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Australian Information Industry Association

Submission to

the Inquiry into the Digital Transformation of Workplaces

17 June 2024

Introduction

The Australian Information Industry Association (AIIA) thanks the House Standing Committee on Employment, Education and Training for the opportunity to respond to its consultation on the rapid development and uptake of automated decision-making and machine learning techniques in the workplace. The AIIA notes that the technology sector supports the responsible uptake of automated decision-making and machine learning techniques in the workplace as a means of driving productivity and improving workforce capability in support of the digital economy.

Automated decision-making (ADM) tools and machine learning (ML), a subset of AI are acknowledged as Critical Technologies that can benefit the National Interest and boost the nation's productivity in the workplace. Increased application of AI across key industries could boost GDP by $200 billion per annum and create 150,000 Australian jobs by 2030.[1] Conversely the opportunity cost of failing to act could be lost GDP of $35.7 billion each year over the next four years.[2][3]

Australia is not realising the opportunities that these technologies can provide in the workplace and risks falling further behind. Government must do more to increase adoption of these technologies and modernise our workplaces. We are currently ranked second last of the 13 countries assessed in deploying and exploring AI, according to the 2022 IBM Global AI Adoption Index.[4] The development of infrastructure and the rate of uptake of these technologies needs to increase if Australia is to achieve its aim of being a top 10 digital economy by 2030.[5]

Government plays a critical role in the adoption of technology for productivity and innovation, funding research through universities, training the future workforce and funding up-skill programs, creating overseas business opportunities and local procurement opportunities. Further, the fundamental importance of data in AI models requires the development of a national data strategy around data collection, management and sharing to boost confidence in AI and ADM.

Specific risks threaten the ability of Australia's technology industry to continue to develop and benefit from AI and ADM and to pass these benefits onto the Australian economy and businesses. These threats to Australia's success include;

- The skills deficit both present and anticipated, recognised by both the NSW and Federal governments,
- Inappropriate regulation, and

[1] Mangan, J. (2024). Australia's AI Imperative: The economic impact of artificial intelligence and what's needed to further its growth. Kingston AI Group, 2 https://kingstonaigroup.org.au/news-and-publications/f/australias-ai-imperative

[2] Ibid

[3] In addition to the key industries identified in the Kingston Group report, CSIRO has identified 31 fields where Australia is developing a comparative advantage it can capitalise on. Hajkowicz S et al., Australia's artificial intelligence ecosystem: Catalysing an AI industry, (2023) CSIRO, Canberra, 31. https://www.csiro.au/en/work-with-us/industries/technology/national-ai-centre/ai-ecosystem-report-2023

[4] IBM Global AI Adoption Index 2022, https://www.ibm.com/downloads/cas/GVAGA3JP

[5] https://www.dfat.gov.au/about-us/publications/trade-and-investment/business-envoy-april-2021-digital-trade-edition/towards-2030-positioning-australia-leading-digital-economy-and-society

- Inadequate funding – the failure of the recent budget to allocate any funds to growing Australia's tech capabilities jeopardises Australia's global competitiveness and will shackle innovation in Australia.

ADM and ML in the workplace

ADM and ML are already accepted features in the workplace, used to enhance efficiency, accuracy, and innovation. These technologies enable organisations to process vast amounts of data rapidly and make data-driven decisions that were previously not possible. ADM systems streamline routine, time-consuming and repetitive tasks, reducing human error and allowing for faster more consistent decision making. ML models can analyse massive datasets to identify trends and patterns, providing employs with predictive analytics that can be used to guide decision-making.

While ADM and ML can guide decisions, final decision making requires human oversight, particularly when those decisions involve moral or ethical considerations. Additionally, there are some areas where ADM and ML may not currently be the most appropriate workplace tool, such as in those roles that require creativity, innovation or human empathy.

AI's unique ability to parse massive amounts of skills data and generate insights into existing and in-demand worker skills will drive informed decision-making in the current and future job market. AI also maximises the impact of workforce development efforts by ensuring that policy interventions are ready-made to tackle these challenges.

AI and ADM have the potential to reduce compliance costs by saving the time required to undertake compliance activities for corporations and by equipping regulators with the ability to receive industry information digitally and process the digitised information in a timely manner to flag issues. AI tools can automate compliance tasks, identify potential risks and threats, and monitor and provide insight into compliance data. One example of such AI use is in reducing workplace cybersecurity threats.

Workforce impact

AI and ADM are already embedded in many people's day to day lives and roles. It is estimated that approximately half the tasks performed today will be automated over the next 20-40 years[6], driving the need for ongoing skill development and the restructuring of workforce participants.

Productivity and career progression

Salesforce's *Generative AI Snapshot Research Series*, an ongoing study of over 4,000 full-time workers across industries revealed that the majority of workers believe AI will advance their career but that they lack the necessary skills.[7] ADM can enhance staff efficiency and accuracy in decision making while ML and AI's data collection and analysis capabilities can streamline and improve job performance. ADM and ML are both able to relieve staff of some of the more monotonous or repetitive tasks, giving more time to work on strategic or high-value activities including learning and skill building. A simple example of ML that allows better utilisation of staff time is the Microsoft Teams Intelligent Recap feature that generates

[6] McKinsey & Company, The economic potential of generative AI The next productivity frontier https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#/

[7] https://www.salesforce.com/news/stories/generative-ai-skills-research/

meeting transcripts and can suggest action items.[8] There are many opportunities for ML to improve career advancement, such as the development of bespoke E-Learning platforms that allow staff to undertake targeted development training.

Research undertaken by Forrester Consulting advised that 70% of human resource (HR) people leaders believe that AI will be crucial for success in the next five years and usage in HR will rapidly increase in the near future.[9] AI value is seen as a tool that can reduce mundane / repetitive administrative tasks, improve efficiency in hiring in areas such as interview transcribing and summary, and assist in creating personalised staff development plans by identifying engagement and activities that align with an employee's aspirations. To maximise workforce opportunities, support labour force transition and minimise the disruption to displaced workers there is a need for investment and planning in new skills development.

Skills development

RMIT identified in 2022 that 87% of jobs in Australia require digital literacy skills and that digital skills are the biggest emerging skill need.[10] Current predictions are that Australia will continue to face skills shortage in the information communication technology (ICT) industry. NSW is projecting a shortage of 85,000 ICT workers by 2030, while nationally has been identified as a skills area with the highest shortages.[11]

The AIIA Digital State of the Nation Survey 2023 identified that 44% of tech businesses saw skills shortages as the main barrier to business expansion. Skill areas most in demand included Cyber security and AI skill. AI skills are hard to find in Australia and AI will be essential in enabling a skills-based approach to workforce development at scale. Our survey advised that filling skills shortages by increasing supply of appropriately skilled Australian workers may depend on:

- expedited skilled migration,
- improved pathways to permanent residency,
- providing reskilling and career shift opportunities, including for women returning to the workforce,
- ensuring critical tech and ICT literacy from preschool to high school and beyond, and
- investing in nimble and industry-responsive models for apprenticeships and internships.

Of further concern, AIIA survey respondents advised that VET and university graduates are not job ready with the majority requiring further on the job training. There is a disconnect between the skills students graduate with and the skills that employers need them to have. Graduates lack the experience necessary to perform tasks competently. The ICT industry is looking for migration to fill

[8] https://www.microsoft.com/insidetrack/blog/how-were-recapping-our-meetings-with-ai-and-microsoft-teams-premium-at-microsoft/

[9] Forrester Consulting, A Human Centered Approach to AI in the Workplace, (2023) 4. https://forms.workday.com/en-us/reports/a-human-centered-approach-to-ai-in-the-workplace/form.html?step=step2_hr

[10] https://online.rmit.edu.au/insights/2021?gclid=CjwKCAjwvMqDBhB8EiwA2iSmPNp7fG4Tku1VgcA_2y6moJpKbVGgL94065BIw8JG9Q_k8C5DiNYAxoCF_oQAvD_BwE

[11] NSW leads the way in tackling digital skills shortage, Media release 29 November 2023 https://www.nsw.gov.au/media-releases/nsw-leads-way-tackling-digital-skills-shortage ; https://www.jobsandskills.gov.au/news/2023-skills-priority-list-released-0

the workforce gap, but this solution still requires allowing time for immigrants to adapt to new roles and workplace expectations. This is exacerbated as the socio-economically disadvantaged Australians are left further behind with lower digital literacy and skills to be productive and compete in the workplace.

This situation disproportionately disadvantages SMEs that find it harder to afford significant investment in on the job training. Our survey found that these responses highlighted 'the importance of reverse-engineering industry needs in higher education and VET contexts, and boosting work-integrated learning, including in the SME context.' As stated in AIIA's response to the Employment White Paper consultation process, upskilling and reskilling will assist workers to transition into technology roles.

Operational approaches to ensure gender and cultural diversity

AI and ADM can be a tool for eliminating bias and discrimination. However, steps need to be taken to ensure that programmer bias (arising from a lack of developer diversity) and organisational or societal bias in training datasets are not built into AI programs. AI used in screening job applications, for instance, should be free of bias around factors such as sex, age, ability and race (to meet requirements of existing Commonwealth discrimination legislation).

Steps to remove bias in AI can start with removing the gender imbalance in the STEM workforce. Women globally make up only 29.2% of STEM workers and 30% of those working in AI.[12] Research undertaken by Monash University suggests that the use of AI can reduce the gender bias in recruitment, possibly helping to improve the ICT gender balance.[13]

As noted in in AIIA's response to the Employment White Paper consultation process steps to further cultural diversity in ICT include

Government should consult with Indigenous-owned ICT businesses to equip Indigenous workers with in-demand digital skills, a largely untapped demographic group. Further, by working with regional students and businesses to diversify the employment pipeline into tech careers and galvanising the focus on women in STEM and women in tech, both among students, parents and women returning to the workforce or seeking to increase hours to fulltime work.

This view is supported by NSW Digital Skills and Workforce Compact, which seeks to promote digital careers to groups that have been underrepresented in the industry including women, First Nations people, and those residing in regional and remote areas.[14]

To ensure that bias is minimised in ML tools organisations can employ a range of processes and tools, including undertaking pilot studies, conducting regular audits and undertaking impact analysis and ensuring human oversight.

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[12] World Economic Forum, Global Gender Gap Report (2023) https://www.weforum.org/publications/global-gender-gap-report-2023/

[13] Avery, M., Leibbrandt, A., & Vecci, J. (2024). Does artificial intelligence help or hurt gender diversity? Evidence from two field experiments on recruitment in tech. www.monash.edu/__data/assets/pdf_file/0011/3279449/2023-09.pdf

[14] https://www.nsw.gov.au/media-releases/nsw-leads-way-tackling-digital-skills-shortage

Regulation in the Workplace

AIIA members do not support the creation of ICT specific legislation and emphasise the importance of a regulatory framework that is primarily technology neutral and able to respond to technological advances. The creation of technology specific legislation creates the risk of overlapping or contradictory regulations that could act as a brake on innovation in Australia. Safeguards and regulation should:

(1) Encourage product innovation and work productivity to benefit the Australian economy.
(2) Prevent harm.
(3) Punish criminal acts.

Successful use of ML and ADM in the workplace will require complimentary allocation of funding and resources for IT security. A co-regulatory approach that incorporates industry and societal input may assist in guiding future regulation.

Intelligent framework to increase trust and close digital divide

Workday's recent research, Closing the Trust Gap, revealed that the AI trust gap in Australia is worryingly large and Australians' scepticism of AI is higher than the global average. To promote AI adoption in the workplace, it is important that organisations put in best responsible and ethical AI practices/programmes to foster that trust. This requires 'ethical development, responsible implementation, transparent guidelines, and smart governance: forward-thinking policies that foster AI innovation while upholding social and ethical values.'[15]

A lack of trust in AI could be alleviated by education programs and fit for purpose regulatory guidance from policymakers. The work done by the Department of Industry, Science and Resources on Australian AI Ethics Principles is important to bridging that trust gap. A number of large corporations have demonstrated a commitment to responsible AI by adopting the Ethics Principles and incorporating them into their business practices, including Telstra and Microsoft.[16]

Conclusion

The AIIA thanks the Committee for the opportunity to share the tech industry insights and assessment on the rapid development and uptake of automated decision-making and machine learning techniques in the workplace. We are keen to discuss the content of this submission. Should you have any questions, please contact Ms Siew Lee Seow, General Manager, Policy and Media at siewlee@aiia.com.au.

Yours sincerely
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[15] Workday, Global Study, Closing the AI Trust Gap 2024, https://forms.workday.com/en-us/reports/the-ai-trust-gap/form.html?step=step2_default

[16] https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework

About the AIIA

The AIIA is Australia's peak representative body and advocacy group for those in the digital ecosystem. Since 1978, the AIIA has pursued activities to stimulate and grow the digital ecosystem, to create a favourable business environment for our members and to contribute to Australia's economic prosperity.

We are a not-for-profit organisation to benefit members, which represents around 90% of the over one million employed in the technology sector in Australia. We are unique in that we represent the diversity of the technology ecosystem from small and medium businesses, start-ups, universities, and digital incubators through to large Australian companies, multinational software and hardware companies, data centres, telecommunications companies and technology consulting companies.