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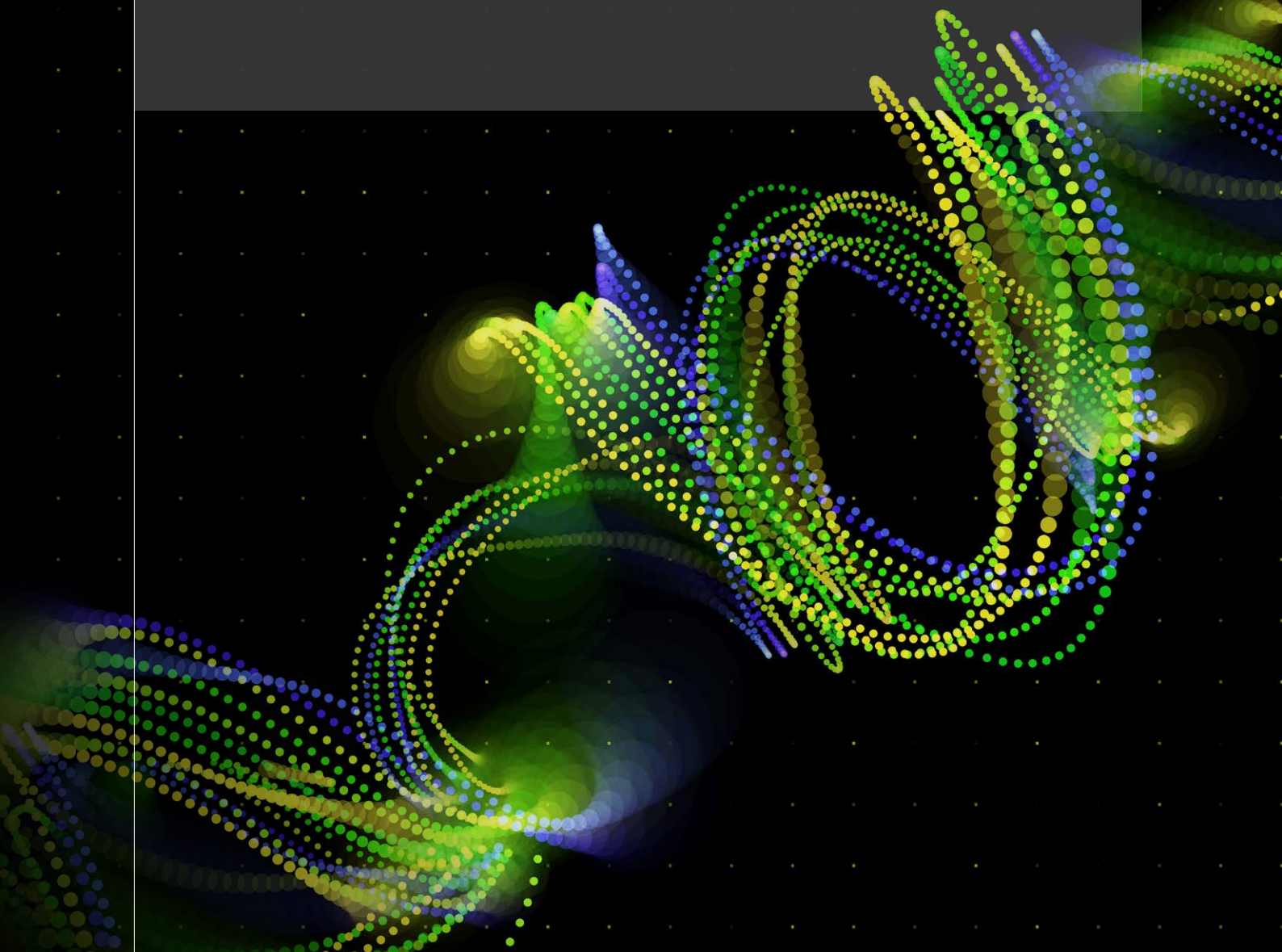
Accelerating Australia's AI Agenda

A positive vision to make Australia a globally recognised AI leader by 2028.



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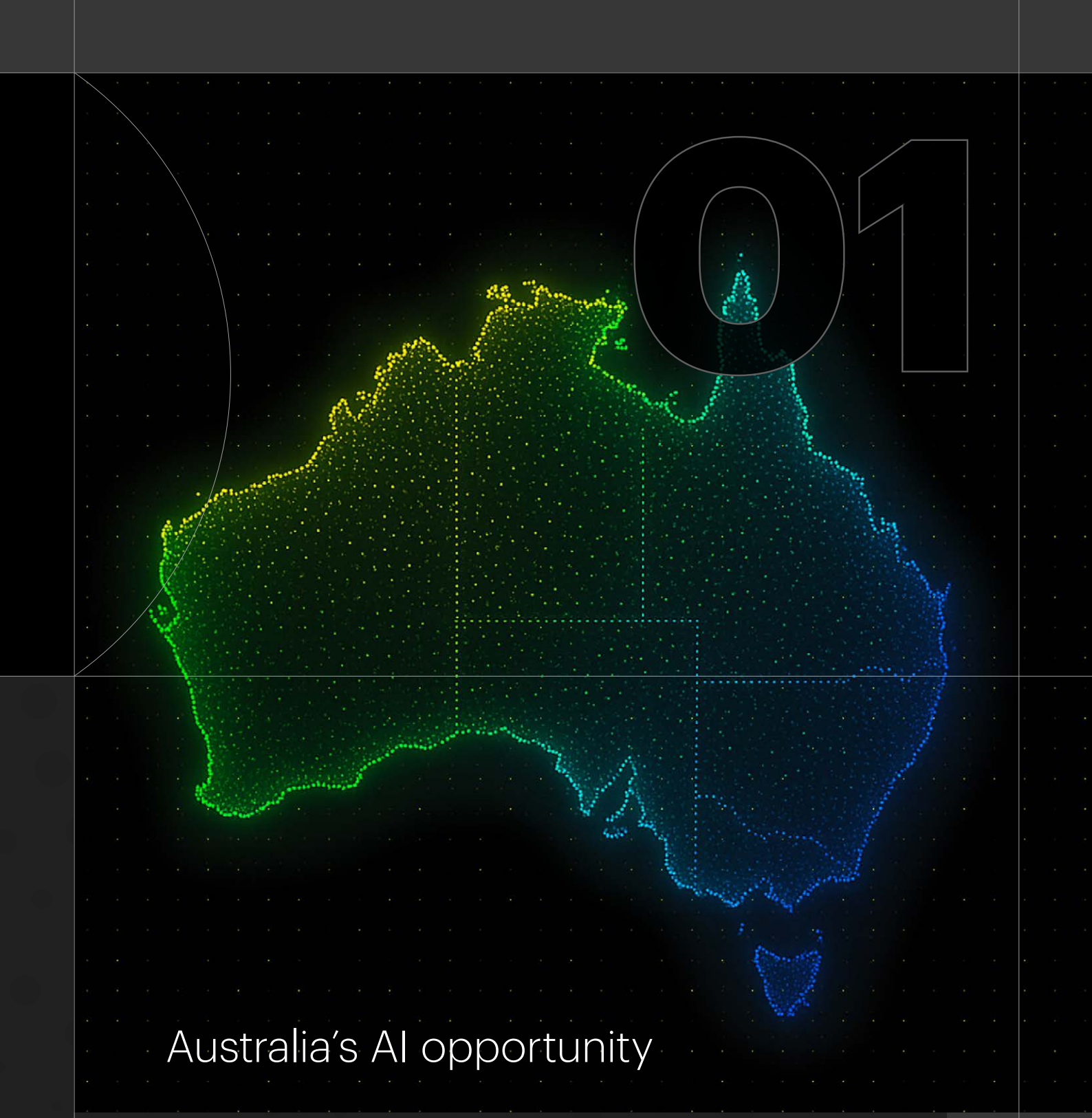

01

Australia's AI opportunity

Australia stands today at the dawn of something truly transformative. Driven by incredible leaps in computing power and data, AI has reached a tipping point. What we do now will determine whether Australia is playing catch up for decades or gains a competitive edge that improves all Australian lives.

Giving us the power to do more

AI is already empowering us to do, see, and understand more as we go about our lives, from Google Maps, to voice assistants, and email spam filters. And the ways it can support us are growing dramatically.

AI is helping doctors diagnose diseases earlier and more accurately, giving families time and hope. It is helping heavy industries operate more safely, reducing waste and creating new, high-value products. In education, AI is helping personalise learning experiences while giving teachers time back to spend with students. AI is helping us manage our natural resources more sustainably. It will underpin our economy and quality of life in the same way as electricity – an essential, seamlessly integrated force empowering how we live and work.[1]

Our national productivity challenge

With this much opportunity at stake, we must seize it with urgency as a national priority. This technological shift comes at a critical moment. Long-term economic growth, the kind that lifts living standards for everyone, doesn't happen by accident. It hinges on our ability to innovate, to invest wisely, and to quickly embrace new technologies that allow us to do or make more without more effort or resources. This is known as productivity, and it has languished in Australia for decades. The great leaps forward we have made in productivity have been a result of new technologies – electricity, mechanisation, computers. The next frontier is AI. Australia must make big moves immediately to ensure we do not miss the opportunity.

1 Ng, A 2017, *Why AI Is the New Electricity*, Stanford Business (https://www.gsb.stanford.edu/insights/andrew-ng-why-ai-new-electricity)

A mindset shift

Like any new technology, there are risks which we must address head-on. But we have been balancing risks with opportunity since the discovery of fire. What matters are the choices we make – how we develop our AI capabilities, how we deploy them, and how we ensure they serve our national interests and reflect our values. We could choose to do this with a fear-first mindset, but a brighter future will come from being focused first on opportunity.

OUR CALL TO ACTION

This paper outlines a clear, positive vision and practical actions to make Australia a globally recognised AI leader by 2028. We must focus our efforts in six areas: adoption, skills, regulation, infrastructure, data, and R&D. Within each area, we propose actions designed to foster innovation, attract investment, unlock productivity gains, manage risks responsibly, and make Australia a more prosperous and resilient nation.

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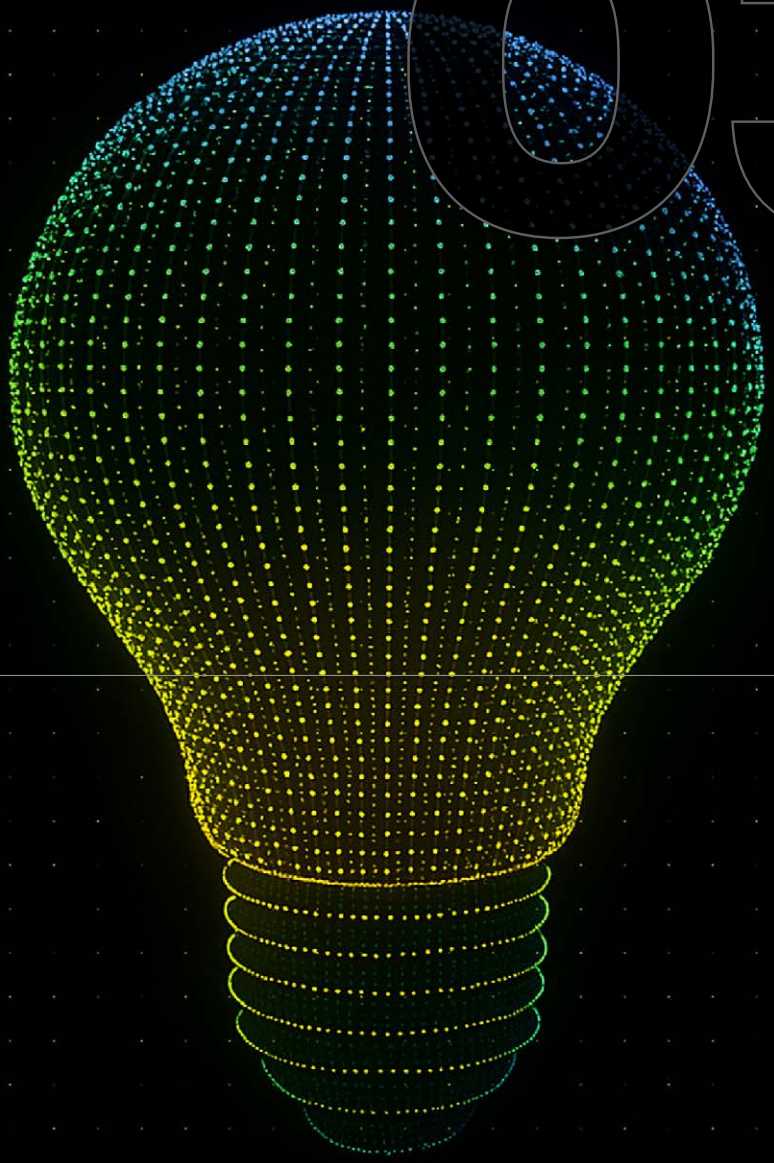


Introduction

There are moments in history when the future pivots. The invention of the printing press, the harnessing of steam power, the dawn of the internet – these were inflection points that reshaped societies and economies in ways previously unimaginable.

03 Introduction

Types of AI

AI technology encompasses far more than just chatbots like ChatGPT. Machine learning systems analyse medical images to detect diseases earlier than human doctors can.

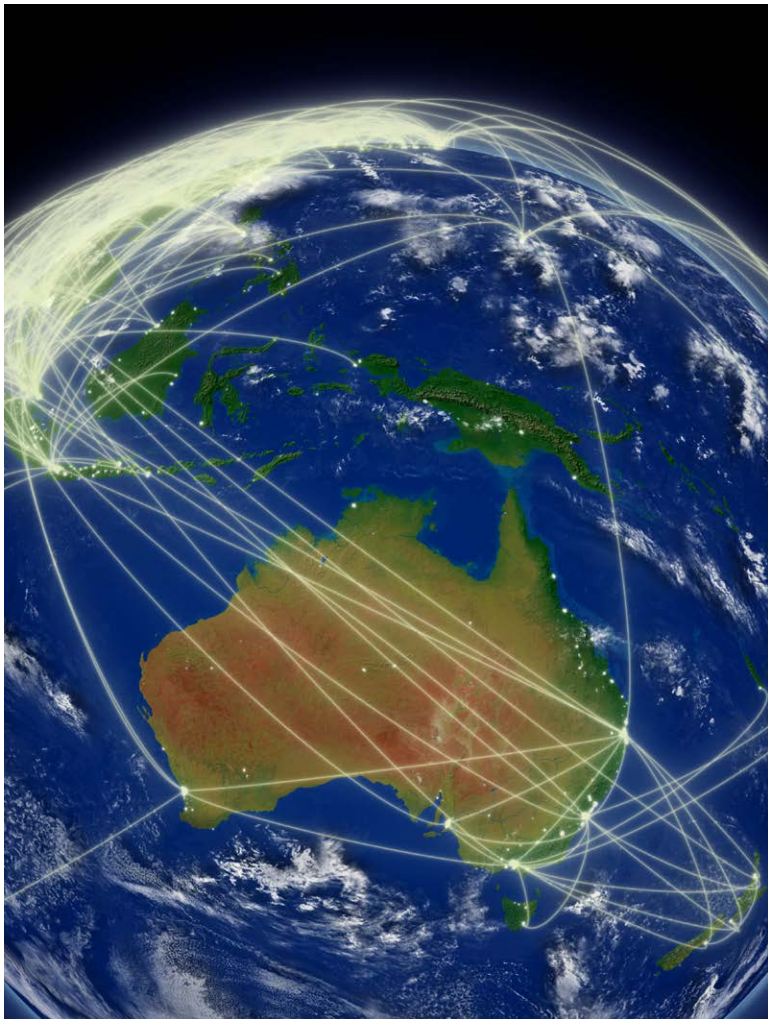
Computer vision allows self-driving vehicles to navigate complex environments. Recommendation engines personalise your streaming and shopping experiences. Natural language processing powers translation services and document analysis. Robotics systems in manufacturing work alongside humans to handle precision or dangerous tasks. AI also drives sophisticated decision support systems in fields ranging from finance to climate science, processing vast datasets to identify patterns humans might miss.

A new economic opportunity

After decades of integrating machine learning into many platforms and services we use every day, the convergence of unprecedented computing power, the availability of vast datasets, and increasingly sophisticated algorithms has supercharged AI into a general-purpose technology.[2] And this is why it has massive economic potential. A general-purpose technology is broadly applicable, creates other innovations, and will continually improve.[3]

Automation technologies – which include AI – could add $600 billion to our economy annually.[4] AI is a pathway to reignite productivity growth, sharpen our competitive edge on the global stage, enhance the delivery of essential services like healthcare and education, and develop innovative solutions to complex national challenges. For example, Telstra uses AI to analyse vast amounts of data from weather stations, satellites, and social media during bushfires. This allows them to predict fire spread patterns and identify areas at high risk. This information is then relayed to emergency services, enabling them to deploy resources more effectively and keep communities safer.

However, we must be wise in how we harness this power. The very power that makes AI so promising also raises legitimate questions about how we use it responsibly and safely. We cannot ignore the concerns people have about the future of work, the protection of personal data and privacy, the ethical dilemmas posed by autonomous systems, and the risk of misuse by those who wish us harm. Public trust is the bedrock upon which successful adoption rests. Without it, even the most beneficial technologies may falter. Both industry and government have roles to play in strengthening public trust.



Australia in the world of AI

Australia approaches this new era from a unique position. We are blessed with significant strengths: a highly educated and adaptable workforce, stable democratic institutions, abundant renewable energy potential that can power the future, and world-class research institutions. Australia is also a part of the powerful Five Eyes intelligence sharing arrangement with the US, UK, Canada and New Zealand, as well as AUKUS with the US and UK, which includes a work stream on AI and autonomy. Both of these security arrangements give Australia privileged access to AI technology sharing and development initiatives, boosting our national security.

2 Buchanan, B and Imbrie, A 2022, *The New Fire*, MIT Press, p.2
3 Ben-Ishai, B, Dean, J, Manyika, J, Porat, R, Varian, H, Walker, K, 2024, *AI and the Opportunity for Shared Prosperity: Lessons From the History of Technology and the Economy*, Google, pp.4-6 (https://arxiv.org/abs/2401.09718)
4 McKinsey & Company 2019, *Australia's automation opportunity*, p.7 (https://www.mckinsey.com/featured-insights/future-of-work/australias-automation-opportunity-reigniting-productivity-and-inclusive-income-growth)

These are powerful assets, but we must not become complacent. We also face distinct challenges. Compared to citizens in many other nations, Australians express a higher level of nervousness about AI's impact. Our digital infrastructure, while in some areas world-leading, needs significant acceleration to meet the demands of widespread AI deployment in what is now a global race. And Australia faces the perennial challenge of translating our research excellence into commercial success and global scale.

We must acknowledge the fierce global competition for AI leadership. This is not a race Australia can afford to sit out. The window of opportunity to shape the trajectory of AI development and deployment is closing. We must move with urgency and ambition to avoid becoming merely consumers of AI technology developed elsewhere. The UK's *AI Opportunities Action Plan* has succinctly articulated this as an aim to become an 'AI maker' not merely an 'AI taker.'[5] This means fostering our own domestic capabilities, attracting global talent and investment, and ensuring that the AI systems used in Australia align with our national interests, our economic needs, and our democratic values. The Australian Government's yet-to-be written *National AI Capability Plan* – slated for completion by end of 2025 – presents a golden opportunity to get this right.[6]

A case for optimism and opportunity

The BCA's view of AI is optimistic, but it is not blind optimism. It adopts a positive, opportunity-focused perspective, grounded in the conviction that AI, guided by human principles and smart policy, can be a powerful force for good. We believe AI can augment human capabilities, create new kinds of jobs, and make existing ones more rewarding and less burdensome. But achieving this positive future requires deliberate choices and concerted action.

The ultimate goal here isn't technological supremacy. It's about building a better future for all Australians, one where we have greater power and agency in our lives.

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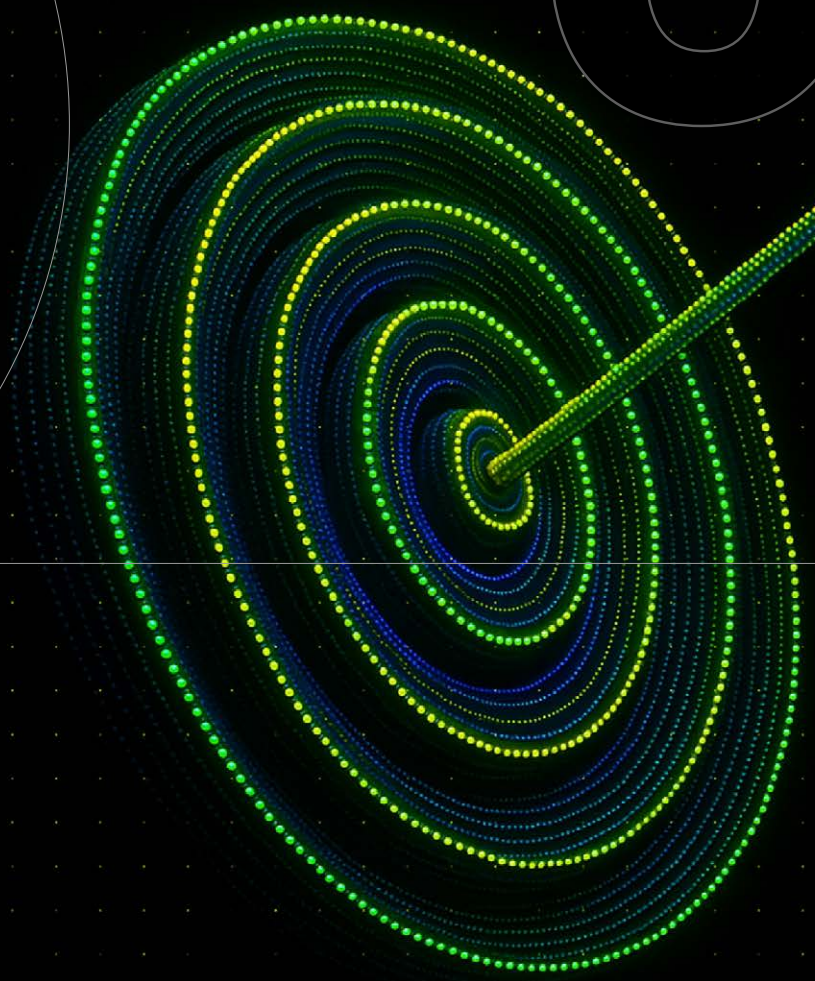
5 UK Government 2025, *AI Opportunities Action Plan* (https://www.gov.uk/government/publications/ai-opportunities-action-plan/ai-opportunities-action-plan)
6 Department of Industry, Science and Resources 2024, *Developing a National AI Capability Plan* (https://www.industry.gov.au/news/developing-national-ai-capability-plan)

04



Vision and timeline

Our vision is clear, ambitious, and achievable: *By 2028, Australia will be a global leader in AI – shaping trusted, transformative technologies that power economic growth, improve lives, and build a more resilient nation.*

04 Vision and timeline

Phased approach

The timeline is structured across three years in a phased approach to development:

- **Year 1: 1 July 2025 – 30 June 2026**
- **Year 2: 1 July 2026 – 30 June 2027**
- **Year 3: 1 July 2027 – 30 June 2028**

All actions should start as soon as possible in 2025, with a clear statement of ambition from the federal government. Completion dates vary with each action's complexity and its dependency on other actions.

YEAR 1
Establishing the essential foundations

YEAR 2
Capacity building and infrastructure development

YEAR 3
Advancing collaboration and optimising data utilisation

Timeline

Year	Phase	Actions
YEAR 1	**Establishing the essential foundations**	■ *Action 1*: Government as an exemplar: pioneering AI in public services ■ *Action 2*: Boost funding for the National AI Centre (NAIC) ■ *Action 3*: Create a National AI Skills Compact ■ *Action 5*: Implement clear, risk-based regulations ■ *Action 7*: Simplify data centre development ■ *Action 13*: Establish the AI Research Consortium (AIRC)
YEAR 2	**Capacity building and infrastructure development**	■ *Action 4*: Reform AI skills development pathways ■ *Action 6*: Establish the Australian AI Safety Institute (AAISI) ■ *Action 8*: Reform copyright through the National AI Capability Plan ■ *Action 14*: Fix R&D settings to support AI development and adoption ■ *Action 15*: Create the AI Commercialisation Accelerator (AICA) ■ *Action 16*: Establish a national AI missions program
YEAR 3	**Advancing collaboration and optimising data utilisation**	■ *Action 9*: Expand frameworks for public-private data access and sharing ■ *Action 10*: Establish the Australian National Data Library (ANDL) ■ *Action 11*: Create secure private sector data collaboration frameworks ■ *Action 12*: Empower researchers and enhance research infrastructure

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Defining Australia's AI context

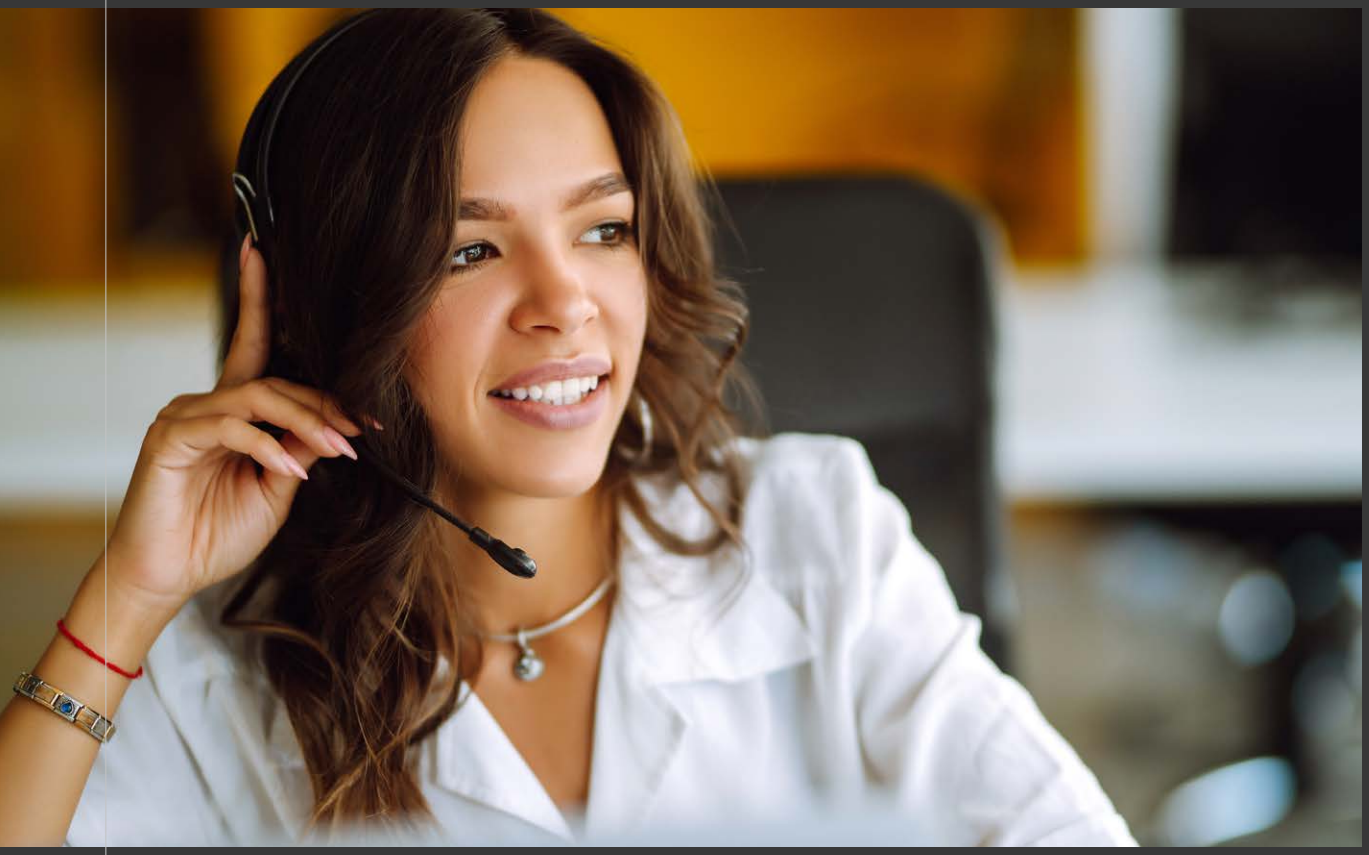
Several factors define Australia's context and will shape our national approach to AI. These include our geographic position in the Asia-Pacific region, our strong democratic institutions, our skilled workforce and research capabilities, and an increasingly competitive global technology landscape.

05 Defining Australia's AI context

The productivity imperative

Australia's future economic prosperity depends heavily on our ability to lift productivity.[7] AI represents the single greatest opportunity to do this in a generation, addressing some of our most prominent and enduring productivity challenges.[8]

The most powerful AI applications aren't necessarily the flashy ones. They're the ones that solve real productivity problems people face right now. What if every call centre in Australia could handle twice as many customer inquiries with half the wait time? What if your HR team could process payroll and benefits in minutes instead of days? What if your supply chain could adapt to disruptions before they impact your customers? This isn't futuristic thinking. This is possible today with basic machine learning applied to relatively boring tasks. And the productivity improvements can be extraordinary.



7 Business Council of Australia 2024, *Australia's flagging competitiveness and productivity: How to turn it around*, BCA, p.5 (https://www.bca.com.au/australia_s_flagging_competitiveness_and_productivity)
8 Productivity Commission 2024, *Making the most of the AI opportunity, Research paper 1, AI uptake, productivity, and the role of government*, Australian Government, p.3 (https://www.pc.gov.au/research/completed/making-the-most-of-the-ai-opportunity)

For example, Commonwealth Bank is using AI to read, analyse and process customer documentation more quickly and accurately than humans. This allows the bank to halve the time it takes to verify someone's income when it processes a loan. These tools are a win for staff as well, who can spend less time on repetitive tasks and focus more on having high-quality conversations with customers.

When we optimise these daily pain points, we don't just save money and do more with less. We free our people to do what humans do best: create, connect, and innovate.

Studies have shown that AI enhances productivity and often helps close the gap between low- and high-skilled workers.[9] It boosts software development productivity by 26 per cent.[10] Generative AI for high-skilled work reduces perceived mental demand by 45 per cent, and perceived stress and difficulty by 58 per cent.[11] Ninety per cent of small and medium businesses using AI report more efficient operations.[12]

Imagine this effect scaled across all business, government and research organisations. In an era of slowing productivity growth, AI offers a powerful new engine. We must ensure that engine is running smoothly and efficiently here in Australia.

Australia needs practical frameworks, clear guidelines, and accessible tools we can implement on Monday morning. In the game of productivity, the winners won't necessarily be those who build the most sophisticated AI. The winners will also be those who adopt and use AI most broadly, not just in areas that are complex and meaningful, but also those that are simple and mundane. It's about helping people unlock those incremental gains that, when combined, create massive momentum.

9 Stanford University Human-Centred Artificial Intelligence 2025, *Artificial Intelligence Index Report 2025*, p.18
10 Cui, Z, Demirer, M, Jaffe, S, Musolff, L, Peng, S and Salz, T 2025, *The Effects of Generative AI on High-Skilled Work: Evidence from Three Field Experiments with Software Developers* (http://dx.doi.org/10.2139/ssrn.4945566)
11 Jaffe, S, Shah, N, Butler, J, Farach, A, Cambon, A, Hecht, B, Schwarz, M, and Teevan, J 2024, *Generative AI in Real-World Workplaces*, Microsoft Technical Report, p.9 (https://www.microsoft.com/en-us/research/publication/generative-ai-in-real-world-workplaces/)
12 Salesforce 2024, *Small & Medium Business Trends Report 6th Edition*, p.6 (https://www.salesforce.com/news/stories/smbs-ai-trends-2025/)

Global competition

Countries that recognise AI's strategic importance are investing heavily. This is a race where early movers gain significant advantages – attracting talent, securing investment, setting standards, and building competitive market positions. Australia cannot afford to be left behind.

We must act decisively and strategically, fostering our own sovereign capabilities and attracting investment and talent from abroad. Australia is lagging in AI readiness compared to regional peers, which underscores the need for immediate action.[13]

AI pioneers – such as the US, the UK, and Singapore – have shown what's possible through steady investment, strong infrastructure, and a clear vision. They've built the basis for leadership in adoption, innovation and talent development.

Pioneers also get to set the global direction for AI responsibility, with ethics and progress moving together.[14] Australia should learn from leading jurisdictions and apply best-practice policy settings to fast-track progress locally – this paper identifies several overseas initiatives Australia should replicate.

The full integration of AI capabilities within R&D is now a non-negotiable for global competitiveness in advanced industries like biotech, materials design, advanced electronics and defence industries. Predictive foundation models are rapidly accelerating the discovery of new materials, compounds and designs which are the lifeblood of these industries. Integrated AI systems that continually learn over long periods and engage directly with humans in natural language are becoming core requirements of advanced defence systems.

13 In 2023, Australia ranked 28th in *The Global AI Vibrancy Tool* from the Institute for Human-Centered AI, Stanford University (https://hai.stanford.edu/research/the-global-ai-vibrancy-tool-2024). In 2024, Australia ranked 17th in *The Global AI Index* (https://www.tortoisemedia.com/data/global-ai#rankings)

14 Schwaerzler, C, Carrasco, M, Daniel, C, Bollyky, B, Niwa, Y, Bharadwaj, A, Awad, A, Sargeant, R, Nawandhar, S and Kostikova, S 2024, *The AI Maturity Matrix*, BCG, p.4 (https://www.bcg.com/publications/2024/which-economies-are-ready-for-ai)

A human-centric approach

Technology must serve humanity. Our focus must be on harnessing AI to benefit people and businesses, not merely technological advancement for its own sake. This means prioritising applications that augment the workforce, particularly in sectors facing chronic skills shortages like healthcare and aged care, allowing dedicated professionals to spend more time on the human aspects of their roles. For a nation with a relatively small workforce compared to global giants, AI offers a way to maximise the impact of our talented people.

Crucially, we must confront Australia's AI anxiety head-on. Australians, more than people in many other countries, express nervousness about AI.[15] Australians are the least optimistic in the world about AI, and we struggle to believe its rewards will outweigh the risks.[16]

We cannot dismiss these concerns. We must build trust through transparency, robust governance and regulatory frameworks, clear ethical guidelines, and by actively demonstrating how risks are being identified and managed.

We need a national conversation, grounded in facts, that addresses fears while focusing on the massive potential for positive transformation. The narrative matters immensely.

Historical analysis of technological adoption provides valuable context for understanding AI's potential impact on jobs. Technology typically automates specific tasks rather than eliminating entire occupations. Of the 271 occupations listed in the 1950 US Census, only one – the elevator operator – was rendered obsolete due to automation.[17]

Since the mid-20th century, technology has automated a growing number of human-performed tasks, yet concurrently, new occupations have emerged. The proof is in the pudding of our current unemployment rates, which sit lower than the days before computerisation or electrification – both of which were mistakenly decried as job-killers.

Studies indicate that 60 cent of the contemporary US workforce is employed in roles that did not exist 80 years ago.[18] Current observations suggest AI is aligning with this historical pattern, primarily automating subsets of tasks within existing occupations rather than causing job displacement.[19]

When fear guides our response to AI, we risk over-regulating. We stifle innovation, miss opportunities, and fall behind. That's not effective leadership. Instead, let's create smart rules targeting real risks. When optimism leads, we create the space for AI to safely deliver its benefits for all Australians.

15 In 2023, Australia had the highest response globally to 'Products and services using AI make me nervous' at 69 per cent, compared to global average of 52 per cent. In 2024, Australia was still in top 5 most nervous countries, clustered with the Anglosphere's general high nervousness and low excitement about AI. Ipsos 2023, *Global Views of AI 2023*, p.8. Ipsos 2024, *The Ipsos AI Monitor 2024*, pp.15–17 (https://www.ipsos.com/en-au/australians-most-nervous-globally-about-ai)
16 Gillespie, N, Lockey, S, Ward, T, Macdade, A, & Hassed, G 2025, *Trust, attitudes and use of artificial intelligence: A global study 2025*, The University of Melbourne and KPMG p.34
17 Bessen, J 2016, *How computer automation affects occupations: technology, jobs, and skills*, Boston University, p.5
18 Autor, D, Chin, C, Salomons, A, Seegmiller, B, 2022, *New Frontiers: The Origins and Content of New Work, 1940–2018*, National Bureau Of Economic Research, p.12
19 Agrawal, A, Gans, J, and Goldfarb, A. 2023, *The Turing Transformation: Artificial intelligence, intelligence augmentation, and skill premiums*, Brookings (https://www.brookings.edu/articles/the-turing-transformation-artificial-intelligence-intelligence-augmentation-and-skill-premiums/)

Leveraging Australian advantages

Our political stability and strong democratic institutions provide a reliable foundation. We boast a highly skilled and educated population and world-leading research institutions. By strategically leveraging advantages, we can create an environment that attracts global investment, nurtures local talent, and builds a vibrant, self-sustaining AI ecosystem.

We must identify our unique niches – areas like biotechnology, agriculture technology, field robotics, or mining automation – and double down on them. There are also areas that Australia can't afford not to support. The increasing medical cost of an aging population is a significant political and economic problem. Australia must implement AI in biotech and medical science to reduce costs and improve treatments if we intend to maintain our high standards of care.

Our AI research community, while small, remains globally competitive. In 2023, Australia had about 0.3 per cent of the global population but contributed 1.6 per cent of all AI research – overperforming by nearly five times.[20] Australia is particularly strong in the design and development of highly efficient AI that has low data, energy and processing requirements.

We have vast land resources – especially in contrast to our regional neighbours – critical for housing the data centres that power AI. Home grown data centre developers such as AirTrunk are among the best in the world. Our potential for cost-competitive renewable energy is enormous, offering a path to sustainable AI development.[21] Australia has long benefited from exporting embedded energy to the world (such as coal and gas). AI data centres powered by cheap and reliable renewables are one way we can evolve this sector.

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20 Hajkowicz S, Bratanova A, Schleiger E, Naughtin C 2023, *Australia's artificial intelligence ecosystem: Catalysing an AI industry*, CSIRO, p.41
21 AirTrunk, Amazon Web Services, CDC Data Centres, Microsoft and NEXTDC 2025, *Pre-Budget Submission 2025-26 Digital Infrastructure Priorities*, p.4 (https://consult.treasury.gov.au/pre-budget-submissions/2025-26/view/642)

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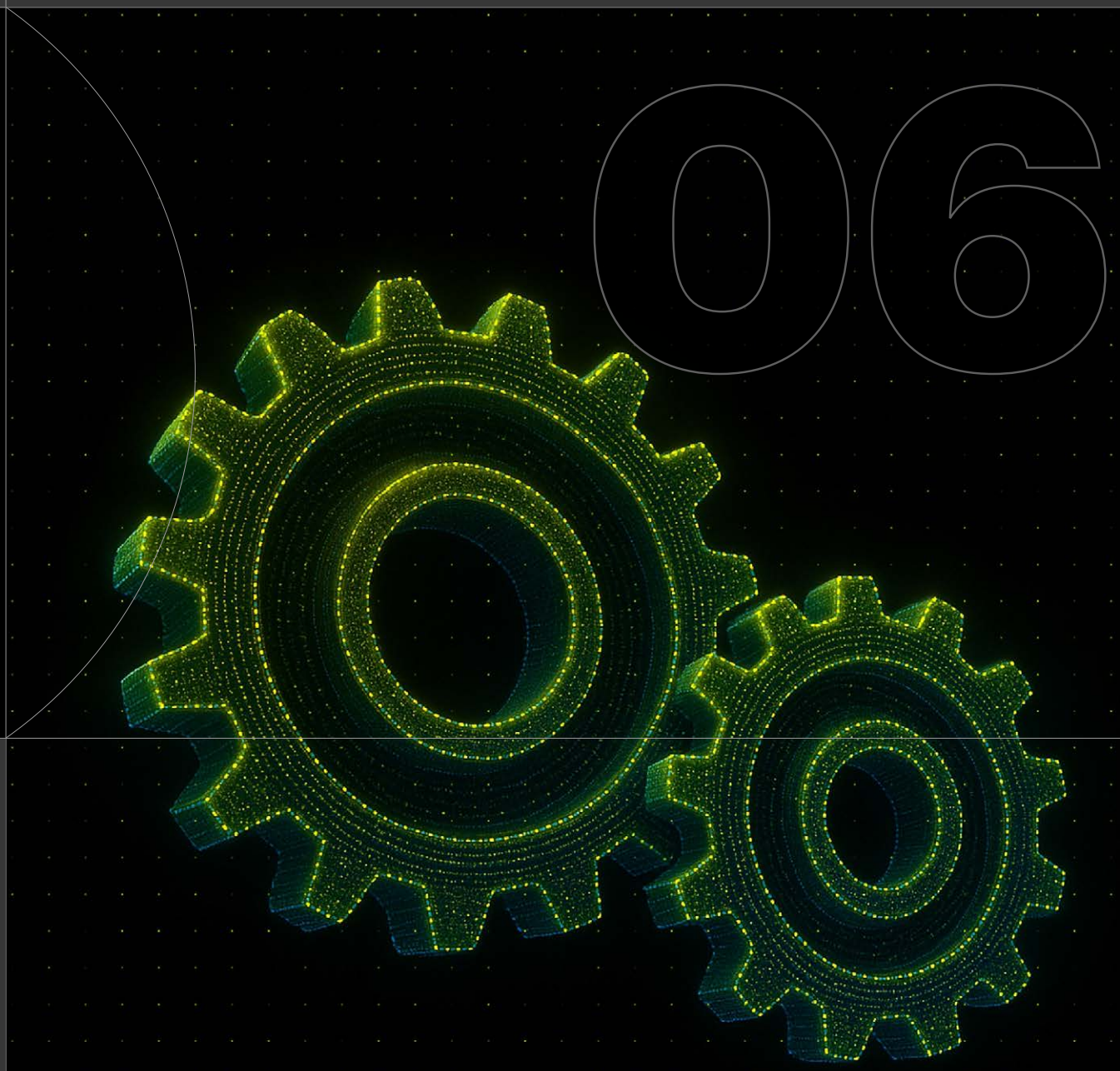
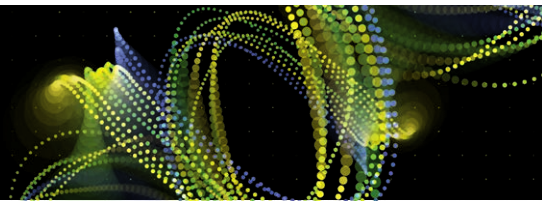


Australia's AI agenda

Australia's AI Agenda outlines a vision and actions across six key areas to become a global AI leader by 2028, boosting innovation and national resilience.

1. Adoption



The challenge

The primary challenge for Australia is the rapid pace of AI evolution and the risk of falling further behind. Australia has already largely missed the first major economic opportunity of AI, that of generative AI and large language models (LLMs). The era dominated by LLMs is already giving way to a new paradigm: agentic AI, which operate with a degree of independence, capable of setting goals, making decisions, and executing complex tasks without constant human direction.[22] This shift is the next major wave in AI.[23] This demonstrates the urgency of our situation.

One of the most important levers that governments at all levels (federal, state and territory) have to build confidence in AI is adoption in the public sector. However, government uptake of AI in Australia has been slow. The federal government conducted a trial of generative AI from January to June 2024 and released *Policy for responsible use of AI in government* in September 2024.[24] More needs to be done to match the scale and speed of the technology.

The opportunity

Australia should aim to be a 'AI maker' but the AI opportunity is not only about inventing new things. Innovation capacity is very important to a nation's strategic and economic power, but speed of adoption and usage throughout an economy can be even more important. This is the process by which innovation moves from its initial creation into widespread use, becoming a standard product, a replicated engineering feat, or a theory embraced across institutions. Countries with a strong capacity to spread adoption and usage but weaker innovation capacity may be more likely to sustain their success than those with the opposite.[25] Credible estimates suggest that increasing speed of adoption could increase generative AI's addition to our economy from $45 to $115 billion annually by 2030.[26]

Australia should rapidly identify high-impact innovations from abroad and adapt them to local conditions. By becoming world-class in how innovation is adopted and adapted, Australia can punch above its weight economically and geopolitically. This 'fast follower' and 'smart adapter' strategy can drive productivity gains, create new industries, enhance public services, and address unique national challenges.

As 98 per cent of businesses in Australia, our overall adoption speed will be largely determined by small and medium enterprises (SMEs). However, recent findings paint a concerning picture: only one-third of SMEs have embraced AI technologies, nearly a quarter struggle with implementation expertise, and more than 40 per cent yet to consider AI adoption.[27] Despite governmental support programs like AI Adopt Centres, the ecosystem supporting SMEs' digital evolution remains fragmented. In this complex environment, SMEs find themselves at a crossroads between technological necessity and practical constraints. Resolving this will be critical for Australia's AI adoption.

22 McKinsey & Company 2025, *What is an AI agent?* (https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-an-ai-agent)
23 Savarese, S 2025, *The Agentic AI Era: After the Dawn, Here's What to Expect*, Salesforce (https://www.salesforce.com/blog/the-agentic-ai-era-after-the-dawn-heres-what-to-expect/)
24 Digital Transformation Agency 2024, *Policy for responsible use of AI in government* (https://architecture.digital.gov.au/responsible-use-of-AI-in-government)
25 Ding, J 2023, *The diffusion deficit in scientific and technological power: re-assessing China's rise,* Review of International Political Economy, 31(1), 173–198 (https://doi.org/10.1080/09692290.2023.2173633)
26 Microsoft and Technology Council of Australia 2023, *Australia's Generative AI Opportunity*, p.14 (https://techcouncil.com.au/newsroom/generative-ai-could-contribute-115-billion-annually-to-australias-economy-by-2030/)
27 Department of Industry, Science and Resources 2024, *Exploring AI adoption in Australian businesses* (https://www.industry.gov.au/news/exploring-ai-adoption-australian-businesses)

Action 1 **Government as an exemplar: pioneering AI in public services**

Owner: Government
Timeframe: Complete by June 2026 (Year 1)

Industry is making significant strides in AI adoption and innovation, demonstrating the technology's transformative potential. However, for Australia to truly harness the power of AI across all sectors, the Australian Government must also spearhead AI adoption by becoming a sophisticated and ethical user. This involves implementing AI in healthcare for improved diagnostics and efficiency, in education for personalised learning and educator support, and across government services to enhance responsiveness and resource allocation. AI also has great potential to review, simplify and improve complex regulation and policies across all areas of government work. Such leadership will demonstrate AI's benefits, establish best practices, build public trust, and encourage broader private sector uptake.

To do so, the government should implement the following three initiatives[28]:

1. **Make it easier to use AI and get good value**
   Commonwealth agencies must identify and remove barriers to responsible AI use, developing agency-specific AI strategies within six months. They should ensure data compatibility for AI systems and share effective tools across government, while also focusing on recruiting, developing, and retaining AI talent.
2. **Put AI leaders in charge to speed things up**
   To drive AI adoption, the Australian Public Service should appoint Chief AI Officers (CAIOs) within two months and establish AI Governance Boards within three. It may be suitable to appoint one CAIO per ministerial portfolio or have fewer CAIOs covering multiple portfolios. These bodies will oversee AI use, ensuring adherence to governance requirements such as compliance plans, updated AI policies, and maintained AI use case inventories. A CAIO Council should coordinate these efforts government-wide.
3. **Make sure government-used AI is safe for Australian businesses and people**
   Government AI must be trustworthy, secure, and accountable. Agencies must develop AI risk management policies and implement robust safety measures, addressing high-risk AI use cases.

Action 2 **Boost funding for the National AI Centre (NAIC)**

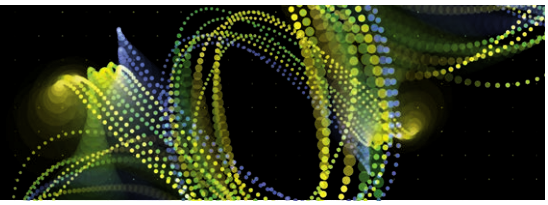
Owner: Government
Timeframe: Complete by June 2026 (Year 1)

The NAIC was established in 2021 to accelerate Australia's AI industry and support AI adoption for small and medium businesses.[29] The NAIC was funded for $21.6 million over four years from 2024-25. This must be boosted significantly to reflect the urgency and scale of the challenge. An expanded NAIC would be able to deliver initiatives like AI implementation grants and building on the AI Adopt Centres to provide targeted financial incentives, technical assistance, and expert consultancy through accessible regional hubs. This will help SMEs identify relevant AI solutions, overcome implementation barriers such as data readiness, workforce training and integrate AI into their business processes.

28 These are inspired by US executive memos: US Executive Office of the President 2025, *Accelerating Federal Use of AI through Innovation, Governance, and Public Trust*, M-25-21 (https://www.whitehouse.gov/wp-content/uploads/2025/02/M-25-21-Accelerating-Federal-Use-of-AI-through-Innovation-Governance-and-Public-Trust.pdf) and US Executive Office of the President 2025, *Driving Efficient Acquisition of Artificial Intelligence in Government*, M-25-22 (https://www.whitehouse.gov/wp-content/uploads/2025/02/M-25-22-Driving-Efficient-Acquisition-of-Artificial-Intelligence-in-Government.pdf)

29 Department of Industry, Science and Resources, *National Artificial Intelligence Centre* (https://www.industry.gov.au/science-technology-and-innovation/technology/national-artificial-intelligence-centre)

2. Skills



The challenge

The most sophisticated AI system is useless without people who know how to build, deploy, manage, and work alongside it. Right now, Australia faces a critical challenge: ensuring our workforce, both current and future, possesses the necessary AI skills.

Australia needs to be training more data scientists and machine learning engineers. It also needs to develop broad AI literacy across the entire economy. We need managers who embrace and drive AI adoption, workers who are comfortable using AI tools in their daily jobs, and a public that engages confidently with AI's societal impact.

This starts with basic IT literacy. In 2022, only 55 per cent of Year 6 students reached or exceeded the proficiency standard, and only 46 per cent of Year 10 students.[30] We need to raise the general digital literacy of all students if we hope to have a future workforce that can fully leverage AI.

Australia also needs the tradespeople that will build and maintain the digital infrastructure required – primarily construction workers, data centre operators, electricians and air conditioning technicians.

Australia faces stiff global competition for top AI talent, and we need clear strategies to attract and retain the best minds.

The opportunity

The prize for getting this right is immense: an AI-skilled workforce gives Australian people and businesses a fighting chance in a rapidly transforming world. These workers will be the drivers of higher national productivity and enhanced global competitiveness. Businesses equipped with AI-savvy employees will innovate faster, operate more efficiently, and create higher-value products and services. Start-ups led by world class talent will be enormous wealth creators for this country. And a workforce ready to deploy AI at scale will draw global investment and anchor high-value industries here in Australia.

By strategically developing and deploying AI to augment human capabilities, we can overcome persistent skills gaps across our services sector, for example in healthcare, education, and aged care, improving service delivery and reducing burnout among essential workers.

Action 3 **Create a National AI Skills Compact**

Owner: Industry, academia and government
Timeframe: Complete by June 2026 (Year 1)

Building Australia's AI workforce will require shared commitment from government, the digital industry and education providers. A National AI Skills Compact would formalise this collaboration, creating a structured partnership to scale talent pipelines, align training with industry needs, and expand access to AI careers. The Compact would provide a clear mechanism for employers to signal demand, shape curriculum, and support practical learning pathways, while giving educators up-to-date insight into the skills industry needs most.

Modelled on the NSW Digital Skills and Workforce Compact, this national initiative would encourage

30 ACARA 2022, *National Assessment Program: ICT Literacy 2022 Technical Report*, p.8

employers to commit to tangible actions – including offering applied learning opportunities, recognising high-quality microcredentials, and broadening recruitment beyond traditional pipelines. By anchoring AI workforce development in real-world demand, the Compact would help ensure training delivers job-ready graduates and supports inclusive, responsive skills growth.[31]

There would be two specific streams:

1. Create a national AI apprenticeship model

- Develop a national apprenticeship model for AI and digital infrastructure roles. This would combine formal training with structured, paid work placements in high-demand areas like data engineering, machine learning deployment, and AI-related trades such as data centre operations and network systems. Drawing on lessons from Germany[32] and Singapore[33], the model would offer a practical pathway for school leavers, career changers, and vocational learners to gain hands-on experience while earning industry-recognised qualifications.
- A nationally coordinated approach to AI apprenticeships would ensure consistency in design and delivery, while giving employers flexibility to tailor on-the-job learning to evolving business needs. This would help build a more diverse, work-ready AI talent pipeline and strengthen the link between training and workforce demand.

2. Scale up industry-led AI microcredentials

- Australia should replicate NSW's Institute of Applied Technology Digital model nationally to deliver fast, flexible microcredentials in AI and related fields.[34] These short, targeted courses are essential for upskilling and reskilling, particularly for mid-career workers and those looking to switch into a digital career. The effectiveness of microcredentials, however, depends on deep industry involvement. All AI microcredentials must be co-designed and endorsed by leading employers, reflecting real workforce needs and emerging technologies.
- To drive uptake and build credibility, members of the proposed National AI Skills Compact should formally recognise industry-approved microcredentials in recruitment. This includes allocating at least 20 per cent of entry-level AI roles to candidates from non-traditional pathways and committing to consider all applications from graduates of approved Institute of Applied Technology-style programs. These actions will broaden access to high-value careers and help deliver a more diverse, job-ready AI workforce.

Action 4 **Reform AI skills development pathways**

Owner: Industry, academia and government
Timeframe: Complete by June 2027 (Year 2)

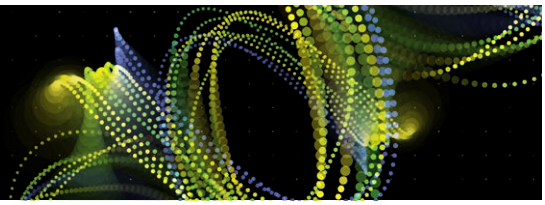
AI literacy must start early and be embedded at every stage of learning. Foundational concepts and practical skills should be integrated into school curricula from primary through to secondary levels. At university, we need more specialist AI degrees. But just as importantly, AI modules must be embedded across all disciplines, so graduates in law, medicine, the arts and beyond understand how to critically engage with AI tools in their fields. Vocational training courses must also embed AI skills to prepare learners for digitally enabled jobs across the trades and technical sectors.

Equally critical is ensuring the existing workforce isn't left behind. We need accessible, high-quality upskilling and retraining options – including short, non-accredited courses – delivered flexibly through TAFEs, universities and private providers.

Government, industry and accrediting bodies should work with the tertiary sector to co-design curricula, identify relevant use cases by discipline, and explore incentive mechanisms to support implementation. Embedding AI literacy in generalist degrees and relevant VET courses will help ensure Australia's future workforce is prepared not just to adapt to AI, but to actively shape its responsible use.

31 NSW Government, *NSW Digital Skills and Workforce Compact* (https://www.nsw.gov.au/education-and-training/nsw-digital-compact)
32 Germany's dual vocational training system combines on-the-job training with classroom instruction. Trainees typically spend part of the week at a company and the remainder at a vocational school. Federal Institute for Vocational Education and Training 2020, *Young people study in the company and at school* (https://www.bibb.de/en/77203.php)
33 Singapore's AI Apprenticeship Programme (AIAP) is a nine-month, full-time program designed to develop local AI talent. Participants engage in deep-skilling and work on real-world AI projects across various industries, including healthcare, insurance, and government agencies. AI Singapore 2025, *Growing our own Timber* (https://aiap.sg/)
34 NSW Government, *IAT Digital: The new way to get digital skills* (https://www.iat.nsw.edu.au/iat-digital)

3. Regulation



The challenge

Regulation in the age of AI is a tightrope walk. We need rules that build public trust and protect citizens from genuine harm, such as deepfakes manipulating opinions, biased algorithms perpetuating inequality, or breaches of data privacy.

Effective AI regulation starts from the premise that the application and use of AI is overwhelmingly positive, but that risks at the edges need to be mitigated. We must avoid strangling the very innovation we seek to foster. Overly burdensome, ambiguous, or premature regulations throttle experimentation, deter investment, and put Australian businesses at a disadvantage.

That is what we are seeing in the EU. In 2024, the Draghi report found that the EU's regulatory burden hindered the EU's competitiveness and performance in critical areas like AI adoption, cloud computing capabilities, and digital infrastructure investment. It called for a reduction in this regulatory burden to rekindle economic dynamism.[35]

The EU AI Act's approval processes and third-party audits for high-risk systems add months to product launches. Meta's Llama 4 AI models, for instance, were delayed by 18 months in the EU compared to the US. Apple Intelligence faced similar setbacks due to EU's Digital Markets Act.[36] This is an important reminder that it's not just 'AI regulation' – Australia should maintain awareness of our broader regulatory environment, and how this might inhibit AI.

Finding the right balance, ensuring our approach aligns sensibly with international partners, and addressing existing legislative challenges (like how AI interacts with current tax or privacy laws) is a complex but critical task. The perception that regulation is inherently 'good' or 'bad' is unhelpful, we need regulation that enables the trust and safety that allows innovation to flourish.

The opportunity

We must remember that AI is already regulated – perhaps 80 per cent of potential issues are solved by applying existing legislation, such as Australian Consumer Law and sector based regulations.[37] Australia needs to enforce existing laws and amend legislation where edge cases are identified.

Getting regulation right is also a source of competitive advantage. A clear, predictable, and trusted regulatory environment makes Australia a more attractive place for AI investment and deployment. Businesses can operate with greater certainty, and consumers can adopt AI technologies with more confidence. By developing a reputation for responsible AI governance, Australia can lead globally, influencing international standards and attracting businesses that prioritise ethical practices. Smart regulation fosters the social license necessary for AI to flourish. Conversely, as long as the regulatory question is unsettled, business investment will stagnate and people will remain more hesitant about AI.

We must also acknowledge that while some new risks may arise, other risks may be reduced. For instance, self-driving cars are can vastly reduce accidents on roads. Despite the focus on their errors, they eliminate the much higher level of human driving errors. Our resources companies are using AI to improve safety outcomes for Australian workers in mines. BHP has rolled out driverless trucks in their mines, including Goonyella Riverside Mine in Queensland's Bowen Basin in Barada Barna country. With each truck fitted with lasers front and back, obstacles are flagged instantly, causing the vehicle to stop automatically.

35 Draghi, M 2024, *The Future of European Competitiveness—A Competitiveness Strategy for Europe* (https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en)
36 Jackson, F 2025, *EU AI Rules Delay Tech Rollouts, But Civil Societies Say Safety Comes First*, TechRepublic (https://www.techrepublic.com/article/news-eu-ai-laws-tech-giants-civil-groups/)
37 Select Committee On Adopting Artificial Intelligence (AI) Senate Committee, 21 May 2024, Official Committee Hansard, p 22

Action 5 **Implement clear, risk-based regulations**

Owner: Government
Timeframe: Complete by June 2026 (Year 1)

The BCA's submission to the government's 2024 *Proposal for Mandatory Guardrails in High-Risk Settings* recommended that government should conduct a transparent and thorough review of current legislation to identify any AI-related gaps.[38] The BCA believes this has not yet been adequately completed by government.

Only if this process reveals clear and compelling evidence of legislative shortcomings would dedicated AI 'framework legislation' be an appropriate response.

Such a regulatory framework should be risk-based and proportionate, focusing scrutiny and safeguards on self-identified high-risk AI applications (such as in critical infrastructure, healthcare and law enforcement) that are aligned to international standards, and where the potential for harm is significant. Applications identified as low-risk should not be subject to regulatory oversight. Prioritising regulatory certainty is key – this means clear definitions (what constitutes 'high-risk' AI?) and practical guidelines.

Rather than reinventing the wheel, framework legislation would empower our existing regulators – who already possess deep expertise in specific products, industries, and professions – by providing them with the principles and tools to address AI-related risks within their areas. To assist in the transition, Australia would also benefit from increasing regulatory capacity.

Framework legislation would ensure different regulators can conduct assessments consistently and apply common guardrails across diverse sectors, promoting compliance and easing implementation burdens. Framework legislation should be accompanied by shared definitions and metrics for assessing AI risk.

However, we must avoid what we have seen transpire in the EU. The EU AI Act nominally establishes a risk-based framework, classifying AI systems according to potential harm, but its practical implementation deviates significantly by targeting AI at the foundational model level, and specifically general-purpose AI (GPAI) models, and even more stringently those deemed to pose 'systemic risk'. This shift from regulating the high-risk *application* to regulating the underlying *technology* imposes substantial burdens and is something Australia must avoid.

An EU-style approach would also be difficult to implement and impose overly broad and rigid obligations, slowing the adoption of AI across Australian sectors. Overregulating early-stage technologies can entrench incumbents and disadvantage SMEs and start-ups. Australia already faces strong global competition in AI development, and so overlaying a burdensome regulatory regime would put local innovators at a structural disadvantage.

If Australia regulates too broadly – if we act out of fear – we risk shutting down the very kind of experimentation that could help us solve the problems we're trying to address in the first place. Australia could box itself into a future that's less innovative and less safe.[39]

38 Business Council of Australia 2024, *Submission to the proposals paper for mandatory guardrails for AI in high-risk settings*, BCA, pp.15–16
39 Bryan, K and Teodoridis, F 2024, *Balancing market innovation incentives and regulation in AI: Challenges and opportunities*, Brookings (https://www.brookings.edu/articles/balancing-market-innovation-incentives-and-regulation-in-ai-challenges-and-opportunities/)

Action 6 **Establish the Australian AI Safety Institute (AAISI)**

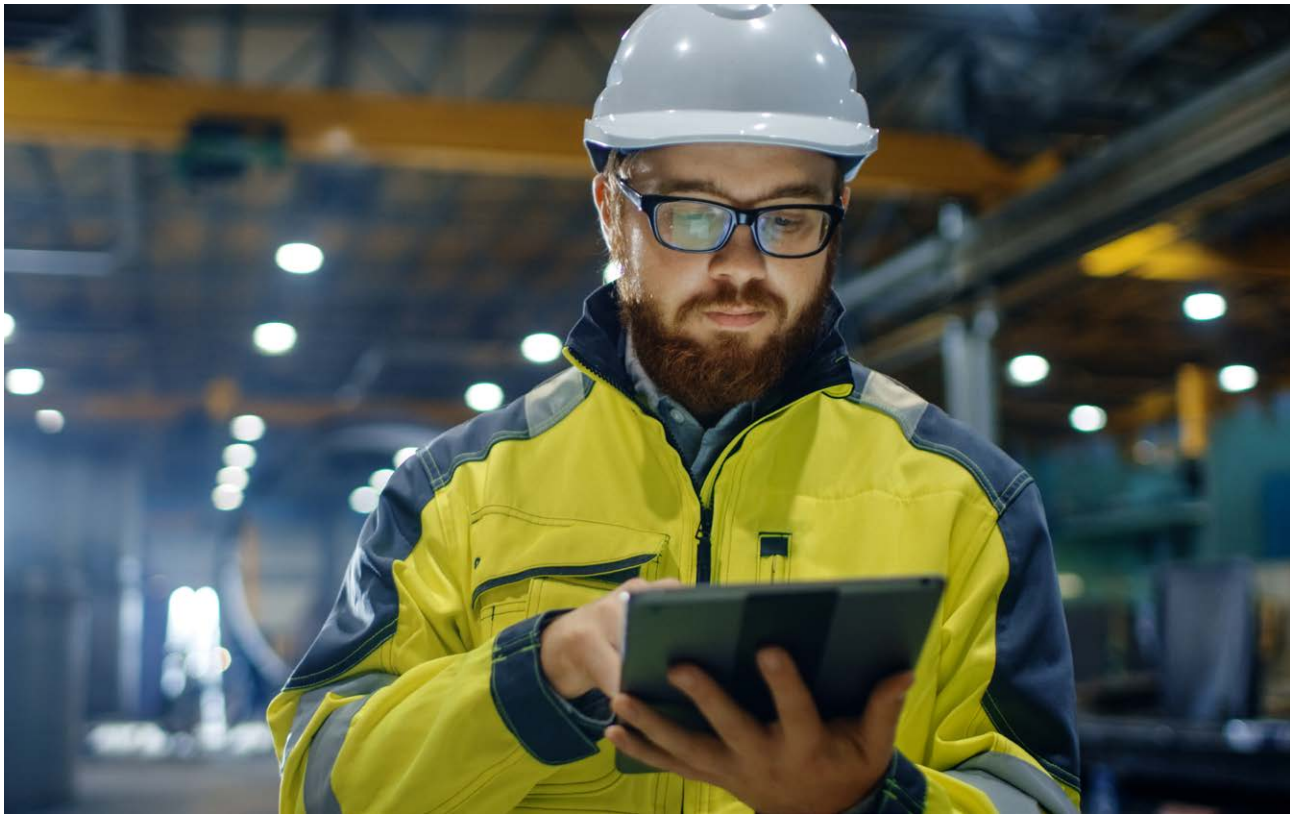
Owner: Industry, academia and government
Timeframe: Complete by June 2026 (Year 2)

Trust requires verification. An independent, respected body – the AAISI – would be focused on the technical aspects of AI safety and reliability.[40] The AAISI would also partner on, and be informed by, interdisciplinary work on AI ethics.

Crucially, AAISI would not be a regulator. Its role would be to collaborate internationally to develop technical standards, create robust methodologies for evaluating AI systems (testing for bias, security and accuracy) and conduct safety research on frontier AI capabilities.[41] Establishing an AAISI means Australia will be able to work more closely with other countries with AI Safety Institutes, such as the US, UK, Japan, South Korea, Canada, France and Singapore.

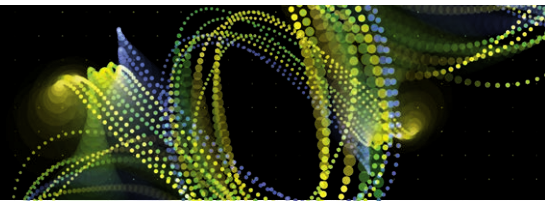
It would share its findings transparently with regulators, industry, and the public, enhancing accountability. To be effective, AAISI needs statutory independence, and secure funding from both government and industry as a public-private partnership.

Building a safer future with AI is also an economic opportunity. By co-developing these standards and evaluation tools, AAISI would enable a market for AI assurance and auditing services, allowing businesses to demonstrate the trustworthiness of their systems. Australia has a chance to lead by building an economic sector focused on the provision of AI safety services and products. An AAISI would be at the heart of that effort. With the AAISI, Australia can grow an entire ecosystem of new AI safety companies, jobs, and exports.



40 The BCA previously spoke favourably of establishing an Australian AI Safety Institute – see Business Council of Australia 2024, *Submission to the proposals paper for mandatory guardrails for AI in high-risk settings*, BCA, pp.13, 16
41 Australia committed to establishing an AI Safety Institute under the 2023 Bletchley and 2024 Seoul declarations.

4. Infrastructure



The challenge

Data centres serve essential functions. Our critical services – healthcare, transport, emergency response – rely on them.

Data centre demand is being driven by the increasing uptake of cloud services as our economy continues to digitally transform. There is still enormous growth to be realised by moving from on-premises servers to energy efficient data centres.

Adding the expected uptake of AI services by Australian businesses, demand for data centre capacity will only grow. The data centre deployable capacity here in Australia is projected to more than double from 1,350 megawatts in 2024 up to 3,100 megawatts by 2030.[42] The Australian Energy Market Operator (AEMO) estimates that data centres are currently about 1.7 per cent of total consumption of the national electricity market (NEM)[43], rising to five per cent by 2033-34 (under an aggressive data centre growth scenario), and not rising higher.[44]

However, it's important to understand that aggregating compute and storage into data centres means energy usage can be optimised. If Australian businesses switched back today to using on-premise servers instead of hyperscale cloud providers, it would consume an estimated 67 per cent more energy.[45]

Australia faces a global race for this infrastructure. Investment capital and cutting-edge hardware (like advanced semiconductor chips, potentially affected by global supply chain dynamics and regulations like US export controls) are fiercely contested.

But infrastructure can't be built overnight, and the countries that build quickest will be better placed to win the global race. 'Speed-to-build' is a critical determinate of where AI investment is going. At the moment, Australia is a slow and expensive place to build, with complex planning and approval processes for major infrastructure projects. Globally, two months is becoming best practice.

The opportunity

By 2030, global capital expenditure on data centres for AI processing loads will reach US$5.2 trillion.[46] We have abundant land, political stability, and some of the world's best renewable energy resources in solar and wind – if we can harness them quickly enough. This combination makes Australia a highly attractive location for building the large-scale, green data centres the world needs, positioning us as a key AI infrastructure hub for the Asia-Pacific region.[47] This would also support a range of other complex computationally-intensive industries and activities such as climate modelling, genomic analysis, drug discovery, computational fluid dynamics modelling, seismic processing, and visual effects rendering.

Building this capacity not only supports our domestic AI ambitions but also creates significant economic activity through construction, new jobs, and attracting further tech investment. It's about building the digital infrastructure for a 21st-century economy, for both AI and cloud services.

42 Mandala 2025, *Empowering Australia's Digital Future*, p.6 (https://mandalapartners.com/reports/empowering-australia-s-digital-future)
43 3 TWh of 181.4 TWh total NEM - Australian Energy Market Operator 2025, *National Electricity Market Factsheet* (https://aemo.com.au/learn/energy-explained/fact-sheets/the-national-electricity-market-fact-sheet)
44 Australian Energy Market Operator 2024, *Electricity Statement of Opportunities 2024*, p.35
45 Mandala 2025, *Empowering Australia's Digital Future*, p.23 (https://mandalapartners.com/reports/empowering-australia-s-digital-future)
46 McKinsey & Company 2025, *The cost of compute: A $7 trillion race to scale data centers*, McKinsey Quarterly, p.2 (https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-cost-of-compute-a-7-trillion-dollar-race-to-scale-data-centers#/)
47 Mandala 2025, *Empowering Australia's Digital Future*, p.18 (https://mandalapartners.com/reports/empowering-australia-s-digital-future)

For Australia, sustainability will be integral to our AI infrastructure plan. Powering AI with clean energy is both an environmental necessity and an economic imperative. Studies estimate that AI could help mitigate 5 to 10 per cent of global greenhouse gas emissions by 2030, equivalent to the total annual emissions of the EU.[48]

AI is also critical to making renewable energy *work*. Renewables require complex balancing of supply and demand, weather forecasting for sun and wind, and energy storage management across various battery technologies. Australia must accelerate our transition to renewable energy sources, and as renewables become a larger proportion of our energy mix, and the system becomes more complex, AI becomes necessary to manage and optimise the grid.

Action 7 **Simplify data centre development**

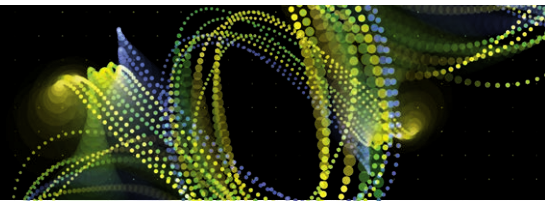
Owner: Government
Timeframe: Complete by June 2026 (Year 1)

Australia needs to cut the red tape to speed up data centre development. We need to collaborate across federal, state and territory and local governments to significantly accelerate planning and approval processes, providing clarity and speed for investors. Governments must take immediate steps to create transparent timelines for approval processes.

Establishing a dedicated public-private council, bringing together government agencies, infrastructure providers, and tech companies, would facilitate this coordination and troubleshoot bottlenecks. Addressing the enabling infrastructure for the future – particularly power grid upgrades and sustainable water solutions – must happen in parallel.

48 BCG and Google 2023, *Accelerating Climate Action with AI*, p.2 (www.gstatic.com/gumdrop/sustainability/accelerating-climate-action-ai.pdf)

5. Data



The challenge

Australia ranks among the very worst in the OECD for data availability, data accessibility and government support for data re-use.[49] Improving this and facilitating better data usage will help realise productivity gains.[50]

Data is the lifeblood of AI. Without access to high-quality, diverse datasets, even the most sophisticated algorithms cannot learn effectively. However, much of the potentially valuable data in Australia remains locked away in silos – held by different government agencies, private companies, or research institutions – constrained by technical barriers, commercial sensitivities, or privacy concerns.

Striking the right balance between enabling data access for innovation and rigorously protecting individual privacy, along with the complex issue of copyright and AI training, is one of the most significant challenges we face. Mishandling protected data is a surefire way to erode trust and support from the public.

Even the EU has acknowledged the critical importance of access to information for innovation. Under the Directive on Copyright in the Digital Single Market (Article 3 and 4), the EU has implemented a text and data mining (TDM) exception.[51] This allows both non-commercial and commercial entities to carry out data mining without needing to seek prior permission from rightsholders, provided that lawful access to the content exists. Article 4 contains a crucial opt-out mechanism for rightsholders where they can expressly reserve their rights and exclude their works from the scope of this exception.

The UK has also recognised the economic and societal benefits of AI-fuelled innovation. As part of its *AI Opportunities Action Plan*, the UK has proposed a TDM exception that would include an opt-out mechanism for rightsholders.[52] This represents a shift towards legal clarity and a pro-innovation stance. It acknowledges that uncertain or overly restrictive copyright rules can hold back AI research, investment, and competitiveness.

The opportunity

If we can overcome these challenges, the rewards are substantial. Open data ecosystems fuel AI innovation. Governments should facilitate responsible data-sharing between public and private sectors to accelerate AI development. The Australian Government has already made good progress in this area. In 2022, the Data Availability and Transparency Act (DAT Act) was enacted, creating a legislative framework for the secure and efficient sharing of public sector data. Curating high-quality, diverse, and representative Australian datasets can become a significant competitive advantage, allowing us to train AI models that are uniquely attuned to our specific context, needs, and values. To facilitate this, the UK has agreed to the creation of a National Data Library (NDL) unlock data assets and boost the economy.[53] They are rapidly identifying and releasing the top five high-impact government datasets to demonstrate the power of publicly owned data for AI training.

Responsibly opening up access to anonymised or aggregated public sector datasets, and creating secure mechanisms for private sector data sharing, would fuel a vibrant ecosystem of AI startups and researchers, driving innovation across the economy. Government itself can lead by example, using data more effectively to improve its own services and decision-making.

49 Organisation for Economic Cooperation and Development 2023, *2023 OECD Open, Useful and Re-usable data (OURdata) Index: Results and Key Findings*, OECD Public Governance Policy Papers, p.14 (https://www.oecd.org/en/publications/2023-oecd-open-useful-and-re-usable-data-ourdata-index_a37f51c3-en.html)
50 Productivity Commission 2024, *Senate Select Committee on Adopting Artificial Intelligence (AI) Productivity Commission submission*, p.6 (https://www.pc.gov.au/research/supporting/adopting-artificial-intelligence)
51 European Union 2019, *Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC* (https://eur-lex.europa.eu/eli/dir/2019/790/oj/eng)
52 UK Government 2025, *AI Opportunities Action Plan* (https://www.gov.uk/government/publications/ai-opportunities-action-plan/ai-opportunities-action-plan)
53 UK Government 2025, *AI Opportunities Action Plan* (https://www.gov.uk/government/publications/ai-opportunities-action-plan/ai-opportunities-action-plan)

Action 8 **Reform copyright through the National AI Capability Plan**

Owner: Government
Timeframe: Complete by June 2027 (Year 2)

The government's attempt at copyright reform and AI has been focused on transparency.[54] Conducted through the Attorney-General's Department, it takes a legalistic view focused on potential harms, rather than enabling opportunity. Government should shift this work out of the Attorney-General's Department and into the work of the Department of Industry Science and Resources on the *National AI Capability Plan* to create a text and data mining exception to speed up progress and emphasise the opportunity, as has been done in the EU, US and will be done in the UK. Reform is critical and work will go offshore if we don't fix it.

Action 9 **Expand frameworks for public-private data access and sharing**

Owner: Government
Timeframe: Complete by June 2028 (Year 3)

Australia needs to reconceive government data as a valuable sovereign resource and establish clear, modernised frameworks. These should build upon existing initiatives like the DATA Scheme[55] but expand its scope and streamline its processes to significantly increase the availability of public sector data for research and innovation purposes, always under strict ethical and privacy safeguards. Prioritising economic growth and public benefit should be key objectives.

Similar to the UK's 'open by default' policy, public sector data should be published proactively and made easily accessible for anyone to use, modify, and share, unless there is a clear and lawful justification to withhold it. The policy applies broadly to non-personal data held by public sector bodies. This includes data like government spending, contracts, procurement data, ministerial meetings, live traffic data, maps, land use, air quality, weather, flood risks, and energy usage.

Action 10 **Establish the Australian National Data Library (ANDL)**

Owner: Government
Timeframe: Complete by June 2028 (Year 3)

Based on the UK's National Data Library (NDL), Australia should establish a similar initiative to serve as enabling infrastructure, designed to unlock the full potential of public-sector data by facilitating secure, streamlined, and scalable access to linked datasets.

By breaking down existing data silos and overcoming fragmentation, an Australian NDL could drive AI innovation, transform public service delivery, and empower researchers and industry to develop solutions tailored to Australia's unique context and challenges. The core purposes should be augmenting the Office of the National Data Commissioner, removing systemic barriers to data access and use, and ensuring public data becomes a powerful, accessible resource for evidence-based policymaking, research breakthroughs, and economic growth.

To realise this vision, Australia's NDL development should be focused on impactful use cases aligned with national priorities rather than being purely technology-driven. It should adopt a federated model where data remains decentralised but accessible through common infrastructure, governance, and standards.

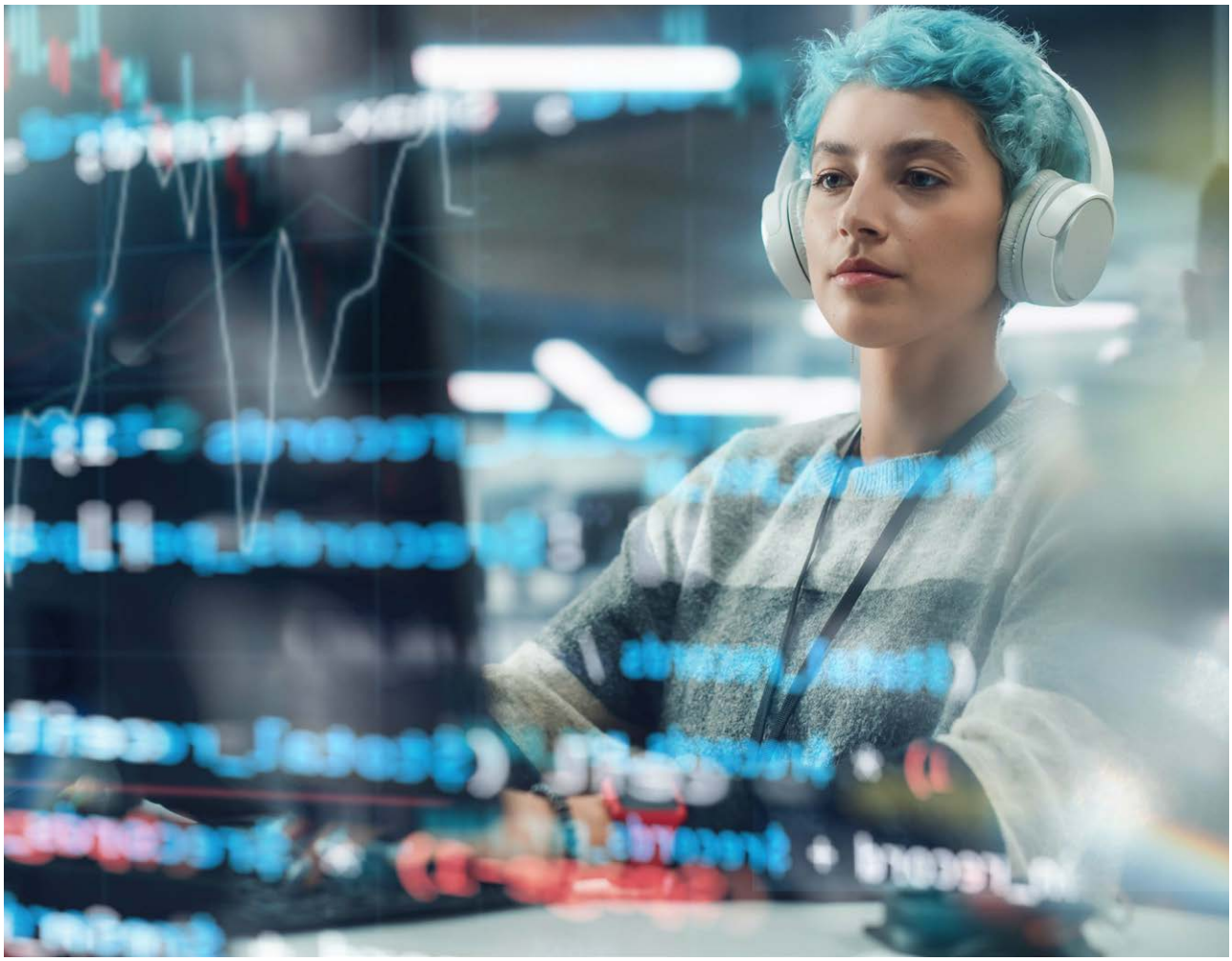
54 Attorney-General's Department 2023, *Copyright and Artificial Intelligence Reference Group (CAIRG)* (https://www.ag.gov.au/rights-and-protections/copyright/copyright-and-artificial-intelligence-reference-group-cairg)
55 Office of the National Data Commissioner 2024, *Introducing the DATA Scheme* (https://www.datacommissioner.gov.au/the-data-scheme)

Action 11 **Create secure private sector data collaboration frameworks**

Owner: Industry and government
Timeframe: Complete by June 2028 (Year 3)

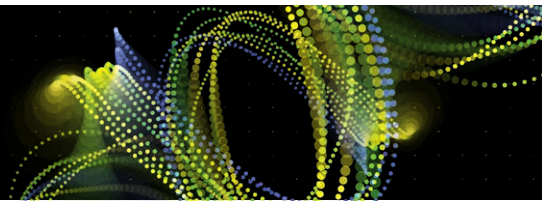
Innovation often requires experimentation in safe environments. We should actively implement 'operational sandboxes' for data-driven AI projects, allowing businesses and researchers to test new ideas under regulatory supervision.[56]

Potentially employing this sandbox model, Australia should also support the creation of secure, trusted data collaboration platforms in the private sector. This could involve sector-specific 'data trusts' (for example, for health or agricultural data) or cross-sectoral platforms inspired by international examples like the EU's Gaia-X[57] and iSHARE[58] and Dutch JoinData[59] initiatives. These platforms would enable multiple parties to securely pool or access data for analysis and model development, using privacy-enhancing technologies and robust governance to protect confidentiality and commercial sensitivities.



56 Similar to what has already be established with the Consumer Data Right sandbox: Australian Government, *Consumer Data Right Sandbox* (https://www.cdr.gov.au/for-providers/participant-tooling/consumer-data-right-sandbox)
57 Gaia-X 2023, *About Gaia-X* (https://gaia-x.eu/)
58 iSHARE Foundation, *iSHARE Trust Framework* (https://ishare.eu/)
59 JoinData 2025, *We are JoinData: an independent platform focused on farmers* (https://join-data.nl/en/)

6. R&D and innovation



The challenge

Becoming a global leader in AI requires a dynamic, well-funded R&D ecosystem capable of generating foundational AI knowledge, translating discoveries into real-world applications, and nurturing the next generation of innovators. The University of Adelaide and Commonwealth Bank have already entered into a five year partnership to advanced Australia's AI research capability.[60]

Along with R&D that develops better AI, we must harness AI's potential to improve R&D across all disciplines, such as biotechnology, engineering and physics. This is essential if Australia is to remain a world-class research destination.

Australia faces challenges here: ensuring sufficient and consistent funding for both long-term research and more applied, industry-focused development; equipping researchers across all scientific disciplines with the AI skills needed to leverage its power in their own fields; ensuring researchers have practical access to powerful computing resources essential for innovative AI work; and overcoming fragmented funding approaches that can suffocate ambitious, large-scale projects.

High-quality data are particularly important. Consider AlphaFold, a breakthrough AI technology that solved the 50-year-old protein folding problem, enabling scientists to predict a protein's 3D structure from its amino acid sequence with unprecedented accuracy, revolutionising biology, drug discovery, and our understanding of life itself. This success was reliant on the Protein Data Bank – carefully annotated and triaged protein structure data that research partners all over the world collected for 60 years. This served as essential training data for AlphaFold's machine learning models, giving it the "answers" needed to learn how sequence determines structure.[61]

A persistent issue in Australia is bridging the 'valley of death' between research breakthroughs and commercial success – from January to June 2023, Australia contributed 1.6 per cent of the world's AI research but only 0.24 per cent of AI patent applications.[62]

The opportunity

AI is more than a field of study in itself. It's becoming a universal tool for accelerating discovery across virtually all domains of science and innovation. AI has helped develop new medicines (like DeepMind's AlphaFold revolutionising protein folding prediction), design novel materials and modelling complex climate systems.[63] AI has also driven major new scientific discoveries in battery optimisation, chemical synthesis, and nuclear fusion reactors.[64]

Strategic investment in AI R&D can position Australia at the forefront of these AI-driven scientific frontiers, creating high-value industries and attracting world-class talent. A thriving R&D ecosystem acts as a magnet, drawing in investment and creating a virtuous cycle of innovation and economic growth. For example, Australia is a world leader in biotech, which is also a relatively cheap and renewable industry for investment. It would make new companies and new jobs in Australian, and the breakthroughs in this area would be some of the most profound in human history.

60 Commonwealth Bank of Australia 2024, *Five-year partnership to boost foundational AI research in Australia* (https://www.commbank.com.au/articles/newsroom/2024/09/commbank-centre-for-foundational-ai.html)
61 Australian Research Data Commons, *Making Data FAIR* (https://ardc.edu.au/resource-hub/making-data-fair/)
62 Hajkowicz S, Bratanova A, Schleiger E, Naughtin C 2023, *Australia's artificial intelligence ecosystem: Catalysing an AI industry*, CSIRO, p.41
63 Tony Blair Institute 2025, *A New National Purpose: Accelerating UK Science in the Age of AI*, p.13 (https://institute.global/insights/tech-and-digitalisation/a-new-national-purpose-accelerating-uk-science-in-the-age-of-ai)
64 Wang, H, Fu T, Du Y, Gao, W, Huang K, Liu, Z, Chandak, P, Liu, S, Van Katwyk, P, Deac, A 2023, *Scientific discovery in the age of artificial intelligence*, Nature, 620(7972):47–60, p.48

Action 12 **Empower researchers and enhance research infrastructure**

Owner: Industry, academia and government
Timeframe: Complete by June 2028 (Year 3)

Alongside skills, researchers need the right tools to meet the scale and speed of scientific change. This requires strategic investment in creating AI-ready, high-quality research datasets. We should require publicly funded research data to be digitally recorded, well-documented, and made accessible where appropriate under FAIR (findable, accessible, interoperable and reusable) principles.[65]

We must also ensure Australian researchers have reliable and affordable access to the national high-performance computing (HPC) resources needed to train and run sophisticated AI models. Investing in our research infrastructure is investing in our future discoveries.

To achieve this, Australia should institute a program similar to Singapore's 'AI for Science'. Singapore is committing AUD $142 million to harness AI in science, with the goal of increasing research efficiency and unlocking new discoveries. Critically, the investment will foster close partnerships between AI specialists and scientists from other domains, focusing on priority areas such as biomedical science, health research, and advanced materials, fields critical to Singapore's long-term innovation strategy. The equivalent investment in Australia (scaled up per capita) would be around AUD $650 million.

Action 13 **Establish the AI Research Consortium (AIRC)**

Owner: Industry and academia
Timeframe: Complete by June 2026 (Year 1)

Australia should establish a national AI Research Consortium (AIRC) – a dedicated research hub where businesses and universities co-locate to pursue foundational, pre-competitive AI research. The AIRC would focus on how AI can drive real-world productivity gains and economic growth across all industries. By bringing together leading researchers and industry experts, the AIRC would help unlock the broad application of AI technologies to solve shared challenges that are too complex, risky, or resource-intensive for any single organisation to address alone.

Modelled on world-leading initiatives like IMEC, which has transformed Belgium into a global leader in chip and nanoelectronics R&D, the AIRC would focus on developing core AI capabilities and non-proprietary technologies.[66] These shared building blocks – such as new machine learning architectures, trustworthy AI systems, and advanced data infrastructure – would underpin a broad range of future commercial applications.

Industry partners would collaborate on joint research within the consortium, then take the resulting outputs back into their own pipelines for competitive product development. This model pools talent, infrastructure, and funding, reducing duplication and dramatically lowering the cost of innovation, particularly for SMEs.

The AIRC would accelerate the development and adoption of AI across the economy while building a critical mass of AI expertise, infrastructure, and intellectual property within Australia. It would support faster commercialisation of AI solutions across diverse sectors – from health to mining to agriculture – and help strengthen our sovereign AI capability. Over time, the AIRC would become a national asset, embedding long-term capacity for innovation, collaboration and economic transformation.

Establishing the AIRC will require genuine co-investment and active participation from industry and academia, with the door open for government playing a role down the road.

66 European Molecular Biology Laboratory - European Bioinformatics Institute 2025, *AlphaFold Protein Structure Database* (https://alphafold.ebi.ac.uk/)
67 imec, *About imec* (https://www.imec-int.com/en/about-us)

Action 14 **Fix R&D settings to support AI development and adoption**

Owner: Government
Timeframe: Complete by June 2027 (Year 2)

Australia should elevate R&D as a national strategic priority and agree a target of 3 per cent GDP spend on R&D by 2035. This should be accompanied by a commitment to a 10-year national R&D strategy to drive innovation, boost productivity, and position Australia as a global leader in R&D.

Australia's R&D Tax Incentive (RDTI) should be modernised to reflect how AI is developed, deployed and scaled in industry. The current tax definition is narrowly focused on experimental, hypothesis-based research and often excludes legitimate innovation, particularly in software, systems integration and iterative AI model development. As a result, key AI-related activities such as training models, refining algorithms, or integrating machine learning into business processes may fall outside the incentive's scope.

To unlock AI's full economic potential, the RDTI must evolve to recognise contemporary innovation methods and technology development pathways. This includes updating the tax definition to align with the OECD Frascati framework[67] and reviewing eligibility for AI-related compute, cloud infrastructure and collaborative projects. This would ensure the RDTI better supports business investment in AI and positions Australia as a competitive destination for technology-led innovation.

Action 15 **Create the AI Commercialisation Accelerator (AICA)**

Owner: Industry, academia and government
Timeframe: Complete by June 2027 (Year 2)

Australia should establish an AI Commercialisation Accelerator (AICA) to bridge the gap between research and deployment in priority sectors. Focused on applied development and early-stage scaling, the Accelerator would support high-potential AI projects emerging from universities, startups and research institutes, particularly in areas like clean energy, advanced manufacturing, digital health and agriculture.

Modelled on the UK's Catapult Network[68] and aligned with a national R&D strategy, AICA would offer shared infrastructure, technical capability and commercialisation support to translate research into market-ready solutions. It would complement the BCA's recommendation to the Australian Government's 2024-2025 Strategic Examination of Research and Development to establish a nationally coordinated network of industry-led R&D centres, providing a targeted vehicle to scale AI innovation and ensuring promising ventures can grow and stay in Australia.

67 Organisation for Economic Cooperation and Development 2015, *Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development* (https://www.oecd.org/en/publications/frascati-manual-2015_9789264239012-en.html)
68 Catapult Network 2025, *Catapult Network* (https://catapult.org.uk/)

Action 16 **Establish a national AI missions program**

Owner: Industry, academia and government
Timeframe: Complete by June 2027 (Year 2)

Australia should establish a national AI missions program to focus R&D investment on solving high-impact national challenges with artificial intelligence. These missions – co-designed by government, researchers and industry – would drive applied research and commercialisation. Each mission should be time-bound, outcome-driven and closely aligned with Australia's broader national R&D strategy.

Modelled on international programs like Japan's Moonshot R&D initiative[69], the AI missions program would consolidate and target funding to build sovereign capability, attract talent and investment, and translate research into national advantage. It would work closely with the NAIC, AIRC and AICA to provide clear pathways for aligning public and private investment, scaling collaborative innovation, and positioning Australia as a leader in responsible, high-impact AI development.

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69 Japan Cabinet Office 2025, *Moonshot Research and Development Program* (https://www8.cao.go.jp/cstp/english/moonshot/top.html)

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Conclusion

Australia's embrace of AI presents an immediate, transformative opportunity, crucial for addressing our national productivity challenge. While the call to action outlines a clear vision for 2028, it's imperative to recognise that our current decisions will cast a far longer shadow, shaping Australia's trajectory for the next two decades and beyond.

The foundational investments we make today are more than short-term gains. They are the bedrock upon which our long-term economic prosperity and global competitiveness will be built. What we do now – how we develop, deploy and regulate AI – will determine whether Australia gains an enduring competitive edge or faces decades of playing catch-up, directly impacting the opportunities available to future generations.

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