Productivity Commission
Locked Bag 2, Collins St East
Melbourne Vic 8003, Australia

Dear Commissioners

RE: Interim Report – 5-year Productivity Inquiry: Australia's data and digital dividend

Thank you for the opportunity to provide comment on the Commission's Interim Report for the 5-year Productivity Inquiry: *Australia's data and digital dividend*.

About the AIIA

The Australian Information Industry Association (AIIA) is Australia's peak representative body and advocacy group for those in the digital ecosystem. We are a not-for-profit organisation to benefit members, and AIIA membership fees are tax deductible. Since 1978, the AIIA has pursued activities to stimulate and grow the digital ecosystem, to create a favourable business environment for our members and to contribute to Australia's economic prosperity.

We do this by delivering outstanding member value by:

• providing a strong voice of influence

• building a sense of community through events and education

• enabling a network for collaboration and inspiration; and

• developing compelling content and relevant and interesting information.

We represent a larger number of technology organisations in Australia, including:

• Global corporations such as Apple, Adobe, Avanade, Deloitte, Gartner, Google, IBM, Infosys, Intel, Lenovo, Microsoft and Oracle

• Multinational companies including Optus and Telstra

• National organisations including Data#3, ASG and Technology One; and

• A large number of small and medium businesses, start-ups, universities and digital incubators.

Introduction

The Covid-19 pandemic highlighted the extent to which technology can facilitate the productivity of the economy despite global disruption and unprecedented paradigm shifts in the way Australians live and work. A resilient digital backbone and transformative digitisation of businesses is crucial as a guarantee of our productivity for decades to come. The momentum created by the elevated focus on digital platforms that saw Australians through the height of the pandemic must be not only maintained but accelerated to achieve the Federal Government's aim for Australia to become a leading digital economy by 2030 and realise important productivity gains. Technology and innovation technology must be embedded in our manufacturing and traditional industries

In 2021, the AIIA published an industry-focused White Paper, *Growing Globally Competitive Industries Powered by Australia's Innovation Technology*.[1] The Paper outlined the undeniable and "transformative opportunity that technology provides … those countries, industries, governments and enterprises that successfully drive technology innovation at the core of their strategies are the ones that will maximise opportunity from the shifts occurring in our world."[2] Embracing and embedding technological innovation will ensure Australia does not lag behind on the world stage. From addressing slowing productivity growth in agriculture through the adoption of new cropping technologies, leveraging health databases to manage and prevent chronic conditions, accelerating the adoption of data and digital skills in the Australian Public Service to drive productivity,[3] to commercialising quantum-enhanced communications and sensing systems,[4] the White Paper illuminates the way in which data and digital technology can reap productivity dividends as an enabler across sectors.

Technology will be the engine of future-fit medical, agricultural, space, engineering and government sectors. Productivity gains can be made across diverse sectors especially if artificial intelligence (**AI**), robotic process automation, digital twin technology, the Internet of Things (**IoT**) and the cloud are fully leveraged and embedded. See below excerpt from the *Growing Globally Competitive Industries*:[5]

> *It is important to note that an innovation technology-driven agenda that places Australia as a global leader across our priority industries is only reliant on our ability to invent and commercialise. It is not dependent on our size or our location. This mindset can change the way we and others view us. During this time of significant transformation, whether it be geo-politically, economically, technologically or socially, we must continue to focus on building a resilient, flexible and future -focussed Australia that is able to maximise the opportunity that technological advancement is providing. By continuing to take a lead in prioritising critical industries and investing in critical technologies, Australia has an opportunity to secure its place, and its industries, in the global arena.*

As referred to in the Commission's fourth Interim Report, *A competitive, dynamic and sustainable* future, the maturity of negative emissions technologies and cost-effective carbon abatement technology will be crucial to realising a digitally advanced net-zero economy. As noted in the fourth Interim Report,[6] sustainable future, an even, economy-wide approach to decarbonisation will necessitate more than just a pillar of 'green jobs', 'clean energy jobs' or a 'green sector' within the economy, but will also need to decarbonise entire industries and jobs of every kind, upskilling workers in emissions reductions, emissions tracking, and abatement across industries. The role of data analytics and digital technology will be crucial in the task of building a productive, decarbonised digital economy, where emissions, offsets and abatement efforts are measured and understood.

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[1] https://35hddx2cwawgt701l2sq0v5c-wpengine.netdna-ssl.com/wp-content/uploads/2021/08/AIIA-Growing-Globally-Competitive-Industries.pdf
[2] Ibid p.1
[3] Ibid p.34
[4] Ibid p.54
[5] https://35hddx2cwawgt701l2sq0v5c-wpengine.netdna-ssl.com/wp-content/uploads/2021/08/AIIA-Growing-Globally-Competitive-Industries.pdf
[6] p. 82

The AIIA believes the key performance indicators outlined by the Digital Economy Strategy, including its 2022 measures of success,[7] will be instrumental in driving productivity across both business and government in the next eight years. The measures of success envisage an Australia in which all new businesses are 'born' digital; 95% of SMEs will be using e-Commerce tools; and 100% of Australian Government services are available online. Realising such productivity along the milestones of the citizen journey, the operations of each business, and the essential work of Australian industry are not disparate tasks, but involve every element of our supply chains.

Incentivising greater take-up of technologies and business digitalisation

Government initiatives such as the Technology Investment Boost for Small and Medium Enterprises and the Research and Development Tax Incentive are important elements in incentivising innovation, productivity and digitalisation of businesses.

The adoption and deepening of emerging technologies such as AI, automation and data analytics that can further productivity in Australia should be pursued with reference to the Federal Government's Critical Technologies List. As a signal to the market and government decision-makers, if the List is utilised strategically, it can lead to tangible consumption and adoption of critical technology with attendant productivity gains.

The AIIA believes that digital twin technology, as referred to early in the report, has the ability to ramp up productivity for its dynamic, real-time and simulation-capable nature. As outlined in *Growing Globally Competitive Industries*, "the ultimate goal [of leveraging digital twins in an infrastructure context] is to deliver more for less as a result of the productivity enhancements that will come from digital-by-default … Australia is missing out on economic, productivity and societal benefits [due to the lack of a national approach and significant investment in digital twin technology]."

With the advent of emerging technologies comes ethical challenges as applications break new ground. Rather than hampering productivity, clarity around common standards and setting the guardrails will ensure that society has the requisite social trust to leverage artificial intelligence and automation. Under the AI Action Plan and Australia's Artificial Intelligence Ethics Framework,[8] government and industry must continue to work together to test and operationalise the principles in the Framework with customers and data practices, including in the guidance provided by the Government's AI and Capability Centres. Similarly, the use of big data analytics will benefit from broader societal trust in best-practice data governance and cyber security. The report rightly identifies cyber-security as a pre-condition for the effective use of data; cyber security uplift is thus a matter of productivity.

While in some cases the productivity gains of technology take-up speak for themselves, and indeed citizens and businesses are organically embracing digital technology, the value proposition of digital transformation needs to be clearly articulated by government, which needs to lead by example, including by modernising and diversifying technological procurement practices.

[7] https://digitaleconomy.pmc.gov.au/sites/default/files/2022-03/strategy-on-a-page-2022.pdf
[8] https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework

Governments across the federation should look to models such as the NSW Digital Restart Fund,[9] administered by the Department of Customer Service, which funds iterative, multi-disciplinary approaches to planning, designing and developing digital products and services. Fostering customer-driven business transformation and collaboration across the NSW Government Sector is a focus of the Fund.

The federal SME Tech Investment Boost, whereby businesses of turnover of less than $50m are able to deduct an additional 20% of the cost incurred on business expenses and depreciating assets that support greater digital adoption, including portable payment devices, cyber security systems and cloud subscriptions, and state-based programs such as the Victorian Small Business Adaptation Program,[10] which had to close applications due to high demand, are important strategic incentives for business.

Privacy and data-sharing

Privacy is a whole-of-economy consideration and the sheer scale of data held by businesses of all size in 21st-century Australia necessitates a comprehensive legislative approach to privacy protections and obligations, appropriately paired with education and support for SMEs. This will help uplift data privacy protections and accentuate the importance of data security to all elements of the economy.

The suggestion of making funding contingent on specified data-sharing in the health and education sectors where the community has a low level of comfort will require careful planning and creation of social license. The 2018 Consumers Health Forum of Australia report, 'Engaging consumers on their health data journey'11 found that consumers strongly feel they ought to own health data pertaining to them, low levels of trust are felt towards government, private medical and research organisations. Consumers expressed through this research that an explicit permissions approach is preferred when it comes to medical data, with 86.7% of respondents wishing this to take place on a case-by-case basis.

There are sensitivities around sharing health data that are best addressed by a healthcare industry coming to the table and going on its digital transformation journey rather than making funding contingent on such sharing by the sector. Leveraging interoperable technologies and best-of-breed frameworks such as HL7's FHIR,[12] a standard for health care data exchange, including implementing a national roadmap for greater adoption, working with those at the coalface of the healthcare sector to eliminate ink signatures, facsimile and paper to give way to fully digital records and communication and formally connecting the start-up sector and medical technologists with the clinical side of the industry are all important.

Structured, data-driven decision-making as a driver of productivity

Under 2.2 of the Report, Broader limitations in the digital and data environment, the Commission lists four channels through which data use may benefit the economy. The AIIA suggests “making better decisions” can enhance productivity as a fifth channel, with data feeding machine learning algorithms to learn which metrics are associated with successful

[9] https://www.digital.nsw.gov.au/funding/digital-restart-fund
[10] https://business.vic.gov.au/grants-and-programs/small-business-digital-adaptation-program
[11] https://chf.org.au/sites/default/files/engaging_consumers_health_data_report_updated.pdf
[12] https://hl7.org/fhir/

outcomes for that type of decision. With AI's increasing prevalence, its role in productivity will rely on the quality of data available to reliably train algorithms and provide support to human decision-makers or, in some cases, automated decision-makers. Data feeds must update algorithms on a continuous basis in order for systems to improve. The availability of data must be paired with the right kind of data to allow machine learning models to consider various factors to support better decision-making. Structured online forms in place of email or telephone communications for high-volume, repetitive processes can capture the required structured data at the outset. Government can lead by example on this innovation, with pockets of excellence at the local and state levels represented by platforms like Snap Send Solve, which is a form-based site eliminating the need to spend time on hold to one's local council, and the online forms that ServiceNSW and Service Victoria use, and leveraged during the Covid-19 pandemic.

Digital skills growth a crucial element in driving productivity

Seeding the digital skills of the future across every element of the economy is a crucial element of realising productivity gains. Upskilling, reskilling, skilled migration and growing the pipeline into the technology sector and technology-dependent sectors all form part of the skills shortage puzzle. As acknowledged on page 56 of the Report, digitally skilled workers play an important enabling role in businesses of all kinds: *"many of these specialist workers are not employed by technology companies, or even consultancies that advise on digital and data solutions, but instead by businesses in other industries."*[13] For greater productivity, investing in workforce capability is essential. Higher education outcomes, including employment outcomes, must directly address the skills shortages affecting Australia.[14] This requires nimble, innovative educative models, where industry and employer requirements can be reverse-engineered in agile timeframes through industry-academia partnerships and work-integrated learning.

Notably the experience and know-how of international students is often lost as graduates return to their home countries, and the AIIA has used the Tech Skills Roundtable process instituted by Minister Husic in 2022 to suggest, in light of digital skills shortages, that international student work rights be extended and made more flexible to meet industry demand.

Technology vendors, their customers, partners, vendor training and existing programs of government support must be better connected so vendors can play their part in delivering in-demand skills to customers, especially as industry certifications are useful, respected by employers and valuable to reskilling professionals, including mid-career women, who do not wish to spend years out of the workforce in order to make a career pivot. A proliferation of frameworks, schemes and pathways has the capacity to present as formidably complex.

Regulatory context, due process and better coordination

Overregulation and cross-regulation of technology has the potential to hamper productivity. Just as Regulatory Impact Statements are undertaken by legislators, the Commission could recommend that Commonwealth agencies complete a 'Co-ordination Impact Statement' when putting policies, bills and rules out for consultation, which would note the government

[13] P.56, *Australia's data and digital dividend* Interim Report – 5-yearly productivity review
[14] P. 20, AQF Review, 2019.

agencies that were engaged in its creation and implications where there are areas of policy overlap or simultaneity with other consultations that are calling for responses by stakeholders. As with the requirement introduced into the Critical Infrastructure Bill following consultation in s30AH(6)(a) that the Minister must have regard to any existing regulatory system of the Commonwealth, a State or a Territory that imposes obligations on responsible entities, this approach may be followed elsewhere.

Regulation of the technology sector must be undertaken in a considered and coordinated fashion given the vital importance of innovation for economic productivity and the chilling effect that may be generated by inconsistent or heavy-handed approaches to tech sector regulation. The AIIA endorses the Report's conclusions that reactionary, piecemeal legislative approaches to novel events can give rise to unintended consequences and fly in the face of due process, especially where consultation is rushed or indeed non-existent:

> *Many of the policy areas where there has been piecemeal or reactive activity are issues that are worthy of government attention. However, government responses would be more effective at supporting emerging digital and data uses if they were better coordinated.*[15]

The AIIA notes that flashpoint events capturing public concern, such as data breaches or attacks on public safety, are often underpinned by complex problems requiring considered review and simulation of potential outcomes. Poor regulatory outcomes and reactionary punitive measures have a dampening effect on business confidence and productivity. Therefore, when it is most tempting to circumvent parliamentary processes of review in the interests of timely action, such processes are in fact most needed.

In response to recommendation direction and information request 3.6, the AIIA would submit that the policy areas it is most important for government to coordinate on would be critical and emerging technologies, critical infrastructure and cyber security, given the high stakes, intensive reporting obligations and national interest involved.

Conclusion

As Australia faces crucial skills, security and economic challenges, government and industry working together to enable and incentivise business digitalisation, keep pace with industrial transformation and encourage take-up of critical and emerging technology in line with social license will be essential for realising productivity gains. The AIIA thanks the Commission for the opportunity to respond to the Interim Report. If you have any questions about the content of this submission, please contact the AIIA

Yours sincerely

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[15] P.83, *Australia's data and digital dividend* 5-year Productivity Inquiry report