Australian Government
Department of Employment and Workplace Relations

Inquiry into the Digital Transformation of Workplaces

Submission from the Department of Employment and Workplace Relations to the House Standing Committee on Employment, Education and Training.

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Contents

1 Introduction

The Department of Employment and Workplace Relations (the department) welcomes the opportunity to make a submission to the House Standing Committee on Employment, Education and Training's inquiry into the digital transformation of workplaces (DTW Inquiry). The department has portfolio responsibility for workplace relations, skills, and employment policy.

1.1 How technology is changing the workplace

Digital technologies are reshaping the nature of work and employment and are becoming increasingly central to all workplaces. For some industries and occupations, the COVID-19 pandemic and rapid shift to work from home arrangements has accelerated the adoption of digital technologies.[1] Digital technologies are increasingly mediating the relationship between employers and employees (such as task allocation tools) but also between employers and their regulatory obligations (such as software that automatically applies modern award rates). The rise of digital technologies in the workplace is occurring in parallel with advancements in, and the availability of, artificial intelligence (AI) systems, which enable new forms of automation and augmentation of tasks done by both workers and managers. The use of AI systems in the workplace can increase productivity and address work health and safety risks. However, these same technologies can also displace workers and negatively impact working conditions.

This submission addresses the DTW Inquiry's Terms of Reference, with a focus on the risks and opportunities posed by RegTech and AI in the workplace. The impact of both regulatory technology (RegTech) and AI on specific populations as identified in the Terms of Reference is discussed throughout this submission.

In addition to the work of the DTW Inquiry, there is a whole-of-government approach to AI policy being led by Department of Industry, Science and Resources (DISR). Further, the Digital Transformation Agency (DTA) is leading work on the safe and responsible use of AI within government. This submission does not consider these pieces of work in-depth.

2 Digital platform work

The gig economy (also known as 'digital platform work' or the 'on-demand' economy') is a small yet growing segment of an increasing number of sectors of the Australian labour market.[2] The gig economy has been enabled by the growing use of consumer digital devices, and advances in digital technologies, including AI. The gig economy includes platforms that connect workers, businesses and consumers to do almost any kind of work, from food delivery, rideshare services, personal care work, translation, web-based services, and beyond.

[1] Productivity Commission (2023), 5-Year *Productivity Inquiry: Australia's Data and Digital Dividend Inquiry Report*, Australian Government, 2023, Volume 4, Chapter 1, accessed 18 June 2024.
[2] The Australian Bureau of Statistics (*Digital platform workers in Australia*, Australian Government, 2023, accessed 18 June 2024), recently found as an experimental estimate, that just under 1% of the employed population reported undertaking digital platform work (in the last 4 weeks) in 2022-23 engaged in the gig economy.

The gig economy offers a range of benefits, including providing the opportunity for workers to flexibly earn extra income or access labour market opportunities, allowing businesses to expand their reach, offering consumers a new level of choice and control in who they get to perform work for them, and providing Australians with innovative and efficient services. Australians increasingly rely on gig workers to meet their everyday needs.

However, the gig economy has also transformed how work is performed, which raises some challenges for workers. For example, some workers may be engaged as independent contractors but experience a lack of bargaining power and autonomy over their own work. Also, the role of some digital labour platforms in facilitating work has been questioned due to their contribution to work intensification, use of surveillance and collection and use of private information, allocation of work by algorithm, and deactivation of workers' accounts by automated decision-making. Increasingly, the technologies and approaches used in the gig economy are also being adopted in traditional workplaces.

2.1 Employee-like worker reforms

In February 2024, the Government passed the *Fair Work Legislation Amendment (Closing Loopholes No. 2) Act 2024,* which empowers the Fair Work Commission (FWC) to set minimum standards for employee-like workers performing digital platform work. The FWC also has powers to resolve disputes around unfair deactivation from digital labour platforms and provides for digital labour platforms and organisations representing employee-like workers to make collective agreements. These measures are due to commence by 26 August 2024. Further information on these reforms can be found on the department's website at www.dewr.gov.au/closing-loopholes/resources/extend-powers-fwc-include-employee-forms-work.

These reforms have been specifically designed to utilise the expertise of the FWC as Australia's workplace relations tribunal to set minimum standards for classes of employee-like workers in a way that meets the unique nature of digital platform work, including the consumers and businesses that have come to rely on it, without breaking the business model. The law adopts a principles-based framework which will allow minimum standards to adapt to changes in innovation, business practices and technological advancements in the gig economy.

The department will monitor the implementation of the FWC's new jurisdiction, following its commencement on 26 August 2024.

2.1.1 Minimum standards orders may deal with AI

The FWC will be able to make minimum standards orders for employee-like workers that reflect the unique nature of digital platform work, guided by the legislative guardrails. The actual minimum standards that are set will ultimately be a matter for the independent FWC based on applications made to it and the requirements set out in legislation.

However, minimum standards orders could conceivably include terms that deal with the use of algorithms, subject to the term complying with the legislated content rules. Minimum standards orders could also include terms relating to consultation, representation, and delegates' rights, which could assist workers on platforms to share their views on how algorithms and systems used by their platform can operate fairly.

By way of example, the FWC could make a minimum standards order that deals with minimum rates of remuneration. If digital labour platforms use algorithms to calculate a worker's remuneration for particular work, then they would likely need to ensure those algorithms are designed and implemented in a way that supports the platform to comply with the terms of any minimum standards order that applies to it.

2.1.2 Deactivation protections may deal with AI and automated decision-making

Employee-like workers will also have new protections from unfair deactivation. Generally, digital labour platforms will need to ensure that deactivations are consistent with the Digital Labour Platform Deactivation Code (the Code), a legislative instrument yet to be made by the Minister.

The Code is required to deal with certain matters, including the internal processes of digital labour platform operators in relation to deactivation and rights of response to deactivation.

The department understands that some digital labour platforms use algorithms and automated decision-making systems as part of their deactivation processes (though actual use differs between platforms). On 29 May 2024, the department released a public discussion paper seeking stakeholder views on the content of the Code.[3] The department will consider any stakeholder views provided on the use of algorithms and automated decision-making in deactivation processes when providing policy advice to government on the Code.

3 Regulatory technologies (RegTech), employment and workplace relations

Businesses are increasingly relying on digital technologies to operate their business and meet their compliance obligations. The Productivity Commission has noted that:

> 'The rising adoption of digital technologies reflects their direct economic benefits to businesses, but also the fact that most businesses cannot be part of the business ecosystem without digital tools. Merely achieving compliance with tax and many other regulations requires technology…'[4]

Business software is one type of technology that has become common in businesses. It includes a range of generic software products that businesses use in their day-to-day operations, such as word processing, point of sale, accounting and payroll software, as well as specialised software for certain industries or professions.[5] As the Productivity Commission has noted, some business software solutions are used by businesses to support their compliance with government regulations. For example, the Australian Taxation Office requires businesses to lodge payroll data using single-touch payroll (STP) enabled software.[6]

[3] Department of Employment and Workplace Relations, *Digital Labour Platform Deactivation Code: Discussion paper*, Australian Government, 2024, accessed 18 June 2024.
[4] Productivity Commission, 5-Year *Productivity Inquiry: Australia's Data and Digital Dividend Inquiry Report*, Australian Government, 2023, Volume 4, Chapter 1, p 8, accessed 18 June 2024.
[5] A Berztiss, 'Domain analysis for business software systems', *Information Systems*, 1999, 24(7): 555-568, doi:10.1016/S0306-4379(99)00032-0.
[6] Australian Taxation Office, *STP Reporting Options*, Australian Government, 2023, accessed 18 June 2024.

RegTech refers to the application of technology by regulators or by regulated entities to meet their regulatory objectives and obligations. Whereas business software may support compliance as one of many functions, compliance tends to be the central function of RegTech solutions. There are a limited number of RegTech solutions in Australia that focus solely on compliance with modern awards, enterprise agreements and the *Fair Work Act 2009*. However, many general human resource, accounting, and payroll software solutions can be customised to take account of such obligations.

While there is limited data on the use of business software specifically for labour and employment compliance, industry surveys report the main human resource and payroll technologies implemented in Australia are payroll software, communication and collaboration platforms, recruitment and onboarding tools, workplace health and safety systems, rostering and time and attendance software, and employee records and leave management tools.[7]

Payroll software has emerged in recent years as a key software solution for employers. Despite the high adoption of payroll software, research suggests businesses continue to face challenges owing to the limited integration across employee management software.[8] The lack of integration often requires manual data entry, fixing errors and checking consistency, which can act as barriers to further adoption of digital technologies.[9]

3.1 Risks and opportunities for business software and RegTech

The increasing reliance of businesses on software and RegTech to assist with meeting compliance obligations poses a number of opportunities and risks.

RegTech has been proposed to improve compliance rates and reduce compliance costs for businesses, while also helping them keep abreast of emerging risks and harms.[10] When adopted by regulators it can enable more timely communication with regulated entities, enable more targeted risk assessment, and support cross-sector and cross-jurisdictional regulatory supervision.[11] Specific to workplace relations and employment, RegTech solutions are already being used to support businesses to conduct work rights checks on their employees, such as confirming visa conditions, working with children checks and policy checks. There are also an increasing number of RegTech solutions that provide support for businesses in meeting their modern award obligations by taking time and attendance data and automatically applying the modern award conditions to ensure staff are paid correctly. Other RegTech solutions are supporting businesses through the real-time auditing of payroll to identify and rectify underpayments in real-time.

Stakeholders have raised concerns as to who is accountable for errors that result in non-compliance when using business software or RegTech. There are various reasons why errors may occur when using payroll software, including errors in the software or user error in entering data or choosing the

[7] ELMO, *2022 HR Industry Benchmark Report*, 2022, accessed 18 June 2024.
[8] ELMO, *2024 HR Industry Benchmark Report,* 2024, accessed 18 June 2024.
[9] Productivity Commission, 5-Year *Productivity Inquiry: Australia's Data and Digital Dividend Inquiry Report*, Australian Government, 2023, Volume 4, Chapter 2, accessed 18 June 2024; MYOB, *The Digital Disconnection Challenge*, 2022, accessed 18 June 2024.
[10] M Bolton and M Mintrom, 'RegTech and Creating Public Value: Opportunities and Challenges', *Policy Design and Practice,* 2023, 6(3):266-282, doi:10.1080/25741292.2023.2213059
[11] Productivity Commission, *Regulatory Technology – Information Paper*, Australian Government, 2020, p 9, accessed 18 June 2024.

correct classification grade for an employee. Some stakeholders have called for 'safe harbour' provisions which would protect businesses if errors occurred due to a fault in the software, as well as suggesting that RegTech solutions should be accredited or endorsed.[12] In considering this issue, the Productivity Commission identified obstacles to the introduction of safe harbour provisions, including that:

- It might reduce incentives for employers to proactively check their own compliance, which in turn would require RegTech solutions to pose a very low risk of errors.
- Because errors can occur in various parts of the payment process, the scope of the safe harbour provision would need to be clearly understood by employers to avoid misconceptions.
- Incentives for Regtech providers may be required to ensure they provide some level of oversight of the software once it is implemented to ensure it is functioning correctly and being used appropriately. [13]

A safe harbour provision could potentially guarantee action would not be taken by the Fair Work Ombudsman. However, consideration would need to be given to whether other stakeholders should be permitted to bring legal action such as unions, employees, or other regulators. There is a risk that safe harbour provisions may create a situation where employers become reliant on technology to meet their legal obligations, rather than using technology to support their compliance processes. Such a situation may amplify the risk of errors in software solutions not being identified by employers.

International research has drawn attention to the potential for payroll software products to facilitate non-compliance such as by allowing unilateral editing of employee attendance records by managers or by not maintaining logs of changes made to employee timesheets.[14] These software features pose compliance risks for businesses and may undermine confidence in RegTech solutions.

There is increasing awareness of the need to invest in payroll systems that are designed to be compliant with Australia's workplace relations laws, and which are updated to ensure ongoing compliance. Recent reporting has suggested that some cases of employee underpayment have been in part due to the under-investment in payroll and time recording systems.[15] Further, there have been cases where businesses have had to adopt new payroll systems as their original systems did not provide the functionality to be compliant with certain workplace relations laws.[16]

[12] Australian Small Business and Family Enterprise Ombudsman (ASBFEO), *Submission 46 – Supplementary Submission 46.1: Select Committee on Financial Technology and Regulatory Technology,* 2020, p 1, accessed 18 June 2024; TANDA, *Submission 173: Select Committee on Financial Technology and Regulatory Technology*, 2020, p 5, accessed 18 June 2024.
[13] Productivity Commission, *5-Year Productivity Inquiry: A more productive labour market inquiry report*, Australian Government, 2023, Volume 7, p 109, accessed 18 June 2024.
[14] E Tippett, CS Alexander, and ZJ Eigen, 'When timekeeping software undermines compliance', *Yale Journal of Law and Technology,* 2017, accessed 18 June 2024.
[15] Department of Education, *Australian Universities Accord – Interim Report,* Australian Government, 2023, p 131; Fair Work Ombudsman, *FWO announces 2022-23 priorities* [media release], Australian Government, 22 June 2022, accessed 18 June 2024.
[16] Workplace Express, 'No Zombie life support to enable payroll system roll-out', *Workplace Express,* 11 December 2023.

3.2 Australian Government initiatives on RegTech and workplace relations

The Workplace Relations Group in the department, when previously part of the Attorney-General's Department, launched the Regulatory Technology Roadmap for Modern Awards (the Roadmap) on 8 April 2021.[17] The Roadmap was co-designed with employer bodies, unions, government agencies and technology sector bodies. The Roadmap sets out opportunities for government to enable and support the uptake of RegTech solutions – by government and private industry – targeted at small businesses, to improve their compliance with modern awards. The Roadmap contains a series of initiatives, with Table 1 below outlining the initiatives that have been completed or are underway.

RegTech Roadmap short-term initiatives: progress to date	
Application Programming Interface (API) for the FWC's Modern Awards Pay Database Developing an API to enable integration of award rates, pay data and allowances into payroll and other business software.	Launched 2023
Update the FWO Pay and Conditions Tool Digital tool providing rates of pay and other award entitlements for most modern awards, a shift calculator, leave calculator and notice and redundancy calculator	Platform upgrade completed
Creating industry working groups To foster a collaborative co-design partnership between government and the regulatory technology sector.	RegTech Working Group established 2023
Policy initiatives to support uptake of RegTech Boosting RegTech infrastructure, increasing innovation in award interpretation tools and addressing key market gaps.	Workplace Relations Usability Challenge currently underway

Table 1: RegTech Roadmap progress to date

The Roadmap is currently under review, with the longer-term initiatives outlined in the Roadmap subject to further decisions of government. The review conducted by the department has included interviewing 43 small and medium sized businesses, establishing a short-term working group of RegTech and business software providers and payroll experts, and reviewing the academic and industry literature.

The review is in its final stages and advice will be provided to the Minister on which longer-term initiatives in the Roadmap should be continued or discontinued, as well as new initiatives that could meet the objectives of the Roadmap to support small and medium-sized enterprises (SMEs) in meeting their modern award obligations.

[17] Attorney-General's Department, '*Regulatory technology roadmap'*, Australian Government, 2021, accessed 18 June 2024.

3.2.1 Workplace Relations Usability Challenge

The Workplace Relations Usability Challenge is part of DISR's Business Research Innovation Initiative (BRII). The BRII provides funding for SMEs to develop innovative solutions to public policy challenges. BRII grant rounds involve a Challenge Statement that businesses respond to in their application. The Challenge Statement for the Workplace Relations Usability Challenge was focused on improving how SMEs engage with modern awards.[18] The Challenge sought solutions to support modern award information being curated for SMEs. Applications for the feasibility round opened on 26 October 2023 and closed on the 6 December 2023, with 125 eligible applications. The successful grant recipients were announced on 6 June 2024.[19]

4 Artificial intelligence, automation and the workplace

4.1 What is artificial intelligence and automation?

Artificial Intelligence is an umbrella term for a range of technologies and approaches that seek to enable machines, such as computers, to perform tasks that would normally require human intelligence. The Human Technology Institute at the University of Technology Sydney has developed the following definition of AI based on European Union and Organization for Economic Co-operation and Development (OECD) definitions:

> *'A collective term for machine-based or digital systems that use machine or human-provided inputs to perform advanced tasks for a human-defined objective, such as producing predictions, advice, inferences, decisions, or generating content. Some AI systems operate autonomously and can use machine learning to improve and learn from new data continuously. Other AI systems are designed to be subject to a 'human in the loop' who can approve or override the system's outputs. AI systems can be custom developed for a specific organisational purpose. Many are embedded in products or deployed by suppliers in upstream or outsourced services.'*[20]

Central to AI systems are algorithms, which are a series of instructions for how to process some input to achieve an output.[21] Historically, AI systems involved instructions developed by humans, in conditional 'if-then' rules, being coded into computer software to automate processes.[22] The significant shift in AI and algorithms in recent decades is the ability for AI systems, through machine learning, to learn patterns and rules from historical data that can then be applied to future decisions. Machine learning involves a machine being provided with historical data (for example, resumes from previous hiring rounds) which are labelled with the outcome of interest (for example, hired or not

[18] Australian Government, *Business Research and Innovation Initiative (BRII) – Workplace Relations Usability Challenge Feasibility grant*, Australian Government, 2024, accessed 18 June 2024.
[19] Information on the successful grant recipients can be found at https://business.gov.au/grants-and-programs/brii-workplace-relations-usability-challenge/grant-recipients
[20] L Solomon and N Davis, *The State of AI Governance in Australia*, 2023, Human Technology Institute, The University of Technology Sydney, p 9, accessed 18 June 2024.
[21] K Lum and R Chowdhury, 'What is an "algorithm"? It depends whom you ask', *MIT Technology Review*, 26 February 2021, accessed 18 June 2024.
[22] F Hayes-Roth, 'Rules-based systems', *Communications of the ACM,* 1985, 28(9):921-932, doi:10.1145/4284.4286.

hired). The machine learns the best algorithm that allows it to achieve the outcome of interest from the data.

Automation is a broader term for the use of technology and programming to perform tasks with minimal human input.[23] Automation involves programmers writing computer code that establishes algorithms (such as instructions and rules) for how a system or machine should behave with different inputs. For example, robotic process automation that businesses may use to automate tasks such as data extraction involve coding scripts of instructions that emulate human processes.[24] Modern AI systems that use machine learning may be a component of automated systems.

There are broadly two phases of the AI lifecycle: development and deployment.[25] In the first phase, an AI model is developed through training on historical data to achieve a specific output with a given input. AI models are the 'engines' of AI systems and can involve various components, including algorithms.[26] In the deployment phase, AI models are implemented in AI systems that are designed for specific purposes. AI systems may involve other technologies such as robotics, sensors, and software interfaces. For example, ChatGPT is an AI system with a user interface where individuals can input queries and receive responses, which is powered by the GPT-4 AI model.[27]

Recent advances in AI, specifically generative AI, have stoked significant public interest and concern, while also making AI more accessible to the public. Generative AI is a type of AI that excels at generating new content. Generative AI models such as those powering ChatGPT have also been termed general purpose AI (GPAI) or 'foundation models' because they have the flexibility to be adapted and used for a wide range of objectives. Unlike previous narrow AI models that were trained for specific purposes, GPAI models can be adapted for various AI systems with different use cases. Because it can be used in a broad number of ways for which it was not necessarily designed, GPAI may risk errors in a GPAI model flowing through to many downstream products. For example, GPAI may simply repeat errors in source information, or it may not take into account particular regulatory frameworks that do not apply in the jurisdiction where it was designed.

4.2 How AI is being used in the workplace

This submission explores four key concepts in the adoption of AI systems in Australian workplaces. Figure 1 then situates these concepts in the broader digitalisation of workplaces.

- **Workplace surveillance and monitoring** refers to the use of various technologies to collect data about workers and the work they are doing. Workplace surveillance and monitoring generates significant data about employees that can be used in people analytics, algorithmic management, and automation.

[23] IBM, *What is Automation?,* IBM website, n.d., accessed 18 June 2024.
[24] IBM, *What is robotic process automation (RPA)?*, IBM website, n.d., accessed 18 June 2024.
[25] OECD, *Updates to the OECD's definition of an AI system explained*, 2023, accessed 18 June 2024.
[26] Department for Science, Innovation and Technology, *International Scientific Report on the Safety of Advanced AI: Interim Report*, UK Government, May 2024, p 16, accessed 18 June 2024.
[27] Department for Science, Innovation and Technology, *International Scientific Report on the Safety of Advanced AI: Interim Report,* https://www.gov.uk/government/publications/international-scientific-report-on-advanced-ai-safety-expert-advisory-panel-and-principles-and-procedures.

- **People analytics** refers to the use of evidence and data in managing a workforce to optimise an organisation's performance. People analytics involves managers making data-driven decisions that utilise data analytics methods and machine learning.
- **Algorithmic management** refers to automated systems either augmenting or replacing managerial decision-making and includes hiring, performance management, rostering, task management and termination.
- **Automation and augmentation of tasks** refers to AI systems either executing or supporting the execution of tasks that would traditionally be performed by human workers.

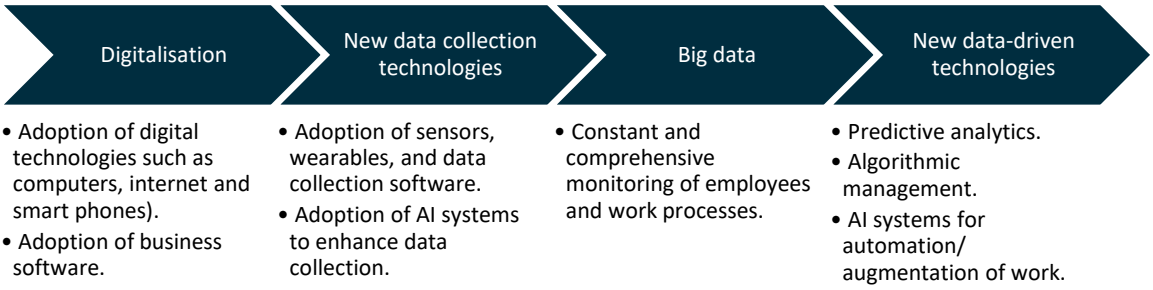

Figure 1 - Cycle of innovation in workplace technologies

Source: Adapted from L. Kresge, *Data and Algorithms in the Workplace: A Primer on New Technologies*, Centre for Labor Research and Education University of California, 2020.

4.2.1 Workplace surveillance and monitoring

Central to the digital transformation of workplaces is the adoption of software and technologies that can generate data about business processes and employees. Data is central to the development and use of AI systems, which can create a feedback loop where the adoption of AI systems necessitates greater collection of employee data. The increasing adoption of workplace surveillance and monitoring technologies has been underway for several decades, with a shift in recent years from the direct physical surveillance of workers through technologies (through CCTV cameras, for example) to forms of monitoring that capture and analyse a significant amount of data about employees.[28]

Modern workplace monitoring and surveillance technologies collect not only data that can be used to manage employees (for example, how long an employee takes to complete a task), but also data that can be used to improve business models and labour processes (for example, what incentives increase worker productivity).[29] Various surveys suggest that between 60-70% of Australian workplaces are using some type of employee surveillance, such as monitoring of web browsing or

[28] D Ravid, D Tomczak, JC White, and T Behrend, 'EPM 20/20: A Review, Framework, and Research Agenda for Electronic Performance Monitoring', *Journal of Management,* 2019, 46(1):101, doi:10.1177/0149206319869435.
[29] J Woodcock, 'The limits of algorithmic management: on platforms, data, and workers' struggle', *South Atlantic Quarterly*, 2021, 120(4):703-713, doi: 10.1215/00382876-9443266.

email content.[30] Table 2 provides examples of workplace surveillance and monitoring technologies drawn from the academic literature.[31]

Types of workplace surveillance and monitoring technologies			
Monitoring email content, web browsing, keystrokes, and telephones calls	Swipe cards to track attendance and location	Closed Circuit Television surveillance – including using AI vision to automatically identify behaviours	Electronic timestamp and attendance systems
Monitoring social media content and creating social profiles of employees	Wearables to track activity and location – including handheld devices such as barcode scanners in supermarkets	Digital badges to track location, tone of voice, frequency, and content of conversation	Global Positioning System tracking in vehicles and ID cards
Radio Frequency Identification tracking	Biometrics (such as finger scans, facial recognition, retinal scans)	Automated systems to collect consumer ratings and staff evaluation	Using sensors to monitor 'time at desk'

Table 2: Types of workplace monitoring and surveillance technologies

Workplace surveillance and monitoring can have legitimate uses. For example, monitoring can ensure that employees are following appropriate safety practices and can be used to collect evidence about customer aggression towards employees. However, these same surveillance technologies can be used in ways that employees may find intrusive, controlling and an invasion of their privacy. A 2024 survey of Australian workers in the retail, nursing and public sectors found that employees hold low levels of confidence and trust that AI-enabled surveillance systems would be used in their best interest.[32]

In Australia, there are only three jurisdictions that have specific workplace surveillance laws, which mainly operate on a notice and consent basis, with restrictions on surveillance in sensitive locations such as bathrooms.[33] Federally, the *Privacy Act 1988* contains an exemption for employee records. However, in the current review of the Privacy Act, it has been proposed (Proposal 7.1) that enhanced privacy protections should be extended to private sector employees.[34]

[30] The Australian Institute, *Under the Employer's Eye: Electronic Monitoring and Surveillance in Australian Workplaces* , 2018, accessed 18 June 2024; Captera, *59% of Aussie SME Business Leaders Use Employee Monitoring Software*, 2020, accessed 18 June 2024.
[31] RA Bales, and K Stone, 'The Invisible Web at Work- Artificial Intelligence and Electronic Surveillance in the Workplace', *Berkeley Journal of Employment & Labor Law,* 2020, 41(1):1-62, accessed 18 June 2024 https://ssrn.com/abstract=3410655; A Aloisi and E Gramano, 'Artificial Intelligence Is Watching You at Work: Digital Surveillance, Employee Monitoring, and Regulatory Issues in the EU Context', *Comparative Labor Law & Policy Journal,* 2019, 41(1):95-121, accessed 18 June 2024.
[32] Human Technology Institute, *Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation*, p 51.
[33] M Brown and N Witzleb, 'Big Brother at Work–Workplace Surveillance and Employee Privacy in Australia,' *Australian Journal of Labour Law,* 2021, 34(3):170-199, pp 13-17, accessed 18 June 2024.
[34] Attorney-General's Department, *Privacy Act Review Report 2022*, Australian Government, 2022, accessed 18 June 2024.

4.2.2 People analytics

People analytics seeks to use data about employee behaviours, performance, and attributes to develop actionable insights that managers can take to improve employee performance and business operations.[35] For example, people analytics could be used to predict which workers are likely to resign soon, enabling the employer to offer incentives for them to stay. AI systems are increasingly playing a role in people analytics, with large datasets fed into machine learning systems to identify relationships, trends and correlations that can inform managerial decision-making. This trend has raised concerns about the intrusiveness and accuracy of the data collected about employees and the risk of this data fuelling workplace discrimination.[36]

4.2.3 Algorithmic management

'Algorithmic management' (ARM) has been defined as 'the use of computer-programmed procedures for the coordination of labour input in an organisation.'[37] ARM includes the use of algorithmic systems to support or replace managerial functions. ARM, which was already a prominent feature of gig work platforms, is increasingly being used in traditional workplaces to inform hiring decisions, rostering, task management, performance management and employee dismissal, as outlined in Table 3.

[35] A Tursunbayeva, S Di Lauro and C Pagliari, 'People analytics—A scoping review of conceptual boundaries and value propositions', *International Journal of Information Management*, 2018, 43:224-247, doi:10.1016/j.ijinfomgt.2018.08.002.
[36] M Cherry, 'People Analytics and Invisible Labor', *Saint Louis University Law Journal,* 2016, 61(1):2, accessed 18 June 2024.
[37] S Baiocco, E Fernandez-Macías, U Rani and A Pesole, 'The Algorithmic Management of work and its implications in different contexts', International Labour Organization and European Commission, Background paper no. 9, 2022, p 5, 18 June 2024.

Algorithmic management (ARM) in practice	
Hiring	Automated systems are increasingly being used in the hiring process, including in developing job advertisements, targeting advertisements to potential candidates, [38] assessing resumes and job interviews, and determining starting salaries and benefits.
Monitoring	Monitoring by AI systems involves the collection, storage, analysis, aggregation and reporting, usually in real-time, of employees' behaviours and performance.[39] Monitoring may feed into other automated systems that instruct and assess employees' behaviours.
Rostering and scheduling	Automated systems can be used to develop rosters – adjusting shift allocation according to wage costs, staff availability and potential demand. For example, AI can predict expected levels of foot traffic in retail settings based on historical data and roster only the required number of staff for that shift.
Task assignment	AI systems can be used to assign employees discrete tasks and direct them on how to complete those tasks most efficiently. For example, warehouse workers could receive tasks on a handheld device that also directs them to the location of products. The granular data collected by AI systems enables tasks to be updated in real time in response to changes in the workplace and customer demand.[40]
Performance evaluation and discipline	AI systems can be used to set performance targets and evaluate workers against pre-established and real time productivity measures, alerting employees if their performance falls below the necessary level. In platform work, for example, workers may be evaluated based on a range of data points tracked by the AI system, including customer-generated ratings.
Employee termination	ARM may also be used to support or make decisions about which workers to terminate. For example, some AI systems can track each worker's productivity and generate warnings and termination recommendations based on collected productivity data, sometimes without input from supervisors.[41]

Table 3: Example of how ARM is used across various management functions.

[38] N Sheard, 'Employment discrimination by algorithm: Can anyone be held accountable?', *The University of New South Wales Law Journal*, 2022, 45(2):617-648, doi: 10.3316/informit.544039827233241.
[39] M Gagné, X Parent-Rocheleau, A Bujold, MC Gaudet and P Lirio, 'How Algorithmic Management Influences Worker Motivation: A Self-Determination Theory Perspective', *Canadian Psychology,* 2023, 63(2):247-260, doi:10.1037/cap0000324.
[40] Gagné et al., 'How Algorithmic Management Influences Worker Motivation', p 11.
[41] J Adams-Prassl, 'What if your boss was an algorithm? Economic incentives, legal challenges, and the rise of artificial intelligence at work', *Comparative Labor Law & Policy Journal*, 2019, 41(1):18.

In contrast to traditional management methodologies, ARM is informed by instantaneous, granular data about employees made possible by the adoption of increasingly inexpensive digital monitoring tools.[42] While AI systems embedded in workplaces can increase interactivity between workers and managers by enabling the collective contribution and access to data, ARM could impact procedural fairness by undermining opportunities for employees to discuss workplace issues directly with their manager. This issue can be exacerbated by the opaque nature of the AI systems that enable ARM.

4.2.4 Automation and augmentation of tasks

The increasing adoption of AI and other automated technologies in the workplace is likely to reshape jobs by replacing some tasks, augmenting other tasks, and creating a whole new range of tasks. In jobs highly exposed to generative AI systems, for example, workers may require new skills in developing prompts for these AI systems so that they generate the appropriate outcomes. Automated systems that augment certain tasks may also reduce the barrier to entry for some jobs by reducing or changing the types of skills required, but could also eliminate the need for some entry-level jobs entirely. Whether jobs become more or less valued with these changes and what consequences this has for workers' pay and conditions, as well as the impact on job quality, remains to be seen. Recent research suggests that in some industries, workers fear that the use of AI may de-humanise work.[43] The augmentation of tasks can also have flow-on effects to other aspects of job quality. For example, recent research has found a relationship between the use of AI systems in call centres and the frequency of customer mistreatment reported by workers.[44] These findings may be due to AI systems routing customer calls incorrectly or providing incorrect data to the call centre worker when interacting with customers.

4.3 Opportunities posed by AI and automation in the workplace

4.3.1 Productivity benefits

The Productivity Commission reports that AI could make a sizeable contribution to Australia's productivity, partly by addressing enduring productivity challenges including skill and labour gaps and slow service sector productivity growth.[45] Microsoft Australia and the Tech Council of Australia have estimated that generative AI alone could add between $45 billion and $115 billion in productivity gains to the economy by 2030, depending on the rate of adoption.[46] AI-augmented jobs could improve efficiency in the existing workforce, which may be particularly beneficial in areas where there are enduring skill and labour gaps.[47]

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[42] KC Kellogg, MA Valentine and A Christin, 'Algorithms at work: The new contested terrain of control', *Academy of Management Annals*, 2020, 14(1):366-410, doi: 10.5465/annals.2018.0174.
[43] Human Technology Institute, Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation.
[44] V Doellgast, S O'Brady, J Kim and D Walters, *AI in Contact Centers: Artificial Intelligence and Algorithmic Management in Frontline Service Workplaces*, 2023, accessed 18 June 2024.
[45] Productivity Commission, *Submission to the Senate Select Committee on Adopting Artificial Intelligence*, 2024, accessed 18 June 2024.
[46] Microsoft Australia and Tech Council of Australia, *Australia's Generative AI Opportunity*, 2023, accessed 18 June 2024.
[47] Productivity Commission, *Submission to the Senate Select Committee on Adopting Artificial Intelligence*, p 3.

Some businesses are already reporting that they are implementing AI in the workplace to beneficial effect. A recent NSW Small Business Commission survey, for example, found that 25% of businesses are currently using AI tools, with almost half of these users reporting a positive impact on their business.[48]

4.3.2 Work health and safety benefits

AI has the potential to promote compliance with Work Health and Safety (WHS) laws and improve the safety of workers across industries. For example, the European Agency for Safety and Health at Work found that the integration of AI in physically demanding tasks can support workers by monitoring for, and reducing exposure to, hazardous and risky workplace conditions and behaviour.[49] Similarly, the use of automation and robots in warehouses could reduce strain on workers' bodies and could also increase the participation of a wider diversity of people in industries that have traditionally required high impact manual labour.[50] AI systems could also be used to support employers and workers to better identify and address psychosocial workplace safety risks. Chatbots like Indie and Spot for example, are being used to address organisational issues including burnout, sexual harassment, bullying and discrimination in the workplace.[51]

4.3.3 Supporting managers and workers to make sound decisions

AI has the potential to improve the quality of human decision-making by reducing bias and providing timely and accurate information that increases the quality of outputs. AI is also increasingly being used to provide workers with accurate and timely information to support the execution of their tasks. By supporting rather than substituting human decision-making, AI can enhance workers' job autonomy while reducing the probability of human error and lowering the skills required to perform certain tasks.[52] For example, a successful trial of anaesthetists wearing AI-augmented smart glasses (that superimposed patients' vital signs onto their field of vision) was found to reduce the anaesthetists' mental strain and their need to multitask.[53]

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[48] New South Wales Small Business Commissioner, Can Artificial Intelligence help your business? [website], n.d., accessed 1 June 2024.

[49] European Agency for Safety and Health at Work, *Strategies for safety and health in an automated world*, 2024, p 3, accessed 18 June 2024.

[50] ARUP, The Warehouse of the Future: How Employment Challenges are Shaping the Evolution of the Warehouse, 2024, accessed 18 June 2024.

[51] Indie, developed by public company Pioneera, works with employees to deliver real-time, intelligent, personalised nudges with tips on how to manage wellbeing with the aim of preventing workplace stress and burnout. Spot is an online record making tool to allow sexual harassment, discrimination and workplace bullying to be recorded and if desired, reported confidentially and anonymously. It is currently being used by the New South Wales Bar Association.

[52] Gagné et al., 'How Algorithmic Management Influences Worker Motivation', p 20; L Nurski and M Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, Bruegel Working Paper 14/2022, 2022:15.

[53] TF Drake-Brockman, A Datta, and BS von Ungern-Sternberg, 'Patient monitoring with Google Glass: a pilot study of a novel monitoring technology', *Pediatric Anesthesia*, 2016, 26(5):539-554, doi: 10.1111/pan.12879.

4.3.4 Job redesign and job matching for vulnerable and disadvantaged workers

AI may also provide a raft of opportunities to improve job design and match vulnerable and disadvantaged workers to appropriate roles. AI may enable job redesign to create entry level opportunities that would suit people entering or attempting to re-enter the workforce. For example, AI could assist businesses to identify components of discrete jobs that could be combined to create new jobs that particularly suit disadvantaged and vulnerable cohorts.

AI could also increase the labour market participation rates of these cohorts by automatically matching workers with appropriate job opportunities and supporting them during the application process. For example, AI avatars could be used to train interviewers to reduce personal biases in hiring decisions.[54]

Automation of repetitive work could also allow employees to focus on higher-value tasks that require creativity, human judgement, and interpersonal skills.[55] Some workers may find this shift leads to higher job satisfaction when they are provided with appropriate supports to manage more complex work.

4.3.5 Supporting compliance with labour and employment laws

AI systems, when developed appropriately, could be used to support businesses comply with labour and employment laws.[56] It is likely that we will increasingly see business software and RegTech solutions adopt AI functionality to support businesses to meet their compliance obligations. AI systems are already being used by some businesses to help them remediate wage underpayments by reviewing large amounts of historical data to identify historical underpayment.[57]

4.4 Risks posed by AI and automation in the workplace

A recent report from the Human Technology Institute at University Technology Sydney found that while Australian workers were able to identify ways in which AI could augment and enhance their work, they were also cognisant of the risks posed by AI.[58] A number of the risks described below could be framed as work health and safety risks. Recent research has suggested that the WHS framework could play a role in helping businesses identify and manage risks posed by AI in the workplace.[59] Safe Work Australia has identified the rise of artificial intelligence, automation and

[54] F Salvetti and B Bertagni, 'Enhancing Inclusivity in Interviewing: Harnessing Intelligent Digital Avatars for Bias Mitigation', in E Babulak (ed), *Advances in Digital Transformation - Rise of Ultra-Smart Fully Automated Cyberspace*, IntechOpen, 2024, doi: 10.5772/intechopen.1004393.
[55] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, p 10.
[56] B Kelley, Wage against the machine: artificial intelligence and the fair labor standards act. *Standford Law and Policy Review,* 2023, 34:261-310, accessed 18 June 2024.
[57] J Hsu, *AI Technologies as a Solution to Wage Underpayment in Australia*, Deloitte Australia, 2023, accessed 18 June 2024.
[58] Human Technology Institute, Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation, 2024, accessed 18 June 2024.
[59] A Cebulla, Z Szpak, C Howell, G Knight and S Hussain, 'Applying ethics to AI in the workplace: the design of a scorecard for Australian workplace health and safety', *AI & Society,* 2023, 38: 919-935, doi: 10.1007/s00146-022-01460-9.

related technologies as an ongoing and emerging WHS challenge as part of their Australian Work Health and Safety Strategy 2023-2033.[60]

4.4.1 Work intensification

AI already demonstrates remarkable potential to improve workflows by automating simple and repetitive tasks, enabling workers to spend more time on complex tasks that require interpersonal skills, judgment, and creativity.[61] Although this new distribution of responsibility can raise workplace productivity by reducing gaps in workflow, there is a growing body of evidence that shows AI systems used in this way can harmfully 'intensify' work. For example, AI systems that automatically set tasks for workers in warehouse and hotel settings and often at an unbearably accelerating pace, can increase the likelihood of workplace strain and injuries.[62] Even in sedentary occupations, work intensification may increase workers' exhaustion and mental stress because the AI system assigns an unending train of complex tasks it cannot perform itself.[63]

4.4.2 Transparency

AI systems used in workplaces are often 'black boxes' whose outputs cannot be reverse-engineered or easily explained even by their designers.[64] The inherent lack of transparency of many AI systems used in workplaces makes it difficult, if not impossible, for workers to seek information and accountability for decisions or recommendations made by these systems that affect their working conditions. The opaque nature of AI systems may also reflect a lack of transparency about when and how these systems are being used in the workplace, meaning that often no explicit consent is being obtained from workers subjected to these systems.[65] The risk of negative mental health outcomes is exacerbated in circumstances where workers feel that decisions are being made based on numbers and data that they have no access to, nor power over.[66]

4.4.3 Deskilling of work and workers

Although AI systems can simplify tasks by breaking them down into smaller components requiring less skill, the increasing fragmentation of tasks may mean that, over time, workers will no longer be required to develop or maintain specific knowledge or skills to carry out their tasks.[67] Research shows that Australian workers are also concerned that they will gradually lose the ability to apply critical

[60] Safe Work Australia, *New national strategy for safe and healthy work*, Safe Work Australian website, 2023, accessed 18 June 2024.
[61] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, p 10.
[62] Nurski and Hoffman, The impact of artificial intelligence on the nature and quality of jobs, p 13; B Gutelius and N Theodore, '*The future of warehouse work: Technological change in the U.S. Logistics Industry*'', UC Berkeley Labor Center, 2019, accessed 18 June 2024.
[63] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, p 10.
[64] A Blackham, 'Setting the framework for accountability for algorithmic discrimination at work,' *Melbourne University Law Review*, 2023, 47(63): 72-73, accessed 18 June 2024.
[65] Human Technology Institute, *Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation*, p 15.
[66] PV Moore, 'Artificial Intelligence in the Workplace: What is at Stake for Workers?', in BBVA OpenMind, *Work in the Age of Data*, BBVA, 2019, accessed 18 June 2024.
[67] Gagné et al., 'How Algorithmic Management Influences Worker Motivation', p 12.

thinking skills, personal judgement and work-based knowledge as they become reliant on AI or automated systems.[68]

These developments could in turn increase the volume of work performed by an outsourced or casual workforce that does not require organisation-specific knowledge or skills, reducing employers' willingness to invest in their employees' long-term skills and career development.

4.4.4 Data-satisfying work

AI systems that monitor and evaluate workers tend to place higher value on the quantifiable parts of a job while neglecting aspects of a role that are more difficult to capture.[69] Where workers are aware of this dynamic, they are more likely to focus their efforts on being 'data-satisfying': meeting the performance targets set by the AI system at the expense of holistic job performance.[70] For example, research has shown that where care professionals are measured on the speed of their work, the quality of their interactions with clients decreases.[71] Some delivery drivers have also been shown to sacrifice sleep and safety checks in order to meet their AI-set performance benchmarks.[72]

4.4.5 Entrenching disadvantage

Automation tends to replace routine, low-skills jobs that are more likely to be held by lower-income workers who may lack the skills to transition to other sectors if their jobs are displaced by AI.[73] The increasing prevalence of AI in workplaces may therefore entrench existing patterns of disadvantage by further excluding job-vulnerable people from the labour market. Aboriginal and Torres Strait Islander people, culturally and linguistically diverse (CALD) Australians, those with low digital literacy, those who live in regional and rural areas and women may be less likely to benefit from AI.[74] A recent International Labour Organization (ILO) report, for example, identifies that jobs with a higher generative AI potential for automation in high income countries are disproportionately held by women, with 7.8 per cent of women in jobs with high automation potential—more than double the

[68] Human Technology Institute, Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation, p 48.
[69] Gagné et al., '*How Algorithmic Management Influences Worker Motivation*'.
[70] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, p 19.
[71] S Moore and LJ Hayes, 'The electronic monitoring of care work—The redefinition of paid working time', in PV Moore, M Upchurch and X Whittaker (eds), *Humans and machines at work: Monitoring, surveillance and automation in contemporary capitalism*, Palgrave Macmillan, 2018:118.
[72] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*, p 19.
[73] P Gmyrek, J Berg and D Bescond, Generative AI and jobs: A global analysis of potential effects on job quantity and quality - ILO Working Paper 96, International Labour Office, 2023; Mandala, 'Preparing Australia's Workforce for Generative AI', 2024; McKinsey & Company, 'Generative AI and the future of work in Australia', 2024; Australian Computer Society, 'Technology Impacts on the Australian Workforce', 2020.
[74] Professor Jon Altman and Mr Francis Markham, *Submission 34 - Senate Select Committee Inquiry into the Future of Work and Workers*, 2018, p 5; Victorian Multicultural Commission, *Submission 107 -- Senate Select Committee Inquiry into the Future of Work and Workers*, 2018, p 8; Business NSW, *Submission 19 – Inquiry into Artificial Intelligence (AI) in New South Wales*, 19 October 2023, p 2; NSW Farmers, *Submission 44 - Inquiry into Artificial Intelligence (AI) in New South Wales*, 27 October 2023, p 8.

2.9 per cent for men. [75] The ILO also predicts the share of jobs with high augmentation potential by generative AI is greater among women than men.

4.4.6 Bias and discrimination

There is growing evidence that AI systems risk making biased—and potentially discriminatory—decisions because the data they have been trained on both replicates and reinforces existing biases and discrimination in both workplaces and the labour market.[76] For example, because AI systems are trained on historical data, there is a risk that these systems will make decisions based on historical human biases (such as over-preferencing male candidates for information technology roles).[77] Decisions made during the design and development of AI systems can also lead to some populations being under-represented, which can lead to these systems making inaccurate decisions for these populations (AI rostering systems trained only on data about young workers, for example, could make rostering decisions that disadvantage older workers).

Research indicates that algorithmic bias is also likely to disproportionately affect those who are already most impacted by discrimination, including women and First Nations peoples, by replicating, multiplying and systematising existing workplace biases. [78] These issues are likely to remain prevalent so long as the cohort of people employed in the production and application of workplace AI systems lacks diversity. An OECD survey found that men are most likely to benefit from the use of AI in the workplace due to the roles male workers are more likely to be in and the fact that the decisions on the parameters and data in AI systems are influenced by the traditional male biases of these AI systems' developers.[79]

The lack of transparency outlined at 4.4.2 above makes it difficult for employers, workers and prospective job candidates to establish whether work-related discrimination has occurred and, if it has, who should be legally liable for that discrimination in circumstances where the decision was made or supported by the biased AI system.[80]

[75] P Gmyrek, J Berg and D Bescond, *Generative AI and jobs: A global analysis of potential effects on job quantity and quality - ILO Working Paper 96*, International Labour Office, 2023; Mandala, 'Preparing Australia's Workforce for Generative AI', 2024; McKinsey & Company, 'Generative AI and the future of work in Australia', 2024; Australian Computer Society, 'Technology Impacts on the Australian Workforce', 2020.
[76] A Blackham, 'Setting the framework for accountability for algorithmic discrimination at work', pp 72-73.
[77] BBC, 'Amazon scrapped 'sexist AI' tool', *BBC,* 10 Oct 2018, accessed 18 June 2024; S Ayoub, 'Recruitment by robot: how AI is changing the way Australians get jobs', *The Guardian,* 23 October 2023, accessed 18 June 2024.
[78] A Blackham, 'Setting the framework for accountability for algorithmic discrimination at work'; M Zalnieriute and T Cutts, 'How AI and New Technologies Reinforce Systemic Racism: Submission to the Study on Patterns, Policies and Processes Leading Racial Discrimination and on Advancing Racial Justice and Equality for the 54th Session of the United Nations Human Rights Council', 2022.
[79] M Lane, M Williams and S Broecke, *The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers*, OECD Social, Employment and Migration Working Papers, No. 288, OECD Publishing, Paris, 2023.
[80] N Sheard, 'Employment discrimination by algorithm: can anyone be held accountable?', p 634.

4.5 The labour market impacts of AI are not yet clear

The full impact of AI on the labour market may take years to be fully realised, in part due to the time necessary for businesses to adopt and take advantage of AI.[81] Key impacts of new technology on the labour market are could potentially include:

- **Displacement**: automation of tasks performed by workers
- **Reinstatement:** creation of new tasks for workers
- **Augmentation:** technology performing complementary tasks
- **Productivity**: decreasing operating costs and increasing demand leads to increased need for workers to complete tasks that cannot be automated.[82]

There is a long history of automation in Australia's labour market. While AI enables new forms of automation, there is currently no expert consensus on the potential for jobs to be automated, augmented or created by the adoption of AI. However, one point of consensus among experts is that AI will likely augment more jobs than it will automate, and that there will be many jobs insulated from the impacts of AI. Generative AI such as ChatGPT, like previous waves of automation, will likely lead to some workers being displaced, some workers needing to adapt as their job is augmented by AI, and new jobs being created.

Because there are very few jobs that can currently be fully automated by AI, it has been suggested that workers in the short term will likely experience 'a reallocation and rebundling of the tasks that together form their occupations', which may in turn have impacts on job quality.[83] However, automation more broadly is still expected to have a significant impact on jobs in industries where machines are already used, and where further automation of these machines may reduce the need for human input into certain processes.[84] Unlike previous rounds of automation, which tended to focus on physical work, generative AI may also be felt more by white collar and knowledge workers.

4.6 AI will require new technology and digital skills

The incorporation of AI in the workplace has the potential to significantly change the nature of job design and the tasks that workers undertake. AI is being used in ways not contemplated even 12-18 months ago, with young Australians leading the uptake.[85] However, a 2024 survey of Australian workers whose workplaces have adopted AI systems reported that the quality of training they received in using these systems is highly variable.[86] Even where training is provided, the training may focus on using the system rather than providing information on how the AI system operates. This

[81] T Tschang and E Almirall, 'Artificial intelligence as augmenting automation: Implications for Employment', *Academy of Management Perspectives,* 2021, 35(4):5, doi: 10.5465/amp.2019.0062.
[82] J Borland and M Coelli, *Working Paper Series: The Australian Labour Market and IT-enabled Technological Change*, 2023, Melbourne Institute: Applied Economic & Social Research, The University of Melbourne, p 4, accessed 18 June 2024.
[83] Nurski and Hoffman, *The impact of artificial intelligence on the nature and quality of jobs*.
[84] Australian Computer Society, *Technology Impacts on the Australian Workforce*; Oxford Economics and CISCO. *Technology and the Future of Australian Jobs*, 2019.
[85] McKinsey & Company, *Generative AI and the future of work in Australia*, 2024, p 16; 54.
[86] Human Technology Institute, Invisible Bystanders: How Australian Workers Experience the Uptake of AI and Automation, p 26.

means that workers will often have a poor understanding of the AI systems' limitations and how those systems reach their conclusions.

To address the current AI skills deficit, Australian workplaces will need more technology and digital skills across the board, as well as highly skilled specialist workforces in fields such as AI and robotics. Transformation in cyber security and AI necessitates highly skilled workers with advanced digital skills provided by both vocational education and training (VET) and higher education. The future workforce will also need to embrace ongoing education and on-the-job training to ensure workers have the skills needed to continuously adapt to changing technology. This could increasingly be achieved through microcredentials.[87]

The Government has put in place a number of measures to give people the skills they need for good, secure jobs by delivering systemic reforms to improve the quality, relevance and responsiveness of the skills and training sector in the age of AI. In the 2023-24 Budget, the Government provided $17 million for the AI Adopt Program to establish centres to act as front doors for safe and responsible deployment of AI technologies by SMEs who face barriers in cost and experience when exploring AI solutions. Additionally, the Future Skills Organisation (FSO), one of ten industry-owned and led Jobs and Skills Councils, is currently undertaking work to understand the impact of AI on occupations within the Finance, Technology and Business sectors to determine how skills requirements have changed, and are changing, across these occupations and where training should adapt to reflect these changes.

4.7 The workforce behind AI

There is growing awareness of the human work that enables AI systems, ranging from labelling data used to train AI systems to stepping in and resolving issues with these systems. The term 'ghost work' has been used to describe the hidden labour that occurs in the training and deployment of AI systems. The most researched form of 'ghost work' is data labelling, where data being used to train machine learning models is tagged or reviewed by humans.[88] For example, images of products might be tagged with labels to enable the AI system to better identify pictures of products. When AI systems fail it will usually be a human that steps in to complete the work. There are concerns that 'ghost workers' in the AI supply chain may experience low pay and poor working conditions.[89]

5 Regulating artificial intelligence

In 2023, the Australian Government undertook consultation through its discussion paper on 'Safe and Responsible AI in Australia'. The consultation made clear that while AI has immense potential to improve wellbeing, quality of life and grow our economy, the current regulatory framework likely does not sufficiently address known risks presented by AI systems, particularly in high-risk settings.

[87] Microcredentials are shorter than existing Australian Qualifications Framework qualifications and build on broader core knowledge and skills. Where they contribute to a larger body of structured and coherent knowledge, they may be aggregated into larger qualifications.
[88] A Bogle, 'Behind 'miracle' AI is an army of 'ghost workers' — and they're speaking out about Appen', *ABC*, 14 October 2022, accessed 18 June 2024.
[89] The Global Partnership on Artificial Intelligence, *Fairwork AI Ratings 2023: The Workers Behind AI at Sama. Report*, 2023, accessed 18 June 2024; J Muldoon, C Cant, M Graham and F Spilda, 'The poverty of ethical AI: impact sourcing and AI supply chains', *AI & Society*, 2023, 1-15, doi: 10.1007/s00146-023-01824-9.

The Australian Government's interim response, published on 17 January 2024, outlined areas of government action to support safe and responsible use of AI, including:

- Delivering regulatory clarity and certainty
- Supporting and promoting best practice for safety
- Ensuring government is an exemplar in the use of AI
- Engaging internationally on how to govern AI.

The Government has committed to a risk-based approach in the consideration of new mandatory guardrails for AI. In designing a risk-based regulatory regime for AI, consideration is given to the levels of risk and key characteristics of known risks and the balance of preventative and remedial regulatory measures to effectively target and mitigate known risks.

The Government has also established a Temporary AI Expert Group with 12 appointees spanning industry, academia and the law profession to provide advice on options for mandatory guardrails.

Businesses and individuals who design, develop and deploy AI are already subject to various Australian laws.[90] These include economy-wide laws such as those relating to privacy, online safety, corporations, intellectual property and anti-discrimination laws, work health and safety laws and sector-specific laws.

Academics have suggested that regulations specific to how AI is used in the workplace may include several features, such as:

- Establishing redlines or prohibitions on the use of employee monitoring in particular contexts and for specific purposes that are deemed particularly intrusive or harmful. This may include prohibiting monitoring in bathrooms or for the purpose of emotional manipulation.
- Establishing the bases for which algorithmic management systems can be used, such as to meet legal obligations or for purposes connected to the contract of employment.
- A requirement that AI systems in the workplace must be capable and valid for achieving the objective they have been deployed to achieve, in a proportionate manner.
- Establishing obligations for employers to notify and consult with individuals and worker representatives that an AI system is being used, and to provide a certain level of detail about how the AI systems makes decisions.
- Establishing requirements for meaningful human involvement in certain decisions, such as termination decisions.
- Providing a right for decisions made by AI systems to be reviewed by a human.
- Requiring employers to assess the impact AI systems on a regular basis to identify and manage risks to workers. [91]

In the 2024-25 Budget, the government invested $4.2 million to clarify and strengthen existing laws to address risks and harms from AI. This work includes the immediate review of the priority areas of health and aged care sector regulation, the Australian Consumer Law and copyright law. DISR is

[90] L Solomon & N Davis, The State of AI Governance in Australia.
[91] J Adams-Prassl, H Abraha, A Kelly-Lyth, M Silberman, and S Rakshita, 'Regulating algorithmic management: a blueprint', *European Labour Law Journal,* 2023, 14(2):124-151, doi: 10.1177/20319525231167299.

working with various Commonwealth agencies to conduct a current state regulatory analysis to better understand how Commonwealth frameworks address risks and harms from AI. The department will draw on the findings of the DTW inquiry in working with DISR to consider advice on potential reforms to address risks posed by AI in the workplace.