To: Michelle Dowdell, First Assistant Secretary
Digital Technology Taskforce
Department of the Prime Minister and Cabinet
By email: digitaltechnologytaskforceinbox@pmc.gov.au

Friday April 29, 2022

Dear Ms. Dowdell,

The Digital Industry Group Inc. (DIGI) thanks you for the opportunity to provide our views on the *Australia as a Leader in Digital Economy Regulation: Automated Decision Making and AI Regulation Issues Paper* ("The Issues Paper").

By way of background, DIGI is a non-profit industry association that advocates for the interests of the digital industry in Australia. DIGI's founding members are Apple, eBay, Google, Linktree, Meta, Twitter, Snap and Yahoo, and its associate members are Change.org, Gofundme, ProductReview.com.au and Redbubble. DIGI's vision is a thriving Australian digitally-enabled economy that fosters innovation, a growing selection of digital products and services, and where online safety and privacy are protected.

DIGI welcomes the work of the Department of Prime Minister and Cabinet (PM&C) to make Australia a leading digital economy, and the consultative approach taken through the engagement of Digital Experts Advisory Committee (on which DIGI is represented), and through this specific exploration. We are pleased to see the opportunities highlighted on p.2 of the Issues Paper, and agree that these are critical to the success of the Digital Economy Strategy; DIGI and its members would value further discussion with PM&C's Digital Technology Taskforce in exploring these opportunities.

DIGI shares the Government's vision for Australia to be a top 10 digital economy by 2030. We agree with the Issues Paper's characterisation of this goal as "ambitious", as Australia currently has the second smallest technology sector in the OECD[1]. However, we do believe that this goal is achievable with *conscious* and *coordinated* efforts to improve the regulatory settings to build and grow technology companies in Australia, and to digitise the economy. This effort requires a whole-of Government approach.

DIGI also shares the vision for the promise of new technologies such as Artificial Intelligence (AI) and Automated Decision Making (ADM), if deployed safely and responsibly. AI and ADM are central to harnessing the potential of a digital economy, and can also support better decision-making, public safety and more inclusive and informed societies. However, we acknowledge the capacity for unintended consequences in perpetuating biases and other risks, and do believe in the need for policy solutions to mitigate against and address potential harm.

Our main arguments in this submission are:

1. Regulatory settings and reform proposals across various regulators and Departments have direct implications on Australia's ability to realise its Digital Economy Strategy goal of becoming a top 10 digital economy by 2030, and to unlock the full potential of technologies such as AI and ADM.

[1] AlphaBeta (2019), *Australia's Digital Opportunity*, accessed at https://digi.org.au/wp-content/uploads/2019/09/Australias-Digital-Opportunity.pdf

Through this area of exploration and the forthcoming Digital Age Policy Framework, we recommend that PM&C establish systems that enable a whole-of-Government approach to digital policy to ensure implications are assessed, and that approaches are coordinated.

2. DIGI agrees with the need for risk-based frameworks to prevent and address issues related to the use of AI and ADM. Such frameworks should provide horizontal guidance on good AI processes, and flexibility to allow for tailored and sector- and application-specific regulation. We also suggest that the AI Ethics framework, developed in consultation with 272 stakeholder organisations[2], provides a good model and should be further promoted and evaluated.

3. DIGI recognises that while well promoted voluntary frameworks will go a long way in adressing harms arising from AI and ADM, there are certain harms such as privacy and discrimination risks that may require more targeted intervention. For such situations, DIGI recommends identifying the applications of AI and ADM where there may be challenges, and working through reform processes of relevant legislation to those sectors, such as through the Privacy Act Review, and an examination of whether existing discrimination laws can be applied to this emerging use of technology.

We thank you for your consideration of the matters raised in this submission, and we look forward to further discussion with you. Should you have any questions, please do not hesitate to contact me.

Best regards,

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[2] Department of Industry, Science, Energy & Resources, *Developing the AI Ethics Framework and principles*, accessed at https://www.industry.gov.au/data-and-publications/australias-artificial-intelligence-ethics-framework/developing-the-ai-ethics-framework-and-principles

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Suggested policy focuses for AI, ADM and digital regulation

Consultation questions
1: What are the most significant regulatory barriers to achieving the potential offered by AI and ADM? How can those barriers be overcome?
2: Are there specific examples of regulatory overlap or duplication that create a barrier to the adoption of AI or ADM? If so, how could that overlap or duplication be addressed?
3. What specific regulatory changes could the Commonwealth implement to promote increased adoption of AI and ADM? What are the costs and benefits (in general terms) of any suggested policy change?
5. Are there opportunities to make regulation more technology neutral, so that it will more apply more appropriately to AI, ADM and future changes to technology?
7: Is there a need for new regulation or guidance to minimise existing and emerging risks of adopting AI and ADM?
10. Are there international policy measures, legal frameworks or proposals on AI or ADM that should be considered for adoption in Australia? Is consistency or interoperability with foreign approaches desirable?

1. Regulatory uncertainty should be addressed, and regulation simplified

1.1. We agree with the Issues Paper's assertion that "Regulatory uncertainty for both industry and government risks inhibiting Australia's ability to achieve its goal of being a top 10 digital economy by 2030". The Issues Paper rightly identifies that relevant businesses are subject to multiple regulatory frameworks (which DIGI further explores in the next section of this submission). We recommend that PM&C is provided with the authority and resourcing to play a key role across Government in improving the state of regulatory uncertainty for the digital industry through its Digital Age Policy Framework.

1.2. Online safety regulation provides a good example of one area of regulatory complexity. The March 2022 House of Representatives Select Committee on Social Media and Online

Safety Committee report into Social Media and Online Safety recommended simplifying regulatory arrangements in relation to online safety[3]. In that effort, DIGI recommends the The Criminal Code Amendment (Sharing of Abhorrent Violent Material) Act 2019 (AVM Act) be incorporated into a consolidated Online Safety Act and that inconsistencies[4] within the various online regulatory instruments under Online Safety Act need to be addressed.

1.3. In this regulatory context, DIGI is concerned when proposals are made for *new* frameworks in relation to digital platform services, as has been proposed in the February 2022 ACCC *Digital Platform Services Inquiry Discussion Paper for Interim Report No. 5: Updating competition and consumer law for digital platform services*. We consider that a new framework could indeed be counterproductive, as it would add further complexity to what is already an overlapping regime for digital platform services.

2. Digital policy across all areas of Government should be grounded in strategy

2.1. We welcome the Discussion Paper's mention of PM&C's intention to develop a Digital Age Policy Framework to provide principles, guidance and best practice that will inform the development of future digital regulation. This effort is crucially important, and we recommend that it provide the foundation for a whole-of-Government approach to digital policy.

2.2. In that endeavour, one international development of which we encourage review is the UK's Plan for Digital Regulation[5], published in July 2021. The plan:

2.2.1. Sets out an overall vision for governing digital technologies, including new principles which will guide how the Government will design and implement regulating digital technologies, as well as some practical proposals for how it will avoid overlaps and conflicts between different frameworks.

2.2.2. Sets clear objectives for digital regulation including promoting innovation, competition and growth.

2.2.3. Commits the UK Government to assess the case for regulation and to consider non-regulatory approaches in the first instance including self-regulation and industry standards.

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[3] House of Representatives Select Committee on Social Media & Online Safety (2022), *Committee report*, accessed at https://www.aph.gov.au/Parliamentary_Business/Committees/House/Social_Media_and_Online_Safety/SocialMediaandSafety/Report, see Recommendations 18 and 19

[4] As one example of an inconsistency, the OSA's takedown schemes and the BOSE suggest that service providers should be required to remove all types of Class 1 material. However, the Commissioner's position as stated in their position paper on the OSA Codes is that an identified subclass of Class 1, termed "Class 1b (fetish practices)" can be treated as Class 2 materials, and therefore do not need to be removed. It is unclear whether this interpretation extends to other aspects of the OSA, which creates confusion for industry participants working in good faith to comply with the legislation.

[5] UK Government (2021), *Digital Regulation: Driving growth and unlocking innovation*, accessed at https://www.gov.uk/government/publications/digital-regulation-driving-growth-and-unlocking-innovation#full-publication-update-history

2.2.4. Is presented as a cross-government approach which is intended to be followed by all departments initiating digital policy.

2.2.5. Repeats the UK Secretary of State's desire that the new Information Commissioner play a role in realising the economic benefits of data use and remove unnecessary barriers.

2.3. Adoption of clear principles and an assessment framework for developing new Australian digital policy and regulation could serve as a consistent and predictable framework for Government and its external stakeholders. It would also complement the coordination efforts around existing regulation occurring at the DP-REG forum.

2.4. DIGI believes that there are key principles that are important for *all* regulatory tools aimed at digital platform services, which should:

2.4.1. Be in response to a well-defined policy problem and informed by *evidence of that problem, specifically its prevalence and where in the digital ecosystem it occurs*.

2.4.2. Avoid "*tech tunnel vision*"; harms that arise on digital platform services are a reflection and manifestation of harms that occur offline. Technology-focused regulatory tools should not be considered in isolation, rather they should be considered alongside solutions in other areas of policy related to the problem, in order to make meaningful improvements.

2.4.3. Have *extensive and iterative consultation* with technology practitioners, in order to ensure that appropriate solutions are considered and that they keep pace with fast-moving technology, and can be effectively implemented.

2.4.4. Be *proportionate* to both the scale and nature of the issue and to businesses of different sizes, because digital platform services encompass start-ups through to large multinational enterprises.

2.4.5. Be *outcomes-based* and flexible, to account for the extreme diversity of the sector. There can be a myriad of different approaches each tailored to specific types of service or supply chains but delivering the same consumer outcome; conversely digital platform services are often each working to solve very different problems, with their only commonality being their medium.

2.4.6. Be *cohesive*, applying a *whole-of-Government approach.* Specifically, their impact on Australia's Digital Economy Strategy should be assessed, taking into account Australia's small technology sector relative to comparable OECD markets.

2.4.7. Have *procedural fairness* inorder to ensure there are documented and transparent pathways for recourse for both consumers and industry participants, and review mechanisms.

2.5. In addition to the Digital Age Policy Framework, DIGI encourages the Australian Government to develop "a digital economy assessment framework" where foundational and emerging policies across a range of departments must be evaluated against agreed principles (such as those outlined above), and for their impact on Australia's Digital Economy Strategy to be a leading digital economy by 2030.

3. Align with global standards & account for Australia-specific differences

3.1. We understand from the Issues Paper that the Australian Government wishes to position "Australia as a leader in digital economy regulation" in an effort to inspire public confidence among consumers in adopting technology and services powered by AI and ADM. Further analysis needs to occur on how this positioning will realistically be perceived by industry.

3.2. Recent years have seen a number of Australian policy proposals focused on algorithms. Such proposals have included:

3.2.1. The ACCC's Digital Platforms Inquiry's Preliminary Report contained recommendations in that amounted to the regulatory oversight of algorithms[6], through these recommendations were narrowed in the final ACCC Digital Platforms Inquiry report. However, the recent ACCC Digital Platform Services Inquiry Discussion Paper for Interim Report No. 5: *Updating competition and consumer law for digital platform services* may appear to revisit this issue, by posing the consultation question: "In what circumstances, and for which digital platform services or businesses, is there a case for increased transparency including in respect of price, the operation of key algorithms or policies, and key terms of service?[7]"

3.2.2. The Australian Human Rights Commission (AHRC) final report into human rights and technology recommended the establishment of an AI Safety Commissioner as an independent statutory office, focused on promoting safety and protecting human rights in the development and use of AI in Australia[8].

3.3. Such proposals can appear to operate from a premise that algorithms can be inherently harmful whereas, as the Issues Paper acknowledges, they play a range of beneficial roles economy-wide. On digital platforms specifically, AI and ADM play an important role as a sorting mechanism for the millions of terabytes of information online, enabling people to readily obtain relevant content and information. They are also key to how digital service providers guard the safety and security of Internet users, and address harmful content. including detecting and removing harmful content before a person sees it.

3.4. While DIGI supports work to address defined harms in the application of AI, we explore later in this submission how regulation will be more effective if it is targeted at a specific problem, rather than catch-all regulation of a certain type of technology. Proposals focused on algorithm review (such as those above) can be met with concern across the digital industry because of the proprietary nature of algorithms, their constant evolution, and the practical impediments associated with third-party review of internal technology.

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[6] ACCC (2018), *Digital Platforms Inquiry—preliminary report*, accessed at https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry.pdf, p. 11 (Recommendations 4 and 5)
[7] ACCC (2022), *Digital Platform Services Inquiry Discussion Paper for Interim Report No. 5: Updating competition and consumer law for digital platform services*, accessed at https://www.accc.gov.au/system/files/Digital%20platform%20services%20inquiry.pdf, p. 11
[8] Australian Human Rights Commission (2021), *Human Rights and Technology Final Report*, accessed at https://humanrights.gov.au/our-work/rights-and-freedoms/publications/human-rights-and-technology-final-report-2021

Industry concern about such proposals may have negatively impacted Australia's international reputation as a place to invest in AI and ADM. We recommend that PM&C further explore the reputational perceptions amongst relevant industries, and perhaps focus on how these perceptions may be improved.

3.5. In relation to digital economy regulation, DIGI believes that Australia should be striving for *effectiveness* in response to defined problems, and *interoperability* with established global standards. Any differences from those global standards should be grounded in evidence of differences in relation to the Australian context that necessitates a departure.

3.6. For example, DIGI supports interoperability between equivalent global privacy regimes in order to provide greater legal certainty to companies, and consistency of experience for consumers who regularly interact with services being offered outside of Australia. This both serves to promote innovation and engenders trust in a digitally enabled economy that increasingly relies on cross border trade that, either directly or indirectly, utilises data that is sometimes personally identifiable. As the OECD notes, the significant increase in flows of personal data requires a globally coherent approach that includes national privacy strategies that can act to further privacy interoperability[9]. The EU's General Data Protection Regulation (GDPR), introduced on May 25, 2018, was landmark legislation that has served as the new global standard for privacy legislation that thousands of companies with a global presence have implemented.

3.7. While DIGI welcomes alignment with GDPR in the updated Privacy Act once the current review is complete, the Australian Government would equally be justified in proposing a departure from the established global norm on the basis that the digitisation of its economy lags behind that of other nations, as it currently has the second smallest technology sector in the OECD[10]. This is where the assessment framework, recommended above, will provide crucial guidance to policymakers.

3.8. DIGI also cautions against a sole focus on emerging regulatory developments in overseas jurisdictions to justify domestic regulation, without consideration of the Australian regulatory context. This can lead to bias toward a view that new regulation is required to address consumer concerns, rather than filling any gaps to address emerging trends in existing Australian frameworks.

4. Improve cooperation mechanisms Australian Government on digital policy

4.1. DIGI believes that strong cooperation mechanisms between Australian regulators and Departments that have a role in relation to digital platform services is critical to advancing efforts to address consumer harms.

[9] OECD, *Interoperability of privacy and data protection frameworks*, accessed at http://goingdigital.oecd.org/data/notes/No21_ToolkitNote_PrivacyDataInteroperability.pdf

[10] AlphaBeta (2019), *Australia's Digital Opportunity*, accessed at https://digi.org.au/wp-content/uploads/2019/09/Australias-Digital-Opportunity.pdf

4.2. DIGI therefore welcomed the formation of Digital Platform Regulators Forum (DP-REG), announced on Friday March 11, 2022[11], which formalises cooperation between the ACCC, ACMA, OAIC and eSafety.

4.3. DIGI agrees that such a forum is needed in order to ensure effective and coordinated regulation of digital platforms. We welcome the focus on streamlining overlapping regulation, reducing duplication and creating proportionate, cohesive, well-designed and efficiently implemented digital platform regulation outlined in the DP-REG's Terms of Reference[12].

4.4. As the newly formed DP-REG's operations are considered, DIGI would encourage a proactive programme of engagement with the digital industry in order to ensure deliberations are well informed, transparent to market participants and responsive to advances in technology. We welcome the inclusion within the Terms of Reference of the DP-REG that relevant stakeholders may have the opportunity to observe meetings or present on issues relating to the regulation of digital platforms.

4.5. Digital platform reform proposals and strategies are advanced by many agencies and Departments across the Australian Government, particularly the Department of Infrastructure, Transport, Regional Development and Communications, the Department of Home Affairs, the Attorney General's Department and PM&C. We therefore encourage PM&C to consider how it might engage with the DP-REG on matters of digital regulation.

4.6. We also believe that the DP-REG's goals would be furthered by identifying a set of issues in its forward work plan in close cooperation with both the Digital Technology Taskforce and industry.

5. Socialise and promote risk-based frameworks on AI processes

5.1. DIGI agrees with the need for risk-based frameworks for AI and ADM, that take a proportionate approach to assessing risk, and that include a focus on applications that can be defined as high risk. Such frameworks should provide horizontal economy-wide guidance on good AI processes, and flexibility to allow for tailored and sector- and application-specific regulation (discussed below).

5.2. We also believe that such frameworks have a role in promoting workable standards for explainability and transparency to promote confidence in algorithms.

5.3. DIGI welcomed the release of the Australian Government's AI Ethics Principles that provide guidance to a wide range of companies using AI to prevent unintended consequences and ensure the highest standards of ethical business and good governance. These principles provide a helpful framework for companies across a wide range of sectors to ensure the ethical application of AI.

5.4. However, DIGI is concerned that the AI Ethics Framework has not been promoted nor socialised across the digital and relevant industries, and other sectors utilising AI. This

[11] ACMA media release (11/03/22), *DP-REG joint public statement*, accessed at https://www.acma.gov.au/dp-reg-joint-public-statement

[12] DP-REG (2022), *Digital Platform Regulators Forum Terms of Reference*, accessed at https://www.acma.gov.au/sites/default/files/2022-03/DP-REG%20Terms%20of%20Reference%20.pdf

signals a broader trend we have observed with recent digital policy announcements: they lack a program of targeted socialisation and evaluation. Furthermore, we observe that new solutions are entertained before existing solutions are suitably promoted or evaluated[13]. As noted, we are pleased that PM&C is undertaking exploration of this area and suggest this build upon the existing work undertaken with the AI Ethics Framework.

6. Focus on outcomes in the application of AI and ADM

6.1. We recognise that there are applications of AI and ADM where a voluntary framework like the AI Ethics Framework may not be sufficient in preventing or addressing real world harm. Privacy and discrimination risks are two examples.

6.2. For such situations, DIGI considers that the majority of potential problems associated with AI lie in the contextual application of the technology in a variety of sectors, and therefore caution against recommendations for regulatory or centralised bodies focused on reviewing the technology of AI itself, such as the recommendation by the AHRC for an "AI Safety Commissioner". In addition to challenges previously noted, any centralised AI review organisation may face significant human resources challenges, as an extremely high level of both technological expertise in relation to AI would be required alongside highly in-depth, sector-specific knowledge of every industry and government vertical where AI is applied, again noting that these technologies will be used across the economy, not just by a small number of highly digitised companies.

6.3. Rather, the focus of regulation should be building on existing rules, such as sectoral regulation, that are targeted at specific policy problems. Setting standards of acceptability for the real-world outcomes of algorithmic applications is a more effective way to assess their impact than examining the algorithm itself, and will also be more effective in mitigating harm. This can complement the AI-focused frameworks explored above. We therefore recommend identifying the applications of AI and ADM where there may be challenges, and working through reform processes of relevant legislation to those sectors. This is also the most technology neutral approach, because it acknowledges that technology is used economy-wide. It also acknowledges that we want this digitisation to increase as part of the Digital Economy Strategy.

Privacy

6.4. The Privacy Act is currently under review, and this provides an important opportunity to mitigate harm that may arise from the application of AI and ADM. With that goal in mind, DIGI recommends that the Privacy Act Review Discussion Paper proceeds with its recommendation outlined below to address this issue, that specifically calls out

[13] For example, on September 3, 2020, the Australian Government released the voluntary *Code of Practice: Securing the Internet of Things for Consumers*, which contains thirteen principles that signal Government expectations to manufacturers about the security of smart products. This voluntary code was only in operation for several months when the Department of Home Affairs was preparing its discussion paper titled *Strengthening Australia's cyber security regulations and incentives*, which proposes options for how that code might be replaced. Should the uptake of the original code not meet the Government's expectations, particularly in any priority sectors of the market, it should prioritise targeted outreach and awareness raising initiatives. In general, targeted promotion of regulatory tools to relevant industry participants should be a baseline requirement upon finalisation.

automated decision-making and other practices that require robust risk mitigation measures:

> *APP entities that engage in the following restricted practices must take reasonable steps to identify privacy risks and implement measures to mitigate those risks:*
>
> - *Direct marketing, including online targeted advertising on a large scale**
> - *The collection, use or disclosure of sensitive information on a large scale*
> - *The collection, use or disclosure of children's personal information on a large scale*
> - *The collection, use or disclosure of location data on a large scale*
> - *The collection, use or disclosure of biometric or genetic data, including the use of facial recognition software*
> - *The sale of personal information on a large scale*
> - *The collection, use or disclosure of personal information for the purposes of influencing individuals' behaviour or decisions on a large scale*
> - *The collection use or disclosure of personal information for the purposes of automated decision making with legal or significant effects, or*
> - *Any collection, use or disclosure that is likely to result in a high privacy risk or risk of harm to an individual.*
>
> **'Large scale' test sourced from GDPR Article 35. Commissioner-issued guidance could provide further clarification on what is likely to constitute a 'large scale' for each type of personal information handling.*[14]

Discrimination

6.5. We need to ensure that existing laws relating to discrimination can be applied to this emerging use of technology. Further consideration might need to occur on whether the following are suitably modernised for AI and ADM application:

6.5.1. Federal anti-discrimination legislation already protects people from discrimination and from breaches of their human rights, in relation to age, disability, racial and sex discrimination.

6.5.2. In addition to the federal legislation, each state and territory in Australia has established equal opportunity and anti-discrimination agencies, with statutory responsibilities.

6.6. In conclusion, DIGI recommends that centralised approaches to AI regulation should be avoided, in favour of approaches that identify outcomes to ensure or harms to prevent through applications of the technology, and working through reform processes of relevant legislation to those sectors or applications.

[14] Attorney General's Department (25/10/21), *Privacy Act Review Discussion Paper*, accessed at https://consultations.ag.gov.au/rights-and-protections/privacy-act-review-discussion-paper/user_uploads/privacy-act-review---discussion-paper.pdf, p.97

Summary of key recommendations

A. We recommend that PM&C has a key role to play in improving the state of regulatory uncertainty for the digital industry through its Digital Age Policy Framework, which we understand will inform the development of future digital regulation.

B. Australia should avoid adding new frameworks in relation to digital platform services, which would further complicate existing regulatory uncertainty.

C. PM&C should consider exploring Australia's global reputation as a place to invest in AI amongst the technology industry and other relevant industries.

D. The forthcoming Digital Age Policy Framework is welcomed, and we recommend that it provide the foundation for a whole-of-Government approach to digital policy.

E. In addition to the Digital Age Policy Framework, DIGI encourages the Australian Government to develop "a digital economy assessment framework" where foundational and emerging policies across a range of departments must be evaluated against agreed principles, such as those above, and as other Governments have done, and for their impact on Australia's Digital Economy Strategy to be a leading digital economy by 2030.

F. Differences from established global standards in digital policy should be grounded in evidence of differences in relation to the Australian context that necessitates a departure.

G. We encourage the DP-REG to consider how it might regularly engage with other arms of Government that are advancing digital platform policy, and the digital industry. We encourage PM&C to consider how it might engage with the DP-REG on matters of digital regulation.

H. DIGI agrees with the need for risk-based frameworks for AI and ADM, that provide horizontal economy-wide guidance on good AI processes. The existing AI Ethics Framework should be socialised across relevant industries, and its uptake in relation to this promotion should be evaluated.

I. DIGI recommends that the Privacy Act Review Discussion Paper proceeds with its recommendation in relation to ADM that would require APP entities that engage in this practice to take reasonable steps to identify privacy risks, and implement measures to mitigate those risk.

J. DIGI recommends an exploration of whether existing federal, state and territory laws relating to discrimination are modernised to be applied to AI and ADM, to address potential discriminatory impacts.

K. DIGI recommends that centralised approaches to AI regulation should be avoided, in favour of an approach that identifies the applications of the technology where there may be challenges, and working through reform processes of relevant legislation to those sectors.

Background rationale: Australia's digital opportunity & regulatory environment

1. Economic impact of Australia's technology sector

1.1. In September 2019, a major report about Australia's technology sector called "Australia's Digital Opportunity" was released, produced by AlphaBeta (now Accenture) and commissioned by DIGI[15]. It quantifies the extraordinary contribution of Australia's technology sector to the national economy. It found that, at that point in time, the technology sector contributed $122 billion each year to the national economy, or 6.6% of GDP. A subsequent estimate by Accenture in 2021 found that the tech sector contributes $167bn, or 8.5%, of GDP, demonstrating the rapid growth of the sector[16].

1.2. The contribution and growth of the sector has an economy-wide impact. This $122 billion a year contribution comprises two components:

1.2.1. The direct impact of firms within ICT industries such as Internet publishing and broadcasting, search portals, data processing, computer system design, and telecommunications. The direct contribution from the tech sector is $69 billion, or 3.8% of GDP.

1.2.2. The indirect impact of technology on other sectors, which includes wages for technology professionals working in non-tech sectors, and profits enabled by digital activities, which is valued at an estimated $53 billion. This calculation does not directly estimate the productivity gains from the technology sector, for example through efficiencies gained through enterprise software.

1.3. The 2019 report also found that the sector employs 580 000 workers, and in 2021 this was estimated to be 860 000, with sizable proportions in regional Australia.

1.4. The technology sector is therefore truly unique -- it is a high performing industry in itself and also supports SMEs and regional Australia, and the productivity of almost all other industries. Gains in this sector can have a major ripple effect economy wide.

2. Australia is not realising its technology potential

2.1. Yet the analysis also showed that Australia is not fully realising the economic potential of its technology sector. Per Figure 1, Australia ranks second last in the OECD for the size of its technology sector. In the past 25 years, Australia's ICT sector has contributed a declining proportion of net economic value.

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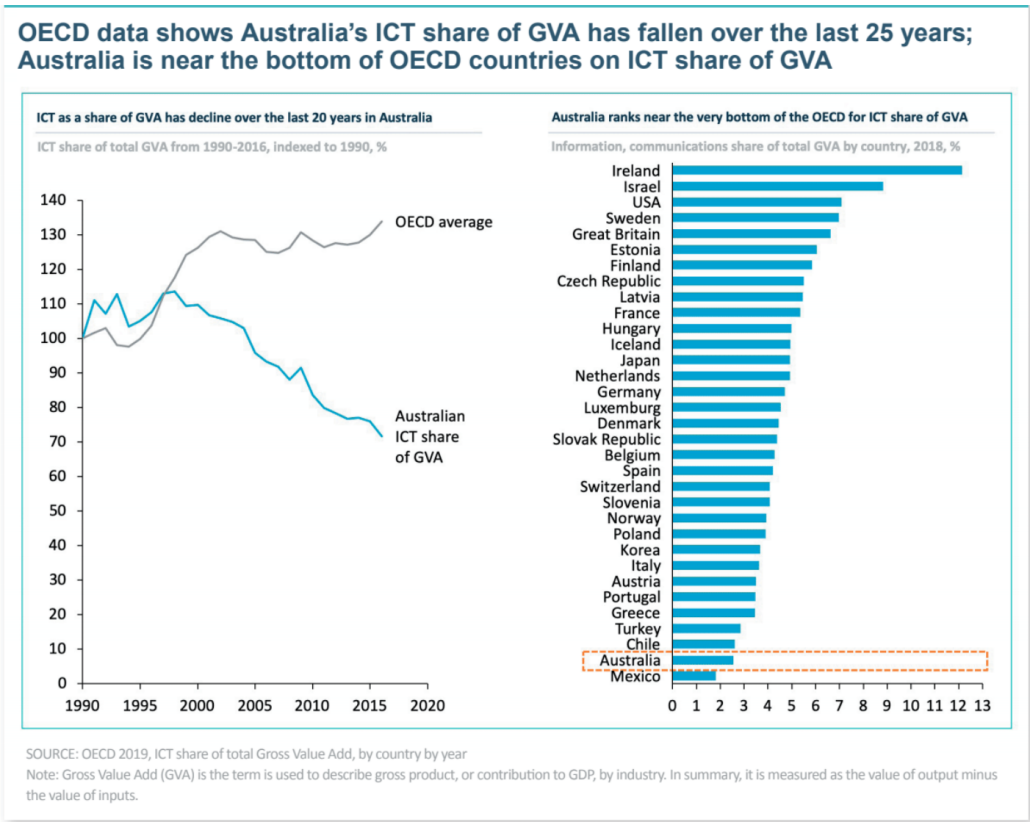
[15] Unless otherwise noted, all statistics from this section are from AlphaBeta (2019), *Australia's Digital Opportunity*, accessed at: https://digi.org.au/wp-content/uploads/2019/09/Australias-Digital-Opportunity.pdf

[16] Accenture (2021), *The economic contribution of Australia's tech sector*, accessed at https://techcouncil.com.au/wp-content/uploads/2021/08/TCA-Tech-sectors-economic-contribution-full-res.pdf

Figure 1: Declining ICT share of Gross Value Added

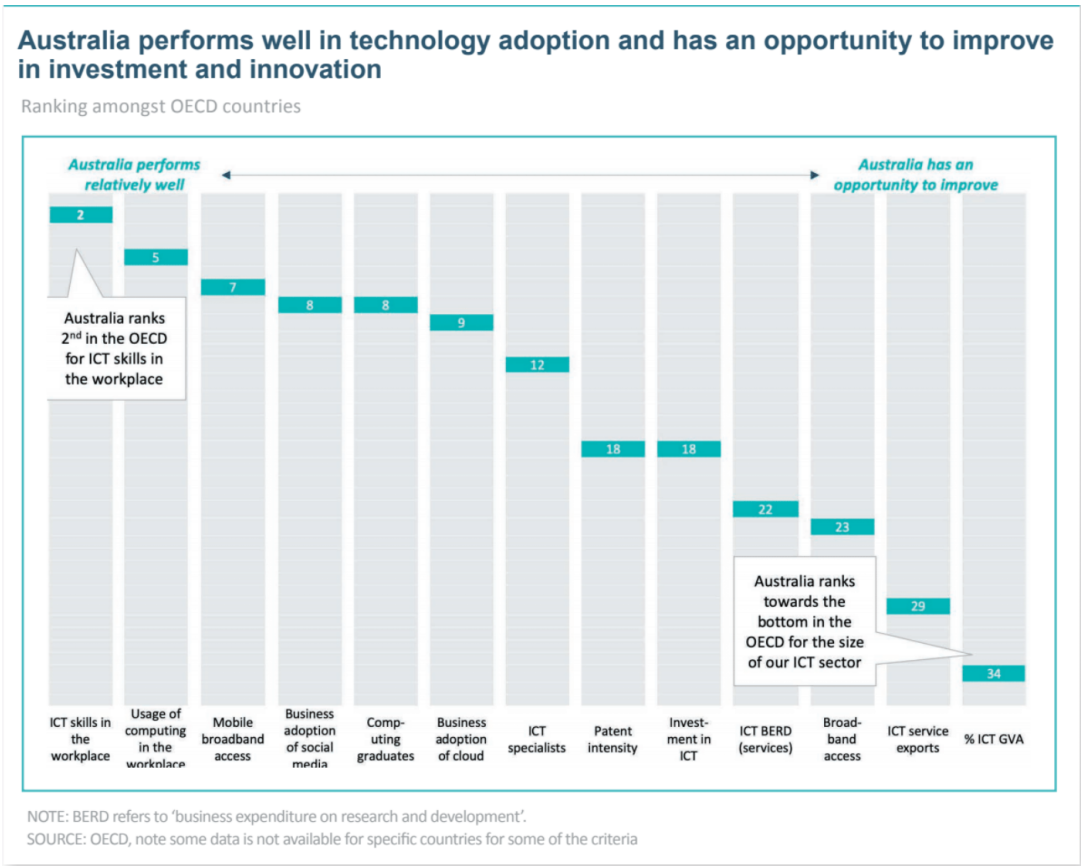


2.2. If Australia caught up with the growth rate of tech-leading countries in the OECD, that overall contribution could almost double to $207 billion per year to GDP by 2030, with the updated estimate in 2021 projecting this figure to be $241 billion.

2.3. A featured part of the Australian Government's Digital Economy Strategy under the Morrison Government has been increasing rates of technology adoption[17]. As Figure 2 shows, Australia performs well with technology adoption, which speaks to the uptake of digital platform services in Australia. By contrast, Australia is towards the bottom of the OECD ladder in relation to the size of the information communications technology (ICT) sector, and for technology exports.

[17] Sadler, Denham (2020) *Tech adoption not creation: the PM's digital plan*, InnovationAus, accessed at https://www.innovationaus.com/tech-adoption-not-creation-the-pms-digital-plan/

Figure 2: OECD rankings for technology performance areas



2.4. As Australia develops a roadmap to become a leading digital economy by 2030, we need to be acutely aware that we are starting this race at the back of the pack with the second smallest technology sector in the OECD. While the incentives under the Government's Digital Economy Strategy are extremely important, the regulatory settings being proposed by other arms of the Australian Government play a crucially important role in the realisation of that strategy, and their impact on it need to be assessed. Establishing systems that enable a whole-of-Government approach to digital policy will ensure the work of one area of Government does not undo that of another.

3. Opportunities with AI and ADM

3.1. DIGI welcomes the Discussion Paper's acknowledgement of the benefits of AI. In general, DIGI believes that AI can support better decision-making, public safety and more inclusive and informed societies, in part because algorithms and machine learning are being used by a wide diversity of private sector industries and public sector departments. Examples of the myriad of beneficial applications include:

3.1.1. **Benefits to health**: AI is helping people attain better health and well-being; a report by PwC demonstrates how AI is already transforming eight components of the healthcare system, including preventative health, diagnosis, decision-making, palliative care, research and training[18]. As one example, Google's DeepMind Health works in partnership with clinicians, researchers and patients to solve real-world healthcare problems by applying machine learning to develop software to improve clinical outcomes[19].

3.1.2. **Disability access and services**: AI is transforming inclusion and access to services for people with disabilities and the elderly. AI-powered devices that use voice commands, such as Amazon Echo and Google Home and Google Assistant technology[20] are being used by people with limited sight or mobility[21], and Meta uses AI to automatically write photo captions for the blind and visually impaired[22].

3.1.3. **The evolution of work**: While there is a fear that AI can result in job losses, research from AlphaBeta actually shows that positive change is happening through workers switching to different tasks within the same jobs, while machines absorb an increasing load of dangerous and repetitive routine work[23]; It predicts that workplace injuries will fall by 11% and job satisfaction will increase among low-skilled workers as dangerous manual tasks are automated.

3.2. The ways AI can result in social good are countless -- as an example of the possibilities, in response to its 2019 AI Impact Challenge, Google received 2602 applications from around the world with different ideas for how AI to help address societal challenges[24].

3.3. Yet Australia currently lags among global leaders across the G20 in the adoption of automation, with 50 per cent fewer Australian firms actively investing in automation compared to firms in comparable economies. Only 9% of ASX companies are making sustained investments in automation, compared with more than 20% in the US and 14% in leading automation nations globally[25]. The unrealised potential underlines the importance of PM&C's work in this area.

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[18] PwC (June 2017) *What doctor? Why AI and robotics will define New Health,* available at: *https://www.pwc.com/gx/en/industries/healthcare/publications/ai-robotics-new-health/transforming-healthcare.html*.

[19] DeepMind (2019) *About DeepMind Health,* available at: *https://deepmind.com/applied/deepmind-health/about-deepmind-health/*

[20] Feros Care (2019), "MyFeros and Google Assistant are helping seniors live in their homes longer" available at https://www.feroscare.com.au/feros-stories/articles/myferos-and-google-assistant-are-helping-seniors-live-in-their-homes-longer

[21] The Tipping Foundation (2018) *6 ways smart home technology is benefiting people with disability,* available at: *https://www.tipping.org.au/6-ways-smart-home-technology-is-benefitting-people-with-disability/*

[22] Matt Burgess (April 5, 2016) "Facebook's AI now writes photo captions for blind users", *Wired UK.* Available at *https://www.wired.co.uk/article/facebook-ai-image-recognition-caption-accessibility-blind-users*

[23] AlphaBeta (2017), *The Automation Advantage*, available at https://www.alphabeta.com/wp-content/uploads/2017/08/The-Automation-Advantage.pdf

[24] Google AI blog (2019), "2,602 uses of AI for social good, and what we learned from them", available at https://www.blog.google/outreach-initiatives/google-org/2602-uses-ai-social-good-and-what-we-learned-them/

[25] AlphaBeta (2017), *The Automation Advantage*, available at https://www.alphabeta.com/wp-content/uploads/2017/08/The-Automation-Advantage.pdf

3.4. At the same time, we understand AI's capacity for unintended negative consequences, and the need for effective solutions to mitigate against potential harm. Many DIGI members are leading important, multi-stakeholder industry initiatives to ensure ethical considerations are taken into account in the development and application of AI. For example, several DIGI members are partners of the Partnership on AI, a multi-stakeholder organisation that brings together academics, researchers, civil society organisations and companies that build and use AI technology. The partnership is developing best practices in "fairness and inclusivity, explanation and transparency, security and privacy, values and ethics, collaboration between people and AI systems, interoperability of systems, and of the trustworthiness, reliability, containment, safety, and robustness of the technology."[26]

3.5. DIGI recognises the important role for governments in ensuring the ethical application of AI in addition to such initiatives, ensuring that existing laws relating to discrimination and privacy can be applied to this emerging use of technology, while also fostering innovation.

4. Complexity of the regulatory environment for digital services

4.1. In an effort to advance an understanding of the complexity of the environment for digital services, DIGI has developed Figure 3 (overleaf) that maps the categories of digital platform services by broad category of issue type, identifies the arms of Government with primary regulatory expertise, and the primary regulatory tools at their disposal (noting that these are not exhaustive).

[26]Partnership on AI (2018) "About Us", accessed at https://www.partnershiponai.org/about/
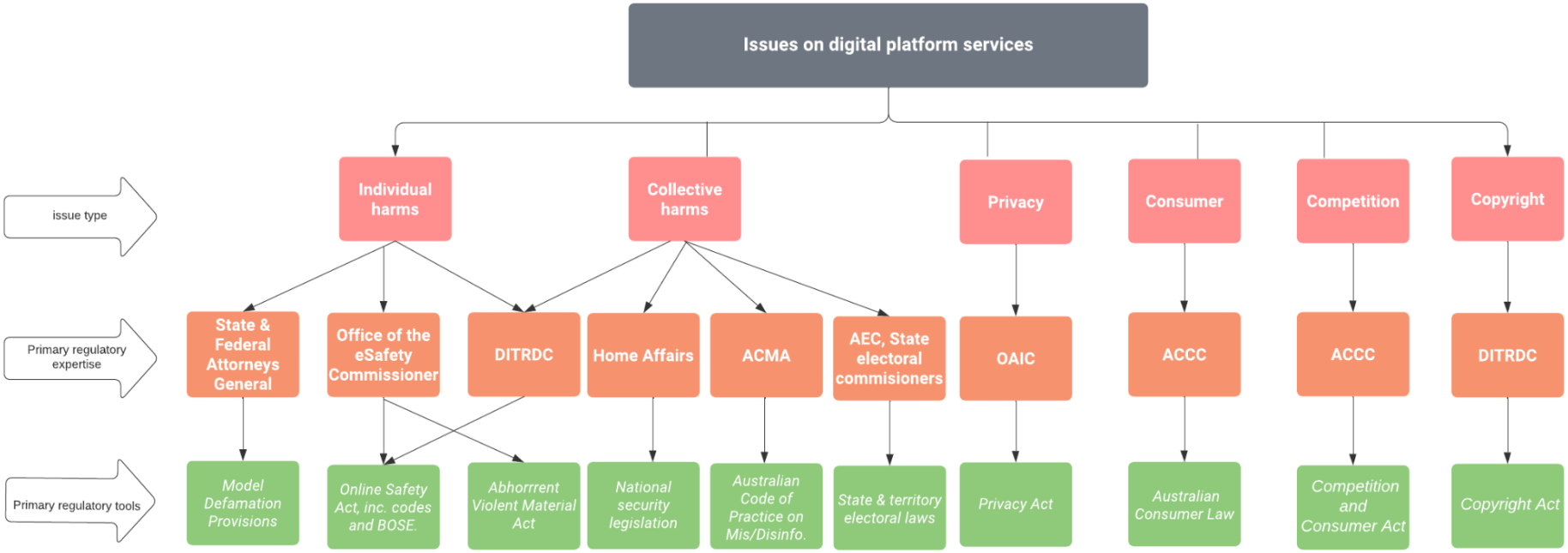
Figure 3: Digital platform service issues, regulatory expertise & tools