cloud providers have less incentive to compete for additional workloads from existing customers than to compete to win new customers.¹⁴⁵⁷
- A working paper by the Toulouse School of Economics noted that 'the pricing of cloud services is quite peculiar, extremely complicated, and not easily comparable to that of other similar services'.¹⁴⁵⁸
- There is some evidence to suggest that the componentry of cloud computing may have declined in cost over time.¹⁴⁵⁹

1448 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 6. Microsoft, [Submission to the Final Report](#), 11 October 2024, p 4.

1449 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 6.

1450 Google, [Submission to the Final Report](#), 11 October 2024, p 45.

1451 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 119.

1452 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 119.

1453 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 77, 80.

1454 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 120–121.

1455 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 63.

1456 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 77.

1457 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 10.

1458 G Biglaiser, J Cr  mer and A Mantovani, [The Economics of the Cloud: Toulouse School of Economics Working Paper No. 1520](#), March 2024, p 15.

1459 For example, the Ofcom noted that innovation in underlying hardware has driven down the unit costs of AWS by lowering energy costs. See Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 130, 169–170.

The ACCC also notes the CMA's provisional view in its Cloud Services Market Study that profitability may be more reliable than pricing as an indicator of the functioning of the cloud market. The CMA stated that this is because profitability accounts for broader financial indicators (for example, revenue) and has a clear and established method for assessing market outcomes against a benchmark (cost of capital) which can be used to compare providers.¹⁴⁶⁰ With regard to the profitability of major cloud service providers in the UK, the CMA has provisionally found that:

- AWS and Microsoft have been generating sustained returns from their cloud services substantially above their cost of capital in cloud services for a number of years, and this is likely to continue in future¹⁴⁶¹
- a situation where the profitability of firms representing a substantial part of the market has exceeded the cost of capital over a sustained period could be an indication of limitations in the competitive process¹⁴⁶²
- a more competitive UK cloud services market would have sustained better market outcomes, including more consistently competitive prices, as well as further improvements in quality and innovation.¹⁴⁶³

The ACCC also notes reports that some large cloud customers, both in the US and Australia, have internal teams or contract external consultants to reduce cloud costs and understand how cloud products are being purchased and used.¹⁴⁶⁴ Gartner's market research indicates that managing costs effectively is a challenge for Australian organisations.¹⁴⁶⁵

4.1.5 Potential risks to competition in the supply of cloud infrastructure services

This section highlights competition issues in the supply of cloud computing services that have been identified in other jurisdictions and notes competition concerns raised by stakeholders. However, the ACCC considers that further in-depth analysis into cloud computing services in Australia would be required to reach any conclusions about the nature and intensity of competition for these services.

Barriers to entry and expansion

There are several barriers to entry and expansion in the supply of cloud computing services. Important barriers to entry and expansion include economies of scale, economies of scope, network effects and significant up-front investment costs. However, the height of these barriers may differ for each level of the cloud computing stack. This means that the entry and expansion challenges faced by new entrants and smaller players may depend on the type of cloud computing service in which they are seeking to enter or expand.

¹⁴⁶⁰ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 119.

¹⁴⁶¹ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 140, 482.

¹⁴⁶² CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 105.

¹⁴⁶³ CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 173, 482.

¹⁴⁶⁴ B Lin, 'Technology Chiefs Seek Help Wrangling Cloud Costs', *The Wall Street Journal*, 3 March 2023, accessed 13 March 2025; R Crozier, 'Australia Post 'flattens' its cloud costs', *IT News*, 10 October 2022, accessed 13 March 2025.

¹⁴⁶⁵ T Raynell, 'Australian public cloud spending to exceed \$23.3 billion', *Telco News*, 20 May 2024, accessed 13 March 2025.

Economies of scale

The providers of cloud computing services that have a presence at each layer of the cloud computing stack (IaaS, PaaS and SaaS) may benefit from economies of scale and scope.¹⁴⁶⁶ As discussed above, AWS, Microsoft and Google have been recognised as the 3 largest providers of cloud services in multiple international jurisdictions, with a presence at each layer of the cloud computing stack.

Economies of scale may exist in cloud computing for several reasons. According to the French Competition Authority, while cloud providers typically incur high fixed costs in establishing the infrastructure to supply cloud computing services, larger cloud providers typically face falling average costs.¹⁴⁶⁷ IaaS providers incur significant initial outlays on fixed assets, typically including data centre assets, network infrastructure as well as servers and components.¹⁴⁶⁸ However, larger providers may be able to realise pricing efficiencies by, for example, buying hardware in bulk at bigger discounts than are offered to small providers.¹⁴⁶⁹ In addition, the average unit labour, energy and security costs of operating data centres typically fall with increasingly larger data centres.¹⁴⁷⁰ For example, cloud providers with larger data centres save energy and associated costs on cooling their infrastructure on a per unit basis relative to smaller data centres, which make them more efficient to operate.¹⁴⁷¹

These economies of scale outlined above typically arise in the supply of IaaS, though the CMA has provisionally found that research and development may have the potential to exhibit economies of scale related to the supply of PaaS.¹⁴⁷²

The JFTC identified that the ratio of operating expenses to revenue for the provision of cloud services by AWS and Google Cloud globally has tended to fall as revenue increased.¹⁴⁷³ For example, between 2015 and 2020, AWS's operating cost per dollar of revenue earned fell by approximately 13%, that is, as the firm's operating cost and revenue grew, revenue grew at a faster rate.¹⁴⁷⁴ Amazon and Google also told the JFTC that the prices they charge for cloud services have been declining, leading the JFTC to conclude that increases in revenue earned from cloud-related services reflected the increase in the scale of supply of those services.¹⁴⁷⁵

Larger cloud service providers may benefit from other operating efficiencies. According to the French Competition Authority, cloud providers that own multiple data centres can more easily reproduce the architecture of their existing data centres, and through learning, can optimise the spread of data over multiple jurisdictions, increasing their data holding capacity.¹⁴⁷⁶ With an expanding customer base, a cloud provider can also more easily automate its services, which reduces the overall cost of the infrastructure assets of a cloud provider.¹⁴⁷⁷ Large cloud providers can gain privileged access to

1466 Economies of scale refers to the economic principle whereby a firm's long-run total cost of production is decreased as the quantity of that firm's output is increased. Economies of scope is the economic principle whereby a firm's long-run average total cost of production is decreased as the quantity of different goods produced by that firm is increased. See ACCC, [Merger Guidelines](#), 21 November 2008 (updated November 2017), p 63. The term 'services' is used in this section to refer to the service offerings of the different providers of cloud computing in this section.

1467 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 72.

1468 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 13.

1469 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 190.

1470 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 72.

1471 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 72.

1472 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 183.

1473 See Figure 3-2 'Relationship between revenue and operating costs on cloud service provision' in JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 40.

1474 In 2015, AWS's operating cost per revenue was 0.809. In 2020, AWS's operating cost per revenue was 0.702. See JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 40.

1475 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 39.

1476 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 72.

1477 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 72.

critical information-technology components used in the provision of cloud services due to their large purchasing volumes.¹⁴⁷⁸

Microsoft, for example, in a filing to the US Securities and Exchange Commission, highlighted the benefits it derives from economies of scale in relation to the supply of cloud computing services and noted that with its relatively larger data centres it can ‘deploy computational resources at significantly lower cost per unit than smaller ones’.¹⁴⁷⁹ Microsoft noted that these features of its cloud service offerings improve customer experiences (in terms of ‘time to value’) and reduce costs.¹⁴⁸⁰

In its submission to this Report, Microsoft noted that ‘[w]hile having many customers can create economies of scale for the cloud service provider, they provide no direct benefit to other users. As a result, a would-be cloud services entrant can start offering cloud services without facing a network effect barrier to entry on the user side’.¹⁴⁸¹ However, as discussed below, some regulators have found that network effects do arise in cloud services.

In a supplementary submission to this Report, Amazon noted that IDC data showing small cloud providers (including providers of IaaS, PaaS and SaaS) have been able to enter and grow as fast or faster than larger providers in Australia indicates that scale advantages are not ‘insurmountable’.¹⁴⁸² However, as noted above, customer bases, uses and business models between IaaS/PaaS and SaaS services tend to be very different. Therefore, Amazon’s submission in this regard may not reflect the rate of entry and expansion for IaaS/PaaS providers alone.

Economies of scope

Economies of scope are present in cloud computing for several reasons. The simultaneous provision of IaaS, PaaS and SaaS cloud computing services enables some cloud service providers to supply a wide range of services at a lower cost than if they were to only supply a single service.¹⁴⁸³ According to the French Competition Authority, firms with a presence at the IaaS level of the cloud computing stack can leverage their own cloud computing infrastructure to develop PaaS by sharing resources and technical skills between the services, which lowers costs.¹⁴⁸⁴ Integrated product solutions, which cover all customer needs, may also reduce the scope for potential new entrants to develop competitive service offerings (although consumers may benefit from being able to purchase all the services their business needs without having to deal with interoperability issues or interconnection costs).¹⁴⁸⁵

The JFTC identified that AWS, for example, opened its cloud services business by leveraging its ‘in-depth knowledge’ relating to the operation of its data centres, IT infrastructure and e-commerce business.¹⁴⁸⁶ Microsoft told the JFTC that on-premise and cloud-based services require engineers

1478 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 73.

1479 Microsoft Corporation, [Form 10-K lodged with the US Securities and Exchange Commission](#), for the fiscal year ended June 30, 2024, p 4.

1480 Microsoft Corporation, [Form 10-K lodged with the US Securities and Exchange Commission](#), for the fiscal year ended June 30, 2024, p 4.

1481 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 6.

1482 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, pp 1, 2, 11, 14, 21. Footnote 34 of the Supplementary Submission notes that IDC defines “cloud services” as including Infrastructure as a Service (“IaaS”), Platform as a Service (“PaaS”), Software as a Service – System Infrastructure Software (“SaaS – SIS”), and Software as a Service – Applications (“SaaS – Applications”).

1483 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 73.

1484 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 73.

1485 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, pp 73, 81.

1486 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, pp 40–41. Amazon submitted that ‘Amazon developed its own expertise in managing large-scale IT services and resources through operating its online stores. This led to the idea of allowing others to use Amazon’s IT services and resources by making them available over the internet and AWS launched in 2006’: Amazon, [Submission to the Final Report](#), 11 October 2024, pp 14–15.

with similar expertise, which may improve operating efficiencies.¹⁴⁸⁷ Google's data centre infrastructure, machine learning capabilities and existing connections to submarine cable networks, among other existing technologies, have been used in its cloud business.¹⁴⁸⁸

Large incumbent digital platforms who provide cloud services in addition to other digital platform services may also benefit from economies of scope, in cases where they redeploy technology (for example, device hardware) or an existing user base from their non-cloud services in order to supply their cloud services and vice versa.¹⁴⁸⁹ For example, a firm providing a search engine or social media service may be able to use user data from the service to train a generative AI foundation model which it offers to developers through its cloud platform.

The existence of economies of scope in the supply of cloud services may also create the incentive for providers to bundle and tie services at different levels of the cloud stack, or bundle and tie cloud services with other core services, and engage in self-preferencing behaviour.¹⁴⁹⁰ Risks of anti-competitive bundling, tying and self-preferencing are discussed further below.

Network effects

Network effects may also strengthen the position of the major providers of cloud computing services.¹⁴⁹¹ According to the French Competition Authority, network effects can arise due to the significant learning costs developers face when learning to use different providers' cloud services, particularly PaaS services.¹⁴⁹² These costs may incentivise developers to focus on learning how to use the most popular solutions offered by large cloud providers, rather than novel solutions offered by new entrants or small players. Similarly, the JFTC observed that network effects may be present within the cloud computing industry in the form of engineering specialisation,¹⁴⁹³ noting that IT specialists and engineers who obtain cloud computing knowledge may specialise in a specific provider.¹⁴⁹⁴ Large cloud providers like AWS, Microsoft and Google also offer training courses and certification programs for developers, sometimes for free, which may further reinforce this dynamic.¹⁴⁹⁵ For example, the US House of Representatives Investigation of Competition in Digital Markets noted that 'the widespread adoption of AWS's developer certification programs, partner networks, and student programs has meant that there are far more engineers familiar with AWS technology than any other platform.'¹⁴⁹⁶

An anonymous submission to this Report raised similar concerns, noting that certification programs create a workforce skilled in a particular provider's technologies, which indirectly increases an

1487 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 41.

1488 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 41.

1489 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 40; see also ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 34.

1490 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 144.

1491 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 84.

1492 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 84.

1493 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, pp 42–43.

1494 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, pp 42–43. The Netherlands Authority for Consumers and Markets made a similar finding – see Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 48.

1495 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 84; Microsoft, [Browse Credentials – Azure](#), Microsoft Learn, accessed 13 March 2025; Amazon, [AWS Certification](#), Amazon Web Services, accessed 13 March 2025; Google, [Grow Skills with Google Cloud Training](#), Google Cloud, accessed 13 March 2025.

1496 Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary of the US House of Representatives, [Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations](#), 6 October 2020, 6 October 2020, p 319.

organisation's switching costs.¹⁴⁹⁷ The same submission also suggested that large cloud providers may benefit from 'data network effects', where their large user base generates a broad data base of customer insights allowing them to improve their services at a rate that smaller competitors cannot match.¹⁴⁹⁸

Several international regulators have also considered whether there are indirect network effects between cloud infrastructure providers, independent software vendors (ISVs) and customers.¹⁴⁹⁹ As noted above, cloud customers may use software provided by third party ISVs that is hosted on their cloud provider's platform or offered through their cloud provider's marketplace. Indirect network effects may arise where a cloud provider offers a large range of ISV services that attracts high numbers of customers, which in turn attracts more ISVs to offer their services through that cloud provider in order to access a larger customer base. These potential indirect network effects could act as a further barrier to entry and expansion for smaller cloud providers, as having fewer customers may make it harder to attract more ISVs, which in turn makes it harder to attract more customers.¹⁵⁰⁰ Based on various international cloud market studies, ISVs find cloud providers with a large customer base more attractive, however there is less consensus on whether customers are more attracted to a cloud provider if they have a large range of ISVs.¹⁵⁰¹

In its submission to this Report, Amazon noted that 'cloud services are not characterised by strong network effects'.¹⁵⁰² In a supplementary submission to this Report, Amazon also noted that there are 'no direct network effects' in IT services (including cloud services), because 'core IT services do not become more valuable to one customer because another is using them'.¹⁵⁰³ Amazon noted that while indirect network effects 'could arise with respect to the link between cloud customers – acting as buyers – on the one side and ISVs – acting as sellers – on the other side, with the cloud provider acting as a platform in between cloud customers and ISVs', ISVs 'typically' offer their services on multiple platforms.¹⁵⁰⁴

Microsoft noted in its submission to this Report that 'cloud services do not exhibit strong direct or indirect network effects that occur when the value of a product, service or platform depends on the number of buyers, sellers or users who use it.' It also noted that, unlike social media platforms, '[i]n the case of cloud computing ... network effects are largely absent. Companies choosing a cloud services provider are indifferent as to whether its public cloud has more or fewer end users. At the same time, a public cloud does not generate incremental additional value to other users from hosting many other users.'¹⁵⁰⁵

Significant upfront investment costs

Large upfront investment costs are likely a barrier to entry and expansion in the supply of cloud computing infrastructure, particularly for IaaS providers. As noted above, IaaS providers incur significant upfront costs on fixed assets including data centres, networking assets, and servers and their associated components. To enter or expand in IaaS, a provider has to invest in these fixed

1497 Anonymous, [Submission to the Final Report](#), 11 October 2024, p 17.

1498 Anonymous, [Submission to the Final Report](#), 11 October 2024, p 20.

1499 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, pp 47–48; CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, pp 139–141; Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, pp 182–186; JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 43.

1500 Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, p 183.

1501 CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, p 141; Ofcom, [Cloud services market study \(final report\)](#), 5 October 2023, pp 183–184; JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, p 44.

1502 Amazon, [Submission to the Final Report](#), 11 October 2024, p 10.

1503 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 21.

1504 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 21.

1505 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 6.

assets.¹⁵⁰⁶ The value of these fixed assets also depreciates over time, which means if the assets are sold, the recoverable value of the asset may be less than the initial investment.¹⁵⁰⁷ The CMA notes that a new IaaS provider could reduce some of the upfront costs by leasing or co-locating data centres and scaling up as their business grows, rather than building or purchasing their own data centres.¹⁵⁰⁸ However, the provider would still need to make large upfront investments in networking assets, servers and other necessary equipment.¹⁵⁰⁹

In 2023, the French Competition Authority estimated the investment required to build a dedicated data centre to be between approximately €500 and €700 million.¹⁵¹⁰ Specialist small-scale data centres were estimated to cost about €100 million, while the largest data centres could cost up to €1 billion.¹⁵¹¹ The time needed to complete land acquisitions and obtain necessary planning approvals also contribute to long project lead times.¹⁵¹² This may increase the opportunity cost, or forgone earnings, of establishing cloud infrastructure. New entrants also incur significant operational costs to maintain and update hardware and expand their service offerings. This is particularly the case due to the wide scope of offerings provided by dominant cloud providers across all levels of cloud services.¹⁵¹³

Similarly, in Australia, cloud providers appear to spend significant amounts on building new data centres. For example:

- In June 2023, it was reported that Microsoft received construction approval to build a \$1.3 billion data centre in Sydney, with an estimated build cost of \$332.6 million.¹⁵¹⁴
- In February 2024, it was reported that AWS has plans to build new data centres in Sydney and Melbourne, with expected build costs of \$50 million for each data centre in addition to land purchase prices of \$30.18 million for Sydney and \$60.5 million for Melbourne.¹⁵¹⁵

For PaaS services, new entrants can use third party IaaS services,¹⁵¹⁶ meaning that barriers to entry and expansion in PaaS are likely relatively lower than in IaaS. However, the ACCC notes that the benefits derived from economies of scale and scope discussed above likely mean that entrants can more easily compete if they hold a position in the IaaS level – especially if they own their own data centre. Likewise, firms with popular SaaS products may have more confidence about investing in datacentres or other IaaS infrastructure because they are able to guarantee minimum demand for the infrastructure via their SaaS products.

Microsoft noted in its submission to this Report that '[a]dditional competitive constraints in cloud infrastructure services are imposed by the potential entry of other well-resourced organisations with the ability and incentive to develop an at-scale cloud for their own use'.¹⁵¹⁷

1506 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 13.

1507 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 178.

1508 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 182.

1509 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 182.

1510 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 69.

1511 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 69. The ACCC notes that these estimates may relate to data centres used for services other than AI, and that data centres configured for AI reportedly cost far above this amount, as discussed in section 4.1.4.

1512 French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, p 69.

1513 Carnegie Endowment for International Peace, [Effects of Cloud Market Concentration – Carnegie Cloud Governance Toolkit](#), accessed 13 March 2025.

1514 C Kwan, 'Microsoft to build \$1.3b Sydney data centre', *Australian Financial Review*, 30 June 2023, accessed 13 March 2025.

1515 G Butler, 'Amazon plans new data centers in Melbourne and Sydney, Australia', *Data Center Dynamics*, 14 February 2024, accessed 13 March 2025.

1516 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 177.

1517 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 5.

Potential risk of anti-competitive bundling, tying and self-preferencing

Vertical integration may give rise to potential risks of anti-competitive bundling, tying and self-preferencing

As noted above, 3 of the major global providers of cloud computing – AWS, Microsoft and Google – are vertically integrated and offer services across IaaS, PaaS and SaaS,¹⁵¹⁸ in addition to having strong positions in markets for other digital platform services. Where cloud providers are vertically integrated, this may raise risks of vertical foreclosure through conduct including anti-competitive bundling, tying or self-preferencing. For example, an IaaS supplier with significant market power may provide IaaS services to support its SaaS products on more favourable terms than the terms on which it supplies those same services to support rivals' SaaS products.

Potential risk of anti-competitive bundling and tying

Competition in cloud computing services may be negatively affected by large providers bundling and tying their cloud products.

One submission to the Report raised general concerns about large cloud providers bundling their cloud products at discounted rates, to the detriment of other cloud providers.¹⁵¹⁹ This reflects the findings of Ofcom in the UK, which noted that during the course of its Cloud Services Market Study it received evidence of hyperscalers offering bundles of discounted services, which cannot be matched by independent software providers.¹⁵²⁰ Ofcom noted that hyperscalers are able to offset low prices on one product through revenue generation by other products in their ecosystem.¹⁵²¹

In addition, several submissions to the issues paper raised specific concerns about Microsoft bundling its cloud services with some of its most popular software products. This issue is explored in more detail below.

We note that one submission to this Report argued that bundling and tying by large cloud providers has strong procompetitive justifications, including 'preventing inefficiencies associated with free riding' and benefitting consumers through 'increased convenience and introducing them to new offerings, better value, and a more integrated product ecosystem'.¹⁵²²

Concerns regarding Microsoft bundling its cloud services with popular software services

In recent years, Microsoft has been the subject of scrutiny due to claims that its licensing practices for its popular software products like Windows Server make it cheaper to run that software on Azure compared to some rival cloud providers, thereby disincentivising customers from using those rival cloud providers.

The relevant licensing practices raised in various complaints and investigations, and in some submissions to this Report, include:

- **Service provider licensing practice:** Microsoft charges certain rival cloud providers (Google, AWS and Alibaba) wholesale prices for the relevant software that exceed the retail prices charged to Azure users, which allegedly inflates the prices at which Google, AWS and Alibaba can offer the software to their own cloud customers.¹⁵²³

1518 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 24–25.

1519 Anonymous, [Submission to the Final Report](#), 11 October 2024, p 11.

1520 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 202.

1521 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 202.

1522 Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 5.

1523 Google, [Submission to the Final Report](#), 11 October 2024, pp 46–47; *Dr Maria Luisa Stasi v Microsoft Corporation, Microsoft Limited & Microsoft Ireland Operations Limited*, [Notice of Collective Proceedings Claim registered in the UK Competition Appeal Tribunal](#), 2 January 2025, p 1; CMA, [Cloud services market investigation – Licensing Practices](#), 6 June 2024, p 82; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 321–322, 420.

In response to claims that this practice may be anticompetitive, Microsoft has stated that the rival cloud providers are responsible for setting prices for their cloud customers, and could offer discounts if they chose to do so.¹⁵²⁴

- **Relicensing practice:** Microsoft prohibits customers with on-premise licences for relevant software from deploying those licences on the clouds of Listed Providers (Google, AWS, Alibaba and Microsoft). If the customer wishes to use the software on another Listed Provider's cloud, they must pay substantial relicensing fees.¹⁵²⁵ Although Microsoft is a Listed Provider, it offers the 'Azure Hybrid Benefit' which allows customers to, at a discount, exchange their on-premises Windows Server licence for a new version of the licence that can only be run on Azure's cloud.¹⁵²⁶ Microsoft's own website previously included a page called 'Azure vs AWS cost comparison' which stated 'AWS is up to 5 times more expensive than Azure for Windows Server and SQL Server. Why run them anywhere else?'.¹⁵²⁷

In response to claims from Google (and others) that this practice may be anticompetitive, Microsoft has stated: "Fundamentally, Google's argument is that it should not have to pay Microsoft when it builds and offers cloud services using our intellectual property – namely Windows Server – if customers have otherwise purchased the same software for a very different use, i.e., on their own server. We disagree. When a streaming service, like Netflix or Disney, includes a movie in their service, they pay for that right. They don't get a credit or discount if a subscriber happens to own a DVD of the same movie. Software and the cloud are no different".¹⁵²⁸

- **Non-price factors:** Some submissions have alleged that Microsoft provides a worse quality version of its software run on other clouds, for example with fewer security updates.¹⁵²⁹

Several submissions to this Report raised specific concerns that Microsoft's software licensing practices may be harming competition in the supply of cloud services:

- Google submitted that Microsoft's licensing practices 'push software customers towards Azure' by restricting customers with perpetual Windows Server licenses from deploying them on infrastructure offered by specified competing providers.¹⁵³⁰ Google argued that Microsoft's conduct is 'already having a detrimental effect on competition', and that 'Microsoft has rapidly increased its share of the market since implementing its most restrictive licensing practices in 2019'.¹⁵³¹
- Amazon alleged Microsoft engages in restrictive licensing practices that restrict customer choice and make switching between IT providers difficult.¹⁵³²
- The Coalition for Fair Software Licensing raised concerns about tying of cloud products to software by Microsoft, alleging that Microsoft leverages its dominant position in its desktop

1524 Microsoft, [Cloud services market investigation: Microsoft response to the licensing working paper](#), 24 July 2024, pp 3–4; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 423.

1525 Google, [Submission to the Final Report](#), 11 October 2024, pp 46–47; *Dr Maria Luisa Stasi v Microsoft Corporation, Microsoft Limited & Microsoft Ireland Operations Limited*, [Notice of Collective Proceedings Claim registered in the UK Competition Appeal Tribunal](#), 2 January 2025, p 1; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 330.

1526 Microsoft, [Azure Hybrid Benefit](#), Microsoft Azure, accessed 13 March 2025.

1527 Microsoft, [Pay less with Azure](#) [via Wayback Machine, 28 March 2023], Microsoft Azure, accessed 13 March 2025; See also, A Zavery and T Brady, [Google Cloud files complaint with European Commission regarding Microsoft's anti-competitive licensing practices](#), Google Cloud Blog, 26 September 2024, accessed 13 March 2025.

1528 R Alaily, [Google's Shadow Campaigns](#), *Microsoft On the Issues*, 28 October 2024, accessed 13 March 2025.

1529 Google, [Submission to the Final Report](#), 11 October 2024, p 48; Coalition for Fair Software Licensing, [Submission to the Final Report](#), 11 October 2024, p 5. See also CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 444.

1530 Google, [Submission to the Final Report](#), 11 October 2024, pp 45–46.

1531 Google, [Submission to the Final Report](#), 11 October 2024, p 49.

1532 Amazon, [Submission to the Final Report](#), 11 October 2024, p 20.

operating system, server and productivity software to force the adoption of Azure, Microsoft's cloud computing platform.¹⁵³³

- An anonymous submission stated that cloud service providers can disadvantage competing firms through bundling practices, including bundling their cloud services with their first party tools for productivity, security and compliance, development, AI and machine learning, among others.¹⁵³⁴

Microsoft is also currently facing ongoing investigations and complaints in relation to its software licensing practices:

- As part of its ongoing cloud market study, the CMA is considering the potential impact of software licensing practices by Microsoft on competition between cloud providers.¹⁵³⁵ The CMA's provisional findings are that Microsoft has significant market power in relation to the supply of the relevant software,¹⁵³⁶ and that it has the ability and incentive to harm rivals through conduct related to these software products.¹⁵³⁷ The CMA has also provisionally found that Microsoft's licensing practices have directly affected AWS's and Google's competitive offerings, and that this is likely to affect a significant portion of cloud services given that they are Microsoft's most significant competitors. This led the CMA to provisionally find that 'Microsoft's conduct is harming competition in cloud services'.¹⁵³⁸ The CMA provisionally recommended a Strategic Market Status investigation of Microsoft's digital activities in respect of cloud services under the UK's new digital competition regime, potentially enabling the CMA to consider 'appropriate interventions' to remedy Microsoft's conduct.¹⁵³⁹ Potential interventions identified by the CMA include measures to:
 - require non-discriminatory pricing for Microsoft software products, regardless of which cloud infrastructure they are hosted on
 - allow customers to freely transfer previously purchased Microsoft software products to the cloud infrastructure of their choice without incurring additional costs
 - increase price transparency in relation to the use of Microsoft software products on Azure and third-party cloud infrastructure
 - require parity of Microsoft software products and product functionality for use on Azure and third-party cloud infrastructure.¹⁵⁴⁰
- In the EU, Google announced in September 2024 that it had filed a complaint with the European Commission alleging that Microsoft's software licence practices anticompetitively lock cloud customers into using Azure.¹⁵⁴¹
- In the UK, a class action was filed against Microsoft in December 2024 by a group of UK businesses who operate Windows Server on Listed Providers, seeking damages of around £1.7 billion to £1.9 billion resulting from Microsoft's software licensing practices.¹⁵⁴²

1533 Coalition for Fair Software Licensing, [Submission to the Final Report](#), 11 October 2024, pp 2–3.

1534 Anonymous, [Submission to the Final Report](#), 11 October 2024, p 18.

1535 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 327–446.

1536 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 443.

1537 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 443–445.

1538 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 446.

1539 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 497.

1540 CMA, [Cloud service market investigation – Provisional decision report, Appendix W: Remedies](#), 28 January 2025, pp 72–73, 79.

1541 A Zavery and T Brady, '[Google Cloud files complaint with European Commission regarding Microsoft's anti-competitive licensing practices](#)', Google Cloud Blog, 26 September 2024, accessed 13 March 2025.

1542 *Dr Maria Luisa Stasi v Microsoft Corporation, Microsoft Limited & Microsoft Ireland Operations Limited*, [Notice of Collective Proceedings Claim registered in the UK Competition Appeal Tribunal](#), 3 December 2024.

Potential risk of anti-competitive self-preferencing

The French Competition Authority and the Netherlands Authority for Consumers and Markets have both noted the potential for vertically-integrated cloud providers to engage in self-preferencing conduct by using their position at one level of the cloud stack to favour its own products at another level.¹⁵⁴³ For example, a PaaS provider could treat its own SaaS products more favourably than those of competitors by displaying its own SaaS products more prominently in its cloud marketplace, or by not integrating third party SaaS products as well as it integrates its own.¹⁵⁴⁴

An anonymous submission to this Report raised similar concerns, stating that cloud providers promote their own products and services ahead of those of competitors through conduct including default settings, prominent placement, biased search results, better data integration, preferential performance and integrated billing.¹⁵⁴⁵ That submission also noted concerns about cloud providers '[g]athering insights on competing products running on their infrastructure to inform their own product development and marketing strategies'.¹⁵⁴⁶ This echoes an issue identified by the US House Judiciary Subcommittee on Antitrust, Commercial, and Administrative Law in its 2022 'Investigation of Competition in Digital Markets' report, as part of a discussion of potential risks that may result from Amazon's 'dual role as a dominant provider of cloud infrastructure and as a dominant firm in other markets'.¹⁵⁴⁷ The Subcommittee noted:

'The Subcommittee also spoke with market participants that expressed concern about how this conflict of interest shapes Amazon's behavior in its other lines of business. For example, in 2015, Amazon kicked Google Chromecast and Apple TV – direct competitors with the Amazon Fire Stick and Fire TV Cube – out of its retail store. AWS is also positioned to use customer and seller data from one line of business to inform decisions in other lines of business, analogous to its conduct in Amazon Retail. At least one market participant who spoke with the Subcommittee had evidence that AWS engaged in this cross-business data sharing.'¹⁵⁴⁸

Impediments to switching

Submitters to this Report and international regulators have raised concerns about barriers to switching and vendor lock-in.¹⁵⁴⁹ Regulators have observed that there are some features of cloud computing services which may limit a cloud customer from switching to an alternative provider, or from using multiple cloud providers ('multi-clouding').¹⁵⁵⁰ Impediments to switching can lead to vendor lock-in, and in turn act as a barrier to entry and expansion for new entrants.¹⁵⁵¹

1543 French Competition Authority, [Summary of Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), pp 8–9; Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 63.

1544 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 63.

1545 Anonymous, [Submission to the Final Report](#), 11 October 2024, pp 17–18.

1546 Anonymous, [Submission to the Final Report](#), 11 October 2024, p 19.

1547 Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary of the US House of Representatives, [Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations](#), 6 October 2020, p 271.

1548 Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary of the US House of Representatives, [Investigation of Competition in Digital Markets: Majority Staff Report and Recommendations](#), 6 October 2020, p 271.

1549 See, for example, Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, p 3; Anonymous, [Submission to the Final Report](#), 11 October 2024, pp 1–14, 16–17; CMA, [Cloud services market investigation – Issues statement](#), 17 October 2023, pp 1, 4–6; Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, pp 55–62; US FTC, [Cloud Computing RFI: What we heard and learned](#), 16 November 2023, accessed 13 March 2025.

1550 See, for example, CMA, [Cloud services market investigation – Provisional Decision Report](#), 28 January 2025, p 140; Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 6.

1551 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 4.

For customers, it may be more difficult or expensive to choose another provider after migrating to the cloud.¹⁵⁵² Vendor lock-in can also reduce the competitive pressure on existing major suppliers, with resulting risk of higher prices or lack of access to innovative products for customers.¹⁵⁵³

The Ofcom's cloud services market study noted that cloud providers predominantly compete for first-time users of cloud computing services, but that there is limited competition for existing users of cloud computing products at the IaaS and PaaS level.¹⁵⁵⁴ The Dutch Authority for Consumers and Markets reported that customers of cloud computing services 'in practice apparently seldom change their cloud provider'.¹⁵⁵⁵ Similarly, the CMA has provisionally found that full switching is extremely rare in the UK cloud market,¹⁵⁵⁶ and that while large cloud customers are more likely than smaller customers to 'multi-cloud', their spending generally remains concentrated with one main provider.¹⁵⁵⁷

Regulatory authorities have raised concerns about the following specific behaviours of cloud computing providers in reducing competition in cloud through vendor lock-in:

- technical differentiation between cloud providers can **reduce interoperability and creates technical barriers** for customers to switch or multi cloud¹⁵⁵⁸
- **egress fees**, which apply when moving data through or out of a cloud ecosystem, have also been characterised as a potential barrier to switching or multi-cloud¹⁵⁵⁹
- some pricing structures used for cloud computing products may also impact switching behaviour, with contractual discounts and **committed spend agreements** potentially driving customer use of cloud services.¹⁵⁶⁰

Each of these issues is explored further below.

Interoperability and technical barriers

Provider-specific cloud services, once integrated into a customer's system, can be technically challenging to move away from or combine with another cloud provider's services.¹⁵⁶¹ A survey of public cloud customers in the UK, commissioned by the CMA, reported that most participants pointed towards anticipated technical barriers when asked about their consideration of a multi-cloud approach or switching.¹⁵⁶² The survey reported that 'the expectation of these barriers alone acted as a deterrence to seriously entertain the prospect of switching cloud provider'.¹⁵⁶³ The technical challenges of altering cloud providers for some or all services can also have flow on effects on a businesses' critical processes, as cloud services are interconnected with business processes.¹⁵⁶⁴

1552 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 55.

1553 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 4.

1554 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 6, 209–211.

1555 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 55.

1556 CMA, [Cloud services market investigation – Provisional Decision Report](#), 28 January 2025, p 140.

1557 CMA, [Cloud services market investigation – Provisional Decision Report](#), 28 January 2025, p 14.

1558 See, for example, CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 270; Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 214. See also Anonymous, [Submission to the Final Report](#), 11 October 2024, pp 4–6, 12, 16.

1559 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 318–319; Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, p 214. See also Anonymous, [Submission to the Final Report](#), 11 October 2024, p 3.

1560 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 214–215. See also Anonymous, [Submission to the Final Report](#), 11 October 2024, p 10.

1561 Anonymous, [Submission to the Final Report](#), 11 October 2024, pp 4–6.

1562 Jigsaw, [Cloud Services Market Investigation – Qualitative Customer Research](#), May 2024, p 44.

1563 Jigsaw, [Cloud Services Market Investigation – Qualitative Customer Research](#), May 2024, p 44.

1564 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 55.

Some of the sources of technical barriers to interoperability may include:

- **Differentiation between the interfaces of cloud providers.**¹⁵⁶⁵ APIs are the communication link between different cloud services, and these APIs can differ by cloud provider.¹⁵⁶⁶ When moving cloud providers or adopting a multi-cloud approach, the APIs may need to be translated and third-party solutions may need to be implemented.¹⁵⁶⁷ One cloud provider submitted to the CMA that interoperability is undermined by frequent changes to APIs.¹⁵⁶⁸ However, some other organisations suggested that the availability of open APIs makes integration easier, diminishing the impact of this on barriers to integration across multiple public clouds.¹⁵⁶⁹
- **Differentiation between databases and storage services.**¹⁵⁷⁰ Databases and storage are 2 of the most commonly used services by cloud customers. Customers have reported differing formats for the storage of data between different cloud providers.¹⁵⁷¹ The data itself may be in different formats, meaning the data must be modified before transfer from one cloud provider to another.¹⁵⁷² APIs and other interfaces can work to transfer data between services, including services of different providers.¹⁵⁷³
- Whether or not multi-clouding can occur is also affected by **latency, or the time it takes for data to transfer from one location to another.**¹⁵⁷⁴ Some services are time-critical and require faster transfer of data, and therefore are limited to cloud services which are closely connected.¹⁵⁷⁵ The CMA's survey results also suggested that data latency may influence some cloud customers' initial vendor choice, not just their multi-cloud approach, with companies potentially more inclined to choose a cloud provider already used by their clients or suppliers.¹⁵⁷⁶
- **Differentiation or lack of interoperability between ancillary cloud services.** An example of this is authentication methods and identity access management, which the CMA survey participants found to be different among providers and were described as particularly difficult to migrate.¹⁵⁷⁷

The ACCC notes that technical barriers to switching cloud providers may be higher for small businesses as opposed to large enterprises, given the Productivity Commission's findings that there is a likely link between firm size and the relative sophistication and in-house expertise of larger firms in managing information and communications technology.¹⁵⁷⁸

The EU enacted regulation to mitigate limited interoperability and other vendor lock-in in cloud services through the Data Act, which comes into force in September 2025. The Data Act sets

1565 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 234.

1566 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 55.

1567 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 213. Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 55.

1568 CMA, [Cloud services market investigation – Technical Barriers Working Papers](#), 6 June 2024, p 31.

1569 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 220.

1570 CMA, [Cloud services market investigation – Technical Barriers Working Papers](#), 6 June 2024, p 32.

1571 CMA, [Cloud services market investigation – Technical Barriers Working Papers](#), 6 June 2024, p 32.

1572 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 56. Jigsaw, [Cloud Services Market Investigation – Qualitative Customer Research](#), May 2024, p 46.

1573 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 56.

1574 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 56.

1575 Netherlands Authority for Consumers and Markets, [Market study into cloud services](#), 5 September 2022, p 56.

1576 Jigsaw, [Cloud Services Market Investigation – Qualitative Customer Research](#), May 2024, p 50.

1577 Jigsaw, [Cloud Services Market Investigation – Qualitative Customer Research](#), May 2024, p 45.

1578 H McMillan et al., [Head in the cloud: firm performance and cloud service](#), *Proceedings of the conference on the Economic implications of the digital economy*, Sydney, 9–10 March 2022, p 10.

minimum requirements to facilitate interoperability and switching between data processing services, including cloud services.¹⁵⁷⁹

Box 4.5: EU Data Act

The EU's Data Act entered into force on 11 January 2024 and provisions under the Act will become applicable in September 2025.¹⁵⁸⁰ The Act was designed to facilitate and promote sharing and use of data while ensuring adequate protection of user data, by clarifying who can share and use what data and under which conditions.¹⁵⁸¹ It includes measures to increase competition in the European cloud market.

Chapter 6 (switching between data processing services) sets minimum requirements that cloud and edge computing providers must meet to facilitate switching and multihoming.¹⁵⁸²

- Article 23 requires cloud providers to remove certain listed pre-commercial, commercial, technical, contractual and organisational obstacles to effective switching between cloud services (for example, exclusivity requirements).¹⁵⁸³
- Other requirements include:
 - prescribed minimum standards for contractual terms relating to switching, which the provider must clearly set out in a written contract and make available to the customer prior to signing (article 25)
 - requirements for the provider to provide the customer with information on available procedures for switching and porting (article 26)
 - a mandatory obligation of good faith on all parties involved in the switching process (article 27)
 - contractual transparency obligations regarding international access and transfer of data (article 28)
 - requirements for providers to reduce switching charges between 11 January 2024 and 12 January 2027, at which point all switching charges must be removed (article 29)
 - requirements regarding technical aspects of switching (for example, PaaS and SaaS cloud providers must export data in a commonly used and machine-readable format; IaaS cloud providers must take measures so that customers switching between services receive 'functional equivalence') (article 30).¹⁵⁸⁴

1579 European Commission, [Data Act explained](#), accessed 13 March 2025; See Chapter IV 'Unfair Contractual Terms Related to Data Access and Use Between Enterprises' EU, [Regulation \(EU\) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation \(EU\) 2017/2394 and Directive \(EU\) 2020/1828](#) (Data Act), Official Journal of the European Union, 13 December 2023.

1580 G Butler, 'EU cloud companies required to facilitate provider switching by Data Act', *Data Centre Dynamics*, 9 January 2024, accessed 13 March 2025; EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1581 European Commission, [Data Act explained](#), 6 September 2024, accessed 13 March 2025; See Chapter I 'General Provisions' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1582 European Commission, [Data Act explained](#), 6 September 2024, accessed 13 March 2025; See Chapter VI 'Switching between data processing services' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1583 See Article 23 'Removing Obstacles to effective switching' in Chapter VI 'Switching between data processing services' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1584 See Article 30 'Technical aspects of switching' in Chapter VI 'Switching between data processing services' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

Certain chapter 6 requirements do not apply to cloud services 'of which the majority of main features has been custom-built to accommodate the specific needs of an individual customer or where all components have been developed for the purposes of an individual customer, and where those data processing services are not offered at broad commercial scale via the service catalogue of the provider of data processing services' (article 31).

Chapter 8 (interoperability) sets requirements for interoperability of cloud services.

- Article 34 provides that some of the chapter 6 (switching) requirements also apply to cloud service providers to facilitate interoperability for the purposes of in-parallel use of cloud services.
- Article 35 creates a framework for the European Commission to request European standardisation bodies to develop, and then to mandate, standards for interoperability of data processing services and open interoperability specifications – both for the purposes of switching between providers and of interoperability for in-parallel use of data processing services.

Member states will designate regulatory authorities to oversee implementation and enforcement of the Act, including setting rules on applicable penalties for infringement of the Act.¹⁵⁸⁵ Member states are also empowered to set up dispute settlement bodies to assist parties who cannot agree on fair, reasonable and non-discriminatory terms for data availability.¹⁵⁸⁶ This is intended to help small businesses enforce their rights under the Act.

The CMA has proposed that, in the event a cloud provider is designated with Strategic Market Status under the UK's new digital competition regime, appropriate interventions to address technical barriers to switching between cloud providers may include measures to:

- increase the degree of standardisation of cloud services and/or interfaces, through voluntary standards, mandatory standards, or broader principles-based requirements
- improve the interoperability of cloud services, through the use of abstraction layers
- increase interconnectivity and reduce latency
- increase transparency around the interoperability of cloud services
- improve the portability of skills between cloud providers.¹⁵⁸⁷

1585 European Commission, [Data Act explained](#), 6 September 2024, accessed 13 March 2025; See Article 37 in Chapter IX 'Implementation and enforcement' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1586 European Commission, [Data Act explained](#), 6 September 2024, accessed 13 March 2025; See Article 10 in Chapter III 'Obligations for data holders obliged to make data available pursuant to union law' in EU, [Data Act](#), Official Journal of the European Union, 13 December 2023.

1587 CMA, [Cloud services market investigation – Provisional decision report, Appendix W: Remedies](#), 28 January 2025, pp 2–3, 18.

Egress fees

Some cloud providers – including AWS, Microsoft and Google – charge customers ‘egress fees’ when they transfer their data outside of the cloud provider’s infrastructure (for example, to another cloud provider’s infrastructure (as part of switching or a multi-cloud architecture), to on-premise servers, or to end users).¹⁵⁸⁸ Egress fees are generally billed monthly,¹⁵⁸⁹ on a pay-as-you-go basis. Table 4.2 below shows egress fees charged by AWS, Microsoft and Google for data transferring out to the Internet from Australia as of March 2025.¹⁵⁹⁰

Table 4.2: Egress fees where customers are transferring data out of selected cloud providers in Australia to the internet, routing on the public internet, March 2025

Provider	AU\$/GB/Month				
	First 100GB	Up to 10TB	Next 40TB (up to 50TB)	Next 100TB (up to 150TB)	Next 350TB (up to 500TB)
Microsoft	0.00	0.1742	0.1188	0.1109	0.0950
AWS	0.00	0.1805	0.1552	0.1488	0.1457
Google	0.00	0.1900	0.1346	0.1346	0.1267

Several international competition regulators have raised concerns about the role of egress fees acting as a commercial barrier to customers using multiple cloud service providers simultaneously (‘multi-cloud’) or switching cloud providers, thereby contributing to customer lock-in.¹⁵⁹¹ The CMA’s analysis found that, ‘for customers of any size, egressing 20% of their data would cost [0–5]% to [10–20]% of their total monthly cloud spend’, and that ‘[s]maller customers are disproportionately affected’.¹⁵⁹² The CMA and the French Competition Authority have both observed that egress fees may not be entirely reflective of some providers’ actual costs of providing egress.¹⁵⁹³

As noted in box 4.5 above, the European Data Act sets out minimum requirements for cloud contracts, including the removal of switching charges and charges for data egress.¹⁵⁹⁴ Although these requirements do not come into force until January 2027, Google, Microsoft and AWS each announced in 2024 that they were voluntarily introducing fee-waiver processes for customers to remove all their

1588 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 118–119; CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 271–272. See Google, [Cloud Storage Pricing](#), Google Cloud, accessed 13 March 2025; Amazon, [AWS Pricing](#), Amazon Web Services, accessed 13 March 2025; Microsoft, [Azure Blob Storage pricing](#), Microsoft Azure, accessed 13 March 2025.

1589 CMA, [Cloud service market investigation – Provisional decision report, Appendix M: Egress fees – hypothetical scenarios](#), 28 January 2025, p 8.

1590 Microsoft’s pricing is for data transfers ‘from Asia (excluding China), Australia, MEA [Middle East & Africa] to any destination’. AWS’s pricing is for data transfers out of Amazon S3 for Asia Pacific (Sydney). Google’s pricing is Standard Tier pricing for Sydney (Australia-southeast1). Prices are for routing on the public internet. Prices for AWS and Google have been converted from US\$ to AU\$ using a conversion rate of 1 US\$ = \$1.5832 and rounded to 4 decimal places. See Microsoft, [Bandwidth Pricing](#), Microsoft Azure, accessed 17 March 2025; Amazon, [Amazon S3 pricing](#), Amazon Web Services, accessed 17 March 2025; Google, [Network Service Tiers pricing](#), Google Cloud, accessed 17 March 2025.

1591 See CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 298–299, 319; Netherlands Authority for Consumers and Markets, [Market Study for Cloud Services](#), 5 September 2024, p 59; JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), June 2022, pp 80–81; French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, pp 6–7. See also Anonymous, [Submission to the Final Report](#), 11 October 2024, pp 3–4.

1592 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 300.

1593 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 298; French Competition Authority, [Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#), 29 June 2023, 29 June 2023, p 7.

1594 EU, [Data Act](#), Official Journal of the European Union, 13 December 2023, Article 29.

data from the provider's cloud platform.¹⁵⁹⁵ For example, a business with 50 employees that stores 20GB of data per employee (1TB total) could save between \$156.78 and \$171 in waived egress fees depending on the cloud provider (noting that each provider provides the first 100GB of storage for free).¹⁵⁹⁶

However, these fee waivers only apply where a customer transfers *all* their data from the cloud provider's platform.¹⁵⁹⁷ Therefore, while the fee waivers will likely assist customers who are seeking to switch all their cloud workloads from one provider to another, they will not assist customers seeking to multi-cloud.¹⁵⁹⁸ Customers may still incur egress fees for partially switching workloads to another provider, and when transferring data back and forth between the different providers' cloud environments.¹⁵⁹⁹ The CMA has observed that customers are likely to choose not to switch or multi-cloud when the expected costs of doing so would exceed the expected benefits, even when an alternative cloud provider may otherwise have a better offering (for example, in terms of price or quality).¹⁶⁰⁰

In addition, the CMA has provisionally found that AWS's, Microsoft's and Google's fee-waiver programs have 'limited and uncertain scope' and as a result do not materially affect the CMA's views on switching costs or multi-cloud costs.¹⁶⁰¹ This is because generally the programs do not cover all products, are limited to a 60-day switching period (while the CMA's customer evidence suggested that switching generally takes longer than this),¹⁶⁰² and do not allow for any temporary period of multi-cloud use while a customer is migrating between cloud providers.¹⁶⁰³

The CMA has proposed that, in the event a cloud provider is designated with Strategic Market Status under the UK's new digital competition regime, it may be appropriate to impose a ban on egress fees for switching or multi-cloud.¹⁶⁰⁴

Committed spend agreements

Contractual arrangements between cloud service providers and their customers may also prevent or limit multi-homing and/or switching.¹⁶⁰⁵ The CMA defines these agreements as 'agreements between a cloud provider and a customer in which the customer commits to spend a minimum amount across the cloud provider's cloud services over a period of years, and in return, receives a percentage discount on its spend with that provider during those same years'.¹⁶⁰⁶ Ofcom and the US FTC have

1595 S Stormacq, '[Free data transfer out to internet when moving out of AWS](#)', *AWS News Blog*, 5 March 2024, accessed 13 March 2025; Microsoft, '[Now Available: Free data transfer out to internet when leaving Azure](#)', *Azure Updates*, 13 March 2024, accessed 13 March 2025; A Zavery, '[Cloud switching just got easier: Removing data transfer fees when moving off Google Cloud](#)', *Google Cloud*, 12 January 2024, accessed 13 March 2025.

1596 Calculated by multiplying the 'Up to 10GB' rate for each provider in Table 4.2 by 900GB (representing 1TB of total storage where the first 100GB is storage is provided free of charge).

1597 Google, '[Applying for free data transfer when exiting Google Cloud](#)', Google Cloud, accessed 13 March 2025; S Stormacq, '[Free data transfer out to internet when moving out of AWS](#)', *AWS News Blog*, 5 March 2024, accessed 13 March 2025; AWS, '[Data transfer fees when moving all data off AWS](#)', *Amazon EC2 FAQs*, accessed 13 March 2025; Microsoft, '[Cancel and delete your Azure subscription](#)', *Microsoft Learn*, 11 September 2024, accessed 13 March 2025.

1598 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 292–293.

1599 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, p 273.

1600 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 273–274.

1601 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 300–301.

1602 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, p 292.

1603 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 292–293, 300.

1604 CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 508–510.

1605 French Competition Authority, '[Opinion 23-A-08 of June 29, 2023 on competition in the cloud sector](#)', 29 June 2023, p 7. For example, Amazon Web Services offers Reserved Instances, where a discount is applied to their EC2 service when customers commit to 1 or 3-year terms. See Amazon, '[Amazon EC2 Reserved Instances](#)', Amazon Web Services, accessed 13 March 2025; Anonymous, '[Submission to the Final Report](#)', 11 October 2024, p 10.

1606 See CMA, '[Cloud services market investigation – Provisional decision report](#)', 28 January 2025, pp 447–448.

both previously noted potential concerns about the role of committed spend agreements contributing to customer lock-in, to the detriment of smaller providers.¹⁶⁰⁷

The CMA investigated whether committed spend agreements could affect customers' incentives to place workloads with rivals.¹⁶⁰⁸ The CMA was concerned that even where consumers have a multi-cloud strategy in place, these customers could be influenced to allocate more workload to the provider with a committed spend agreement, in order to meet the minimum requirements of the agreement.¹⁶⁰⁹ The CMA provisionally found that, while committed spend agreements are widespread and can influence customer choice in relation to workload allocation, such agreements, in their current form and application, do not harm competition for cloud services.¹⁶¹⁰

The CMA noted that committed spend agreements generally benefit customers by reducing price and may to some degree help the providers of cloud services with their investment decisions.¹⁶¹¹ However, the CMA noted that even if such agreements were beneficial to customers and providers' investment decisions, the consideration of such benefits would need to be balanced against any harm to competition in the long run.¹⁶¹²

The CMA noted that harm to competition from committed spend agreements could arise in the future if:

- the market matures such that there is a significant increase in the share of 'sticky demand' (i.e. demand where a customer cannot exercise effective choice over their preferred supplier due to factors like barriers to switching or a lack of suitable alternatives)¹⁶¹³
- AWS and/or Microsoft change the way discounts for committed spend agreements are applied by increasing the incentive of customers to concentrate their spend with them.¹⁶¹⁴

Microsoft and Amazon submitted that customers do not face high barriers to switching

Providers of cloud products report varied switching experiences for customers who switch to, or away from, their products. For example, in its submission to this Report, Microsoft noted that '[c]ustomers of IaaS and PaaS look to these cloud services as an input or component in their broader ecosystems to complete certain tasks or workloads, using the combination of cloud services that best meets their system design needs'.¹⁶¹⁵ Microsoft argued that it 'would not expect one or even 3 providers to supply all customer needs in either IaaS, PaaS or any specific service'.¹⁶¹⁶ Contrastingly, Google submitted that Microsoft lacks incentives to 'commit to abstaining from practices that lock-in customers' and that, as a result, its customers 'face less choice and are exposed to a potential single point of failure that creates significant operational and security risks for customers'.¹⁶¹⁷

Amazon submitted that 'potential barriers to switching and multi-clouding are not detectable empirically', and that 'high customer satisfaction is frequently named as a reason why cloud customers do not want to switch to another provider or IT solution'.¹⁶¹⁸ As noted above, Amazon also

1607 Ofcom, [Cloud Services Market Study \(Final Report\)](#), 5 October 2023, pp 214–215; US FTC, [Cloud Computing RFI: What we heard and learned](#), 16 November 2023, accessed 13 March 2025.

1608 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 449.

1609 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 449.

1610 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 15, 477–478.

1611 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 477.

1612 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 477.

1613 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, pp 449, 478.

1614 CMA, [Cloud services market investigation – Provisional decision report](#), 28 January 2025, p 478.

1615 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 5.

1616 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 5.

1617 Google, [Submission to the Final Report](#), 11 October 2024, pp 49–50.

1618 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 2.

submitted that customers generally do not choose a single IT solution for all their workloads, and may 'choose their preferred providers and delivery methods on a workload-by-workload basis'.¹⁶¹⁹ While the ACCC would need to conduct further analysis to confirm if this is in fact the approach adopted by Australian cloud customers, we note that this approach may not address barriers faced by customers who want to switch providers for a workload they *already* have on the cloud. Even for new workloads, this approach may not overcome some of the potential barriers to multi-clouding, like committed spend agreements and engineering specialisation with a particular cloud provider.

Unfair dealings with business users

The JFTC has noted that customers in Japan may not have sufficient information when selecting cloud services and that this may 'distort' competition.¹⁶²⁰ In a survey of several hundred business customers of IaaS and PaaS services, the JFTC found that 19.3% of all customers surveyed said that either 'some of the information obtained at the time of service selection was not sufficient, and it was necessary to purchase additional services or change to a higher level of service after implementation', or 'as the information obtained during service selection was not sufficient, there is some concern about the use of the service, although no special measure is currently taken'. The number of customers who reported concerns with insufficient information was higher for Microsoft (31%) than for Google (21.1%), AWS (19.6%), and 'other' providers (13.7%).¹⁶²¹ Particular problems identified by surveyed customers regarding fairness and transparency in cloud transactions included where cloud service providers:

- unilaterally change the contents of contracts, including prices (reported by 9.9% of surveyed IaaS customers and 11.2% of surveyed PaaS customers)
- discretionarily terminate a service or suddenly change the contents of the service (11% for IaaS; 7.7% for PaaS)
- do not provide sufficient reports on measures taken to prevent reoccurrence of service failures that have taken place (14.8% for IaaS; 11.2% for PaaS).¹⁶²²

To address information asymmetry issues, the JFTC has recommended that cloud service providers notify their prospective customers before signing their contracts of:

- the availability for the customer to migrate to another cloud service provider or to on-premises after the customer starts using the cloud service, and 'the restrictions and technical limitations concerning the method, cost conditions, procedure and other requirements specified by the original provider for such porting'.¹⁶²³
- 'the terms and conditions that are important for [the customer] to judge the quality of such cloud services and make the most appropriate choice, such as conditions/restrictions concerning use of services and the method to provide information concerning system failure'.¹⁶²⁴

1619 Amazon, [Supplementary submission to the Final Report](#), 22 October 2024, p 4.

1620 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 56; JFTC, [Report on Trade Practices in Cloud Services Sector \(Summary\)](#), June 2022, p 10.

1621 JFTC, [Report on Trade Practices in Cloud Services Sector \(Summary\)](#), June 2022, p 10; JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, pp 55–57.

1622 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, pp 57–59.

1623 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 76.

1624 JFTC, [Report on Fact-Finding Survey on Trade Practices by Digital Platform Operators – Report on Trade Practices in Cloud Services Sector](#), 28 June 2022, p 77.

4.1.6 A lack of competition in cloud infrastructure services could impact competition in the generative AI sector

As noted above, cloud computing is a key input in generative AI development and deployment. Competition authorities such as the French Competition Authority and the US FTC have raised concerns this dynamic could potentially enable cloud computing providers to exert control over the generative AI value chain.¹⁶²⁵ This topic is explored in more detail below in section 4.2, but examples include:

- Generative AI developers generally use cloud service providers to obtain the necessary computing power to develop and deploy their foundation models and applications. A large cloud provider facing insufficient competition could set prices higher or offer less innovative services to generative AI developers than they otherwise would, which could increase barriers to entry and expansion for developers.
- Large cloud providers including AWS, Microsoft and Google now operate across multiple layers of the generative AI stack. For example, in addition to providing cloud services, each of these providers makes their own AI chips, has developed their own foundation models, and has their own user-facing generative AI products and services – all of which are made available to their cloud customers. There is a potential risk that large cloud providers operating across the generative AI stack may have the ability and incentive to engage in anti-competitive bundling, tying and self-preferencing, or to create impediments to switching such as reduced interoperability, in order to favour their own generative AI services and foreclose downstream competitors.

In addition, dynamics in the generative AI sector could also reinforce strong positions held by large cloud providers. For example:

- Several cloud computing providers have entered into partnerships with generative AI developers, some of which reportedly include restrictions on the use of alternative cloud providers.¹⁶²⁶ For example, under the terms of Microsoft's partnership with OpenAI, prior to January 2025, OpenAI was required to exclusively use Microsoft cloud services, and Microsoft now has a right of first refusal over any new cloud capacity for OpenAI.¹⁶²⁷ Similarly, AWS's partnership with Anthropic requires Anthropic to use AWS as its primary cloud provider, and use AWS's own AI chips for future models.¹⁶²⁸ These sorts of arrangements could potentially reinforce the strong positions of large cloud providers.¹⁶²⁹
- Large cloud providers who are vertically integrated across the rest of the generative AI stack may have the ability and incentive to engage in anti-competitive conduct that favours their own cloud services and forecloses upstream competitors.

1625 B Coeuré, [‘Artificial intelligence: making sure it's not a walled garden’](#), Keynote address at the Bank for International Settlements – Financial Stability Institute policy implementation meeting on big techs in insurance, Basel, 19 March 2024; US FTC, [Cloud Computing RFI: What we heard and learned](#), 16 November 2023, accessed 13 March 2025.

1626 Z Meyers, [‘Big tech rivalry could be the key to competition in AI’](#), Centre for European Reform, 30 May 2024, accessed 13 March 2025.

1627 Microsoft, [Microsoft and OpenAI evolve partnership to drive the next phase of AI](#), 21 January 2025, accessed 13 March 2025.

1628 Amazon, [Amazon and Anthropic deepen strategic collaboration](#), 22 November 2024, accessed 13 March 2025.

1629 C Carugati, [‘The competitive relationship between cloud computing and generative AI’](#), 11 December 2023, accessed 13 March 2025, p 5.

Potential pro-competitive impacts of cloud on AI

There are also several procompetitive factors to consider when analysing the competitive effects of cloud on AI. For example, as explored in more detail in section 4.2 below, AWS, Microsoft and Google offer cloud computing platforms as hosts to multiple foundation models, beyond their own investments in AI.

In addition, large digital platforms operating in the generative AI value chain that do not have cloud computing platforms may have incentives to develop strategies that stop large cloud providers from limiting competition in the supply of AI products and services. For example:

- As noted above, Nvidia has launched its own AI cloud service, DGX Cloud, which runs on top of the cloud platforms of companies including AWS, Google, Oracle, and Microsoft, who are also customers of Nvidia's AI chips business.¹⁶³⁰ This vertical expansion and change in business relationships may increase competitive pressure on cloud providers.
- Meta develops open-source machine learning models,¹⁶³¹ which may lower barriers to entry for generative AI developers who can avoid API access fees for closed models.
- Apple is designing AI systems that can run locally on a user's own Apple device or on Apple's dedicated cloud, rather than using third party cloud computing.¹⁶³²

¹⁶³⁰ Nvidia, [NVIDIA DGX Cloud](#), accessed 13 March 2025; A Gardizy and A Holmes, '[Nvidia Muscles Into Cloud Services, Rankling AWS](#)', *The Information*, 11 September 2024, accessed 13 March 2025.

¹⁶³¹ Meta, '[Introducing Meta Llama 3: The most capable openly available LLM to date](#)', *Meta AI Blog*, 18 April 2024, accessed 13 March 2025.

¹⁶³² Apple, [Apple extends its privacy leadership with new updates across its platforms](#), Press release, 11 June 2024, accessed 13 March 2025.

4.2 Generative artificial intelligence

Key points

- Generative AI is a specific type of artificial intelligence (AI) that uses algorithms trained to learn the patterns and structure of their training data, and generate new content in response to prompts.
- Generative AI applications could bring substantial benefits to Australian consumers and businesses, both by improving the quality of existing products and services and by generating new products and services across a range of industries.
- Many Australian consumers are already using generative AI tools for purposes beyond entertainment. Among consumers surveyed who had used generative AI in the last 6 months, the ACCC found that 43% of those aged 25 to 54 had used it for work or business purposes, and 79% of those aged 14 to 17 had used it for school or study purposes.
- The generative AI technology stack can generally be understood as comprising 3 layers: user-facing generative AI applications; foundation models (the core technology which generative AI applications are built on); and the infrastructure required to train and run generative AI models at scale (particularly AI accelerator chips and cloud services).
- There are emerging trends in the generative AI sector which may impact competition dynamics:
 - There is a high level of vertical integration across the generative AI technology stack, including a growing presence of large digital platforms such as Microsoft, Amazon, Google, Meta and Apple. These firms are also integrating generative AI into many of their core products and services.
 - While developers have generally previously sought to improve their frontier foundation models through increasing the amounts of data and compute used during training, developers are now searching for new ways to train and scale their foundation models.
 - There is a growing trend towards smaller, more efficient foundation models which can run locally on mobile devices. If demand for smaller foundation models increases, this may make it easier for smaller foundation model developers to recoup their investments and become competitive with developers of larger models.
 - Foundation model developers are continuing to release a mix of proprietary and open-source models, with open-source models potentially lowering barriers to entry for generative AI application developers.
 - Estimates suggest that in 2025, major digital platforms' expenditure on generative AI will exceed US\$250 billion. However, platforms have indicated that it may be several years before they generate significant revenues from their AI products, raising questions about what sources of revenue will be used to eventually recoup these costs.
 - Vast amounts of energy and water are required to train and deploy AI, prompting major players to make significant investments in energy resources. The net sustainability impacts of AI are uncertain.

- International regulators and submissions to this Report have identified several potential risks to competition in the generative AI sector:
 - There have been a large number of mergers, acquisitions and partnerships between firms at different layers of the generative AI technology stack. Partnerships could lower barriers to entry by granting smaller firms access to necessary inputs (such as data or computing power) – but may also increase concentration and insulate existing large players from potential rivals.
 - There may be high barriers to entry for firms developing foundation models, due to limited access to key inputs and network effects.
 - Large digital platforms which operate across multiple layers of the generative AI stack may have incentives to foreclose competition, by engaging in conduct such as anti-competitive self-preferencing, bundling or tying, or imposing undue restrictions on interoperability or switching. This conduct could also impact competition in related digital markets where generative AI is being integrated (for example, social media, app marketplaces and online marketplaces).
 - Algorithms, including those used in generative AI, could facilitate collusive or anti-competitive coordinated behaviours, such as price-fixing, in broader markets.
- According to the ACCC consumer survey, 96% of Australian consumers have concerns about generative AI – including its misuse by scammers, personal privacy implications, and the creation of harmful content.
- 83% of Australian consumers surveyed believe that companies should seek their consent to use their data for training AI models, and 89% believe that Meta should provide Australians with the ability to opt-out of having their public Facebook and Instagram data used to train AI, which is currently available to users in the EU.

This section explores potential emerging competition issues in generative AI. It is structured as follows:

- **Section 4.2.1** provides an overview of generative AI technology, its usage in Australia, and the different layers of the generative AI technology stack.
- **Section 4.2.2** outlines the key firms operating at each layer of the generative AI technology stack.
- **Section 4.2.3** describes dynamics and key trends in the generative AI sector.
- **Section 4.2.4** discusses potential risks to competition across the generative AI technology stack.
- **Section 4.2.5** discusses the potential impacts of generative AI on competition in related markets.

Given Treasury's ongoing review of regulations relating to consumer law and AI,¹⁶³³ the ACCC has not focused on the consumer protection implications of generative AI as part of this section (apart from seeking views on Australian consumers' experience with generative AI as part of the ACCC consumer survey). However, the ACCC notes that consumers may be affected by harms to competition in the generative AI sector, for example through reduced innovation or higher prices.

¹⁶³³ Treasury, [Review of AI and the Australian Consumer Law](#), 15 October 2024, accessed 13 March 2025.

4.2.1 Introduction to generative AI

What is generative AI?

Generative AI is a specific type of artificial intelligence (AI) that uses algorithms trained to learn the patterns and structure of their training data, and generate new content in response to prompts.¹⁶³⁴ At its core, generative AI adopts a machine learning approach for turning inputs and outputs into new outputs by analysing extremely large datasets.¹⁶³⁵ This section primarily focuses on generative AI, and where appropriate, may also refer to AI more broadly.

This technology can generate a wide range of content types—including text, images, audio, video, programming code, and structured data—typically in response to natural language inputs from users. Beyond simple content creation, generative AI optimises numerous tasks, enhancing workflows and personalising user experiences.¹⁶³⁶

In November 2022, generative AI gained worldwide attention with OpenAI's release of ChatGPT, a large language model that could process text-based prompts and generate text in response.¹⁶³⁷ It is estimated that the ChatGPT website had 3.7 billion worldwide visits in December 2024 alone, including 52.6 million visits from Australia.¹⁶³⁸ The landscape of AI is evolving, with many foundation models now becoming 'multimodal' – meaning they can process and generate text, images, audio content and videos.¹⁶³⁹ Examples of these multimodal foundation model 'families' include OpenAI's Generative Pre-trained Transformer (GPT) series, Google's Gemini, Alibaba's Qwen, Anthropic's Claude, and Meta's Llama. These advanced models have been integrated into various consumer-facing generative AI products, from chatbots to enhanced features within digital platforms.¹⁶⁴⁰

¹⁶³⁴ K Martineau, [What is generative AI?](#), *IBM Blog*, 20 April 2023, accessed 13 March 2025.

¹⁶³⁵ Digital Platform Regulators Forum, [Working Paper 2: Examination of technology – Large Language Models](#), 25 October 2023, accessed 13 March 2025.

¹⁶³⁶ Digital Platform Regulators Forum, [Working Paper 2: Examination of technology – Large Language Models](#), 25 October 2023, accessed 13 March 2025.

¹⁶³⁷ OpenAI, [Introducing ChatGPT](#), 30 November 2022, accessed 13 March 2025.

¹⁶³⁸ Source: SimilarWeb data.

¹⁶³⁹ Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, accessed 13 March 2025; Stanford Institute for Human-Centered Artificial Intelligence, [Artificial Intelligence Index Report 2024](#), April 2024, p 77; C Li et al., [Multimodal Foundation Models: From Specialists to General-Purpose Assistants](#), 18 September 2023, p 91.

¹⁶⁴⁰ E Jones, [What is a foundation model?](#), *Ada Lovelace Institute*, 17 July 2023, accessed 13 March 2025.

Box 4.6: Previous consideration of work on AI and algorithms by the Digital Platform Regulators Forum

In March 2022, the ACCC, the Australian Communications and Media Authority (ACMA), the eSafety Commissioner (eSafety) and the Office of the Australian Information Commissioner (OAIC) formalised existing collaborative arrangements to form the Digital Platform Regulators Forum (DP-REG). Through DP-REG, members share information and collaborate on issues and activities involving the regulation of digital platforms, including emerging technologies.¹⁶⁴¹

Over the last 3 years, DP-REG has produced 3 working papers into AI and algorithms:

- Working Paper 1: Literature summary – Harms and risks of algorithms¹⁶⁴²
- Working Paper 2: Examination of technology – Large Language Models¹⁶⁴³
- Working Paper 3: Examination of technology – Multimodal Foundation Models.¹⁶⁴⁴

DP-REG also made submissions to the Senate Select Committee on Adopting Artificial Intelligence¹⁶⁴⁵ and to the Department of Industry, Science and Resources' consultation on the safe and responsible use of AI in Australia.¹⁶⁴⁶ DP-REG continues to engage with government counterparts, academic experts, and industry stakeholders to enhance understanding of emerging technologies and raise awareness of potential challenges and opportunities facing Australians on digital platforms – including the rapid growth of AI tools.¹⁶⁴⁷

Use of generative AI products and services in Australia

Many commentators have noted the potential of generative AI to bring substantial benefits to Australian consumers and the economy.¹⁶⁴⁸ The technology can be used both to improve the productivity and quality of existing products and services, and to create new products and services.¹⁶⁴⁹ Generative AI's capabilities and use cases include:

- **Text:** Users can use text generation to create a variety of content (e.g. emails, essays, speeches, language translation, chatbots), find and summarise information, write and debug programming code, and analyse data.¹⁶⁵⁰

1641 Digital Platform Regulators Forum, [Digital Platform Regulators Forum](#), accessed 13 March 2025.

1642 Digital Platform Regulators Forum, [Working Paper 1: Literature summary – Harms and risks of algorithms](#), 1 June 2023, accessed 13 March 2025.

1643 Digital Platform Regulators Forum, [Working Paper 2: Examination of technology – Large Language Models](#), 25 October 2023, accessed 13 March 2025.

1644 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, accessed 13 March 2025.

1645 Digital Platform Regulators Forum, [DP-REG joint letter submission to Senate Select Committee on Adopting Artificial Intelligence](#), 9 May 2024, accessed 13 March 2025.

1646 Digital Platform Regulators Forum, [DP-REG joint submission to Department of Industry, Science and Resources' AI discussion paper](#), 9 May 2024, accessed 13 March 2025; DP-REG, [DP-REG joint submission to Department of Industry, Science and Resources' Proposals paper on introducing mandatory guardrails for AI in high-risk settings](#), September 2024, accessed 13 March 2025.

1647 Digital Platform Regulators Forum, ['Digital platform regulators make joint statement on AI'](#), 11 September 2023, accessed 13 March 2025.

1648 Department of Industry, Science and Resources, [Safe and responsible AI in Australia – Discussion paper](#), June 2023, accessed 13 March 2025, p 3; Productivity Commission, [Making the most of the AI opportunity – Research paper 1 – AI uptake, productivity, and the role of government](#), January 2024, p 1.

1649 Microsoft and Tech Council of Australia, [Australia's Generative AI opportunity](#), July 2023, accessed 13 March 2025, p 3.

1650 Digital Platform Regulators Forum, [Working Paper 2: Examination of technology – Large Language Models](#), 25 October 2023, accessed 13 March 2025.

- **Image:** Consumers can use image generation to edit or create new images for content or communication with friends, while businesses can leverage image generation and editing for product design, content production or creating marketing materials.¹⁶⁵¹
- **Video:** Video generation allows consumers to edit and create video content, such as dubbing languages in their videos to reach a wider audience, and businesses can generate marketing or creative content.¹⁶⁵²
- **Audio:** Audio generation enables consumers and creative workers to produce music, provide speech translation and transcription services, offer reading assistance, and support people who are non-speaking.¹⁶⁵³
- **3D models:** Businesses can use generative AI to generate 3D models, to help design products and prototypes.¹⁶⁵⁴

The Productivity Commission has suggested that AI has the potential to address some of Australia's biggest productivity challenges, including by closing skill and labour gaps, improving productivity and accelerating innovation.¹⁶⁵⁵ While it is still too early to know to what extent AI will deliver on this potential,¹⁶⁵⁶ research by Microsoft (a supplier of generative AI) and the Tech Council of Australia estimates that generative AI could contribute up to \$115 billion to the Australian economy annually by 2030 if there is fast-paced adoption.¹⁶⁵⁷

As software providers continue integrating AI (including generative AI) into their existing applications, it is arguable that many businesses across Australia are already using AI without realising it.¹⁶⁵⁸ According to the ACCC's consumer survey, 35% of Australians 'don't really know' what the phrase 'generative artificial intelligence' means, and a further 9% had never heard of it.¹⁶⁵⁹ In 2023, Australia's Chief Scientist noted that generative AI was already being applied across the Australian economy in a range of industry settings, including healthcare, engineering, legal services, arts, journalism, advertising, and marketing.¹⁶⁶⁰

The range of use cases and participating industries is expected to grow – the Deloitte AI Institute's report on Generative AI noted that, between September 2023 and May 2024, the number of Australian employees using generative AI increased from 32% to 38% (a 20% increase in less than 12 months),¹⁶⁶¹ and that employees had moved from 'experimenting' with generative AI to using it 'systematically' as part of their work.¹⁶⁶²

1651 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, p 7.

1652 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, p 7.

1653 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, p 7.

1654 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, p 7.

1655 Productivity Commission, [Making the most of the AI opportunity – Research paper 1 – AI uptake, productivity, and the role of government](#), January 2024, pp 3–4.

1656 Productivity Commission, [Making the most of the AI opportunity – Research paper 1 – AI uptake, productivity, and the role of government](#), January 2024, p 4.

1657 Microsoft and Tech Council of Australia, [Australia's Generative AI opportunity](#), July 2023, accessed 13 March 2025, p 3.

1658 Productivity Commission, [Making the most of the AI opportunity – Research paper 1 – AI uptake, productivity, and the role of government](#), January 2024, pp 8–9.

1659 Loneragan Research, [ACCC DPSI Consumer Survey Research Report](#), p 16.

1660 G Bell, J Burgess, J Thomas and S Sadiq, [Rapid Response Information Report: Generative AI – language models \(LLMs\) and multimodal foundation models \(MFMs\)](#), Australian Council of Learned Academies, 24 March 2023, p 10.

1661 Percentages have been rounded to the nearest whole number. Deloitte AI Institute, [Generative AI: Australia update](#), 20 May 2024, accessed 13 March 2025, p 3.

1662 Deloitte AI Institute, [Generative AI: Australia update](#), 20 May 2024, accessed 13 March 2025, p 4.

Australian consumers' experience with generative AI

Younger consumers are more likely to be aware of and use generative AI tools

According to the ACCC's consumer survey, while 84% of consumers had heard of at least one generative AI tool,¹⁶⁶³ younger consumers were much more likely to be aware of various AI services than older consumers. 36% of consumers aged 65+ and 19% of consumers aged 45 to 64 were not aware of any AI tools, compared to only 7% of consumers aged 30 to 44 and only 6% of consumers aged 14 to 29.¹⁶⁶⁴

Among consumers surveyed who were aware of any generative AI tools, 59% reported having used at least one of them in the last 6 months. Among those users:

- The most widely used tools were ChatGPT (used by 41% of consumers), Meta AI (within Facebook, Messenger or WhatsApp) (15%), and Microsoft Copilot (11%).¹⁶⁶⁵
- The usage of generative AI tools was largely driven by young people – only 31% of consumers aged 65+ and 46% of consumers aged 45 to 64 had used any generative AI tools, compared to 65% of consumers aged 30 to 44 and 82% of consumers aged 14 to 29.¹⁶⁶⁶
- Consumers who used generative AI tools generally tended to use them quite frequently. For example, 41% of people who used OpenAI's ChatGPT used it once a week or more, as well as 52% of people who used Google's Gemini, and 68% of people who used Anthropic's Claude (see figure 4.7).¹⁶⁶⁷
- The most common tasks consumers used generative AI for included searching for information on a specific topic (e.g. a browsing tool) (39%), summarising information or advice on a specific topic (37%), and reviewing or improving written content (35%).¹⁶⁶⁸
- Young people were more likely to use AI for work or school than older consumers. 79% of consumers aged 14 to 17 had used generative AI for school or study purposes (by far the most common purpose for this age group),¹⁶⁶⁹ as well as 43% of consumers aged 18 to 24.¹⁶⁷⁰ Additionally, 43% of consumers aged 25 to 54 had used generative AI for work or business purposes, compared to only 21% of consumers aged 55+ (see figure 4.8).¹⁶⁷¹

1663 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 18.

1664 ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 17–18, 90, 97. Questions C3 (Which of these AI tools, if any, were you aware of before today?) and A2 (How old are you?).

1665 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 19. The popularity of ChatGPT was also reflected in data the ACCC obtained from Sensor Tower and SimilarWeb, which showed that, in October 2024, ChatGPT's website had 4 million unique visitors in Australia and its mobile app had 2.7 million Australian monthly active users (in both cases, ChatGPT was the most popular service among those for which data was sought).

1666 ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 97. Questions C4 (Which of these AI tools, if any, have you used in the past 6 months?), filtered to those who were aware of any Gen AI tools, and A2 ('How old are you?').

1667 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 20–21. Note that the results for Claude AI were based on a relatively low sample size of the 20 consumers surveyed who had used it in the past 6 months.

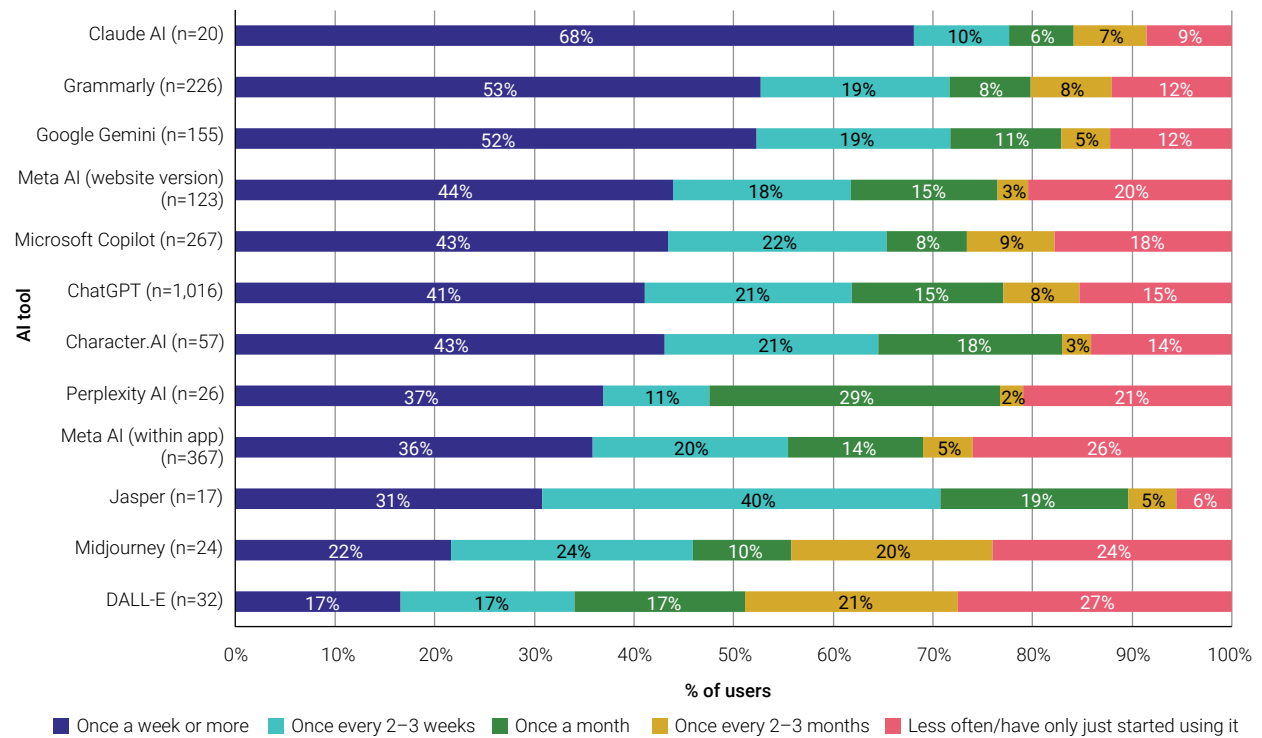
1668 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 22–23.

1669 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 23.

1670 ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 98. Questions C6 (For which of the following purposes have you used generative AI tools?), filtered to those who used any generative AI tools in the past 6 months, and A2 (How old are you?).

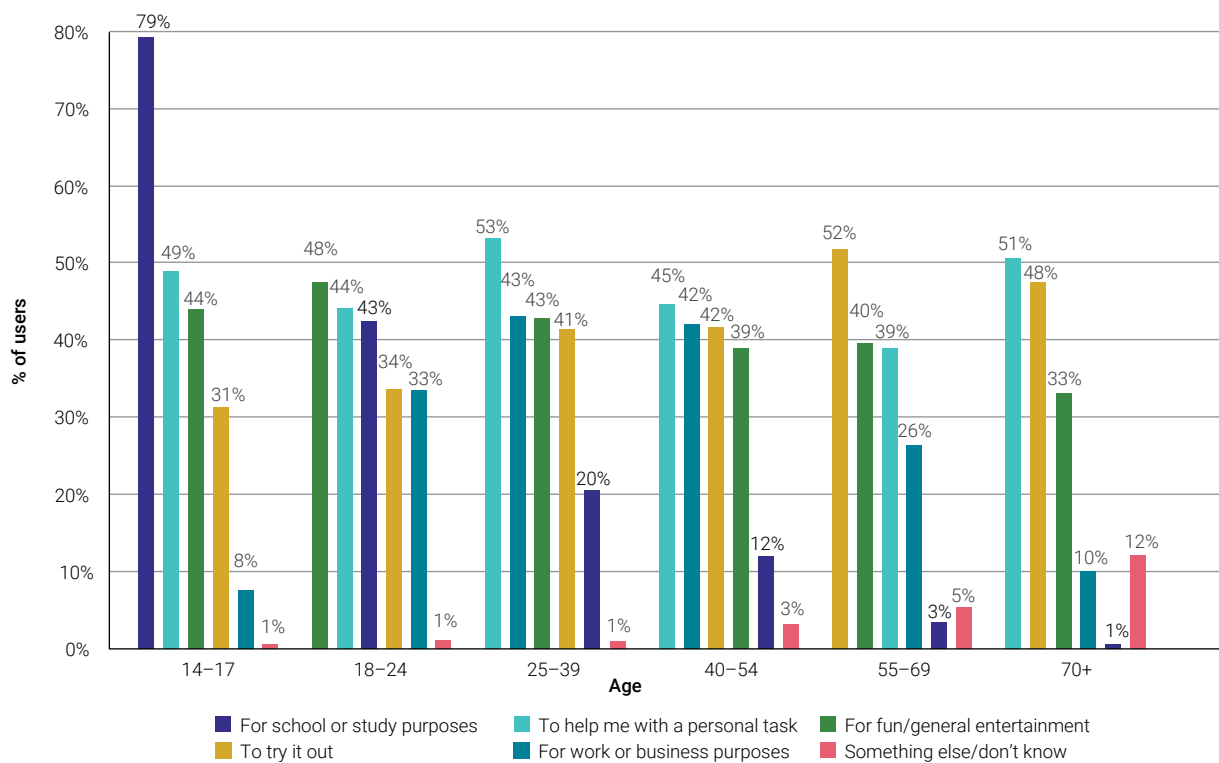
1671 ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 98. Questions C6 (For which of the following purposes have you used generative AI tools?), filtered to those who used any generative AI tools in the past 6 months, and A2 (How old are you?).

Figure 4.7: Usage frequency for selected generative AI tools



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 21. Question C5 (How often do you use these generative AI tools?). Filtered to those who used these generative AI tools in the past 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024. Results for Claude AI, Perplexity AI, Jasper and Midjourney are indicative only as n<30.

Figure 4.8: Purposes for using generative AI in the last 6 months, by age group



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 22. Questions C6 (For which of the following purposes have you used generative AI tools? (Multiple responses)), filtered to those who had used any generative AI tools in the past 6 months, and A2 (How old are you?). Survey of Australian consumers aged 14+, conducted October–November 2024.

Consumers have concerns about generative AI, particularly regarding scams and privacy

The ACCC also surveyed Australian consumers on any concerns they may have about generative AI, and 96% of consumers indicated one or more concerns. Among the most common concerns, 65% of consumers surveyed were concerned about the misuse of generative AI by scammers, as well as the privacy of their information. 59% of consumers were also concerned that it could create harmful content such as misinformation and deepfakes.¹⁶⁷²

Firms are increasingly leveraging the consumer data they collect through their existing products and services (such as social media platforms) for training and developing generative AI models. According to the ACCC’s consumer survey, 83% of consumers surveyed agree that companies should seek consent from consumers before using consumer data to train AI models.¹⁶⁷³

Some digital platforms have already updated their privacy policies to enable them to use customer data for AI training. Some platforms, such as LinkedIn (owned by Microsoft), currently allow users to opt out of this permission (though this does not affect training that has already taken place).¹⁶⁷⁴

Meta is using data collected from public Facebook and Instagram posts from as far back as 2007 to train its AI models.¹⁶⁷⁵ EU users have been given the ability to opt out due to EU privacy

¹⁶⁷² Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 26.

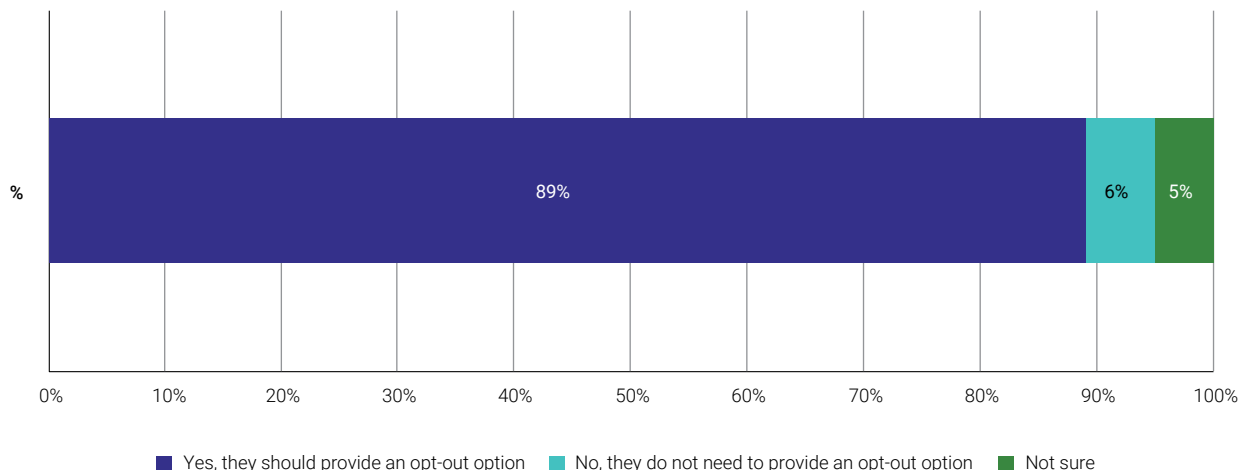
¹⁶⁷³ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 25.

¹⁶⁷⁴ W Davis, ‘[LinkedIn is training AI models on your data](#)’, The Verge, 19 September 2024, accessed 13 March 2025.

¹⁶⁷⁵ J Evans, ‘[Facebook admits to scraping every Australian adult user’s public photos and posts to train AI, with no opt-out option](#)’, ABC News, 11 September 2024, accessed 13 March 2025.

laws¹⁶⁷⁶ – however, Meta has indicated this will not be offered in Australia due to the lack of similar requirements under Australian privacy law.¹⁶⁷⁷ 89% of consumers surveyed believe that Meta should give Australians the ability to opt out of their data being used to train Meta’s AI models.¹⁶⁷⁸

Figure 4.9: Consumers’ views on whether Meta should allow Australians to opt out of having their data used to train its generative AI



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 25. Question C9 (Do you think Meta should give Australians the ability to opt out?). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 99 for the full wording of this question in the survey. Survey of Australian consumers aged 14+, conducted October–November 2024.

Character.AI users spend much more time on the app than users of other generative AI apps

Sensor Tower data showed that Australian mobile users of Character.AI (a generative AI chatbot which allows users to build and customise their own AI characters and engage with them via messaging, voice notes and calls)¹⁶⁷⁹ spend overwhelmingly more time on the app, compared to the time spent by Australian users of other generative AI mobile apps. In October 2024, Character.AI’s daily active users spent an average of 1 hour and 45 minutes per day on the app, while the daily active users of ChatGPT (the app with the next-longest usage time) spent an average of 9 minutes per day on the app.¹⁶⁸⁰

This reflects reports that AI-generated companions (like those provided by Character.AI) are generating growing interest in Australia and overseas, being used for friendship, sex or romance,

1676 S Fratta, [‘Building AI Technology for Europeans in a Transparent and Responsible Way’](#), Meta Newsroom, 10 June 2024, accessed 27 March 2025.

1677 J Evans, [‘Facebook admits to scraping every Australian adult user’s public photos and posts to train AI, with no opt-out option’](#), ABC News, 11 September 2024, accessed 13 March 2025.

1678 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 25.

1679 eSafety, [What is Character.AI?](#), 2 January 2025, accessed 13 March 2025.

1680 Source: Sensor Tower data.

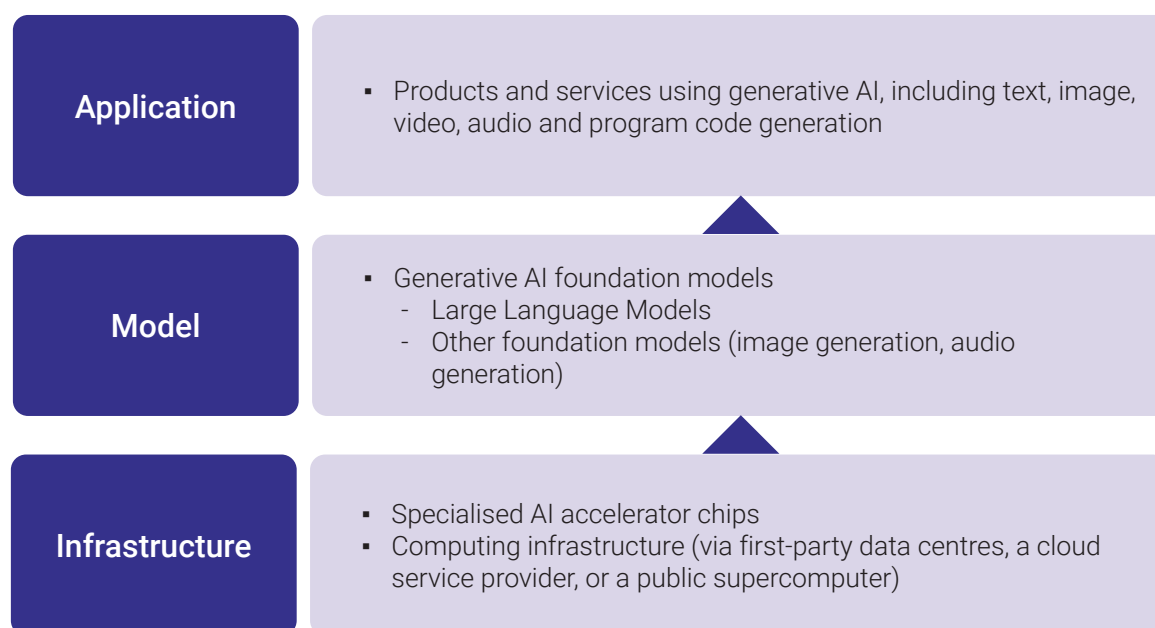
and counselling.¹⁶⁸¹ Some young people are reportedly concerned about becoming ‘addicted’ to AI chatbots and companions.¹⁶⁸²

The generative AI technology ‘stack’

The market structure of the generative AI sector is complex, layered and still developing, as innovations and partnerships continue to bring about changes. For the purpose of this preliminary analysis, the ACCC understands the generative AI ‘stack’ comprises the following layers:

- **Application layer:** This lower layer makes generative AI models accessible to end-users through integration into software applications, either as a standalone or within existing products and services. Through these applications, consumers can use generative AI products and services which offer text generation, code generation, image generation, video generation, and audio/music generation, where outputs are generated in response to input prompts from users.
- **Model layer:** This layer involves the development and supply of generative AI foundation models (upon which user-facing applications can be built), which are pre-trained using vast amounts of data, often leveraging cloud technologies. These include foundation models that are trained on extensive datasets to identify patterns and generate content.
- **Infrastructure layer:** This foundational layer refers to the key physical hardware (and associated software) required to develop and run a generative AI foundation model, including specialised AI accelerator chips and other computing infrastructure (such as cloud computing services).

Figure 4.10: Layers in the generative AI technology stack



These 3 layers are discussed in more detail in the following sections.

¹⁶⁸¹ See for example G Cann, ‘[Users of AI chatbot companions say their relationships are more than ‘clickbait’ — but views are mixed on their benefits](#)’, ABC News, 7 January 2025, accessed 13 March 2025; J Purtill, ‘[Replika users fell in love with their AI chatbot companions. Then they lost them](#)’, ABC News, 1 March 2023, accessed 13 March 2025.

¹⁶⁸² Y Yu et al., [Exploring Parent-Child Perceptions on Safety in Generative AI: Concerns, Mitigation Strategies, and Design Implications](#), arXiv preprint arXiv:2406.10461v2, 15 June 2024, last updated 30 October 2024, p 8; F Chung, ‘[“I need to go outside”: Young people ‘extremely addicted’ as Character.AI explodes](#)’, News.com.au, 23 January 2024, accessed 13 March 2025. See also A Yankouskaya et al., [Can ChatGPT Be Addictive? A Call to Examine the Shift from Support to Dependence in AI Conversational Large Language Models](#), Human-Centric Intelligent Systems, 17 February 2025; T Zhou & C Zhang, [Examining generative AI user addiction from a C-A-C perspective](#), Technology in Society, Vol 78 (September 2024); R Maharu & P Pataranutaporn, [We need to prepare for ‘addictive intelligence’](#), MIT Technology Review, 5 August 2024, accessed 13 March 2025; L Eliot, ‘[Being Addicted To Generative AI](#)’, Forbes, 24 August 2024, accessed 13 March 2025.

Application layer (user-facing generative AI products & services)

The application layer incorporates the development and supply of generative AI products and services that are made available to end consumers and businesses. Users can access generative AI products and services in a number of ways, including through:

- **Dedicated generative AI websites and apps**, for example, the ChatGPT website or mobile app. These may also offer consumers access to custom or more specialised generative AI services which are built by individuals or third parties. For example, ChatGPT's 'Kayak' GPT enhances the use of Kayak's third-party service by retrieving information directly from Kayak, assisting users with travel planning in a conversational way.¹⁶⁸³
- **Integration into existing products and services**. Generative AI tools can be embedded in existing software applications or devices to enrich functionality and introduce new features, such as automatic content generation, chat assistance, or personalised search.

Firms providing user-facing generative AI products and services use various monetisation strategies, including:

- **freemium models**: some generative AI platforms offer basic functionality for free while charging for premium features or advanced functionalities, or
- **advertising-based revenue**: this monetisation strategy involves incorporating advertisements within the outputs or interfaces of generative AI products. For example, Microsoft began including ads in Bing Chat results in late March 2023.¹⁶⁸⁴

Model layer

User-facing generative AI products and services use foundation models as their base. Foundation models constitute the core technology underpinning generative AI systems, serving as the foundational algorithms from which various AI products and services are built. They are trained on large datasets and can be adapted to a wide range of tasks.¹⁶⁸⁵

Foundation model training generally occurs in 3 stages: pre-training, fine-tuning and prompt tuning (see figure 4.11 below).¹⁶⁸⁶

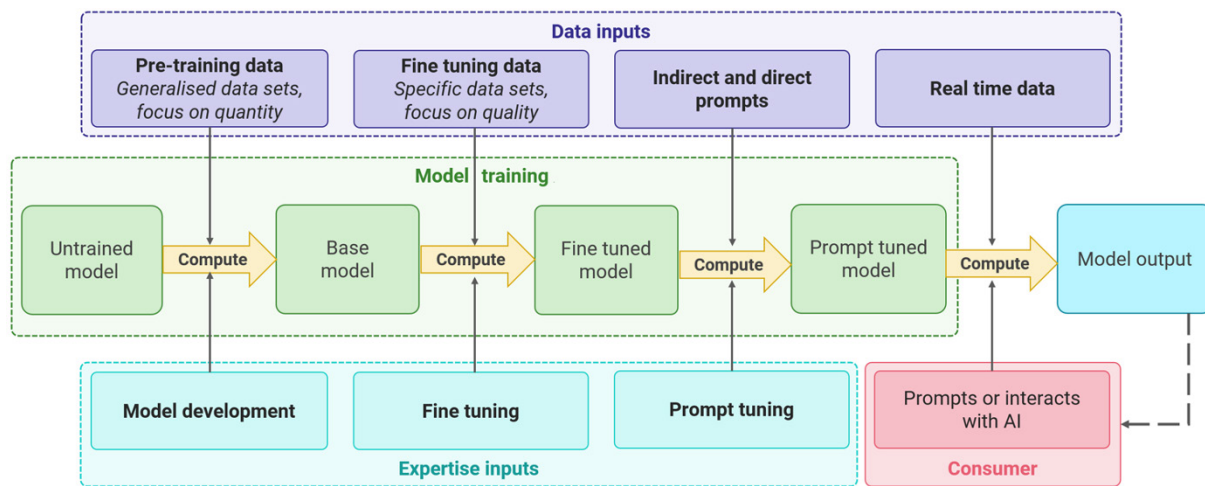
¹⁶⁸³ Kayak, [Ask KAYAK](#), accessed 13 March 2025.

¹⁶⁸⁴ J Peters, '[Microsoft's Bing chatbot is getting more ads](#)', *The Verge*, 30 March 2023, accessed 13 March 2025.

¹⁶⁸⁵ R Bommasani et al., [On the opportunities and risks of foundation models](#), *Center for Research on Foundation Models, Stanford Institute for Human-Centered Artificial Intelligence, Stanford University*, 16 August 2021, last updated 12 July 2022, accessed 13 March 2025, p 3.

¹⁶⁸⁶ Adapted from CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 54; J Omiye et al., [Large language models in medicine: the potentials and pitfalls](#), preprint, 31 August 2023, p 4.

Figure 4.11: Process for training and deploying a foundation model



Source: Based on CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 54.

A foundation model builds its knowledge at the pre-training stage, where the model is given a very large quantity of data which it can use to discover patterns and insights in the data, without explicit guidance or instruction.¹⁶⁸⁷ Pre-training is the most computationally intensive step of foundation model development.¹⁶⁸⁸

A pre-trained foundation model usually undergoes further training through fine-tuning and prompt tuning before being deployed in consumer-facing generative AI products.¹⁶⁸⁹ During fine-tuning, a model is enhanced with specific capabilities using particular datasets and customised for specific tasks or use cases.¹⁶⁹⁰ Fine-tuning is also used to improve the behaviour of a model to align with the expectations or preferences of human users.¹⁶⁹¹ For example, human feedback is used to train models to distinguish outputs that could be biased, false or harmful, or to determine the style and tone of conversational responses.¹⁶⁹²

Depending on the specific use case, fine-tuning may be supplemented or substituted with ‘prompt tuning’, a reiterative process of adding and adjusting prompts to guide the model towards generating the desired output.¹⁶⁹³

Once a foundation model has been deployed to users in the form of an application, the model is able to process real-time inputs (e.g. users’ prompts) to produce a response or output. The term ‘inferencing’ refers to the process that takes place each time a trained foundation model is used to make a prediction or generate an answer based on information it has not seen before (i.e. the user’s prompts).¹⁶⁹⁴

Types of foundation models

¹⁶⁸⁷ Google Cloud, [What is unsupervised learning?](#), accessed 13 March 2025.

¹⁶⁸⁸ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 126.

¹⁶⁸⁹ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 46.

¹⁶⁹⁰ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 10–11. Pre-training has usually been done through unsupervised training and fine-tuning through supervised learning. However, both supervised and unsupervised learning methods, or a combination of both, can be used in pre-training and fine-tuning.

¹⁶⁹¹ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 11.

¹⁶⁹² CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 12.

¹⁶⁹³ D Didmanizde, ‘[Understanding Prompt Tuning: Enhance Your Language Models with Precision](#)’, *Data Camp*, 19 May 2024, accessed 13 March 2025; K Martineau, [What is prompt-tuning?](#), *IBM*, 15 February 2023, accessed 13 March 2025; S Cheng et al., [Prompting GPT-3 To Be Reliable](#), *International Conference on Learning Representations (ICLR 23)*, May 2023, p 3.

¹⁶⁹⁴ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 14.

Foundation models can be broadly categorised into 2 types: general purpose foundation models and task-specific fine-tuned models.

- **General purpose or ‘frontier’¹⁶⁹⁵ foundation models** are large-scale models trained on diverse datasets that can be adapted to a variety of tasks outside of those for which they were specifically trained.¹⁶⁹⁶ Their training involves processing massive amounts of data, allowing them to capture a broad range of knowledge and language patterns. As of April 2024, the training costs for a single frontier model were estimated to be up to US\$191 million.¹⁶⁹⁷
- **Task-specific fine-tuned models** are derived from general foundation models and undergo additional training to better align with specific tasks and user preferences.¹⁶⁹⁸ This process involves additional training on a smaller, focused dataset relevant to a specific domain, such as law or medicine.¹⁶⁹⁹ This allows the model to learn nuances and improve its performance on tasks in the specific subject area while retaining the knowledge gained during the general-purpose pre-training phase.¹⁷⁰⁰

It is possible that a combination of general purpose and task-specific fine-tuned foundation models will emerge.¹⁷⁰¹

Key inputs for developing foundation models

The development and supply of foundation models rely on 3 primary inputs: data, expertise, and computing resources. Each of these components plays a critical role in ensuring the effectiveness and performance of generative AI systems.

- **Data** – Foundation models are trained on large datasets, especially in the pre-training phase. As discussed in section 4.2.4, the volume and quality of data required to pre-train a generative AI model from scratch may impact the ability of new players to enter the market.¹⁷⁰²
 - Existing digital platforms with large user bases may have access to large volumes of relevant data (e.g. photo, video or audio repositories or access to a web index) which could be used during pre-training to train the model on the structure and meaning of language.¹⁷⁰³
 - After pre-training, additional datasets are used for fine-tuning to tailor the model to specific tasks or applications. Once deployed, data from user prompts may be used to further fine-tune the model (e.g. prompt-tuning), by providing the model with specific prompts in order to elicit more effective or desired responses.¹⁷⁰⁴
 - Effective data management encompasses not only the collection but also the processing and cleansing of data, which is essential for pre-training, fine-tuning, prompting, and real-time

1695 ‘Frontier AI’ refers to advanced general-purpose AI models that can perform a wide range of tasks and match or outperform the most advanced existing models. For more information, see: UK Department for Science, Innovation & Technology, [Frontier AI: capabilities and risks – Discussion paper](#), 25 October 2023.

1696 C I Gutierrez et al., [A Proposal for a Definition of General Purpose Artificial Intelligence Systems](#), SSRN, 5 October 2022, note 101.

1697 Stanford Institute for Human-Centered Artificial Intelligence has estimated the training costs for Google’s Gemini Ultra model to be up to US\$191 million. See Stanford Institute for Human-Centered Artificial Intelligence, [Artificial Intelligence Index Report 2024](#), April 2024, p 63.

1698 C Zhou et al., [LIMA: Less Is More for Alignment](#), *arXiv preprint arXiv:2305.11206*, 18 May 2023.

1699 F G’sell, [Regulating under Uncertainty: Governance Options for Generative AI](#), Stanford Cyber Policy Centre, September 2024, p 46.

1700 D Bergmann, [‘What is fine-tuning?’](#), IBM, 15 March 2024, accessed 13 March 2025.

1701 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 46.

1702 US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025.

1703 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 6; C Hogg and D Westrik, [Generating Concerns? Exploring Antitrust Issues in the Generative AI Sector](#), *TechREG Chronicle*, December 2023, pp 9–10.

1704 S Bigelow, [‘Prompt engineering vs fine-tuning: What’s the difference?’](#), *TechTarget*, 21 August 2023, accessed 13 March 2025.

inferencing. Increasingly, model developers are entering into licensing arrangements with data holders to access their datasets.¹⁷⁰⁵

- **Technical expertise** – Development and training of foundation models demands a high level of technical expertise from AI specialists with highly specific skillsets. Given the scarcity of qualified talent, there is strong competition among large technology companies to attract and retain these professionals.¹⁷⁰⁶
- **Computing resources** – Access to computational resources is crucial for developing and deploying foundation models, as compute is used at each stage of the process (pre-training, fine-tuning and inferencing). Computing resources include specialised AI accelerator chips and other physical computing hardware (accessed through building and owning an AI data centre, using a cloud service provider, or using a public supercomputer). These computing resources comprise the infrastructure layer of the generative AI stack, discussed below.

How developers access foundation models to create generative AI products and services

Developers seeking to create a generative AI product or service who do not have their own foundation model can access third-party foundation models in several ways, including:

- **Model distribution platforms.** Generative AI foundation models and deployment software are often offered to developers as a cloud-based service, either through licensing arrangements with commercial customers or via subscription-based plans. For example, major cloud providers offer platforms with a range of models that their customers can use to develop generative AI applications. Developers can also access open-source foundation models through free model repositories, such as Hugging Face.¹⁷⁰⁷
- **Application programming interfaces (APIs).** APIs, such as OpenAI's API for its GPT-3.5 and GPT-4 models, allow downstream actors to access and incorporate a model's capabilities into their own applications and services.¹⁷⁰⁸ This allows developers to develop a specific application, such as a chatbot, powered by the foundation model.¹⁷⁰⁹

Infrastructure layer

Computational resources are required for developing and supplying both foundation models and user-facing generative AI products and services. This includes essential AI accelerator chips and associated software, as well as access to computing power primarily through the cloud.

AI accelerator chips

In most cases, due to the size of foundation models and the amount of training data required, it is not feasible to train and run these models on conventional computer chips (such as central processing units).¹⁷¹⁰ AI accelerator chips have a more efficient architecture to process deep learning and have become essential for the pre-training, fine-tuning and inference of generative AI foundation models.

'Graphics processing units' (GPUs) are the most common type of accelerator chip used for developing AI models and applications, with revenue from sales of GPUs estimated to reach US\$51 billion in 2025.¹⁷¹¹ GPUs were originally designed for graphics processing but are well-suited for

1705 CMA, [AI Foundation Models: Update Paper](#), 11 April 2024, p 6.

1706 K Bindley, '[The Fight for AI Talent: Pay Million-Dollar Packages and Buy Whole Teams](#)', The Wall Street Journal, 27 March 2024, accessed 13 March 2025.

1707 Hugging Face, [Models](#), accessed 13 March 2025.

1708 S Küspert, N Moës and C Dunlop, '[The value chain of general-purpose AI](#)', Ada Lovelace Institute, 10 February 2023, accessed 13 March 2025.

1709 I Ism, '[Chatbot APIs: Powering Intelligent AI for Your Business](#)', Chatbase, 29 June 2024, accessed 13 March 2025.

1710 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 12.

1711 Gartner, [Gartner Forecasts Worldwide Semiconductor Revenue to Grow 14% in 2025](#), 28 October 2024, accessed 13 March 2025.

processing deep-learning processes in parallel, and have in recent years been optimised to perform various AI-related computing tasks.¹⁷¹² Other types of more specialised AI accelerator chips include ‘application-specific integrated circuits’ and ‘field-programmable gate arrays’. These chips are specifically designed for AI use cases, and are commonly used for inference.¹⁷¹³ In addition to the physical chips themselves, AI developers also require deep learning software packages and development platforms to work with the chips.

Suppliers of accelerator chips can provide access either by directly selling chips to third parties to incorporate into their broader computing infrastructure (e.g. a data centre or supercomputer), or by incorporating the chips into their own cloud services. Nvidia’s latest Blackwell GPUs for AI development cost between US\$30,000 and US\$40,000 per unit.¹⁷¹⁴ Major tech firms are purchasing these chips in enormous quantities. For example, it was estimated that Microsoft purchased 485,000 of Nvidia’s Hopper GPUs in 2024.¹⁷¹⁵

Box 4.7: Global shortages of AI chips

The accelerated adoption of AI across industries has caused an unprecedented increase in demand for AI chips. According to the Taiwan Semiconductor Manufacturing Company (TSMC), which manufactures chips for major AI chip providers including Nvidia,¹⁷¹⁶ this global demand for AI chips has created a shortage that is expected to persist until 2025 or 2026.¹⁷¹⁷

This shortage has led to difficulties obtaining AI accelerator chips, and long wait times for customers of Nvidia and other chip providers. In October 2024, Nvidia announced that its latest Blackwell GPUs were sold out until the end of 2025 – every Blackwell GPU that Nvidia and TSMC could produce over the next 4 quarters had already been purchased by its traditional customers, including AWS, Microsoft, Google, Meta, Oracle and CoreWeave.¹⁷¹⁸

Firms who have ordered AI chips from firms like Nvidia have also been subject to delays during the production process, impacting their timelines for getting their GPU clusters up and running.¹⁷¹⁹

AI data centres, cloud service providers and public supercomputers

Computing power is required both to build and run a foundation model. There are 3 main ways to access the type and volume of compute required: building and operating an AI data centre, using a cloud service provider, or using a publicly owned supercomputer (for example, as part of a research grant).¹⁷²⁰ In each case, AI accelerator chips are integrated within the computing infrastructure.

1712 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 20.

1713 Competition Bureau Canada, [Artificial Intelligence and competition: Discussion Paper](#), March 2024, p 10.

1714 K Leswing, ‘Nvidia’s latest AI chip will cost more than \$30,000, CEO says’, *CNBC*, 19 March 2024, accessed 13 March 2025.

1715 T Brshaw and S Morris, ‘Microsoft acquires twice as many Nvidia AI chips as tech rivals’, *Financial Times*, 18 December 2024, accessed 13 March 2025.

1716 D Saul, ‘Just The Beginning’ For AI Demand Surge As Big Chip Stocks Gain \$250 Billion’, *Forbes*, 17 October 2024, accessed 13 March 2025.

1717 Refinitiv Streetevents, [Q2 2024 Taiwan Semiconductor Manufacturing Co Ltd Earnings Call](#), 18 July 2024, accessed 13 March 2025, p 6.

1718 A Shilov, ‘Nvidia’s Blackwell GPUs are sold out for the next 12 months – chipmaker to gain market share in 2025’, *Yahoo! Finance*, 12 October 2024, accessed 13 March 2025.

1719 Q Liu and A Gardizy, ‘Nvidia Customers Worry About Snag With New AI Chip Servers’, *The Information*, 17 November 2024, accessed 13 March 2025.

1720 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 14.

- **Building and operating a first-party AI data centre.** A small number of companies (e.g. Google, Amazon, Microsoft, Meta and Samsung) build and operate their own AI data centres, which are specifically configured to support generative AI development and deployment.
 - ‘Standard’ data centres are generally designed to store, manage and distribute data for a broad range of tasks (such as website hosting or running software), and use standard computer chips like central processing units for most workloads.¹⁷²¹ By contrast, AI data centres use thousands of high-performance GPUs and other AI accelerator chips to handle the complex computing tasks required for foundation model development and deployment, and require more power, more storage capacity, higher-density servers, faster networking and more advanced cooling systems to manage the large heat output from AI accelerator chips.¹⁷²²
 - Building and operating an AI data centre requires significant financial resources both for upfront infrastructure costs and for ongoing operation and maintenance costs.¹⁷²³
- **Using a cloud service provider.** Only a ‘handful’ of large technology companies have the resources to build and maintain their own AI data centres, so most other foundation model developers rely on cloud service providers for access to the compute needed to train their models.¹⁷²⁴
 - Developers can purchase cloud services at commercial on-demand rates, enter a multi-year agreement to purchase cloud services at reduced rates, or enter a commercial partnership with the cloud provider (where the cloud provider may use the model for its own services or make the model available to its cloud customers to develop their own generative AI-powered services).¹⁷²⁵
- **Using a publicly owned supercomputer.** A supercomputer is a large computer with tens of thousands of computer chips connected by high-performance networks, which can perform a very large number of parallel computing tasks.¹⁷²⁶ Publicly owned supercomputers have traditionally been used for scientific research purposes and for tasks such as weather forecasting, but are now being adapted for AI research projects.¹⁷²⁷ A developer may be able to use a publicly owned supercomputer to develop their foundation model for free (for example, under a research grant).¹⁷²⁸ For example, a publicly owned French supercomputer, Jean Zay, was used by Hugging Face to build its BLOOM foundation model,¹⁷²⁹ and by a team of researchers from the CentraleSupélec University to train the CroissantLLM model.¹⁷³⁰ Some governments are making investments to build new supercomputers in order to increase their jurisdictions’ computing capacity for AI:

1721 Cyfuture Cloud, [What is the Difference Between AI Data Centers and Traditional Data Centers?](#), accessed 13 March 2025.

1722 Macquarie Data Centres, [What is an AI data centre, and how does it work?](#), 15 July 2024, accessed 13 March 2025; Cyfuture Cloud, [What is the Difference Between AI Data Centers and Traditional Data Centers?](#), accessed 13 March 2025.

1723 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 42.

1724 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 34; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 17; US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 42.

1725 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 34–35.

1726 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 97.

1727 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, pp 33, 49.

1728 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 36; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 5.

1729 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 36.

1730 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 5.

- The European High Performance Computing Joint Undertaking is a government-industry collaboration working to deploy supercomputers across the EU. So far, it has deployed 8 supercomputers, with a ninth under construction.¹⁷³¹
- The UK Government recently announced a multibillion-pound investment plan aimed at increasing the country's AI computing power twenty-fold by 2030, including by building a new supercomputer.¹⁷³²

In January 2025, Nvidia announced the upcoming release of Project DIGITS (since renamed to DGX Spark),¹⁷³³ a personal AI supercomputer to be priced at US\$3,000, which enables users to develop and test AI models locally from a standard power outlet, offering an alternative to public supercomputers and cloud service providers.¹⁷³⁴ In March 2025, Nvidia announced that it would also be releasing a larger version named DGX Station, claiming it 'brings data-center-level performance to desktops for AI development'.¹⁷³⁵

Figure 4.12 shows the application layer, model layer, and infrastructure layer within the broader 'generative AI stack'.

1731 K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 10.

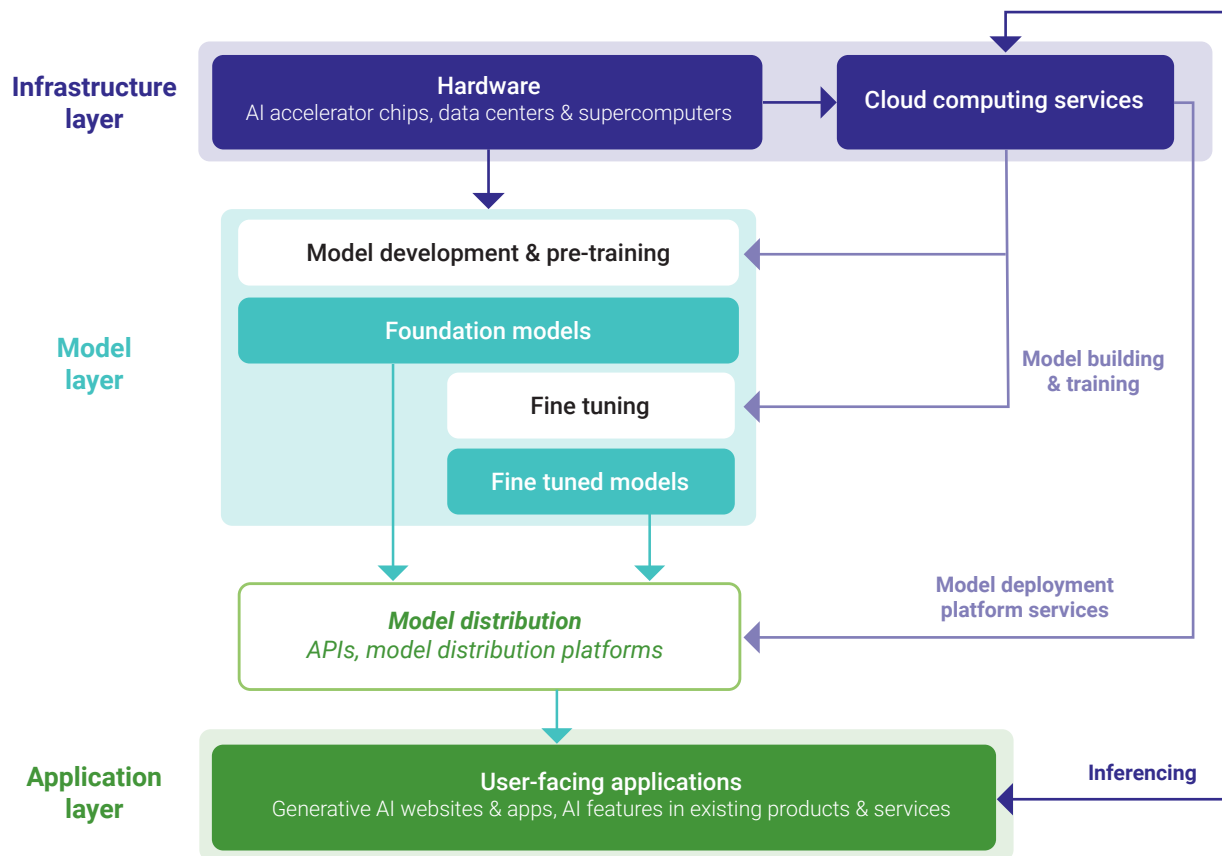
1732 R Booth, '[Mainlined into UK's veins': Labour announces huge public rollout of AI](#)', *The Guardian*, 13 January 2024, accessed 13 March 2025.

1733 Nvidia, '[NVIDIA Announces DGX Spark and DGX Station Personal AI Computers](#)', Press release, 18 March 2025, accessed 20 March 2025.

1734 W Ma and Q Liu, '[Nvidia Introduces Personal Supercomputer to Deploy AI Locally](#)', *The Information*, 7 January 2025, accessed 13 March 2025; Nvidia, '[NVIDIA Puts Grace Blackwell on Every Desk and at Every AI Developer's Fingertips](#)', Press release, 6 January 2025, accessed 13 March 2025.

1735 Nvidia, '[NVIDIA Announces DGX Spark and DGX Station Personal AI Computers](#)', Press release, 18 March 2025, accessed 20 March 2025.

Figure 4.12: The generative AI stack



4.2.2 Key firms operating in the generative AI stack

This section presents an overview of key market players operating within the different layers of the generative AI technology stack and some of their most popular products and services.

Application layer

In recent years, generative AI has gained significant traction, leading to the emergence of various user-facing products and applications developed by major technology companies. Among the most prominent players in this field are OpenAI, Google, Microsoft, Adobe and Meta, each offering their own generative AI products and applications. Some prominent examples include:

- **OpenAI's 'ChatGPT'**, which is the most popular multimodal standalone chatbot with over 300 million weekly active users globally.¹⁷³⁶ It is trained to follow an instruction in a prompt and provide a detailed response.¹⁷³⁷ ChatGPT has more than 10 million paying subscribers and another 1 million subscribers that are part of higher-priced plans for business teams.¹⁷³⁸ It is renowned for its human-like responses, particularly since the introduction of GPT-4 and GPT-4o.

¹⁷³⁶ E Roth, 'ChatGPT now has over 300 million weekly users', *The Verge*, 5 December 2024, accessed 13 March 2025. OpenAI has not published ChatGPT's number of daily or monthly active users.

¹⁷³⁷ OpenAI, *Introducing ChatGPT*, 30 November 2022, accessed 13 March 2025.

¹⁷³⁸ A Efrati, 'OpenAI COO Says ChatGPT Passed 11 Million Paying Subscribers', *The Information*, 12 September 2024, accessed 13 March 2025.

OpenAI operates ChatGPT in partnership with Microsoft, leveraging Microsoft's cloud services to develop its models and applications.¹⁷³⁹

- **Google's 'Gemini'**, which is a chatbot and AI assistant initially launched under the name 'Bard' in February 2023. It originally leveraged Google's LaMDA (Language Model for Dialogue Applications)¹⁷⁴⁰ and is now powered by Google's 'Gemini' foundation model. Google's generative AI technology is offered as an integration within Google's ecosystem, including Google Search, Google Workspace and Google Messages.¹⁷⁴¹
- **Microsoft's 'Copilot'**, which is a generative AI assistant and chatbot offered as a standalone service, as well as integrated in Microsoft products such as Edge, Bing, and 365. It can assist with drafting and editing documents, analysing data, and may automate routine tasks, such as scheduling meetings or managing emails.¹⁷⁴²
- **Meta's 'Meta AI'**, which is an AI assistant and chatbot offered as a standalone service, and also integrated within Meta's social media and messaging products.¹⁷⁴³ Globally, it reportedly had 400 million monthly users and 40 million daily users in early August 2024.¹⁷⁴⁴
- **Apple's 'Apple Intelligence'**, which refers to generative AI capabilities built into some Apple devices, such as writing tools and image generation.¹⁷⁴⁵ Apple Intelligence leverages both Apple's own proprietary foundation models as well as OpenAI's ChatGPT technology to provide these capabilities.¹⁷⁴⁶ In China, Apple Intelligence on iPhones will be supported by Alibaba's AI models, due to local regulatory requirements.¹⁷⁴⁷
- **ByteDance's 'Doubao'**, an AI chatbot released by TikTok's parent company, which is reportedly one of the most popular AI chatbots in China with 60 million monthly active users.¹⁷⁴⁸
- **Midjourney Inc.'s 'Midjourney'**, which generates images from natural language descriptions. It runs on the messaging platform, Discord, and on Midjourney's official website.¹⁷⁴⁹
- **Adobe's 'Firefly'**, which refers to a suite of generative AI-powered tools and features made available within Adobe's creative applications. Designed specifically for content creators, these allow users to generate images, videos, and text effects.¹⁷⁵⁰

1739 Q. Ai, [Microsoft Confirms Its \\$10 Billion Investment Into ChatGPT, Changing How Microsoft Competes With Google, Apple And Other Tech Giants](#), *Forbes*, 27 January 2023, accessed 13 March 2025.

1740 S Pichai, [An important next step on our AI journey](#), *Google Blog*, 6 February 2023, accessed 13 March 2025.

1741 Google AI, [Gemini](#), accessed 13 March 2025.

1742 Microsoft, [Microsoft 365 Copilot overview](#), *Learn*, 13 February 2025, accessed 13 March 2025.

1743 Meta, [Meta AI](#), accessed 13 March 2025.

1744 K Huang, [Meta's AI Assistant Wins Millions of Users in Challenge to ChatGPT](#), *The Information*, 29 August 2024, accessed 13 March 2025.

1745 Apple, [Apple Intelligence](#), accessed 13 March 2025. On this webpage, Apple notes that Apple Intelligence will also support an enhanced version of Siri with personal context understanding, onscreen awareness and in-app actions, and that these features 'are in development and will be available with a future software update'. In March 2025, it was reported that Apple had indefinitely delayed the roll out of the Siri upgrade but planned to release it sometime in 'the coming year'. See M Gurman, [Apple Delays Siri Upgrade Indefinitely as AI Concerns Escalate](#), *Bloomberg*, 8 March 2025, accessed 17 March 2025.

1746 Q Liu and J Yang, [Apple Partners With Alibaba to Develop AI Features for iPhone Users in China](#), *The Information*, 11 February 2025, accessed 13 March 2025; S Altman, [OpenAI and Apple announce partnership to integrate ChatGPT into Apple experiences](#), *OpenAI*, 10 June 2024, accessed 13 March 2025.

1747 Q Liu and J Yang, [Apple Partners With Alibaba to Develop AI Features for iPhone Users in China](#), *The Information*, 11 February 2025, accessed 13 March 2025.

1748 Z Soo, [DeepSeek Has Rattled the AI Industry. Here's a Quick Look at Other Chinese AI Models](#), *The Associated Press*, 30 January 2025, accessed 13 March 2025.

1749 Midjourney, [Getting Started Guide](#), accessed 13 March 2025.

1750 S Shankland, [Adobe Firefly Review: AI Images for Artists and Stock Photo Fans](#), *CNET*, 2 April 2024, accessed 13 March 2025.

- **DeepSeek's** free generative AI chatbot named 'DeepSeek' that has been compared to OpenAI's ChatGPT, and became the most downloaded free app in the US app store within a week of its launch in January 2025.¹⁷⁵¹
- **Baidu's** 'Ernie Bot', which was the first generative AI chatbot made publicly available in China in 2023,¹⁷⁵² with 430 million users as of November 2024.¹⁷⁵³ Following the release of DeepSeek's chatbot, Baidu announced plans in February 2025 to start offering its own chatbot's premium features for free.¹⁷⁵⁴

Additionally, as explained above, generative AI models can be accessed through APIs (such as OpenAI's API for its GPT-3.5 and GPT-4 models, or Google Cloud's AI API), and deployed as an application within other existing services (such as Spotify's AI DJ), or within organisations for specific internal use cases.

Model layer

Foundation models

According to the Stanford Center for Research on Foundation Models, over 100 foundation models were publicly released in 2024, bringing the total number of known foundation models globally to nearly 400.¹⁷⁵⁵

OpenAI is one of the most prominent foundation model providers, having garnered significant public interest since its release of ChatGPT in November 2022. In October 2024, 8 out of the top 10 AI mobile apps in Australia were built either partially or exclusively on one of OpenAI's foundation models.¹⁷⁵⁶

The default large language models currently powering the free version of ChatGPT are GPT-4o and GPT-4o mini,¹⁷⁵⁷ which can process and generate text, images and audio.¹⁷⁵⁸ On 27 February 2025, OpenAI began rolling out GPT-4.5 as a research preview to paid ChatGPT users, claiming that this model was its 'largest and best model for chat yet' and that user interactions would feel more 'natural'.¹⁷⁵⁹ OpenAI noted that GPT-4.5 'does not currently support multimodal features like Voice Mode, video and screensharing in ChatGPT'.¹⁷⁶⁰

In September 2024, OpenAI released a new 'reasoning' model called o1, which is designed to spend more time and compute power 'thinking' about its responses and solve more complex problems compared to GPT-4o.¹⁷⁶¹ o1 is intended to be a complement to GPT-4o, rather than a replacement.¹⁷⁶²

1751 K Ng, B Drenon, T Gerken and M Cieslak, '[DeepSeek: The Chinese AI app that has the world talking](#)', *BBC*, 5 February 2025, accessed 13 March 2025.

1752 Baidu Research, '[ERNIE Bot: Baidu's Knowledge-Enhanced Large Language Model Built on Full AI Stack Technology](#)', 24 March 2023, accessed 13 March 2025.

1753 Albase, '[Baidu's Wang Haifeng: Wenxin Yiyuan User Base Reaches 430 Million](#)', 13 November 2024, accessed 26 March 2025.

1754 Reuters, '[China's Baidu says DeepSeek success inspired open source move](#)', *Reuters*, 19 February 2025, accessed 13 March 2025.

1755 This is a count of foundation models that are in the public domain; there may be others that are private. Based on ACCC analysis of Stanford Center for Research on Foundation Models, '[Ecosystem Graphs for Foundation Models](#)', accessed 13 March 2025.

1756 Source: Sensor Tower data. Based on the top mobile apps by the number of Australian monthly active users in October 2024, in the 'AI chatbot' category.

1757 OpenAI, '[ChatGPT Pricing](#)', accessed 13 March 2025.

1758 OpenAI, '[What is the ChatGPT model selector?](#)', accessed 13 March 2025.

1759 OpenAI, '[Introducing GPT-4.5](#)', 27 February 2025, accessed 13 March 2025.

1760 OpenAI, '[Introducing GPT-4.5](#)', 27 February 2025, accessed 13 March 2025.

1761 OpenAI, '[Introducing OpenAI o1-preview](#)', 12 September 2024, accessed 13 March 2025.

1762 N Handa, '[New reasoning models: OpenAI o1-preview and o1-mini](#)', *OpenAI Developer Forum*, 17 September 2024, accessed 13 March 2025.

o1's successor, o3, was announced in December 2024,¹⁷⁶³ with the o3-mini model released to the public on 31 January 2025.¹⁷⁶⁴ Users of ChatGPT can access these models on a paid plan.¹⁷⁶⁵

OpenAI has also developed specific text-to-image and text-to-video generation models with DALL-E¹⁷⁶⁶ and Sora,¹⁷⁶⁷ respectively. While OpenAI's foundation models are regarded as leading models,¹⁷⁶⁸ other firms have released foundation models with competitive capabilities. For example:

- **Google's 'Gemini Ultra' model**, which Google claims outperforms GPT-4 against a number of benchmarks.¹⁷⁶⁹ In December 2024, Google introduced Gemini 2.0, its newest and most capable model,¹⁷⁷⁰ which has been confirmed to outperform GPT-4 in certain functionalities.¹⁷⁷¹ In the same month, Google released its own 'reasoning' model called Gemini 2.0 Flash Thinking Experimental.¹⁷⁷²
- **Anthropic's 'Claude 3' model**, which Anthropic claims outperforms GPT-4 and other highly capable large language models (LLMs) across a range of benchmarks.¹⁷⁷³ On 25 February 2025, Anthropic released its first 'hybrid reasoning model', Claude 3.7 Sonnet, which it claimed 'can produce near-instant responses or extended, step-by-step thinking that is made visible to the user'.¹⁷⁷⁴
- **DeepSeek's 'V3' and 'R1' open-source foundation models**. DeepSeek's 'V3' model reportedly achieves performance on par with OpenAI's GPT-4o and Anthropic's Claude-3.5, while its 'R1' model is adapted for more complex tasks, comparable to OpenAI's o1 model.¹⁷⁷⁵
- **ByteDance's 'Doubao 1.5 Pro' model**, which ByteDance claims is better than GPT-4 at coding, reasoning and retaining knowledge, and is more cost efficient due to its architecture being optimised to balance performance with reduced computational demands.¹⁷⁷⁶
- **Meta's open-source Llama 3 foundation model**.¹⁷⁷⁷
- **Hugging Face's 'Bloom' foundation model**, which was trained on a public supercomputer and is now available to all as open-source.¹⁷⁷⁸
- **Mistral AI's open-weights models**, including 'Mistral 7B', 'Mistral 8x7B' and 'Mistral 8x22B', as well as 'Mistral Large'.¹⁷⁷⁹

1763 M Zeff and K Wiggers, '[OpenAI announces new o3 models](#)', *TechCrunch*, 20 December 2024, accessed 13 March 2025.

1764 OpenAI, '[OpenAI o3-mini](#)', 31 January 2025, accessed 13 March 2025.

1765 OpenAI, '[ChatGPT Pricing](#)', accessed 13 March 2025; OpenAI, '[What is the ChatGPT model selector?](#)', accessed 13 March 2025.

1766 OpenAI, '[DALL-E 3](#)', accessed 13 March 2025.

1767 OpenAI, '[Sora](#)', accessed 13 March 2025.

1768 CMA, '[AI Foundation Models: Technical update report](#)', 16 April 2024, p 5.

1769 Gemini Team, Google, '[Gemini: A Family of Highly Capable Multimodal Models](#)', 19 December 2023, accessed 13 March 2025.

1770 S Pichai, D Hassabis and K Kavukcoglu, '[Introducing Gemini 2.0: our new AI model for the agentic era](#)', *Google Blog*, 11 December 2024, accessed 13 March 2025.

1771 S Ganesh, '[Google Gemini 2.0 vs OpenAI's GPT-4: The AI Battle Heats Up](#)', *Industry Wired*, 13 December 2024, accessed 13 March 2025.

1772 K Wiggers, '[Google releases its own 'reasoning' AI model](#)', *TechCrunch*, 19 December 2024, accessed 13 March 2025.

1773 Anthropic, '[Introducing the next generation of Claude](#)', Press release, 4 March 2024, accessed 13 March 2025.

1774 Anthropic, '[Claude 3.7 Sonnet and Claude Code](#)', Press release, 25 February 2025, accessed 13 March 2025.

1775 DeepSeek AI, '[DeepSeek-V3 Technical Report](#)', 27 December 2024, pp 5–6. DeepSeek AI, '[DeepSeek-R1: Incentivizing Reasoning Capability in LLMs via Reinforcement Learning](#)', 22 January 2025, p 13.

1776 '[DeepSeek Has Rattled the AI Industry. Here's a Quick Look at Other Chinese AI Models](#)', *The Associated Press*, 30 January 2025, accessed 13 March 2025.

1777 Meta, '[Introducing Llama 3.1: Our most capable models to date](#)', 23 July 2024, accessed 13 March 2025.

1778 French Competition Authority, '[Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#)', 12 July 2024, p 28.

1779 French Competition Authority, '[Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#)', 12 July 2024, p 29.

- **Stability AI's** suite of text-to-image models, including 'Stable Diffusion 3.5 Large', 'Stable Diffusion 3.5 Large Turbo' and 'Stable Diffusion 3.5 Medium'.¹⁷⁸⁰
- **Alibaba's** open-source 'Qwen 2.5' model, released in January 2025, which Alibaba claims outperforms advanced models by firms such as OpenAI, DeepSeek and Meta.¹⁷⁸¹ In February 2025, Alibaba announced plans to release an open-source version of its AI video generation model.¹⁷⁸²
- **Baidu's** 'Ernie 4.0' model series, which powers its 'Ernie Bot' chatbot and which Baidu claims is on-par with OpenAI's GPT-4.¹⁷⁸³ Following the release of DeepSeek's open-source model, Baidu announced plans in February 2025 to open-source its upcoming Ernie 4.5 series.¹⁷⁸⁴
- **Tencent's** 'Hunyuan3D 2.0' model, released in January 2025, which is an open-source generative AI model which specialises in transforming text or images into detailed 3D models.¹⁷⁸⁵
- **xAI's** 'Grok 3' model, released in February 2025, which is able to analyse images and respond to questions, powers certain features of X (formerly Twitter), and supports xAI's chatbot named 'Grok'.¹⁷⁸⁶ xAI claims that Grok3 outperforms GPT-4o on a number of benchmarks.¹⁷⁸⁷
- **Black Forest Labs's** 'FLUX.1' model, which powers the image generation component of xAI's Grok assistant.¹⁷⁸⁸
- **Microsoft's** 'Phi' family of small open-source language models, which are made available on Microsoft's Azure AI Foundry and on Hugging Face. Microsoft claims that Phi-4, released in December 2024, offers high quality results at a smaller size, and particularly excels at math-related reasoning.¹⁷⁸⁹

1780 StabilityAI, [Image Models](#), accessed 13 March 2025.

1781 E Baptista, ['Alibaba releases AI model it says surpasses DeepSeek'](#), *Reuters*, 30 January 2025, accessed 13 March 2025.

1782 J Osawa, ['Alibaba to Launch Open-Source AI Video Models'](#), *The Information*, 26 February 2025, accessed 13 March 2025.

1783 Y Mo and E Baptista, ['China's Baidu unveils new Ernie AI version to rival GPT-4'](#), *Reuters*, 17 October 2023, accessed 13 March 2025; Z Soo, ['DeepSeek Has Rattled the AI Industry. Here's a Quick Look at Other Chinese AI Models'](#), *The Associated Press*, 30 January 2025, accessed 13 March 2025.

1784 Reuters, ['China's Baidu says DeepSeek success inspired open source move'](#), *Reuters*, 19 February 2025, accessed 13 March 2025.

1785 M Nuñez, ['Tencent introduces 'Hunyuan3D 2.0,' AI that speeds up 3D design from days to seconds'](#), *VentureBeat*, 21 January 2025, accessed 13 March 2025.

1786 K Wiggers, ['Elon Musk's xAI releases its latest flagship model, Grok 3'](#), *TechCrunch*, 17 February 2025, accessed 19 March 2025; K Wiggers, ['What is Elon Musk's Grok chatbot and how does it work?'](#), *TechCrunch*, 29 March 2024, accessed 19 March 2025.

1787 xAI, [Grok 3 Beta – The Age of Reasoning Agents](#), 19 February 2025, accessed 19 March 2025; K Wiggers, ['Elon Musk's xAI releases its latest flagship model, Grok 3'](#), *TechCrunch*, 17 February 2025, accessed 19 March 2025.

1788 M Zeff, ['Meet Black Forest Labs, the startup powering Elon Musk's unhinged AI image generator'](#), *TechCrunch*, 14 August 2024, accessed 13 March 2025.

1789 E Kamar, ['Introducing Phi-4: Microsoft's Newest Small Language Model Specializing in Complex Reasoning'](#), *Microsoft AI – AI Platform Blog*, 13 December 2024, accessed 25 March 2025.

Model distribution platforms

There are a range of platforms through which developers can access pre-trained foundation models.¹⁷⁹⁰ Notably, major cloud providers offer their cloud customers access to distribution platforms which host a range of foundation models, on which they can build generative AI products and services. For example:

- **Microsoft** offers Azure Machine Learning Studio (which provides exclusive access to OpenAI models)¹⁷⁹¹
- **AWS** offers Amazon Bedrock¹⁷⁹²
- **Google Cloud** offers Vertex AI Model Garden¹⁷⁹³
- **Alibaba Cloud** offers a Model Gallery within its 'Platform for AI' service.¹⁷⁹⁴

Each of the above distribution platforms provide developers with access to a range of first-party and third-party foundation models, including open-source models. There are also some free model distribution platforms which offer access to open-source models only (for example, Hugging Face and Kaggle).¹⁷⁹⁵

Infrastructure layer

AI accelerator chips

Nvidia is currently the largest supplier of AI accelerator chips – through sales of its GPUs, it is estimated to supply between 70% and 95% of AI chips globally.¹⁷⁹⁶ Nvidia's GPU chips are manufactured by TSMC, a leading producer of advanced semiconductors for various technology companies including Apple, Qualcomm, Advanced Micro Devices (AMD), Broadcom, and Sony.¹⁷⁹⁷

Nvidia has experienced strong growth in recent years due to the popularity of its GPUs for AI, as well as the popularity of its GPU programming software known as 'CUDA' (Compute Unified Device Architecture). Nvidia's CUDA software only works with Nvidia GPUs, and is reportedly the software most widely used by developers to build foundation models.¹⁷⁹⁸ Nvidia's data centre business, which includes sales of its GPUs, generated nearly US\$100 billion in the 12 months ended in October 2024 – a 66% increase on the prior year.¹⁷⁹⁹ As of the end of 2024, Nvidia's market capitalisation was valued at US\$3.28 trillion (up from US\$1.2 trillion at the end of 2023), making it the second-most valuable public company in the world after Apple.¹⁸⁰⁰

1790 CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 20.

1791 Microsoft, [Azure Machine Learning](#), accessed 13 March 2025.

1792 Amazon Web Services, [Amazon Bedrock](#), accessed 13 March 2025.

1793 Google Cloud, [Google Cloud Model Garden](#), accessed 13 March 2025.

1794 Alibaba, [Platform for AI User Guide – Model Gallery](#), Alibaba Cloud, accessed 13 March 2025; Alibaba, [Platform for AI](#), Alibaba Cloud, accessed 13 March 2025.

1795 Hugging Face, [Hugging Face](#), accessed 13 March 2025; Kaggle, [Kaggle](#), accessed 13 March 2025.

1796 K Leswing, '[Nvidia dominates the AI chip market, but there's more competition than ever](#)', *CNBC*, 2 June 2024, accessed 13 March 2025.

1797 Open Markets Institute, [AI in the Public Interest: Confronting the Monopoly Threat](#), 15 November 2023, p 16, A Shilov, '[Analyst estimates Nvidia is now TSMC's second largest customer accounting for 11% of revenue in 2023](#)', *Tom's Hardware*, 2 March 2024, accessed 13 March 2025.

1798 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 41.

1799 W Sheik et al., '[7 Charts That Explain 2024](#)', *The Information*, 30 December 2024, accessed 13 March 2025.

1800 Reuters, [Nvidia's market value gets \\$2 trillion boost in 2024 on AI rally](#), 2 January 2025, accessed 13 March 2025.

Nvidia's main competitors include other chipmakers like AMD. AMD, which reported US\$11 billion in data centre revenue including from AI chips in the 12 months ending September 2024, is adapting its GPUs for AI inside data centres.¹⁸⁰¹ Microsoft has already bought AMD processors, offering access to them through its Azure cloud.¹⁸⁰² Microsoft has also stated that it is using AMD's Instinct GPUs to serve its Copilot models.¹⁸⁰³

Other firms specialise in creating custom AI chips for specific, high-volume tasks, rather than a broad range of workloads (like Nvidia's GPUs).¹⁸⁰⁴ One example is Broadcom, which reported US\$12.2 billion in revenue from its custom AI chips and AI networking equipment in the 12 months ending October 2024.¹⁸⁰⁵ Huawei has also emerged in China as a potential competitor to Nvidia for inferencing chips, which can be used to run AI models after they have been trained.¹⁸⁰⁶

In addition, large digital platforms are increasingly investing in developing their own AI chips (which they generally use in addition to Nvidia's chips).¹⁸⁰⁷ Reportedly, it can cost US\$500 million to design a single version of a new AI accelerator chip, and these costs can double when building the necessary software and other associated features.¹⁸⁰⁸ Amazon, Google, Microsoft and Meta have all now developed in-house chips purpose-built for AI operations, with Apple and OpenAI set to follow suit:

- **Amazon:** Amazon has designed 2 types of application-specific integrated circuit chips for training and accelerating generative AI.¹⁸⁰⁹ These custom chips, Inferentia and Trainium, offer AWS cloud customers an alternative for training their large language models (alongside Nvidia GPUs). Amazon reportedly deployed 1.3 million of its Trainium and Inferentia chips in 2024.¹⁸¹⁰
- **Google:** Google has designed its own application-specific integrated circuit chip called a Tensor Processing Unit, and has been using these chips since 2015 to train and deploy its own AI models, as well as offering them to customers through Google Cloud.¹⁸¹¹ Google reportedly deployed 1.5 million Tensor Processing Units in 2024, and offers its cloud customers access to both Tensor Processing Units and Nvidia chips.¹⁸¹²
- **Microsoft:** Microsoft has developed its own application-specific integrated circuit chip called Maia 100, which has been designed specifically to support Microsoft's own AI workloads in its

1801 K Leswing, '[Nvidia dominates the AI chip market, but there's more competition than ever](#)', *CNBC*, 2 June 2024, accessed 13 March 2025.

1802 K Leswing, '[Nvidia dominates the AI chip market, but there's more competition than ever](#)', *CNBC*, 2 June 2024, accessed 13 March 2025.

1803 K Leswing, '[Nvidia dominates the AI chip market, but there's more competition than ever](#)', *CNBC*, 2 June 2024, accessed 13 March 2025.

1804 A Ramaswamy, '[Why Marvell Will Overtake Broadcom As Nvidia's AI Challenger](#)', *The Information*, 3 January 2025, accessed 13 March 2025.

1805 W Sheik et al., '[7 Charts That Explain 2024](#)', *The Information*, 30 December 2024, accessed 13 March 2025.

1806 Z Wu, '[Huawei improves AI chip production in boost for China's tech goals](#)', *Financial Times*, 25 February 2025, accessed 13 March 2025.

1807 D Clark, '[Bigger in Texas: The furious battle to topple the world's most valuable company](#)', *The Age*, 5 December 2024, accessed 13 March 2025.

1808 A Tong, M Cherney and K Hu, '[Exclusive: OpenAI set to finalize first custom chip design this year](#)', *Reuters*, 11 February 2025, accessed 13 March 2025.

1809 K Leswing, '[Nvidia dominates the AI chip market, but there's more competition than ever](#)', *CNBC*, 2 June 2024, accessed 13 March 2025.

1810 T Brashaw and S Morris, '[Microsoft acquires twice as many Nvidia AI chips as tech rivals](#)', *Financial Times*, 18 December 2024, accessed 13 March 2025.

1811 A Levy, '[Meet the 69-year-old professor who left retirement to help lead one of Google's most crucial projects](#)', *CNBC*, 6 May 2017, accessed 13 March 2025; Google Cloud, '[Accelerate AI development with Google Cloud TPUs](#)', accessed 13 March 2025.

1812 W Williams, '[Chinese cloud giants bought more of Nvidia's flagship AI chips than anybody else – except Microsoft](#)', *Yahoo! Finance*, 1 January 2025, accessed 13 March 2025.

Azure cloud.¹⁸¹³ Microsoft currently offers customers access to Nvidia and AMD chips through its cloud.¹⁸¹⁴

- **Meta:** Meta has designed its own application-specific integrated circuit chip called the Meta Training and Inference Accelerator, to support Meta's own AI workloads.¹⁸¹⁵ Meta reportedly deployed 1.5 million Meta Training and Inference Accelerator chips in 2024.¹⁸¹⁶
- **Apple:** In December 2024, it was reported that Apple is working with Broadcom to develop its first server chip specifically designed for Apple's own AI workloads.¹⁸¹⁷
- It has been reported that Broadcom is also working with Google, Meta, ByteDance and OpenAI to develop their own AI chips.¹⁸¹⁸ OpenAI is apparently intending to finalise the design for its first in-house silicon AI chip in 2025.¹⁸¹⁹

In addition, a coalition of technology companies including Google, AMD, Qualcomm and Intel are seeking to develop an alternative to Nvidia's popular CUDA programming software (which, as noted above, only works with Nvidia's own chips) to 'promote productivity and choice in hardware'.¹⁸²⁰ The coalition plans to develop an open-source suite of software that will allow developers to program multiple types of AI accelerator chips regardless of the supplier.¹⁸²¹ This initiative may be a strategic response to concerns over perceived barriers to switching between chips (discussed in section 4.2.4).

AI data centres and cloud services

This Report has already explored cloud computing services in section 4.1. However, cloud services also play an important role throughout the entire generative AI supply chain.

As discussed in section 4.1.4, due to the significant costs involved in building and running AI data centres, AI developers will typically access the compute required to train and deploy their generative AI models and applications through cloud services, rather than investing in their own AI data centres. As noted in section 4.1.3, the largest providers of cloud services globally are AWS, Microsoft and Google. Each of these companies own and operate AI data centres which generate the computing power needed to develop and deploy generative AI. Other large cloud providers, such as Alibaba, are also investing heavily in expanding their AI cloud computing infrastructure.¹⁸²² Third-party developers can access this computing power by purchasing the firms' cloud services.

Some AI developers are entering into partnerships with one or more of these major cloud service providers to access the computing power required to train and deploy their foundation models. The partnerships between large digital platforms and leading AI developers can include substantial

1813 S Xu, [Inside Maia 100: Revolutionizing AI Workloads with Microsoft's Custom AI Accelerator](#), *Microsoft*, 28 August 2024, accessed 13 March 2025.

1814 T Brashaw and S Morris, ['Microsoft acquires twice as many Nvidia AI chips as tech rivals'](#), *Financial Times*, 18 December 2024, accessed 13 March 2025.

1815 Meta, [Introducing Our Next Generation Infrastructure for AI](#), Press release, 10 April 2024, accessed 13 March 2025.

1816 W Williams, ['Chinese cloud giants bought more of Nvidia's flagship AI chips than anybody else – except Microsoft'](#), *Yahoo! Finance*, 1 January 2025, accessed 13 March 2025.

1817 W Ma and Q Liu, ['Apple Is Working on AI Chip With Broadcom'](#), *The Information*, 11 December 2024, accessed 13 March 2025.

1818 W Williams, ['Trillion-dollar tech company emerges as key partner to help Google, Meta and other hyperscalers build an Nvidia-free AI future'](#), *TechRadar*, 5 January 2025, accessed 13 March 2025.

1819 A Tong, M Cherney and K Hu, ['Exclusive: OpenAI set to finalize first custom chip design this year'](#), *Reuters*, 11 February 2025, accessed 13 March 2025.

1820 M A Cherney, ['Exclusive: Behind the plot to break Nvidia's grip on AI by targeting software'](#), *Reuters*, 25 March 2024, accessed 13 March 2025. See also French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 55; K Leswing, ['Nvidia dominates the AI chip market, but there's more competition than ever'](#), *CNBC*, 2 June 2024, accessed 13 March 2025.

1821 M A Cherney, ['Exclusive: Behind the plot to break Nvidia's grip on AI by targeting software'](#), *Reuters*, 25 March 2024, accessed 13 March 2025.

1822 Alibaba, [Alibaba to Invest RMB380 billion in AI and Cloud Infrastructure Over Next Three Years](#), *Alibaba Cloud Blog*, 24 February 2025, accessed 13 March 2025.

financial investment, favourable terms to access cloud services (for the AI developers) and preferential access to models (for the cloud providers). For example:

- Microsoft and OpenAI announced a partnership in July 2019 whereby Microsoft would invest US\$1 billion in OpenAI and become its exclusive cloud provider.¹⁸²³ This partnership has since been extended several times,¹⁸²⁴ with Microsoft having reportedly invested up to US\$13 billion in OpenAI in total.¹⁸²⁵ The arrangement between the companies grants Microsoft preferential access to OpenAI's latest foundation models (which are being deployed in Microsoft products under the umbrella term Copilot),¹⁸²⁶ and includes revenue sharing agreements that 'flow both ways'.¹⁸²⁷ In January 2025, following the announcement of OpenAI's role in the Stargate Project (see below), Microsoft stated that it would no longer be OpenAI's exclusive cloud provider, but has a right of first refusal to provide any new cloud capacity for OpenAI.¹⁸²⁸
- Anthropic and AWS announced a partnership in September 2023 whereby AWS invested \$4 billion in Anthropic, and became Anthropic's primary cloud provider.¹⁸²⁹ In November 2024, AWS invested an additional US\$4 billion in Anthropic and announced that it would also become Anthropic's 'primary training partner', meaning that Anthropic will use AWS's Trainium and Inferentia chips to train and deploy future foundation models.¹⁸³⁰ Anthropic also has a cloud partnership with Google, which has invested US\$3 billion in Anthropic.¹⁸³¹
- In January 2025, US President Donald Trump formally announced the Stargate Project, an AI joint venture between OpenAI, Oracle, SoftBank (a Japanese technology investment firm) and MGX (an Abu Dhabi-based AI investment firm), which intends to invest US\$100 billion immediately, and additional US\$400 billion over 4 years, to build new AI data centres in the US.¹⁸³² OpenAI has operational control of Stargate, while SoftBank has financial control,¹⁸³³ and reportedly all Stargate data centres will be for OpenAI's exclusive use.¹⁸³⁴ *The Information* reported that OpenAI and SoftBank have each committed US\$19 billion to fund Stargate while Oracle and MGX have each committed US\$7 billion, with remaining funds to be sourced from investors and debt financing.¹⁸³⁵ President Trump indicated that he would assist Stargate by making emergency declarations to expedite the project, particularly in relation to energy infrastructure.¹⁸³⁶

1823 Microsoft, [OpenAI forms exclusive computing partnership with Microsoft to build new Azure AI supercomputing technologies](#), Press release, 22 July 2019, accessed 13 March 2025.

1824 OpenAI, [OpenAI and Microsoft extend partnership](#), 23 January 2023, accessed 13 March 2025.

1825 F Y Chee and Y Malik, ['Microsoft-OpenAI deal set to dodge formal EU merger probe, sources say'](#), *Reuters*, 18 April 2024, accessed 13 March 2025.

1826 S Stolton, ['Microsoft's \\$13 Billion OpenAI Pact Faces Extra EU Scrutiny'](#), *Bloomberg*, 28 June 2024, accessed 13 March 2025.

1827 Microsoft, [Microsoft and OpenAI evolve partnership to drive the next phase of AI](#), 21 January 2025, accessed 13 March 2025.

1828 Microsoft, [Microsoft and OpenAI evolve partnership to drive the next phase of AI](#), 21 January 2025, accessed 13 March 2025. The ACCC notes that, on 10 March 2025, CoreWeave (a US-based cloud computing company) announced that it had signed a US\$11.9 billion deal to deliver AI infrastructure to OpenAI, with OpenAI purchasing US\$350 million of CoreWeave stock as part of the deal. See CoreWeave, [CoreWeave Announces Agreement with OpenAI to Deliver AI Infrastructure](#), 10 March 2025, accessed 13 March 2025.

1829 Amazon, [Amazon and Anthropic deepen their shared commitment to advancing generative AI](#), 28 March 2024, accessed 13 March 2025.

1830 Amazon, [Amazon and Anthropic deepen strategic collaboration](#), 23 November 2024, accessed 13 March 2025.

1831 K Wiggers, ['Anthropic reportedly secures an additional \\$1B from Google'](#), *TechCrunch*, 22 January 2025 accessed 13 March 2025..

1832 J Jacobs, ['Trump announces up to \\$500 billion in private sector AI infrastructure investment'](#), *CBS News*, 22 January 2025, accessed 13 March 2025; OpenAI, [Announcing the Stargate Project](#), 21 January 2025, accessed 13 March 2025.

1833 OpenAI, [Announcing the Stargate Project](#), 31 January 2025, accessed 13 March 2025.

1834 Reuters, [Stargate artificial intelligence project to exclusively serve OpenAI, FT reports](#), 24 January 2025, accessed 13 March 2025.

1835 N Mascarenhas and A Efrati, ['OpenAI, SoftBank Each Commit \\$19 Billion to Stargate Data Center Venture'](#), *The Information*, 22 January 2025, accessed 13 March 2025.

1836 J Jacobs, ['Trump announces up to \\$500 billion in private sector AI infrastructure investment'](#), *CBS News*, 22 January 2025, accessed 13 March 2025; J Gedeon, ['Trump unveils \\$500bn Stargate AI project between OpenAI, Oracle and SoftBank'](#), *The Guardian*, 22 January 2025, accessed 13 March 2025.

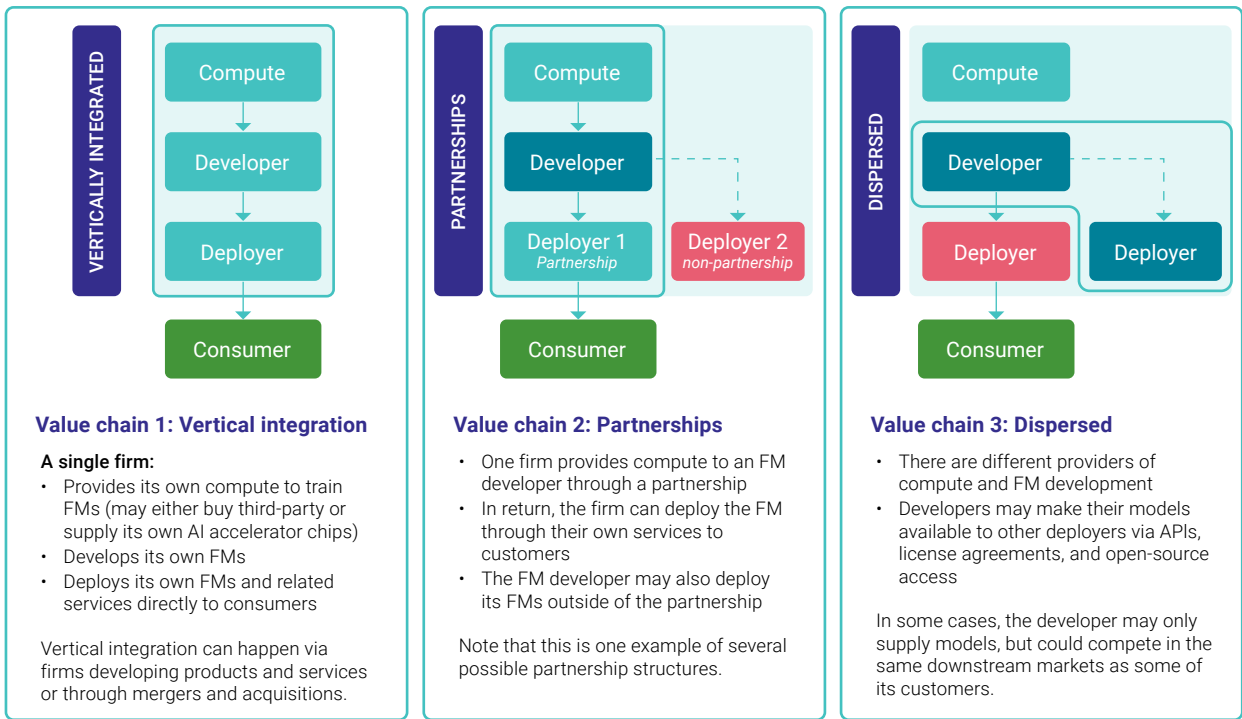
4.2.3 Dynamics and key trends in generative AI

There is a significant level of vertical integration and partnerships between firms across the generative AI stack

Several regulators have noted that there is a tendency for firms to operate at multiple layers of the generative AI stack.¹⁸³⁷ This occurs both through vertical integration (where a single firm operates at different stages of a single vertical supply chain), and through partnerships between players operating at different levels of the stack. Foundation model developers may seek partnerships with established platforms to access key inputs (e.g. cloud computing power or data) and to access distribution channels to customers via the platforms' existing products and services.¹⁸³⁸

Figure 4.13 shows examples of various value chain models for supplying generative AI products and services, with varying degrees of vertical integration.¹⁸³⁹

Figure 4.13: Generative AI value chain examples



Source: Based on CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 27.

1837 K Kowalski, C Volpin and Z Zombori, 'Competition in Generative AI and Virtual Worlds', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 3; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, pp 27–28; Competition Bureau Canada, [Consultation on Artificial Intelligence and Competition: What We Heard](#), 27 January 2025, accessed 13 March 2025; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 3.

1838 K Kowalski, C Volpin and Z Zombori, 'Competition in Generative AI and Virtual Worlds', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 3.

1839 In this figure, 'FM' stands for 'foundation model'. Based on CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 27.

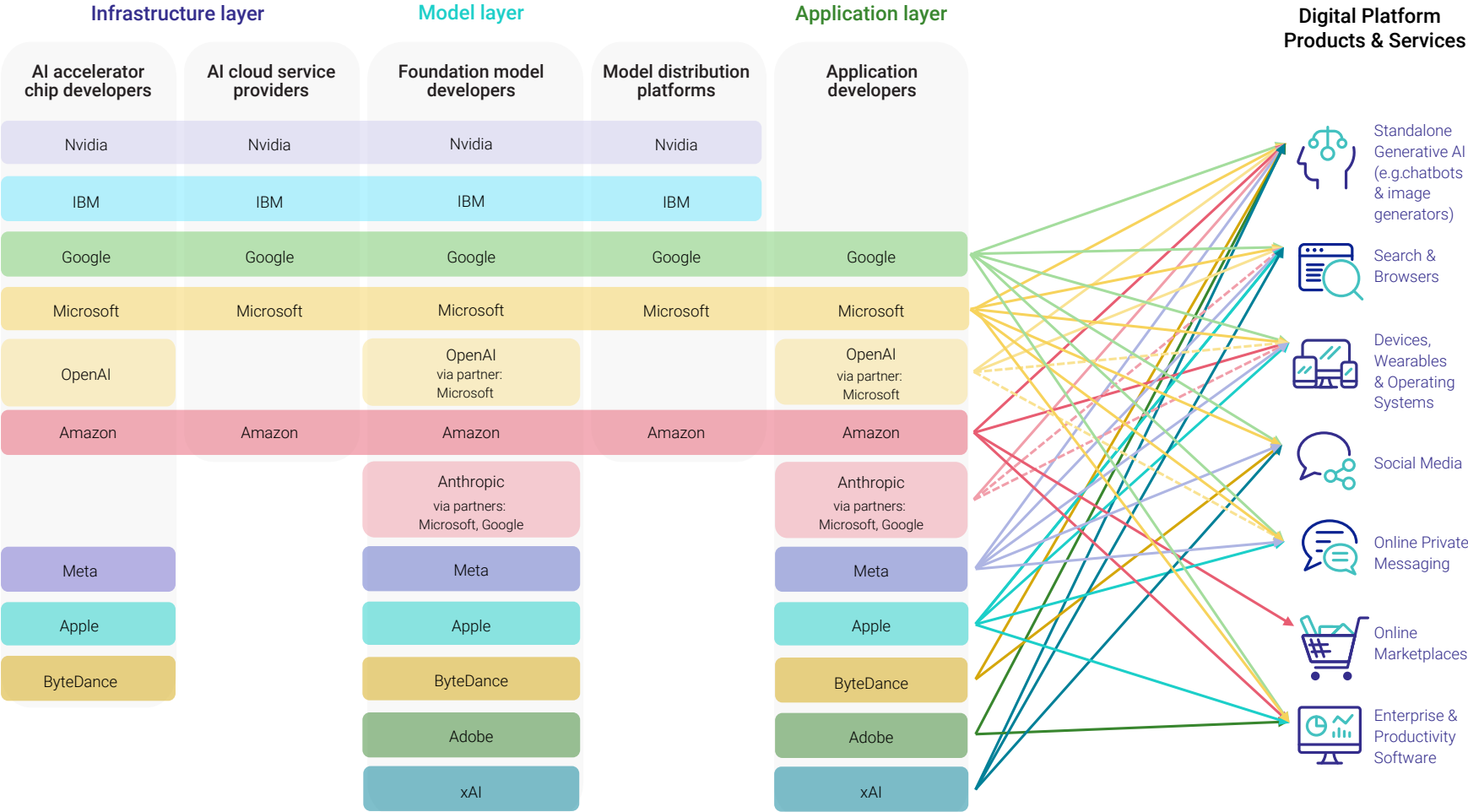
As figure 4.14 shows, Google, Amazon, Microsoft, Meta and Apple operate at multiple levels of the generative AI stack, including through partnership arrangements with foundation model developers. For example, Amazon, Google and Microsoft each supply cloud computing services at the upstream infrastructure level, proprietary foundation models at the model level, and generative AI products and services at the downstream application level.

The large established digital platforms benefit from economies of scope and scale, and can combine their significant financial resources, access to key inputs and access to large existing consumer bases to support their expansion into generative AI markets.¹⁸⁴⁰

Figure 4.14 shows the presence of major firms across multiple layers of the generative AI stack, and the integration of generative AI applications into their core digital platform services markets.

¹⁸⁴⁰ K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 3; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 6.

Figure 4.14: Vertical integration & integration of generative AI in digital markets



*OpenAI, Apple and ByteDance chips are reportedly in development.
**Microsoft, Meta, Apple, ByteDance chips are currently for in-house use only.

Source: ACCC analysis of publicly available information as at February 2025.

Large digital platforms are integrating generative AI into their existing products and services

Large digital platforms are increasingly deploying generative AI features within their core products and services. These include features aimed at business users, creators, advertisers, and consumers.

Among the top 50 apps in Australia (by number of monthly active users in October 2024), 17 out of 50 apps already offer consumer-facing generative AI features or services to Australian users, and a further 7 apps are in the process of testing or rolling out consumer-facing generative AI features in Australia or overseas.¹⁸⁴¹

Generative AI is being incorporated across many digital platform services – for example:

- **Social media:** Social media platforms have integrated generative AI features into their services for end users in various ways, including via AI assistants, chatbots, and summaries. Social media platforms are also introducing generative AI features to assist business users and advertisers on their platforms. For example:
 - Meta AI, built on Meta’s proprietary foundation models, has been integrated into Meta’s social and communication apps, allowing users to access real-time information from across the web without leaving Meta’s apps. On Facebook and Instagram, Meta AI can be accessed via the ‘search’ functions, and on Facebook, Meta AI can also be accessed on the news feed, allowing users to ‘ask Meta AI’ for more information about posts that appear.
 - Some other social media platforms, such as TikTok, have implemented AI-powered summaries within the platforms’ search functions. Users of X (formerly Twitter) also have access to ‘Grok on X’, an AI assistant which can answer questions, summarise news and trends, brainstorm and help complete tasks.¹⁸⁴²
 - Meta has introduced a variety of generative AI features (powered by Meta’s Llama) for advertisers on its platforms, including tools for generating image variations, text and overlay, and optimised images and videos.¹⁸⁴³
 - TikTok’s Creative AI suite, powered by generative AI, enables creators and advertisers to generate and remix videos, create custom brand avatars, translate and dub videos, and optimise ad performance.¹⁸⁴⁴
 - Tencent has reportedly announced plans to integrate AI agents within its messaging and social media app, WeChat.¹⁸⁴⁵
- **Online private messaging:** As outlined previously in section 3.1, online private messaging services are increasingly integrating generative AI features – including Facebook Messenger, WhatsApp, Instagram, Discord, Snapchat, Google Messages and iMessage in iOS18. This is also prominent among enterprise-productivity based messaging services, such as Microsoft Teams, Google Meet, Zoom Workplace and Slack.

1841 Source: Sensor Tower data. The top 50 apps list is based on the total number of monthly active users in Australia for apps across all categories (on both Apple App Store and Google Play Store) in October 2024.

1842 A Pequeño IV, ‘[X Introduces Free Version Of Grok—With These Limits](#)’, *Forbes*, 6 December 2024, accessed 13 March 2025.

1843 Meta, [Introducing Enhanced Gen AI Features and Other Tools to Help Build Your Business](#), Press release, 7 May 2024, accessed 13 March 2025.

1844 TikTok, [Meet TikTok Symphony, our new Creative AI suite](#), 17 June 2024, accessed 13 March 2025.

1845 E Chang, ‘[Chinese AI applications now have bigger aims — they’re looking beyond chatbots](#)’, *CNBC*, 26 January 2025, accessed 13 March 2025.

- **Online marketplaces:** On the Amazon Retail Store, sellers in Australia can use generative AI tools to create more engaging product listings, more efficiently.¹⁸⁴⁶ For consumers in the US, Amazon has also introduced AI-generated Shopping Guides.¹⁸⁴⁷
- **Search:** As noted in the ACCC's Report on Revisiting General Search Services, search providers have increasingly been integrating generative AI into their search services and browsers to enable new or improved functionalities. Generative AI has been incorporated into search in 3 main ways: conversational search interfaces, AI-generated summaries, and AI-assisted ranking.¹⁸⁴⁸
 - Microsoft has integrated Copilot into its search engine, Bing, through a tab that appears above search results, which offers conversational responses to search queries and allows users to ask follow-up questions. Bing also offers users the ability to perform a generative-AI powered search through the 'deep search' button, which appears beside the search bar on the search results page. Bing's 'generative search' optimises the search results, as well as the layout of the results page.¹⁸⁴⁹
 - Google's Gemini chatbot can similarly provide conversational responses to search queries using real-time information from the web. Google has also incorporated 'AI Overviews' within Google Search (powered by Gemini), which provides AI-generated summaries in response to user queries at the top of the Google Search results page.¹⁸⁵⁰
 - Alongside existing search engines, several standalone generative AI chatbots can also search the web and provide links to web results in response to user queries. For example, users of ChatGPT can enter a query using the 'search' button and will receive a response with attached links to the online sources of the information.¹⁸⁵¹
- **Productivity software:** Google, Microsoft, Adobe, Zoom and Slack¹⁸⁵² have all integrated generative AI features into their existing productivity software products.
 - Google has expanded its Google Workplace plans to include the standalone Gemini app, and businesses who purchase the Gemini for Workspace add-on can also use Gemini directly within Gmail, Docs and Drive, Slides, Sheets and Meet.¹⁸⁵³
 - Microsoft has integrated Copilot into Microsoft 365 plans for consumers and enterprises – including integrations in Microsoft Outlook, PowerPoint, Excel, and Teams. Copilot can be used to summarise email conversations, write and edit content, create presentations, analyse data, scan workplace emails, chats, documents and the web, and create specialised AI agents.¹⁸⁵⁴
 - Adobe has introduced a range of AI features into its Creative Cloud software suite (based on its own proprietary AI models), including its own standalone AI art generator, Adobe Firefly. It has also added generative AI-powered features into existing apps – for example, in Adobe Express, Photoshop, and InDesign, users can enter text prompts to generate images, templates or effects, replace or expand backgrounds, or recolour objects.¹⁸⁵⁵

1846 Amazon, [Submission to the Final Report](#), 11 October 2024, p 23.

1847 D Lloyd, '[Amazon's new AI Shopping Guides make it easier to research product types and buy smarter. Here's how.](#)', *Amazon*, 10 October 2024, accessed 13 March 2025.

1848 ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 38.

1849 Microsoft, '[The next step in Bing generative search](#)', *Microsoft Bing Blog*, 1 October 2024, accessed 13 March 2025.

1850 Google, '[Introducing AI Overviews in Australia, a new generative AI experience on Search](#)', *Australia Blog*, 29 October 2024, accessed 13 March 2025.

1851 J Koetsier, '[ChatGPT Search vs Google Search: Which Is Better?](#)', *Forbes*, 3 November 2024, accessed 13 March 2025.

1852 The ACCC notes that while Zoom and Slack offer online private messaging services, they do so within the context of broader productivity suites – see discussion in section 3.1.

1853 Google, '[The better way to work just got an upgrade with Google AI](#)', accessed 13 March 2025.

1854 Microsoft, '[Reinvent productivity with Microsoft 365 Copilot](#)', accessed 13 March 2025.

1855 Adobe, '[AI at Adobe](#)', accessed 13 March 2025.

- As discussed in section 3.1, Zoom Workplace has also implemented an ‘AI Companion’ built on a mixture of closed and open-source foundation models, including Meta’s Llama,¹⁸⁵⁶ while Slack’s generative AI features are built on AWS infrastructure, utilising multiple foundation models.¹⁸⁵⁷
- **Enterprise cloud services (PaaS and SaaS):** Cloud computing services play a critical role in developing and running generative AI applications and their underlying foundation models. Partnerships between cloud providers and AI developers enable AI models to be deployed on cloud partners’ platforms and within their existing products and services.¹⁸⁵⁸
 - As noted above, major providers of cloud computing services such as Amazon, Google and Microsoft have introduced new platforms for developing AI applications into their existing cloud service offerings – including Amazon Bedrock, Microsoft’s Azure AI, and Google’s Vertex AI.
 - For existing business customers of AWS, Google Cloud, and Microsoft Azure, these platforms can be used to build custom generative AI applications within their existing infrastructure, based on the organisation’s own data.¹⁸⁵⁹ These AI application development platforms can also be used by developers to build consumer-facing AI applications.
 - Salesforce has introduced generative AI capabilities within its existing cloud-based platform. For example, customers can build and customise their own conversational AI agents to respond to employee or customer queries, based on existing customer data.¹⁸⁶⁰
 - Oracle has launched a generative AI service in Australia which allows businesses to integrate certain foundation models from Cohere and Meta into their applications via Oracle’s cloud infrastructure.¹⁸⁶¹
- **Devices and operating systems:** Generative AI is also being embedded into the operating systems of consumer products such as smartphones, laptops, home assistants and wearable devices. For example:
 - In December 2024, Apple released ‘Apple Intelligence’ in Australia as part of an iOS update, providing users generative AI features on their device and within Apple’s proprietary apps – such as ChatGPT integrations into Writing Tools.¹⁸⁶²
 - Microsoft has similarly released a range of Windows Copilot+ PCs, embedding generative AI on various Dell, Acer, Samsung and other devices.¹⁸⁶³ Meta has also now integrated Meta AI into its smart glasses.¹⁸⁶⁴

¹⁸⁵⁶ Meta, [Zoom leverages Llama in its federated approach to AI](#), 9 August 2024, accessed 13 March 2025.

¹⁸⁵⁷ J Rocca et al., ‘[Slack delivers native and secure generative AI powered by Amazon SageMaker JumpStart](#)’, *Amazon Web Services*, accessed 13 March 2025.

¹⁸⁵⁸ US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 3.

¹⁸⁵⁹ Amazon Web Services, [Amazon Bedrock](#), accessed 13 March 2025.

¹⁸⁶⁰ Salesforce, [Salesforce Artificial Intelligence](#), accessed 13 March 2025.

¹⁸⁶¹ A Starc, ‘[Oracle launches cloud infrastructure GenAI service in ANZ](#)’, *CRN*, 9 February 2024, accessed 13 March 2025; Oracle, [Generative AI Service](#), accessed 13 March 2025.

¹⁸⁶² Apple, [Apple Intelligence is available today for users in Australia and New Zealand](#), Press Release, 12 December 2024, accessed 13 March 2025.

¹⁸⁶³ Y Mehdi, ‘[Introducing Copilot+ PC](#)’, *Microsoft*, 20 May 2024, accessed 13 March 2025.

¹⁸⁶⁴ K Wiggers, ‘[Meta updates its smart glasses with real-time AI video](#)’, *TechCrunch*, 16 December 2024, accessed 13 March 2025.

- Google has incorporated Gemini into its voice assistant technology.¹⁸⁶⁵ Similarly, in February 2025, Amazon launched ‘Alexa+’, a generative AI version of its Alexa voice assistant.¹⁸⁶⁶

Developers are searching for new ways to train and scale their foundation models

Since the release of ChatGPT in 2022, many large AI developers have sought to continue improving their foundation models using a ‘scaling up’ method, where more data and computing power is added during pre-training of each new model to advance its capabilities beyond those of earlier models. However, several industry participants have recently posited that simply adding more data and computing power may no longer be as effective in advancing the capabilities of generative AI models.¹⁸⁶⁷

Firms are now seeking new strategies to develop and scale their models. For example:

- As noted above in section 4.2.2, OpenAI and Google have now developed ‘reasoning’ models which are designed to spend more time ‘thinking’ about their responses before answering. It was reported in December 2024 that OpenAI’s reasoning model, o3, significantly outperformed other models on a number of mathematical and coding benchmark tests.¹⁸⁶⁸
- In December 2024, DeepSeek AI released an open-source AI model with capabilities reportedly on par with OpenAI’s GPT-4, Meta’s Llama and Google’s Gemini, which it claims to have developed in less than 2 months and at a much lower cost than its competitors’ models (discussed further in section 4.2.4). According to a technical paper describing the model’s development process, the efficiency is attributable to training techniques which require less data and computing resources.¹⁸⁶⁹

There is a growing trend towards development of smaller and more efficient foundation models

Both the UK CMA and the European Commission have observed a growing trend towards developing smaller and more efficient foundation models that can run locally on mobile devices.¹⁸⁷⁰ The European Commission suggests that, if this becomes a commercial reality, this would be ‘transformative’ for the industry because it would counter the current predominant trend where the performance of a foundation model is commensurate with the size of the model and its pre-training dataset.¹⁸⁷¹ If demand for smaller foundation models increases, this may make it easier for smaller foundation model developers to recoup their investments and become competitive with developers

¹⁸⁶⁵ Google, [Introducing Gemini, your new personal AI assistant](#), accessed 13 March 2025.

¹⁸⁶⁶ P Panay, [Introducing Alexa+, the next generation of Alexa](#), Amazon, 26 February 2025, accessed 13 March 2025.

¹⁸⁶⁷ See, for example, K Hu and A Tong, [‘OpenAI and others seek new path to smarter AI as current methods hit limitations’](#), Reuters, 15 November 2024, accessed 13 March 2025; N Patel, [‘Microsoft AI chief Mustafa Suleyman says conversational AI is the next web browser’](#), The Verge, 10 December 2024, accessed 13 March 2025; S Palazzolo, E Woo and A Efrati, [‘OpenAI Shifts Strategy as Rate of ‘GPT’ AI Improvements Slows’](#), The Information, 9 November 2024, accessed 13 March 2025.

¹⁸⁶⁸ S Palazzolo, [‘OpenAI Wows the Crowd as New Scaling Law Passes Its First Test’](#), The Information, 23 December 2024, accessed 13 March 2025.

¹⁸⁶⁹ DeepSeek, [DeepSeek-V3 Technical Report](#), 27 December 2024, p 5; T Liu, [‘DeepSeek: How a small Chinese AI company is shaking up US tech heavyweights’](#), University of Sydney – News & opinion, 29 January 2025, accessed 13 March 2025; E Baptista, [‘What is DeepSeek and why is it disrupting the AI sector?’](#), Reuters, 29 January 2025, accessed 13 March 2025.

¹⁸⁷⁰ K Kowalski, C Volpin and Z Zombori, [‘Competition in Generative AI and Virtual Worlds’](#), European Commission Competition Policy Brief, Issue 3, September 2024, p 3; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 11.

¹⁸⁷¹ K Kowalski, C Volpin and Z Zombori, [‘Competition in Generative AI and Virtual Worlds’](#), European Commission Competition Policy Brief, Issue 3, September 2024, p 3.

of larger models.¹⁸⁷² Users who can access on-device foundation models may also benefit from reduced latency, increased privacy and security, and the ability to use generative AI offline.¹⁸⁷³

There are challenges both in decreasing the size of foundation models and developing AI chips for small mobile devices that are powerful enough to run foundation models.¹⁸⁷⁴ However recent developments towards deploying generative AI onto consumer devices include:

- In January 2024, Samsung and Google announced a partnership to deploy Google's generative AI services, including its on-device LLM, Gemini Nano, onto Samsung's smartphone devices, via the cloud.¹⁸⁷⁵
- In 2023, Qualcomm announced the development of mobile chipsets that support optimised versions of certain foundation models on mobile devices,¹⁸⁷⁶ and in February 2024 released a library of pre-optimised foundation models for on-device deployment.¹⁸⁷⁷
- In May 2024, Microsoft announced a new range of 'Copilot+ PCs' that would be able to run Microsoft's small language models for AI locally on-device.¹⁸⁷⁸
- Since October 2024, Apple has been rolling out Apple Intelligence on certain models of iPhone, iPad and Mac,¹⁸⁷⁹ and has announced that it will come to Apple Vision Pro in April 2025.¹⁸⁸⁰ Apple Intelligence became available for Australian users in December 2024.¹⁸⁸¹ Apple states that Apple Intelligence models run entirely on-device when possible, but that cloud computing is used to fulfil complex requests requiring more computational power.¹⁸⁸²

Developers are continuing to release a mix of both open and closed-source foundation models

Generative AI developers can access foundation models with varying degrees of openness. This includes:

- **Closed-source (proprietary or internal-use) models** that are either kept for internal use or licensed to third parties for a fee, allowing them to develop commercial applications but not modify the underlying models.¹⁸⁸³ An example is Google's Flamingo model. Where a firm develops its own model for internal use, the model can be specifically tailored and adapted over time to meet the unique needs of the firm and its own user-facing generative AI products.
- **Fully open-source models** that are publicly available and free for third parties to modify, improve and correct errors.¹⁸⁸⁴ All code, architecture, training data, weights (i.e. the values a model learns

1872 K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 3.

1873 CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 11.

1874 CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 11.

1875 Samsung, '[Samsung and Google Cloud Join Forces To Bring Generative AI to Samsung Galaxy S24 Series](#)', *Samsung Newsroom*, 18 January 2024, accessed 13 March 2024.

1876 J Soriaga, '[Accelerating generative AI at the edge](#)', *Qualcomm Blog*, 7 November 2023, accessed 13 March 2025.

1877 Qualcomm, [Qualcomm Continues to Bring the Generative AI Revolution to Devices and Empowers Developers with Qualcomm AI Hub](#), Press Release, 26 February 2024, accessed 13 March 2025.

1878 Microsoft, '[Introducing Copilot + PCs](#)', *Official Microsoft Blog*, 20 May 2024, accessed 13 March 2025.

1879 Apple, [Apple Intelligence is available today on iPhone, iPad and Mac](#), Press release, 29 October 2024, accessed 13 March 2025.

1880 Apple, [Apple Intelligence comes to Apple Vision Pro in April](#), Press release, 22 February 2025, accessed 13 March 2025.

1881 Apple, [Apple Intelligence is available today for users in Australia and New Zealand](#), Press release, 12 December 2024, accessed 13 March 2025.

1882 Apple, [Apple Intelligence & Privacy](#), Legal, 16 December 2024, accessed 13 March 2025.

1883 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, accessed 13 March 2025, p 6.

1884 C Carugati, [Working Paper – Competition in Generative AI Foundation Models](#), *Social Science Research Network*, 18 September 2023, p 1.

during its training phase) and learning processes are made available.¹⁸⁸⁵ On ‘model hubs’, third parties can develop and pre-train their own models using open-source model architectures, or fine-tune open-source pre-trained models to develop specialised models for their purposes.¹⁸⁸⁶ An example is Hugging Face’s BLOOM model.

- **Partially open-source models** where access is provided to model weights but not the source code, and where there may be some restrictions on use.¹⁸⁸⁷ An example is Meta’s Llama model, which is marketed as ‘open-source’. However, some in the open-source community have noted that, given the restrictions Meta has placed on Llama’s commercial use, it does not meet the definition of open-source developed by the Open Source Initiative.¹⁸⁸⁸

As discussed further below, open-source models can lower barriers to entry for user-facing generative AI applications, allowing firms to customise existing foundation models without having to make significant investments in compute, data and talent.¹⁸⁸⁹

International competition regulators have observed that foundation model developers continue to release a mix of both closed and open-source models,¹⁸⁹⁰ and that having this variety of options will best support competitive outcomes.¹⁸⁹¹

Major generative AI firms are developing autonomous AI agents

Key firms in the generative AI sector, including Google,¹⁸⁹² Microsoft,¹⁸⁹³ Oracle,¹⁸⁹⁴ Anthropic,¹⁸⁹⁵ and OpenAI,¹⁸⁹⁶ are actively developing AI agents to enhance various applications, including personal assistants, customer service, and data analysis. AI agents are software programs designed to autonomously perform tasks with minimal prompts, often by mimicking human-like reasoning and decision-making. They can interact with their environment, collect data, and use the data to perform self-determined tasks to meet predetermined goals.¹⁸⁹⁷

As these technologies evolve, AI agents could become increasingly integrated into everyday life. For example, an AI agent could take over a user’s web browser to complete tasks such as gathering research, purchasing products, and booking flights.¹⁸⁹⁸ AI agents also have the potential to automate

1885 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 51.

1886 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 15–16.

1887 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 51; K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 4.

1888 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 51; S Maffulli, ‘[Meta’s LLaMa license is not Open Source](#)’, *Open Source Initiative*, 20 July 2023, accessed 13 March 2025; B Lynn, M von Thun and K Montoya, ‘[AI in the Public Interest: Confronting the Monopoly Threat](#)’, *Open Markets Institute*, November 2023, p 20.

1889 Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024, pp 6–7.

1890 K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 4; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, pp 9, 13; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 52.

1891 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 13; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 56.

1892 E Woo, ‘[Google Preps AI That Takes Over Computers](#)’, *The Information*, 26 October 2024, accessed 13 March 2025.

1893 Microsoft, [Agent AI](#), accessed 13 March 2025.

1894 Oracle, [Generative AI Agents](#), accessed 13 March 2025.

1895 Anthropic, [Building effective agents](#), 20 December 2024, accessed 13 March 2025.

1896 S Ghaffary and R Metz, ‘[OpenAI Nears Launch of AI Agent Tool to Automate Tasks for Users](#)’, *Bloomberg*, 14 November 2024, accessed 13 March 2025.

1897 Amazon, ‘[What are AI Agents?](#)’, *Amazon Web Services*, accessed 13 March 2025. The ACCC notes that there currently does not appear to be a settled position within industry on what constitutes an ‘AI agent’ or ‘agentic AI’. See R Miller, ‘[What exactly is an AI agent?](#)’, *TechCrunch*, 15 December 2024, accessed 20 March 2025.

1898 E Woo, ‘[Google Preps AI That Takes Over Computers](#)’, *The Information*, 26 October 2024, accessed 13 March 2025.

routine business operations, thereby improving productivity for software engineers and office employees. Large enterprise software companies, including Salesforce, Microsoft, and Workday, are utilising large language models to facilitate the development of these AI agents.¹⁸⁹⁹

Despite the considerable interest in AI agents as an emerging frontier in generative AI applications, few companies have launched a fully operational and robust AI agent. This is likely due to the complexities involved in developing a system that minimises errors and makes sound decisions once deployed.¹⁹⁰⁰

Additionally, AI agents are prone to prompt injection attacks, where a large language model is tricked into following instructions from a malicious user.¹⁹⁰¹ While this is not a new threat (having been observed in products like OpenAI's ChatGPT and Anthropic's Claude) its implications are significant,¹⁹⁰² as less user oversight may increase the likelihood of harmful outcomes. For example, AI agents may mistakenly follow commands found on webpages without a user's direction, and researchers discovered that this kind of 'prompt injection' could even cause a model to autonomously download and launch malware on an innocent user's device.¹⁹⁰³

Nevertheless, there have been several notable launches of AI agents with varying capabilities in recent months. For example:

- In January 2025, OpenAI launched its AI agent, 'Operator', in the US, and began rolling it out to other countries including Australia in February 2025.¹⁹⁰⁴ OpenAI has stated that while Operator can 'handle a wide variety of repetitive browser tasks such as filling out forms, ordering groceries, and even creating memes', it 'currently encounters challenges with complex interfaces like creating slideshows or managing calendars'.¹⁹⁰⁵ Additionally, in March 2025, OpenAI launched a set of tools for developers to build their own agents.¹⁹⁰⁶
- In February 2025, Amazon launched 'Alexa+', a generative AI version of its Alexa voice assistant, which has 'agentic capabilities' and can navigate the internet in a self-directed manner.¹⁹⁰⁷ Amazon has reportedly also established a group within AWS dedicated to agentic AI, with AWS CEO Matt Garman stating to staff that '[a]gentic AI has the potential to be the next multi-billion business for AWS'.¹⁹⁰⁸
- In March 2025, Chinese start-up Butterfly Effect launched 'Manus' on an invitation-only basis,¹⁹⁰⁹ claiming it was 'the first general AI agent'.¹⁹¹⁰ Manus is reportedly built on a range of AI models including Anthropic's Claude and Alibaba's Qwen.¹⁹¹¹ The Manus website provides example use cases including planning an international holiday itinerary, identifying suitable properties in

1899 E Woo, '[Google Preps AI That Takes Over Computers](#)', *The Information*, 26 October 2024, accessed 13 March 2025.

1900 S Palazzolo, '[Why OpenAI is Taking So Long to Launch Agents](#)', *The Information*, 7 January 2025, accessed 13 March 2025.

1901 S Palazzolo, '[Why OpenAI is Taking So Long to Launch Agents](#)', *The Information*, 7 January 2025, accessed 13 March 2025.

1902 S Palazzolo, '[Why OpenAI is Taking So Long to Launch Agents](#)', *The Information*, 7 January 2025, accessed 13 March 2025.

1903 R Lakshmanan, '[Researchers Uncover Prompt Injection Vulnerabilities in DeepSeek and Claude AI](#)', *The Hacker News*, 9 December 2024, accessed 13 March 2025; Anthropic, '[Build with Claude: Computer use \(beta\)](#)', *Anthropic User Guides*, accessed 13 March 2025.

1904 I Mehta, '[OpenAI rolls out its AI agent, Operator, in several countries](#)', *TechCrunch*, 21 February 2025, accessed 13 March 2025.

1905 OpenAI, '[Introducing Operator](#)', 23 January 2025, accessed 13 March 2025.

1906 OpenAI, '[New tools for building agents](#)', 11 March 2025, accessed 13 March 2025.

1907 Amazon provided the following example of Alexa+'s agentic capabilities: 'Let's say you need to get your oven fixed—Alexa+ will be able to navigate the web, use Thumbtack to discover the relevant service provider, authenticate, arrange the repair, and come back to tell you it's done—there's no need to supervise or intervene'. See P Panay, '[Introducing Alexa+, the next generation of Alexa](#)', *Amazon*, 26 February 2025, accessed 13 March 2025.

1908 G Bensinger, '[Amazon's AWS forms new group focused on agentic AI](#)', *Reuters*, 5 March 2025, accessed 13 March 2025.

1909 K Wiggers, '[Manus probably isn't China's second "DeepSeek moment"](#)', *TechCrunch*, 9 March 2025, accessed 13 March 2025.

1910 ManusAI (@ManusAI_HQ), '[Introducing Manus: the first general AI agent. Try Manus today and see the future of human-machine collaboration: <https://manus.im>](#)', *X.com*, 6 March 2025, accessed 13 March 2025.

1911 C Smith, '[China's Autonomous Agent, Manus, Changes Everything](#)', *Forbes*, 8 March 2025, accessed 13 March 2025.

New York for a real estate purchase, and developing a video game.¹⁹¹² However there have been mixed reviews of Manus' performance to date, with some users praising its performance while others note that they have encountered issues like factual mistakes, missing citations and error messages.¹⁹¹³

Large digital platforms are making significant investments into their generative AI businesses

Large digital platforms have made, and continue to make, significant investments into their AI businesses. Costs are incurred at each layer of the generative AI stack:

- At the infrastructure layer, firms are making enormous investments into AI data centres, including the AI accelerator chips to power them. For example:
 - Microsoft, Meta, Google and Amazon are estimated to have collectively spent US\$125 billion on building and operating their AI data centres between January and August 2024 alone,¹⁹¹⁴ and some have predicted that these firms' AI spending in 2025 will exceed US\$250 billion.¹⁹¹⁵
 - AWS has built its largest AI supercomputer using 20,736 Nvidia GB200 Superchips,¹⁹¹⁶ which are estimated to cost US\$60,000 to US\$70,000 per unit¹⁹¹⁷ (totalling US\$1.24 billion to US\$1.45 billion spent on chips alone).
 - Alibaba has announced plans to invest at least US\$53 billion over 3 years to expand its AI cloud computing infrastructure.¹⁹¹⁸
- At the model layer, developers spend significant and increasing amounts on training AI.
 - For example, the Stanford Institute for Human-Centered AI has estimated that the cost for training OpenAI's GPT-3 175B model was US\$4.3 million in 2020, while in 2023 it cost US\$78.4 million to train OpenAI's GPT-4 model, and US\$191.4 million to train Google's Gemini Ultra model.¹⁹¹⁹ *Wired* has reported that the training process for OpenAI's GPT-4 model cost over US\$100 million.¹⁹²⁰
 - Developers may also spend large amounts on acquiring data or talent to train their AI models. For example, OpenAI has entered into a multi-year deal with News Corp to licence its data for AI training purposes that is reported to be worth over US\$250 million over 5 years.¹⁹²¹
- Once a generative AI model has been deployed at the application layer, there are high inference costs. For example, analysts have estimated that it costs OpenAI around US\$700,000 a day

1912 Manus, [Use case gallery](#), accessed 13 March 2025.

1913 K Wiggers, '[Manus probably isn't China's second "DeepSeek moment"](#)', *TechCrunch*, 9 March 2025, accessed 13 March 2025. See also J Osawa et al, '[Anthropic's Claude Drives Strong Revenue Growth While Powering "Manus" Sensation](#)', *The Information*, 11 March 2025, accessed 13 March 2025; C Chen, '[Everyone in AI is talking about Manus. We put it to the test](#)', *MIT Technology Review*, 11 March 2025, accessed 13 March 2025.

1914 M Cembalest, '[A severe case of COVIDIA: prognosis for an AI-driven US equity market](#)', *J.P. Morgan*, 3 September 2024, p 10.

1915 B Kindig, '[AI Spending To Exceed A Quarter Trillion Next Year](#)', *Forbes*, 14 November 2024, accessed 13 March 2025; UBS, '[Tech earnings underline robust AI growth](#)', *Chief Investment Office*, 4 November 2024, accessed 13 March 2025.

1916 Amazon Web Services, [Project Ceiba](#), accessed 13 March 2025.

1917 A Shilov, '[Nvidia's next-gen Blackwell AI Superchips could cost up to \\$70,000 — fully-equipped server racks reportedly range up to \\$3,000,000 or more](#)', *Tom's Hardware*, 15 May 2024, accessed 13 March 2025.

1918 Alibaba, '[Alibaba to Invest RMB380 billion in AI and Cloud Infrastructure Over Next Three Years](#)', *Alibaba Cloud Blog*, 24 February 2025, accessed 13 March 2025.

1919 N Maslej et al., '[The AI Index 2024 Annual Report](#)', *Stanford University Institute for Human-Centered AI*, April 2024, pp 63–64.

1920 W Knight, '[OpenAI's CEO Says the Age of Giant AI Models Is Already Over](#)', *Wired*, 17 April 2023, accessed 13 March 2025.

1921 T Spangler, '[News Corp Inks OpenAI Licensing Deal Potentially Worth More Than \\$250 Million](#)', *Variety*, 22 May 2024, accessed 13 March 2025.

(or US\$0.36 per query) to run ChatGPT,¹⁹²² and its latest reasoning model, o3, reportedly uses US\$1,000 worth of compute for every task.¹⁹²³ This is a key difference to some other types of digital platform services where the marginal costs associated with each additional user are typically relatively low (for example, search engines).¹⁹²⁴

These firms have warned their investors that it may be several years before they earn much revenue from their AI products,¹⁹²⁵ which raises questions about what sources of revenue will be used to recoup the costs, including possible new sources of revenue.¹⁹²⁶ Options include:

- Major cloud providers (i.e. AWS, Microsoft and Google) may be able to recover some of these costs through increased revenues from their cloud business, as demand increases from customers investing in more compute to develop and deploy generative AI.
- According to the ACCC's consumer survey, most Australian consumers are currently using standalone generative AI tools for free – only 6% of ChatGPT users, 11% of Google Gemini users and 15% of Copilot users were paid subscribers.¹⁹²⁷ However, as consumers' and businesses' demand for generative AI increases, platforms may start offering more paid services and fewer free services. Consistent with the pricing model used for most SaaS services, the ACCC anticipates that most paid services would be offered using an ongoing subscription or licence model, rather than a one-off payment.
- Where platforms integrate generative AI into existing paid services, they may increase the prices of those services. For example, in Australia, Microsoft has recently increased prices for subscriptions to its Microsoft 365 productivity software, in part to reflect the addition of new AI-powered features such as Microsoft Copilot and Microsoft Designer.¹⁹²⁸
- For digital platforms that offer their services with AI-powered features at zero cost, consumers may encounter greater non-monetary costs such as higher levels of advertising. For example, Mark Zuckerberg advised investors during Meta's earnings call for Q1 2024 that once Meta's AI services reached scale, it would be able to effectively monetise them by, for example, introducing ads or paid content into AI interactions.¹⁹²⁹ Alternatively, costs may be pushed onto the advertiser side of a social media service, for example through higher prices for advertisers.

The ACCC further notes that pricing dynamics in generative AI can be fast-moving. For example, in China, the release of DeepSeek's low-cost AI models prompted other major Chinese developers (including ByteDance, Tencent, Baidu, and Alibaba) to cut their prices for inferencing in early 2025, and some firms such as Baidu are now planning to offer their premium consumer-facing AI applications at zero monetary cost.¹⁹³⁰

A competitive generative AI sector will be vital to ensure that Australian consumers and businesses continue to have access to high quality and innovative services at prices that deliver value for money (for example, through productivity gains).

1922 A Gardizy and W Ma, '[Microsoft Readies AI Chip as Machine Learning Costs Surge](#)', *The Information*, 18 April 2023, accessed 13 March 2025.

1923 M Zeff, '[OpenAI's o3 suggests AI models are scaling in new ways – but so are the costs](#)', *TechCrunch*, 23 December 2024, accessed 13 March 2025.

1924 ACCC, [Digital Platform Services Inquiry Third Interim Report](#), 28 October 2021, p 88.

1925 D Milmo, '[Meta value falls \\$190bn as investors react to plan to increase spending on AI](#)', *The Guardian*, 26 April 2024, accessed 13 March 2025. C Weinberg, '[OpenAI Projections Imply Losses Tripling to \\$14 Billion in 2026](#)', *The Information*, 9 October 2024, accessed 13 March 2025.

1926 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 64.

1927 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 19.

1928 S Sharwood, '[Microsoft tests 45% M365 price hikes in Asia-Pacific to see how much you enjoy AI](#)', *The Register*, 13 January 2025, accessed 13 March 2025.

1929 Meta, [Meta Platforms, Inc. First Quarter 2024 Results Conference Call](#), 24 April 2024, p 2.

1930 C S Smith, '[DeepSeek And The Looming AI Price War Will Affect Us All](#)', *Forbes*, 28 January 2025, accessed 13 March 2025; J Liu, '[AI giants Baidu, OpenAI offer their chatbots for free in response to DeepSeek's advance](#)', *CNN Business*, 14 February 2025, accessed 13 March 2025.

Growing AI development and deployment is increasing the energy and water consumption of data centres

Building and operating data centres – including AI data centres – requires substantial amounts of energy, water and other resources. For example:

- **Energy consumption:** Data centres require significant amounts of electricity to power both hardware and building facilities. According to the International Energy Agency, data centres and data transmission networks each accounted for about 1%–1.5% of global electricity use and 1% of energy-related global greenhouse gas emissions.¹⁹³¹ Cooling systems can account for up to 40% of the total energy consumed by a data centre.¹⁹³²
- **Water consumption:** Data centres also require significant amounts of water for cooling purposes. For example, in 2023, Google used 6.1 billion gallons of water (around 23 billion litres) for cooling its data centres, representing a 17% increase on the previous year.¹⁹³³
- **E-waste:** Data centres generate e-waste when hardware is replaced, and the turnover of data centre hardware is high. For example, according to interviews conducted by the *Financial Times*, companies such as Amazon and Microsoft destroy millions of data-storing devices each year in the UK rather than reusing them, due to privacy and data security concerns.¹⁹³⁴
- **Rare earth materials:** Data centres require rare earth materials for semi-conductors, memory and cabling.¹⁹³⁵ These materials are difficult to mine in large quantities due to their scarcity, and can require high energy consumption to process.¹⁹³⁶

The growth of generative AI is leading to increased energy and water requirements for data centres due to the vast amounts of computing power needed to train and run foundation models, and the more advanced cooling systems required to manage the large heat output from AI accelerator chips. For example:

- It has been reported that Nvidia GPUs require about 5 times more power than standard cloud computing chips.¹⁹³⁷ In January 2024, the International Energy Agency estimated that global energy demand for data centres, cryptocurrency and artificial intelligence could by 2026 reach roughly the amount of electricity used by the entirety of Japan.¹⁹³⁸
- Recent research by Sasha Luccioni, a computer scientist specialising in AI and climate change, found that generating one high-definition image with AI uses as much energy as fully recharging a phone.¹⁹³⁹ Luccioni has also stated that generative AI platforms like ChatGPT may use up to 30 times more energy than traditional search engines.¹⁹⁴⁰

1931 International Energy Agency, [Data centres and Data Transmission Networks](#) accessed 13 March 2025.

1932 M Giannelis, '[The Environmental Impact Of Data Centres](#)', *Tech Business News*, 15 September 2023, accessed 13 March 2025.

1933 Google, [Environmental Report 2024](#), July 2024, p 13.

1934 A Gross, A Heal and I Bott, '[Why Big Tech shreds millions of storage devices it could reuse](#)', *Financial Times*, 6 October 2022, accessed 13 March 2025.

1935 Data Center Sustainability, [Data Centers and Critical Raw Materials](#), accessed 13 March 2025; W Clarke, '[Not just copper: minerals markets have yet to catch up on the implications of the AI boom](#)', *Mining Journal*, 23 April 2024, accessed 13 March 2025.

1936 Data Center Sustainability, [Data Centers and Critical Raw Materials](#), accessed 13 March 2025.

1937 M Swift, '[Water, power to emerge alongside training data as potential limits to AI development, data center builder says](#)', *MLex*, 19 August 2024, accessed 13 March 2025.

1938 B Calvert, '[AI already uses as much energy as a small country. It's only the beginning.](#)', *Vox*, 28 March 2024, accessed 13 March 2025.

1939 S Luccioni, Y Jernite and S Strubell, '[Power Hungry Processing: Watts Driving the Cost of AI Deployment?](#)', *Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency*, 5 June 2024, p 88.

1940 Markedium Desk, [Generative AI Uses 30x More Energy than Search Engines](#), *Markedium*, 25 September 2024, accessed 13 March 2025.

- ChatGPT is estimated to consume half a litre of water for every 10 to 50 medium-length responses generated.¹⁹⁴¹ Meanwhile, based on academic research published in 2010, Google is estimated to use only 5 to 25 millilitres to perform 10 to 50 searches (based on an estimated rate of half a millilitre of water required per single search).¹⁹⁴²
- The lifespan of AI-related data centre hardware has been reported to only be about 3 years due to technological advancements.¹⁹⁴³

Generative AI technology appears to have already increased the energy and water consumption of large digital platforms, particularly large cloud service providers. For example, in their 2024 environmental sustainability reports, Google and Microsoft reported marked increases in energy and water consumption compared to the previous year – Google’s electricity and water consumption for its data centres both grew by 17% from 2022 to 2023 (which Google attributes to AI’s resource demands),¹⁹⁴⁴ while Microsoft’s total energy and water consumption grew by 29% and 23% respectively from the 2021/22 financial year to the 2022/23 financial year.¹⁹⁴⁵ Microsoft noted that ‘the infrastructure and electricity needed for [generative AI] technologies create new challenges for meeting sustainability commitments across the tech sector’.¹⁹⁴⁶

In addition, to prepare for the increasing energy requirements for their AI data centres, several key players in the AI sector have been making major investments in energy. For example:

- On 20 September 2024, Microsoft entered a deal with Constellation Energy to buy 100% of the power generated at the Three Mile Island nuclear power plant to power their data centres for AI.¹⁹⁴⁷
- On 14 October 2024, Google announced that it had entered a deal to purchase nuclear energy from multiple new reactors to be developed by Kairos Power, in order to unlock the electricity needed to support AI technologies.¹⁹⁴⁸
- On 16 October 2024, Amazon announced that it had entered a similar deal to purchase nuclear energy from multiple new reactors across the US to be developed by Energy Northwest, X-energy and Dominion Energy.¹⁹⁴⁹ Kevin Miller, AWS’s vice president of global data centres, has stated, ‘AI is driving a significant increase in the amount of data centres and power that are required on the grid...We view advanced new nuclear capacity as really key and essential’.¹⁹⁵⁰

1941 P Li et al., ‘Making AI Less “Thirsty”: Uncovering and Addressing the Secret Water Footprint of AI Models’, *Communications of the ACM*, 15 January 2025, pp 2, 5; J Gupta, H Bosch and L van Vliet, ‘AI’s excessive water consumption threatens to drown out its environmental contributions’, *The Conversation*, 22 March 2024, accessed 13 March 2025; D Swan, ‘Every time you use ChatGPT, half a litre of water goes to waste’, *The Age*, 2 December 2024, accessed 13 March 2025.

1942 Relaxnews, ‘Half a milliliter of water needed per Google search’, *The Independent*, 2 July 2010, accessed 13 March 2025. As the efficiency of technology increases over time, the ACCC notes that the amount of water required for a standard Google search (without the integration of generative AI features) may be even less today.

1943 J Purtill, ‘Generative AI will soon generate millions of tonnes of electronic waste, study suggests’, *ABC News*, 29 October 2024, accessed 13 March 2025.

1944 Google, *Environmental Report 2024*, July 2024, pp 12–13.

1945 ACCC analysis of Microsoft’s 2024 environmental sustainability report found that total energy use increased by 29% and total water use increased by 23% from 2023 to 2024. See Microsoft, *2024 Environmental Sustainability Report: Data Fact Sheet*, p 6. Amazon’s 2023 Sustainability report (its most recent report) did not disclose its total energy and water consumption. See Amazon, *2023 Amazon Sustainability Report*, accessed 13 March 2025.

1946 Microsoft, *2024 Environmental Sustainability Report*, p 4.

1947 E Halper, ‘Microsoft deal would reopen Three Mile Island nuclear plant to power AI’, *The Washington Post*, 20 September 2024, accessed 13 March 2025.

1948 M Terrell, ‘New nuclear clean energy agreement with Kairos Power’, *Google*, 14 October 2024, accessed 13 March 2025.

1949 Amazon, *Amazon signs agreements for innovative nuclear energy projects to address growing energy demands*, 16 October 2024, accessed 13 March 2025.

1950 A St. John and J McDermott, ‘Amazon, Google make dueling nuclear investments to power data centers with clean energy’, *The Associated Press*, 17 October 2024, accessed 13 March 2025.

- On 3 December 2024, Meta announced that it was seeking proposals from nuclear energy developers to develop nuclear generators that would power Meta's data centres and enable the firm to meet its 'AI innovation and sustainability objectives'.¹⁹⁵¹

The ACCC notes that the substantial energy costs involved in running AI data centres may also raise barriers to entry for firms at the infrastructure layer of the generative AI technology stack.

There is uncertainty around the sustainability impacts of generative AI's resource demands

The significant energy and water demands of generative AI outlined above may raise concerns about the environmental impacts of this technology.¹⁹⁵² However, a holistic assessment of the sustainability impacts of a particular technology would require consideration of the technology's sustainability impact throughout the economy. In this respect, the ACCC notes that applications of generative AI technologies have the potential to generate environmental efficiencies across industries, for example by generating solutions to increase water efficiency in agriculture¹⁹⁵³ and improving energy grid management to reduce wastage.¹⁹⁵⁴ If realised, these applications may offset the sustainability impacts outlined above. In addition, the energy and water required to train and deploy generative AI models may fall in the coming years, as more efficient models and infrastructure are developed.

Nevertheless, the ongoing discussion around the sustainability impacts of generative AI demonstrates that dynamics in this sector are likely to be affected by other policy and regulatory considerations outside of competition.

1951 Meta, [Accelerating the Next Wave of Nuclear to Power AI Innovation](#), 3 December 2024, accessed 13 March 2025.

1952 See for example J Gupta, H Bosch and L van Vliet, '[AI's excessive water consumption threatens to drown out its environmental contributions](#)', *The Conversation*, 22 March 2024, accessed 13 March 2025; D Swan, '[Every time you use ChatGPT, half a litre of water goes to waste](#)', *The Age*, 2 December 2024, accessed 13 March 2025; B Calvert, '[AI already uses as much energy as a small country. It's only the beginning.](#)', *Vox*, 28 March 2024, accessed 13 March 2025; United Nations Environment Programme, '[Artificial Intelligence \(AI\) end-to-end: The Environmental Impact of the Full AI Lifecycle Needs to be Comprehensively Assessed – Issue Note](#)', September 2024; N Bashir et al., '[The Climate and Sustainability Implications of Generative AI](#)', *MIT Press*, 28 March 2024, accessed 13 March 2025.

1953 J Gupta, H Bosch and L van Vliet, '[AI's excessive water consumption threatens to drown out its environmental contributions](#)', *The Conversation*, 22 March 2024, accessed 13 March 2025.

1954 C Walther, '[Generative AI's Impact On Climate Change: Benefits And Costs](#)', *Forbes*, 12 November 2024, accessed 13 March 2025.

Box 4.8: Ongoing policy considerations outside of competition

In Australia, other ongoing policy and regulatory considerations in relation to generative AI include:

- **Governance mechanisms for safe and responsible AI:** The Australian Government is considering introducing mandatory guardrails for developing or deploying AI systems in 'high-risk settings'.¹⁹⁵⁵ In September 2024, the Government published a proposals paper seeking views on the proposed mandatory guardrails, the proposed definition of 'high-risk AI', and regulatory options for mandating the guardrails.¹⁹⁵⁶ The same month, the National Artificial Intelligence Centre published a Voluntary AI Safety Standard which provides guidance to help organisations develop and deploy AI systems in Australia safely and reliably.¹⁹⁵⁷
- **Australia's National AI Capability Plan:** In December 2024, the Australian Government announced that it would work with industry to develop a National AI Capability Plan to promote local economic and productivity growth.¹⁹⁵⁸
- **Jobs and skills:** Jobs and Skills Australia is undertaking a capacity study on the implications of generative AI for the Australian labour market, workforce planning and associated needs within the national skills system.¹⁹⁵⁹
- **Consumer protection:** The Treasury is conducting a Review of AI and the ACL, which has included public consultation from October to November 2024 on whether the ACL remains suitable to protect consumers who use AI and support businesses' safe and responsible use of AI.¹⁹⁶⁰ The review will inform ongoing work on Australia's consumer protection framework, and to clarify and strengthen existing laws to address AI-related risks and harms.¹⁹⁶¹
- **Privacy:** In October 2024, the OAIC published guides on how Australian privacy law applies to artificial intelligence,¹⁹⁶² including a guide for developers using personal information to train generative AI models.¹⁹⁶³ In addition, the Attorney-General has committed to continue advancing proposals that the Government agreed to or agreed to in principle in its response to the 2023 Privacy Act Review Report,¹⁹⁶⁴ which may have implications for businesses developing or deploying generative AI.

1955 Department of Industry, Science and Resources, [Safe and responsible AI in Australia consultation: Australian Government's interim response](#), 17 January 2024, p 6. The interim response also noted other actions that the Government would take to support safe and responsible AI in Australia, including working with industry to develop a voluntary AI Safety Standard (which was released in September 2024), and to develop options for voluntary labelling and watermarking of AI-generated materials.

1956 Department of Industry, Science and Resources, [Introducing mandatory guardrails for AI in high-risk settings: proposals paper](#), accessed 13 March 2025.

1957 Department of Industry, Science and Resources, [Voluntary AI Safety Standard](#), 5 September 2024, accessed 13 March 2025. The National Artificial Intelligence Centre was established by government in 2021 to support and accelerate Australia's AI industry (see Department of Industry, Science and Resources, [National Artificial Intelligence Centre](#), accessed 13 March 2025).

1958 Department of Industry, Science and Resources, [Developing a National AI Capability Plan](#), Press release, 13 December 2024, accessed 13 March 2025.

1959 Jobs and Skills Australia, [Generative Artificial Intelligence Capacity Study](#), accessed 13 March 2025.

1960 Treasury, [Review of AI and the Australian Consumer Law – Consultation](#), accessed 13 March 2025.

1961 Treasury, [Review of AI and the Australian Consumer Law – Consultation](#), accessed 13 March 2025.

1962 OAIC, [New AI guidance makes privacy compliance easier for business](#), Press release, 21 October 2024, accessed 13 March 2025.

1963 OAIC, [Guidance on privacy and developing and training generative AI models](#), 23 October 2024, accessed 13 March 2025.

1964 Attorney-General's Department, [Privacy](#), accessed 13 March 2025.

- **Copyright:** In December 2023, the Attorney-General announced the establishment of a Copyright and Artificial Intelligence Reference Group to facilitate engagement between government and non-government sectors to better prepare for copyright challenges emerging from AI (for example, in the US, the New York Times and other news organisations have sued OpenAI for alleged copyright infringement, by using data from their copyrighted works to power ChatGPT).¹⁹⁶⁵ To date, Reference Group meetings have focused on the use of copyright materials as inputs for AI systems. Other topics that the Reference Group may examine include potential copyright infringement in AI outputs and the copyright status of AI outputs.¹⁹⁶⁶
- **Online safety:** Under Australia's Online Safety Act 2021, the eSafety Commissioner oversees mandatory and enforceable industry codes and standards. The codes and standards which are currently in effect focus on unlawful and serious harmful material such as child sexual abuse and pro-terror material, including where that material is generated by artificial intelligence. In addition, the Designated Internet Services Standard and the Search Engine Services Code contain specific obligations for certain consumer-facing generative AI services, platforms which distribute open generative AI models, and search engines which integrate generative AI functionality.¹⁹⁶⁷ These safeguards were informed by eSafety's generative AI position statement, which eSafety published in August 2023 as part of its Tech Trends program. The statement provides an overview of the generative AI lifecycle and outlines online safety risks and opportunities with the technology. The position statement also outlines specific 'Safety by Design' interventions for industry to minimise existing and emerging generative AI harms (e.g. the creation of synthetic child abuse material).¹⁹⁶⁸
- **Electoral material:** In November 2024, the Electoral Legislation Amendment (Electoral Communications) Bill 2024 was introduced into the Australian House of Representatives.¹⁹⁶⁹ If passed, the bill would expand electoral authorisation requirements to include new requirements for labelling material that is modified using digital technology (including AI), and create new civil penalties to address the threat of the misuse of AI in electoral processes.

4.2.4 Potential risks to competition across the generative AI stack

There has been significant regulatory scrutiny globally about competition issues arising across the generative AI technology stack. Acknowledging that this is a fast-changing area, this section highlights potential risks to competition in the generative AI sector that have been identified in other jurisdictions to date and notes competition concerns raised by stakeholders in submissions to this Report.

Harms to competition in the generative AI sector could hamper innovation, result in lower quality products and services, and force Australian businesses and consumers to pay more than they otherwise would to utilise generative AI. However, the ACCC considers that further analysis into generative AI technologies and applications in Australia would be required to reach any conclusions

¹⁹⁶⁵ This case is ongoing. See B Allyn, 'The New York Times takes OpenAI to court. ChatGPT's future could be on the line', *NPR*, 14 January 2025, accessed 13 March 2025. Other copyright actions have been brought against generative AI model developers in other parts of the US as well as other countries including the UK, Canada and India – see A Panwar, 'Generative AI and Copyright Issues Globally: ANI Media v OpenAI', *Tech Policy Press*, 9 January 2025, accessed 13 March 2025.

¹⁹⁶⁶ Attorney-General's Department, [Copyright and Artificial Intelligence Reference Group \(CAIRG\)](#), accessed 13 March 2025.

¹⁹⁶⁷ [Online Safety \(Designated Internet Services— Class 1A and Class 1B Material\) Industry Standard 2024](#).

¹⁹⁶⁸ eSafety, [Generative AI – position statement](#), 15 August 2023, accessed 13 March 2025.

¹⁹⁶⁹ Parliament of Australia, [Electoral Legislation Amendment \(Electoral Communications\) Bill 2024](#), accessed 13 March 2025.

about the nature and intensity of competition for these services, and about risks to the competitive process in this sector.

Given the high rate of change in generative AI technologies, and their potential widespread integration across the economy, it is critical that the proposed digital competition regime enables continued scrutiny and monitoring of emerging technologies and their effects in digital platform markets. The ACCC notes that some of the key innovations in generative AI technology have been propelled by newer or smaller firms other than large incumbent digital platforms (for example, OpenAI and DeepSeek), and that it is vital for this sector to remain competitive to allow for new players to enter and drive further innovation, which will benefit Australian consumers and businesses.

Mergers, acquisitions, and partnerships

Recent years have seen a range of strategic partnerships between prominent digital platforms and emerging developers of foundation models, such as Microsoft/OpenAI, Google/Anthropic, Amazon/Anthropic and Microsoft/Mistral. These partnerships take various forms, often involving digital platforms offering foundation model developers access to AI chips and cloud computing services, training data (from sources like news publishers and social media), and technical expertise.

Table 4.3: Types and examples of AI partnerships

Type of partnership	Examples
AI chips partnerships	Nvidia is a major partner or supplier of almost every major market participant in the generative AI supply chain, including Google and Microsoft. ¹⁹⁷⁰
Cloud computing partnerships	<p>Both Google and Microsoft have partnerships with French AI startup Mistral AI, who uses their cloud services to train its AI models.¹⁹⁷¹</p> <p>Amazon has invested a total of US\$8 billion in Anthropic.¹⁹⁷² As part of this partnership, Anthropic is required to use AWS as its primary cloud provider, and use AWS chips, Trainium and Inferentia, for future models.¹⁹⁷³ Google has also invested US\$3 billion in Anthropic.¹⁹⁷⁴</p> <p>Microsoft has reportedly invested up to US\$13 billion in OpenAI.¹⁹⁷⁵ Microsoft was OpenAI's exclusive cloud provider until January 2025, and now has a right of first refusal over any new cloud capacity for OpenAI.¹⁹⁷⁶</p> <p>Microsoft has a multi-year agreement with Oracle to use Oracle Cloud Infrastructure (in addition to its use of Microsoft Azure AI infrastructure) on AI models that are being optimised to power Microsoft Bing conversational searches.¹⁹⁷⁷</p>

1970 K Leswing, [‘Nvidia dominates the AI chip market, but there’s more competition than ever’](#), *CNBC*, 2 June 2024, accessed 13 March 2025.

1971 O Sorgho, [‘Google Cloud partners with Mistral AI on generative language models’](#), *Reuters*, 14 December 2023, accessed 13 March 2025; R Dilet, [‘Microsoft made a \\$16M investment in Mistral AI’](#), *TechCrunch*, 27 February 2024, accessed 13 March 2025.

1972 F Yun Chee and Y Malik, [‘Microsoft-OpenAI deal set to dodge formal EU merger probe, sources say’](#), *Reuters*, 18 April 2024, accessed 13 March 2025.

1973 F Yun Chee and Y Malik, [‘Microsoft-OpenAI deal set to dodge formal EU merger probe, sources say’](#), *Reuters*, 18 April 2024, accessed 13 March 2025.

1974 K Wiggers, [‘Anthropic reportedly secures an additional \\$1B from Google’](#), *TechCrunch*, 22 January 2025, accessed 13 March 2025.

1975 F Y Chee and Y Malik, [‘Microsoft-OpenAI deal set to dodge formal EU merger probe, sources say’](#), *Reuters*, 18 April 2024, accessed 13 March 2025.

1976 Microsoft, [Microsoft and OpenAI evolve partnership to drive the next phase of AI](#), 21 January 2025, accessed 13 March 2025.

1977 Oracle, [Oracle Cloud Infrastructure Utilized by Microsoft for Bing Conversational Search](#), Press release, 7 November 2023, accessed 13 March 2025.

Data partnerships, including licensing agreements with news publishers and social media platforms	OpenAI entered into agreements with publishers such as News Corp, The Atlantic, Condé Nast, and Time. ¹⁹⁷⁸ Google has entered into an agreement with Reddit, and Microsoft with Informa, the parent company of academic publisher Taylor & Francis. ¹⁹⁷⁹
Technical expertise partnerships	Microsoft also agreed a deal with AI startup Inflection AI to use its models and to hire most of its 70 staff, including its co-founders. ¹⁹⁸⁰ Google and Amazon have reportedly completed similar deals to hire staff from AI startups. ¹⁹⁸¹
Partnership to offer generative AI tools on other digital platform service providers	Apple has reportedly used Google's AI chips to train in-house foundation models, to be used in forthcoming generative AI features in Apple's products and services. ¹⁹⁸² Google entered a partnership with Samsung to offer certain Google generative AI search features on Samsung's smartphones. ¹⁹⁸³ Real-time search results from both Google Search and Bing are integrated into MetaAI, which is accessible on Facebook, Instagram, Messenger and WhatsApp. ¹⁹⁸⁴

These partnerships can benefit competition by granting developers access to resources and enabling firms across the supply chain to compete effectively. The European Commission has noted that 'investments in small AI developers by large companies are seen by the industry as important for developing and distributing AI systems, securing necessary capital, accessing intellectual property, and gaining technological insights'.¹⁹⁸⁵ This sentiment was reflected in Microsoft's submission, which stated that '[f]or those who cannot proceed alone, Microsoft included, partnerships and investments are a crucial path to ensuring continued innovation, development, and new entry in this nascent area'.¹⁹⁸⁶

However, competition authorities in the UK, EU, US, Brazil and Germany have taken, or are taking, steps to consider the potential competitive impact of some of these partnerships and whether they could be classified as mergers.¹⁹⁸⁷ For example:

- The UK CMA noted that companies are using long-term partnerships and strategic investments, such as Microsoft's partnership with OpenAI and Amazon's partnership with Anthropic, as an alternative to outright acquisitions and vertical integration.¹⁹⁸⁸ The CMA has to date conducted

- 1978 OpenAI, [A landmark multi-year global partnership with News Corp](#), Press release, 22 May 2024, accessed 13 March 2025; OpenAI, [A content and product partnership with The Atlantic](#), Press release, 29 May 2024, accessed 13 March 2025; OpenAI, [OpenAI partners with Condé Nast](#), Press release, 20 August 2024, accessed 13 March 2025; OpenAI, [Strategic Content Partnership with TIME](#), Press release, 27 June 2024, accessed 13 March 2025.
- 1979 Google, [An expanded partnership with Reddit](#), *The Keyword (Google Blog)*, 22 February 2024, accessed 13 March 2025; W Potter, ['An academic publisher has struck an AI data deal with Microsoft – without their authors' knowledge'](#), *The Conversation*, 23 July 2024, accessed 13 March 2025.
- 1980 J E Lessin, N Mascarenhas and A Holmes, ['Microsoft Agreed to Pay Inflection \\$650 Million While Hiring Its Staff'](#), *The Information*, 21 March 2024, accessed 13 March 2025.
- 1981 K Cai, ['Google hires top talent from startup Character.AI, signs licensing deal'](#), *Reuters*, 3 August 2024, accessed 13 March 2025.
- 1982 Apple, [Apple Intelligence Foundation Language Models](#), 29 July 2024, accessed 13 March 2025; K Leswing, ['Apple says its AI models were trained on Google's custom chips'](#), *CNBC*, 29 July 2024, accessed 13 March 2025.
- 1983 H Lockheimer, [The power of Google AI comes to the new Samsung Galaxy S24 series](#), *Google*, 17 January 2024, accessed 13 March 2025.
- 1984 M G Southern, ['Meta Integrates Google & Bing Search Results Into AI Assistant'](#), *Search Engine Journal*, 18 April 2024, accessed 13 March 2025.
- 1985 K Kowalski, C Volpin and Z Zombori, ['Competition in Generative AI and Virtual Worlds'](#), *European Commission Competition Policy Brief*, Issue 3, September 2024, p 8.
- 1986 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 10.
- 1987 CMA, [CMA seeks views on Microsoft's partnership with OpenAI](#), Press release, 8 December 2023, accessed 13 March 2025; CMA, [CMA seeks views on AI partnerships and other arrangements](#), Press release, 24 April 2024, accessed 13 March 2025; Bundeskartellamt, [Cooperation between Microsoft and OpenAI currently not subject to merger control](#), Press release, 15 November 2023, accessed 13 March 2025; US FTC, [FTC launches inquiry into generative AI investments and partnerships](#), Press release, 25 January 2024, accessed 13 March 2025.
- 1988 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 18.

inquiries into 5 AI partnerships (Microsoft/OpenAI,¹⁹⁸⁹ Microsoft/Inflection,¹⁹⁹⁰ Microsoft/Mistral,¹⁹⁹¹ Alphabet/Anthropic¹⁹⁹² and Amazon/Anthropic)¹⁹⁹³ to examine whether the partnership in question resulted in the creation of a relevant merger situation under the UK's Enterprise Act 2002. Each of these inquiries has been closed.

- In January 2025, the US FTC published the findings of its study into the nature of 3 partnerships involving cloud providers and AI developers – Google/Anthropic, Amazon/Anthropic, and Microsoft/OpenAI.¹⁹⁹⁴
 - The report identified that cloud service providers have significant equity and certain revenue-sharing rights in their AI developer partners, as well as varying consultation, control, and exclusivity rights. In some cases, this includes exclusive or preferential treatment of the cloud provider and the ability to potentially influence the AI developer through board seats and consultation.¹⁹⁹⁵
 - The report also noted that partnerships require AI developers to spend a large portion of the investment on their partner's cloud services, and to varying degrees, permit the sharing of key resources and information such as discounted access to computing resources, intellectual property, training data, performance and financial data, and engineering personnel.¹⁹⁹⁶
- Brazil's Administrative Council for Economic Defense (CADE) has also initiated multiple investigations into recent AI acquisitions by major technology companies, including Amazon, Microsoft, and Google.¹⁹⁹⁷
- In Germany, Bundeskartellamt President Andreas Mundt commented that some cooperation agreements between large digital platforms partnerships with startup AI developers could be mergers in all but name and urged competition authorities around the world to be "extremely alert" to the terms of these cooperation agreements.¹⁹⁹⁸

Competition authorities worldwide have expressed concern that large digital platforms may use these mergers, acquisitions and partnerships with foundation model developers to steer technological developments in a manner to insulate themselves from competition.¹⁹⁹⁹ This trend could increase competition risks by increasing market concentration and vertical integration, thereby raising barriers to entry for new competitors.

The UK CMA's Updated Report on Foundation Models specifically identified what it called an 'interconnected web' of more than 90 partnerships and strategic investments between a small handful of the biggest tech and AI firms, a set-up it warned could be used to quash competitive

1989 CMA, [Microsoft / OpenAI partnership merger inquiry](#), last updated 5 March 2025, accessed 13 March 2025.

1990 CMA, [Microsoft / Inflection inquiry](#), last updated 24 October 2024, accessed 13 March 2025.

1991 CMA, [Microsoft / Mistral AI partnership merger inquiry](#), last updated 21 May 2024, accessed 13 March 2025.

1992 CMA, [Alphabet Inc. \(Google LLC\) / Anthropic merger inquiry](#), last updated 24 December 2024, accessed 13 March 2025.

1993 CMA, [Amazon / Anthropic partnership merger inquiry](#), last updated 17 October 2024, accessed 13 March 2025.

1994 US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 1; US FTC, [FTC Launches Inquiry into Generative AI Investments and Partnerships](#), Press release, 25 January 2024, accessed 13 March 2025.

1995 US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 2.

1996 US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 2.

1997 Competition Policy International, ['Brazil Launches Antitrust Investigations into Big Tech AI Acquisitions'](#), *Pymnts*, 28 August 2024, accessed 13 March 2025.

1998 T Gil, ['Watch out for AI cooperation agreements that are really mergers, Germany's Mundt warns'](#), *MLex Insight*, 21 September 2023, accessed 13 March 2025.

1999 For example, CMA, [CMA seeks views on AI partnerships and other arrangements](#), Press release, 24 April 2024, accessed 13 March 2025; Competition Bureau Canada, [Consultation on Artificial Intelligence and Competition: What We Heard](#), 27 January 2025, accessed 13 March 2025.

threats.²⁰⁰⁰ The UK CMA noted that vertically-integrated firms may have incentives to foreclose competition in the downstream markets if the profit they stand to make from attempting to monopolise the downstream market exceeds what they can make from licensing their foundation models.²⁰⁰¹ This can occur, for example, by degrading foundation models to downstream competitors who rely on vertically integrated firms as suppliers.

The US FTC has similarly noted that incumbent firms could use mergers and acquisitions in the generative AI space to consolidate market power in the hands of a few players.²⁰⁰² The FTC expressed its concern that incumbents may be tempted to simply buy up nascent rivals instead of trying to out-compete them by offering better products or services.²⁰⁰³

The Competition Bureau Canada noted that ‘big tech companies’ use vertical integration and partnerships to strengthen their market positions, creating significant barriers to entry and expansion for competitors and new entrants.²⁰⁰⁴

Barriers to entry and expansion

There are several challenges that can present high barriers to entry and expansion for new players arising at each layer of the generative AI stack, particularly for foundation model developers.²⁰⁰⁵ These barriers include limited access to key inputs (computing power, data and technical expertise) and network effects.

Limited access to key inputs for developing foundation models

Computing power (AI chips, data centres and cloud computing)

As explained above, generative AI development requires access to computing resources like specialised accelerator chips and data centres specifically configured for AI which are expensive to build and operate.²⁰⁰⁶ Meta submitted that one of the biggest challenges of working with AI is ‘the level of resources required (e.g., research, data, computing power)’.²⁰⁰⁷

The limited supply of key components like AI accelerator chips, data centres, and energy resources may make it more difficult for firms to enter or expand in generative AI markets.²⁰⁰⁸ The Software & Industry Association submitted that difficulties obtaining necessary compute resources act as a barrier to developing foundation models and AI applications.²⁰⁰⁹ Amazon submitted that, in response to demand-driven growth in generative AI, established IT providers are expanding their supply of computing services.²⁰¹⁰

2000 CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 80.

2001 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 74.

2002 US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025.

2003 US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025.

2004 Competition Bureau Canada, [Consultation on Artificial Intelligence and Competition: What We Heard](#), 27 January 2025, accessed 13 March 2025.

2005 The Software & Information Industry Association’s submission notes that while there are barriers to entry throughout the AI technology stack, those barriers are most acute for foundation models. Software & Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 5.

2006 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 33.

2007 Meta, [Submission to the Final Report](#), 11 October 2024, p 17.

2008 For example, see J Vipra and S Myers West, [Computational power and AI](#), *AI Now Institute*, 27 September 2023, accessed 13 March 2025; P Dave, [‘Nvidia chip shortages leave AI startups scrambling for computing power’](#), *Wired*, 24 August 2023, accessed 13 March 2025; CMA, [AI Foundation Models: Technical update report](#), 16 April 2024, p 18; CMA, [Cloud services market investigation – Competitive landscape working paper](#), 23 May 2024, pp 143–154; J Novet, [‘Microsoft says cloud AI demand is exceeding supply even after 79% surge in capital spending’](#), *CNBC*, 25 April 2024, accessed 13 March 2025.

2009 Software & Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 6.

2010 Amazon, [Submission to the Final Report](#), 11 October 2024, p 26.

In the Australian context, Australia's Chief Scientist has noted that the computational resources required for generative AI are concentrated in a small number of firms and jurisdictions (notably the US, China and EU) and that, for smaller countries like Australia, this may create challenges for access and capability.²⁰¹¹

As noted above, some AI developers enter into partnerships with cloud service providers to access necessary computing resources. This can benefit competition by providing smaller developers with the tools needed to compete effectively. However, the US FTC's study on partnerships between cloud providers and AI developers highlighted that partnerships could affect access to inputs (like chips and computing resources) by potentially impacting the likelihood that a cloud provider may consider limiting access for non-partner AI developers.²⁰¹²

Despite the current high computing demands of AI development, recent breakthroughs by DeepSeek AI (see box 4.9) may signal the possibility for these computing demands to go down in future, which could in turn lower barriers to entry for developers.

2011 G Bell, J Burgess, J Thomas and S Sadiq, [Rapid Response Information Report: Generative AI – language models \(LLMs\) and multimodal foundation models \(MFMs\)](#), Australian Council of Learned Academies, 24 March 2023, p 14.

2012 US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 3.

Box 4.9: DeepSeek's 'low cost' foundation model

In December 2024, Chinese start-up DeepSeek released DeepSeek-V3, an open-source large language model that reportedly performs on par with OpenAI's GPT-4o and Anthropic's Claude-3.5.²⁰¹³ In January 2025, DeepSeek also released DeepSeek-R1, a reasoning model adapted for more complex tasks, comparable to OpenAI's o1 model.²⁰¹⁴

DeepSeek claims the V3 model was pre-trained for less than US\$5.6 million, which is significantly cheaper than OpenAI's costs to develop GPT-4 (which have been reported to be as high as over US\$100 million), and about one tenth of what Meta spent building its latest AI technology.²⁰¹⁵ DeepSeek also claims the model was developed using only 2,048 of Nvidia's H800 GPUs, which are capped at half the speed of the advanced H100 GPUs used by large US-based AI developers.²⁰¹⁶ The ACCC notes that some industry stakeholders have challenged these claims.²⁰¹⁷

In technical papers accompanying the release of both models, DeepSeek outlined how it achieved these efficiencies through a series of innovative training techniques, including by 'distilling'²⁰¹⁸ the reasoning patterns of powerful open-source models (such as Meta's Llama) into smaller models, resulting in better performance at lower computing costs.²⁰¹⁹

DeepSeek's models are also reportedly cheaper to run than its competitors' foundation models, with DeepSeek claiming that DeepSeek-R1 is 20 to 50 times cheaper to use than OpenAI's o1 reasoning model, depending on the task.²⁰²⁰

With DeepSeek's models and techniques now publicly available, other firms may have the opportunity to improve the efficiency of their own models, potentially lowering the cost of computing resources required for AI development and deployment.

Data

As noted earlier, developers typically require exceptionally large datasets to develop foundation models, particularly in the pre-training phase. Several regulators have observed that the volume and

2013 DeepSeek AI, [DeepSeek-V3 Technical Report](#), 27 December 2024, pp 5–6; K Huang and S Palazzolo, [Meta Scrambles After Chinese AI Equals Its Own, Upending Silicon Valley](#), *The Information*, 26 January 2025, accessed 13 March 2025.

2014 DeepSeek AI, [DeepSeek-R1: Incentivizing Reasoning Capability in LLMs via Reinforcement Learning](#), 22 January 2025, p 13.

2015 DeepSeek AI, [DeepSeek-V3 Technical Report](#), 27 December 2024, p 5; W Knight, [OpenAI's CEO Says the Age of Giant AI Models Is Already Over](#), *Wired*, 17 April 2023, accessed 13 March 2025; C Metz and M Tobin, [How Chinese A.I. Start-Up DeepSeek Is Competing With Silicon Valley Giants](#), *The New York Times*, 23 January 2025, accessed 13 March 2025.

2016 DeepSeek AI, [DeepSeek-V3 Technical Report](#), 27 December 2024, p 11; S Nellis and J Lee, [Nvidia tweaks flagship H100 chip for export to China as H800](#), *Reuters*, 22 March 2023, accessed 13 March 2025.

2017 Experts have highlighted that US\$5.6 million only refers to pre-training computing costs, and the total investment required for AI development is much higher. Analysts estimate that the total development cost for R1 was US\$2.6 billion. It is also reported that DeepSeek may have had access to 50,000 Nvidia H100 chips which it did not discuss due to export restrictions and may even have used smuggled chips. See J Tran, [DeepSeek development cost probably 100 times the sticker price: fundie](#), *Financial Review*, 31 January 2025, accessed 13 March 2025; S Boughedda, [Analyst says R1 development costs were \\$2.6B, 467x higher than DeepSeek reported](#), *Investing.com*, 3 February 2025, accessed 13 March 2025; E Baptista, [What is DeepSeek and why is it disrupting the AI sector?](#), *Reuters*, 29 January 2025, accessed 13 March 2025; Q Liu, [Nvidia AI Chip Smuggling to China Becomes an Industry](#), *The Information*, 12 August 2024, accessed 13 March 2025.

2018 'Distillation' refers to the process of reducing the size of one model into a smaller model that mimics the original model's predictions as accurately as possible. See, for example, Google, [Machine Learning Glossary](#), accessed 13 March 2025.

2019 DeepSeek AI, [DeepSeek-R1: Incentivizing Reasoning Capability in LLMs via Reinforcement Learning](#), 22 January 2025, p 4.

2020 E Baptista, [What is DeepSeek and why is it disrupting the AI sector?](#), *Reuters*, 29 January 2025, accessed 13 March 2025.

quality of data required to pre-train a generative AI model may act as a barrier to new players entering the market.²⁰²¹

Developers may be able to obtain training data from public sources (e.g. web pages). Some submissions argued that the wide availability of public data means that data is not in fact a barrier to entry or expansion for foundation model developers, noting that major players such as OpenAI and Anthropic were able to train successful models without having access to extensive proprietary datasets.²⁰²²

However, the usefulness of public data may be limited by factors including possible low quality,²⁰²³ legal uncertainties (e.g. the application of copyright and intellectual property laws – see box 4.10),²⁰²⁴ and by the fact it is available to all developers and therefore may not help to develop a sufficiently differentiated model.²⁰²⁵ All of these factors increase the value of proprietary data for training foundation models.²⁰²⁶

Box 4.10: Stakeholders are concerned about their intellectual property and copyrighted content being used to train AI models

Several submissions to this report raised concerns about content creators' intellectual property being used by AI developers to train their models without transparency or remuneration, threatening the sustainability of content creation businesses.²⁰²⁷

- The ABC, SBS and the Media, Entertainment and Arts Alliance (MEAA) noted that large, incumbent platforms have been updating their terms of service to effectively grant themselves the right to use creators' content to train their own generative AI products as a condition of the use of the platform, without remuneration or attribution. They each submitted that these platforms are often unavoidable trading partners for content creators, leaving creators with no choice but to accept these terms.²⁰²⁸
- SBS raised a further concern that platforms may be using its data to train AI products that may one day be in competition with SBS.²⁰²⁹

2021 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 4; US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025; Portuguese Competition Authority, [Competition and generative AI: Zooming in on Data](#), September 2024, p 4; Competition Bureau Canada, [Consultation on Artificial Intelligence and Competition: What We Heard](#), 27 January 2025, accessed 13 March 2025.

2022 Amazon, [Submission to the Final Report](#), 11 October 2024, p 27; Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 6; International Center for Law and Economics, [Submission to the Final Report](#), 11 October 2024, p 23.

2023 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 4.

2024 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 4; European Commission, [Competition in Generative AI and Virtual Worlds: Competition Policy Brief No 3/2024](#), 3 September 2024, p 4; Schools and TAFE Copyright Advisory Group, [Submission to the Final Report](#), 11 October 2024, pp 2–3.

2025 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 4.

2026 K Kowalski, C Volpin and Z Zombori, 'Competition in Generative AI and Virtual Worlds', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 4.

2027 Australian Broadcasting Corporation, [Submission to the Final Report](#), 11 October 2024, pp 2–3; SBS, [Submission to the Final Report](#), 11 October 2024, p 4; Free TV Australia, [Submission to the Final Report](#), 11 October 2024, pp 5–6; Media, Entertainment and Arts Alliance, [Submission to the Final Report](#), 11 October 2024, p 2.

2028 Australian Broadcasting Corporation, [Submission to the Final Report](#), 11 October 2024, p 3; SBS, [Submission to the Final Report](#), 11 October 2024, p 4; Media, Entertainment and Arts Alliance, [Submission to the Final Report](#), 11 October 2024, p 2.

2029 SBS, [Submission to the Final Report](#), 11 October 2024, p 4.

In addition, the ACCC notes that website owners are now taking steps to prevent their website data being used to train AI (for example, by blocking web scrapers), meaning that new foundation model developers may not have access to as broad a dataset as incumbent developers did previously.²⁰³⁰ In June 2024, AI research organisation Epoch AI predicted that large language model training may exhaust the entire supply of public human-generated text data by as early as 2026.²⁰³¹

Established digital platforms, which have large user bases across their ecosystems of products and services, possess significant quantities of proprietary data that can enhance pre-training. This may grant them a competitive advantage in the development of foundation models²⁰³² (in the form of economies of scope and scale) and at the same time likely increases barriers to entry for newer or smaller players who are unable to access similar volumes of high-quality data.

Box 4.11: Privacy implications of using consumer data in generative AI training

The ACCC notes that the practice of using consumer data to train generative AI models may raise concerns regarding privacy and consent. The ACCC's consumer survey found that 83% of consumers agree that companies should seek consent from consumers before using consumer data to train AI models.²⁰³³

According to Meta, using publicly accessible data to train AI models 'is an industry-wide practice'.²⁰³⁴ However, the OAIC has noted that just because data is publicly available does not automatically mean that developers can legally use it to train or fine-tune generative AI models.²⁰³⁵ For example, publicly accessible datasets may contain sensitive information, which generally requires consent to be collected under Australian privacy law. The OAIC advised that developers must always consider whether the data they are using – including publicly accessible data – contains personal information, and comply with their privacy obligations.²⁰³⁶ However, given the huge amounts of data required to train a frontier generative AI model, and the fact that much of that data is scraped from the Internet, it does not seem practicable that all developers would comply with their privacy obligations in this regard.²⁰³⁷

In addition, while digital platforms' privacy policies may enable them to collect and use a broad range of consumer data from their own products and services, the ACCC notes these policies often contain vague and ambiguous language that is difficult for consumers to understand.²⁰³⁸

New entrants may be able to obtain access to training data by entering into licensing agreements with rights holders of high-quality content, such as publishers. However, as part of its initial review of AI foundation models, the CMA heard concerns from stakeholders that large technology firms could leverage their existing strong positions in other markets and financial resources to secure licensing

2030 K Roose, '[The Data That Powers A.I. Is Disappearing Fast](#)', *The New York Times*, 19 July 2024, accessed 13 March 2025.

2031 Epoch AI, '[Will We Run Out of Data? Limits of LLM Scaling Based on Human-Generated Data](#)', 6 June 2024, accessed 13 March 2025.

2032 C Hogg and D Westrik, '[Generating Concerns? Exploring Antitrust Issues in the Generative AI Sector](#)', *TechREG Chronicle*, Vol 2 (December 2023), p 5.

2033 Lonergan Research, '[ACCC DPSI Consumer Survey Research Report](#)', p 25.

2034 T Williams, '[Meta already using Aussie Facebook, Instagram posts to train AI](#)', *Information Age*, 19 June 2024, accessed 13 March 2025.

2035 OAIC, '[Guidance on privacy and developing and training generative AI models](#)', 23 October 2024, accessed 13 March 2025.

2036 OAIC, '[Guidance on privacy and developing and training generative AI models](#)', 23 October 2024, accessed 13 March 2025.

2037 For example, the European Data Protection Board's ChatGPT Taskforce has observed that, 'Considering large amounts of data is collected via web scraping, it is usually not practicable or possible to inform each data subject about the circumstances'. European Data Protection Board, '[Report of the work undertaken by the ChatGPT Taskforce](#)', 23 May 2024, p 8.

2038 ACCC, '[Digital Platform Services Inquiry First Interim Report](#)', 23 October 2020, p 35.

agreements for proprietary data sources that are not available to smaller players, either due to their significant bargaining power or exclusivity agreements.²⁰³⁹ In addition, the European Commission has noted that these agreements are generally very expensive.²⁰⁴⁰ To the extent that investments in training models are a sunk cost, this implies a potentially significant barrier to entry.

Some factors which may reduce the barriers caused by limited access to data include:

- Innovations in foundation model architecture which make the training and fine-tuning phases more efficient and less expensive²⁰⁴¹ – such as ‘model distillation’ (employed by DeepSeek).²⁰⁴² Microsoft submitted that methods like model distillation enable developers to employ pre-existing models to cheaply create new models which are often equally as powerful.²⁰⁴³ However, not all foundation model providers allow their models to be distilled. For example, OpenAI has reportedly blocked certain entities from distilling its models, and Microsoft and OpenAI are reportedly investigating whether DeepSeek ‘inappropriately’ distilled OpenAI’s models to develop its own models.²⁰⁴⁴
- The trend towards developing smaller and more efficient models, for example for deployment on mobile devices or for specific use-cases where specialised models are trained on smaller datasets. Amazon noted in its submission that the volume of data used to train a model is not determinative of the model’s success, and that it is more important to have access to the right data for the specific use case.²⁰⁴⁵
- The availability of open-source datasets,²⁰⁴⁶ which are publicly available with no restrictions on their use.
- The availability of synthetic data, which is data generated by AI.²⁰⁴⁷ However, there is debate as to whether synthetic data can be a complete substitute for real-world data for model training purposes.²⁰⁴⁸ In addition, the Schools and TAFE Copyright Advisory Group noted that many generative AI service providers’ terms of use prohibit users from using any outputs of their services to develop or improve any competing models, suggesting that this may limit developers’ ability to use synthetic data generated by one model to train their own models.²⁰⁴⁹
- The Software & Information Industry Association submitted that government could mitigate data access issues by providing engineers with access to public organisations’ data to develop societally beneficial generative AI applications, and helping small and medium enterprises make use of publicly available data by supporting storage and compute.²⁰⁵⁰ In January 2025, the UK government announced a plan to boost the UK’s AI capabilities which included providing access

2039 CMA, [AI Foundation Models: Technical Update Report](#), 16 April 2024, p 40.

2040 K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 4.

2041 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 5.

2042 DeepSeek states that its models were developed by distilling larger open-source models, including Meta’s Llama. See DeepSeek AI, [DeepSeek-R1: Incentivizing Reasoning Capability in LLMs via Reinforcement Learning](#), 22 January 2025, p 4.

2043 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 9.

2044 M Sweeney and D Milmo, ‘[OpenAI ‘reviewing’ allegations that its AI models were used to make DeepSeek](#)’, *The Guardian*, 30 January 2025, accessed 13 March 2025. D Bass and S Ghaffary, ‘[Microsoft Probing If DeepSeek-Linked Group Improperly Obtained OpenAI Data](#)’, *Bloomberg*, 29 January 2025, accessed 13 March 2025.

2045 Amazon, [Submission to the Final Report](#), 11 October 2024, p 27.

2046 Amazon, [Submission to the Final Report](#), 11 October 2024, p 27.

2047 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 5.

2048 K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 4; Amazon, [Submission to the Final Report](#), 11 October 2024, p 27.

2049 See generally Schools and TAFE Copyright Advisory Group, [Submission to the Final Report](#), 11 October 2024.

2050 Software & Information Industry Association, [Submission to the Final Report](#), 11 October 2024, p 6.

to public data, including anonymised National Health Service data, for AI developers to use to train models.²⁰⁵¹

The ACCC considers it is unclear whether these factors sufficiently lower the data-related barriers to entry and expansion for firms seeking to develop new frontier or general-purpose foundation models, as opposed to task-specific or specialised models (where developers take a general-purpose model as a base and then use specific and generally smaller data sets to fine-tune the model for a particular task).

Technical expertise

Development and training of foundation models demands a high level of technical expertise from AI specialists with highly specific skillsets.²⁰⁵² Due to a limited talent pool, there is intense competition among firms to attract and retain these professionals.²⁰⁵³ Small firms, for example start-ups, reportedly have difficulty competing with the salaries and other benefits offered by large digital platforms, raising barriers to entry and expansion.²⁰⁵⁴

The US FTC has also raised concerns about non-compete clauses hindering the mobility of the skilled labour force as companies may attempt to lock-in workers with AI experience and skills.²⁰⁵⁵ However, the European Commission and CMA have both stated it does not currently appear that non-competes are being widely used in the AI sector.²⁰⁵⁶

The Software & Information Industry Association submitted that difficulties accessing technical expertise is a barrier to entry in generative AI in Australia.²⁰⁵⁷ In contrast, Google submitted that there is a growing pool of talent both in Australia and globally.²⁰⁵⁸

Positive data feedback loops and network effects

Generative AI models have the potential to improve in quality as more people use them, as data generated from this usage can be utilised to improve the performance of the model.²⁰⁵⁹ These 'positive data feedback loops' can in turn lead to network effects, as models with larger user bases may be more likely to provide accurate results in response to user prompts, and may then attract more users.²⁰⁶⁰

Digital platforms that are able to integrate generative AI into their existing popular consumer-facing services, such as Meta with WhatsApp (estimated to have almost 2.96 billion monthly active users

2051 R Booth, '[Mainlined into UK's veins: Labour announces huge public rollout of AI](#)', *The Guardian*, 13 January 2024, accessed 13 March 2025.

2052 CMA, '[AI Foundation Models: Initial Report](#)', 18 September 2023, p 38.

2053 K Bindley, '[The Fight for AI Talent: Pay Million-Dollar Packages and Buy Whole Teams](#)', *The Wall Street Journal*, 27 March 2024, accessed 13 March 2025; K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5; CMA, '[AI Foundation Models: Initial Report](#)', 18 September 2023, p 39.

2054 K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5; Software and Information Association, '[Submission to the Final Report](#)', 11 October 2024, p 6.

2055 US FTC, '[Generative AI Raises Competition Concerns](#)', 29 June 2023, accessed 13 March 2025.

2056 K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5; CMA, '[AI Foundation Models: Initial Report](#)', 18 September 2023, p 39.

2057 Software & Information Industry Association, '[Submission to the Final Report](#)', 11 October 2024, p 6.

2058 Google, '[Submission to the Final Report](#)', 11 October 2024, p 54.

2059 US FTC, '[Generative AI Raises Competition Concerns](#)', 29 June 2023, accessed 13 March 2025; K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5; CMA, '[AI Foundation Models: Initial Report](#)', 18 September 2023, p 76.

2060 K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5.

worldwide as at June 2024),²⁰⁶¹ may have a competitive advantage over a new entrant into generative AI that does not have existing access to a large user base and large volumes of consumer data.²⁰⁶² The strength of these ‘positive data feedback loops’ may therefore potentially be an important factor in determining whether the market could tip in favour of a dominant player or a few large players in a concentrated market, with less possibility for new entrants to compete effectively.²⁰⁶³

Open-source foundation models may lower barriers to entry and expansion

Open-source models can lower barriers to entry for user-facing generative AI applications, allowing firms to customise existing foundation models without having to make significant investments in compute, data and talent.²⁰⁶⁴ The CMA has noted that open-source foundation models are an important force for competition and innovation, citing the release of numerous models that were built on top of open-source models.²⁰⁶⁵

The degree of access to foundation models can impact the quality of specialised downstream models. The Portuguese Competition Authority has highlighted that the diversity of models provides choice and flexibility for downstream AI developers, and advocates for preventing unnecessary restrictions on access points to these AI models.²⁰⁶⁶

Open-source models can also allow new entrants to catch up to incumbents more quickly, potentially diminishing the effects of ‘first-mover advantage’.²⁰⁶⁷ They offer significant cost advantages compared to closed models and additional flexibility to third-party developers. Meta submitted that the open-source approach lowers or eliminates barriers to adoption and democratises access to AI technologies, both by allowing more people to build generative AI-powered experiences without the need to develop a foundation model from scratch, and by allowing developers to innovate on top of open models without steering or restrictions.²⁰⁶⁸ Microsoft submitted that there is broad access available to high-quality open-source AI models for the development of new models, and that these models are often ‘just as powerful as the models which were more expensive to produce’.²⁰⁶⁹

However, while open-source models may lower barriers to entry and foster innovation, they face several limitations that restrict their ability to foster competition and may carry risks of reinforcing existing power dynamics in the AI industry:

- The US FTC and the Portuguese Competition Authority have both raised concerns over the ‘open-then-closed’ approach, where companies initially provide open-source resources to build user bases before restricting access, creating challenges for competition and innovation.²⁰⁷⁰ For example, OpenAI previously provided public information on its large language models, however stopped releasing information after GPT-4, citing the ‘competitive landscape’.²⁰⁷¹

2061 L Ceci, [Number of unique WhatsApp mobile users worldwide from January 2020 to June 2024](#), Statista, August 2024, accessed 13 March 2025.

2062 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 76.

2063 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 70–71, 77–78; K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5; US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025.

2064 Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024; US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025; K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 9.

2065 CMA, [AI Foundation Models: Technical Update Report](#), 16 April 2024, p 13.

2066 Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024, p 5.

2067 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 49.

2068 Meta, [Submission to the Final Report](#), 11 October 2024, pp 16–17.

2069 Microsoft, [Submission to the Final Report](#), 11 October 2024, p 9.

2070 US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025; Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024, p 9.

2071 OpenAI, [GPT-4 Technical Report](#), 27 March 2023, p 2, accessed 13 March 2025.

- Additionally, some researchers argue that the term ‘open-source AI’ is frequently used inaccurately or misleadingly, and is increasingly being instrumentalised by large companies to entrench their dominance and fend off regulation.²⁰⁷² As a recent paper by David Gray Widder, Sarah Myers West, and Meredith Whittaker explains, while ‘some tech companies initially fought open-source, seeing it as a threat to their own proprietary offerings, more recently these companies have tended to embrace it as a mechanism that can allow them to entrench dominance by setting standards of development while benefiting from the free labor of open source contributors’.²⁰⁷³
- The fact that a foundation model is open does not preclude a firm from engaging in potential anticompetitive practices involving the model, such as discriminatory access, self-preferencing, lock-in strategies, or bundling.²⁰⁷⁴
- Developers of open models may prohibit users from using the model to create competing models by imposing restrictions on their commercial use.²⁰⁷⁵ For example, Meta’s Llama 3 Community Licence Agreement prohibits users from using Llama 3 or any outputs to improve any other large language model, and users must request a licence from Meta if they provide products or services with more than 700 million monthly active users.²⁰⁷⁶
- There is some uncertainty as to whether open-source models perform as well as proprietary models. For example, Epoch AI published a report in 2024 stating that the best open large language models lag behind the best closed large language models by 5 to 22 months.²⁰⁷⁷

Risk of anti-competitive self-preferencing, bundling and tying

As noted above in sections 4.2.2 and 4.2.3, many key firms supplying generative AI products and services are large incumbent digital platforms. These platforms are often vertically integrated and operate at multiple levels of the AI stack, while maintaining their strong positions in markets for other digital platform services such as search and social media.

As large digital platforms extend their reach into the generative AI supply chain, they may be able to leverage any positions of market power they may have in their core service markets into generative AI markets, or to further entrench their strong position in their core service markets, potentially resulting in a lessening of competition.²⁰⁷⁸ This could occur when platforms with significant market power:

- **self-preference** their own products and services above those of third-party rivals
- **tie or bundle** their AI products and services with their other core products and services
- **restrict interoperability** by making their products and services incompatible with third-party products and services from outside their own ecosystem.

Not all instances of the above conduct are problematic, and some may be benign or even pro-competitive in certain circumstances. However, this conduct can also be anti-competitive where it has the effect of extending or entrenching the positions of platforms with significant market power and hindering rivals’ ability to compete. This can cause harm through reduced innovation and

2072 D G Widder, S West and M Whittaker, ‘[Open \(For Business\): Big Tech, Concentrated Power, and the Political Economy of Open AI](#)’, *Nature*, 18 August 2023; see also Open Markets Institute, [AI in the Public Interest: Confronting the Monopoly Threat](#), November 2023, p 21.

2073 D G Widder, S West and M Whittaker, ‘[Open \(For Business\): Big Tech, Concentrated Power, and the Political Economy of Open AI](#)’, *Nature*, 18 August 2023, p 13.

2074 Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024, p 8.

2075 Portuguese Competition Authority, [Competition and generative AI: Opening AI models](#), December 2024, p 9.

2076 Meta, [Meta Llama 3 Community License Agreement](#), 18 April 2024, clauses 1(b)(v) and 2, accessed 13 March 2025.

2077 B Cottier, J You, N Martemianova and D Owen, ‘[How Far Behind Are Open Models?](#)’, *Epoch AI*, 4 November 2024, accessed 13 March 2025.

2078 Digital Platform Regulators Forum, [Working Paper 3: Examination of technology – Multimodal Foundation Models](#), 19 August 2024, accessed 13 March 2025.

consumer choice, increased prices for consumers, and steering consumers towards products that do not align with their preferences.

Self-preferencing and tying and bundling are explored further in this section. Restrictions on interoperability are explored further in the next section, under ‘Impediments to switching’.

Risk of anti-competitive self-preferencing

Self-preferencing occurs when a platform gives preferential treatment to its own products and services that are in competition with products and services provided by third parties using the platform. International regulators and submissions to this Report have identified several ways that large digital platforms with significant market power could engage in anti-competitive self-preferencing in the generative AI supply chain,²⁰⁷⁹ including:

- **A platform with significant market power promoting its own generative AI products and services above those of competitors.**²⁰⁸⁰ Examples of this could include situations where:
 - a leading provider of a platform providing developers with access to generative AI models promotes its own proprietary models more prominently than third-party models²⁰⁸¹
 - a large app store provider ranks its own generative AI app more favourably than rivals’ apps in search results.²⁰⁸²
- **A vertically-integrated platform with significant market power providing itself preferential access to key inputs for generative AI.** The CMA noted that a vertically-integrated firm may have incentives to engage in this kind of foreclosure if the profit it stands to make from monopolising the downstream market exceeds what it can make from licensing its foundation model.²⁰⁸³ An example of this could be where a platform supplying foundation models to both its own downstream services and downstream competitors provides those downstream competitors with a degraded version of the foundation model.²⁰⁸⁴
- **A platform with significant market power developing an AI model that favours its own products and services over those of competitors in inference results.** The JFTC has posited that as the use of AI products and services increases, more decisions will be based on the inference results produced by AI models.²⁰⁸⁵ In this context, a firm with a strong position in the AI model market may develop a model that gives preferential treatment to the firm’s own products and services over those of rivals, potentially harming competition for those products and services.²⁰⁸⁶
 - An example of this would be where a platform develops and integrates an AI chatbot into its dominant online retail marketplace to assist consumers to decide what products to buy, but designs the AI model to recommend its own products even when a competitor’s product better aligns with the consumer’s preferences.

2079 See JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, pp 14–15; K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 7; US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 73.

2080 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 15.

2081 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 15; European Commission, [Competition in Generative AI and Virtual Worlds: Competition Policy Brief No 3/2024](#), 3 September 2024, p 7.

2082 The ACCC has previously noted it is concerned that Apple may rank its own apps more favourably than third-party apps in its App Store search results. See ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 124.

2083 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 74.

2084 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 74.

2085 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, pp 14–15.

2086 JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 15.

Risk of anti-competitive bundling and tying

A large digital platform expanding into the generative AI supply chain may exclude or hinder rivals by bundling or tying a service in which it has market power with its generative AI product or service. Bundling occurs when a supplier only offers 2 or more products or services as a package, or for a lower price if these products or services are purchased together. Tying, on the other hand, involves a supplier providing one product or service on the condition that the purchaser buys another product or service from the same supplier. These practices could harm competition for those generative AI products and services by limiting rivals' access to users, thereby potentially reducing their ability to achieve sufficient scale to effectively compete.

In the context of generative AI, bundling and tying may occur where large digital platforms provide AI products and services alongside or within their existing core offerings in which they hold a strong market position, such as search engines, messaging platforms, and device operating systems. For example, a dominant mobile OS provider may integrate its own generative AI tools within the OS, forcing users to acquire both the OS and the generative AI tools together.²⁰⁸⁷ Users may value these sorts of product integrations, but the integrations may also raise barriers to expansion for the developers of competing generative AI tools for mobile OS.

In addition, vertically integrated firms may engage in tying and bundling of their products and services across different levels of the AI supply chain, which may be anti-competitive where a firm has significant market power. For example, the US DOJ and the European Commission are both reportedly examining whether Nvidia is abusing its alleged dominance in GPU chips by discouraging customers from using competitors' products, including through alleged anti-competitive tying of its GPU chips with other networking equipment,²⁰⁸⁸ and through charging higher prices for its GPUs or restricting the number of GPUs it would sell to a customer who also bought chips from competing firms.²⁰⁸⁹

2087 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 73. The European Commission is also investigating whether Google degrades Android for smartphone makers that don't pre-install or give preferential treatment to its AI services. The European Commission is assessing whether Google's Gemini Nano AI service (that can run on phones offline) is tied to Google Play Store, thereby gaining a distribution advantage over rivals. The European Commission is also asking developers about their agreements and any unsuccessful attempts to pre-install their AI chatbots. See K Kowalski, C Volpin and Z Zombori, '[Competition in Generative AI and Virtual Worlds](#)', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 6; M Vestager, [Speech by EVP Margrethe Vestager at the European Commission workshop on "Competition in Virtual Worlds and Generative AI"](#), 28 June 2024.

2088 A Gardizy, S Palazzolo and A Efrati, '[Nvidia Faces DOJ Antitrust Probe Over Complaints From Rivals](#)', *The Information*, 1 August 2024, accessed 13 March 2025; F Yun Chee, '[Nvidia's business practices in EU antitrust spotlight, sources say](#)', *Reuters*, 6 December 2024, accessed 13 March 2025.

2089 A Gardizy, S Palazzolo and A Efrati, '[Nvidia Faces DOJ Antitrust Probe Over Complaints From Rivals](#)', *The Information*, 1 August 2024, accessed 13 March 2025.

Box 4.12: Consumer concerns from bundling or tying products – Microsoft 365 subscriptions with generative AI features

Bundling and tying of products may also raise consumer law concerns, in cases where firms do not clearly communicate the circumstances of the tying or bundling arrangement to consumers.

The ACCC understands from recent news articles that some Australian consumers have raised concerns about recent price increases for their subscriptions to Microsoft 365, which provides access to popular Microsoft productivity apps like Word and Excel.²⁰⁹⁰ Personal subscriptions are increasing from \$109 per year to \$159 per year (a 45.9% increase) and Family subscriptions are increasing from \$139 per year to \$179 per year (a 28.8% increase). A Microsoft spokesperson has stated that these price changes reflect ‘extensive subscription benefits that Microsoft has added over the past 12 years ... in addition to new features such as Microsoft Copilot and Microsoft Designer’.²⁰⁹¹ Microsoft Copilot and Microsoft Designer are both generative AI services.

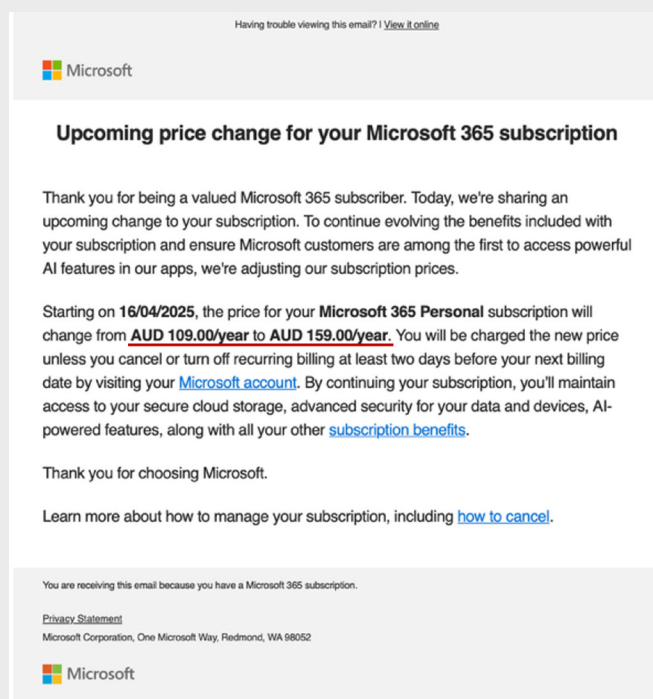
Consumers have reported finding an option to move from their ‘Microsoft 365 Personal’ subscription to a ‘Microsoft 365 Personal Classic’ subscription, which does not contain the generative AI services and remained at the earlier price of \$109 per year. However, consumers noted this option was not mentioned in Microsoft’s email notifications to consumers about the price increases (see figure 4.15), and, according to a Microsoft Community Support Specialist and other reports, only appeared as an option on Microsoft’s website once the user attempted to cancel their Microsoft 365 Personal subscription.²⁰⁹²

2090 S Sharwood, [‘Microsoft tests 45% M365 price hikes in Asia-Pacific to see how much you enjoy AI’](#), *The Register*, 13 January 2025, accessed 13 March 2025; T Williams, [‘Aussies push back against Microsoft 365 price hikes’](#), *Information Age*, 13 January 2025, accessed 13 March 2025; N Khadem, [“Arrogance is astounding”: Microsoft hikes subscription prices causing consumer backlash](#), *ABC News*, 25 February 2025, accessed 13 March 2025.

2091 S Sharwood, [‘Microsoft tests 45% M365 price hikes in Asia-Pacific to see how much you enjoy AI’](#), *The Register*, 13 January 2025, accessed 13 March 2025.

2092 In response to a user post on the Microsoft Community forums about how to ‘avoid’ the Microsoft 365 price increase, a Microsoft Community Support Specialist responded: ‘If you are willing to switch subscriptions by yourself, you can visit the [Subscription] interface, find the Microsoft 365 subscription, click [Cancel Subscription], and a window will appear asking you [Do you want to return to the classic subscription], just select it.’ (Microsoft Community forum, [Response from ‘Tracy.W – MSFT’ to ‘Why is there an automatic \\$50 price hike and how do I avoid it’](#), 11 January 2025, accessed 13 March 2025). See also L Walker, [How to Avoid the Microsoft 365 Price Increase](#), YouTube video, 11 January 2025, accessed 13 March 2025; N Gelling, [You don’t have to pay the Microsoft 365 price increase](#), *Consumer NZ*, 29 November 2024, accessed 13 March 2025.

Figure 4.15: Screenshot of an email from Microsoft to a Microsoft 365 Personal subscriber regarding an upcoming price increase, received 9 January 2025



Source: Screenshot captured by ACCC on 9 January 2025.

Impediments to switching

It is important that businesses and consumers can compare offers and switch to products or services that better meet their needs. Where users face unnecessary barriers to switching, this can result in lock-in, leading to reduced choice and quality, as well as increased price of products and services.

In their July 2024 'Joint statement on competition in generative AI foundation models and AI products', the CMA, European Commission, US FTC and US DOJ cited interoperability among AI products and services and the systems they rely on, and customers' ability to choose among diverse products and business models, as 2 key principles for protecting competition in AI ecosystems.²⁰⁹³ As explored in this section, impediments to switching can arise at each layer of the generative AI stack through a range of conduct, including restrictions on interoperability and data portability, excessive switching costs, technical barriers and exclusivity arrangements between firms. As the JFTC observed in its discussion paper on generative AI: '[T]his tendency for switching costs to arise at each layer makes the entire generative AI market structurally prone to lock-in'.²⁰⁹⁴

Restricting interoperability in generative AI services

Interoperability refers to the ability of a product or service to work with other products or services. When offerings from various digital platforms are interoperable, this facilitates competition by making it easier for users to mix and match the offerings that best meet their needs. For example, if a user

²⁰⁹³ European Commission, CMA, US DOJ and US FTC, [Joint statement on competition in generative AI foundation models and AI products](#), 23 July 2024, accessed 13 March 2025.

²⁰⁹⁴ JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 12.

has a project that requires 2 or more AI tools specialised in different tasks, it may be important for those AI tools to work together seamlessly to achieve the best outcome.²⁰⁹⁵

The ACCC has previously raised concerns about platforms restricting interoperability by making their services incompatible with other services supplied outside their own ecosystem.²⁰⁹⁶ This can limit competition between the services supplied within the platform's ecosystem as well as between ecosystems, by increasing barriers to entry and expansion for new entrants and making it harder for users to switch or multi-home services.

In particular, several international regulators have expressed concern that powerful incumbent platforms may exploit their positions in related markets to favour their own AI products and services, by unduly restricting the interoperability of competing third-party products and services with the platform's ecosystem.²⁰⁹⁷

In some cases, there may be a reasonable business justification for a firm to have interoperability restrictions. However, powerful incumbent firms may have the ability and incentive to unduly restrict the interoperability of third-party AI products and services with their ecosystems, such that there could be a lessening of competition. Industry participants have raised some concerns about possible competition risks arising from interoperability restrictions in the generative AI sector. For example:

- At the infrastructure layer: *Global Competition Review* has reported that Nvidia's customers and other companies active in the graphics processing units sector have raised concerns that Nvidia may be reducing the interoperability of its AI accelerator chips with other data centre components (e.g. network cables) supplied by rivals.²⁰⁹⁸
- At the model and application layers:
 - SBS, in submitting that 'large tech giants' providing AI services may have competitive advantages that smaller providers cannot compete with, noted as a hypothetical example that: 'if Amazon Web Services (AWS) is being utilised by an organisation, Amazon's own AI services are also on offer ... If organisations or consumers seek to utilise other AI services, such services may not be compatible with AWS'.²⁰⁹⁹
 - In its letter to the United States President in support of the objectives of the DMA, a coalition of American startups, technology companies and industry associations led by Y Combinator argued that major digital platforms' interoperability restrictions are locking consumers into using 'inferior' AI products. The letter refers to Apple's delay in rolling out its AI-supported version of Siri 'years after companies like OpenAI and Anthropic brought generative AI to the public', with iPhone users having no choice but to continue using Siri in the meantime because third-party developers of AI-powered search tools and assistants cannot integrate their services freely on Apple's platform.²¹⁰⁰

2095 OECD, [Artificial intelligence, data and competition: Working paper](#), 24 May 2024, p 35.

2096 ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 6.

2097 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 73–74; European K Kowalski, C Volpin and Z Zombori, 'Competition in Generative AI and Virtual Worlds', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 8; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, pp 60–61.

2098 B John, 'Companies warn over Nvidia's sales practices', *Global Competition Review*, 22 August 2024, accessed 13 March 2025.

2099 SBS, [Submission to the Final Report](#), 11 October 2024, p 4.

2100 Luther Lowe (@lutherlowe), 'This is exactly why @ycombinator led a coalition yesterday urging @WhiteHouse support for the EU Digital Markets Act. Apple's anti-competitive...', X.com, 14 March 2025, accessed 19 March 2025; M Zeff, 'Y Combinator urges the White House to support Europe's Digital Markets Act', *TechCrunch*, 13 March 2025, accessed 14 March 2025.

However, no submissions to this Report identified any specific instances of undue restrictions on interoperability or switching in generative AI products and services in Australia at present. Some parties who provide generative AI solutions in Australia highlighted in their submissions what they are doing to support interoperability in this space:

- Amazon submitted that Amazon Bedrock (Amazon's service for building generative AI applications on the AWS cloud platform) provides customers with access to a range of foundation models from both AWS and other leading AI companies to build generative AI solutions, allowing developers to choose the best model for their use case and switch between models as needed.²¹⁰¹ In addition, Amazon noted customers who have built generative AI applications on AWS can choose to run those applications on AWS or any other IT environment where the underlying foundation model is also accessible.²¹⁰²
- Meta submitted that in comparison to closed proprietary foundation models, open-source models, like its Llama model, more easily allow for interoperability and compatibility between different inputs and components when building generative AI solutions.²¹⁰³

Other impediments to switching

Other barriers to switching that could arise throughout the generative AI value chain include:

- **Difficulty switching cloud services** – As noted in section 4.1.5, cloud customers may face several barriers to switching or multi-homing across cloud providers, including restrictions on interoperability, data portability, minimum spend agreements, and egress fees. Some international regulators have identified that competition conditions in the cloud services sector could affect competition conditions in the generative AI sector, given the significant role of cloud computing at each layer of the stack.²¹⁰⁴ For example, a foundation model developer may incur significant costs when moving or multi-homing a model built in one cloud environment to another cloud environment or on-premises. The US FTC identified that partnerships with cloud providers could increase switching costs for AI developers via both contractual requirements (e.g. exclusivity) and technical barriers.²¹⁰⁵
- **Difficulty switching development environments** – The JFTC has observed that model and app developers may hesitate to switch development environments due to the significant costs associated with moving between environments built on different semiconductor chips and software.²¹⁰⁶
- **Exclusivity arrangements** – The CMA and the French Competition Authority have both noted stakeholder concerns about the impact of exclusivity arrangements or other contractual restrictions between firms at different layers of the generative AI stack.²¹⁰⁷ For example, where the developer of a foundation model with a significant position in the market has an exclusivity agreement with their cloud service provider, this may limit competition between cloud service providers, potentially leading to higher prices and reduced innovation.²¹⁰⁸

²¹⁰¹ Amazon, [Submission to the Final Report](#), 11 October 2024, pp 23–24.

²¹⁰² Amazon, [Submission to the Final Report](#), 11 October 2024, p 26.

²¹⁰³ Meta, [Submission to the Final Report](#), 11 October 2024, p 17.

²¹⁰⁴ French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 7; Portuguese Competition Authority, [Competition and generative artificial intelligence: Issues Paper](#), November 2023, pp 26, 28; K Kowalski, C Volpin and Z Zombori, 'Competition in Generative AI and Virtual Worlds', *European Commission Competition Policy Brief*, Issue 3, September 2024, p 5.

²¹⁰⁵ US FTC, [Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6\(b\) Study](#), January 2025, p 3.

²¹⁰⁶ JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, p 12.

²¹⁰⁷ French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 9; CMA, [AI Foundation Models: Technical Update Report](#), 16 April 2024, p 53.

²¹⁰⁸ French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 9.

- **Vertically integrated suppliers potentially engaging in foreclosure** – Several regulators have noted that vertically integrated suppliers of generative AI products and services may have both the ability and the incentive to limit the availability of key inputs (such as data), foundation models and AI applications to their own ecosystems.²¹⁰⁹ Where a downstream customer is locked into a particular platform’s ecosystem that only offers a limited range of models and applications, they may have difficulty switching to products and services that better suit their needs.²¹¹⁰

4.2.5 Potential impacts of generative AI on competition in related markets

As noted throughout this chapter, major digital platforms are increasingly integrating generative AI tools into their core products and services. It is still too early to definitively assess the impact of generative AI integration on competition in these related markets. However:

- As noted above, the CMA has observed that vertically integrated firms may have incentives to foreclose competition in related markets if the profit they stand to make from attempting to monopolise the related market exceeds what they can make from licensing their foundation models.²¹¹¹ This can occur, for example, if vertically integrated firms degrade the foundation models they provide to competitors who rely on them as suppliers. As the monetisation strategies of generative AI models are still evolving, it is difficult to predict what impact generative AI will have on other digital platform services markets.
- Similarly, the US FTC has cautioned that if access to AI models and capabilities becomes a necessity in certain digital platform services markets but is restricted or controlled by a few large private companies facing insufficient competitive constraint, this may frustrate competition and innovation in other digital markets.²¹¹²
- The integration of generative AI systems into digital platform services has the potential to further raise the existing barriers to entry and expansion in these markets which make digital platforms tend towards concentration.²¹¹³ However, consumers may value these integrated service combinations.²¹¹⁴

This section discusses the potential impacts of generative AI integration on competition in markets for search, productivity software, social media, online private messaging and ad tech. In addition, section 4.1.6 above discusses the potential impacts of generative AI on competition in cloud services.

2109 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 74–75; K Kowalski, C Volpin and Z Zombori, ‘[Competition in Generative AI and Virtual Worlds](#)’, *European Commission Competition Policy Brief*, Issue 3, September 2024, p 3; Competition Bureau Canada, [Artificial Intelligence and competition: Discussion Paper](#), March 2024, pp 17–18; Portuguese Competition Authority, [Competition and generative artificial intelligence: Issues paper](#), November 2023, p 27; French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 9.

2110 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 74.

2111 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 74.

2112 US FTC, [Generative AI Raises Competition Concerns](#), 29 June 2023, accessed 13 March 2025.

2113 Digital Platform Regulators Forum, [DP-REG joint submission to Department of Industry, Science and Resources’ AI discussion paper](#), 26 July 2023, accessed 13 March 2025.

2114 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 73–74.

Search

As part of the Report on Revisiting General Search Services, the ACCC examined the integration of generative AI in general search services. The ACCC found:

- The use of generative AI in general search has rapidly increased since the introduction of OpenAI's ChatGPT in November 2022.²¹¹⁵ In general search, generative AI enables different features, including AI-generated summaries,²¹¹⁶ conversational search interfaces and AI-assisted ranking of results. It provides opportunities for new ways of providing search to consumers, and for new entrants to find innovative ways into the market.²¹¹⁷
- New entrants, as well as established digital platforms such as Google and Microsoft, have introduced generative search type functions or integrated AI functions into their existing search services.²¹¹⁸
- It is too early to say with any certainty what effect generative AI will have on the competitive dynamics in general search in Australia. While AI has the potential to disrupt traditional search services and allow smaller players to better challenge large incumbents, the impacts, so far, appear to be limited. Google and Microsoft's participation in several layers of the generative AI supply chain, as well as their established positions in general search, mean they are each well placed to leverage generative AI into their own search offerings.²¹¹⁹
- Similarly, the implications for search quality remain uncertain. As search engines incorporate this technology into their services in different ways, generative AI may lead to a new era of more relevant, efficient, and intuitive search. It could also raise new challenges for consumers seeking credible, reliable, unbiased, and verifiable information.²¹²⁰

Productivity software

The potential impact of generative AI on competition in the productivity software sector remains unclear. However, as noted above in section 4.2.3, generative AI foundation models are becoming increasingly important inputs into productivity software services, including Microsoft 365, Google Workspace, Adobe Creative Cloud, Slack and Zoom Workspace.²¹²¹

As highlighted by the CMA, incumbent firms offering productivity software may have a competitive advantage over new entrants because they can direct their existing consumer base to new AI-driven features and use data from their existing services to develop these features.²¹²²

In addition, the CMA also noted that AI-powered productivity software could evolve towards customised ecosystems integrated with other adjacent AI-powered services, such as search functionality.²¹²³ For example, users on Copilot enterprise plans can now search their organisation's SharePoint or OneDrive files within Bing search on Edge browsers – appearing as a button on Bing's search results page.²¹²⁴ This trend may further raise barriers to entry and make it difficult for other

2115 C Gordon, '[ChatGPT Is The Fastest Growing App In The History Of Web Applications](#)', *Forbes*, 3 February 2023, accessed 13 March 2025.

2116 In February 2025 (after the publication of the Report on Revisiting General Search Services), an education technology company called Chegg filed an antitrust complaint against Google in Washington D.C., claiming that Google's AI-generated summaries of search results (including Chegg's own content) have reduced its traffic and revenue. See J Godoy, '[Google's AI previews erode the internet, US edtech company says in lawsuit](#)', *Reuters*, 26 February 2025, accessed 13 March 2025.

2117 ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 4.

2118 ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 4.

2119 ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 6.

2120 ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 90.

2121 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 59.

2122 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 61.

2123 CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, p 61.

2124 Microsoft, [How Microsoft Search in Bing helps keep your info secure](#), accessed 13 March 2025.

firms to compete as a standalone service in both markets. However, consumers may value these types of integrated services,²¹²⁵ which have the potential for pro-competitive effects (for example, Microsoft's integration of Copilot into Bing and Edge may allow it to better challenge Google's dominance in search and browser markets).

Social media

A growing number of social media platforms are integrating generative AI-driven features into their existing services.

Similarly to productivity software, incumbent providers of social media platforms may have a competitive advantage over new entrants because they can push their existing users towards their new AI features. For example, when Meta AI was first added to Facebook and Instagram, it activated when users clicked the blue 'send' button in the search bar (which previously enabled searches).²¹²⁶ Pushing users towards these features then enables firms to use the data they collect from users of the platform to further enhance the new features.

In addition, during an April 2024 earnings call, Mark Zuckerberg stated that 50% of Instagram content was now AI-recommended, and that AI was helping improve consumers' ad engagement.²¹²⁷ In this way, the integration of AI into existing services has the potential to further entrench the dominance of incumbent social media platforms.

As noted in the Report on Revisiting Search Services, social media is also becoming a new way for some consumers (particularly young people) to search for information on specific topics.²¹²⁸ The integration of generative AI-powered summaries within social media platforms' search functions has the potential to accelerate this trend by providing more direct and effective responses to user queries. This could elevate the competitive constraint these social media services pose on traditional search services (such as Google).

Online private messaging

Similarly to markets for productivity software, incumbent providers of online private messaging services may have a competitive advantage over new entrants because they can direct their existing users to their new AI features and use data from their existing services to develop those features.

As identified previously in section 3.1, many online private messaging services have already integrated generative AI features into their platforms – potentially creating a new standard for these types of services. In addition, several business-oriented online private messaging services are already being primarily offered as a component within broader productivity software suites. The development of AI assistants which can draw on information across message threads, documents, and other applications, may drive these services to evolve even further towards ecosystems integrated with productivity software. Again, while this may make it harder for standalone competitors to compete and raise barriers to entry for new rivals, consumers may value these integrations.

Also as discussed in section 3.1, digital platforms such as Meta are working on applications of generative AI to support business users of online private messaging services, by driving efficiencies and lowering the cost of direct business-to-consumer messaging. While the likelihood of these features emerging is uncertain, a future increase in the uptake of business-to-consumer messaging in Australia (facilitated by generative AI) could strengthen the position of certain digital platforms as a critical gateway for businesses to reach consumers.

²¹²⁵ CMA, [AI Foundation Models: Initial Report](#), 18 September 2023, pp 73–74.

²¹²⁶ A Yang, '[Meta is putting AI front and center in its apps, and some users are annoyed](#)', *NBC News*, 23 April 2024, accessed 13 March 2025.

²¹²⁷ Meta, [Meta Platforms, Inc. \(META\) First Quarter Results Conference Call](#), 24 April 2024, pp 2–3.

²¹²⁸ ACCC, [Digital Platform Services Inquiry Ninth Interim Report](#), 4 December 2024, p 14.

Online marketplaces and app marketplaces

The use of generative AI to search for, compare or recommend products and services has the potential to exacerbate existing competition issues related to self-preferencing in markets offering intermediary and navigation services – such as online marketplaces and app marketplaces. Vertically integrated firms may have incentives to self-preference their own products and services when providing AI-generated searches, comparisons or recommendations.

The anticipated development of advanced AI agents embedded on devices could potentially further disrupt competition in these types of intermediary markets, particularly online marketplaces. The ability of an AI agent to plan and execute a series of multi-step tasks (such as purchasing an item or booking a trip) may replace consumers' need to access these intermediary platforms directly, with implications for advertising revenue in those markets.²¹²⁹

Ad tech

Generative AI has led to a greater number of AI-driven web crawlers that scrape data from websites (for example, for training foundation models or for research). One effect of this trend is that there has been an increase in invalid traffic rates, where the web crawlers generate impressions that do not represent genuine human engagement, which may artificially increase the amount that advertisers pay to publishers for their online advertising space.²¹³⁰

2129 T Hoppner and S Uphues, '[On the Antitrust Implications of Embedding Generative AI in Core Platform Services](#)', *CPI Antitrust Chronicle*, Vol 1 (July 2024), pp 4–6.

2130 Double Verify, '[AI Crawlers and Scrapers Are Contributing to an 86% Increase in General Invalid Traffic](#)', *Marketing Blog*, 9 January 2025, accessed 13 March 2025.

Box 4.13: Algorithmic collusion in other areas of the economy

- Several regulators have noted the risk that generative AI could facilitate coordinated conduct between competitors, in particular allowing competitors to fix prices, which may result in higher prices for customers.²¹³¹
- One alleged example of this type of algorithm-facilitated coordination is the subject of the US DOJ's ongoing complaint against the property management software firm RealPage, whose algorithmic pricing software was used to generate rental pricing suggestions for landlords who owned millions of properties across the US. RealPage entered into contracts with landlords allowing them to exchange non-public data about rental rates and lease terms to train its algorithmic pricing software. This software then generated pricing recommendations based on the shared information. The US DOJ contends that this practice unlawfully reduced competition among landlords and harmed renters.²¹³²
- The Information Technology & Innovation Fund, citing comments by US FTC officials in 2017,²¹³³ submitted that existing antitrust principles are already well equipped to deal with algorithmic collusion concerns, and that algorithms do not by themselves create novel liability scenarios.²¹³⁴ However, the ACCC notes concerns it raised through the Digital Platform Regulators Forum that algorithmic collusion may make it easier for firms to avoid detection, and that some forms of potentially harmful algorithmic coordination may not contravene laws under current regulatory settings (for example, when 'competing' algorithms simultaneously learn to set higher prices collectively to maximise profit).²¹³⁵

2131 French Competition Authority, [Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector](#), 12 July 2024, p 10; JFTC, [Generative AI and Competition \(Discussion Paper\)](#), October 2024, pp 15–16; European Commission, UK Competition & Markets Authority, US DOJ and US FTC, [Joint statement on competition in generative AI foundation models and AI products](#), 23 July 2024, accessed 13 March 2025; Competition Bureau Canada, [Consultation on Artificial Intelligence and Competition: What We Heard](#), 27 January 2025, accessed 13 March 2025.

2132 US DOJ, [Justice Department Sues RealPage for Algorithmic Pricing Scheme that Harms Millions of American Renters](#), Press release, 23 August 2024, accessed 13 March 2025; US DOJ, [Justice Department Sues Six Large Landlords for Algorithmic Pricing Scheme that Harms Millions of American Renters](#), Press release, 7 January 2025, accessed 13 March 2025.

2133 M K Ohlhausen, [Should We Fear The Things That Go Beep In the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing](#), 23 May 2017, p 11.

2134 Information Technology and Innovation Foundation, [Submission to the Final Report](#), 11 October 2024, p 6.

2135 Digital Platform Regulators Forum, [DP-REG joint submission to Department of Industry, Science and Resources' AI discussion paper](#), 26 July 2023, accessed 13 March 2025.

4.3 Online gaming

Key points

- Online video games are a popular form of entertainment and social connectivity for Australian consumers. Most Australians aged 14 and older (69%) who took part in the ACCC's consumer survey noted they had played games on at least one gaming device in the previous 6 months (game players), with mobile devices (smartphones, tablets etc.) being the most frequently used devices.
- Developers may monetise their games by selling them as one-off purchases, through producing and selling downloadable content, through in-game advertising, in-game purchases, or a combination of these approaches. Some digital platforms also offer subscription services, which give players access to a library of games.
- Under standard-form terms of service used by many online game stores, a consumer who purchases a game does not gain ownership of a digital copy of it, but rather a revocable and generally non-transferable licence to access and play it. Consumers may experience financial detriment where their access to a game (or certain features) they have paid for is terminated by a developer or distributor. The ACCC's consumer survey found most game players (56%) were unaware of these types of clauses. The ACCC considers that the use of these types of clauses may be unfair in some circumstances, but all businesses seeking to rely on these clauses should take steps to clearly and prominently disclose them to consumers to ensure transparency.
- Paid loot boxes are a type of in-game purchase which involve players paying to obtain chance-based rewards for in-game use. While they are typically optional, concerns have been raised about them leading to overspending or addiction, depending on how they are implemented. Game developers which use paid loot boxes should ensure sufficient transparency for consumers, such as by clearly and prominently disclosing the probabilities of items appearing in a loot box.
- The use of manipulative design elements may contribute to accidental or unwanted spending on in-game items or gaming subscription services. Aspects of these business practices may not be covered by existing provisions of the Australian Consumer Law (ACL). The ACCC continues to support the introduction of an unfair trading practices prohibition, to improve business practices across the economy, including those of game developers.

This section explores potential consumer harms in relation to online gaming products and services in Australia. It is structured as follows:

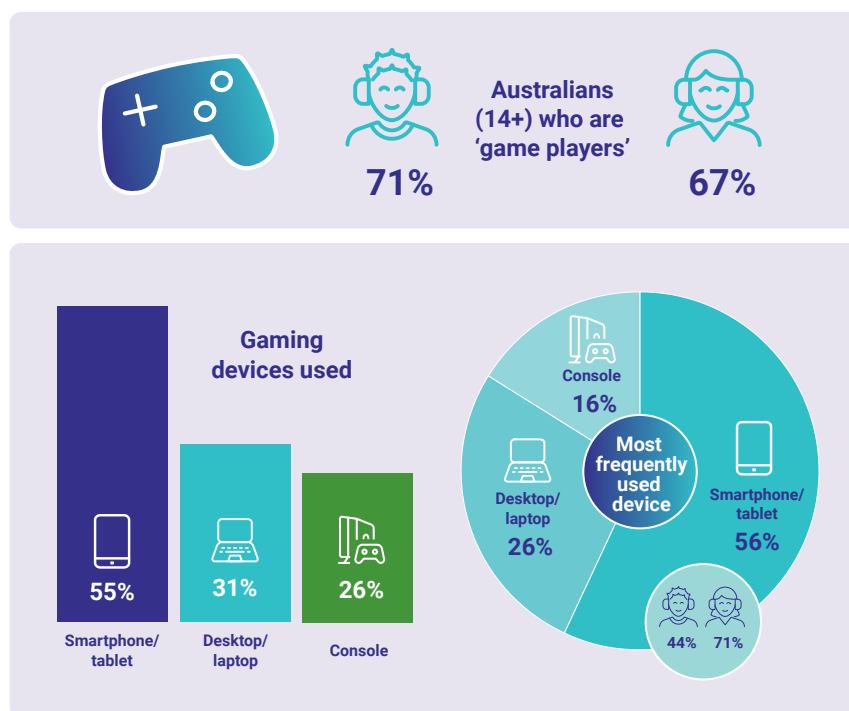
- **Section 4.3.1** notes the widespread popularity of online gaming in Australia. It notes the various ways in which Australian consumers purchase and play online games, and describes some common ways in which such games may be monetised.
- **Section 4.3.2** focuses on some potential harms that Australian consumers who play online games may experience, including due to:
 - a lack of awareness of the licensing limitations in the terms of use of some online game stores
 - the way paid loot boxes are implemented in certain games
 - potentially unfair trading practices, such as manipulative design practices.

4.3.1 Online gaming in Australia

Online gaming is a popular form of entertainment and social connectivity for Australians

Figure 4.16 shows that online video games are a popular form of entertainment and social connectivity for many Australian consumers.

Figure 4.16: Use of games and gaming devices by Australians



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 52–53, 90, 108. Additional results gathered from ACCC analysis of consumer survey results data, questions F1 (Which of the following devices have you used to play games on in the past 6 months? (Multiple responses)), F2 (Which of these do you use most often?, filtered to those who have used more than one type of gaming device to play games in the past 6 months) and A3 (What is your gender?). Survey of Australian consumers aged 14+, conducted October–November 2024.

More than 2 in 3 Australians (69%) who took part in the ACCC’s nationally representative survey of 3,075 consumers aged 14 and older noted they had played games on at least one gaming device in the previous 6 months (game players).²¹³⁶ Consumers identifying as male played games at a slightly higher rate than consumers identifying as female (71% of males and 67% of females surveyed were game players).²¹³⁷ In addition, younger Australians played games at higher rates than older ones. For example, 96% of Australians aged 14 to 17 and 86% of those aged 18 to 29 were game players, compared to 52% of those aged 60 to 74 and 42% of those aged 75 or older.²¹³⁸

²¹³⁶ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 52.

²¹³⁷ ACCC analysis of consumer survey results data, questions F1 (Which of the following devices have you used to play games on in the past 6 months?) and A3 (What is your gender?). Among all game players who responded to this survey, 50.3% were female and 49.2% were male. The remaining 0.5% of game players were non-binary or other. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 90, 108.

²¹³⁸ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 52.

55% of Australians in the ACCC's survey said they had played games on a mobile device (smartphone, tablet etc.) during this time. 31% had played on a desktop or laptop and 26% had played on a gaming console (excluding tablets).²¹³⁹

Among those who played games on multiple devices, mobile devices (smartphones, tablets etc.) were the most frequently used gaming devices, with 56% of game players nominating a mobile device (smartphone, tablet etc.) as the device they used most often, compared to 26% who said it was a desktop or laptop computer, and 19% who said it was a gaming console. This trend was particularly pronounced among female game players, 71% of whom said a mobile device (smartphone, tablet etc.) was their most commonly used gaming device, compared to 44% of male game players.²¹⁴⁰

In this section of the Report, the ACCC will refer collectively to devices on which Australian consumers can play online games, including smartphones, tablets, desktop and laptop computers and gaming consoles, as gaming devices.

Recent eSafety research has found that 33% of gamers aged 8 to 17 in Australia played for between 6 and 12 hours per week, while a further 33% played for more than 12 hours per week.²¹⁴¹ A separate study by parental control software firm Qustodio found Australians aged 4 to 18 spent an average of 43 minutes per day on mobile gaming apps in 2024. Roblox was the most popular gaming app for Australians in this age range, and those who played it spent an average of 137 minutes per day doing so.²¹⁴² The Interactive Games and Entertainment Association, an industry body, submitted to this Report that there are hundreds or thousands of companies in Australia which are 'chiefly or partially involved' in making, selling or otherwise supporting the video game industry, and that Australian-made games brought in around \$345 million in largely export revenue in the financial year 2022/23.²¹⁴³

How Australian consumers buy and play online games

Australian consumers primarily purchase or access online games through digital distribution platforms. According to the Interactive Games and Entertainment Association, Australian consumers spent a total of \$4.4 billion on video games and video-game related hardware in 2023, 74% of which was either digital (including consumers purchasing full games digitally, making in-game purchases and spending money on paid gaming subscription services) or mobile spending.²¹⁴⁴

The types of digital stores Australian consumers use to acquire games depends on their choice of gaming device. Figure 4.17 shows Australians play online games through a range of hardware, including gaming consoles, desktop and laptop computers (collectively, personal computers), and mobile devices.²¹⁴⁵

2139 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 52.

2140 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 53.

2141 eSafety Commissioner, [Levelling up to stay safe: Young people's experiences navigating the joys and risks of online gaming](#), February 2024, p 18.

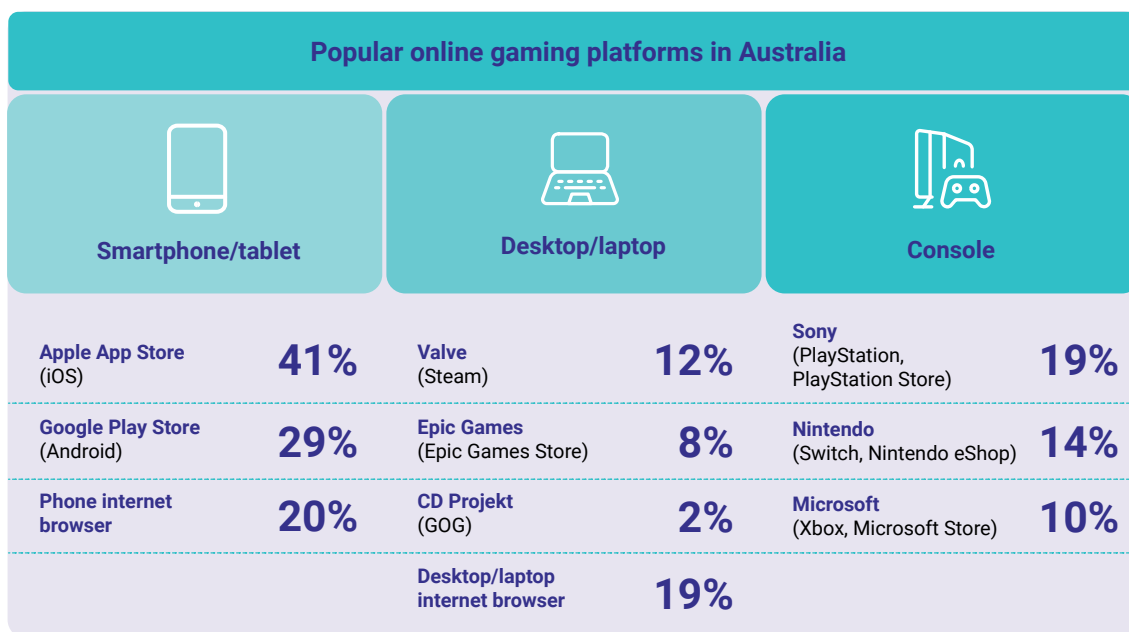
2142 Qustodio, [The digital dilemma – Childhood at a crossroads, Annual data report](#), 22 January 2025, accessed 13 March 2025, pp 41, 44.

2143 Interactive Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 2.

2144 Interactive Games and Entertainment Association, [2023 Australian Video Game Consumer Sales continue stable growth](#), 3 June 2024, accessed 13 March 2025.

2145 See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 52–53. Additional results gathered from ACCC analysis of consumer survey results data. Question F3 (Thinking of the devices you used to play games, which of the following have you used to access games in the past 6 months?). Filtered to those who have used any platform to play online games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

Figure 4.17: Types of gaming devices in Australia



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 52. Question F3 (Thinking of the devices you used to play games, which of the following have you used to access games in the past 6 months? (Multiple responses)). Filtered to those who used any platform to play games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

On smartphones and tablets, consumers can download games as apps via app marketplaces such as Apple’s App Store (which 41% of all game players in the ACCC’s consumer survey had used to play games in the past 6 months) and Google’s Play Store (29%).²¹⁴⁶ Games for Android devices may also be available through other device manufacturers’ proprietary app marketplaces (such as the Galaxy Store for Samsung Galaxy devices), or they may be sideloaded (<1%)²¹⁴⁷ either through alternative app marketplaces such as the Amazon Appstore and the Epic Games Store,²¹⁴⁸ or by downloading them directly onto the device without using an app store.²¹⁴⁹ Some online games can also be played directly

²¹⁴⁶ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 53. It is common for gaming apps to appear on more than one app marketplace. For example, Apple submitted to this Report that in June 2021, 97 of the top 100 downloaded iPhone game apps were also available on Google Play. Apple’s submission also notes various other game distribution platforms which Apple considers compete with its App Store, including some browser-based indie game stores such as Green Man Gaming, Humble Bundle and itch.io. See Apple, [Submission to the Final Report](#), 11 October 2024, pp 14–15.

²¹⁴⁷ Sideloading refers to installing an app on a mobile device without using an ‘official’ app marketplace associated with the device’s operating system (the Apple App Store for iOS or Google Play Store for Android devices) or manufacturer (such as the Galaxy Store in the case of Samsung Galaxy devices). See section 3.2 for a more detailed discussion of sideloading. ACCC analysis of consumer survey results data, question F3. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 109. Question F3 (Thinking of the devices you used to play games, which of the following have you used to access games in the past 6 months?) Filtered to those who have used any platform to play online games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

²¹⁴⁸ Google submitted to this Report that, of the top 50 apps by consumer spend on the Australian Play Store, 72% are available on the Amazon Appstore, 34% on the Samsung Galaxy Store, 22% via web apps and 12% via direct downloading. See Google, [Submission to the Report](#), 11 October 2024, p 32. Users of Apple devices outside the EU cannot currently use alternative app marketplaces to download apps. See, for example, A Blake, [No, third-party iPhone app stores won’t work outside Europe – even with a VPN](#), *Techradar*, 6 March 2024, accessed 13 March 2025.

²¹⁴⁹ W White, [Supporting the Thriving and Competitive Mobile Ecosystem in Australia](#), Google Australia Blog, 14 March 2024, accessed 13 March 2025. Apple does not currently permit sideloading on its devices in Australia – see, for example, M Diaz, [Can I sideload apps on my iPhone without jailbreaking?](#), *ZDNet*, 6 March 2024, accessed 13 March 2025.

through web browsers on mobile devices (regardless of operating system). Sensor Tower estimates that Australians downloaded 245.6 million mobile games in 2024.²¹⁵⁰

For personal computers, game developers and publishers operate digital stores through which consumers can purchase and play online games. This includes Epic Games (Epic Games Store, which 8% of all game players had used in the past 6 months), CD Projekt (GOG.com, 2%), Valve (Steam, 12%), Electronic Arts (EA desktop store, previously known as Origin) and Ubisoft (Ubisoft Connect). Digital platforms such as Microsoft (Microsoft Store) and Apple (Mac App Store) also operate digital stores.²¹⁵¹ As with mobile devices, consumers may also play some online games on personal computers using a web browser.

For gaming consoles, Australian consumers can purchase games through digital stores operated by console manufacturers, such as the Microsoft Store for the Xbox, the PlayStation Store for Sony's PlayStation console, and the Nintendo eShop for Nintendo's Switch console.

The number or variety of games available in different online game stores can vary significantly, based on factors such as the number of games produced for a particular gaming device and whether the game store operator allows games developed by third parties to be listed on its platform.²¹⁵²

Unlike mobile games, consumers may choose to purchase games for personal computers and consoles as discs instead of digitally. Playing games on discs may incur other costs. For example:

- Consoles which can use discs can be more expensive than digital-only consoles. In Australia, as of 23 January 2025, the standard model of Sony's PlayStation 5 console has a Recommended Retail Price (RRP) of \$799.95. This is \$120 or around 18% more than the RRP of the 'digital model' (\$679.95), which is unable to play physical games.²¹⁵³ In late 2024, Microsoft launched a Digital Edition of its Xbox Series X console, which likewise comes without a disc drive and has an RRP of \$699. The standard Series X has a disc drive and has an RRP of \$799, about 14% more expensive.²¹⁵⁴
- Most modern personal computers, particularly laptops, lack disc drives,²¹⁵⁵ which means a game player using a disc may need to incur extra cost by purchasing an external disc player to play the games. Online stores are the main way that many Australian consumers purchase and play games on desktop devices.

In addition, many popular PC and console games in recent years have launched without any physical version at all.²¹⁵⁶

Some console manufacturers, app marketplace operators and other digital platforms also offer paid gaming subscription services, which are discussed in box 4.14.

2150 J Briskman, [2025 State of mobile: Consumers' \\$150 billion spent on mobile highlights another record-setting year](#), *Sensor Tower*, January 2025, accessed 13 March 2025.

2151 ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 109. Question F3 (Thinking of the devices you used to play games, which of the following have you used to access games in the past 6 months?). Filtered to those who have used any platform to play online games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

2152 For example, Steam's catalogue reportedly included almost 80,000 games as of January 2024, more than the total number of games available for the Xbox, PlayStation and Nintendo Switch consoles combined. Meanwhile, starting on 13 June 2022, EA removed all games from third-party publishers from sale in its online game store, though it said it would continue to offer some third-party games through its EA Play subscription service. See E Obedkov, [PC vs. console catalog size: Steam saw 3x more new games in 2023 than Switch, PlayStation, and Xbox combined](#), *Game World Observer*, 12 January 2024, accessed 13 March 2025; Electronic Arts, [Upcoming Changes to the EA Origin Catalog](#), accessed 13 March 2025.

2153 Sony Australia, [PlayStation 5](#), accessed 13 March 2025.

2154 B Roberts, [Disc-less Xbox Series X Digital Edition \(and two more consoles\) get release date](#), *What Hi-Fi*, 10 June 2024, accessed 13 March 2025; Microsoft, [Xbox Series X](#), accessed 13 March 2025; Microsoft, [Xbox Series X – 1 TB Digital Edition \(White\)](#), accessed 13 March 2025.

2155 L Knerl, [How to Use CDs and DVDs on a Computer With No Hard Disk Drive](#), HP, 8 August 2024, accessed 13 March 2025.

2156 M Smith, [5 Best Games That Never Received Physical Releases](#), *Gamerant*, 7 June 2024, accessed 13 March 2025.

Box 4.14: Gaming subscription services

Paid gaming subscription services are available from several gaming console manufacturers and other digital platforms. Similar to streaming services for other media, online gaming subscription services typically involve the consumer paying a monthly fee to gain access to a digital library of games – a model which has been described as virtually renting games as opposed to buying them.²¹⁵⁷

Services like Xbox Game Pass, PlayStation Plus, Google Play Pass, Apple Arcade, Nintendo Switch Online, Ubisoft+, Electronic Arts (EA) Play and Netflix each offer unique features catering to different platforms and player needs.²¹⁵⁸ Subscription models may appeal to consumers who play games regularly and prefer variety over purchasing individual games they are particularly interested in. Gamers can access dozens of games for a monthly fee that is less than the price of purchasing a single game, with plans starting at \$13.95 per month for Xbox Game Pass on personal computers,²¹⁵⁹ or \$18.95 per month for a one-month subscription to PlayStation Plus Extra (the cheapest tier of PlayStation Plus membership to grant consumers access to the 'Game Catalogue').²¹⁶⁰

The uptake of gaming subscription services in Australia has grown significantly. According to Interactive Games and Entertainment Association statistics, Australians spent \$329.5 million on gaming subscriptions in 2023, a 31% increase from \$251 million in 2022.²¹⁶¹ The Interactive Games and Entertainment Association reports that growth in spending on gaming subscriptions in Australia outpaces global growth.²¹⁶²

Consoles and desktop devices are usually capable of processing larger games that require greater computing power than games developed for mobile devices and web browsers. However, many popular games are available on multiple different gaming devices.²¹⁶³ Some multiplayer games support 'cross-platform' play, meaning they allow consumers to play online alongside (or against) other people who own it on a different device.²¹⁶⁴ In addition, cloud-based game streaming services (see box 4.15) may allow consumers to play games that require more computing power on mobile devices.

2157 J Minor, [The Best Video Game Subscription Services](#), *PCMag Australia*, 23 November 2023, accessed 13 March 2025.

2158 Microsoft, [Xbox Game Pass – Play Day One](#), *Xbox.com*, accessed 13 March 2025; Sony, [Subscription offers](#), *Playstation.com*, accessed 13 March 2025; Google, [Google Play Plus: Getting Started](#), accessed 13 March 2025; Apple, [Apple Arcade](#), *Apple.com*, accessed 13 March 2025; Nintendo, [Nintendo Switch Online – Membership Benefits](#), *Nintendo.com*, accessed 13 March 2025; Ubisoft, [Ubisoft+ – Australia and New Zealand](#), *Ubisoft.com*, accessed 13 March 2025; EA Games, [EA Play](#), *EA.com*, accessed 13 March 2025; Netflix, [Netflix Mobile Games](#), *Netflix.com*, accessed 13 March 2025.

2159 Microsoft, [Xbox Game Pass](#), accessed 13 March 2025.

2160 Sony Interactive Entertainment, [New worlds are waiting with PlayStation Plus](#), *PlayStation Plus*, accessed 13 March 2025.

2161 Interactive Games and Entertainment Association, [2023 Australian Video Game Consumer Sales continue stable growth](#), 3 June 2024, accessed 13 March 2025.

2162 Interactive Games and Entertainment Association, [2023 Australian Video Game Consumer Sales continue stable growth](#), 3 June 2024, accessed 13 March 2025.

2163 For example, Apple's submission to this Report noted that *Minecraft* is available on the App Store, Google Play, the Microsoft Store, the Amazon Appstore, the Nintendo eShop, the PlayStation Store and directly from Minecraft's website, whereas *Roblox* is available on the App Store, Google Play, the Microsoft Store, the Amazon Appstore, the PlayStation Store and the Quest Store. See Apple, [Submission to the Final Report](#), 11 October 2024, p 15.

2164 T Bowen, [The 77 Best Crossplay Games to Play Right Now \(November 2024\)](#), *Game Rant*, 9 September 2024, accessed 13 March 2025.

Box 4.15: Cloud game streaming services

Cloud gaming, also known as game streaming, allows users to play video games streamed directly from a remote server to their devices, bypassing the need for local downloads and reducing hardware requirements. Cloud gaming is compatible across various platforms, including personal computers, consoles, mobile devices, smart TVs and virtual reality headsets.

Cloud gaming can provide a range of benefits to game players, such as:²¹⁶⁵

- allowing for higher quality, richer graphics and more complex games to be played on older or lower-end devices²¹⁶⁶
- providing a convenient option for cross-device and cross-platform playing. For example, game players can play a game on one device (e.g., on mobile during their commute) and resume play from 'where they left off' on another device (e.g., on a console once home). Game players can also play a game online with friends using different devices.²¹⁶⁷

However, cloud gaming requires the game player to have a high-quality internet connection, otherwise the game may lag and impact the game player's experience.²¹⁶⁸

Cloud gaming is generally offered through subscription-based models which offer access to extensive game libraries and streaming capabilities. For example, Xbox Cloud Gaming (Beta) is included in Microsoft's Xbox Game Pass Ultimate subscription. This provides gamers with access to hundreds of console games for use across a variety of devices. As another example, NVIDIA's GeForce NOW cloud gaming platform (exclusively offered by Pentanet, a telecommunications company)²¹⁶⁹ provides consumers access to the cloud so they can play games they already own across a range of devices.²¹⁷⁰

According to Google's submission to this Report, several cloud gaming apps have recently launched on Android, including Amazon Luna, NVIDIA's GeForce NOW and Microsoft's Xbox Cloud Gaming.²¹⁷¹

In February 2024, it was reported that the global cloud gaming market had reached an estimated US\$5 billion in value in 2023 and would achieve projected revenues of US\$143.4 billion by 2032.²¹⁷²

Despite cloud gaming's potential, concerns have been raised by providers of cloud gaming services about mobile app marketplace policies restricting their growth. This issue is considered in section 3.2.

2165 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 7.

2166 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 7.

2167 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 7.

2168 CMA, [Mobile browsers and cloud gaming market investigation, Working paper 6: cloud gaming services: nature of competition and requirements for native apps on mobile devices](#), 5 July 2024, p 8.

2169 Pentanet, [Unleashing Ultra – Pentanet unveils a new era in Australian Cloud Gaming](#), 20 September 2023, accessed 13 March 2025.

2170 Cloud GG, Cloud GG FAQ, [Cloud.gg](#), accessed 13 March 2025.

2171 Google, [Submission to the Final Report](#), 11 October 2024, p 36.

2172 Market.U.S., [Cloud Gaming Market to Soar to USD 143.4 Bn by 2032 | Driven by Technological Advancements and Growing Demand for High-Quality Gaming Experience](#), *Yahoo Finance*, 19 February 2024, accessed 13 March 2025.

Monetisation of online games

Game developers, publishers and distributors (such as online game store operators) which sell games to Australian consumers typically earn revenue in the following ways:²¹⁷³

- One-off game purchases: Consumers make a one-time purchase of a game. This model is commonly used for high-budget games on PC and console, such as *The Legend of Zelda* and *God of War*. This model is typically associated with in-depth games that offer substantial content upon purchase. The ACCC's consumer survey found that 37% of game players had made a one-off purchase of a game in the last 2 years.²¹⁷⁴
- Subscription fees:²¹⁷⁵ Revenue comes from ongoing fees for access to a game library or exclusive content,²¹⁷⁶ as explored in box 4.14. The ACCC's consumer survey found that 22% of game players had spent money on game subscriptions in the last 2 years.²¹⁷⁷
- In-game advertising: Games are free to download, generating revenue through in-game advertisements. This model is used by games such as *Candy Crush* and *Words with Friends*.
- In-game purchases: Games generate revenue through in-game purchases or downloadable content.²¹⁷⁸ Games earning revenue this way are often, but not necessarily, free to download. In-game purchases are often microtransactions, with a game player making a small purchase within a game, often made using a virtual currency, game points or real-world money.²¹⁷⁹ This model is popular in games like *Fortnite* and *League of Legends*. Purchases may be cosmetic or offer gameplay advantages. The ACCC's consumer survey found that 24% of game players had spent money on in-game purchases and 18% had spent money on downloadable content in the last 2 years.²¹⁸⁰ In-game purchases can be made in various ways, as described below.

In-game purchases can have different purposes and be made in various ways

In some games, in-game purchases only grant access to cosmetic features that do not confer any competitive advantages or benefits over other players. For example, in *Fortnite*, players can purchase virtual costumes, or 'emotes' which allow their characters to express ideas and feelings through their movements,²¹⁸¹ while in the vehicular soccer game *Rocket League*, players can purchase 'goal explosions' which are visual effects that appear when they score a goal.²¹⁸²

2173 Note that some games may combine 2 or more of these business models. For example, since 2017, game developer Ubisoft has sold many of its games as one-off transactions and also allowed players to purchase in-game items for their characters with real money. See D Strickland, [Ubisoft adopts Fair Monetization model for 'responsible monetization'](#), *TweakTown*, 23 June 2022, accessed 13 March 2025. Many other games which are available as one-off transactions also offer optional downloadable content or 'DLC', which may range from cosmetic items to 'expansions' with additional story content.

2174 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 55–56.

2175 Some subscriptions offer games that can be downloaded and played on gaming devices, along with a smaller selection of cloud-based games, whereas other subscriptions offer gaming libraries that are entirely cloud-based.

2176 Microsoft, [Xbox Game Pass Perks](#), accessed 13 March 2025.

2177 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 55–56.

2178 Downloadable content refers to additional digital content that players can download and add to a video game after its initial release. Downloadable content can expand and enhance the gaming experience by providing new storylines, challenges, characters, weapons, or cosmetic items. K Amanda, [What is DLC in gaming? Understanding downloadable content](#), *HP*, 4 August 2024, accessed 13 March 2025.

2179 Senate Environment and Communications References Committee, [Gaming micro-transactions for chance-based items](#), Australian Senate, November 2018, p 2.

2180 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 55–56.

2181 US FTC, [\\$245 million FTC settlement alleges Fortnite owner Epic Games used digital dark patterns to charge players for unwanted in-game purchases](#), 19 December 2022, accessed 13 March 2025; D Zendle, [The changing face of desktop video game monetisation: An exploration of exposure to loot boxes, pay to win, and cosmetic microtransactions in the most-played Steam games of 2010–2019](#), *PLoS One*, 7 May 2020, accessed 13 March 2025.

2182 D Zendle, [The changing face of desktop video game monetisation: An exploration of exposure to loot boxes, pay to win, and cosmetic microtransactions in the most-played Steam games of 2010–2019](#), *PLoS One*, 7 May 2020, accessed 13 March 2025.

In some other games, developers offer players the chance to spend money on items that grant in-game benefits, such as obtaining a powerful and sought-after item, progressing to a higher level or increasing the strength of their character.²¹⁸³ For example, in the game *Diablo Immortal*, players can choose to purchase in-game items with real money which can grant them advantages over other players who choose not to make in-game purchases.²¹⁸⁴ These are sometimes referred to as ‘pay to win’ purchases.

In-game purchases, including ‘pay to win’ purchases, have become a significant revenue stream in the gaming industry. Global consumer spending on in-game purchases is projected to reach US\$74.4 billion by 2025.²¹⁸⁵ In the year to 31 March 2024, EA reported US\$4.463 billion in net revenue from ‘extra content’ (around 59% of its overall net revenue of US\$7.562 billion), which it said was derived primarily from the sale of in-game currency and digital in-game content.²¹⁸⁶ Sensor Tower estimated that Australians spent \$1.97 billion on mobile gaming in-app payments in 2024.²¹⁸⁷

According to the ACCC’s consumer survey, younger Australians tend to make in-game purchases more than older ones. For example, 46% of game players aged 14–17 and 35% of those aged 18–29 said they had spent money on in-game purchases in the past 2 years, compared to an overall average of 24% of all game players aged 14 and over.²¹⁸⁸

Some examples of approaches to increase engagement and increase spending on in-game purchases are outlined below.

Paid loot boxes

Paid loot boxes allow players to spend in-game currency or real money for a chance to obtain rare items, characters, cosmetics or upgrades.²¹⁸⁹ For example, a game player may pay to open a mystery box which may contain in-game rewards. In some games, they may be referred to by other names such as ‘loot crates’, ‘prize crates’, ‘packs’, ‘mystery boxes’ or ‘chests’.²¹⁹⁰ Loot boxes provide randomised rewards; that is, a game player is not assured that spending money will result in them

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- 2183 F Steinmetz et al., [Pay-to-Win Gaming and its Interrelation with Gambling: Findings from a Representative Population Sample](#), *Journal of Gambling Studies* (2022) 38, accessed 13 March 2025, pp 785–816. In some games, in-game purchases can be an alternative to ‘grind mechanics’ or ‘grinding’ (intense and sometimes repetitive gameplay to earn points or in-game currency). See Senate Environment and Communications References Committee, [Gaming micro-transactions for chance-based items](#), Australian Senate, November 2018, p 6 and A Cerulli-Harms et al., [Loot boxes in online games and their effect on consumers, in particular young consumers](#), *Publication for the committee on the Internal Market and Consumer Protection (IMCO), Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament*, 16 July 2020, p 15.
- 2184 P Tassi, [Oh yes, Diablo Immortal is absolutely pay-to-win, eventually](#), *Forbes*, 4 June 2022, accessed 13 March 2025; J Cox, [How I learned to stop caring about Diablo Immortal’s pay-to-win mechanics](#), *Vice*, 21 June 2022, accessed 13 March 2025.
- 2185 M Webb, [70+ Must-Know Video Game Statistics in 2025: Players, Revenue & Trends](#), *Techopedia.com*, 22 October 2024, accessed 13 March 2025.
- 2186 United States Securities and Exchange Commission, [Electronic Arts Inc. 2024 Form 10-K Annual Report](#), pp 20, 42.
- 2187 J Briskman, [2025 State of mobile: Consumers’ \\$150 billion spent on mobile highlights another record-setting year](#), *Sensor Tower*, January 2025. Sensor Tower report a figure of US\$1.3 billion, converted to \$1.97 billion using an average 2024 exchange rate of \$1= US\$0.6603. Average exchange rate for 2024 gathered from the Reserve Bank of Australia. See Reserve Bank of Australia, [Historical data](#), accessed 13 March 2025.
- 2188 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 55–56; ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 97, 112. Questions F9 (Over the past 2 years, have you spent money on online games in any of the following ways? Please include any spending which was deliberate, accidental, made by someone else using your account, or which was later reimbursed), filtered to those who have used any platform to play online games in the last 6 months, and A2(How old are you?). Survey of Australian consumers aged 14+, conducted October–November 2024.
- 2189 Interactive Games and Entertainment Association, [IGEA Loot Boxes Fact Sheet](#), 8 February 2018, p 1. For the purposes of this report, all gaming micro-transactions for chance-based items are collectively referred to as paid loot boxes.
- 2190 J Ash, R Gordon and S Mills, [Between Gaming and Gambling – Children, Young People and Paid Reward Systems in Digital Games](#), *Loughborough University Research Repository*, 6 December 2022, accessed 13 March 2025; N Greer, C Murray Boyle and R Jenkinson, [Harms associated with loot boxes, simulated gambling and other in-game purchases in video games: a review of the evidence](#), Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts, November 2022, p 4; Senate Environment and Communications References Committee, [Gaming micro-transactions for chance-based items](#), Australian Senate, November 2018, p 2.

receiving high-value items.²¹⁹¹ According to the Interactive Games and Entertainment Association, ‘some virtual items contained in loot boxes are functional upgrades that help players progress, such as useful tools, armour, weapons or abilities), whereas others are simply cosmetic items’.²¹⁹² Loot boxes and other in-game purchases can be an important source of revenue for the developers that use them.

Battle passes

Games offer seasonal tasks that reward players with exclusive items upon completion, with paid battle passes providing greater rewards. Typically, battle passes provide players with a list of in-game tasks to complete within a limited timeframe (such as 30 days), and each completed task provides a player with an in-game reward. Popularised by *Fortnite*, this model extends to games like *Clash of Clans* and *Rocket League*.²¹⁹³

Daily login rewards

Many games now offer daily login rewards, providing players with incentives for logging into the game each day over a set period. For example, game players may become eligible for discounts on purchases if they log in for a period of consecutive days. Rewards may increase in value with consecutive logins, encouraging regular engagement. This mechanic is common in mobile games like *Genshin Impact*²¹⁹⁴ and *Raid: Shadow Legends*.²¹⁹⁵

Timed events and limited-time offers

Timed events provide unique content or rewards available only during specific events, typically for a short period. These events often have exclusive in-game items, such as ‘skins’²¹⁹⁶ that aren’t available once the event ends, leveraging scarcity to encourage spending. Games like *Apex Legends* and the *Call of Duty* series of games use this model regularly.²¹⁹⁷ For example, *Apex Legends* features an annual event that coincides with Halloween, introducing exclusive cosmetics such as themed character and weapon skins. These items are accessible only during the event.²¹⁹⁸

4.3.2 Potential harms to consumers

Consumers may lack awareness of online game licensing limitations

As discussed in section 4.3.1, Australian consumers typically access online games through digital stores, with the distribution of modern games via hardware such as discs often being more expensive or unavailable, depending on the specific game and gaming device used.

2191 In some cases, loot boxes may contain a mixture of randomised and fixed contents. For example, a game player may be able to choose the type of item they will item they obtain but not its quality. See for example, juwhang, [4-5/5 loot boxes are back](#), *Reddit – r/DiabloImmortal*, 15 June 2023, accessed 13 March 2025.

2192 Interactive Games and Entertainment Association, [IGEA Loot Boxes Fact Sheet](#), 8 February 2018, p 1.

2193 See, for example, E Kiiski, [Battle Pass is a hot trend in mobile games – like it or not](#), *GameRefinery*, 17 December 2019, accessed 13 March 2025; J Davenport, [Battle passes are replacing loot boxes, but they're not necessarily a better deal](#), *PCGamer*, 6 July 2018, accessed 13 March 2025.

2194 HoYoLAB, [Genshin Impact Daily Check-In](#), accessed 13 March 2025.

2195 AyumiLove, [Raid Shadow Legends Daily Login Rewards Guide](#), 16 April 2023, accessed 13 March 2025.

2196 Skins are virtual items which can either be earned as rewards through in-game play or purchased within a game, often through loot boxes. They are typically cosmetic and may be used to change the look of an in-game character or item. See, for example, N May, [Dangerous play: how online gaming purchases led an Australian youth into a secret gambling addiction](#), *The Guardian*, 1 September 2024, accessed 13 March 2025.

2197 eSports, [Every Apex Legends limited time mode \(ltn\): dates and content](#), 6 December 2023, accessed 13 March 2025; See, for example, Call of Duty, [Drop Into the Game: Netflix Squid Game Comes to Call of Duty](#), 2 January 2025, accessed 13 March 2025.

2198 Electronic Arts, [Twilight Befalls E-District in the Techno Terror Collection Event](#), 10 October 2024, accessed 13 March 2025.

To use a digital store, a consumer typically must accept a set of standard-form contractual terms, which is often referred to as an end-user licence agreement (EULA), a subscriber agreement or similar. In this section of the Report, such standard-form software terms in the context of online gaming are referred to collectively as standard-form gaming contracts. These arrangements are not limited to online game stores – many individual online games also come with their own terms that consumers must consent to before downloading and using the software.²¹⁹⁹

The ACCC has observed that under the standard-form gaming contracts of online game stores such as Steam, the Epic Games Store and the PlayStation Network, a consumer who purchases an online game does not gain ownership of a digital copy of a game or the permanent ability to play it and lend it to others, but rather a revocable licence to access and play it.²²⁰⁰ Some developers also employ EULAs which state that players will only maintain a licence interest in the in-game content they purchase through microtransactions.²²⁰¹ Many online game stores' standard-form gaming contracts also state that games are not transferrable to other users, although some may allow them to be bequeathed in a will.²²⁰²

This may not be the case for all gaming store contracts, with some firms explicitly marketing their stores on a different basis. For example, the Managing Director of CD Projekt's GOG.com service, the third-most popular PC gaming store according to the ACCC's consumer survey,²²⁰³ has said that 'games you bought and downloaded [from GOG] can never be taken from you or altered against your will'.²²⁰⁴

In the ACCC's recent consumer survey, 56% of game players surveyed said they were unaware that under the terms of some digital game stores, purchasing a game does not give you ownership of it, but rather a licence to access and play it (see figure 4.18).²²⁰⁵ An even greater majority (72%) considered that this was either 'quite unfair' or 'very unfair', with only 10% of game players saying it was 'very fair' or 'quite fair'.²²⁰⁶

2199 C King, [Forcing Players to Walk the Plank: Why End User Licences Agreements Improperly Control Players' Rights regarding Microtransactions in Video Games](#), 58 *William & Mary Law Review* 1365, 2017, p 1,373.

2200 Valve Corporation, [Steam® Subscriber Agreement](#), 25 April 2023, accessed 13 March 2025; Epic Games, [Epic Games Store End User License Agreement](#), 17 July 2024, accessed 13 March 2025; Sony, [PlayStation Network Terms of Service](#), December 2023, accessed 13 March 2025.

2201 C King, [Forcing Players to Walk the Plank: Why End User Licences Agreements Improperly Control Players' Rights regarding Microtransactions in Video Games](#), 58 *William & Mary Law Review* 1365, 2017, p 1,368.

2202 N Carpenter, [What happens to your games after you die depends on your store of choice](#), *Polygon*, 7 June 2024, accessed 13 March 2025.

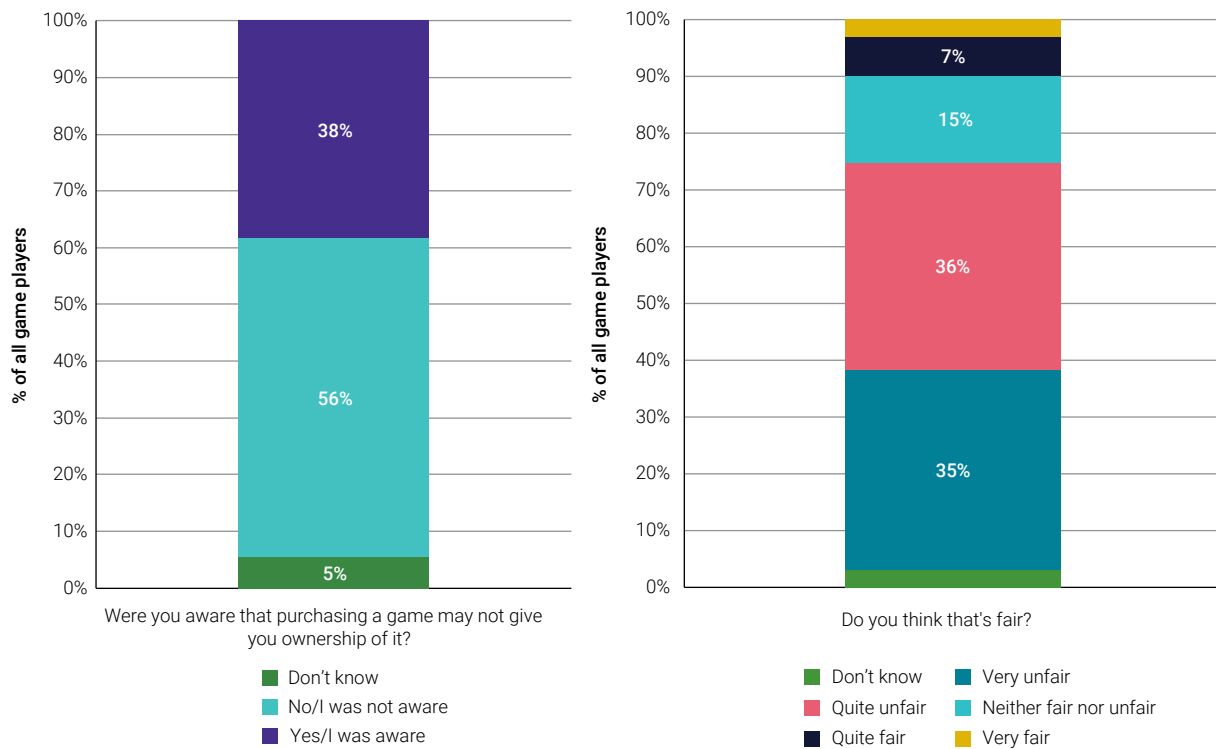
2203 ACCC analysis of consumer survey results data. Question F3 (Thinking of the devices you used to play games, which of the following have you used to access games in the past 6 months?). Filtered to those who used any platform to play online games in the last 6 months. The consumer survey found that 5% of desktop/laptop game players had used GOG in the past 6 months (compared with Steam (26%) and Epic Games Store (19%)). See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 109.

2204 B Frye, [GOG Brings a Bright DRM-Free Future to Gaming](#), *CGM Tech*, 22 December 2022, accessed 13 March 2025.

2205 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 64.

2206 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 64–65.

Figure 4.18: Australian game players' awareness and views on fairness of licensing of games



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 64–65. Questions F5 (Some digital game stores have terms of use which say that purchasing a game does not give you ownership of the game, but rather a licence to access and play it. This means that if a digital game store were to stop hosting the game or the developer were to cancel the licence, you may no longer be able to play it at all, even if you have paid for it. Before today, were you aware of this?) and F6 (In your opinion, how fair is it that you may no longer be able to play a game you have paid for if the game store stops hosting it?). Filtered to those who used any platform to play online games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

Consumers may experience financial detriment where a game developer or distribution platform relies on a standard-form gaming contract to terminate access to a game or remove certain features from it, leaving consumers who have purchased the game unable to access the game or those features.

One recent example of this was in April 2024, when Ubisoft revoked all digital licences for its online-only racing game *The Crew*, leaving consumers unable to download, install or play the game.²²⁰⁷ Ubisoft cited server infrastructure and licensing constraints as its reason for shutting down the servers for the game.²²⁰⁸ Some consumers said the game had also been removed from their accounts, and Ubisoft reportedly did not offer refunds to consumers unless they had purchased the game ‘recently’.²²⁰⁹ Some players also reported they had planned to set up private servers to be able to keep playing the game, but this became extremely difficult or impossible after their licences were revoked.²²¹⁰

2207 M Taylor, [Ubisoft is stripping people's licences for The Crew weeks after its shutdown](#), *PCGamer*, 13 April 2024, accessed 13 March 2025; A Saad, [Ubisoft revokes players' licenses to The Crew, removes game from libraries](#), *Dot Esports*, 13 April 2024, accessed 13 March 2025.

2208 N Carpenter, [Ubisoft sued for shutting down The Crew](#), *Polygon*, 12 November 2024, accessed 13 March 2025.

2209 P Ferdinand, [Ubisoft reportedly removing access to The Crew from buyers' accounts](#), *Game Rant*, 12 April 2024, accessed 13 March 2025.

2210 M Taylor, [Ubisoft is stripping people's licences for The Crew weeks after its shutdown](#), *PCGamer*, 13 April 2024, accessed 13 March 2025. In California, a proposed class action lawsuit has been filed on behalf of 2 consumers and ‘all others similarly situated’ over Ubisoft’s shutdown of *The Crew*. See N Carpenter, [Ubisoft sued for shutting down The Crew](#), *Polygon*, 12 November 2024, accessed 13 March 2025.

An earlier example occurred in November 2021, when mobile game developer Niantic announced that its game *Harry Potter: Wizards Unite* would be removed from app marketplaces on 6 December 2021 and ‘officially close’ on 31 January 2022. Niantic stated that players would be unable to play the game beyond this date and would not receive a refund on any in-game purchases they had made, except where required by law.²²¹¹

Game developers have also shut down online servers for games, significantly limiting the functionality and features of these games. For example, in November 2023, Electronic Arts shut down its online servers for several of its FIFA games, including *FIFA 18, 19, 20 and 21*, meaning these games could only be played offline.²²¹² The effect of this was that consumers who had made in-game purchases in these games, or purchased in-game currency for in-game purchases, lost some of the benefit of these investments as they were no longer able to access them in online play.²²¹³

The Australian Computer Society submitted to this Report that consumers have largely moved from purchasing media in physical form to buying or licensing their digital equivalents. It noted that the distinction between ‘owning’ a video game on a platform like Steam and owning a physical copy is significant because unlike physical goods, digital games ‘are often subject to restrictive licensing agreements that limit how consumers can use them’. For example, they often cannot be traded, lent or bequeathed to others like a physical cartridge, and may simply disappear in some circumstances due to licensing deals.²²¹⁴

The Australian Computer Society advocated for mechanisms that could allow consumers more control over their digital purchases, such as the ability to resell or trade digital assets, similar to physical goods. It argued there should also be a focus on increasing transparency in licensing agreements, so consumers are fully aware of what they are buying and the limitations that come with it.²²¹⁵

In September 2024, the Californian legislature passed a law prohibiting the use of terms such as ‘buy’, ‘purchase’ or other terms that suggest unrestricted ownership in connection with the sale of licences to digital goods (including games), unless:

- the seller receives an ‘affirmative acknowledgement from the purchaser’ that they are paying for a revocable license to access the digital good, or
- the seller provides the purchaser with a ‘clear and conspicuous statement’ which ‘states in plain language that “buying” or “purchasing” the digital good is a license’, prior to the transaction.²²¹⁶

The law came into effect on 1 January 2025.²²¹⁷ In explaining the rationale for the law, California State Representative Jacqui Irwin, who introduced this legislation, said in a press release that it would ‘address the increasingly common instance of consumers losing access to their digital media purchases through no fault of their own.’²²¹⁸

2211 Niantic, [Announcing the close of Harry Potter: Wizards Unite](#), 2 November 2021, accessed via Wayback Machine 13 March 2025.

2212 D Molina, [EA Shuts Down Online Services for Classic FIFA Titles](#), *FIFA Infinity*, 8 November 2023, accessed 13 March 2025.

2213 J Kenmare, [Fans devastated after servers for FIFA games shut down forever on November 6](#), *Sportbible*, 6 November 2023, accessed 13 March 2025; C Boyle, [EA Servers for FIFA games shut down forever](#), *Joe*, 6 November 2023, accessed 13 March 2025.

2214 Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, pp 4–5.

2215 Australian Computer Society Inc, [Submission to the Final Report](#), 11 October 2024, p 5.

2216 [California Assembly Bill No. 2426](#), published 25 September 2024, accessed 13 March 2025.

2217 A Chalk, [New California law inspired by Ubisoft and Sony requires retailers to warn consumers that the digital games they buy can be taken away at any time](#), *PC Gamer*, 28 September 2024, accessed 13 March 2025; J Carlos Guerrero, [New 2025 California laws: Artificial intelligence, octopuses, cannabis cafes and more](#), *ABC7 Eyewitness News*, 3 January 2025, accessed 13 March 2025.

2218 Office of Jacqui Irwin, Assemblymember, District 42, [Assembly member Irwin Urges Governor to Sign Legislation Increasing Transparency Surrounding Disappearing Digital Media](#), 16 September 2024, accessed 13 March 2025.

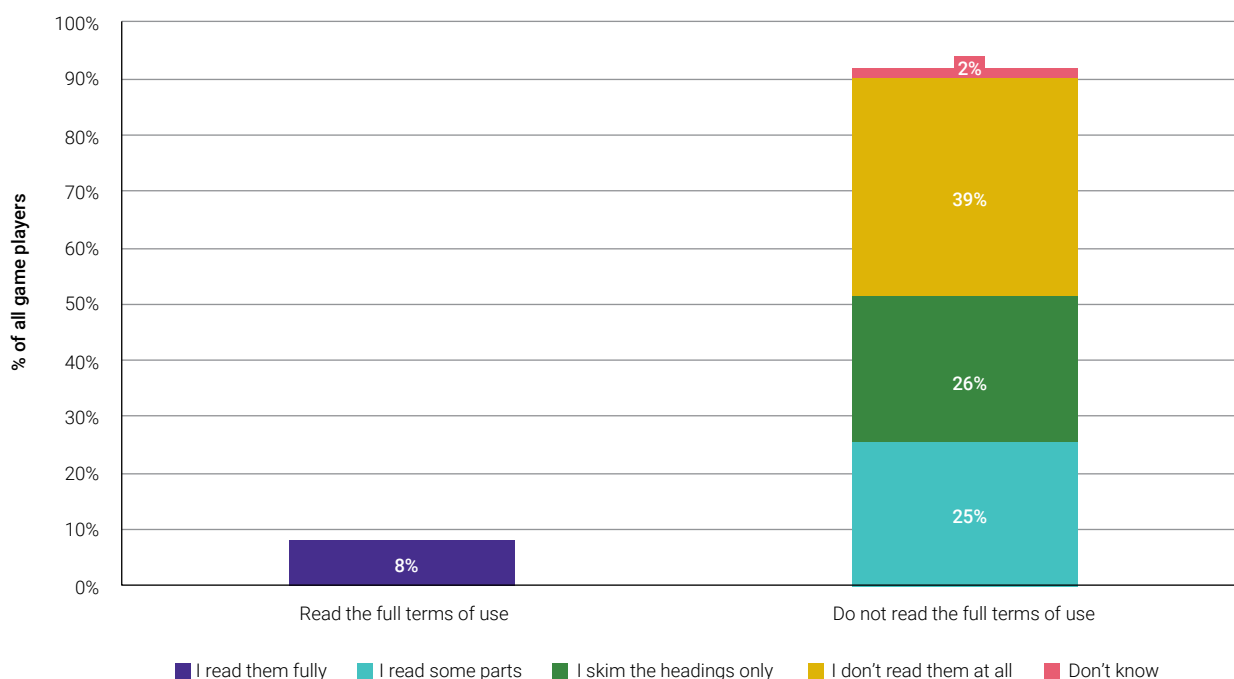
Online gaming providers should provide greater transparency about licensing limitations

The ACCC considers that many Australian consumers who purchase online games in digital stores may be unaware of the licensing limitations described above, because they are unlikely to fully read or understand the terms and conditions that outline these limitations.

In other contexts, the ACCC has previously raised concern about business practices that involve inducing consumer consent or agreement via very long contracts or all-or-nothing ‘clickwrap’ agreements,²²¹⁹ or long, complex ‘take-it-or-leave-it’ privacy policies that consumers often must agree to in order to access a service.²²²⁰

In the ACCC’s consumer survey, only 8% of game players said they ‘fully’ read the terms of use of digital game stores where they access games, and 39% said they don’t read them at all (see figure 4.19).²²²¹ Among 14–17-year-olds, even fewer game players reported reading the terms of use, with only 2% ‘fully’ reading digital game stores’ terms of use and 57% not reading them at all.²²²²

Figure 4.19: Australian game players’ approach to reading terms of use of digital game stores where they access games



Source: Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 67. Question F4 (How closely do you read the terms of use for the digital stores where you access games (e.g. App Store, Google Play Store, Steam, PlayStation Store, etc.))? Filtered to those who used any platform to play online games in the last 6 months. Survey of Australian consumers aged 14+, conducted October–November 2024.

²²¹⁹ See, for example, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, p 65; ACCC, [Customer Loyalty Schemes – Final Report](#), 3 December 2019, p 58.

²²²⁰ The ACCC’s March 2024 Report on Data Products and Services noted the issue of ‘take-it-or-leave-it’ terms that consumers often must agree to in order to use a service, and highlighted that the length and complexity of many privacy policies would prevent the average consumer from meaningfully engaging with them. See ACCC, [Digital Platform Services Inquiry Eighth Interim Report](#), 21 May 2024, pp 94, 100–101.

²²²¹ Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 67.

²²²² Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 67. As noted in section 4.3.1, 96% of 14–17-year-olds surveyed were game players.

In some cases, it is possible that certain termination-of-licence clauses in standard-form gaming contracts may be considered unfair contract terms.²²²³

However, the ACCC acknowledges that standard-form contract terms which permit a store to sever a consumer's access to a game they have purchased may sometimes be necessary. One example may be cancelling the licence of a player who has exhibited extreme anti-social behaviour, in order to protect other players' safety or the reputation and business interests of a developer or distribution platform.

In other circumstances, the removal of a game from sale in a digital game store may be at the developer's request and outside of the store operator's control, such as if the developer's licence to include certain cars, music or military equipment in a game expires.²²²⁴ For example, in January 2024, military shooter game *Spec Ops: The Line* was delisted from digital stores, reportedly due to music licences expiring. However, in this case, players who had already bought the game could still download and play it.²²²⁵

Furthermore, the ACCC acknowledges that it is often not practicable for developers to continue supporting online features of older games with low player bases indefinitely, and that withdrawing online support can free up resources to be used on developing or maintaining newer games. For example, Electronic Arts has previously indicated that as the number of players of a game dwindles to below 1% of online players across all its games, it may no longer be feasible to keep the online services for the game up and running.²²²⁶ Likewise, Ubisoft has noted that closing the online services for some older games allows it to focus its resources on newer or more popular titles.²²²⁷

The ACCC considers that the practice of a developer choosing to no longer maintain the online servers for a particular game may be broadly compared to digital platforms withdrawing support for other software. For example, Microsoft has stated that after 14 October 2025, it will no longer provide free software updates, technical assistance or security fixes for its Windows 10 operating system, and that consumers should consider moving to Windows 11 instead.²²²⁸ Microsoft previously withdrew support for Windows 8.1 and Windows 7 in January 2023 and January 2020, respectively.²²²⁹ As in the context of online gaming, the ACCC acknowledges that while such decisions are likely to cause inconvenience for some consumers, they may sometimes be reasonably necessary for operational or business reasons.

The ACCC considers that any businesses seeking to rely on 'standard-form gaming contracts' should take steps to ensure the terms of any licence limitation clauses are transparent, in plain language and prominently displayed so consumers can clearly understand what they are purchasing and make an informed decision. In this regard, Valve's recent steps to inform consumers at the checkout that a purchase on Steam only grants a licence for the game are a positive development.²²³⁰

2223 These clauses could be unfair if they cause a significant imbalance in the rights and obligations of the parties under the contract, are not reasonably necessary to protect the legitimate interests of the party who gets an advantage from the term, and would cause financial or other harm to the other party if applied or relied on. See [Competition and Consumer Act 2010](#) (Cth), Sch 2 ('Australian Consumer Law'), Part 2–3.

2224 Nirast, [Let's talk about licensing in video games and why that's a terrible thing for the medium as a whole](#), *Out of Games*, February 2024, accessed 13 March 2025.

2225 A Parrish, [Spec Ops: The Line permanently removed from Steam and other digital stores](#), *The Verge*, 31 January 2024, accessed 13 March 2025.

2226 E Makuch, [EA Will Shut Down Online Servers For These 12 Games By The End Of The Year](#), *Gamespot*, 8 August 2023, accessed 13 March 2025.

2227 Ubisoft, [Decommissioning of online services for older legacy Ubisoft games \(A – M\)](#), last updated 28 March 2024, accessed 13 March 2025.

2228 Microsoft, [End of support for Windows 10, Windows 8.1 and Windows 7](#), accessed 13 March 2025.

2229 Microsoft, [End of support for Windows 10, Windows 8.1 and Windows 7](#), accessed 13 March 2025.

2230 See, for example, M Ali Bari, [Steam Updates Policy With Clear Warning That Buying Digital Games Only Provides A License](#), *Twisted Voxel*, 11 October 2024, accessed 13 March 2025.

The ACCC also considers that operators of digital game stores should explore mechanisms that allow consumers to download and keep the games they purchase, so that they can continue playing them even if the store ceases trading. For example, the User Agreement for CD Projekt's GOG.com service notes that if GOG were to shut down permanently, it would seek to contact each individual user and give them at least 60 days' advance notice to download and keep their purchased games.²²³¹

Potential measure 1: to address online game licensing limitations

The ACCC considers that any businesses seeking to rely on 'standard-form gaming contracts' should take steps to ensure the terms of any licence limitation clauses are transparent, in plain language and prominently displayed so consumers can clearly understand what they are purchasing and make an informed decision.

The ACCC also considers that, where possible, operators of digital game stores should explore mechanisms that allow consumers to download and keep the games they purchase, so that they can continue playing them even if the store ceases trading. The ACCC acknowledges that digital game stores and games may have different functionalities and business models which may impact the ability for consumers to download and keep games. Accordingly, digital game stores and game developers are best placed to determine when it is feasible to implement this potential measure.

Consumers may suffer financial detriment from paid loot boxes

The ACCC has observed the potential for consumers to suffer financial detriment in connection with how in-game purchases are deployed in some online games. This may include financial or psychological harm stemming from the way paid loot boxes are implemented.²²³² As described in section 4.3.1, paid loot boxes are a means for players to obtain chance-based rewards for in-game use (such as a mystery box which can be opened to obtain character outfits or virtual currency).²²³³

Research in Australia has found that a relatively small overall proportion of Australian adults purchase loot boxes, but that younger people, and particularly adolescent males, are significantly more likely than average to make such purchases.²²³⁴ On the other hand, several Australian and international studies have indicated that while loot box purchasing may be more common among males, females who purchase loot boxes may be at greater risk of experiencing gambling problems.²²³⁵

²²³¹ See GOG.com, [GOG User Agreement](#), last updated 17 February 2024, accessed 13 March 2025.

²²³² Depending on the game, some loot boxes can be obtained for free via gameplay, while some developers may also allow players to 'preview' a paid loot box's contents before purchasing it. W Yin-Poole, [EA now lets you see what's in FIFA loot boxes before you buy them](#), *Eurogamer*, last updated 18 June 2021, accessed 13 March 2025. However, this section of the Report focuses on loot boxes which consumers can use real money to buy and whose contents are not disclosed to the consumer before they make a purchase decision. See Australian Institute of Family Studies, [Harms associated with loot boxes and simulated gambling in video games](#), accessed 13 March 2025; Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts, [New classifications for gambling-like content in video games](#), 18 September 2024, accessed 13 March 2025; Norwegian Consumer Council, [Loot boxes: How the gaming industry manipulates and exploits consumers](#), 31 May 2022, accessed 13 March 2025.

²²³³ European Commission, [Commission Staff Working Document – Fitness Check of EU consumer law on digital fairness](#), 3 October 2024, Glossary; Interactive Games and Entertainment Association, [IGEA Loot Boxes Fact Sheet](#), 8 February 2018, p 1.

²²³⁴ For example, an estimated 3% of Australian adults purchased loot boxes in 2019, but separate studies in 2020 found between 24% and 37% of adolescents and young adults had done so in the previous 12 months, including 48% of adolescent males. See N Greer, C Murray Boyle and R Jenkinson, [Harms associated with loot boxes, simulated gambling and other in-game purchases in video games: a review of the evidence](#), Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts, November 2022, p 7.

²²³⁵ N Greer, C Murray Boyle and R Jenkinson, [Harms associated with loot boxes, simulated gambling and other in-game purchases in video games: a review of the evidence](#), Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts, November 2022, p 17.

There is evidence to suggest that the use of paid loot boxes is widespread. For example, a 2021 report from Juniper Research estimated that globally, loot boxes generated around US\$15 billion of revenue in 2020, and predicted this would increase to over US\$20 billion by 2025.²²³⁶ A separate 2020 study found that loot boxes were present in 58% and 59% of the 100 top-grossing Google Play and Apple App Store games respectively, and 36% of the top 50 most-played games on Steam.²²³⁷

Industry bodies have noted existing efforts to reduce the risk of consumer harm from paid loot boxes. The Interactive Games and Entertainment Association submitted to this Report that in-game spending like loot boxes ‘has helped to sustain and keep most smaller developers and indies afloat, where the majority of games are free-to-play.’²²³⁸

The Interactive Games and Entertainment Association stated that increasing transparency and addressing community concern is a focus of its industry. For example, it noted the industry ‘has globally committed that consumers will be more informed about the probability of receiving items in loot boxes (drop rates)’.²²³⁹ The Interactive Games and Entertainment Association considers that with the introduction of new measures such as the new minimum classification reforms, regulation of loot boxes in video games is ‘well-covered for protecting consumers and does not warrant any further regulation.’²²⁴⁰

The International Social Games Association, another industry body, submitted to this Report that regarding loot boxes, its best practices align with recent industry developments, such as the Principles and Guidance on Paid Loot Boxes recommended by the Technical Working Group convened by the UK’s Department for Culture, Media and Sport.²²⁴¹

For mobile games, the International Social Games Association also strongly supports Australia’s new minimum classification regime, including the requirement that games containing paid loot boxes receive a minimum rating of M (Mature – not recommended for children under 15).²²⁴²

While the ACCC acknowledges that some positive steps have been made by industry, some of the possible consumer harms that the ACCC has observed may continue to occur in relation to paid loot boxes. As is explored further below, the ACCC considers that game developers should take further measures to mitigate consumer harm.

Potential financial harm associated with overspending on ‘pay-to-win’ loot boxes

Some authors have suggested that ‘pay-to-win’ loot box models which confer in-game advantages to players may promote overspending in games. One notable example of this was the 2017 game *Star Wars Battlefront II*, developed and published by EA, which attracted significant controversy for its ‘loot crate’ system.²²⁴³ In Australia, the game cost \$99.95, but it also included in-game micro-transactions allowing players to pay real money for in-game ‘crystals’ which could be traded for advantages in the

2236 Juniper Research, [Video Game Loot Boxes to Generate over \\$20 Billion in Revenue by 2025](#), 9 March 2021, accessed 13 March 2025.

2237 D Zendle et al., [The prevalence of loot boxes in mobile and desktop games](#), *Addiction*, September 2020, Vol. 115 (9), 1,278–1,772, accessed 13 March 2025.

2238 Interactive Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 8.

2239 Interactive Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 8.

2240 Interactive Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 9.

2241 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 4.

2242 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 4.

2243 GameSpot Staff, [Star Wars Battlefront 2’s Loot Box Controversy Explained](#), *GameSpot*, 22 November 2017, accessed 13 March 2025. The game’s design director, Dennis Brännvall, later referred to the game as having ‘launched with loot boxes’ – see J Batchelor, [Restoring trust in Star Wars Battlefront II](#), *GamesIndustry.biz*, 23 August 2019, accessed 13 March 2025.

game's competitive multiplayer network and ultimately used to help unlock additional content such as playable hero characters.²²⁴⁴

Early estimates suggested that unlocking all the playable content in the game, including powerful heroes such as Luke Skywalker and Darth Vader, could take approximately 4,528 hours of playtime, or cost an estimated US\$2,100 (on top of the game's purchase price) in expenditure on crystals.²²⁴⁵ The negative fan reaction to this monetisation model prompted EA to remove all in-game microtransactions from the game, hours prior to its full release.²²⁴⁶

As noted in section 4.3.1, some more recent games such as *Diablo Immortal* also allow players to make chance-based in-game purchases with real money which grant them a significant advantage over other players who choose not to make in-game purchases.²²⁴⁷

As noted above, concerns have been raised in Australia and overseas about potential links between paid loot boxes and addiction or problem gambling. Box 4.16 describes this issue.

2244 M Carter, [‘Loot boxes’ and pay-to-win features in digital games look a lot like gambling](#), *The Conversation*, 27 November 2017, accessed 13 March 2025.

2245 D Stauffer, [Spend 4528 Hours or \\$2100 To Unlock Star Wars: Battlefront II Content](#), *Screenrant*, 15 November 2017, accessed 13 March 2025.

2246 S Byford, [EA reverses course on Star Wars Battlefront II loot box controversy](#), *The Verge*, 17 November 2017, accessed 13 March 2025.

2247 P Tassi, [Oh yes, Diablo Immortal is absolutely pay-to-win, eventually](#), *Forbes*, 4 June 2022, accessed 13 March 2025.

Box 4.16: Australian and international consideration of potential links between paid loot boxes and addiction

In Australia, a 2022 literature review commissioned by the Australian Government's Department of Infrastructure, Transport, Regional Development, Communications and the Arts found 'reliable evidence' that loot box engagement was associated with problem gambling and internet gaming disorder.²²⁴⁸ The ACMA submitted to this Report that to date, online video games (including those that involve loot box features) have generally not been regarded as gambling services under Australia's *Interactive Gambling Act*, because they are not 'played for money or anything else of value.'²²⁴⁹

In September 2024, the Australian Government introduced new mandatory minimum classifications for computer games which contain 'gambling-like' content such as loot boxes.²²⁵⁰ The changes mean games which contain in-app purchases linked to elements of chance, such as paid loot boxes, will receive a minimum classification of M (Mature – not recommended for children under 15).²²⁵¹

Internationally, in January 2025, game developer Cognosphere reached a US\$20 million settlement with the US FTC, following allegations that it had, among other things, unfairly marketed loot boxes to children that obscured real costs, and misled all players about the odds of obtaining prizes in its *Genshin Impact* game. In relation to loot boxes, under the settlement Cognosphere will be:

- prohibited from allowing children under 16 to purchase loot boxes without a parent's affirmative express consent
- prohibited from selling loot boxes using virtual currency without providing an option for consumers to purchase them directly with real money
- prohibited from misrepresenting loot box odds, prices and features
- required to disclose loot box odds and exchange rates for multi-tiered virtual currency.²²⁵²

2248 N Greer, C Murray Boyle and R Jenkinson, [Harms associated with loot boxes, simulated gambling and other in-game purchases in video games: a review of the evidence](#), Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts, November 2022, p 45. This followed a 2018 Senate Environment and Communications References Committee report on gaming micro-transactions for chance-based items (also known as loot boxes) in 2018. See Parliament of Australia, [Report – Gaming micro-transactions for chance-based items](#), 27 November 2018, accessed 13 March 2025. See also Parliament of Australia, [Australian Government response to the Senate Environment and Communications References Committee report: Gaming micro-transactions for chance-based items](#), 6 March 2019, accessed 13 March 2025.

2249 ACMA, [Submission to the Final Report](#), 11 October 2024, pp 1–2.

2250 Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts | Australian Classification, [New classifications for gambling-like content in video games](#), 18 September 2024, accessed 13 March 2025.

2251 M Rowland, [New mandatory minimum classifications for gambling-like games content \[media release\]](#), 23 September 2023, accessed 13 March 2025. Games which contain simulated gambling will receive a minimum classification of R18+ (Restricted – legally restricted to adults 18 years and over). A 2020 survey in NSW found that 40.1% of surveyed children had played games with gambling components (simulated gambling) in the previous year. The research also noted that purchasing loot boxes and betting with in-game items have characteristics of gambling, are recognised by young people as such, and are linked to gambling and gambling problems. Simulated gambling falls within the scope of eSafety's Phase 2 Online Safety Codes, which will likely require platforms to take steps to prevent children from accessing or being exposed to such games. N Hing et al., [NSW Youth Gambling Study 2020](#), January 2021, pp 2–3, 84, 102, 113, 118.

2252 US FTC, [Genshin Impact Game Developer Will be Banned from Selling Lootboxes to Teens Under 16 without Parental Consent, Pay a \\$20 Million Fine to Settle FTC Charges](#), 17 January 2025, accessed 13 March 2025.

In October 2024, the European Commission released a staff-authored ‘Fitness Check’ of the EU’s consumer law on digital fairness.²²⁵³ The authors noted that loot boxes and other forms of ‘addictive design’ can lead to compulsive buying among young adults, mental harms such as anxiety and depression, or physical problems resulting from sedentary behaviour and a lack of sleep.²²⁵⁴ They argued digital addiction (including in connection with loot boxes) poses a threat to vulnerable consumers, and there is a need for more transparency regarding the probability of obtaining specific items from paid content that has a randomisation element.²²⁵⁵

In January 2023, the European Parliament adopted a research report calling for game players to be better protected from addiction and other manipulative practices, while emphasising the potential of the sector. Among other measures, this report noted game developers should avoid manipulative game design that can lead to gambling addiction and should account for children’s age, rights and vulnerabilities.²²⁵⁶

In May 2022, the Norwegian Consumer Council published a report which argued that loot boxes ‘exploit consumers’ in a range of ways, including through deceptive design practices that exploit cognitive or behavioural biases and vulnerabilities, opaque algorithms and potentially skewed probabilities, and aggressive marketing in ways that push consumers to purchase loot boxes.²²⁵⁷ A separate study for a European parliamentary committee in 2020 similarly noted that some mechanisms in loot boxes use well-documented behavioural biases to sell content, which can cause negative financial consequences.²²⁵⁸

Consumers should be given clear information about what items loot boxes contain and how much they cost

The ACCC considers that loot boxes or other in-game monetisation techniques may sometimes lead to consumer harm, depending on the specific context of how they operate in individual games.

For example, an Australian academic has previously noted that many games appear to employ systems designed to present constant in-game purchasing opportunities, some may have design elements that make them frustrating to players unless they spend money, and some game developers have patented systems that aim to capitalise on player data to present individualised offers that a player is more likely to accept.²²⁵⁹ The ACCC is not suggesting that paid loot boxes should be considered a form of gambling under Australian law, but notes the potential for them to be implemented in ways that contribute to similar consumer harms.

To the extent that online games sold in Australia allow consumers to purchase paid loot boxes or similar bundles of in-game items, the ACCC considers that consumers would benefit from transparency as to the contents of these loot boxes before making a purchase. Internationally, China,

2253 European Commission, [Commission Staff Working Document – Fitness Check of EU consumer law on digital fairness](#), 3 October 2024.

2254 European Commission, [Commission Staff Working Document – Fitness Check of EU consumer law on digital fairness](#), 3 October 2024, p 31.

2255 European Commission, [Commission Staff Working Document – Fitness Check of EU consumer law on digital fairness](#), 3 October 2024, p 133.

2256 European Parliament, [Protecting gamers and encouraging growth in the video games sector](#), 18 January 2023, accessed 13 March 2025; European Parliament, [European Parliament resolution of 18 January 2023 on consumer protection in online video games: a European single market approach \(2022/2014\(INI\)\)](#), 18 January 2023, accessed 13 March 2025.

2257 Norwegian Consumer Council, [Insert Coin: How the gaming industry exploits consumers using loot boxes](#), 31 May 2022, accessed 13 March 2025, pp 10–18.

2258 A Cerulli-Harms et al., [Loot boxes in online games and their effect on consumers, in particular young consumers](#), *Publication for the committee on the Internal Market and Consumer Protection (IMCO), Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament*, 16 July 2020, pp 21–26.

2259 I Taylor, [The flawed Kinder Egg defence](#), *GamesIndustry.biz*, 5 August 2019, accessed 13 March 2025.

South Korea and Taiwan have all passed laws which require video game companies to disclose the probabilities of obtaining rewards from paid loot boxes.²²⁶⁰ Similarly, the Netherlands Authority for Consumers and Markets has published guidelines on the protection of the online consumer including similar guidance, as well as clarifying that the price of a loot box should also be disclosed in real currency before the purchase.²²⁶¹

Potential measure 2: to mitigate consumer harm from paid loot boxes

The ACCC considers that developers of games which include paid loot boxes should clearly and prominently disclose to game players who are considering purchasing a loot box:

- what items the loot box may contain
- the probability that each of these items will appear in the loot box, expressed in easily understood terms such as a percentage chance.

In games that allow players to purchase paid loot boxes or other in-game content in exchange for virtual currency such as coins or gems, developers should prominently disclose the costs in real-money terms of these transactions, prior to the point of purchase.

The ACCC considers that transparency measures such as these are particularly important in games where consumers are more likely to spend beyond their means on loot boxes, such as games which are marketed towards children.

Manipulative practices may contribute to accidental or unwanted spending on in-game items or gaming subscription services

As discussed in section 2.2, the ACCC has observed a range of manipulative business practices in the context of other digital platform services which are detrimental to consumers but currently unlikely to breach the ACL.²²⁶² The ACCC has also observed the potential for Australian consumers to experience financial harm from some of these unfair trading practices in online games.²²⁶³

These may include certain manipulative or deceptive design elements (sometimes referred to as 'dark patterns') that facilitate unwanted spending, whether on in-game purchases, or through so-called 'subscription traps' whereby consumers find it difficult to cancel paid gaming subscription services due to confusing or arduous cancellation processes.

2260 L Xiao et al., [Gaming the system: suboptimal compliance with loot box probability disclosure regulations in China](#), *Behavioural Public Policy*, 8(3):590–616, 23 July 2021, p 593; H Ho Eun et al., [Legislative Notice on the Proposed Amendments to the Enforcement Decree of the Game Industry Promotion Act to Require Game Providers to Disclose Probabilities of Loot Boxes](#), Kim & Chang, 28 November 2023, accessed 13 March 2025; E Obedkov, [South Korea found 266 games violating loot box probability rules since March](#), *Game World Observer*, 8 July 2024, accessed 13 March 2025; Consumer Protection Committee, [Executive Yuan \(Taiwan\), Disclosing Loot Box Odds to Protect Gamers' Interests](#), 15 July 2022, accessed 13 March 2025; L Xiao, [Loot box State of Play 2023: A global update on regulation](#), *GamesIndustry.biz*, 5 December 2023, accessed 13 March 2025.

The South Korean government recently passed amendments to its law which will allow courts to award up to triple damages for intentional violations of probability disclosure rules for in-game items. See Y Ye-won, [Game companies face burden of proof after new law on probability-based items in Korea](#), *Chosun Biz*, 1 February 2025, accessed 13 March 2025.

2261 Netherlands Authority for Consumers and Markets, [Guidelines – Protection of the online consumer: boundaries of online persuasion](#), 11 February 2020, p 28.

2262 See, for example, ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 64–66.

2263 In some online games, consumers may also experience emotional or psychological harm from their interactions with other players. However, these concerns are beyond the remit of the ACCC and the scope of this Report. The Office of the eSafety Commissioner has responsibilities in this area and published research in 2024 noting the risks and benefits of online gaming for children and young people. See eSafety, [Levelling up to stay safe: Young people's experiences navigating the joys and risks of online gaming](#), February 2024, accessed 13 March 2025.

Manipulative design practices may lead consumers to make unwanted in-game purchases

As a medium, online gaming is arguably more immersive than other hobbies such as reading or watching television, due to the ability of players to shape their own experiences.²²⁶⁴ This is not inherently problematic; on the contrary, immersion has long been recognised as an important aspect of successful game design.²²⁶⁵

Nonetheless, there is a risk that online game players, particularly those who are heavily immersed or invested in a game, may be susceptible to interface design practices present in some online games which exploit cognitive biases or manipulate them into making in-game purchases.

A survey of 800 Australian weekly game players conducted by the CPRC from May–June 2024 found that 46% of the sample had experienced financial detriment from digital gaming. 30% of these game players had spent more money than intended on a game, 27% had felt pressured into buying something and 19% had accidentally made a purchase.²²⁶⁶

The CPRC also found that 54% of these weekly game players reported feelings of annoyance when gaming in the last year, while 24% reported feeling manipulated. 28% felt that their trust in a game designer or a gaming company had been undermined in the last year.²²⁶⁷

Some examples of potentially manipulative or deceptive design elements which the ACCC has observed may occur in an online gaming context include:

- **Confusing use of in-game currency:** In some online games, microtransactions may be tied to in-game currency in a way that makes it difficult for consumers to work out how much real money they are spending.
 - For example, in September 2024, the European Consumer Organisation submitted a complaint to EU authorities alleging that 7 developers²²⁶⁸ breached EU consumer laws through their use of ‘manipulative spending tactics’ to maximise consumers’ spending by using ‘premium in-game currencies’ (meaning in-game currencies that can be purchased for real money).²²⁶⁹ The complaint alleged that the ‘lack of price transparency’ of these currencies and the need to buy extra currency in bundles pushes consumers to spend more, including children who ‘have limited financial literacy and are easily swayed by virtual currencies.’²²⁷⁰
 - Separately, in a representative survey of 10,000 consumers conducted for the European Commission’s Digital Fitness Check, 29% of consumers said they had experienced a situation

²²⁶⁴ UK House of Commons Digital, Culture, Media and Sport Committee, [Immersive and addictive technologies](#), 12 September 2019, accessed 13 March 2025.

²²⁶⁵ G Christou, [The interplay between immersion and appeal in video games](#), *Computers in Human Behaviour*, Vol. 32, 20 December 2013, accessed 13 March 2025.

²²⁶⁶ C Gupta, M Campbell, B Robards, and R Fordyce, *Game Over – Unfair digital gaming practices and their impact on Australians*, Consumer Policy Research Centre, forthcoming, p 5. As of 25 March 2025, this report is not yet published, but an unpublished version of it has been provided to the ACCC. Once published, the report will be available on the Consumer Policy Research Centre’s website at the following link: <https://cprc.org.au/report/playing-the-player>.

²²⁶⁷ C Gupta, M Campbell, B Robards, and R Fordyce, *Game Over – Unfair digital gaming practices and their impact on Australians*, Consumer Policy Research Centre, forthcoming, pp 5, 21. As of 25 March 2025, this report is not yet published, but an unpublished version of it has been provided to the ACCC. Once published, the report will be available on the Consumer Policy Research Centre’s website at the following link: <https://cprc.org.au/report/playing-the-player>.

²²⁶⁸ Namely Activision Blizzard, Electronic Arts, Epic Games, Mojang Studios, Roblox Corporation, Supercell and Ubisoft. See European Consumer Organisation, [Consumer groups denounce video games’ manipulative spending tactics](#), 12 September 2024, accessed 13 March 2025, pp 1–2.

²²⁶⁹ European Consumer Organisation, [Consumer groups denounce video games’ manipulative spending tactics](#), 12 September 2024, accessed 13 March 2025, p 1.

²²⁷⁰ European Consumer Organisation, [Consumer groups denounce video games’ manipulative spending tactics](#), 12 September 2024, accessed 13 March 2025, p 1.

where the real price of a virtual item was not clear because it was only indicated in the app's virtual currency.²²⁷¹

- **Deceptive interface design:** In December 2022, the US FTC announced it had reached a US\$520 million settlement with Epic Games following FTC allegations in 2 complaints about its *Fortnite* game.²²⁷² In one of the complaints,²²⁷³ the FTC alleged that Epic's conduct violated provisions of the Federal Trade Commission Act.²²⁷⁴ It was alleged that Epic had deployed a counterintuitive, inconsistent and confusing button configuration which led players to incur unwanted charges based on the press of a single button.²²⁷⁵

The US FTC also alleged Epic had locked the accounts of customers who disputed unauthorised charges with their credit card companies, preventing them from accessing any of the in-game content they had purchased, and purposefully obscured cancellation and refund features to make them more difficult for consumers to find.²²⁷⁶

Under the finalised administrative order settling the complaint, Epic must pay US\$245 million to be used to fund consumer refunds. The US FTC noted the order also prohibits Epic from charging consumers through the use of dark patterns or without their affirmative consent, and from blocking consumers from accessing their accounts for disputing unauthorised charges.²²⁷⁷

In May 2024, the Netherlands Authority for Consumers and Markets imposed a fine of €1.125 million on Epic Games International for using unfair commercial practices aimed at children in its *Fortnite* game.²²⁷⁸ In its investigation, the Authority for Consumers and Markets found that children that played the game could experience pressure in several ways to make purchases, for example by using ads which directly exhort children to make purchases, and by using misleading countdown timers for items on offer. It also found that design choices for offerings in the Epic Item Shop exploited the vulnerabilities of children.

The ACCC considers that manipulative design practices may have a disproportionate effect on heavy in-game spenders and vulnerable groups. For example, in the ACCC's consumer survey, 62% of all game players aged 14 and over said they found it 'quite easy' or 'very easy' to keep track of how much they spent on online games. However, this fell to less than half (46%) of respondents who made in-game purchases at least weekly, and just 36% of respondents who rated their own confidence with technology as 5 or lower out of 10.²²⁷⁹

2271 European Commission, [Commission Staff Working Document – Fitness Check of EU consumer law on digital fairness](#), 3 October 2024, p 21.

2272 US FTC, [Fortnite Video Game Maker Epic Games to Pay More Than Half a Billion Dollars over FTC Allegations of Privacy Violations and Unwanted Charges](#), 19 December 2022, accessed 13 March 2025.

2273 In the other complaint, the US FTC alleged that Epic violated the Children's Online Privacy Protection Act (privacy legislation). Please note that the OAIC is the federal privacy regulator in Australia.

2274 Including its prohibition on unfair or deceptive acts or practices in or affecting commerce. See [Federal Trade Commission Act](#), 15 USC §§ 45.

2275 For example, the US FTC alleged players could be charged while attempting to wake the game from sleep mode, while the game was in a loading screen, or by pressing an adjacent button while attempting to preview an item. See US FTC, [Fortnite Video Game Maker Epic Games to Pay More Than Half a Billion Dollars over FTC Allegations of Privacy Violations and Unwanted Charges](#), 19 December 2022, accessed 13 March 2025.

2276 US FTC, [Fortnite Video Game Maker Epic Games to Pay More Than Half a Billion Dollars over FTC Allegations of Privacy Violations and Unwanted Charges](#), 19 December 2022, accessed 13 March 2025.

2277 US FTC, [FTC Finalizes Order Requiring Fortnite maker Epic Games to Pay \\$245 Million for Tricking Users into Making Unwanted Charges](#), 14 March 2023, accessed 13 March 2025.

2278 Netherlands Authority for Consumers and Markets, [ACM imposes fine on Epic for unfair commercial practices aimed at children in Fortnite game](#), 14 May 2024, accessed 13 March 2025.

2279 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 7, 56–57. Note that as part of the consumer survey, respondents were asked to rate their confidence with technology from 1 to 10; ACCC analysis of consumer survey results data. See Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), pp 112–113. Questions F11 (How easy or difficult is it for you to keep track of how much real-world money you spend on online games?), filtered to those who have spent money on games in the past two years, and F10 (Over the past two years, how often have you spent money on online games in the following way?), filtered to those who spent any money on games in the past 2 years. Survey of Australian consumers aged 14+, conducted October–November 2024.

Subscription traps may make it difficult for consumers to unsubscribe from paid gaming subscription services they no longer want

Another example of potentially manipulative practices is subscription traps. In the UK, there is already legislation which seeks to protect consumers from unfair commercial practices, including in relation to auto-renewing paid subscriptions, as discussed in section 2.2. In the context of paid gaming subscription services, the UK's CMA has previously secured improvements to the subscription renewal practices of Microsoft (in respect of its Xbox Live Gold, Game Pass and Game Pass Ultimate subscription services), Sony (in relation to its PlayStation Plus service) and Nintendo (in relation to its Nintendo Switch Online service), following concerns about consumers being locked into auto-renewing subscription services they were no longer using.²²⁸⁰

While Microsoft and Sony provided undertakings to address the CMA's concerns,²²⁸¹ Nintendo changed its business practices during the investigation so that its Nintendo Switch Online service would no longer be sold with automatic renewal set as the default option. The CMA said this meant people would not be automatically entering into renewing contracts, addressing a number of its concerns about consumers being locked in.²²⁸² In Australia, Nintendo's website notes that Nintendo Switch Online memberships automatically renew by default, though consumers can change this if they wish.²²⁸³

In the ACCC's consumer survey, 26% of consumers who had spent money on games in the past 2 years said they had thought they made a one-off gaming purchase that turned out to be a paid subscription, while the same proportion (26%) had paid subscriptions for games which they no longer use because they forgot to cancel them.²²⁸⁴

Stakeholders expressed varying levels of concern about potentially unfair trading practices in an online gaming context

Apple submitted that online games may employ manipulative or deceptive design elements, giving rise to consumer concerns. In Apple's view, these illustrate the need for thorough app review, fraud detection and parental controls, rather than ex ante reforms which could reduce digital platform operators' ability to maintain and further improve such measures.²²⁸⁵ Apple considered that the prevalence of this type of conduct demonstrates the importance of measures such as its app review processes, parental controls and fraud detection tools.²²⁸⁶

Google submitted that it is committed to reducing the prevalence of subscription practices designed to manipulate, mislead or deceive Android users, and supports ACCC consideration of potential competition and consumer concerns relating to transparency around subscription practices and purchases in the gaming industry.²²⁸⁷ Google submitted it takes steps to minimise the risk of users being manipulated or deceived by developers, and strives to equip users with the information necessary to make an informed choice as to whether to purchase a Google Play Pass subscription.²²⁸⁸

The International Social Games Association submitted that the online games industry is proactively addressing consumer protection concerns through self-regulation, including developing campaigns

2280 CMA, [CMA secures changes to Xbox subscription practices](#), 26 January 2022, accessed 13 March 2025; CMA, [CMA welcomes Sony and Nintendo's gaming subscription improvements](#), 13 April 2022, accessed 13 March 2025.

2281 CMA, [CMA secures changes to Xbox subscription practices](#), 26 January 2022, accessed 13 March 2025; CMA, [CMA welcomes Sony and Nintendo's gaming subscription improvements](#), 13 April 2022, accessed 13 March 2025.

2282 CMA, [CMA welcomes Sony and Nintendo's gaming subscription improvements](#), 13 April 2022, accessed 13 March 2025.

2283 Nintendo, [Nintendo Switch Online – FAQ](#), accessed 13 March 2025.

2284 Lonergan Research, [ACCC DPSI Consumer Survey Research Report](#), p 57.

2285 Apple, [Submission to the Final Report](#), 11 October 2024, p 3.

2286 Apple, [Submission to the Final Report](#), 11 October 2024, p 19.

2287 Google, [Submission to the Final Report](#), 11 October 2024, pp 38–40.

2288 Google, [Submission to the Final Report](#), 11 October 2024, p 39.

and initiatives focused on data privacy, age restrictions, and in-app purchases.²²⁸⁹ In this regard, the International Social Games Association said it is committed to driving industry-wide responsible practices and has developed a set of Best Practice Principles,²²⁹⁰ while its members are committed to providing clear and accurate advertising for games and in-game purchases. This includes informing users when purchases are necessary and clearly communicating the value and cost of in-game purchases, ensuring players fully understand their buying decisions.²²⁹¹

The Interactive Games and Entertainment Association submitted that in the absence of clarity regarding the scope of ‘manipulative or deceptive design elements’, Australia’s existing consumer protection regime should be considered adequate.²²⁹² It stated that existing ACL protections ‘should be sufficient to conduct enforcement related to digital games, including in the area of consumer related purchases.’²²⁹³

An unfair trading practices prohibition could help address the risks of manipulative design practices and subscription traps in online games

The ACCC considers that as in many other digital platform services markets, Australian consumers may experience financial or other harm due to potentially unfair trading practices in some online games.

The ACCC has also recently noted concerns about consumers incurring ‘huge’ in-app purchase costs because of in-app offerings with inadequate safeguards or which ‘deliberately target and nudge or confuse consumers,’ especially in the video gaming industry.²²⁹⁴

To the extent such conduct is not covered by Australia’s existing consumer laws, the ACCC continues to support the addition of an unfair trading practices prohibition to the ACL.²²⁹⁵

As noted in section 2.2 of this Report, the ACCC welcomes the Government’s October 2024 announcement of forthcoming legislative reform to create a general prohibition on unfair trading practices, including subscription traps and ‘manipulative online practices.’²²⁹⁶

While unfair trading practices reforms could help address the issue of manipulative design elements in online games, the ACCC also expects game developers to implement measures to minimise the risk of consumers making unwanted or accidental in-game purchases.

2289 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 3.

2290 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 3.

2291 International Social Games Association, [Submission to the Final Report](#), 11 October 2024, p 4.

2292 International Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 4.

2293 International Games and Entertainment Association, [Submission to the Final Report](#), 11 October 2024, p 9.

2294 ACCC, [Cost of living and digital economy shape 2024–25 compliance and enforcement priorities](#), 7 March 2024, accessed 13 March 2025.

2295 The ACCC has previously advocated for an unfair trading practices prohibition in the original Digital Platforms Inquiry and several previous reports of this Inquiry. See, for example, ACCC, [Digital Platforms Inquiry Final Report](#), 26 July 2019, p 26; ACCC, [Digital Platform Services Inquiry Fourth Interim Report](#), 28 April 2022, pp 5, 39–40, 52, 72; ACCC, [Digital Platform Services Inquiry Fifth Interim Report](#), 11 November 2022, pp 64–71.

2296 Prime Minister of Australia, [Albanese Government to stop the rip offs from unfair trading practices](#), 16 October 2024, accessed 13 March 2025.

Potential measure 3: to reduce the risks of unwanted and accidental in-game spending

The ACCC considers that developers of games which allow players to make in-game purchases should employ measures to reduce the risks of consumers making unintended or unauthorised in-game purchases. Such measures may include:

- in cases where in-game currency such as coins or gems can or must be purchased with real money (as opposed to only being obtainable through gameplay), prominently disclosing the costs in real-money terms of any in-game items that consumers may purchase with this in-game currency, prior to the point of purchase
- in games where consumers can use real money to purchase currency or other items, requiring an additional step for a consumer to 'confirm' their purchase. For example, if a consumer has opted to link their card details to their account, this could include requiring them to re-enter their CVV number and press a button to make the purchase. The ACCC considers such measures could reduce the risks of accidental purchases or children incurring unauthorised charges on their parents' cards, and provide all game players with an opportunity to consider if they would like to make an in-game purchase.

ACCC and international enforcement action in online gaming

While the ACCC considers that an unfair trading practices prohibition could help to better address some of the harms identified in online gaming, there are practices by online gaming providers where the ACCC has taken enforcement action for alleged misleading or deceptive conduct and false or misleading representations under existing law. This has been in relation to online game publishers or retailers misleading Australian consumers about their rights to refunds or about the consumer guarantee provisions of the ACL. A consumer has the right to expect a range of guarantees when purchasing a product or service (see box 4.17).

Box 4.17: Consumer guarantee provisions of the Australian Consumer Law

The ACL provides several guarantees to ensure that goods and services meet consumer expectations.²²⁹⁷ Products must be of acceptable quality (including being safe, durable and free from defects, among others), and fit for their intended purpose. They must also match descriptions, samples, or demonstration models provided by the seller. If a consumer specifies a particular purpose for a product and relies on the seller's advice, the product must meet that purpose.²²⁹⁸

Under the ACL, consumer guarantees cannot be excluded, restricted or modified by contract.²²⁹⁹

Prior enforcement action in Australia includes the following:

- On 23 December 2016, the Federal Court ordered Valve Corporation (Valve) to pay penalties totalling \$3 million for breaches of the ACL (among other orders). The Federal Court found Valve had made false or misleading representations to consumers in the subscriber agreements and refund policies of its online game distribution platform, Steam, including about consumers'

²²⁹⁷ [Competition and Consumer Act 2010](#) (Cth) sch 2 ('Australian Consumer Law'), Part 3–2, Division 1 – Consumer Guarantees.

²²⁹⁸ [Competition and Consumer Act 2010](#) (Cth) sch 2 ('Australian Consumer Law'), ss 54–57.

²²⁹⁹ [Competition and Consumer Act 2010](#) (Cth) sch 2 ('Australian Consumer Law'), s 64.

rights to obtain a refund for games which were not of acceptable quality.²³⁰⁰ This judgment demonstrated that businesses which sell online games or other digital goods to consumers in Australia must abide by the ACL, even if they are based overseas.²³⁰¹

- On 5 June 2020, the Federal Court ordered (among other things) Sony to pay \$3.5 million in penalties for making false or misleading representations on its website and in dealings with Australian consumers about their ACL rights, such as telling consumers Sony was not required to refund a game if it had been downloaded or if 14 days had passed, and implying users did not have consumer guarantee rights regarding the quality, functionality, completeness, accuracy or performance of their purchased digital games.²³⁰²
- The ACCC has also previously accepted court-enforceable undertakings from 3 ZeniMax companies as well as retailer EB Games (regarding the Fallout 76 game), and 3 Electronic Arts companies (regarding games purchased through the online Origin store). Both publisher groups and EB Games acknowledged they were likely to have misled Australian consumers about their consumer guarantee rights under the ACL.²³⁰³

Box 4.18 notes some examples of relevant enforcement action that has occurred overseas.

2300 [Australian Competition and Consumer Commission v Valve Corporation \(No 3\)](#) [2016] FCA 196; [Valve Corporation v Australian Competition and Consumer Commission](#) [2017] FCA 224.

2301 [Australian Competition and Consumer Commission v Valve Corporation \(No 3\)](#) [2016] FCA 196 at [198]-[205]; [Valve Corporation v Australian Competition and Consumer Commission](#) [2017] FCA 224 at [140]-[153]; D King et al., [Unfair play? Video games as exploitative monetized services: An examination of game patents from a consumer protection perspective](#), *Computers in Human Behaviour*, December 2019.

2302 [Australian Competition and Consumer Commission v Sony Interactive Entertainment Network Europe Limited](#) [2020] FCA 787.

2303 ACCC, [ZeniMax to refund consumers for the Fallout 76 game](#), 1 November 2019, accessed 13 March 2025; ACCC, [EB Games undertakes to refund consumers for the Fallout 76 game](#), 1 June 2020, accessed 13 March 2025; ACCC, [Electronic Arts undertakes to provide refunds to consumers](#), 28 April 2015, accessed 13 March 2025.

Box 4.18: Relevant overseas enforcement action against online gaming businesses

Europe

In December 2021, a German court granted an injunction against Nintendo of Europe GmbH, after ruling that its Switch eShop policy of only allowing consumers to cancel a pre-order for a game up to 7 days before the game's release 'excluded the right of withdrawal' under which consumers can usually revoke online purchases within 14 days without giving reasons.²³⁰⁴ Formally, the ruling only applied to consumers in Norway, but because Norway had ratified the European Consumer Rights Directive, the legal situation there corresponded to that in EU member states.²³⁰⁵

South Korea

In March 2018, the KFTC imposed fines and penalties totalling KRW 1.009 billion (around \$1.1 million as of March 2025) against game developers Nexon, Netmarble and NextFloor for selling loot boxes 'through false, exaggerated, and deceptive means' after finding they had provided false information to consumers regarding their chances of attaining certain items.²³⁰⁶

Subsequently, in January 2024, the KFTC imposed a larger fine of KRW 11.6 billion (around \$12.7 million as of March 2025) for alleged 'deceptive behaviour'. More specifically, the KFTC said Nexon had changed the odds of receiving certain items in paid loot boxes in its *Maple Story* and *Bubble Fighter* games (in some cases lowering them to zero) and failed to notify users of this fact.²³⁰⁷ Later that year, the KFTC and the Korea Consumer Agency announced that a settlement had been agreed under which Nexon would compensate *Maple Story* players an estimated KRW 21.9 billion (around \$23.9 million as of March 2025).²³⁰⁸

France

In September 2018, France's Directorate-General for Competition, Consumer Affairs and Fraud Prevention issued administrative fines of €147,000 and €180,000 to Valve and Ubisoft respectively, over the refund policies of their Steam and Uplay game stores, which it said breached parts of the French Consumer Code due to their failure to specify that consumers have 14 days to demand a refund from digital services.²³⁰⁹ Uplay had no refund policy in place, while Valve offered a 14-day refund policy but only on games that had been played for less than 2 hours.²³¹⁰

2304 T Whitehead, [Nintendo Loses Court Appeal Over Switch eShop Pre-Order Cancellations](#), *Nintendo Life*, 7 December 2021, accessed 13 March 2025.

2305 The proceedings originated from a complaint by Forbrukerrådet, the Norwegian Consumer Council, but the case was brought by the Federation of German Consumer Organisations (VZBV) in Frankfurt because this was where Nintendo was based in Europe. See VZBV, [Court confirms right of withdrawal for video game pre-order](#), 27 January 2022, accessed 13 March 2025.

2306 KFTC, [E-commerce Policy](#), accessed 13 March 2025; J Fingas, [South Korea fines game studios over deceptive loot box odds](#), *Engadget*, 11 April 2018, accessed 13 March 2025.

2307 KFTC, [KFTC Imposes Severe Sanctions on Nexon Korea for Deceptive Practice with Loot Boxes](#), 3 January 2024, accessed 13 March 2025, pp 1–2; H-S Park, [Nexon fined over MapleStory in-game item selling](#), *The Korea Economic Daily*, 3 January 2024, accessed 13 March 2025.

2308 Korea Consumer Agency, [Nexon Collective Dispute Settlement Agreed, Biggest Compensation Payout Ever](#), 13 December 2024, accessed 13 March 2025.

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Appendix A – Competition cases or investigations involving major digital platforms in G20 jurisdictions

Appendix A – Competition cases or investigations involving major digital platforms in G20 jurisdictions

The following represents a non-exhaustive list of competition law-based investigations and legal activity between large digital platforms and international competition regulators, government entities or private firms and individuals. This list includes publicly announced investigations by regulators (including Australia) and may not contain investigations that have not been publicly confirmed.

Disclaimer:

- Matter types referred to as ‘Government’ includes action taken by regulators which may or may not be independent of government.
- For matters that involve appeals to initial proceedings, hyperlinks generally refer only to the initial court case. For some matters, links to appeals have been included, but they have only been counted as one matter combined with the initial proceeding.
- In jurisdictions where the regulator is the initial decision-maker and an entity appeals the decision in court, the hyperlink generally refers to the initial decision by the regulator. For some matters, links to appeals of the regulators’ decision have been included, but this has only been counted as one matter.
- For private matters that form part of a class action, the table below lists each originating claim for a class action and the combined matter.
- The table below includes private actions against digital platforms that were dismissed or unsuccessful, and government actions (such as investigations) that have been closed.
- The information in the table below has been derived from a range of sources. Matters in Australia, the US, UK, Europe, and Canada primarily refer to official sources, including final judgments by a court or official media releases made by the regulator, while other matters (particularly matters in non-English speaking countries) may refer to a range of publicly available sources, including news articles.
- Where a matter appears more than once in the table below as more than one digital platform is under investigation or a party to a proceeding, only the first appearance of the matter in the table is numbered in the far left column.

Platforms considered as part of the Digital Platform Services Inquiry

Amazon (United States)

	Matter type	Matter name	Service type	Start date, decision date, or first public reference	Status
United States					
1	Private action	Subspace Omega LLC v Amazon Web Services Inc (2:23-cv-01772)	Cloud services	November 2023	Concluded
2	Private action	In re Amazon.com EBook Antitrust Litig. (1:21-cv-351-GHW-VF)	Online marketplace	January 2021	Ongoing
3	Private action	Reiss v Audible Inc. (1:24-cv-05923)	Online marketplace	June 2024	Ongoing
4	Government	District of Columbia v Amazon.com Inc. (21-ca-01775-B)	Online marketplace	May 2021	Ongoing
5	Government	State of California v Amazon.com Inc. (CGC-22-601826)	Online marketplace	September 2022	Ongoing
6	Government	Federal Trade Commission et al v Amazon.com Inc. (2:23-cv-01495)	Online marketplace	September 2023	Ongoing
7	Government	State of Arizona v Amazon.com Inc. (CV2024-011990 & CV2024-012081)	Online marketplace	May 2024	Ongoing
8	Private action	Frame-Wilson v Amazon.com Inc. (2:20-cv-00424)	Online marketplace	March 2020	Ongoing
9	Private action	De Coster v Amazon.com (2:21-cv-00693)	Online marketplace	May 2021	Ongoing
10	Private action	Angela Hogan v Amazon.com Inc. (2:2021-cv-00996)	Online marketplace	July 2021	Concluded
11	Private action	Floyd v Amazon.com Inc. and Apple Inc. (2:22-cv-01599)	Online marketplace	November 2022	Ongoing
12	Private action	Brown et al v Amazon Inc. (2:22-cv-00965)	Online marketplace	July 2022	Ongoing
13	Private action	Zulily LLC v Amazon.com Inc. (2:23-cv-01900)	Online marketplace	December 2023	Ongoing
Canada					
14	Government	Canadian Competition Bureau investigation into Amazon's potential abuse of dominance	Online marketplace	August 2020	Ongoing
15	Private action	Difederico v Amazon.com Inc. 2023 FC 1156	Online marketplace	April 2021	Concluded
China					
16	Private action	Guangzhou Mengbian Information Technology v Amazon Services Europe	Online marketplace	August 2023	Concluded

	Matter type	Matter name	Service type	Start date, decision date, or first public reference	Status
European Union					
17	Government	European Commission investigation into Amazon's eBook distribution arrangements (AT.40153)	Online marketplace	June 2015	Concluded
18	Government	European Commission investigation into Amazon Marketplace (AT.40462)	Online marketplace	July 2019	Concluded
19	Government	European Commission investigation into Amazon's Buy Box (AT.40703)	Online marketplace	November 2020	Concluded
Germany					
20	Government	German Federal Cartel Office investigation into Amazon's price parity clauses	Online marketplace	November 2013	Concluded
21	Government	German Federal Cartel Office investigation into Amazon's terms of business and practices towards sellers	Online marketplace	November 2018	Concluded
India					
22	Government	Competition Commission of India investigation into Amazon and Flipkart's preferencing of select sellers (No. 9 of 2020)	Online marketplace	January 2020	Ongoing
Italy					
23	Government	Italian Competition Authority investigation into Amazon	Online marketplace	April 2019	Concluded
24	Government	Italian Competition Authority investigation into Apple and Amazon for alleged collusion	Online marketplace	July 2020	Concluded
Japan					
25	Government	Japan Fair Trade Commission investigation into Amazon's price parity clauses	Online marketplace	August 2016	Concluded
26	Government	Japan Fair Trade Commission investigation into Amazon's abuse of market power	Online marketplace	March 2018	Concluded
27	Government	Japan Fair Trade Commission investigation into Amazon's unfair treatment of online third-party sellers	Online marketplace	November 2024	Ongoing
Spain					
28	Government	Spanish National Authority for Markets and Competition investigation into brand gating clauses (S/0013/21)	Online marketplace	June 2021	Concluded

	Matter type	Matter name	Service type	Start date, decision date, or first public reference	Status
Türkiye					
29	Government	Turkish Competition Authority investigation into algorithmic pricing by e-commerce firms including Amazon (23-49/940-M)	Online Marketplace	November 2023	Ongoing
United Kingdom					
30	Government	UK Office of Fair Trading investigation into Amazon's price parity policy (CE/9692/12)	Online marketplace	October 2012	Concluded
31	Government	UK Competition and Markets Authority investigation into Amazon's Marketplace	Online marketplace	July 2022	Concluded
32	Private action	Robert Hammond v Amazon.com Inc. & Others (1595/7/7/23), Julie Hunter v Amazon.com Inc. & Others (1568/7/7/22)	Online marketplace	June 2023	Ongoing
33	Private action	Christine Riefa Class Representative Limited v Apple Inc. and Amazon.com Inc. (1602/7/7/23)	Online Marketplace	July 2023	Concluded
34	Private action	Professor Andreas Stephan v Amazon.com Inc., Amazon Europe Core S.À.R.L, Amazon Services Europe S.À.R.L, Amazon EU S.À.R.L, Amazon UK Services Ltd, Amazon Payments UK Limited (1644/7/7/24)	Online marketplace	June 2024	Ongoing

Apple (United States)

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
United States					
35	Private action	In re Apple iPhone Antitrust Litigation (4:11-cv-06714)	App marketplace/ Mobile OS	December 2011	Ongoing
36	Private action	Donald R Cameron v Apple Inc. (4:19-cv-03074)	App marketplace/ Mobile OS	June 2019	Concluded
37	Private action	Epic Games Inc. v Apple Inc. (4:20-cv-05640)	App marketplace/ Mobile OS	August 2020	Concluded
38	Private action	Beverage et al v Apple Inc. (20-cv-370535)	App marketplace/ Mobile OS	September 2020	Concluded

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
39	Private action	Saurikit LLC v Apple Inc. (4:20-cv-08733)	App marketplace/ Mobile OS	December 2020	Concluded
40	Private action	AliveCor Inc. v Apple Inc. (4:21-cv-03958)	App marketplace/ Mobile OS	May 2021	Ongoing
41	Private action	Coronavirus Reporter v Apple Inc. (3:21-cv-05567)	App marketplace/ Mobile OS	July 2021	Ongoing
42	Private action	618Media Dijital Hizmetler Limited Sirketi v Apple Inc. (5:24-cv-02952)	App marketplace/ Mobile OS	May 2024	Ongoing
43	Government	United States v Apple Inc. et al (1:12-cv-02826)	App marketplace/ Mobile OS	April 2012	Concluded
44	Private action	DNAML Pty Ltd. v Apple Inc. (25 F. Supp. 3d 422)	App marketplace/ Mobile OS	September 2013	Concluded
45	Private action	Abbey House Media Inc. v Apple Inc. (14cv2000)	App marketplace/ Mobile OS	March 2014	Concluded
46	Private action	Lavoho, LLC v Apple Inc. (1:14-cv-01768)	App marketplace/ Mobile OS	March 2014	Concluded
47	Government	United States of America v Apple Inc. (2:24-cv-04055)	App marketplace/ Mobile OS	March 2024	Ongoing
48	Private action	Pierre et al v Apple Inc. (5:23-cv-05981)	App marketplace/ Mobile OS	November 2023	Concluded
49	Private action	Bakay et al v Apple Inc. (5:24-cv-00476)	App marketplace/ Mobile OS	January 2024	Ongoing
50	Private action	Collins et al v Apple Inc. (3:24-cv-01796)	App marketplace/ Mobile OS	March 2024	Ongoing
51	Private action	Goldfus v Apple Inc. (2:24-cv-04108)	App marketplace/ Mobile OS	March 2024	Ongoing
52	Private action	Kolinsky et al v Apple Inc. (2:24-cv-04232)	App marketplace/ Mobile OS	March 2024	Ongoing
53	Private action	Dwyer et al v Apple Inc. (5:24-cv-01844)	App marketplace/ Mobile OS	March 2024	Ongoing
54	Private action	Chiuchiarelli et al v Apple Inc. (5:24-cv-01895)	App marketplace/ Mobile OS	March 2024	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
55	Private action	Kurtz v Apple Inc. (2:24-cv-04355)	App marketplace/ Mobile OS	March 2024	Ongoing
56	Private action	Miller et al v Apple Inc. (5:24-cv-01988)	App marketplace/ Mobile OS	April 2024	Ongoing
57	Private action	Loewen v Apple Inc. (2:24-cv-07292)	App marketplace/ Mobile OS	April 2024	Ongoing
58	Private action	Affinity Credit Union v Apple Inc. (5:22-cv-04174)	Mobile wallet/ Mobile OS	July 2022	Ongoing
-	Private action	Floyd v Amazon.com Inc and Apple Inc (2:22-cv-01599)	Online marketplace	November 2022	Ongoing
59	Private action	California Crane School Inc v Google LLC, Alphabet Inc., XXVI Holdings Inc., Apple Inc., Cook, Pichai and Schmidt (4:21-cv-10001)	Search	December 2021	Ongoing
60	Private action	Arcell et al v Apple Inc. et al (5:22-cv-02499)	Search	April 2022	Ongoing
Australia					
61	Private action	Epic Games Inc & Anor v Apple Inc & Anor (NSD1236/2020)	App marketplace/ Mobile OS	November 2020	Ongoing
62	Private action	David Anthony v Apple Inc & Anor (VID341/2022)	App marketplace/ Mobile OS	June 2022	Ongoing
63	Government	Australian Competition and Consumer Commission investigation into access to NFC components on Apple mobile devices	Mobile wallet/ Mobile OS	September 2021	Concluded
Brazil					
64	Government	Brazil's Administrative Council for Economic Defence investigation into Apple relating to the market for iOS applications 08700.009531/2022-04	App marketplace/ Mobile OS	January 2023	Ongoing
China					
65	Private action	Bodyreader v Apple Inc.	App marketplace/ Mobile OS	November 2024	Ongoing
66	Private action	Shanghai Yuanbao Network Technology v Apple Electronic Trading (Beijing) Co.	App marketplace/ Mobile OS	November 2024	Ongoing
67	Private action	Jin Xin v Apple Inc.	App marketplace/ Mobile OS	February 2021	Concluded

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
European Union					
68	Government	European Commission investigation into app store practices re. music streaming (AT.40437 / Case T-260/24)	App marketplace/ Mobile OS	June 2020	Ongoing
69	Government	European Commission investigation into app store practices re. eBooks and Audiobooks (AT.40652)	App marketplace/ Mobile OS	June 2020	Concluded
70	Government	European Commission investigation into Apple Wallet (AT.40452)	Mobile wallet/ Mobile OS	June 2020	Concluded
France					
71	Government	French Competition Authority investigation into Apple's practices in the distribution of mobile apps	App marketplace/ Mobile OS	October 2020	Unknown
Germany					
72	Government	German Federal Cartel Office investigation into Apple's tracking rules for third-party apps	App marketplace/ Mobile OS	June 2022	Ongoing
73	Government	German Federal Cartel Office investigation into Audible/ Amazon and Apple's audiobooks agreement	Online marketplace	November 2015	Concluded
India					
74	Government	Competition Commission of India investigation into Apple's App Store practices	App marketplace/ Mobile OS	December 2021	Unknown
Italy					
75	Government	Italian Competition Authority v Apple Inc., Apple Distribution International Ltd, Apple Italia S.r.l.	App marketplace/ Mobile OS	May 2023	Ongoing
Japan					
76	Government	Japan Fair Trade Commission investigation into Apple Inc. relating to the App Store	App marketplace/ Mobile OS	October 2016	Concluded
The Netherlands					
77	Private action	Right to Consumer Justice v Apple Inc.	App marketplace/ Mobile OS	November 2021	Unknown
78	Government	The Netherlands Authority for Consumers and Markets investigation into abuse of dominance by Apple in its App Store	App marketplace/ Mobile OS	April 2019	Concluded

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
Romania					
79	Government	Romanian Competition Council investigation into Apple's iOS app-based advertising	App marketplace/ Mobile OS	October 2023	Unknown
Russia					
80	Government	Russian Competition Authority investigation into Apple's anti-steering clause in App Store Review Guidelines	App marketplace/ Mobile OS	October 2021	Concluded
South Korea					
81	Government	Korea Fair Trade Commission investigation into Apple's commissions from app developers	App marketplace/ Mobile OS	September 2022	Ongoing
Türkiye					
82	Government	Turkish Competition Authority investigation into Apple Inc regarding alternative payment systems on the App Store	App marketplace/ Mobile OS	June 2024	Ongoing
United Kingdom					
83	Government	UK Competition and Markets Authority investigation into Apple App Store Case 60015	App marketplace/ Mobile OS	March 2021	Concluded
84	Private action	Dr Rachael Kent v Apple Inc. and Apple Distribution International Ltd (1403/7/7/21)	App marketplace/ Mobile OS	May 2021	Ongoing
85	Private action	Dr Sean Ennis v Apple Inc and Others (1601/7/7/23)	App marketplace	July 2023	Ongoing
86	Private action	Consumers' Association ("Which?") v Apple Inc. and Ors (1689/7/7/24)	Consumer cloud services/ Mobile OS	November 2024	Ongoing
-	Private action	Christine Riefa Class Representative Limited v Apple Inc. and Amazon.com Inc (1602/7/7/23)	Online Marketplace	July 2023	Concluded

Google (United States)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
United States					
87	Private action	Epic Games Inc. v Google LLC et al (3:20-cv-05671)	App marketplace/ Mobile OS	August 2020	Ongoing
		Epic Games Inc. v Google LLC et al (24-6256)	App marketplace/ Mobile OS	October 2024	Ongoing
88	Private action	McCready v Google LLC et al (1:20-cv-03556)	App marketplace/ Mobile OS	December 2020	Ongoing
89	Private action	Blumberg v Google LLC et al (1:20-cv-03557)	App marketplace/ Mobile OS	December 2020	Ongoing
90	Private action	Ratliff v Google LLC et al (3:20-cv-00833)	App marketplace/ Mobile OS	December 2020	Ongoing
91	Private action	Black v Google LLC et al (4:21-cv-00077)	App marketplace/ Mobile OS	January 2021	Ongoing
92	Private action	Alexander v Google LLC et al (3:21-cv-01201)	App marketplace/ Mobile OS	January 2021	Ongoing
93	Private action	In Re Google Play Developer Antitrust Litigation (3:20-cv-05792)	App marketplace/ Mobile OS	August 2020	Ongoing
94	Private action	Peekya Services Inc. v Google LLC et al (3:20-cv-06772)	App marketplace/ Mobile OS	September 2020	Ongoing
95	Private action	Bentley et al v Google LLC et al (3:20-cv-07079)	App marketplace/ Mobile OS	October 2020	Ongoing
96	Private action	McNamara v Google LLC et al (3:20-cv-07361)	App marketplace/ Mobile OS	October 2020	Ongoing
97	Private action	Herrera v Google LLC (3:20-cv-07365)	App marketplace/ Mobile OS	October 2020	Ongoing
98	Private action	Carroll v Google LLC (3:20-cv-07379)	App marketplace/ Mobile OS	October 2020	Ongoing
99	Private action	Paige v Google LLC et al (1:20-cv-03158)	App marketplace/ Mobile OS	October 2020	Ongoing
100	Government	State of Utah et al v Google LLC et al (3:21-cv-05227)	App marketplace/ Mobile OS	July 2021	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
101	Private action	Unlockd Media, Inc. Liquidation Trust v Google LLC (4:21-cv-07250)	App marketplace/ Mobile OS	September 2021	Ongoing
102	Private action	Epic Games, Inc. v Samsung Electronics Co. Ltd, Samsung Electronics America Inc and Google LLC (3:24-cv-06843)	App marketplace/ Mobile OS	September 2024	Ongoing
103	Private action	Dreamstime.com LLC v Google LLC (5:18-cv-01910)	Advertising services	March 2018	Concluded
104	Government	State of Texas et al v Google LLC (Google Ad Tech) (4:20-cv-00957)	Advertising services	December 2020	Ongoing
105	Government	United States et al v Google LLC et al (1:23-cv-00108)	Advertising services	January 2023	Ongoing
106	Private action	In Re Google Digital Advertising Antitrust Litigation (5:20-cv-03556)	Advertising services	May 2020	Ongoing
107	Private action	In Re Google Digital Publisher Antitrust Litigation (5:20-cv-08984)	Advertising services	December 2020	Ongoing
108	Private action	SPX Total Body Fitness LLC v Google LLC (4:21-cv-00801)	Advertising services	February 2021	Ongoing
109	Private action	Cliffy Care Landscaping LLC v Facebook Inc, Google LLC and Alphabet LLC (1:21-cv-00360)	Advertising services	February 2021	Ongoing
110	Private action	Coastal Point LLC v Google LLC and Facebook Inc. (1:21-cv-00554)	Advertising services	April 2021	Ongoing
111	Private action	AIM Media Indiana Operating LLC v Facebook Inc. and Google LLC (1:21-cv-00951)	Advertising services	April 2021	Ongoing
112	Private action	Flag Publications Inc v Google LLC and Facebook Inc. (1:21-cv-00965)	Advertising services	April 2021	Ongoing
113	Private action	Journal Inc. v Google LLC and Facebook Inc. (1:21-cv-00072)	Advertising services	April 2021	Ongoing
114	Private action	Emmerich Newspapers Incorporated et al v Google LLC and Facebook Inc. (3:21-cv-00274)	Advertising services	April 2021	Ongoing
115	Private action	Gale Force Media LLC v Google LLC and Facebook Inc. (2:21-cv-09716)	Advertising services	April 2021	Ongoing
116	Private action	AIM Media Midwest Operating LLC v Google LLC and Facebook Inc. (2:21-cv-01915)	Advertising services	April 2021	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
117	Private action	Eagle Printing Company v Google LLC and Facebook Inc. (2:21-cv-00518)	Advertising services	April 2021	Ongoing
118	Government	State of Texas et al v Google LLC (4:20-cv-00957)	Advertising services	December 2020	Ongoing
119	Private action	AIM Media Texas Operating LLC v Google LLC and Facebook Inc. (7:21-cv-00150)	Advertising services	April 2021	Ongoing
120	Private action	Clarksburg Publishing Company v Google LLC and Facebook Inc. (1:21-cv-00051)	Advertising services	April 2021	Ongoing
121	Private action	HD Media Company LLC v Google LLC et al (3:21-cv-00077)	Advertising services	January 2021	Ongoing
122	Private action	Ecent Corporation v Google LLC and Facebook Inc. (5:21-cv-00251)	Advertising services	April 2021	Ongoing
123	Private action	Brown County Publishing Company Inc et al v Google LLC and Facebook Inc. (1:21-cv-00498)	Advertising services	April 2021	Ongoing
124	Private action	Associated Newspapers Ltd et al v Google LLC and Alphabet Inc. (1:21-cv-03446)	Advertising services	April 2021	Ongoing
125	Private action	Rumble Canada Inc. v Google LLC and Alphabet Inc. (1:24-cv-09904)	Advertising Services	December 2024	Ongoing
126	Government	United States of America et al v Google LLC (1:20-cv-03010)	Search	August 2020	Concluded
127	Private action	Feitelson v Google Inc. (14-cv-02007-BLF)	Search/Mobile OS	May 2014	Concluded
128	Private Action	Associated Newspapers Ltd. et al v Google LLC et al (1:2021cv03446)	Search	April 2021	Ongoing
-	Private action	California Crane School Inc. v Google LLC, Alphabet Inc., XXVI Holdings Inc., Apple Inc., Cook, Pichai and Schmidt (4:21-cv-10001)	Search	December 2021	Ongoing
129	Private action	Rumble, Inc. v Google LLC et al (4:2021-cv-00229)	Search	January 2021	Ongoing
130	Private action	Yelp Inc. v Google LLC (3:24-cv-06101)	Search	August 2024	Ongoing
131	Private action	Chegg, Inc. v Google LLC (1:25-cv-00543)	Search	February 2025	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
132	Private action	Dream Big Media Inc, Getify Solutions Inc, and Sprinter Supplier LLC v Alphabet Inc. and Google LLC (5:22-cv-2314)	Software	April 2022	Ongoing
		Dream Big Media Inc, Getify Solutions Inc, and Sprinter Supplier LLC v Alphabet Inc. and Google LLC (24-4968)	Software	August 2024	Ongoing
Argentina					
133	Government	Argentina's National Commission for Competition Defence investigation into Google in relation to the search market	Search	1 November 2010	Unknown
Australia					
134	Government	Australian Competition and Consumer Commission investigation into Google's ad tech services	Advertising services	June 2022	Ongoing
135	Government	Australian Competition and Consumer Commission investigation into Google's advertising and mobile OS services	Advertising services/ Mobile OS	December 2018	Concluded
136	Private action	Unlockd Ltd v Google Asia Pacific Pte Ltd & Anor (VID628/2018)	Advertising services/ Mobile OS	May 2018	Concluded
137	Private action	Epic Games, Inc. & Anor v Google LLC & Ors (NSD190/2021)	App marketplaces	March 2021	Ongoing
138	Private action	Brett McDonald v Google LLC & Ors (VID342/2022)	App Marketplaces	June 2022	Ongoing
139	Private action	Hamilton v Meta Platforms, Inc. and Google LLC [2023] FCA 1148 (NSD 899/2020)	Advertising services	August 2020	Concluded
140	Private action	Q News Pty Ltd & Anor v Google LLC & Ors (VID1375/2024)	Advertising services	December 2024	Ongoing
141	Private action	Riverine Grazier Pty Ltd & Anor v Google LLC & Ors (VID164/2025)	Advertising services	February 2025	Ongoing
142	Government	Australian Competition and Consumer Commission investigation into Google's search services	Search	June 2022	Ongoing

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
Brazil					
143	Government	Brazil's Administrative Council for Economic Defence v Google and Facebook Online Services of Brazil LTDA 08700.006751/2022-78	Advertising services	September 2022	Concluded
144	Government	Brazil's Administrative Council for Economic Defence v Google 08700.005694/2013-19	Advertising services	June 2013	Concluded
145	Government	Brazil's Administrative Council for Economic Defence v Google 08700.002969/2024-61	App marketplace	December 2024	Ongoing
146	Government	Brazil's Administrative Council for Economic Defence v Google 08700.002940/2019-76	Mobile OS	June 2019	Ongoing
147	Government	Brazil's Administrative Council for Economic Defence v Google 08012.010483/2011-94	Search	October 2013	Concluded
148	Government	Brazil's Administrative Council for Economic Defence v Google 08700.009082/2013-03	Search	October 2013	Concluded
149	Government	Brazil's Administrative Council for Economic Defence v Google 08700.003498/2019-03	Search	July 2019	Concluded
150	Government	Brazil's Administrative Council for Economic Defence v Google, Meta and Telegram (2023) 08700.003089/2023-85	Search, social media and messaging	May 2023	Ongoing
Canada					
151	Government	Commissioner of Competition v Google Canada Corporation and Google LLC	Advertising services	November 2024	Ongoing
152	Government	Canada Competition Bureau's investigation into Google's conduct in online search, search advertising and display advertising	Search and advertising services	May 2013	Concluded
China					
153	Government	China's State Administration for Market Regulation investigation into Google under Anti-Monopoly Act	Not specified	February 2025	Ongoing
Czech Republic					
154	Government	Office for the Protection of Competition investigation into Google Shopping	Online marketplace	2024	Concluded

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
European Union					
155	Government	European Commission investigation into Google AdSense (AT.40411)	Advertising services	July 2016	Ongoing
156	Government	European Commission investigation into Google's Ad-tech and Data-related practices (AT.40670)	Advertising services	June 2021	Ongoing
157	Government	European Commission investigation into Google and Facebook – Open Bidding Agreement (AT.40774)	Advertising services	March 2022	Concluded
158	Government	European Commission investigation into Google Shopping (AT. 39740)	Search	November 2010	Concluded
		Google LLC and Alphabet Inc. v European Commission (T-612/17)	Search	September 2017	Concluded
		Google LLC and Alphabet Inc. v European Commission (C-48/22 P)	Search	January 2022	Concluded
159	Government	European Commission investigation into Google Android (AT.40099)	App marketplace; Mobile OS; Search	April 2015	Concluded
		Google LLC and Alphabet Inc. v European Commission (T-604/18)	App marketplace Mobile OS Search	October 2018	Concluded
		Google LLC and Alphabet Inc. v European Commission (Appeal) (C-738-22 P)	App marketplace Mobile OS Search	February 2023	Ongoing
France					
160	Government	French Competition Authority investigation into Google's online advertising services	Advertising services	March 2015	Concluded
161	Government	French Competition Authority investigation into Google's online advertising services	Advertising services	June 2017	Concluded
162	Government	French Competition Authority investigation into Google relating to news publishers and news agencies	Search News Services	November 2019	Concluded
India					
163	Government	Competition Commission of India investigation into Google Ad-Tech	Advertising services	January 2025	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
164	Government	Competition Commission of India investigation into Google Play billing (No. 1)	App marketplace	November 2020	Concluded
165	Government	Competition Commission of India investigation into Google Play billing (No. 2)	App marketplace	March 2024	Ongoing
166	Government	Competition Commission of India investigation into Google Play (Real money gaming apps)	App marketplace	November 2024	Ongoing
167	Government	Competition Commission of India investigation into Google India Private Limited	App marketplace	2023	Concluded
168	Private action	Testbook Edu Solutions Pvt Ltd v Google India Pvt Ltd	App Marketplace	April 2024	Ongoing
169	Government	Competition Commission of India investigation into Android	Mobile OS; App Marketplace; Search	May 2019	Concluded
170	Government	Competition Commission of India investigation into Android, Android TV exclusivity arrangements with manufacturers	Mobile OS Smart TV OS	October 2020	Concluded
171	Government	Competition Commission of India investigation into leveraging dominant market position of Gmail	Software	2020	Concluded
Indonesia					
172	Government	Indonesia Competition Commission investigation into Google Play Billing practices	App marketplace	September 2022	Ongoing
Italy					
173	Government	Italian Competition Authority investigation into Android Auto	App marketplace	May 2019	Concluded
174	Government	Italian Competition Authority investigation into Google's Display Advertising	Advertising services	October 2020	Ongoing
175	Government	Italian Competition Authority investigation into Google for abuse of dominant position in preventing data portability	Software; Mobile OS	July 2022	Concluded
Japan					
176	Government	Japan Fair Trade Commission investigation into Google compliance with Yahoo search advertising agreement	Search	March 2024	Concluded

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
177	Government	Japan Fair Trade Commission investigation of Android OEM agreements	Mobile OS	October 2023	Ongoing
Russia					
178	Government	Federal Antimonopoly Service investigation into Android OEM agreements	Mobile OS	February 2015	Concluded
Spain					
179	Government	Spanish National Authority for Markets and Competition investigation into Google's anticompetitive practices affecting Spanish publishers of press publications and news agencies	Search	March 2023	Ongoing
South Africa					
180	Private action	Lottoland South Africa v Google Ireland Ltd, Google South Africa Pty Ltd (IR191Mar23)	Advertising services; Search	March 2023	Concluded
South Korea					
181	Government	Korea Fair Trade Commission investigation into Google advertising	Advertising services	May 2021	Ongoing
182	Government	Korea Communications Commission investigation into access to Android Auto	App marketplace/ Mobile OS	May 2021	Ongoing
183	Government	Korea Fair Trade Commission investigation into Play Store agreements with game developers	App marketplace/ Mobile OS	April 2018	Ongoing
184	Government	Korea Fair Trade Commission investigation into in-app payment policies	App marketplace/ Mobile OS	October 2020	Ongoing
185	Government	Korea Communications Commission investigation into in-app payment policies (No. 1)	App marketplace/ Mobile OS	August 2020	Concluded
186	Private action	OneStore v Google Inc.	App marketplace/ Mobile OS	July 2024	Ongoing
187	Private action	Korea Publishers Association v Google Inc.	App marketplace/ Mobile OS	October 2022	Ongoing
188	Government	Korea Fair Trade Commission investigation into YouTube Premium and YouTube Music bundling	Content aggregation	February 2023	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
189	Government	Korea Fair Trade Commission investigation into Android (No. 1)	App marketplace/ Mobile OS	2011	Concluded
190	Government	Korea Fair Trade Commission investigation into Android (No. 2)	App marketplace/ Mobile OS	July 2016	Ongoing
191	Government	Korea Fair Trade Commission investigation into Google, Facebook, Naver, and Kakao's terms of service	Other	March 2019	Concluded
192	Government	Korea Fair Trade Commission investigation into Telecom firms' internet carriage fee agreements with Google, Facebook	Other	September 2019	Unknown
Türkiye					
193	Government	Turkish Competition Authority investigation into Google Search and AdWords	Search, Advertising services	January 2019	Concluded
194	Government	Turkish Competition Authority investigation into Google Ads, DV360, and AdX	Advertising services	June 2023	Concluded
195	Government	Turkish Competition Authority investigation into Android OEM Agreements	Mobile OS	February 2017	Concluded
196	Government	Turkish Competition Authority investigation into Search and Shopping	Search	July 2018	Concluded
197	Government	Turkish Competition Authority investigation into Search self-preferencing of local and hotel search	Search	March 2019	Concluded
198	Government	Turkish Competition Authority investigation into search self-preferencing of other features	Search	February 2023	Concluded
United Kingdom					
199	Government	UK Competition and Markets Authority investigation into Google's 'Privacy Sandbox' browser changes	Advertising services	January 2021	Concluded
200	Government	UK Competition and Markets Authority investigation into agreement between Google and Meta, header bidding behaviour by Google	Advertising services	March 2022	Concluded
201	Government	UK Competition and Markets Authority investigation into suspected anti-competitive conduct by Google in ad tech	Advertising services	May 2022	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
202	Private action	Ad Tech Collective Action LLP v Alphabet Inc. & Others (1572/7/7/22; 1582/7/7/23)	Advertising services	October 2023	Ongoing
203	Government	UK Competition and Markets Authority Investigation into suspected anti-competitive conduct by Google	App marketplace/ Mobile OS	June 2022	Concluded
204	Private action	Epic Games, Inc. and Others v Alphabet Inc., Google LLC and Others (1378/5/7/20)	App marketplace/ Mobile OS	December 2020	Ongoing
205	Private action	Elizabeth Helen Coll v Alphabet Inc. and Others (1408/7/7/21)	App marketplace/ Mobile OS	July 2021	Ongoing
206	Private action	Professor Barry Rodger v Alphabet Inc. and Others (1673/7/7/24)	App marketplace	August 2024	Ongoing
207	Private action	Unlockd Ltd and Others v Google Ireland Ltd and Others (1283/5/7/18)	Mobile OS	June 2018	Concluded
208	Private action	Kelkoo.com (UK) Ltd & Others v Google UK Ltd & Others (1424/5/7/21)	Search	November 2021	Ongoing
209	Private action	Infederation Ltd v Google Inc. and Others (1589/5/7/23)	Online marketplace	May 2023	Ongoing
210	Private action	Whitewater Capital Limited v Google LLC and Alphabet Inc. (1596/5/7/23)	Online marketplace	June 2023	Ongoing
211	Private action	Skimbit Limited v Google UK Ltd and Others (1636/5/7/24)	Online marketplace	March 2024	Ongoing
212	Private action	Nikki Stopford v Alphabet Inc and Others (1606/7/7/23)	Search; Mobile OS	September 2023	Ongoing

Meta (United States)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
United States					
213	Private action	Affilious Inc., Frederick, NJ Premier Inc. & Ors v Facebook Inc. (5:20-cv-09217)	Advertising services	December 2020	Ongoing
214	Private action	Layser v Facebook Inc. (5:21-cv-00337)	Advertising services	January 2021	Ongoing
-	Private action	Cliffy Care Landscaping LLC v Facebook Inc, Google LLC and Alphabet LLC (1:21-cv-00360)	Advertising services	February 2021	Ongoing
215	Private action	Klein et al v Facebook Inc. (3:20-cv-08570)	Advertising services	April 2021	Ongoing
-	Private action	AIM Media Indiana Operating LLC v Facebook Inc. and Google LLC (1:21-cv-00951)	Advertising services	April 2021	Ongoing
-	Private action	Flag Publications Inc v Google LLC and Facebook Inc. (1:21-cv-00965)	Advertising services	April 2021	Ongoing
-	Private action	Journal Inc. v Google LLC and Facebook Inc. (1:21-cv-00072)	Advertising services	April 2021	Ongoing
-	Private action	Emmerich Newspapers Incorporated et al v Google LLC and Facebook Inc. (3:21-cv-00274)	Advertising services	April 2021	Ongoing
-	Private action	Gale Force Media LLC v Google LLC and Facebook Inc. (2:21-cv-09716)	Advertising services	April 2021	Ongoing
-	Private action	AIM Media Midwest Operating LLC v Google LLC and Facebook Inc. (2:21-cv-01915)	Advertising services	April 2021	Ongoing
-	Private action	Eagle Printing Company v Google LLC and Facebook Inc. (2:21-cv-00518)	Advertising services	April 2021	Ongoing
-	Private action	AIM Media Texas Operating LLC v Google LLC and Facebook Inc. (7:21-cv-00150)	Advertising services	April 2021	Ongoing
-	Private action	Clarksburg Publishing Company v Google LLC and Facebook Inc. (1:21-cv-00051)	Advertising services	April 2021	Ongoing
-	Private action	Ecent Corporation v Google LLC and Facebook Inc. (5:21-cv-00251)	Advertising services	April 2021	Ongoing
-	Private action	Brown County Publishing Company Inc et al v Google LLC and Facebook Inc. (1:21-cv-00498)	Advertising services	April 2021	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
216	Private action	Reveal Chat Holdco LLC v Facebook Inc. (5:20-cv-00363)	Advertising services	January 2020	Concluded
217	Government	US Federal Trade Commission v Meta Platforms Inc. (1:20-cv-03590)	Social media	December 2020	Ongoing
218	Private action	State of New York and Ors. v Facebook Inc. (1:20-cv-03589)	Social media	December 2020	Ongoing
219	Private action	Klein et al v Facebook Inc. (5:20-cv-08570)	Social media	December 2020	Ongoing
220	Private action	Sherman et al v Facebook Inc. (5:20-cv-08721)	Social media	December 2020	Ongoing
221	Private action	Dames et al v Facebook Inc (4:20-cv-08817)	Social media	December 2020	Ongoing
222	Private action	Kupcho v Facebook Inc. (5:20-cv-08815)	Social media	December 2020	Ongoing
223	Private action	Steinberg v Facebook Inc. (5:20-cv-09130)	Social media	December 2020	Ongoing
224	Private action	Klein et al v Facebook Inc. (3:20-cv-08570)	Social media	April 2021	Ongoing
225	Private action	Phhphoto Inc. v Meta Platforms Inc. (21-cv-06159)	Social media	November 2021	Ongoing
226	Private action	Andrew Elijah Immersive Inc. v Meta Platforms Technologies (3:23-cv-05159)	Virtual reality	October 2023	Concluded
Argentina					
227	Government	Argentinian National Commission for Competition Defence investigation into WhatsApp's Privacy Policy	Messaging	May 2021	Ongoing
Australia					
228	Private action	Hamilton v Meta Platforms Inc. and Google LLC [2023] FCA 1148	Advertising services	August 2020	Concluded
229	Private action	Dialogue Consulting Pty Ltd v Instagram Inc. & Ors (VID369/2019)	Social media	April 2019	Ongoing
Brazil					
-	Government	Brazil's Administrative Council for Economic Defence investigation into Google and Facebook Online Services of Brazil LTDA 08700.006751/2022-78	Advertising services	September 2022	Concluded

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
-	Government	Brazil's Administrative Council for Economic Defence investigation into Google, Meta and Telegram (2023) 08700.003089/2023-85	Search, Social media and Messaging	May 2023	Ongoing
European Union					
-	Government	European Commission investigation into Google & Facebook – Open Bidding Agreement (AT.40774)	Advertising services	March 2022	Concluded
230	Government	European Commission investigation into tying of Facebook to Facebook Marketplace (AT.40684)	Social media, Online marketplace	June 2021	Ongoing
France					
231	Government	French Competition Authority investigation into Meta's online advertising services (Decision 22-D-12 of 16 June 2022)	Advertising services	September 2019	Concluded
232	Government	French Competition Authority investigation into Meta's ad verification processes	Advertising services	May 2023	Ongoing
Germany					
233	Government	German Federal Cartel Office investigation into Meta relating to their processing of user data	Social media	February 2019	Concluded
234	Government	German Federal Cartel Office investigation into integration between Meta Quest (formerly Oculus) with the Facebook network	Social media	December 2020	Concluded
India					
235	Government	Competition Commission of India investigation into WhatsApp's Updated Terms of Service and Privacy Policy	Messaging	January 2021	Concluded
South Korea					
-	Government	Korea Fair Trade Commission investigation into Google, Facebook, Naver, and Kakao's terms of service	Other	March 2019	Concluded
-	Government	Korea Fair Trade Commission investigation into Telecom firms internet carriage fee agreements with Google, Facebook	Other	September 2019	Concluded

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
Türkiye					
236	Government	Turkish Competition Authority investigation into WhatsApp data integration with other Meta services	Social media	January 2021	Concluded
237	Government	Turkish Competition Authority investigation into tying Threads accounts to Instagram	Social media	December 2023	Concluded
United Kingdom					
238	Government	UK Competition and Markets Authority investigation into Meta's use of data in online advertising services	Advertising services	June 2021	Concluded
239	Private action	Dr Liza Lovdahl Gormsen v Meta Platforms Inc. and Others (1433/7/7/22)	Social media	February 2022	Ongoing

Microsoft (United States)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
United States					
240	Private action	Xockets Inc. v Nvidia Corporation, Microsoft Corporation and RPX Corporation (6:24-cv-00453)	Cloud services	September 2024	Ongoing
241	Private action	DeMartini et al v Microsoft Corporation (3:22-cv-08991)	Video gaming	December 2022	Ongoing
China					
242	Government	China's State Administration for Industry and Commerce investigation into Windows licensing	Desktop OS	July 2013	Concluded
European Union					
243	Government	European Commission investigation into tying and bundling of Teams (No.1) (AT.40721)	Messaging	July 2023	Concluded
244	Government	European Commission investigation into tying and bundling of Teams (No. 2) (AT.40873)	Messaging	June 2024	Ongoing

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
India					
245	Government	Competition Commission of India Investigation into bundling Microsoft Windows 10 with Microsoft Defender (case no 03/2024)	Desktop OS	April 2024	Concluded
Russia					
246	Government	Russian Federal Antimonopoly Service investigation into bundling Windows and antivirus software	Desktop OS	November 2016	Concluded
Türkiye					
247	Government	Turkish Competition Authority investigation into Windows distribution practices	Desktop OS	September 2012	Concluded
248	Government	Turkish Competition Authority investigation into Windows internet café licensing (No. 1)	Desktop OS	January 2011	Concluded
249	Government	Turkish Competition Authority investigation into Windows internet café licensing (No. 2)	Desktop OS	April 2017	Concluded
United Kingdom					
250	Private action	Dr Maria Luisa Stasi v Microsoft Corporation, Microsoft Ltd & Microsoft Ireland Operations Ltd (1696/7/7/24)	Cloud services	December 2024	Ongoing
251	Private action	JJH Enterprises Limited (trading as ValueLicensing) v Microsoft Corporation and Others (1570/5/7/22)	Software	May 2021	Ongoing

Other Large Digital Platforms in G20 Jurisdictions

Booking.com (Netherlands)

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
Brazil					
252	Government	Brazil's Administrative Council for Economic Defence investigation into Booking.com and other online travel agencies regarding most-favoured-nation clauses 08700.005679/2016-13	Online travel booking service	2016	Concluded
European Union					
253	Government	French, Italian and Swedish national competition authorities' investigation into Booking.com's price parity clauses	Online travel booking service	December 2014	Concluded
254	Private action	Booking.com BV, Booking.com (Deutschland) GmbH v 25Hours Hotel Company Berlin GmbH et al (C-264/23)	Online travel booking service	October 2020	Ongoing
Germany					
255	Government	German Federal Cartel Office investigation into Booking.com's 'best price' clauses	Online travel booking service	April 2015	Concluded
Italy					
256	Government	Italian Competition Authority investigation into Booking.com's Preferred Partner Program	Online travel booking service	March 2024	Concluded
Japan					
257	Government	Japan Fair Trade Commission investigation into Booking.com's price parity clauses	Online travel booking service	December 2021	Concluded
Spain					
258	Government	Spanish National Commission on Markets and Competition investigation into Booking.com	Online travel booking service	October 2017	Concluded
Türkiye					
259	Private action	Association of Turkish Travel Agencies (TURSAB) v Booking.com	Online travel booking service	March 2017	Concluded

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
United Kingdom					
260	Government	UK Competition and Markets Authority investigation into Booking.com, Expedia, and IHG in relation to discounting restrictions in hotels and online travel agents' arrangements	Online travel booking service	September 2010	Concluded
261	Government	UK Competition and Markets Authority monitoring of Booking.com, Expedia and IHG's pricing practices	Online travel booking service	September 2015	Concluded

Yandex (Russia)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
Russia					
262	Government	Russian Federal Antimonopoly Service investigation into Yandex Search's self preferencing	Search	March 2021	Concluded

Alibaba (China)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
China					
263	Government	China's State Administration for Market Regulation investigation into Alibaba's exclusivity arrangements with merchants	Online Marketplace	December 2020	Concluded

Baidu (China)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
China					
264	Private action	Shanghai Hantao Information Consulting Co Ltd v Baidu Inc and Others.	Search	April 2016	Concluded

Tencent (China)

Matter type		Matter name	Service type	Start date, decision date or first public reference	Status
China					
265	Private action	Beijing Qihoo 360 Technology Co v Tencent Technology (Shenzhen) Co	Social media	December 2010	Concluded

Kakao (South Korea)

Matter type	Matter name	Service type	Start date, decision date or first public reference	Status	
South Korea					
-	Government	Korea Fair Trade Commission investigation into Google, Facebook, Naver, and Kakao's terms of service	Other	March 2019	Concluded

Naver (South Korea)

	Matter type	Matter name	Service type	Start date, decision date or first public reference	Status
South Korea					
-	Government	Korea Fair Trade Commission investigation into Google, Facebook, Naver, and Kakao's terms of service	Other	March 2019	Concluded
266	Government	Korea Fair Trade Commission investigation into Naver Search	Search	May 2013	Concluded
267	Government	Korea Fair Trade Commission investigation into Naver's self-preferencing of real estate, shopping and video	Search	2018	Concluded



Appendix B – Status of ACCC recommendations from the Digital Platforms Inquiry and the Digital Platform Services Inquiry

Appendix B – Status of ACCC recommendations from the Digital Platforms Inquiry and the Digital Platform Services Inquiry

Recommendation	Government response	Current status
Regulatory Reform Report (September 2022) & Government response (December 2023)		
Recommendation 1 Economy wide consumer measures, including an economy-wide prohibition against unfair trading practices and strengthening of the unfair contract terms laws	Support in principle	<p>On 9 November 2023, changes to the Australian Consumer Law came into effect that prohibit businesses from proposing, using, or relying on unfair contract terms in standard form contracts with consumers and small businesses. The changes will allow Courts to impose substantial penalties on businesses and individuals who include unfair terms in their standard form contracts. The maximum financial penalties for businesses under the new unfair contract terms law are the greatest of:</p> <ul style="list-style-type: none"> ▪ \$50,000,000 ▪ three times the value of the 'reasonably attributable' benefit obtained from the conduct, if the court can determine this, or ▪ if a court cannot determine the benefit, 30 per cent of adjusted turnover during the breach period. <p>The changes will also expand the coverage of the unfair contract term laws to apply to more small business contracts than before. The threshold for small business contracts will increase to apply to small business that employ fewer than 100 persons or have an annual turnover of less than \$10 million.</p> <p>From 15 November 2024 to 13 December 2024, the Government consulted on proposed amendments to the Australian Consumer Law that would prohibit unfair trading practices. On 14 March 2025, the Government announced that it would also consult in 2025 on the design of unfair trading practices protections for small businesses.</p>

Recommendation	Government response	Current status
Recommendation 2 Digital platform specific consumer measures, including: <ul style="list-style-type: none"> ■ mandatory processes to prevent and remove scams, harmful apps and fake reviews ■ mandatory internal dispute resolution standards ■ ensuring consumers and small businesses have access to an independent external ombuds scheme 	Support in principle	Scams <p>The 2023–25 Budget provided \$86.5 million in 2024–25 for anti-scam measures including the establishment of a new National Anti-Scam Centre within the ACCC.</p> <p><i>The Scams Prevention Framework Act 2025</i> received Royal Assent on 20 February 2025. The Scams Prevention Framework sets out principle-based obligations that require regulated entities to take reasonable steps to prevent, detect, disrupt, report and respond to scams. The Framework also establishes governance and reporting processes to support these obligations and introduces civil penalties for non-compliance.</p> <p>Under the Framework, the relevant Treasury Minister can designate participants within sectors of the economy to be regulated entities, which will be subject to the Framework's obligations. The Government has committed to first designating banks, telecommunications, and certain digital platforms (initially including social media, paid search advertising and direct messaging services).</p> <p>The Scams Prevention Framework also establishes a single external dispute resolution scheme (to be operated by the Australian Financial Complaints Authority for at least the first three designated sectors), offering scam victims an avenue to have their complaints heard by an independent third party and to seek compensation.</p> <p>The ACCC will be the general regulator for the Scams Prevention Framework and the sector regulator for the digital platforms sector. The Australian Securities and Investment Commission (ASIC) and the Australian Communications and Media Authority (ACMA) will be the sector regulator for the banking and telecommunications sectors, respectively.</p> <p>Dispute resolution standards</p> <p>The Government response to the ACCC Digital Platform Services Inquiry stated that the Government would undertake further work to develop internal and external dispute resolution requirements. As a first step, the Government called on industry to develop voluntary internal dispute resolution standards by July 2024. As of 20 March 2025, these voluntary standards have not yet been published.</p>
Recommendation 3 Additional competition measures for digital platforms including a new power to make mandatory codes of conduct for 'designated' digital platforms based on principles set out in legislation	Support in principle (December 2023) New regime proposed (December 2024)	<p>On 2 December 2024, the Government commenced consultation on a proposed approach to implement a new digital competition regime administered by the ACCC. The consultation period concluded on 14 February 2025.</p> <p>The proposed framework would introduce new, up-front competition obligations for certain 'designated' digital platforms with a critical position in the Australian economy. The framework would be established in primary legislation and supplemented by subordinate legislation that would impose further detailed obligations on specified digital platform services at the service level.</p> <p>The proposal paper for this consultation suggested that the first services investigated for designation under the regime would be app marketplace services and ad tech services. The paper also sought stakeholder views about the priority that should be given to social media services.</p>

Recommendation	Government response	Current status
Recommendation 4 Targeted competition obligations to address anti-competitive conduct on platforms	Support in principle (December 2023) New regime proposed (December 2024)	See Recommendation 3 above.

Recommendation	Government response	Current status
Final Report of the Digital Platforms Inquiry (2019) & Government response (December 2019)		
Recommendation 1 Changes to merger law	Recommendation 1 – Note	<p>On 10 December 2024, the <i>Treasury Laws Amendment (Mergers and Acquisitions Reform) Act 2024</i> received Royal Assent. The Act creates a mandatory obligation on parties to certain acquisitions that meet specified thresholds to notify the ACCC before proceeding, with the ACCC as the primary decision maker. These thresholds will be specified in legislative instruments.</p> <p>The Government has announced that there will be three economy-wide notification thresholds under the new regime, which will be consulted on further in 2025 and include:</p> <ul style="list-style-type: none"> ■ a monetary threshold, where an acquisition must be notified if the target has a material connection to Australia, and meets the following limbs: <ul style="list-style-type: none"> – the combined Australian turnover of the businesses involved is at least \$200 million – either the businesses or assets being acquired have Australian turnover of at least \$50 million, or – the global transaction value is at least \$250 million ■ an additional targeted threshold for any acquisition involving a very large acquirers with Australian turnover of at least \$500 million buying a smaller business or assets with Australian turnover of at least \$10 million ■ a separate three-year cumulative threshold, for all acquisitions by businesses with combined Australian turnover of at least \$200 million where the cumulative Australian turnover from acquisitions in the same or substitutable goods or services over a three-year period is at least \$50 million, or \$10 million if a very large acquirer is involved. <p>A Treasury Minister can also set additional notification requirements for high-risk acquisitions. So far, the Government has indicated that it intends to apply this to supermarkets.</p> <p>While the notification requirements announced by the Government do not specifically target digital platforms, it is likely that acquisitions by the largest digital platforms will meet some or all of these thresholds. The Treasury has stated that these thresholds will be reviewed 12 months after coming into effect.</p> <p>The new mandatory regime will come into effect from 1 January 2026, with businesses able to make voluntary notifications under the new regime from 1 July 2025.</p>
Recommendation 2 Advance notice of acquisitions	Recommendation 2 – Support	

Recommendation	Government response	Current status
Recommendation 3 Changes to search engine and internet browser defaults	Note	<p>The Government response asked that the ACCC monitor and report back on Google's rollout of choice screen options in Europe, before making a commitment to rollout in Australia.</p> <p>The ACCC's September 2021 Report on Search Defaults and Choice Screens noted the critical role of search engines and the low level of competition in this market. The report observed that the Android choice screen had a limited impact on the supply of search services in Europe to date, partly due to the design and implementation of this mechanism, as well as the effect of COVID-19 on the supply of new Android devices.</p> <p>However, the report also noted the potential benefits and effectiveness of choice screens in facilitating competition and improving consumer choice, and ultimately recommended the ACCC be given the power to mandate, develop and implement a mandatory choice screen for consumers in Australia.</p> <p>The ACCC's September 2022 Regulatory Reform Report reiterated the potential benefits and effectiveness of choice screens, particularly when implemented alongside other competition obligations. It noted that the rollout of choice screens in Europe and other jurisdictions would be useful to inform the careful design and implementation of any choice screen rollout in Australia.</p> <p>The ACCC's Regulatory Reform Report and September 2024 Report Revisiting General Search Services both reiterated the recommendation to implement choice screens in Australia, which may occur through the implementation of digital platform competition reforms.</p>
Recommendation 4 Proactive investigation, monitoring and enforcement of issues in markets in which digital platforms operate	Support	<p>This recommendation has been implemented.</p> <p>In February 2020, the Government directed the ACCC to complete a 5-year Digital Platform Services Inquiry (DPSI). The DPSI has included 10 reports examining digital platform services and issues including online private messaging, app marketplaces, general search services, social media services, data products and services, general online retail marketplaces and ecosystems. The DPSI concluded on 31 March 2025 with the Final Report.</p>

Recommendation	Government response	Current status
Recommendation 5 Inquiry into ad tech services and advertising agencies	Support	<p>This recommendation has been implemented.</p> <p>On 10 February 2020, the Government directed the ACCC to complete an Inquiry into Digital Advertising Services (the Ad Tech Inquiry).</p> <p>The ACCC published an interim report in January 2021 and a final report on 28 September 2021. The ACCC made 6 recommendations to Government in relation to these services:</p> <ul style="list-style-type: none"> ■ Recommendation 1 – Google should amend its public material so that it clearly describes how Google uses first-party data to provide ad tech services. ■ Recommendation 2 – the ACCC should be given powers to develop sector-specific rules to address conflicts of interest and competition issues in the ad tech supply chain. ■ Recommendation 3 – the power to introduce sector-specific rules should allow the ACCC to address competition issues caused by an ad tech provider’s data advantage. ■ Recommendation 4 – industry should establish standards to require ad tech providers to publish average fees and take rates for ad tech services, and to enable full, independent verification of demand side platform services. ■ Recommendation 5 – Google should provide publishers with additional information about the operation and outcomes of its publisher ad server auctions. ■ Recommendation 6 – the ACCC should be given powers to develop and enforce rules to improve transparency of the price and performance of ad tech services. <p>Some of these recommendations have been reiterated in the ACCC’s Digital Platform Services Inquiry interim reports. Recommendations 2 and 3 will be given effect through the proposed new digital competition regime, for which the Government has signalled ad tech will be a priority.</p>
Recommendation 6 Process to implement harmonised media regulatory framework	Support	<p>The Department of Infrastructure, Transport, Regional Development, Communications, and the Arts oversees the development and administration of media and communications policies. The Department has undertaken to implement relevant media reforms including:</p> <ul style="list-style-type: none"> ■ a \$7.3 million Television Research and Policy Development Program to provide the Government and industry with the information needed to make choices about the future of free-to-air television services in Australia, announced in February 2022 ■ a proposed Streaming Services Reporting and Investment Scheme to incentivise and, as needed, require large streaming video on-demand services to invest in Australian content, with a consultation commencing in April 2022 ■ the introduction of a ‘must-carry’ prominence framework in July 2024, which requires manufacturers of connected television devices in Australia to provide easy access to local free-to-air television on-demand services ■ consultation on a proposal for a radio prominence framework for smart speakers in September 2024.

Recommendation	Government response	Current status
Recommendation 7 Designated digital platforms to provide codes of conduct governing relationships between digital platforms and media businesses to the ACMA	Support in principle	<p>On 20 April 2020, the Government asked the ACCC to develop a mandatory code of conduct to address bargaining power imbalances between Australian news media businesses and digital platforms, specifically Google and Facebook (now Meta).</p> <p>The Treasury Laws Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Act 2021 came into effect from 3 March 2021. Under the legislation, the relevant Minister is able to designate certain digital platforms as subject to the obligations under the code. No digital platforms have been designated to date.</p> <p>Following the introduction of the code, Google and Facebook (now Meta) reached voluntary commercial agreements with a significant number of news media organisations.</p> <p>On 1 December 2022, the Treasury published a review of the code. The review concluded that the code had been a success to date and made 5 recommendations to improve its operation in the future.</p> <p>On 12 December 2024, the Government announced the News Bargaining Incentive to ensure large digital platforms contribute to the sustainability of news and journalism in Australia.</p>
Recommendation 8 Mandatory ACMA take-down code to assist copyright enforcement on digital platforms	Do not support	
Recommendation 9 Stable and adequate funding for public broadcasters	Support	<p>This recommendation has been implemented.</p> <p>In the 2023–24 Budget the Government announced that it would provide \$6 billion for the ABC and \$1.8 billion for the SBS over the following 5 years, moving from 3 year to 5 year funding terms.</p> <p>On 17 December 2024, the Government announced additional funding to the ABC of \$83.1 million over 2 years from 2026–27, followed by ongoing funding of \$43 million per year. The Government also announced a commitment to legislate five-year funding terms for the ABC and SBS, in contrast to the current convention-based funding arrangements where Governments maintain funding at the level announced over the course of the funding term.</p> <p>The legislative approach would affirm the intent that the national broadcasters have stable, five-year funding terms, but would not mandate or lock in the quantum of funding. The Government will consult on these proposed changes.</p>

Recommendation	Government response	Current status
Recommendation 10 Grants for local journalism	Support in principle	<p>The Government response to the Digital Platforms Inquiry stated that it would enhance the Regional and Small Publishers Jobs and Innovation Package to better support the production of news in regional and remote areas of Australia during 2020.</p> <p>In 2020, the Government provided \$5 million from its Regional and Small Publishers Innovation Fund to support public interest journalism during COVID-19 and announced a new Public Interest News Gathering (PING) program with \$50 million in funding (including \$13.4 million in new expenditure, with the remaining funds reallocated from the Regional and Small Publishers Jobs and Innovation Package). These initiatives provided funding to 107 regional publishers and broadcasters and \$5 million in funding to the Australian Associated Press (AAP) newswire service.</p> <p>The 2021–22 Budget included \$15 million over 2 years from 2020–21 to support the financial sustainability of AAP.</p> <p>On 7 February 2022, the Government announced a \$10 million Journalist Fund to support the provision of public interest journalism in regional areas. This funding was confirmed in the 2022–23 Budget.</p> <p>On 7 July 2022, the Government committed to \$29 million funding package to support regional, local, and community media. This includes \$10 million for regional newspapers, \$5 million for independent suburban, First Nations and multicultural publishers, and \$12 million for community broadcasters.</p> <p>On 28 September 2022, the Government announced the Regional and Local Newspaper Publishers program. The program provided \$15 million to assist print publishers to absorb newsprint price increases such as printing costs and equipment directly related to printing.</p> <p>On 29 November 2024, Government commenced its News Media Relief Program to support public interest journalism with \$15 million in funding for regional grants to eligible regional, independent suburban, multicultural and First Nations news publishers creating news content distributed online.</p> <p>On 16 December 2024, the Government announced an investment of \$180.5 million to support local news and community broadcasting, including launching the News Media Assistance Program and providing additional funding for community broadcasting.</p> <p>The Government is also investing \$116.7 million over four years from 2024–25 (and \$1.7 million in 2028–29) to support and build the sustainability and capacity of news organisations to deliver public interest journalism and local news to Australian communities.</p>
Recommendation 11 Tax settings to encourage philanthropic support for journalism	Do not support	

Recommendation	Government response	Current status
Recommendation 12 Improving digital literacy in the community	Support in principle	<p>The Department of Infrastructure, Transport, Regional Development, Communications and the Arts oversees policies relating to digital literacy.</p> <p>In January 2023, the Government announced the establishment of the First Nations Digital Inclusion Advisory Group to accelerate progress towards closing the digital inclusion gap for First Nations Australians.</p> <p>In the 2023–24 Budget, the Government announced \$31.2 million in funding to extend the Be Connected program until 30 June 2028. The program provides resources to help older Australians improve their digital literacy, build confidence, and engage safely online.</p> <p>On 16 December 2024, the Government announced an investment of \$3.8 million over 3 years from 2025–26 for the development of Australia’s first National Media Literacy Strategy, co-designed in partnership with the media literacy research sector, education sector and communities, to better equip Australians to critically engage with news and media.</p>
Recommendation 13 Digital media literacy in schools	Support in principle	<p>In the 2022–23 Budget, the Government announced \$6 million over 3 years for online learning tools to help schools keep children safe online. The resources made available through this program include:</p> <ul style="list-style-type: none"> the eSmart Media Literacy Lab for secondary students aged 12 to 16 years, freely available from 1 July 2023 the eSmart Digital Licence+ for students aged 10 to 14 years, freely available from Term 1 2024 the eSmart Junior Digital Licence+ for primary students aged 4 to 9, freely available following its development in 2024.
Recommendation 14 Monitoring efforts of digital platforms to implement credibility signalling	Support in principle	<p>In December 2019, the Government requested that major digital platforms in Australia develop a voluntary code of practice to address online disinformation and news quality concerns.</p> <p>In February 2021, the Australian Code of Practice on Disinformation and Misinformation was published by the Digital Industry Group Inc (DIGI). The code currently has 9 signatories: Adobe, Apple, Facebook, Google, Legitimate, Microsoft, Redbubble, TikTok and Twitch. The ACMA oversees the development of this code and reports on platforms’ measures and the broader impacts of disinformation in Australia.</p> <p>As of 20 March 2025, the ACMA has provided 3 reports on the code to Government.</p>

Recommendation	Government response	Current status
Recommendation 15 Digital Platforms Code to counter disinformation	Support in principle	<p>On 12 September 2024, the Communication Legislations Amendment (Combating Misinformation and Disinformation) Bill 2024 was introduced to the Parliament. The Bill attracted a high level of public debate and engagement but ultimately did not pass the Senate.</p> <p>On 24 November 2024 the Minister for Communications announced that the Government will not proceed with the Bill.</p> <p>The ACMA will continue to oversee digital platforms' compliance with the Australian Code of Practice on Disinformation and Misinformation and report to Government on platforms' efforts in complying with the voluntary code.</p>
Recommendation 16 Strengthen Privacy Act protections in the Privacy Act 16(a) update 'personal information definition' 16(b) strengthen notification requirements 16(c) strengthen consent requirements and pro-consumer defaults 16(d) enable the erasure of personal information 16(e) introduce direct rights of action for individuals 16(f) higher penalties for breach of the Privacy Act	Recommendations 16(a), 16(b), 16(c), 16(e) – Support in principle, subject to consultation and design measures 16(d) – Note 16(f) – Support	<p>In October 2020, the Government commenced the Privacy Act Review.</p> <p>On 13 December 2022, the Privacy Legislation Amendment (Enforcement and Other Measures) Act 2022 came into effect, which increased the maximum civil penalties for serious or repeated interference with privacy and other penalty provisions of the Privacy Act to match penalties under the Australian Consumer Law.</p> <p>The Attorney-General released the Privacy Act Review Report on 16 February 2023, and the Government released its response to this report on 28 September 2023.</p> <p>On 10 December 2024, the Privacy and Other Legislation Amendment Act 2024 received Royal Assent. The Act enacts the first tranche of reforms to the <i>Privacy Act 1988</i> (Cth) and implements a range of measures, including:</p> <ul style="list-style-type: none"> ■ the introduction of a statutory tort for serious invasions of privacy, giving individuals a route to seek redress for privacy harms in the courts (see recommendation 19 below) ■ a mandate for the Office of the Australian Information Commissioner (OAIC) to develop a Children's Online Privacy Code, which will cover not only social media platforms but any online services likely to be accessed by children ■ greater transparency to individuals when using data for automated decisions that affect them ■ the expansion of the OAIC's enforcement and investigation power, including an enhanced civil penalties regime and the ability to issue infringement notices ■ a new mechanism to prescribe a 'white list' of countries and binding schemes with adequate privacy protections to facilitate cross-border data transfers.
Recommendation 17 Broader reform of Australian privacy law to ensure it continues to effectively protect consumers' personal information in light of increasing volume and scope of data collection in the digital economy	Support	<p>The first tranche of reforms to the Privacy Act (see Recommendation 16 above) did not include measures to address the issues of increased data collection which could increase protection against misuse of data and empower consumers in making an informed choice.</p>

Recommendation	Government response	Current status
Recommendation 18 Office of the Australian Information Commissioner (OAIC) privacy code for digital platforms	Support in principle	<p>The first tranche of reforms to the Privacy Act (see Recommendation 16 above) did not include an OAIC privacy code for digital platforms.</p> <p>However, the Privacy and Other Legislation Amendment Act 2024 included relevant elements such as:</p> <ul style="list-style-type: none"> the development of a Children’s Online Privacy Code by the OAIC enhanced code-making powers for the Information Commissioner on the application of, and compliance with, Australian Privacy Principles stronger enforcement powers for the OAIC, and empowering the OAIC to use the general investigation and monitoring powers under Part 2 and 3 of the <i>Regulatory Powers (Standard Provisions) Act 2014</i> to improve successful regulatory outcomes.
Recommendation 19 Statutory tort for serious invasions of privacy	Note	<p>This recommendation has been implemented.</p> <p>The Privacy and Other Legislation Amendment Act 2024 has introduced a new statutory tort to address serious invasions of privacy.</p>
Recommendation 20 Prohibition against unfair contract terms	Note	<p>This recommendation has been implemented.</p> <p>On 9 November 2023, changes to the ACL came into effect that prohibit businesses from proposing, using, or relying on unfair contract terms in standard form contracts with consumers and small businesses. The changes allow courts to impose substantial penalties on businesses and individuals that include unfair terms in their standard form contracts.</p> <p>The maximum financial penalties for businesses under the new unfair contract terms law are the greatest of:</p> <ul style="list-style-type: none"> \$50,000,000 three times the value of the ‘reasonably attributable’ benefit obtained from the conduct, if the court can determine this, or if a court cannot determine the benefit, 30% of adjusted turnover during the breach period. <p>The changes will also expand the coverage of the unfair contract term laws to apply to more small business contracts than before. The threshold for small business contracts will increase to apply to small business that employ fewer than 100 persons or have an annual turnover of less than \$10 million.</p>
Recommendation 21 Prohibition against certain unfair trading practices	Note	<p>From 15 November 2024 to 13 December 2024 the Government commenced consultation on proposed amendments to the Australian Consumer Law that would prohibit unfair trading practices. On 14 March 2025, the Government announced that it would also consult in 2025 on the design of unfair trading practices protections for small business.</p>

Recommendation	Government response	Current status
<p>Recommendation 22</p> <p>Digital platforms to comply with internal dispute resolution requirements</p>	<p>Support in principle</p>	<p>The ACCC reiterated support for this recommendation in its September 2022 Regulatory Reform Report, at recommendation 2 (see above). The Government response to this report stated it would undertake further work to develop internal and external dispute resolution requirements by calling on industry to develop voluntary internal dispute resolution standards by July 2024. As of 20 March 2025, these voluntary standards have not yet been published.</p>
<p>Recommendation 23</p> <p>Establishment of an ombuds scheme to resolve complaint and disputes with digital platform providers</p>		



Appendix C – Top 100 apps downloaded on the Google Play Store and the Apple App Store in Australia

Appendix C – Top 100 apps downloaded on the Google Play Store and the Apple App Store in Australia

This appendix contains a set of figures capturing the top 100 apps downloaded on each of the Google Play Store and the Apple App Store from 31 July 2023 to 31 July 2024.

Figure C.1: Google Play Store – Top 100 apps by number of downloads in Australia, 31 July 2023 – 31 July 2024

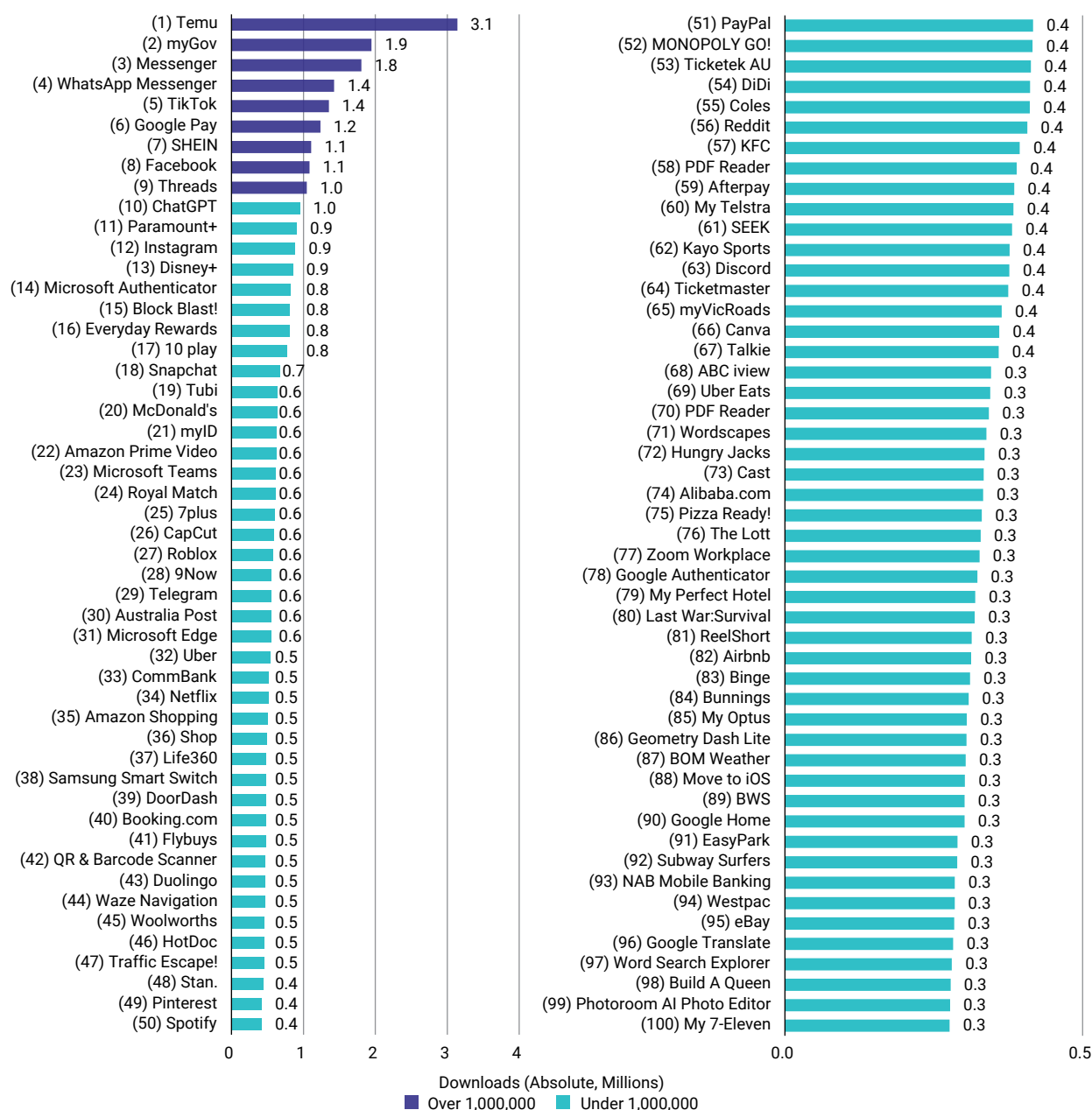
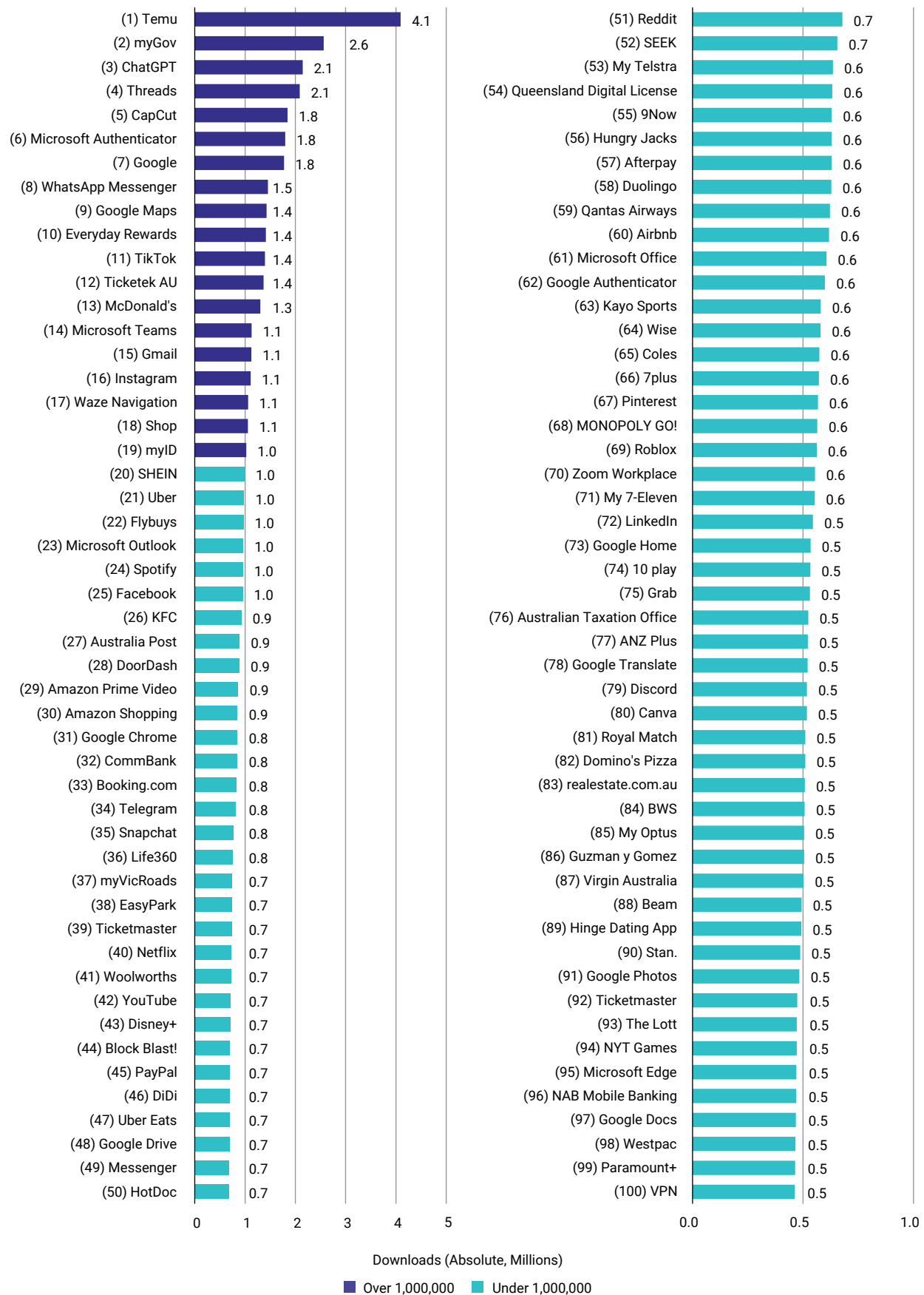


Figure C.2: Apple App Store – Top 100 apps by number of downloads in Australia, 31 July 2023 – 31 July 2024



Appendix D – Ministerial direction



Appendix D – Ministerial direction



Competition and Consumer (Price Inquiry— Digital Platforms) Direction 2020

I, Josh Frydenberg, Treasurer, give the following direction to the Australian Competition and Consumer Commission.

Dated: 10 February 2020

Josh Frydenberg
Treasurer

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Part 1—Preliminary

1 Name

This instrument is the *Competition and Consumer (Price Inquiry—Digital Platforms) Direction 2020*.

2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. The whole of this instrument	The day after this instrument is registered.	

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

3 Authority

This instrument is made under the *Competition and Consumer Act 2010*.

4 Definitions

Note: Expressions have the same meaning in this instrument as in the *Competition and Consumer Act 2010* as in force from time to time—see paragraph 13(1)(b) of the *Legislation Act 2003*.

In this instrument:

Australian law means a law of the Commonwealth, a State, or a Territory (whether written or unwritten).

data broker means a supplier who collects personal or other information on persons, and sells this information to, or shares this information with, others.

digital content aggregation platform means an online system that collects information from disparate sources and presents it to consumers as a collated, curated product in which users may be able to customise or filter their aggregation, or to use a search function.

digital platform services means any of the following:

- (a) internet search engine services (including general search services and specialised search services);

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- (b) social media services;
- (c) online private messaging services (including text messaging; audio messaging and visual messaging);
- (d) digital content aggregation platform services;
- (e) media referral services provided in the course of providing one or more of the services mentioned in paragraphs (a) to (d);
- (f) electronic marketplace services.

electronic marketplace services means a service (including a website, internet portal, gateway, store or marketplace) that:

- (a) facilitates the supply of goods or services between suppliers and consumers; and
- (b) is delivered by means of electronic communication; and
- (c) is *not* solely a carriage service (within the meaning of the *Telecommunications Act 1997*) or solely consisting of one or more of the following:
 - (i) providing access to a payment system;
 - (ii) processing payments.

exempt supply has the meaning given by subsection 95A(1) of the Act.

goods has the meaning given by subsection 95A(1) of the Act.

inquiry has the meaning given by subsection 95A(1) of the Act.

services has the meaning given by subsection 95A(1) of the Act.

State or Territory authority has the meaning given by subsection 95A(1) of the Act.

supply has the meaning given by subsection 95A(1) of the Act.

the Act means the *Competition and Consumer Act 2010*.

Part 2—Price inquiry into supply of digital platform services

5 Commission to hold an inquiry

- (1) Under subsection 95H(1) of the Act, the Commission is required to hold an inquiry into the markets for the supply of digital platform services. The inquiry is *not* to extend to any of the following:
 - (a) the supply of a good or service by a State or Territory authority;
 - (b) the supply of a good or service that is an exempt supply;
 - (c) reviewing the operation of any Australian law (other than the Act) relating to communications, broadcasting, media, privacy or taxation;
 - (d) reviewing the operation of any program funded by the Commonwealth, or any policy of the Commonwealth (other than policies relating to competition and consumer protection).
- (2) For the purposes of subsection 95J(1), the inquiry is to be held in relation to goods and services of the following descriptions:
 - (a) digital platform services;
 - (b) digital advertising services supplied by digital platform service providers;
 - (c) data collection, storage, supply, processing and analysis services supplied by:
 - (i) digital platform service providers; or
 - (ii) data brokers.
- (3) Under subsection 95J(2), the inquiry is not to be held in relation to the supply of goods and services by a particular person or persons.

6 Directions on matters to be taken into consideration in the inquiry

Under subsection 95J(6) of the Act, the Commission is directed to take into consideration all of the following matters in holding the inquiry:

- (a) the intensity of competition in the markets for the supply of digital platform services, with particular regard to:
 - (i) the concentration of power in the markets amongst and between suppliers; and
 - (ii) the behaviour of suppliers in the markets, including:
 - (A) the nature, characteristics and quality of the services they offer; and
 - (B) the pricing and other terms and conditions they offer to consumers and businesses; and

Example: Terms and conditions relating to data collection and use.
- (iii) changes in the range of services offered by suppliers, and any associated impacts those changes had or may have on other markets; and
- (iv) mergers and acquisitions in the markets for digital platform services; and

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- (v) matters that may act as a barrier to market entry, expansion or exit, and the extent to which those matters act as such a barrier;
- (b) practices of individual suppliers in the markets for digital platform services which may result in consumer harm, including supplier policies relating to privacy and data collection, management and disclosure;
- (c) market trends, including innovation and technology change, that may affect the degree of market power, and its durability, held by suppliers of digital platform services;
- (d) changes over time in the nature of, characteristics and quality of digital platform services arising from innovation and technological change;
- (e) developments in markets for the supply of digital platform services outside Australia.

7 Directions as to holding of the inquiry

- (1) Under subsection 95J(6) of the Act, the Commission is directed to do the following in holding the inquiry:
 - (a) regularly monitor the markets for the supply of digital platform services for changes in the markets, particularly focussing on the matters referred to in section 6 of this instrument; and
 - (b) give to the Treasurer an interim report on the inquiry by 30 September 2020, and then further interim reports every 6 months thereafter, on:
 - (i) any changes observed by the Commission in the markets since the last report; and
 - (ii) any other matter, within the scope of the inquiry, the Commission believes appropriate.
- (2) Under subsection 95P(3) of the Act, the Commission is directed not to make available for public inspection, copies of any interim report until the Treasurer, in writing, authorises the Commission to do so.

8 Period for completing the inquiry

For the purposes of subsection 95K(1) of the Act, the inquiry is to be completed, and a report on the matter of inquiry given to the Treasurer, by no later than 31 March 2025.

