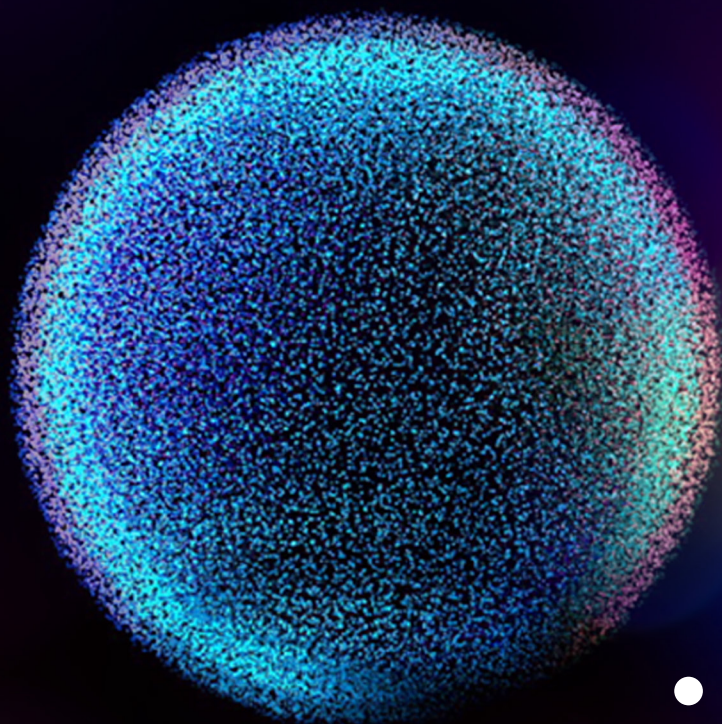# Technology and trust: Priorities for a reimagined economy led by technology

May 2021

Introduction

Prime Minister Scott Morrison has outlined an ambition for Australia to be a "leading digital nation by 2030". The Government has backed this ambition in the recent Federal Budget with a series of initiatives in its Digital Economy Strategy that show it is firmly focussed on this agenda. Australia can no longer afford to be a follower in the digital and technology sphere, and these announcements show the Government is on board.

We must now ensure we make the most of these important initiatives. That includes making sure the public understands and embraces these ambitions, and their expectations are reflected in them. One factor that will be critical to achieving this goal is our ability to demonstrate to the community that technology is in fact making their lives better. What is missing is a focal point and process for addressing community expectations and concerns, and increasing its understanding of our ambitions. In this paper we propose two solutions to achieve these aims.

Drawing on insights from the United States and the United Kingdom, CEDA's Public Interest Technology (PIT) agenda puts trust at the centre of all tech decision making. It promotes actions that strengthen community understanding and trust of the development, adoption and use of technology. This requires buy-in from all sectors, and makes clear that the responsibility for building trust is shared widely.

As Australia takes a far more ambitious approach to data, digital and emerging technologies, government leadership will be fundamental to building the right frameworks to support these goals. This, the first of CEDA's technology priorities papers, therefore focuses on government leadership and priorities.

Reimaging recovery and our technology future

In 2020, embracing tech and digitisation reshaped how we worked, kept our communities safe and delivered business opportunities that steadied our economic decline at the hands of COVID-19. The pandemic brought a wave of technological adoption at a scale and pace not seen before in Australia, demystified digital technologies for many and brought the benefits of these technologies and the use of data to the fore. It is now abundantly clear that how well we manage our digital and data opportunities will drive Australia's future prosperity. Making the most of these advances is critically important to the pace and shape of Australia's recovery and longer-term economic and social development.

CEDA considers that Australia's current appetite for digital adoption can build a more dynamic, reimagined and technology-led economy. Achieving this requires strong and consistent leadership on our national aspirations and intent, a demonstrated commitment to building and retaining public trust in technology and data and creating the knowledge and skills to work in ways that foster this trust.

CEDA strongly supports the Federal Government's aspiration to become a "leading digital nation", but there is a lack of clarity around what this means in practice, particularly given the pace of change, the range of initiatives being announced and the need to ensure that community expectations and concerns are reflected in our progress.

The state of play: a piecemeal approach

Former Federal Minister for Industry, Science, and Technology, the Hon. Karen Andrews, recently observed: "if we continue to embrace innovation, particularly out the other side of this pandemic, then Australia is going to see some incredible economic gains and much-needed jobs will be created"[1].

Since then, the portfolio has again changed hands, with the appointment of the Hon. Christian Porter to replace Minister Andrews. This marks the seventh minister overseeing this portfolio in eight years. Over that period, technology has changed exponentially. This ministerial musical chairs has caused some to suggest the Federal Government views tech-related issues as a low priority, and that tech portfolios have become 'parking lots'.[2]

Even before the 2021 ministerial reshuffle, policy and programs relating to technology were spread across the public sector, with inputs from Departments for Prime Minster and Cabinet; Treasury; Industry, Science, Energy and Resources; Communications, Home Affairs and various agencies including CSIRO, Digital Transformation Agency (DTA), Industry and Innovation and Science Australia, Data and Information Commissioners and many others.

The DTA is a case in point. Having been part of Communications, then the Prime Minister's Department and then Social Services, it is now back to the PM's Department. Hopefully, this marks the beginning of a period of stability and greater coordination across billions of dollars of disparate initiatives and programs. There is cause for optimism, with the recent announcement of plans to develop a whole-of-government architecture to map out existing capabilities and gaps.

There has been a burst of new initiatives announced in the Federal Budget as part of the Government's $1.2 billion Digital Economy Strategy, including: faster depreciation of intangible assets; an overhaul of MyGov; funding for digital skills training; an investment in Australia's Artificial Intelligence (AI) capability; and accelerating the rollout of the Consumer Data Right.

Other budget initiatives, such as the patent box, signal the Government is ready and willing to support risk-taking and innovation. We support the Government's view that by requiring domestic development of new products and technologies, this initiative will boost research and development in Australia.

We will need to be courageous in pushing our digital and tech agenda. We will need clarity around the Government's overall vision, and how this aligns with state and territory approaches. Importantly, more discussion is needed around the role of government in the "stewardship" of emerging technologies, and how this can and should foster community trust.

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1 https://www.afr.com/technology/covid-19-elevates-innovation-off-the-government-black-list-20200529-p54xuy
2 https://www.afr.com/technology/porter-appointment-to-tech-ministry-shows-portfolio-is-a-parking-lot-20210330-p57f7w

A public trust mindset

OECD research has shown that a decline in trust can lead to lower rates of compliance with rules and regulations and can contribute to citizens and businesses becoming more risk-averse, delaying investment and innovations that are essential to building economic dynamism and competitiveness. Put simply, a lack of trust and understanding can be a handbrake on technological progress. Trust is therefore both an input to reform and an outcome of it.[3]

Australia's *My Health Record* experience is a case in point. Despite the clear benefits of electronic health records, including: patients not having to provide repeat medical histories; the need for fewer expensive diagnostic tests; and greater information available during emergency care, community concerns and uncertainty contributed to a very low "opt-in" rate. Following a series of reviews, the program became opt-out. Despite this change, and a Federal Government investment of close to $2 billion, half of the 23 million records created as a result of the "opt-out" system lie empty, containing no relevant health information.[4] The Australian National Audit Office (ANAO) concluded that shared cyber security and privacy risks were not properly considered or managed by the Australian Digital Health Agency (ADHA)[5]. The politicisation of the rollout, reviews and changes also affected businesses and technologists keen to work with the system to develop innovative approaches to health care, and eroded trust in the digital health strategy[6]. The recent Federal Budget included a significant boost in funding for My Health Record. This will hopefully drive improved engagement with the system.

The other side of the coin, of course, is that good governance of technology and data underpins trust and acceptance, through the management of risks and potential harms and a clear focus on beneficial outcomes.

One example of this in practice is the NSW Department of Customer Service, which has delivered effective services through COVID-19, as shown by the high up-take and acceptance of the *ServiceNSW* app and QR check-in codes. With greater data insights across government and real-time consumer feedback on the COVIDSafe check-in, New South Wales has been able to make data-driven decisions to keep the state open through COVID-19 and develop new digital services at short notice, such as border permits, due to the state's digital maturity and the trust in its digital platform. The scanning of QR codes through this app has also helped speed up contact tracing when outbreaks of COVID-19 have occurred.

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3 OECD (2013), "Trust in government, policy effectiveness and the governance agenda", in Government at a Glance 2013, OECD Publishing, Paris, https://doi.org/10.1787/gov_glance-2013-6-en.
4 https://www.theguardian.com/australia-news/2020/jan/23/my-health-record-almost-2bn-spent-but-half-the-23m-records-created-are-empty
5 https://www.anao.gov.au/work/performance-audit/implementation-the-my-health-record-system
6 https://www.afr.com/technology/startup-investors-slam-roll-out-of-my-health-record-20181109-h17pk8

Is tech trust at a tipping point in Australia?

In a year when our response to COVID-19 meant digital opportunities were critical to the economy and Australia recorded historic levels of digitisation, trust in the technology sector continued to fall, while trust in other sectors, government, media and non-government organisations grew.[7] This continued a 10-year trend of declining trust in the technology sector (albeit from a relatively high level). In terms of the trust among the Australian community, the tech sector sits in the middle of the industry pack, having once been a high trust sector. Whether this represents a shift to a more realistic level of trust in the sector, or a trend towards distrust – 'the more tech we use the less we trust it' – the prospect of eroding trust and social license presents challenges for policymakers, developers and users of technology alike.

The rapid take-up and use of AI is something of a live and evolving case study. AI can provide insights and efficiencies that benefit many, but there is tremendous complexity and potentially significant adverse consequences when AI is poorly designed or applied. As AI applications become more entwined in our daily lives, it will be important to retain trust, including by lifting awareness and transparency around where and how it is used. Research by the University of Queensland and KPMG from 2020 found just 51 per cent of the public had heard about AI, and most reported a low understanding of how it was used in everyday applications, although the vast majority (86 per cent) wanted to know more about it.[8]

Many ethics frameworks, governance principles and standards have been developed to ensure individual and public interests are articulated, protected and enhanced. While this is welcome, what matters most is how they are implemented and their practical impact. If these commitments do not live up to community expectations, support for data, AI and machine learning could be eroded, and along with it, the significant opportunities they bring.

CEDA's 2020 PIT forum provided some sobering observations on this front. Gradient Institute Chief Executive, Bill Simpson-Young, noted with regard to AI: "It is quite easy for companies who are not being careful about what they are doing to have systems that are not lawful from a discrimination point of view". Similarly, Salesforce Principal of Ethical AI Practice, Yoav Schlesinger, remarked: "Ethical AI as an industry is in its infant stages – we are probably like the securities industry in the mid-1980s". These comments remind us that much is still to be achieved.

Public trust in AI, and data and technology more broadly, will be won or lost based on outcomes, not the promises of ethics principles and frameworks. Given perceptions in Australia that the pace of technological change is too fast, and the government does not understand emerging technologies enough to regulate them effectively, the risk of heavy-handed, reactive and risk-averse regulatory responses to tech missteps or community concerns seems high. If this decline in trust means we fail to seize the immense opportunities before us, we risk falling further behind our international competitors.

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7 Edelman Trust Barometer, (2021)
8 The University of Queensland, KPMG (2020) *Trust in Artificial Intelligence: Australian Insights 2020.*

CSIRO's *Data61* found that through 2000-2018, the rate at which Australia captured the benefits of digitisation through digital capital investments, domestic digital industries, digital exports and multi-factor productivity was 34 per cent below its advanced economy peers.[9]

In 2020, research by Alpha Beta for the Office of Innovation and Science Australia showed Australian businesses invest less in research and development than many OECD peers, and expenditure on research and development (BERD) had declined by 30 per cent since its 2008-09 peak.[10]

The 2020 global survey of business competitiveness by the Swiss International Institute for Management Development (IMD) showed Australia continued to worsen on future readiness, with key weaknesses in communications technology and business agility.[11]

Visible, consistent, expert leadership

The pace of change, its complexity, the breadth of its potential impacts and the challenge of designing effective regulation after the fact, all make the stewardship of emerging technologies challenging.

CEDA considers that the appointment of a Chief Technologist would support stronger stewardship of Australia's technology agenda. A Chief Technologist would, among other things, provide a balanced, expert voice on the benefits of new technologies and how trust can be safeguarded. It would also provide a place to address community expectations, which would enhance community trust and confidence.

A new Chief Technologist

One key lesson from the COVID-19 experience is the importance of having trusted and respected experts to advise and communicate on complex issues. The nation's Chief Medical Officers and Chief Scientists have brought crucial expertise to policy making and have served as a vital link between governments and the public.

A new national statutory office holder, the Chief Technologist – essentially, Australia's most senior technology expert and advisor – could do likewise for technology. Such a role would establish clear leadership, align our frameworks and more directly communicate Australia's data and technology considerations and decisions to the community.

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9 Data61 (2018), *Digital Innovation: Australia $315 Billion opportunity*
10 Alpha Beta, prepared for the Office of Innovation and Science Australia (2020) *Australian Business Investment in Innovation: levels, trends, and drivers*
11 https://www.ceda.com.au/ResearchAndPolicies/Research/International-affairs/World-Competitiveness-Yearbook-2020

This objective was an important focus of the Productivity Commission's (PC's) 2017 *Data Availability and Use Inquiry,* which called for a National Data Custodian to "provide the focus of improved national-al effort to lift access to and use of data analytics to contemporary standards and objectives".

The Chief Technologist would:

- enable a long-term focus on emerging technologies;
- guide the development and implementation of digital and tech strategies;
- objectively communicate the opportunities, challenges and risks of emerging technologies;
- provide counsel and act as a 'reality check' on advice that policy makers may be hearing from other sources; and
- align efforts across jurisdictions, and promote greater capability within government to respond to technology issues.

The Chief Technologist must have significant expertise, an understanding of community attitudes, a deep appreciation of the importance of maintaining a social license for technology and data and an ability to enable collaboration, rather than competition, across jurisdictions. In simple terms, the role would clearly demonstrate Australia's commitment to trust in the development and use of technology.

Other nations have sought to establish similar high-level technology stewardship. Since 2009, the United States Federal Chief Technology Officer (CTO) within the Office of Science and Technology Policy, has shaped policy and driven the Government technology agenda forward. In Canada, the CTO provides government-wide vision and strategic leadership in digital integration. The CTO within the Israel Innovation Authority is responsible for assessing requests and proposals submitted to the authority and formulating policy on Israeli companies engaged in R&D. The UK has established a Regulatory Horizons Council, that seeks to ensure regulation keeps up with innovation and enables it to thrive, while ensuring public safety.

A focal point for global engagement

To be a digital leader by 2030, Australia must also aspire to play an important role in global technology and data governance and regulation.

Australia's Consumer Data Right is a world-leading approach to enabling access to and control over one's own information and data. It is just one example of the types of insights Australia can and should bring to the global table.

Continuing to work collaboratively with other nations to advance new ideas and approaches must be a priority. In this context, the Government should consider joining the international Digital Nations collaborative network, which comprises 10 like-minded nations. The Chief Technologist could represent Australia in such international engagement, in addition to being a strong national voice in support of domestic technology and data aspirations.

The role of tech assessment

Creating a transparent and objective technology assessment process can also help to enhance public trust in the use of technologies, and their oversight and regulation. The Chief Technologist should oversee the establishment of these processes, to provide objective advice on emerging technologies, their potential impacts and related policy implications.

With the complexity and economic significance of emerging technologies increasing, we must change how we govern them. The transparent, independent advice CEDA is calling for would help to increase understanding of critical data and tech issues among policy makers and the wider community. This is important to build confidence in our ability to govern technology, and broader trust in the adoption and use of data and technology.

Over time, this process could enable engagement with the tech sector at the development stage, and contribute to a greater focus on ex-ante policy or regulatory solutions to risks. Similarly, it could and should evolve to deepen and formalise community engagement and consultation. Overseas examples of such processes include the European Parliamentary Technology Assessment network, which advises parliaments on the social, economic and environmental impacts of new sciences and technologies. In the United States, there is growing support for the re-establishment of a US Office of Technology Assessment.

Another valuable non-government example is the technology fact sheets produced by the Technology and Public Purpose project at the Harvard Kennedy School. These expert fact sheets provide a plain-language overview of emerging and important technologies – such as 5G, machine-learning, AI deep fakes and blockchain – their potential impacts, and issues policy makers should be considering as they make decisions around procurement, regulation and broader policy settings.

Importantly, CEDA does not believe our proposal requires significant new institutional infrastructure. Rather, it can be achieved through better leveraging existing expertise, coupled with consistency and a greater emphasis on transparency and public engagement.

Trust in tech – a shared responsibility

As stated at the start of this paper, the responsibility for building and retaining trust in technology starts with technologists, but it is shared with business, government and the community. This was a clear and consistent message throughout CEDA's PIT forum.

Ensuring that trust is considered throughout the tech development process means potential risks can be identified and addressed early. Critically applying a "safe, responsible and sustainable lens" from tech ideation to adoption and use means some risks can be designed out in the process. This is far more efficient than relying on retrospective and often blunt policy and regulation that can be difficult to implement and enforce when technologies are widespread.

Conclusion and next steps

Following Australia's rapid and impressive period of digitisation in 2020, the opportunities presented by emerging technologies are clear. It is also clear that they will be central to Australia's economic revitalisation. There is, however, an urgent need to build trust with the community as technology spreads to nearly every aspect of our lives. It is incumbent on governments, business, technologists and consumers to share in this responsibility.

Our first next step is to work with stakeholders from industry and government to build awareness of the importance of a PIT approach and agenda, advance our recommendations and advocate for their adoption.

Through its Public Interest Technology agenda, in 2021 CEDA will also:

- showcase examples of technology and trust in practice, including "tech for good" and gov-tech (improved service delivery using technology);
- use its convening power and diverse membership base and stakeholder connections to explore ways in which we can increase transparency around the state of play regarding responsible use of technology;
- understand and share best practice in the governance and use of AI in practice, making sure that commitments and ethics principles are real and apparent to the broader community;
- work with members of our advisory committee and broader membership base to discuss strategies to lift the awareness and understanding of these issues among the tech sector, building on collaborative and multidisciplinary processes already in place in some institutions such as CSIRO, the Australian National University and UTS; and
- undertake work on how to build digital literacy and inclusion.

Finally, other areas of CEDA's research and policy program complement this agenda. In particular, CEDA will continue to advocate for changes to Australia's migration system and policies to improve access to the skilled migrants Australia needs in digital, data and tech. If Australia is to realise its full potential through the ongoing uptake of technology, these skills needs will continue to grow.

CEDA has an ongoing program of work aimed at leading a national discussion on how technology can be designed, developed and used with trust in mind. Future work in this area will focus on the role of the tech sector. Read more here.