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Amazon Australia submission to the Australian Competition and Consumer Commission Digital Platform Services Inquiry: Ecosystems (2023)
3 May 2023

Amazon Australia Commercial Services Pty Ltd (**Amazon Australia**) welcomes the opportunity to comment on the Australian Competition and Consumer Commission (**ACCC**) March 2023 Issues Paper,[1] noting the ACCC's decision to focus on smart home devices[2] and personal cloud storage services.

Regardless how digital "ecosystems", which is not a term of art, are defined, Amazon manufactures and supplies a small range of smart home devices,[3] a virtual assistant (Alexa[4]) and it does not hold a strong or unique position with respect to any of the components identified for so-called "ecosystems". Relevantly:

● Amazon Australia is primarily a retailer and we operate a store at amazon.com.au (the **Amazon Australia Store**) where customers can buy products sold by Amazon Australia and third-party sellers. As the ACCC found in its DSPI 4th Report "*[C]onsumers have a number of options*" and there is a high degree of multi-homing by consumers in retail.[5] Our suppliers also multi-home across channels. Amazon Australia does not have market power in this sector.

● In the manufacture of smart home devices, Amazon is just one of many providers in a dynamic and innovative space. Globally, there are a large number of players innovating in the smart home devices space, including Alibaba, Anker, Apple, Arlo, Baidu, Bose, Comcast, Meta, Google, Honeywell, Huawei, Insteon, Lenovo, Lutron, June Life, LG, Microsoft, Phillips, Roku, Samsung, SimpliSafe, Sony, TCL, TP-Link, Tuya, Vivint, Vizio, Wemo, Wink, Wyze, and Xiaomi among others.

● For the sale of Amazon Smart Home Devices the Amazon Australia Store faces vigorous competition from a wide range of retailers and brands and across its Smart Home Devices and Alex interface.

● Customers predominantly access smart home devices through iOS and Android apps.

● For the interface of smart home devices with different apps and virtual assistants, Amazon has and will continue to play a key role in promoting interoperability to the benefit of its customers. Customers want smart home devices that work well together and are easy to manage, and Amazon has supported interoperability through various initiatives such as Voice Interoperability Initiative, Zigbee or Matter (the latter functions as a "protocol bridge" that translates one protocol to another to allow for interoperability).

● When Amazon does collect and use data from Amazon Smart Home Devices we are transparent about this, and customers' data is only used and disclosed in accordance with Amazon's or its subsidiaries' privacy notices.

● For personal cloud services, Amazon has focussed on providing a single service restricted to photo and video media files. This service faces strong competition from electronic storage devices (eg, portable hard-drives), home based cloud storage IT equipment as well as a number of popular personal cloud services, including those offered by mobile phone operating system providers that, unlike the Amazon service, come tightly integrated with other services (such as email) on those devices (eg, smartphones or tablets).

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[1] Digital Platform Services Inquiry – September 2023, "*Report on the expanding ecosystems of digital platform service providers*" (**Issues Paper**).

[2] Page 10 of the Issues Paper defines "Smart Home Devices" as follows: "*Smart home devices are devices typically found in the home that can connect to other devices or networks, exchange data and interact with users.*"

[3] While this is a very broad definition, the devices that fall within the Issues Paper definition of "Smart Home Devices" which are manufactured and supplied by Amazon on the Amazon Australia Store are: (1) Echo devices (smart speakers and smart displays), (2) Ring video doorbells and security cameras, (3) eero mesh wifi devices; and (4) FireTV Stick streaming media players. For purposes of this paper these will be referred to as **Amazon Smart Home Devices**. See also **Annexure 1**. Amazon Australia re-sells third-party manufactured smart home devices acquired from vendors on the Australian Store but when we refer to Amazon Smart Home Devices, we are referring to devices manufactured and supplied by Amazon.

[4] Amazon's virtual assistant, Alexa (which is one of a number of virtual assistants), can be used to interface with smart home devices via a mobile phone or another virtual assistant-enabled device such as a speaker. See Link.

[5] ACCC, Digital platform services inquiry - March 2022 interim report (**DPSI 4th Report**), p 78.

Smart home devices and digital services offer many consumer and public benefits. Demand for such products and the variety of different products that are available continue to grow. Amazon's participation in this space has led to innovation, rapid growth, interoperability, all of which have and facilitated competition. For the reasons outlined below, Amazon's Smart Home Devices and personal cloud service offerings do not give rise to any potential competitive concerns.

There is also no evidence that digital reforms of the nature previously proposed by the ACCC are required with respect to Amazon's retail services (consistent with ACCC's DPSI 4th Report), smart home devices, or personal cloud service offering. Such intervention would curb innovation and investment in the smart home devices space. As the Productivity Commission recently identified in the context of its "Advancing Prosperity" report (**Productivity Commission Report**) "*many of these emerging digital and data applications do not merely lead to cost reductions, but can also result in better-quality goods and services and more product choice for consumers. Australia needs to keep pace with technological developments to underpin our future economic prosperity*".[6]

1. AMAZON

Amazon's mission is to be Earth's most customer-centric company. Our philosophy is rooted in working backwards from what customers want and continuously innovating to provide a better experience. We aim to build trust into every interaction we have with our customers – it's at the heart of every design decision we make and every new product and experience we invent. This is also true for Amazon Smart Home Devices, the Alexa interface and our personal cloud service.

Amazon Australia launched the Amazon Australia Store in December 2017, and in the five years since, we have worked to establish our retail business in a fiercely competitive retail sector. Amazon Australia's entry into Australia has expanded consumer choice by providing customers with additional options among the many they already had. Amazon Australia further supports a strong Australian economy, the creation and growth of successful businesses and the promotion and protection of consumer welfare.

Issues Paper

The ACCC has adopted a very broad definition of "*digital platform ecosystems*" which encompasses a "*wide range of interrelated products and services*". There is however no clear and uniform view of what constitutes an "*ecosystem*" from a competition perspective or what criteria must be met for an anticompetitive "*ecosystem*" to exist. Instead of relying on a broad and uncertain definition it would be preferable for the Issues Paper to identify the specific areas of concern by reference to concepts contained in Australia's *Competition and Consumer Act 2010* (Cth) (**CCA**), eg identifying services which exhibit a substantial degree of market power. This would help to ensure the focus is on the incentives and conduct said to give rise to concerns under the CCA.

While the ACCC's "ecosystem" definition captures a very broad range of businesses, such businesses do not inherently raise competition issues or consumer harms. Indeed, in recent years, the ACCC has cleared several mergers involving the acquisition and/or expansion of digital businesses providing interrelated products and services.[7] The ACCC's Issues Paper itself also observes that expansion into related or complementary products and services can benefit consumers.[8] Moreover, businesses in this space drive competition between each other by investing in new products offering customers innovative services.

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[6] Productivity Commission, *5-year Productivity Inquiry report - Advancing Prosperity*, 17 March 2023, vol 4, page iv.
[7] For example, the fact that Telstra/ Fetch TV (2022), Google/ Mandiant (2022), Meta/ Kustomer (2021), Salesforce/ Slack (2021) and Microsoft/ Nuance (2021) were all cleared by the ACCC without the need for a phase 2 review demonstrates that interconnected businesses involving digital services are not inherently problematic.
[8] Issues Paper, p.6.

Amazon Smart Home Devices are sold and can be purchased individually and can be used independently of each other (eg, customers choose whether to connect their Ring or eero device to Alexa). They also interface with a broad range of third-party products and services. Amazon knows that customer experience is affected by the way in which devices work together. To be successful Amazon must ensure its Amazon Smart Home Devices work with and provide customers with convenient access to a wide selection of their favourite consumer Internet of Things (**IoT**) products and services. Amazon is therefore committed to customer choice in the smart home space given that consumers prefer to mix and match devices and services from different providers. Amazon strives to continually make it easier for developers and manufacturers to integrate with Amazon products, and for customers to easily access and use the services and devices of their choice. This is important as Amazon is just one of a large and growing number of players in the smart home space. Further, mobile phones and their apps, not virtual assistants, are the main access point for smart home devices and by far the more predominant means for customers to interact with smart home devices. We encourage the ACCC to distinguish between the sectoral dynamics of specific companies in this space and to fully consider the dynamics of the smart home devices space and characteristics of virtual assistant technology.

Amazon offers a single personal cloud storage service "Amazon Photos" - a service only for storage of common photo and video media file types (JPEG, PNG, MP4, etc).[9] Amazon Photos faces intense competition from a range of alternatives including Apple's iCloud, Google Photos, Google Drive, Microsoft's OneDrive and Dropbox. The "Amazon Drive" (a storage service for most common file types like .pdf, and .doc) is being withdrawn during 2023 to allow us to focus on Amazon Photos.[10]

As we discuss below, the retail industry in which Amazon Australia competes is dynamic and the Amazon Australia Store does not hold a position of market power (the ACCC's DSPI 4th Report concluded that "*no one marketplace holds a dominant position in Australia[11]*"), customers have more options for smart home devices than ever before, and both Amazon's Alexa and its personal cloud storage service face intense competition from alternatives. On these facts, Amazon Australia's position in this competitive, growing and dynamic space remains customer-centric, pro-competitive, and innovative.

2. THE AMAZON AUSTRALIA STORE

Amazon Australia operates in an intensely competitive retail sector[12] where Australian consumers have a very broad range of retail options. The competitiveness of Australia's retail sector has been recognised by the ACCC, which has noted the "*highly competitive, growing and dynamic nature of the retail sector*."[13]

The Amazon Australian Store is just one of a growing number of alternative retail options available to Australian consumers and sellers, including an increasing number of stores and multichannel retailers such as Wesfarmers, JB-HiFi, The Good Guys, Myer, David Jones and Woolworths. Amazon Australia welcomes this competition and the benefits it brings to Australian consumers.

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[9] For differences between Amazon Photos and Amazon Drive see:
https://www.amazon.com.au/gp/help/customer/display.html?nodeId=GEXHTHG9FFUQL3R8
[10] https://www.amazon.com.au/b/?node=10581396051. Amazon Drive will be removed such that customers will no longer have access to their files aside from photos and videos which can be accessed from Amazon Photos.
[11] See Interim Report No. 4, pp 11 and 13.
[12] DPSI 4th Report, p 2; Houston Kemp, *Competition in the Retail Sector*, 2022, pp i - ii (Report commissioned by Amazon Australia) (**Houston Kemp Report**). Houston Kemp's Report was provided to the ACCC and is available at:
https://www.accc.gov.au/system/files/Digital%20Platform%20Services%20Inquiry%20-%20General%20Online%20Retail%20Marketplaces%20Submission%20-%20Amazon%20Australia%20-%20Public%20-%2024%20November%202022.pdf
[13] Interim Report No. 4, p 2; ACCC Media Release, '*ACCC won't oppose Wesfarmers proposed acquisition of Catch*",' (5 August 2019). See https://www.accc.gov.au/media-release/accc-won%E2%80%99t-oppose-wesfarmers%E2%80%99-proposed-acquisition-of-catch.

Competition in retail is further highlighted by the fact that retail has been the 10th fastest growing sector over the past five years comprising over 156,000 retailers (2022).[14] There are good reasons for this continued growth. Barriers to entry and expansion are low and falling, particularly in relation to online retailing.[15] Generally low margins are further evidence of the competitiveness of the retail sector.[16]

Since launching, the Amazon Australia Store has substantially contributed to competition in the retail sector by giving consumers another retail option in addition to the numerous options they already had and our innovation and focus on providing a great customer experience has incentivised many existing incumbent retailers to invest in and deliver an improved customer experience.

The ACCC confirmed the competitiveness of Australia's retail sector in the DPSI 4th Report, finding that:

● "*[C]onsumers have a number of options*" and that there is a high degree of multi-homing by consumers in retail;[17]
● Selling Partners multi-home - of the top 100 sellers on Amazon Australia, Catch, eBay Australia and Kogan that the ACCC examined, "43 operate on two or more online marketplaces";[18]
● Even if one only examines online retail sales, the majority (64%) of online purchases in late 2021 were made through the website of bricks and mortar retailers;[19]
● Amazon Australia's sales accounted for a very small proportion of online sales (less than 2.5%);[20]
● Based on data collected from retail industry participants, sales by physical retailers such as Bunnings or BigW were multiples larger than Amazon Australia's sales during 2020-21;[21] and,
● "*no one marketplace holds a dominant position in Australia*".[22]

These findings align with analysis from Houston Kemp, an economic consultant engaged by Amazon Australia. Their report on *Competition in the Retail Sector* (**Houston Kemp Report**) found online retailing has brought new opportunities for business and increased options and improved prices for consumers. Further, it found the rise in "omnichannel" retailing, where existing retailers combine their significant physical presence with online retailing and services (e.g. loyalty), is further increasing retail competition.[23]

The Amazon Australia Store faces intense retail competition and has no market power in this sector, Amazon offers a limited range of Amazon Smart Home Devices compared to the wide variety of smart home devices available more broadly and customers have many choices. Therefore, the ACCC's "leverage" concerns are not plausible.

3. SMART HOME DEVICES

The Issues Paper notes that smart home devices include security devices, connected entertainment systems and smart speakers and a range of other connected and voice-activated home appliances or devices.[24]

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[14] Australian Bureau of Statistics (**ABS**), "Counts of Australian Businesses, series 8165.0, June 2018-June 2022" (available at: https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/latest-release). The 'entry rate' of new retailers into the retail sector is also higher than the average for the economy. - see Houston Kemp Report, p 20.
[15] Houston Kemp Report, pp 17-18.
[16] Retail net and gross margins declined for retailers between 2006 and 2018 - Reserve Bank of Australia, Carter, M, *Competition and profit margins in the retail trade sector*, June 2019, pp 115-116.
[17] DPSI 4th Report, p 78.
[18] DPSI 4th Report, p 80.
[19] DPSI 4th Report, p 19.
[20] DPSI 4th Report, p 12.
[21] DPSI 4th Report, pp 19-21.
[22] Interim Report No. 4, pp 11 and 13.
[23] Houston Kemp Report, pp 15-16.
[24] Issues Paper, p 10.

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A. Amazon is a small player in the rapidly growing smart devices space and faces intense competition

Amazon is one supplier among many of the wide variety of available smart home devices. Further, every "smart" device competes against "non-smart" alternatives, with customers on the demand-side making choices and trade-offs on features and price. A consumer wanting a refrigerator is very likely to consider a refrigerator that does not have "smart" functionality to be a competitive substitute for a refrigerator with such functionality. On the supply-side, suppliers, manufacturers or brand owners can and do typically have the ability to offer a full complement of "smart" and "non-smart" products.[25] There is no sufficient basis to distinguish smart home products from home products without "smart" features. A customer choosing products selects between different solutions, trading off, for example, device costs, any applicable subscription fees, and extent of service and functionality. Supply-side substitutability between smart and non-smart products is seen across product categories. Thus, there is strong demand and supply side substitution among smart and non-smart products in the same category (eg, refrigerators, thermostats, speakers, etc).

Based on 2022 data from Futuresource (which captures products within the "security," "climate control," "lighting," "energy," and "hubs and control" devices), Amazon has a global share of supply by units of just 8% in "smart home" products as defined by Futuresource.[26] The Amazon Australia Store's share is certainly even more modest given the Store has only operated since late 2017 (and noting that eero was introduced into Australia in 2020), by which time incumbent smart home device competitors had strong and established brands.

Globally, there are a large number of players innovating in the smart home devices space, including Alibaba, Anker, Apple, Arlo, Baidu, Bose, Comcast, Meta, Google, Honeywell, Huawei, Insteon, Lenovo, Lutron, June Life, LG, Microsoft, Phillips, Roku, Samsung, SimpliSafe, Sony, TCL, TP-Link, Tuya, Vivint, Vizio, Wemo, Wink, Wyze, and Xiaomi and others. Quite apart from the brands and suppliers listed, start-ups and small businesses are constantly launching new devices for the smart home indicating there are no meaningful barriers bringing new devices and services to market.

Many of these suppliers and brands are present in Australia and those that are not can easily establish Australian distribution channels. Amazon supplies a very small percentage of smart home devices worldwide with the leading suppliers of smart home devices being Samsung and Apple. Looking within Australia, there are already many alternatives to each of Amazon's Smart Home Devices. For example:

● alternatives to Amazon's Echo smart speakers and smart displays include (among others) Google Home, Apple HomePod, Sonos, Lenovo, and Bose;
● alternatives to Amazon's FireTV streaming media players include Google Chromecast, Apple TV, Fetch and the many streaming services integrated into smart TVs;
● alternatives to Ring's security cameras include Arlo, D-Link, Eufy, Ezviz, Google Nest, Reolink, Swann, TP-Link, Uniden and Wyze;
● alternatives to Ring's video doorbells include Alarm.com, Arlo, Dahua, Eufy, Google Nest, Kangaroo, Kogan, Orion, Swann and Ubiquiti; and
● alternatives to eero's wifi router include Telstra or Optus branded modem/routers; TP-Link, Asus, Netgear, Google, D-Link, Ubiquiti, AVM, Billion, Xiaomi; Linksys; Wavelink; Synology and Mercku; Huawei and many others.

Amazon is a small player in a competitive and dynamic space with ample alternatives for its Smart Home Devices and virtual assistants.

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[25] For example, appliance brands including Samsung, Bosch, Hoover, and Miele make smart and non-smart washing machines (and other appliances), audio brands like Sony, Bose, Sonos and Panasonic make smart and non-smart speakers, and lighting brands like Philips, Osram, and LEDVANCE offer smart and non-smart lightbulbs.
[26] Based on analysis by Futuresource.

B. Alexa is not a necessary (or even the most widely used) means to access Amazon's or other smart home devices

Amazon has designed its virtual assistant Alexa interface to enable customers to connect with different types of smart home devices (both Amazon and third-party manufactured devices), including lights, door locks, appliances, thermostats, and more, using their voice (or Alexa app). However, most customers use their mobile phones – not virtual assistants - in order to accomplish these tasks. In this respect, we note the following:

● First, mobile phones, not virtual assistants, are the main access point for smart home devices. As the European Commission's IoT Final Report found:

"*smart mobile applications or companion apps remain the most popular user interfaces to access smart devices and consumer IoT services. In that sense, smart mobile devices and their operating systems also play an important role in the consumer IoT sector. Google's Android and Apple's iOS are the leading operating systems for smart mobile devices.*"[27]

Most smart devices are accessible without any need for a virtual assistants via touch screens, keypads, remote controls, smart buttons, smart switches, PCs and laptops. Virtual assistants are therefore just one type of software among many other more widely used options allowing customers to interface with services and devices.

● Second, when Alexa does interface with a third-party smart device the smart device generally must first be set-up through a mobile app. Mobile phones – a space in which Amazon is not present – provide the most widely used means to interface with smart devices and mobile phone suppliers can limit the features and functionality offered by smart device manufacturers based on their position, mobile operating systems and app stores.

● Third, even focussing on virtual assistants, the data demonstrates that voice assistant usage often occurs through voice assistants that are defaults on users' mobile phones. Indeed, the virtual assistants provided with mobile phones are responsible for the majority of all virtual assistant usage. Given this, it could not plausibly be said that Alexa could be leveraged to limit access or consumer choice in the smart device home sector.

● Fourth, Amazon designs its Smart Home Devices to interact with virtual assistants other than Alexa. Indeed, a device can have multiple virtual assistants, in addition to numerous other applications, all available to customers simultaneously. For example: (a) customers can access Siri, Google Assistant and Alexa from Echo Buds; and (b) customers can control Ring devices through Siri, Google Assistant, Samsung's Bixby and Alexa. Working through the Voice Interoperability Initiative (see Section 4 below) Amazon's objectives are to see the capability for multiple virtual assistants to be available simultaneously on a single device to ensure consumers and smart home device manufacturers have great flexibility in selecting voice assistants. Noting that there are alternative virtual assistants; that consumers most often use mobile applications and the other interfaces to the exclusion of a virtual assistant; and that smart device manufacturers and brands are investing in their own virtual assistant technology; this space does not give rise to competitive concerns.

● Finally, smart home control is just one of the ways customers use Alexa. Alexa is however more commonly used to set timers and alarms, listen to music, ask about the weather, and retrieve information.[28]

We know Alexa can only be successful if it provides customers with convenient access to a broad selection of their favourite devices and services, and our incentives are to ensure that Alexa works well with many

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[27] European Commission, Final report - sector inquiry into consumer Internet of Things, 20 January 2022, para 12.
[28] Futuresource Audio Tech Lifestyles Consumer Survey, 2022

different smart home devices (see Section 4 below). Amazon must also compete vigorously for the attention of customers, and continuously strives to ensure Alexa works well with third-party services and products. As a result, our incentives are to make it easier for developers and manufacturers to integrate with Alexa, and for customers to easily access and use the services and devices of their choice.

C. Customers mix and match different smart home devices

When looking at devices that are "connected" and used for various functions in the home, there are high levels of multi-homing, and customers can and do mix and match smart home devices across multiple different suppliers. For example, customers can have a Google Nest thermostat, an Arlo doorbell, a Sonos smart speaker, an Apple mobile device, an Amazon eero mesh wifi router and so on. Customers make their purchasing decisions on an individual basis based on consideration of matters like price, quality, and functionality and take into account alternative non-smart devices.

D. Conclusions

Customers make trade-offs between price, features, and smart functionality when making purchasing decisions, and customers mix and match smart device brands in their home. Further, as discussed, virtual assistants are not the primary, means of interacting with other smart home devices. Instead, smartphones, which Amazon does not offer, are the primary non-manual means of interacting with other smart home devices. Even if virtual assistants could somehow be considered "essential" for a smart home ecosystem, Amazon faces significant competition from other virtual assistant providers. Finally, for the reasons given, Amazon's incentives are to support customers exercising choice in their smart home device purchases. This suggests that Amazon has no market power with respect to Alexa, Amazon Smart Home Devices or indeed its other products and there is no "ecosystem" across Alexa and Amazon's Smart Home Devices.

4. AMAZON PROMOTES INTEROPERABILITY

Amazon's incentives are to deliver the best customer outcome and in this space that means ensuring a customer can enable the smart functionality of their devices regardless of the manufacturer. To this end, Amazon has worked to enable and empower third-party developers and device manufacturers to be able to innovate and develop products in an environment where interoperability is the default (interoperability in the sense of being compatible with multiple devices and software and the underlying operating systems).

In the smart home space, interoperability is important as customers want to be able to mix and match devices (as described above). Interfacing between devices therefore makes it straightforward for customers to multi-home (use various different devices) and also acts to reduce switching costs. As noted above, a customer may have an Apple iPhone, Sonos smart speaker enabled with Sonos' own virtual assistant or another virtual assistant such as Google, an Arlo doorbell, an ADT alarm system, a Nest thermostat, and various brands of smart plugs and lightbulbs. The fact that the smart home devices space is highly fragmented underscores the need for smart home device manufacturers to offer wide interoperability. Amazon thus has a strong incentive to ensure Alexa is interoperable with third-party devices and services.

In the virtual assistant space, Amazon can only increase the frequency and range of uses that customers have for the Alexa interface in their home by promoting the interoperability of third-party smart home devices with Alexa. In particular, most smart home device manufacturers offer both iOS and Android compatible applications, and 94% of smart home devices that "work with" a single virtual assistant were compatible with multiple virtual assistants in 2021.[29] We know customers purchase smart home devices from many different manufacturers, so our goal (and our incentive) is to have Alexa work well with as many devices, from as many

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[29] Based on Futuresource data. Devices that "work with" a virtual assistant are those devices that are compatible with virtual assistant software but that do not have microphones to allow direct access to virtual assistants and thus customers require an app and/or virtual assistant enabled device (i.e., devices with virtual assistants "built-in") to do so.

manufacturers, as possible and Amazon has invested in increasing the number of Alexa interfaces that third parties can access.

Recognising the importance of Alexa's interoperability in this growing industry, Amazon has joined and initiated a number of interoperability initiatives. For instance:

- Amazon uses application programming interfaces (APIs), and software development kits (SDKs), and tools to make its virtual assistant software available to third-party device manufacturers, allowing them to easily integrate with Alexa. This allows a wide range of smart home device manufacturers to offer virtual assistant capabilities with their devices, making these devices more useful and valuable to customers. Amazon's standard terms do not require exclusivity from device manufacturers and app developers, such that manufacturers and developers can also allow their devices to interface with other virtual assistants.

- Matter is a new set of protocols with the promise of interoperability that aims to standardise the baseline device discovery, command, and control experience across smart home systems. Specifically, Matter functions as a "protocol bridge" that translates one protocol to another to allow for interoperability. Since its founding within the Connectivity Standards Alliance (**CSA**), a global, open standards organisation made up of over 550 member companies, more than 280 companies (including silicon manufacturers, voice assistants/home-controllers, and device makers) have joined the Matter working group. Amazon is a founding member of Matter, and has taken an open and collaborative approach to integrate with developers, focusing ultimately on ensuring a valued customer experience. In doing so, Amazon has worked to ensure its own devices are compatible with Matter. Matter complements our strategic approach where openness and collaboration are fundamental. Amazon also seeks to ensure that Alexa is compatible with smart home devices created by third parties and major industry players, for example Google Nest Camera, and other members of the CSA who have actively committed to making devices of their multiple brands interoperable on a worldwide basis, as well as secure and easy to use.

- Amazon has also been involved with Zigbee since 2016 and collaborates with other CSA member companies to continue developing the standard. Zigbee, an open connectivity smart home standard that is also developed by the CSA, aims to promote security, reliability, and interoperability. For example, in 2018, Amazon worked on an "All Hubs" initiative to identify the security, relatability, and interoperability issues the standard encountered, and most recently Amazon assisted with the Zigbee release of Revision 23, which expands on the existing security features in the protocol.

- Amazon also supports interoperability of products with multiple virtual assistants from a single device through its Voice Interoperability Initiative (**VII**).[30] Amazon is focused on giving customers a choice of their preferred service for completing any task. The VII aims to deliver this experience through multiple, simultaneous voice services on the same product, each with its own "wake word" or invocation name – enabling customers to talk to the service of their choice in a secure manner by simply saying its name.

- Amazon supports Thread[31] – a low-power and low-latency wireless mesh networking protocol built using open and proven standards. It is aimed at addressing interoperability, range, security, energy, and reliability. Amazon has participated in the Thread Group since 2016 and has implemented the relevant standard in some of its devices.

- In addition, Amazon's commitment to open standards extends to participation in other standard setting organizations such as: Wi-Fi Alliance, Bluetooth Special Interest Group, and the Z-Wave Alliance. Amazon works with these organizations to improve the protocols range and reliability, in line with its commitment to support open standards.

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[30] See https://developer.amazon.com/en-US/alexa/voice-interoperability
[31] See https://developer.amazon.com/en-US/blogs/alexa/device-makers/2021/11/support-for-matter-over-thread-coming-to-echo-and-eero-devices

Amazon has also designed the Alexa interface to enable customers to access a wide range of services. These services include for instance, entertainment, information, productivity, health and wellness, shopping, and other services and are generally made available on Alexa through cloud-based voice applications called "skills." Today, over 100,000 skills are available through Alexa, including from competing streaming services such as Spotify and Apple Music. Amazon also makes it incredibly easy for a person to set their preferred music service as the default music provider through the Alexa app.

Amazon is focused on providing customers choice, including by having Alexa work with a broad selection of third-party devices and services and by fostering interoperability among voice assistants and smart home devices. Amazon's business interests and incentives are to increase customer engagement and Amazon does not seek to discourage customers from mixing and matching products. Delivering customer benefits in this way also pushes others in the industry in this direction and ensures customers can use and connect any device they wish.

5. DATA RELATED TO SMART HOME DEVICE USAGE IS LIMITED AND IS NOT A SIGNIFICANT DIFFERENTIATOR

Amazon knows that customers care how their information is used and shared. We appreciate the trust that customers place in us to handle their data carefully and sensibly. We collect personal information from our customers to provide and continually improve our products and services. For example, Amazon generally only receives two types of data related to the smart home devices customers connect with Alexa: (a) voice requests to operate the smart home device, and (b) information about the device, such as device type, name, features, and status and usage history. In Australia, this data is governed by Amazon Australia's privacy notice, and used to provide and improve the customer experience. Amazon Australia is not in the business of selling customers' personal information to others.

Amazon also designs Alexa and Amazon Smart Home Devices to have multiple layers of privacy protection and we're committed to giving customers transparency and control over their experience.[32] Amazon has built into our services various ways for customers to manage and access their data. For example, Amazon gives customers the ability to access a lot of their data instantly through their account, to request access to their personal data through a self-service "Request My Data" tool, and to personalise their Alexa privacy settings including by deleting data, updating permissions and controlling Alexa features.[33]

Access to data for smart home devices is not an important differentiator between competing smart home devices and is not such a source of durable competitive advantages that it would drive competitive outcomes in this space. Different types of smart home devices gather and use data primarily in relation to their specific use case and data gathered in one category (eg, speakers) is of minimal relevance in another (eg, lighting). In that sense, data acquired from a smart home device is limited in its utility (being tied to the limited nature and purpose of the device), replicable (other devices collect the same or similar data) and not unique (data about a smart doorbell is not so unique that it leads to a competitive advantage in respect of the same or other devices). Data from one smart home device is not a critical input for competition between devices or other digital products or services and device data should not raise a smart home device "ecosystem" concern.

6. PERSONAL CLOUD SERVICES

Information technology (**IT**) is a dynamic industry and personal cloud services are a relatively new component of that industry. Personal cloud storage provides consumers with an online information storage option. This is in addition to the numerous alternatives customers already have for their data storage needs, including

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[32] There may be some variation in the privacy controls across Amazon's Smart Home Devices.
[33] See https://www.amazon.com.au/b/?node=6971549051. There may be some variations across Amazon's Smart Home Devices.

customer self-storage on physical IT media,[34] customer ready-to-go home cloud services,[35] or even hybrid solutions that combine, for example, self-storage and a personal cloud solution. Indeed, almost every significant consumer electronics retailer sells devices that give customers the ability to create their own personal cloud for information storage. In short, there are options and alternatives to personal cloud solutions and customers can (and do) choose which service option or combination of service options would be appropriate based on factors such as their functionality, cost, performance, availability and support.

Amazon's personal cloud storage offering is limited to photos and videos only. The service allows users to upload, download, view, edit, and create albums or share photos and videos. While Amazon account holders receive 5 GB of storage - additional storage requires a paid plan.[36] Aside from needing an Amazon account, Amazon Photos has a limited relationship with Amazon's other products and services, e.g., customers can choose for their stored photos to be displayed on Amazon's Echo Show device. As noted above, the "Amazon Drive," a general file storage and sharing service, will be withdrawn from 31 December 2023 worldwide,[37] demonstrating the depth of the existing competition for personal cloud storage services.

Amazon's photo cloud storage service is small relative to other digital photo storage options and not as comprehensive as other personal cloud storage options which support a wider range of file types and functionality. Example include: Google Photos, Apple's iCloud, Microsoft's OneDrive, Dropbox and Google Drive. In Australia, the Amazon Photos App is not preloaded on customers' devices unlike many competing personal cloud storage services, which are pre-loaded for a large number of users (eg OneDrive on Windows devices, Google Photos and Drive on Android phones, iCloud on iPhones, etc.). Amazon's Photos App can be downloaded from iOS or Android app stores.

While consumers have not widely selected the Amazon Drive, notwithstanding that they may use other Amazon products or services shows that related product or service offerings do not confer any unique competitive advantage nor raise any leverage concerns.

7. CONSUMERS BENEFIT FROM INTERCONNECTED SERVICES

The starting point for a discussion of smart home devices and related services should be that interconnected digital services also offer many consumer and public benefits. In this regard, the Productivity Commission Report found that:

● emerging digital and data applications, including but not limited to artificial intelligence, IoT and data analytics have a number of consumer benefits. These emerging digital applications are often supported by and evolve through the implementation of interconnected services. The benefits outlined by the Productivity Commission included that these digital services:

  1. can result in better-quality goods and services and more product choice for consumers;[38]
  2. can enable consumers to easily search online for products that best meet their preferences and verify product quality through online information;[39]

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[34] The options include personal computers, tablets, phones, various portable storage media such as thumb drives, hard drives, memory cards, and even cloud enabled storage solutions such as sinology.

[35] IT Pro Today, How to Build a Personal Cloud Server for Private File Storage at Home; Synology Drive at https://www.itprotoday.com/cloud-storage/how-build-personal-cloud-server-private-file-storage-home and Synology Drive: Transform your Synology NAS into your own private cloud with 100% data ownership at zero additional cost at https://www.synology.com/en-au/dsm/feature/drive

[36] Amazon Photos at https://www.amazon.com.au/gp/help/customer/display.html?nodeId=G6PT8TMLM9NVZCSL#:~:text=Amazon%20Photos%20is%20a%20secure,desktop%2C%20mobile%2C%20and%20tablet.

[37] Amazon, Amazon Drive Deprecation: FAQs at https://www.amazon.com/b?ie=UTF8&node=23943055011

[38] Productivity Commission Report, vol 4, pages iv, 6.

[39] Productivity Commission Report, vol 4, page iv.

3. help create more personalised goods and services which are tailored to an individual customer's needs;[40] and
4. support consumers to make more informed purchasing decisions.[41]

● large businesses are often the source of new competition when they move into markets.[42]

Amazon submits that ACCC should be cautious in considering the matters outlined in the Issues Paper to ensure all relevant considerations are properly balanced. For example, Amazon's development of virtual assistants and Amazon Smart Home Devices enhances competition in this space as well as more broadly across non-smart products and encourages suppliers, brand owners to innovate and invest. Unless the dynamics are carefully considered and the incentives of participants are well understood, there is a substantial risk of speculative and incorrect findings. This could result in innovation being unduly curbed by regulatory recommendations, in turn impacting the benefits Australian consumers derive from these services. As the Productivity Commission Report finds, general competition law in Australia is well designed and effective and competition-related regulatory intervention should be targeted to high-risk areas to avoid inhibiting productivity-enhancing investment and innovation, which ultimately benefits consumers.[43]

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[40] Productivity Commission Report, vol 4, page 6.
[41] Productivity Commission Report, vol 2, page 51.
[42] Productivity Commission Report, vol 1, page 26.
[43] Productivity Commission Report, vol 1, page 26.

ANNEXURE 1: AMAZON SMART HOME DEVICES

Echo Devices: Echo comprises speakers and displays that enable customers to listen to music, watch films, set timers, create calendar events, make video calls (only for Echo devices with a screen), among other features. Echo devices are Alexa-enabled and customers can use the Alexa functionality on Echo devices to interface with smart home devices. There are three primary ways to interact with Echo devices: (a) by voice, through Alexa (e.g., through voice commands such as "*Alexa, turn the lights on*"), (b) using the Alexa app, or (c) by touch on the screen of Echo devices with screens. Certain Echo devices may allow customers to control smart home devices connected locally to such devices via technologies like Bluetooth Low Energy and Zigbee using Alexa or touch-screen interactions on Echo devices with a screen (e.g., Echo Show).	**Figure 1 - Echo Dot (4th generation) and Echo Show 10 (3rd generation)**
Ring video doorbells and security cameras: Ring products include video doorbells and security cameras. Ring cameras and doorbells can detect motion and record videos of the detected event. When a camera detects motion or a doorbell button is pressed, the device communicates this information via the Ring cloud to the Ring Always Home application (the "Ring app") to notify the customer. The Ring app allows users to view real-time video from the camera, receive push notifications when the doorbell is rung and communicate with visitors at the door via an integrated speaker and microphone. Customers can also view videos by logging in on Ring.com.	**Figure 2 - Ring Video Doorbell**
e**ero mesh wifi devices:** eero is a wifi system that uses one or more access points to provide a customer's home with fast, reliable coverage all on a single network.[44] Mesh networks enable multiple access points to work in unison to deliver fast, reliable wifi. Each device in a mesh network connects to the other devices, rather than each device connecting to an ISP modem. Unlike home wifi networks that are built around a centralised hub, a mesh network consists of multiple access points communicating with each other.[45]	**Figure 3 - eero mesh wifi device**
FireTV Stick streaming media players: Fire TV enables customers to access content including TV episodes and movies, songs, classes, and on-demand television. Customers can interface with Fire TV devices via Alexa through the Alexa Voice Remote included with the device or the Fire TV app.	**Figure 4 - Fire TV Stick and Alexa Voice Remote**

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[44] https://support.eero.com/hc/en-us/articles/207602596-How-is-eero-different-than-a-range-extender-
[45] https://support.eero.com/hc/en-us/articles/207646676-What-s-a-mesh-network-

ANNEXURE 1: AMAZON SMART HOME DEVICES

Alexa: Virtual assistants are software that can supply information, connect to or interface with smart devices, perform certain tasks and provide services or content based on the customer's questions and commands. Customers can ask their virtual assistants questions, interface with home automation devices and media playback (music, radio, audiobooks, video), and manage other basic tasks such as email, to-do lists, and calendars, depending on the device. Amazon's Alexa virtual assistance software can be used to interface with smart home devices through an app- and/or virtual assistant- enabled device, such as a phone device (eg, iPhone, Android), wearable device, etc. Virtual assistants generally can either be "built-in" to the device or "work with" the device. Devices with virtual assistants "built-in" typically have a microphone and speaker as well as virtual assistant software integrated in the device. On the other hand, devices that "work with" (e.g. light bulbs, security cameras) virtual assistants cannot interface directly with virtual assistants but instead require app- and/or virtual assistant-enabled devices (i.e., devices with virtual assistants "built-in") to do so.	