

Department of Customer Service

Select Committee on Adopting Artificial Intelligence (AI)

Digital NSW
NSW Department of Customer Service

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1. Introduction

This submission includes content from the NSW Submission into Artificial Intelligence (AI) in NSW: [The NSW Government submission in AI](#). This submission provides consolidated factual information about NSW Government policy, frameworks and governance mechanisms for the oversight of AI and its potential for public good.

Digital NSW welcomes the opportunity to make a submission to the Select Committee on Artificial Intelligence (AI). This submission has been prepared by Digital NSW within the NSW Department of Customer Service.

The NSW Government is committed to using the AI Assurance Framework to ensure responsible and ethical AI development and use. The key component of the NSW approach to AI is to build public trust that data and decisions are being used and developed ethically and responsibly and with a clear focus on community outcomes.

As AI technologies emerge and evolve, the NSW Government is taking a risk-based approach to support our teams and business units in using data and technology ethically and responsibly to inform decision-making. The focus is on achieving fast and high-quality service delivery and the best possible outcomes for the community.

AI has the potential to transform government services by driving innovation and contributing to future economic growth, sustainability, and productivity. AI technologies may impact and advance government outcomes such as automating routine or hazardous tasks, enabling regulatory compliance, creating personalised support services, and improving the speed of data-driven insights for decision making. AI also has the potential to transform the NSW Government's workforce, with a stronger emphasis and demand for new data and digital skills and capability, ensuring a future ready workforce.

While the application of AI is rapidly expanding and becoming increasingly accessible, the NSW Government acknowledges there are challenges to making sure it is used safely and ethically. As the technology advances, AI can have unintentional negative impacts if left without safeguards. Risks include the potential for AI systems to perpetuate biases, spread misinformation, privacy breaches, as well as legal and ethical risks when used in significant decision-making processes that lack human oversight.

To address and mitigate the risks of AI, NSW was the first Australian jurisdiction to develop and implement a holistic and ethical approach to its use in the public sector. The NSW Government is committed to ensuring that AI solutions used by government are trusted by the public, meet the highest ethical and assurance standards, are clearly focused on community needs and carefully manage potential risks.

The framework for the responsible use of AI in NSW consists of the AI Strategy, AI Ethics Policy, and AI Assurance Framework (AIAF). The development and implementation of these guidelines and artefacts provide a clear message to public servants, industry, and the community on the NSW Government's priorities with this technology.

The framework is the key guidance for supporting uptake and use of AI solutions. Its application has been mandatory for use by NSW Government agencies since March 2022. The framework is a self-assessment tool supported by an expert AI Review Committee (AIRC).

The AIAF is being updated by Digital NSW to provide a standardised approach for agencies to assess new and emerging AI risks such as those related to generative AI and AI foundation models. This aligns with the AI ethics principles outlined in the mandatory NSW AI Ethics Policy.

Adequate privacy and data protection regulations are another critical element for the safe use of AI and a key factor that will influence public trust in the technology. NSW Government regulates data privacy and protection through legislation and policies (see Appendix 2.3 and 2.4). The *Privacy and Personal Information Protection Act 1998* (PPIP Act) has the primary objective of ensuring that any personal information that NSW agencies collect, use, and disclose is protected. The PPIP Act is technology neutral and sets out the principles that agencies must follow regardless of what technology is used. Regulations and laws that are technology-agnostic withstand rapid technological changes.

NSW is aware that effective governance of AI technologies both within NSW, nationally and internationally will also be supported by the continuing development of AI standards. Although still evolving standards will play a pivotal role in building the public trust in AI technologies as they harmonise the expectations for AI deployment across all jurisdictions.

1.1 Responsible AI in NSW

The framework for the responsible use of AI in NSW Government consists of the AI Strategy, AI Ethics Policy, and AI Assurance Framework. The development and implementation of these guidelines and artefacts provide a clear message to public servants, industry, and the community on the NSW Government's priorities with this technology.

The Department of Customer Service is leading a program of work to respond to risks associated with the increased demand for AI and emerging technology across NSW government.

The AIAF is being updated to provide a standardised approach for NSW agencies to assess new and emerging AI risks such as those related to generative AI and AI foundation models. This aligns with the AI ethics principles outlined in the mandatory NSW AI Ethics Policy.

The AIAF encourages agencies to comprehensively analyse and document their projects' AI specific risks. It assists teams to implement risk mitigation strategies and establish clear governance and accountability measures.

A program of work is being led by Digital NSW to strengthen the management of AI risks by integrating the AIAF into broader assurance processes for digital investments, including procurement considerations.

The aim of this approach is to implement risk-based independent assurance (consistent with the NSW Gateway Policy (TPG22-12)) to ensure digital projects are delivered on time and on budget, are achieving their objectives and delivering value for money. Digital assurance processes are intended to ensure the risks associated with digital projects including AI and other emerging technology are considered when determining the level of assurance and reporting required. This will provide independent assurance oversight and reporting to protect the community and government sector from risks associated with investment in AI.

This work will ensure that the NSW Government is well placed to take a leading role in managing and mitigating the risks of AI across agencies by enhancing the accountability and transparency of AI usage. A guideline to support staff in the use and application of the AIAF is also in development.

This is an evolving area, and as technology and advancements in AI keep rapidly evolving, the Government's guidance and advice will also have to change and iterate to address the emerging technology requirements. This approach will ensure NSW Government is able to optimise the innovation and productivity value of AI in a secure and transparent way.

NSW AI Assurance Framework

The NSW AI Assurance Framework is one of the controls in place to manage AI projects and maintain the public's trust in NSW. It supports the NSW Government to innovate with AI technology while making sure it's used safely and securely, with clear accountability for the design and use of AI systems. The framework has been designed to:

- identify and mitigate the risks associated with AI
- ensure that AI is used in a way that is consistent with the NSW Government's values and principles
- build public trust in the use of AI by NSW Government.

The framework provides NSW Government agencies with a structured self-assessment tool to confirm AI-enabled projects align with the principles under the NSW AI Ethics Policy: community benefit, fairness, privacy and security, transparency and accountability. The self-assessment tool is intended to be used at all stages of the project lifecycle and while operating an AI system. The assessment requires project teams to document a project's specific AI risks and establish clear governance and accountability measures. Project teams can seek advice on their projects from a committee of AI experts, who also review projects that meet certain criteria.

The Department of Industry, Science and Resources' discussion paper on [*Safe and Responsible AI in Australia*](#) recognises the NSW AI Assurance Framework as one of the key governance responses in Australia's current regulatory landscape and assurance infrastructure.

NSW has also been co-leading the development of the National Framework for AI Assurance with the Commonwealth. DCS will continue to contribute to its development by exploring how elements of the NSW AIAF can be used, while ensuring alignment with the diverse needs of all jurisdictions. NSW collaborates significantly with its interjurisdictional state and territory colleagues on progressing this vital body of work.

1.2 Opportunities and Risks of AI for governments

AI and machine learning has the potential to deliver significant benefits to NSW Government. It has the capacity to quickly process and learn from large amounts of data and provide predictions to assist in decision making and support problem solving. The capabilities of AI have the potential to increase productivity by empowering government agencies to optimise their processes and services for the benefit of NSW with personalised support services and improved service delivery.

Government can play an important role in leading on AI governance to build public trust in the technology. As the capability and adoption of AI increases, we will need to ensure any potential risks are mitigated by existing and future policy and regulatory frameworks. The current regulatory landscape in NSW is the foundation for addressing some of the emerging risks posed by AI technologies.

Public sentiment towards AI is cautious, therefore the design and use of AI-enabled solutions must be open and transparent for public scrutiny. The key issue raised throughout the AI Strategy's Have Your Say public consultation in 2021 was for the NSW Government to identify and address ethical considerations to ensure AI technologies are socially acceptable, fair and transparent. Some risks are unforeseeable due to the speed at which AI technologies are evolving. However, taking an agile and risk-based approach as new AI technologies arise will allow the NSW Government to capitalise on its benefits.

As the adoption of AI technologies progress, the quality and governance of the data used in AI and LLMs will become even more critical. Data of high quality will improve the accuracy and reliability of

AI models and the outputs they create. This will result in better information for decision making and will support public trust.

Social Opportunities and Risks

The capabilities of AI present a range of social opportunities to improve the lives of people in NSW. Examples include:

- eHealth NSW has developed a tool which uses an AI model and five years' of deidentified patient medical data to detect complex patterns in patients that had developed sepsis. Sepsis continues to be one of the leading causes of death across the world. The tool helps clinicians detect, then treat sepsis patients in the emergency department waiting room sooner. This greatly reduces patients risks of transfer to ICU, readmission, development of chronic conditions, and death. The tool was developed in collaboration with the Clinical Excellence Commission (CEC), Western Sydney Local Health District (WSLHD), Sydney Health Partners, the University of Sydney and NSW Health Pathology.
- Revenue NSW is using a range of indicators to identify and support vulnerable people early who may be unable to pay their fines. Operating since 2018, the AI-enabled program diverts vulnerable people away from enforcement action and provides alternative resolution options. This supports vulnerable people facing financial hardship. The solution has helped identify 15,000 people annually and allowed for more appropriate resolutions to their cases.
- Create NSW is exploring innovative uses of AI and machine learning to enhance access to creative experiences. This includes using AI technology for interactive installations, virtual experiences, and immersive narratives, enhancing engagement between artist and audience. They are also considering the possibility of using AI and machine learning to preserve cultural heritage by digitising and restoring artifacts and artworks, ensuring their longevity and accessibility.
- Transport for NSW has developed an AI prototype that detects and matches vehicles entering and exiting freight facilities, car parks and loading docks. It uses algorithms on camera images to detect and classify objects using their shape from over 25,000 reference images. The data translates into de-identified insights, used to improve the flow and use of freight facilities, parking and loading docks. The new technique improves the speed and reliability of information and replaces current manual survey methods used to record vehicles.

AI can be also used to automate mundane or hazardous tasks, allowing people to engage in higher-value or safer activities. For example:

- Forest Services use camera traps and acoustic recordings to monitor fauna behaviour and habitats for conservation and management in government-managed forests and national parks. AI has been used effectively, enabling the automated identification of different species from many thousands of recordings, with humans verifying the results. AI is also being used to remove empty images resulting from false triggers of the camera due to wind. The automation of these laborious tasks allows scientists to collect and analyse more data than was previously possible.
- Transport for NSW and the University of Technology Sydney have created a robot which can inspect difficult to reach areas of the Harbour Bridge, allowing for greater visibility and assessment of the bridge structure.
- Natural Language Processing is being used by the Department of Customer Service to rapidly and systematically analyse de-identified written feedback, complaints and survey submissions to take more targeted and timely action based on this input from the community.
- Generative AI can be used to create programming code that can make software development more efficient and reduce the burden on data environments.

- Create NSW is also considering opportunities to improve the administration of its funding programs through AI and machine learning such as using AI to analyse vast amounts of data to identify trends and funding gaps to ensure the equitable distribution of government support.
- According to the NSW Department of Primary Industries (DPI) Agriculture Annual Report 2022, labour shortages, particularly for horticultural seasonal workers, continues to impact the sector. Following the report, DPI notes that the use and adoption of AI technologies may attract new workers with different skills to the agricultural workforce and enhance their quality of life by automating tasks such as crop cultivation and livestock monitoring. AI may increase farm outcomes and automation may improve the safety of the machine, livestock and intensive industries through a reduction in fatigue and the removal of people from dangerous environments. Overall, the resulting high production positively impacts consumers and reduces environmental impacts from the more sustainable agricultural practices.

AI also has the capability to facilitate and improve regulatory compliance. For example, Fire and Rescue NSW (FRNSW) analyses thousands of building applications each year against the National Construction Code to ensure safe buildings across NSW. To help meet demand from the building industry, FRNSW is working with the Department of Customer Service's Data Analytics Centre to develop an AI machine-learning and natural language processing solution that would semi-automate the review of future building applications at the design and pre-construction building stages. It is hoped this will increase accuracy of reviews, improve situational awareness for responding firefighters on fire and life safety systems in new buildings, and increase government and industry access to building fire safety information.

Other examples include:

- AI being used to create personalised support services that improve services and make their delivery more efficient.
- AI having the potential to provide greater efficiency in government contracting processes. The NSW Government is a significant procurer of goods and services, and AI has the capability to streamline contracting processes.
- AI having the potential to be a powerful tool to address cyber vulnerabilities and respond to threats. Machine learning algorithms can identify malware and respond to vulnerabilities in network security such as flagging suspicious login attempts. As cyber security threats advance, AI can help reduce the likelihood and severity of cyber-attacks.

However, there are social risks presented by the increasing use of AI and large language models in the delivery of NSW Government services that will need to be addressed. While the full implications are yet to be known, it is anticipated that the increasing use of AI may affect some job functions. The technology is also expected to improve productivity for these roles, providing opportunities for people to move away from administrative and manual tasks and focus on connecting with customers or undertaking more complex tasks and projects.

The NSW Government is aware of the need to ensure our people are prepared for the future of work. From graduate and traineeship program levels that include digital streams, to leadership programs, we are proactive in providing resources and pathways for our people to upskill. In addition, NSW already has a robust and flexible remote workforce which could help reduce the impact of increased automation on impacted industries. Examples include the Digital and Customer Capability Framework which identifies the critical capabilities and skills requiring uplift, including AI. NSW has also adopted the Skills Framework for the Information Age (SFIA) as the occupation specific capability set for government ICT professionals. SFIA is incorporating AI into its framework, consulting on the most effective way to support AI and machine learning jobs, skills, profiles and career paths.

Other examples of social risks include the following:

- Privacy and cyber security threats that will continue to present challenges and impact public trust. Compliance with NSW Government policies such as the NSW Cyber Security Policy and the

AI Ethics Policy will ensure relevant cyber controls and ethical processes are in place to mitigate the risks of AI. In addition, the NSW Government is developing iterative public and private guidance for agencies on the responsible and safe use of AI.

- AI systems can be biased, reflecting the biases of the data they are trained on, potentially leading to unfair or discriminatory decisions, privileging or discriminating certain groups. This can also be made worse by AI learning and aggregating data from individuals with a biased dataset. For this reason, in line with the NSW AIAF, privacy, security, and data governance controls must be in place.
- Decisions must always be subject to human review and intervention. The NSW AI Ethics Policy outlines the mandatory ethical principles for the use of AI and the key legislative, information, privacy and assurance considerations that must be taken into account when using AI.
- Accountability and transparency: Legal frameworks regarding accountability for AI-enabled systems are still in development globally. AI systems are complex, making it difficult to understand how they make decisions. In line with the NSW AIAF, people who are responsible for different phases of the AI system lifecycle and outcomes should be identified and accountable. The framework also requires that humans are able to clearly explain how a decision or outcome has been informed by AI, and to have oversight of decisions made by AI-enabled systems. NSW is aware that there will be challenges in ensuring AI-driven decisions can be explained as the technology advances. The inner workings of commercial AI systems are not always accessible or can be complex to interpret. The AIAF notes that under these circumstances it is important for human judgement to intervene before an AI-generated insight is acted on, and to identify and document mechanisms to readily reverse any action arising from such an insight.
- The effect of generative AI on copyright laws is one area that has had limited discussion. Preliminary arts, cultural and creative industry feedback from Create NSW indicates that in Australia, the intersection between AI and copyright laws in the creative industries is becoming increasingly complex. With the rise of AI-generated content, questions are being raised about who owns the copyright to such works. This is a question that will become increasingly pertinent for government as artists and creative practitioners seek government support for AI-developed or assisted projects.

Digital Inclusivity and Accessibility

AI technologies present a range of social, economic, and technical opportunities to improve the NSW Government commitment to digital inclusivity and accessibility. AI also presents unique opportunities and risks for digital inclusion – a person's ability to access, afford and use digital technology.

- AI can be used to reduce jargon and ensure government communications are clear and simple. This is in line with the NSW Government's commitment to ensuring government communications are accessible for customers, including people with low literacy levels, people with disability, and people with English as a second language.
- AI can also be used to quickly identify common accessibility issues in government webpages, such as missing alternative text for images.

AI offers new advances in assistive technology for users with disability. For example, people with reduced mobility can write using speech recognition apps, and AI can identify objects for people who are blind or have low vision.

Despite these positives, AI use can also present risks to digital inclusion. AI models are trained on large datasets which can exclude the experiences of marginalised groups. These risks can be mitigated by ensuring that training datasets represent the community we serve. The NSW AIAF requires that developers consider the risks associated with differences in the data used for training the AI model compared to the data for intended use.

Use of AI can increase access to services for people who cannot use traditional digital channels. For example, an opportunity Create NSW is considering is the implementation of AI powered chat-bots or virtual assistants to support applicants in the grant application process, with real-time guidance. However, educating communities on the benefits and risks of AI to reduce barriers to digital inclusion will remain a key focus.

Reliance on AI without considering the community contributes to non-inclusive design processes, resulting in products that exclude some people and favour others. As with any other digital projects, Digital NSW recommends co-design and consultation with people with disability to ensure AI-driven projects are inclusive and accessible.

Economic Opportunities and Risks

The NSW Productivity Commission and the NSW Innovation and Productivity Council have published a major report exploring the current and future extent and impact of AI in NSW: Adaptive NSW: How embracing tech could recharge our prosperity¹. Adaptive NSW contains whole-of-NSW-economy modelling on the potential impacts of emerging technologies on NSW's economic growth, industry composition, skills, occupations, and workforce profile. It also contains case studies and high-level policy principles for managing the risks and challenges and seizing the opportunities of emerging technologies such as AI.

The NSW Government is aware that productivity is key to driving economic growth and lifting living standards in the long term. AI offers an enormous potential opportunity to recharge NSW's slowing productivity growth and drive a sustained improvement in our standards of living over the coming decades. As Adaptive NSW states:

"Productivity growth could continue to decline. But it is also possible that the world is now on the threshold of an enormous technology opportunity. There is a suite of emerging technologies that, if widely adopted, could recharge productivity growth for years to come. Among these technologies are artificial intelligence (AI), quantum computing, 3D printing, and autonomous vehicles. This wave of emerging technologies has been dubbed the Fourth Industrial Revolution or 'Industry 4.0'"
(Adaptive NSW, p.14).

NSW Productivity Commission and NSW Innovation and Productivity Council modelling suggests that if emerging technologies are widely adopted, by 2034-35 they could potentially:

- increase the productivity growth rate in NSW to 2.0 per cent annually and lift the growth rate of real Gross State Product to 3.0 per cent annually
- increase Gross State Product by 11.8 per cent, which is equivalent to an extra \$11,600 per person or \$27,400 per household (in real 2021-22 dollars)
- increase own-source revenues by as much as \$4.5 billion relative to baseline projections presented in the 2021-22 NSW Intergenerational Report.

While there is public concern around automation and job security fuelled by any increase in productivity, any decrease in jobs is predicted to be offset by the increasing demand associated with a growing economy and new jobs created to support emerging technologies such as AI. NSW Productivity Commission and NSW Innovation and Productivity Council modelling shows that the diffusion of AI will reduce demand for physical skills and meet the increased demand for complex problem-solving skills, cognitive abilities, and social skills. This reflects the need for continuous upskilling and training so the workforce gains new capabilities within this changing landscape (Adaptive NSW, p. 35, 41, 68).

¹ <https://www.productivity.nsw.gov.au/adaptive-nsw-embracing-tech>

1.3 Emerging international approaches to mitigating AI risks

The regulation of AI remains in an early stage, though, there is an emerging consensus towards taking a risk-based approach to AI governance.

The European Union, the United Kingdom and the United States have all adopted or foreshadowed adopting a risk-based approach to AI governance, based on key principles such as trustworthy AI and an acknowledgement of the role of international standards.

The NSW AI Ethics Policy is one of the measures which the NSW Government uses to protect individuals and society from AI risks.

The NSW Government is aware that AI is a transformative technology and presents some key policy challenges for current regulatory frameworks and laws. Regulatory frameworks may target specific areas of concern such as algorithmic bias and data privacy. The EU's approach to AI regulation is comprehensive, building on existing legislation, such as the General Data Protection Regulation (GDPR) and the new Artificial Intelligence Act (AIA) passed in March 2024.

The *Privacy and Personal Information Protection Act 1998* (NSW) (PPIP Act) outlines how NSW public sector agencies manage personal information. The PPIP Act is technology neutral and sets out the principles agencies must follow regardless of what technology is used. The NSW privacy legislative framework governs the sharing and use of personal information within government, including personal information that is shared or used in an AI project.

In addition to this legislation, NSW has a suite of policies and guidance to ensure agencies are well informed about their data protection and privacy obligations under the law.

NSW supports the importance of fostering public trust and advocating for a clear, flexible regulatory framework focused on AI usage rather than the technology itself. This will ensure that NSW remains a safe and responsible location for AI innovation and development.

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