FUTURE SKILLS ORGANISATION
Finance Technology Business

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Building an AI-enabled workforce: impacts for Finance, Technology and Business education and training

Final report

Prepared by Mandala Partners for the Future Skills Organisation

Contents

Report overview

1 Fast-paced AI adoption would reap Australia a $115B economic boost under the right conditions and could help address Australia's productivity challenges

- Productivity has been identified by the Treasurer as one of the greatest structural problems in Australia's economy.
- Artificial intelligence (AI) offers new way to drive productivity growth and could drive up to $115B in economic value for the Australian economy by 2030.
- Individuals are using AI at work for tasks including written communication, data analysis and process improvement, with benefits including increased efficiency, improved quality of work and automation of tasks.
- However, realising these benefits involves appropriately upskilling and training Australia's workforce.

2 Despite this, a third of Finance, Technology and Business workers do not use AI at work, with lack of trust and limited access to training key barriers

- While adoption is increasing, 36% of workers surveyed are not using AI at work.
- 33% of workers said they did not use AI at work due to a lack of trust in the technology.
- 33% of workers also said that they did not use AI at work due to lack of access to training.
- Individuals who were older, more remote or had lower incomes were also less likely to use AI at work compared to individuals who were younger, less remote or had higher incomes.

3 Workers want AI training and VET is well placed to offer this through a suite of unaccredited and accredited courses

- Despite barriers, workers realise the importance of AI. More than half of workers believe AI will be important in the near-future and over two-thirds want to use it more.
- 86% of workers are interested in receiving more AI training.
- Key areas where individuals want more training include AI fundamentals, practical implementation and usage of AI as well as AI ethics, security and best practices.
- VET is well placed to deliver training for AI and should focus on unaccredited training in the short-term, with accredited training long-term.

An action plan is needed to roll out AI-related training products

Report action plan

This report's action plan shows short, medium and long-term training needs, including considerations around roll out and design of AI training products. The action plan is informed by the literature review, business survey and consultations.

Short term

- **Catalyse delivery of non-accredited, broad-based and transferrable generative AI skilling courses** for the FTB sector to get training products to market quickly
- **Begin to develop accredited training products on generative AI,** building off unaccredited courses

Medium term

- **Launch accredited courses to deliver versatile, industry-ready generative AI skills**
- **Monitor generative AI adoption trends** in FTB sectors through active engagement with industry and workforce stakeholders to identify more specialised courses

Long term

- Expand coverage of **transferable, broad-based** generative AI **training** for the VET sector
- Develop more **technical courses** focused on all types of AI (not just generative AI)
- Develop **more specialised courses for FTB** with industry, focused on industry specific skills where use cases are clear

Source: Mandala analysis.

Section 1

Overview of research approach

This report is a critical tool for the FSO's understanding of how AI will change work and training and builds on previous analysis

Current work

Understanding the **adoption, usage, barriers and training needs for AI for the FTB sector** to inform an **action plan for AI-related training products** for the FSO

Context

- The FSO, Australia's Jobs and Skills Council for the Finance, Technology and Business (FTB) sectors plays a pivotal role in developing skills across three industries.
- Generative AI is an emerging skill area in the FTB sectors, rapidly growing in Australia and global markets.
- Generative AI – defined as systems that create new content such as text, images and audio based on patterns learned from existing data – has emerged as a new AI technology that is reshaping the future of work and is likely to have a significant impact on the economy.
- Despite significant research and analysis, there is still little information on generative AI business-level use in Australia and for the FTB sector specifically. This gap limits the ability of training providers to upskill and design relevant training products for the FTB sector.

Opportunity

- Given FSO's role in linking industry and training, this generative AI research project offers a strong opportunity to understand the current state and future direction of generative AI adoption, to inform training curricula.
- This work builds on the previous reports as well as current literature by exploring the current state of AI adoption among FTB organisations and workers in Australia.
- The report provides insights based on a detailed literature review, business surveys, and consultation with stakeholders, that inform the future outlook for AI, key barriers facing organisations and individuals, and training preferences and needs.
- Findings from this report will be used to help inform VET training products for the Finance, Technology and Business sectors and lays out an action plan for achieving this.
- While this work explores the initial adoption and usage of AI, more work is needed to unpack, how this adoption of AI in the workplace is going to change the skills required of the future worker, and its implications for the VET system.

Previous work

Creating **an AI exposure index** identifying likelihood a qualification is exposed to generative AI

Developing a **prioritisation framework** for qualifications to be reviewed for potential changes to respond to the impact of generative AI

This report provides key insight into AI adoption, barriers and training through a multi-faceted investigation

Sources of insight

1 Literature review	2 Business survey	3 Interviews
Literature on AI use in businesses globally, Australian businesses and FTB sectors[1]	Survey of FSO members and SMBs, with almost 450 responses	40 executives and leaders from employee, employer and sector representative groups, and associate members

The production of this report uses AI tools, such as transcription tools (Copilot), and chatbot tools (Claude, ChatGPT) to refine and summarise findings

Key topics

Adoption of AI	Barriers to AI adoption	AI training	Action plan
Sub-topics			
• Organisational adoption and individual use • Frequency of usage • Commonly used AI tools in the workplace • Common tasks for which AI is used • Benefits derived from AI use	• Key barriers to AI • Individuals' concerns and limitations about the use of AI at work • Barriers to adoption for particular demographic groups	• Individuals' interest in learning AI topics • Individuals' preferred format for AI training • Provision of training and resources by organisations to help individuals at all levels understand AI	• AI training action plan outlining needs in the short, medium and long-term • Key considerations when rolling out and designing AI related training based on findings

Supporting case studies

Note: 1. The literature review was undertaken between July and November 2024.
Source: Mandala analysis.

Generative AI can deliver up to $115B in economic value to Australia

Generative AI offers could deliver significant economic benefits for the Australian economy and help address Australia's productivity challenges. Productivity has been identified by the Treasurer as one of the greatest structural problem in Australia's economy and is a top priority for reform.[1]

Realising the benefits of generative AI requires an understanding of the current state of AI adoption in Australia, to ensure the right training and resources are developed to support it.

Having the right foundations; through training and upskilling, is likely to accelerate adoption and allow Australia to capture as much as $115B in economic benefits,[2] 2.5x more than in a slow-paced adoption scenario.

Most of these economic benefits are expected to be attributed to an increase in labour productivity. As generative AI grows, computing power is seeing model accuracy converge towards human expertise.[3] As generative AI automates certain minor tasks, workers can transition to more productive tasks.

Generative AI is also expected to drive jobs and business growth by assisting workers with evaluation tasks that enhance product quality, and by powering innovation in new products and services. The Finance, Technology and Business sectors are likely to be disrupted by this technology.

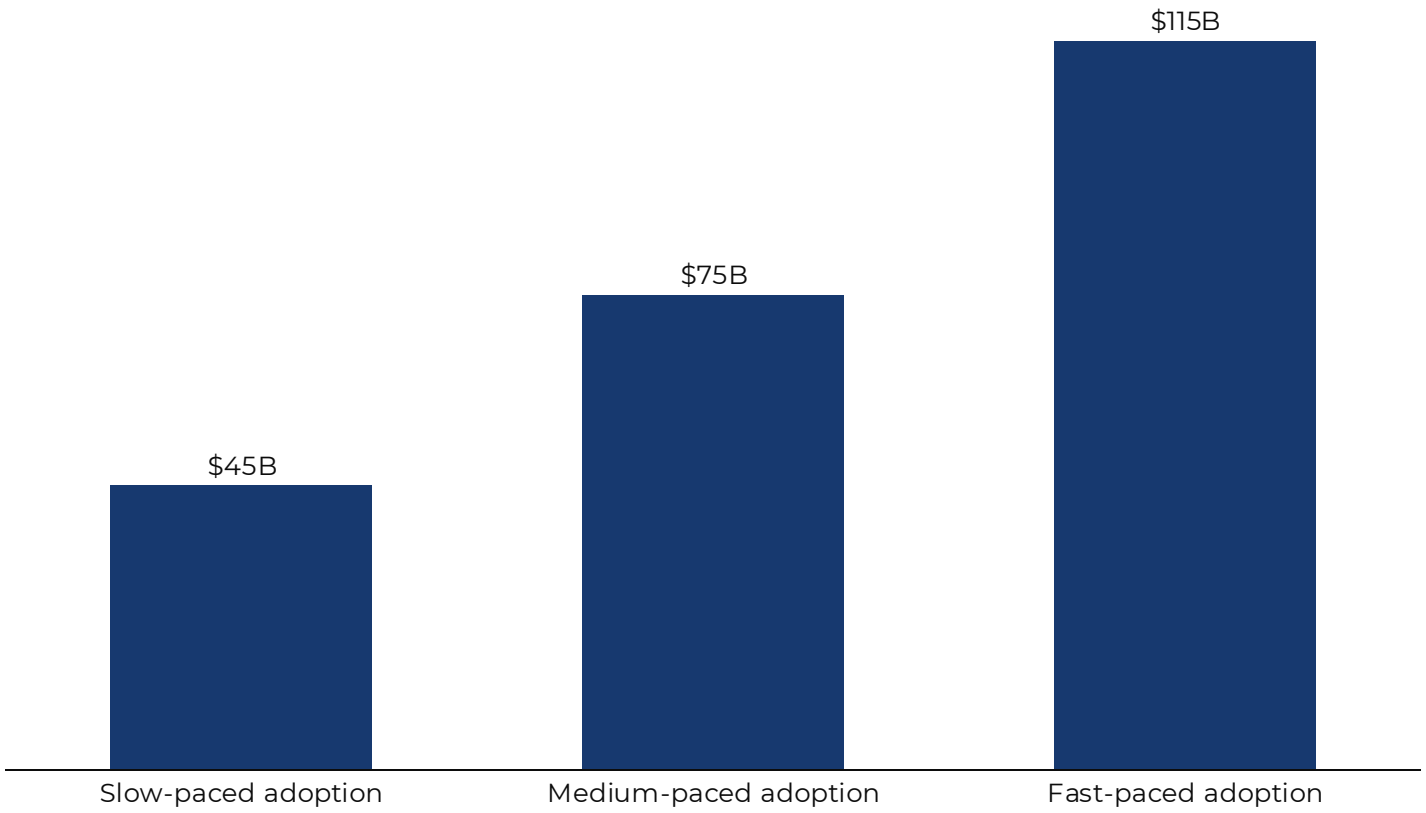
Notes: 1. The Hon Dr Jim Chalmers MP Address to the Australian Business Economists. 2. Since generative AI is relatively nascent and rapidly evolving, it is difficult to estimate with precision its economic value in 2030. For this reason, value-added is modelled based on three different adoption scenarios. 3. See, for example, Our World In Data (2023) *Artificial Intelligence: Performance on knowledge tests vs training computation*.

Generative AI's annual value-added by 2030

$A, 2023 values, Australia

The value added by generative AI is driven by three key components

- Enhanced labour productivity (70%)
- Improved quality of output (20%)
- New products and services (10%)



Sources: Microsoft and Technology Council of Australia (2023) Australia's Generative AI Opportunity.

Section 2

Adoption and use of AI

57% of FTB organisations surveyed are using AI

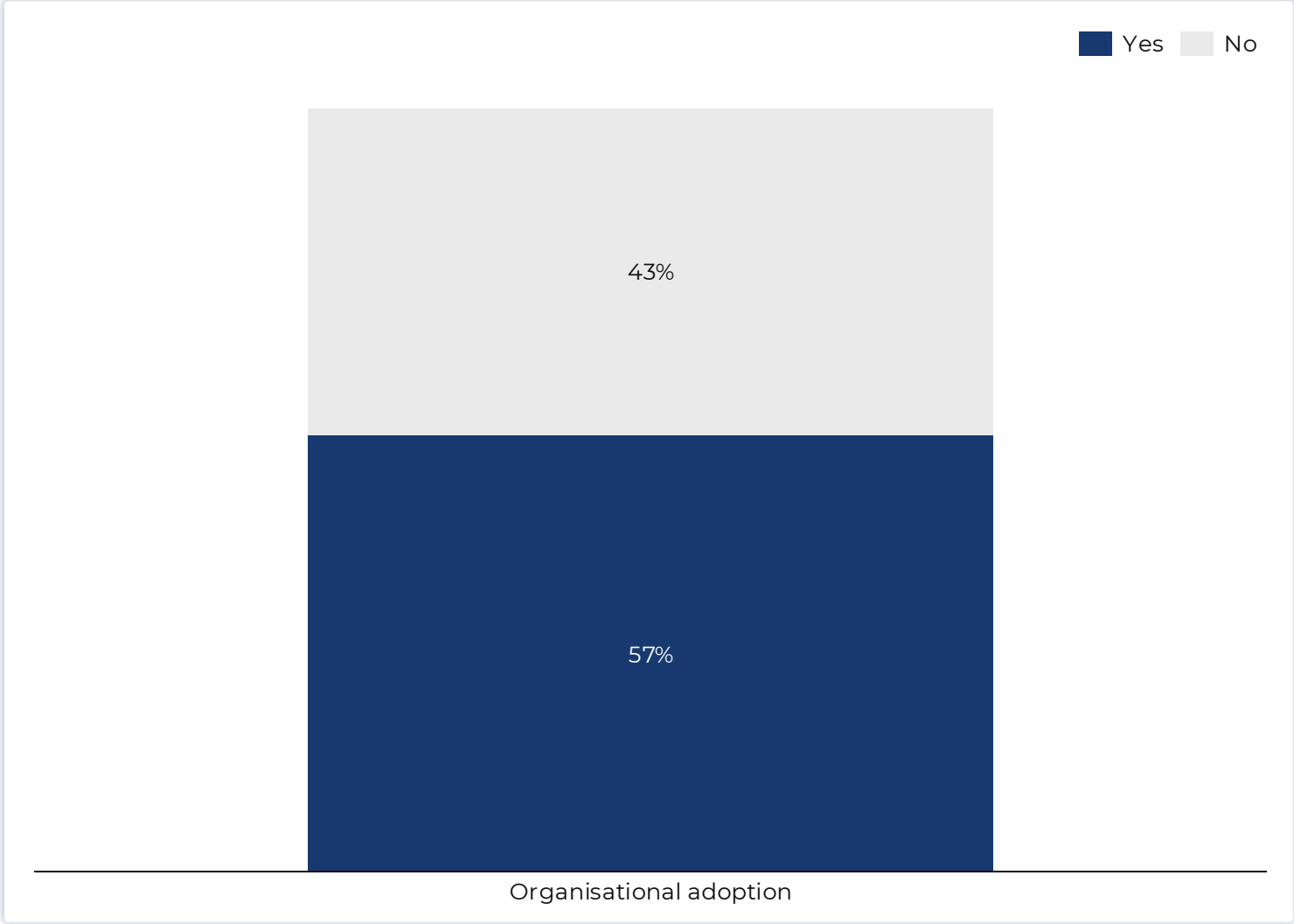
Approximately six of ten Finance, Technology and Business (FTB) organisations are using AI. Technology organisations had the highest rates of adoption, followed by finance and then business.

Large organisations show higher adoption rates and more systematic implementation than small and medium sized organisations, primarily because smaller organisations face resource constraints and a lack of expertise.

This is consistent with our survey findings, which showed that 33% of micro-organisations had adopted AI, and this rose to 58% for small organisations, 65% for medium organisations and 72% for large organisations.[1]

AI adoption within FTB organisation

Question: 'Does your organisation use AI?', N=447



Notes: 1. See p 38. Australian Chamber of Commerce and Industry (2024) *Accelerating the Potential of AI in Business.*

Sources: Mandala analysis of survey of FSO members and SMBs

36% of individuals still do not use AI for work officially or unofficially

Just over one-third of FTB workers still do not use AI for work. For those that do use AI, adoption comprises of official use (44%) and unofficial use (20%). Official use occurs when employees use AI tools their organisation provides or approves, like an organisational Copilot license and proprietary AI assistant. Unofficial use occurs when employees use unsupported AI tools, like a personal ChatGPT account.

About half (51%) of people unofficially using AI at work are from organisations that haven't adopted AI, indicating people are seeking ways to use it informally. Stakeholder consultations confirm this trend of unofficial AI use by employees, even when organisations haven't formally adopted it. Research from the Australian Chamber of Commerce and Industry confirms that unofficial use of AI is common across businesses without an AI use policy.[1]

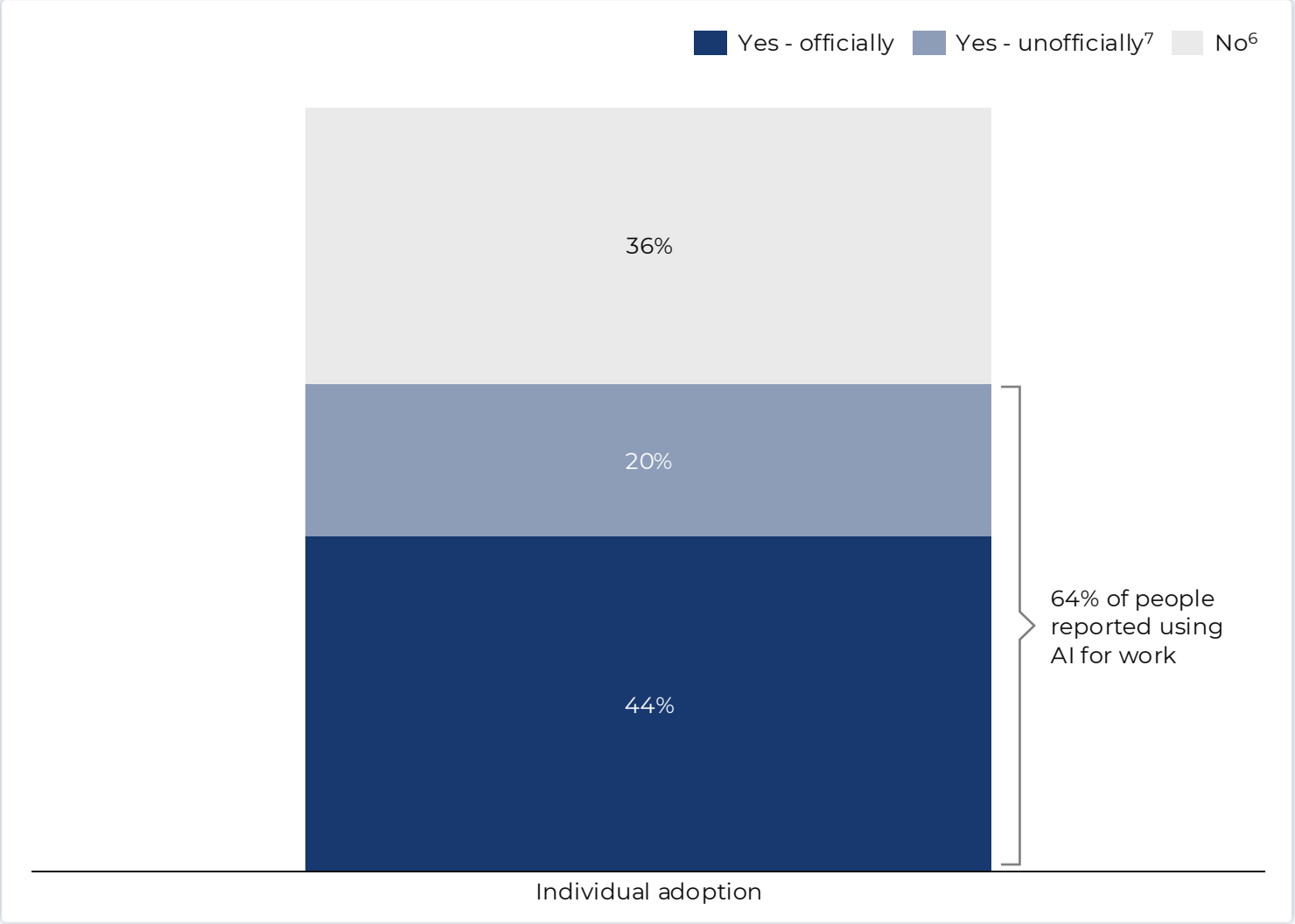
AI adoption rates between men and women are relatively similar. 65% of women and 62% of men use AI at work.[2] Findings are mixed here, with other literature showing higher AI adoption among men than women.[3]

AI adoption estimates vary widely in literature due to differences in how AI and adoption are framed. For Australia, estimates range from 20% to 72%.[4,5]

Notes: 1. Australian Chamber of Commerce and Industry (2024) *Accelerating the Potential of AI in Business*. 2. Further information about the adoption of AI by gender is provided on p38. 3. See, for example, OECD (2024) *The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers*, and Humlum & Vestergaard (2024) *The Adoption of ChatGPT*. 4. IBM (2024) *IBM Global AI Adoption Index 2023*. 5. Datacom (2023) *AI Attitudes in Australia*.

AI adoption by individuals

Question: 'Do you use AI for work?', N=447



Notes: 6. 'No' includes 'Unsure' responses. 7. 'Unofficial' adoption can include situations where an individual uses AI at work based on their own initiative, rather than with organisational directive.
Sources: Mandala analysis of survey of FSO members and SMBs

While Finance is most exposed to AI, adoption is highest in Technology

Workers in the Finance field are most exposed to AI, followed by those in the Business field and workers in the Technology field.

Exposure refers to the extent to which particular roles are likely to be affected by AI. It is based on the proportion of tasks in the profession that can be augmented, replaced or automated by AI. For example, in Finance, tasks like analysing unstructured data, data processing and management, and sales support.

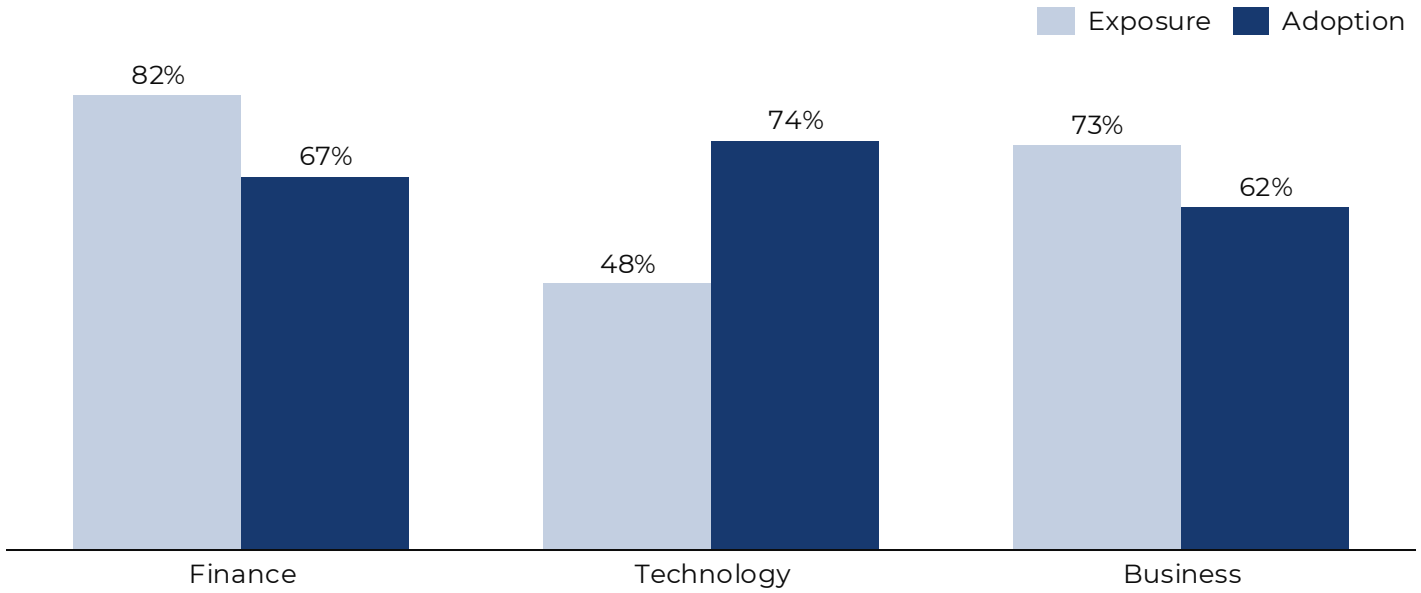
Previous research from Mandala and FSO on this topic shows occupations that generally require university qualifications tend to have greater exposure to AI. This is the case for organisations in the Finance and Business sector, more so than in the Technology sector. This is partly due to the presence of some occupations in the Technology sector which require a combination of more physical skills with cognitive skills.

The concept of exposure to AI does not necessarily reflect the extent of organisational adoption of AI. This research finds that people who work in the Technology sector report the highest levels of AI adoption, notwithstanding the sector's lower exposure to AI.

Other research shows that technology companies are more likely to say that their data, resources, and policies are ready to support generative AI use cases than nontechnology companies.[1]

Occupational exposure and individual adoption of AI by industry

Index, average of AI Occupational Exposure score by qualification type[2]; Question: 'Do you use AI for work?'[3]



Example use cases

- Analysing unstructured data (e.g., insurance claims)
- Data processing and management
- Sales support

- Assistance with writing code and checking code for errors
- Generating scenarios for code

- Drafting and editing emails, reports or other materials
- Processing and checking legal and HR related materials
- Writing new policies and procedures

Notes: 1. Bain (2024) *Quarterly Executive Survey on AI: Four Themes Emerging.*
Sources: Mandala and FSO (2023) *Impact of generative AI on skills in the workplace;* Mandala analysis of survey of FSO members and SMBs.

2. AI exposure for qualifications required in each industry was measured by matching Standard Occupation Classification (SOC) exposures to AI with ANZSCO qualification codes. 3. 'Yes' responses include 'Yes – officially' and 'Yes – unofficially' responses.

Case study: Justice Connect

- Justice Connect is an access to justice charity with an Innovation team that develops tech products. The team operates as part of the broader organisation, which focuses primarily on providing legal support to those in need.
- In 2022, Justice Connect collaborated with the University of Melbourne to develop an unbiased and inclusive ethical AI model that helps people classify their legal problems. The model allows users to describe their issue in their own words and suggests relevant legal categories.
- Since its integration, only 9% of users select 'Something else' as a category, compared to 23% without the AI model, streamlining legal triage. Triage staff could rely on the AI's accuracy to determine whether an issue was eligible for support, freeing up time to assist more clients.
- The initiative also saw a 50% reduction in partial entries, showing that the AI not only helps people understand their legal issues but also gives them the confidence to seek further support.
- Its success highlights how AI is currently being used to automate repetitive tasks, increase operational efficiency and help organisations serve and empower clients. This innovation led to Justice Connect being named the Infoxchange Not-for-Profit Technology Innovator of the Year for 2024.

Source: Connecting Up (Webinar recording: How we introduced ethical AI into our NFP, Justice Connect; accessed September 2024)

Around 33% of those who have adopted AI are using it daily

Among workers who have adopted AI, 33% use it daily and 44% use it several times a week. Only 4% use AI less than every few weeks.

This is broadly consistent with **other research which finds that 29% of people who use generative AI are 'power users' who use it several times a week**, and that 21% of employees are 'heavy users' who use generative AI at least every second day. [1,2]

Individuals who have used AI for longer are likely to use AI more frequently. AI is used daily by 24% of individuals who have been using AI for no more than 6 months, 39% of individuals who have been using AI for 1 to 3 years, and 75% of individuals who have been using AI for more than 5 years. This is likely due to the fact that individuals become more adept at using AI. It is also possible that earlier adopters are more likely to champion the technology compared to later adopters.

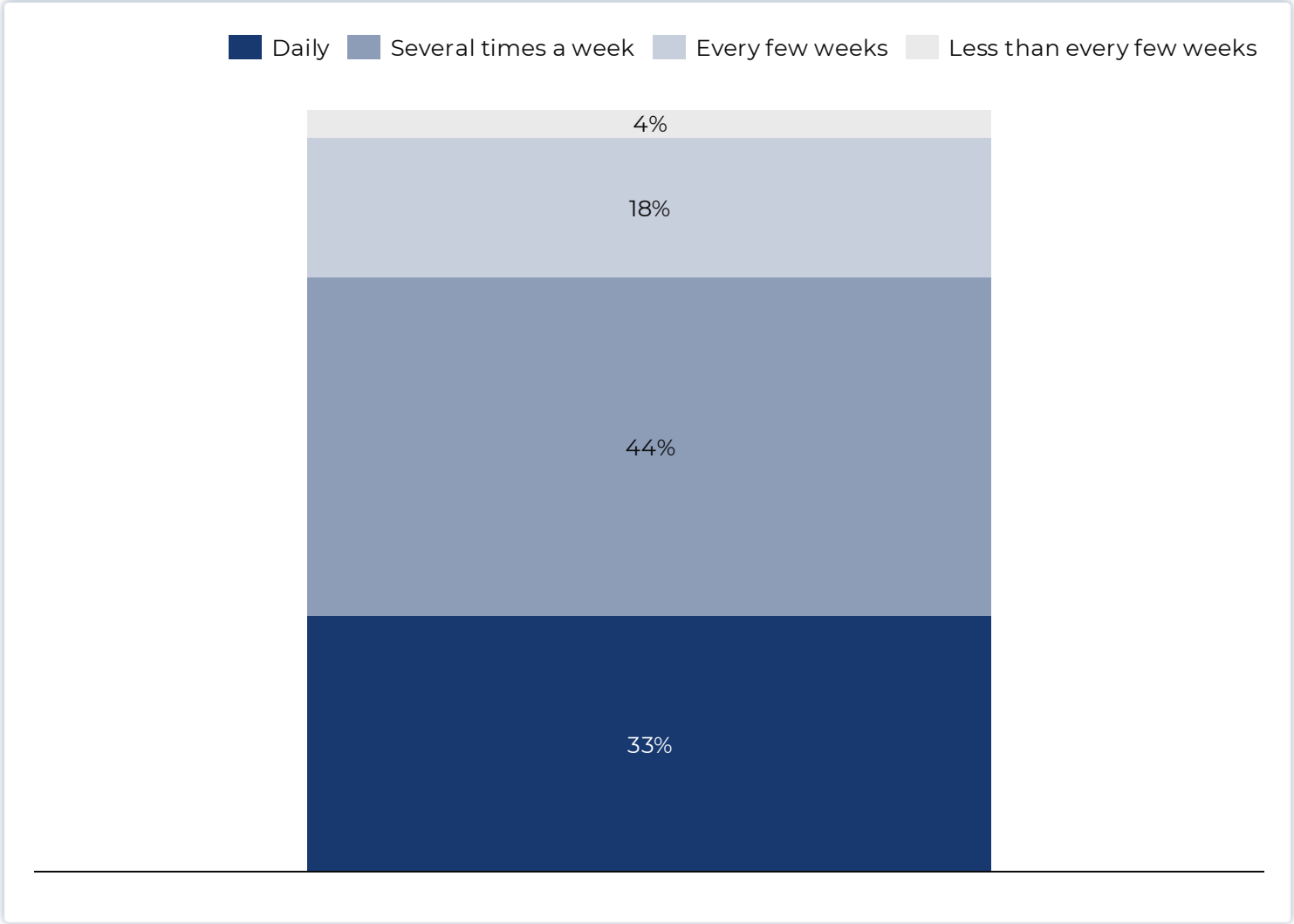
While there is variation in the intensity of AI use across times since adoption, there is less variation across industries or organisation sizes.

Stakeholder consultations suggest that younger professionals and recent graduates tend to be the most frequent users of AI tools.

Notes: 1. Jaffe et al (2024) *Generative AI in Real-World Workplaces*. 2. McKinsey (2024) *Gen AI's next inflection point: From employee experimentation to organizational transformation.*

Frequency of use among those who have adopted

Question: 'How frequently do you use AI in your work?', N=284



Sources: Mandala analysis of survey of FSO members and SMBs.

AI assistants are by far the most used AI tool in the workplace

AI assistants are the dominant AI tool used by workers. Among individuals that use AI at work, 87% report using AI assistants such as ChatGPT, Copilot, and Gemini. The next most commonly used set of AI tools – those for image and video recognition – are used by only 22% of workers.

As AI assistants may be classified as an example of generative AI, and other AI tools as non-generative AI, the uptake differential between AI assistants and other AI tools may be explained by the ability of generative AI systems to create new content and their accessibility.

Among individuals who use AI, AI assistant use is highest among workers in Business (91%) and among workers in large organisations (96%), while machine learning use is highest among workers in Finance (28%) and among workers in medium-sized organisations (30%). [1]

Other research suggests that organisations with relatively high generative AI adoption are more likely to use proprietary foundation models than publicly available 'off-the-shelf' models.[2]

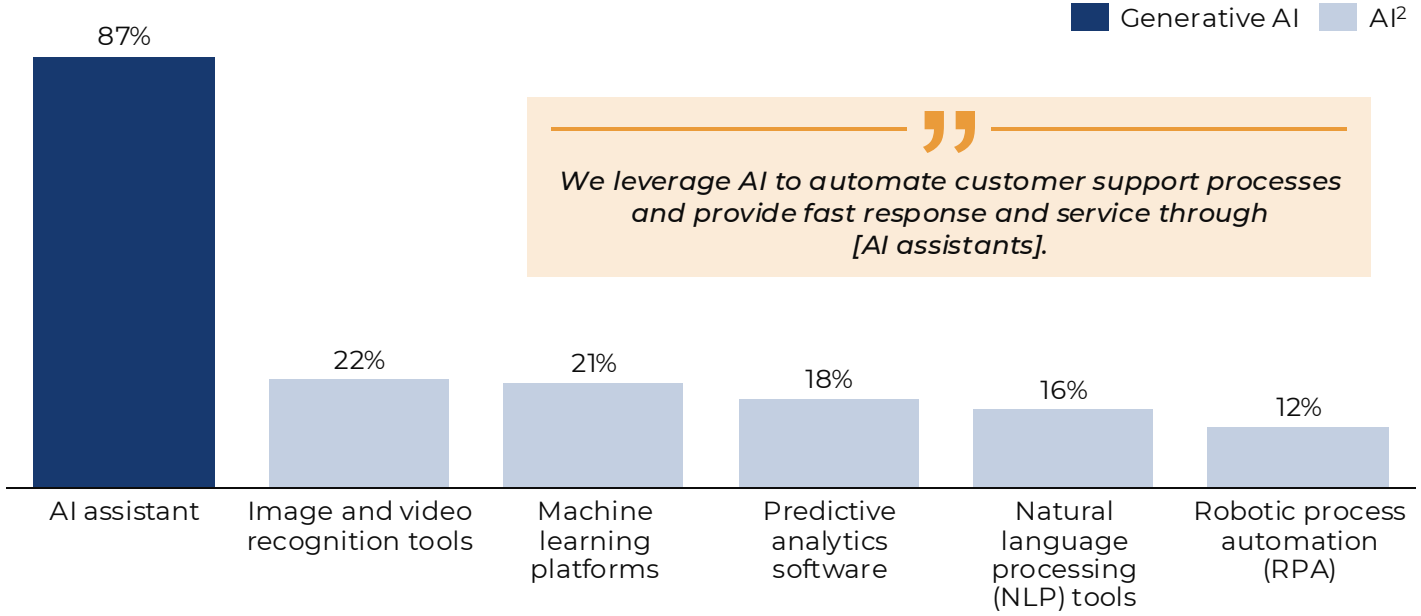
Stakeholder consultations also suggest that large organisations tend to use enterprise-grade AI tools such as Microsoft Copilot and custom-built models, while smaller organisations are more likely to use general-purpose tools such as ChatGPT. Additionally, Finance workers were likely to use AI risk assessment tools and predictive models, while Business workers tended to use AI-assistant tools.

Notes: 1. See page 40 for further detail. 2. McKinsey (2024) *The state of AI in early 2024: Gen AI adoption spikes and starts to generate value.*
Sources: Mandala analysis of survey of FSO members and SMBs.

AI tools used by individuals that use AI at work

Question: 'What AI tools do you use in your work?', Multi-select question, N=284

Generative AI is mainly being adopted by large organisations and frequently takes the form of proprietary models



> *We leverage AI to automate customer support processes and provide fast response and service through [AI assistants].*

Example tools					
ChatGPT, Copilot, Gemini	OpenCV, Amazon Rekognition	TensorFlow, PyTorch	SAS, RapidMiner	BERT	UiPath, Automation Anywhere

Notes: 2. The primary function of non-generative AI is not to create new content, but to analyse, process, predict or automate tasks using existing data and patterns.

Case study: St George & Sutherland Community College

- St George & Sutherland Community College (SGSCC), a leading Australian community education provider, has embraced artificial intelligence (AI) to enhance operations and student outcomes.
- The college uses AI to streamline social media engagement, automate workflow processes, and interpret complex regulatory documents. AI tools like ChatGPT assist in breaking down legal and policy texts, enabling staff to focus on higher-value tasks. Predictive analytics also play a crucial role in improving project planning and execution.
- Since adopting AI, SGSCC has improved efficiency without compromising academic integrity. Human oversight remains central. Staff refine AI-generated outputs to ensure quality and alignment with educational values. Additionally, trainers encourage responsible AI use, promoting critical thinking among students.
- SGSCC's balanced approach demonstrates AI's capacity to augment, not replace, human expertise, setting a model for integrating technology in community education with integrity and care.
- The integration of AI at SGSCC illustrates how AI can be a transformative tool in community education, enhancing engagement, streamlining operations, and supporting academic integrity while ensuring that the technology is properly understood.

Sources:: St George & Sutherland Community College, The Use of AI at SGSCC (2024)

Workers are mainly using AI to assist with written communication

Among workers using AI at work, 47% report using it for written communication tasks such as generating reports and checking grammar. Moreover, 14% report using AI for specialised applications such as creating lesson plans and assisting with payroll, and 11% report using it for data analysis such as financial analysis and reporting.

This is consistent with other research showing that automation of document processing, automation of IT processes, and business analytics are among the top use cases of AI.[1]

Stakeholder consultation also reported using AI to assist with writing policies and procedures, replying to customers and marketing emails, rephrasing awkward sentences, researching information, processing unstructured data such as claims and forms, and generating ideas for assessment tasks.

Moreover, consultations reveal that small organisations tend to use AI for basic task automation, social media management, and simple financial forecasting, while large organisations tend to use AI for complex predictive modelling, large-scale data analysis, and customer relationship management.[2]

Consultations also suggest that basic data processing, routine report generation, and responding to simple customer inquiries are tasks that are being fully automated by AI, while complex decision support, content creation and editing, and advanced data analysis are tasks that are being augmented by AI.

Notes: 1. IBM (2024) *IBM Global AI Adoption Index 2023*. 2 See page 40 for further detail.
Sources: Mandala analysis of survey of FSO members and SMBs.

Tasks performed using AI

Question: 'What tasks do you use AI for in your work?', free-text question[3], N=249[4]

Task	% of survey respondents	Examples
Written communication	47%	Generating reports, emails or marketing materials, and improving existing writing
Specialised applications	14%	Creating lesson plans and assessment materials for teachers, and assisting in payroll for accountants
Data analysis	11%	Data processing and management, financial analysis and reporting
Process Improvement	10%	Automating repetitive tasks, creating itineraries and daily plans
Research Assistance	9%	Searching for related content, summarising large documents
Customer Service	8%	Customer support chatbots, responding to customer emails

Notes: 3. Responses were placed into a single category using the task listed first if multiple were proposed. 4. N=13 responses were illegible, 'Technical and Creative' was omitted due to low response count.

Case studies: Digital Transformation Agency

- The Australian Public Service (APS) recently trialled Microsoft 365 Copilot, deploying it to over 7,600 users across 60+ agencies between January and June 2024. The initiative explored how generative AI could enhance productivity and efficiency within public sector operations.
- The results were overwhelmingly positive. 86% of participants expressed a desire to continue using Copilot, while 80% reported noticeable productivity gains. Users found the AI particularly helpful for drafting documents, summarising complex information, and managing email workloads.
- Beyond productivity, Copilot demonstrated its capacity to foster inclusivity. This included offering tailored support for employees with diverse needs by simplifying communication and enhancing accessibility.
- The APS's experience underscores the transformative potential of generative AI in the public sector. However, it also highlights the necessity of training and cultural adaptation to maximize the benefits of these tools. The trial sets a benchmark for integrating AI into government operations globally.
- Read the full report here.

Sources: Digital Transformation Agency (2024); Microsoft (2024).

Workers mainly benefit from AI through efficiency and quality improvements

Increased efficiency and improved quality of work have been the key areas where the benefits of AI have been realised. 73% of workers report that AI use has led to increased efficiency at work, while 53% report that AI has improved the quality of their work.

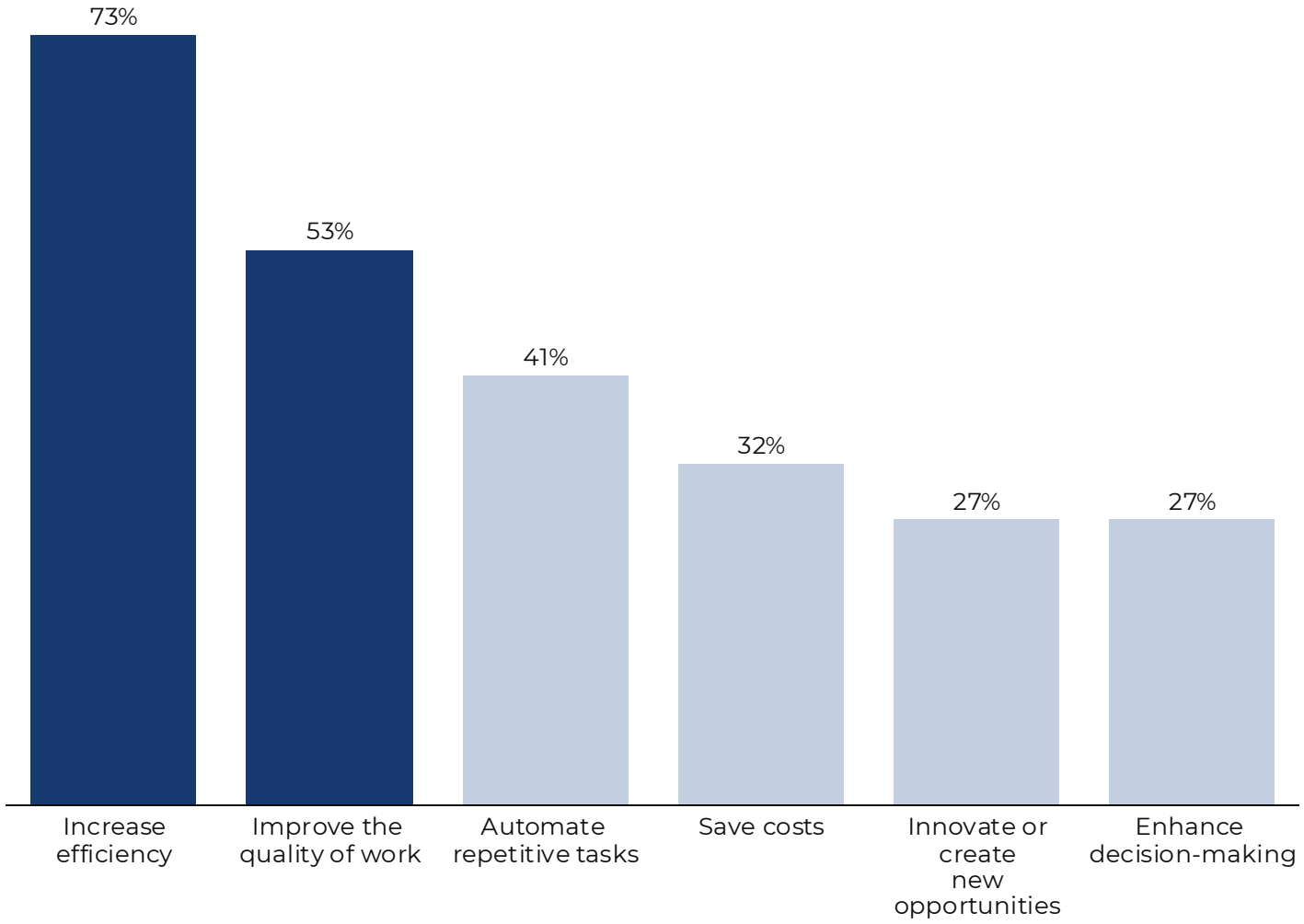
Efficiency gains have been spread evenly across Finance, Technology, and Business fields, whereas quality improvements have been enjoyed primarily in the Technology field.

Results from consultations reinforce these findings. For Technology, organisations are leveraging AI to improve product quality and development speed, particularly with AI-assisted coding and enhanced cybersecurity and threat detection. For Finance and Business, AI was used for simplifying and improving some operational processes (e.g., in HR and Finance) by automating repetitive tasks such as automating compliance checks and reporting and improving risk detection. AI was also valuable in enhancing data analysis and visualisation and processing unstructured data.

Other research shows that organisations are seeing material benefits from generative AI use, with many reporting cost decreases in the business units deploying the technology.[1]

Ways in which AI helps at work

Question: 'How has AI helped you at work?', Multi-select question, N=284



Notes: 1. McKinsey (2024) *The state of AI in early 2024: Gen AI adoption spikes and starts to generate.*

Sources: Mandala analysis of survey of FSO members and SMBs.

Section 3

Barriers to AI adoption

Adoption is limited by deficits of trust, skills, and regulatory certainty

Many organisations are worried about the accuracy and integrity of AI outputs, particularly AI hallucinations and potential errors. Survey results show that concerns about data privacy are the top concern expressed across demographics. Older workers reported that the main restriction to AI use at work is a lack of trust in AI.

There is a notable shortage of professionals with the necessary skills to implement and manage AI effectively. The lack of skills and knowledge is particularly prevalent at more senior levels. Importantly, AI trainers are also lacking the necessary skills in AI to upskill other employees and individuals. These trainers may not be equipped with the knowledge to teach the latest developments in AI.

The future regulatory landscape is expected to play a key role in shaping AI adoption and implementation. There is an expectation across all sectors that regulation and legislation should help to facilitate smoother integration of AI technologies, including by defining the responsibilities of technology providers and where or how AI can be used.

Finally, certain individual and organisational attributes mean that particular groups are less likely to be exposed to and use AI. This includes smaller organisations, as well as regional and remote workers, lower income workers and older workers.

Notes: 1. KPMG & UQ (2023) *Trust in Artificial Intelligence – A global study*. 2. UTS (2024) *'Invisible Bystanders': How Australian Workers Experience the Uptake of AI and Automation*. 3. Ai Group (2024) *The digital and AI revolution, jobs and skills*. 4. Productivity Commission (2024) *Making the most of the AI opportunity – Research paper 1*. 5. eSafety Commissioner (2023) *Tech Trends Position Statement – Generative AI*.

Key AI adoption barriers

Literature review, survey results, and stakeholder consultations

Limited trust	Lack of skills and knowledge	Regulatory uncertainty	Individual and organisational attributes
33% of workers surveyed report that a lack of trust in AI restricts their use.	33% of workers surveyed don't use AI at work because of a lack of skills and 63% of businesses say a skills gap is a barrier for AI adoption.[3]	Stakeholders are concerned about the lack of a clear regulatory framework for AI in Australia and internationally.[1,3]	Research shows that adoption is lower for SMEs.[3]
Survey results suggest concerns about data privacy and security are the main types of concern reported across demographics.	Stakeholder consultations suggest the AI skills deficit is most noticeable at senior levels of organisations.	Stakeholders are also concerned about regulations being too restrictive and stifling innovation.	Survey results show that the main restriction to AI use among older workers is trust.
AI hallucinations have raised concerns about the accuracy and integrity of AI outputs.	Stakeholder consultations suggest trainers facilitating AI adoption are not equipped with the skills or knowledge to teach the latest developments in AI.	According to research, overlapping regulations in different Australian jurisdictions potentially increase compliance costs.[4]	Survey results show that the main restriction to AI use among workers located in regional or remote areas is a lack access to training.
Research suggests that Australian workers don't feel they can influence AI use in their industry.[2]	Research suggests that businesses have insufficient understanding of AI opportunities.[3]	Research suggests that regulatory burdens may be more acute for SMEs, especially those operating in overseas jurisdictions facing additional regulations.[4]	Survey results show that the main restriction to AI use among low-income workers is AI's lack of relevance to their work tasks.

Sources: Mandala analysis of survey of FSO members and SMBs.

The main restrictions to AI use at work are a lack of trust and training

The top restrictions to AI use at work are lack of trust (33%) and lack of AI skills (33%). For trust, stakeholders reported concern about AI output accuracy and integrity, particularly AI hallucinations and errors. This aligns with research showing only 40% of Australians trust AI at work.[1] More men (33%) than women (22%) report trust issues restrict their AI use at work.

Lack of trust aligns with workers' top concerns about AI use: data privacy and security (58%), and over-reliance on technology (42%). Business workers and those in large organisations are most concerned about these issues and most affected by lack of AI trust and training.

A lack of training is another key restriction. This is consistent with research showing training shortage is the main barrier to AI adoption among Australian small to medium enterprises.[2] More women (30%) than men (25%) report skills gaps restrict their AI use at work.

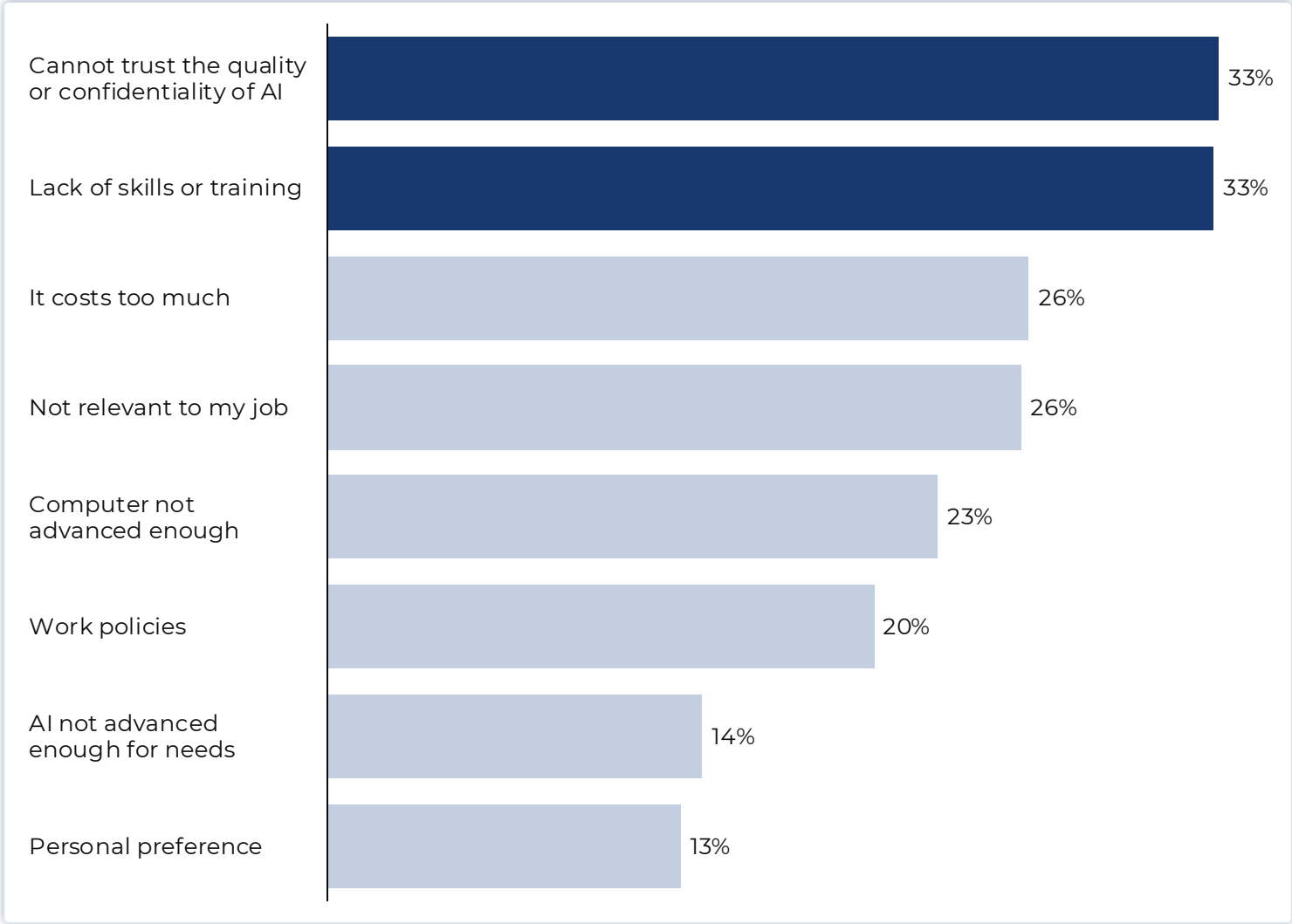
Stakeholder consultations reveal a notable shortage of professionals with skills to implement and manage AI effectively, with this gap particularly evident at senior levels, especially in Finance and Business sectors.

Relatedly, a common concern amongst stakeholders was that trainers facilitating AI adoption lack the skills to teach about the latest AI developments.

Notes: 1. KPMG (2023) *Trust in Artificial Intelligence: Global Insights 2023*. 2. NAB (2024) *SME Business Insights*.
Sources: Mandala analysis of survey of FSO members and SMBs.

Restrictions to AI use at work

Question: 'What is restricting your use of AI at work currently?'; Multi-select question; N=378[3]



Notes: 3. 'Other' responses (made by 7.9% of respondents) are not graphed.

Case study: ANZ Immersion Centre

- ANZ Bank has partnered with Microsoft to establish an AI Immersion Centre at its Melbourne headquarters, a first-of-its-kind initiative in the banking sector across Australia and New Zealand. The centre aims to train 3,000 leaders over the next year, equipping them with the skills to adopt and deploy generative AI technologies effectively and responsibly.
- The AI Immersion Centre provides hands-on experiences to help leaders explore practical applications of AI, from enhancing productivity to improving customer service. Supporting this effort, ANZ has invested in 3,000 Microsoft 365 Copilot licenses and integrated tools like GitHub Copilot and its proprietary Z-GPT chatbot.
- This initiative underscores ANZ's commitment to embracing AI as a driver of innovation and operational efficiency, while maintaining a focus on ethical and responsible use. By fostering AI literacy and empowering its workforce, ANZ is setting a benchmark for how financial institutions can transform their operations and deliver exceptional value to customers through cutting-edge technology.

Source: ANZ (2024)

Different barriers restrict AI use among different demographic groups

Workers aged over 55 are less likely to use AI at work than those aged under 35. Younger professionals tend to be more comfortable with AI tools. On the other hand, consultations reveal stakeholder concerns on the impact of AI on entry-level or junior employees' traditional career models, which would likely impact younger people.

Other research finds that older people are 25 percentage points less likely to use AI than younger people.[1] The main restriction to using AI at work faced by workers over the age of 55 is a lack of trust in the quality or confidentiality of AI (34%).

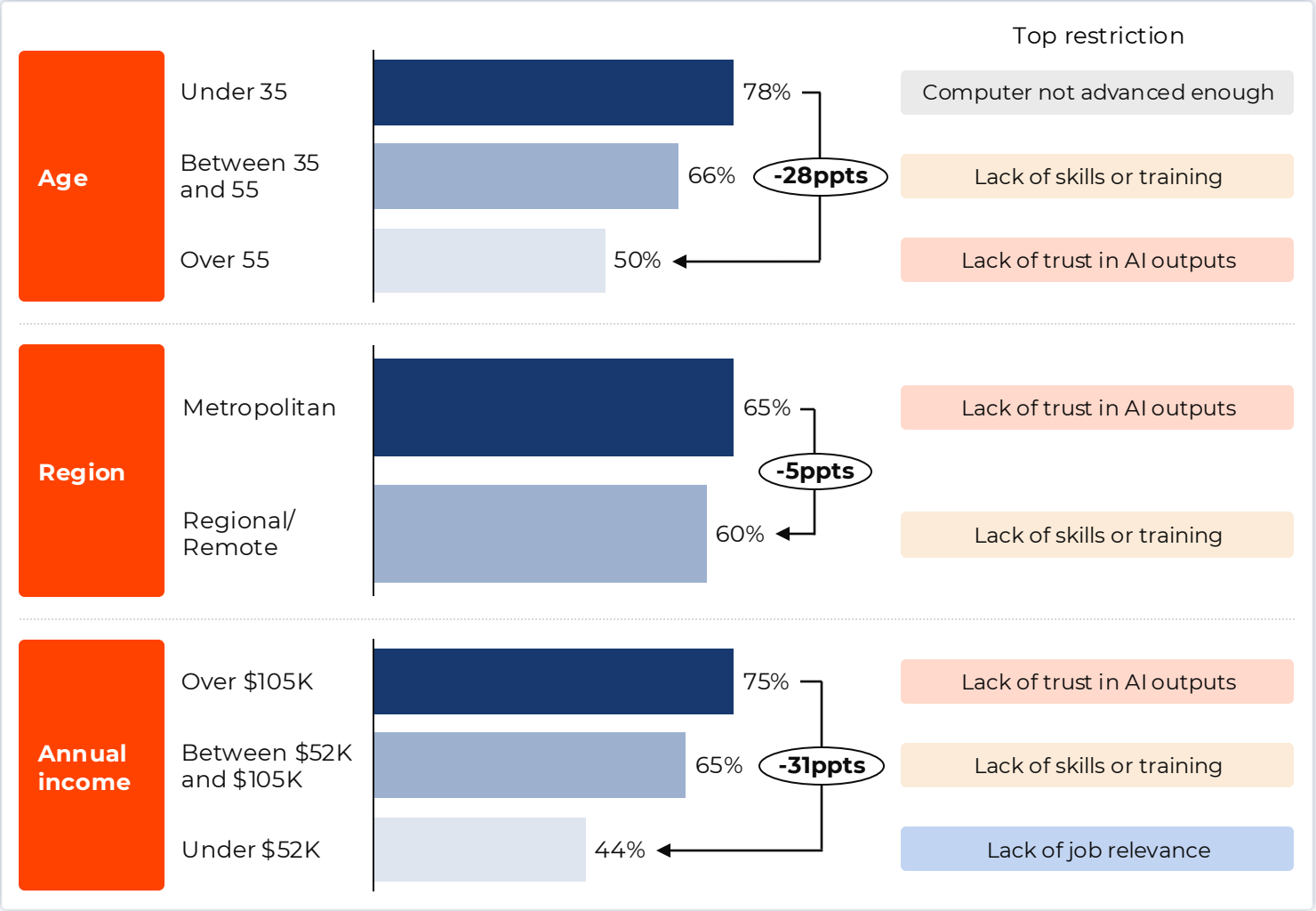
Workers who live in regional or remote areas are less likely to use AI than those who live in metropolitan areas. The main restriction to using AI at work faced by workers living in regional or remote areas is a lack of skills and training (29%).

Similarly, lower income workers are less likely to use AI at work than higher income workers. **This was the case more for women than men.**[2] The main restriction to using AI at work faced by workers earning less is a lack of job relevance (41%), indicating that the tasks that AI can be used for may be better suited to particular jobs.

Relatedly, research shows that culturally and linguistically diverse (CALD) individuals face digital literacy challenges, primarily due to affordability barriers. For the education and training sector, this highlights the need to develop targeted, accessible programs that address technological skills gaps and economic constraints, ensuring these communities can participate effectively in a digital workforce.[3]

AI adoption by demographics

Question: 'Do you use AI for work?'; Demographic Questions: 'What is your age?'; 'Where is your home or primary residence located?'; 'What is your total personal income each week, before any deductions or tax?'



Sources: Mandala analysis of survey of FSO members and SMBs.

Notes: 1. OECD (2024) *OECD Social, Employment and Migration Working Papers*.. 2. See page 39. 3. RMIT (2019) *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2019*.

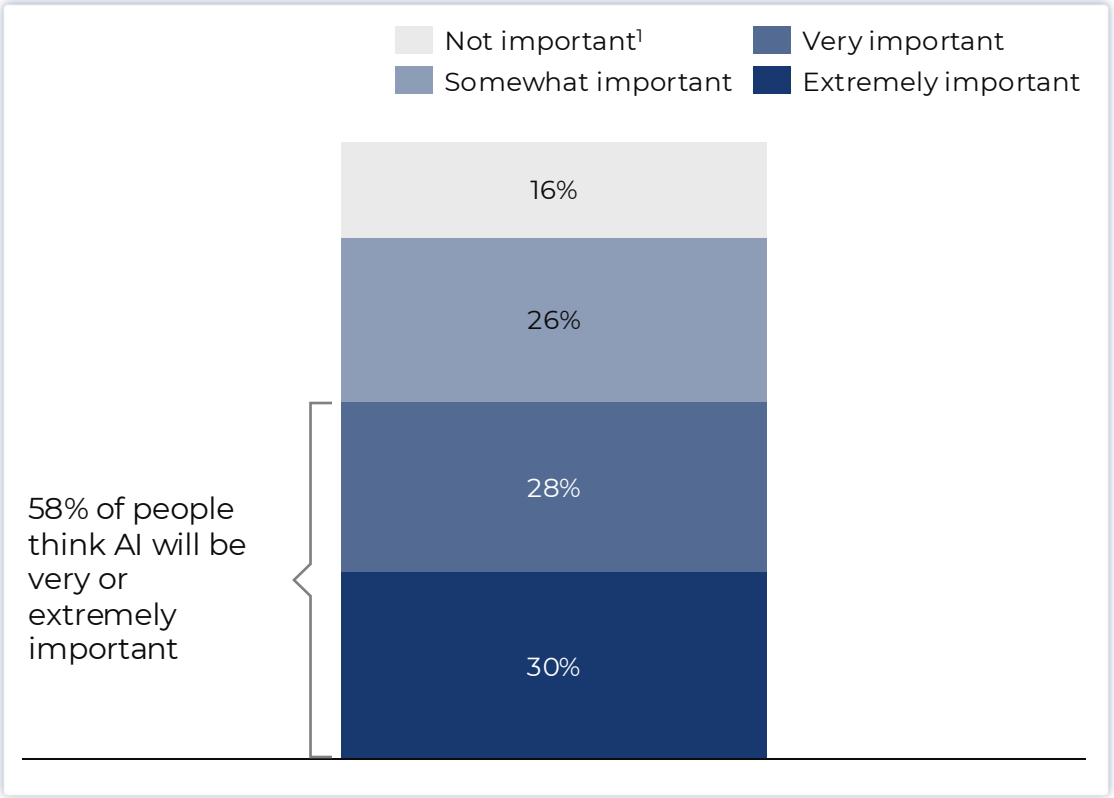
Section 4

AI training needs

Over half of FTB workers believe AI will be important in the near-future while over two-thirds want to use it more

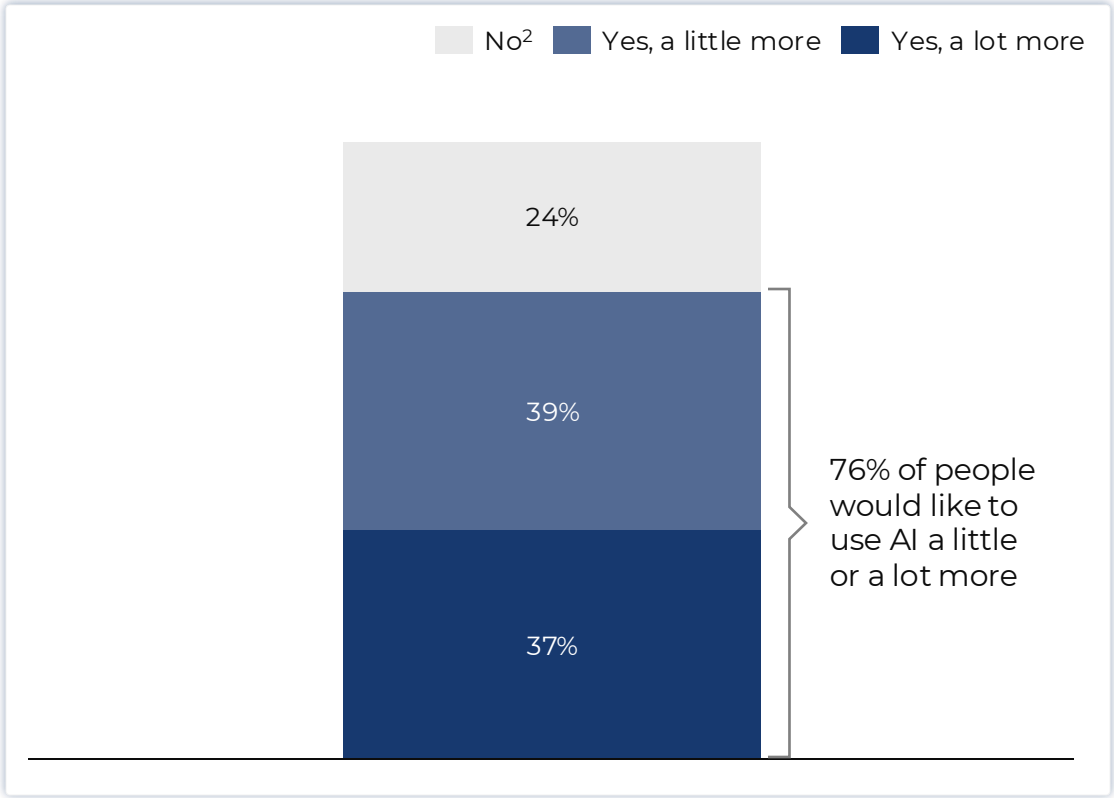
Individual assessment of AI's near-term importance

Question: 'How important do you think AI will be in the next 3-5 years?', N=447



Individual desire to use AI

Question: 'Would you like to use AI more than you are currently using it at work?', N=284



Insights based on combined FSO and SMB survey

Notes: 1. 'Not important' includes 'Not important at all' and 'Not very important'; 2. 'No' includes 'No, a lot less', 'No, a little less', and 'No, it's the right amount'.
Sources: Mandala analysis of survey of FSO members and SMBs.

86% of workers are interested in receiving more AI training

There is a strong interest in upskilling in AI. 86% of workers report that they are interested in receiving more AI training. This is consistent with research by LinkedIn which finds that 80% of people want to learn more about how to use AI in their profession.

A gender-based view reveals that 48% of women report being very interested in AI training, with 38% of men very interested. Stakeholder consultations suggest that younger works are generally more enthusiastic about AI training and are often more self-motivated to learn and experiment with AI tools than older workers

Despite this interest, half of workers report that they have not been provided with any training or resources to understand and use AI tools.

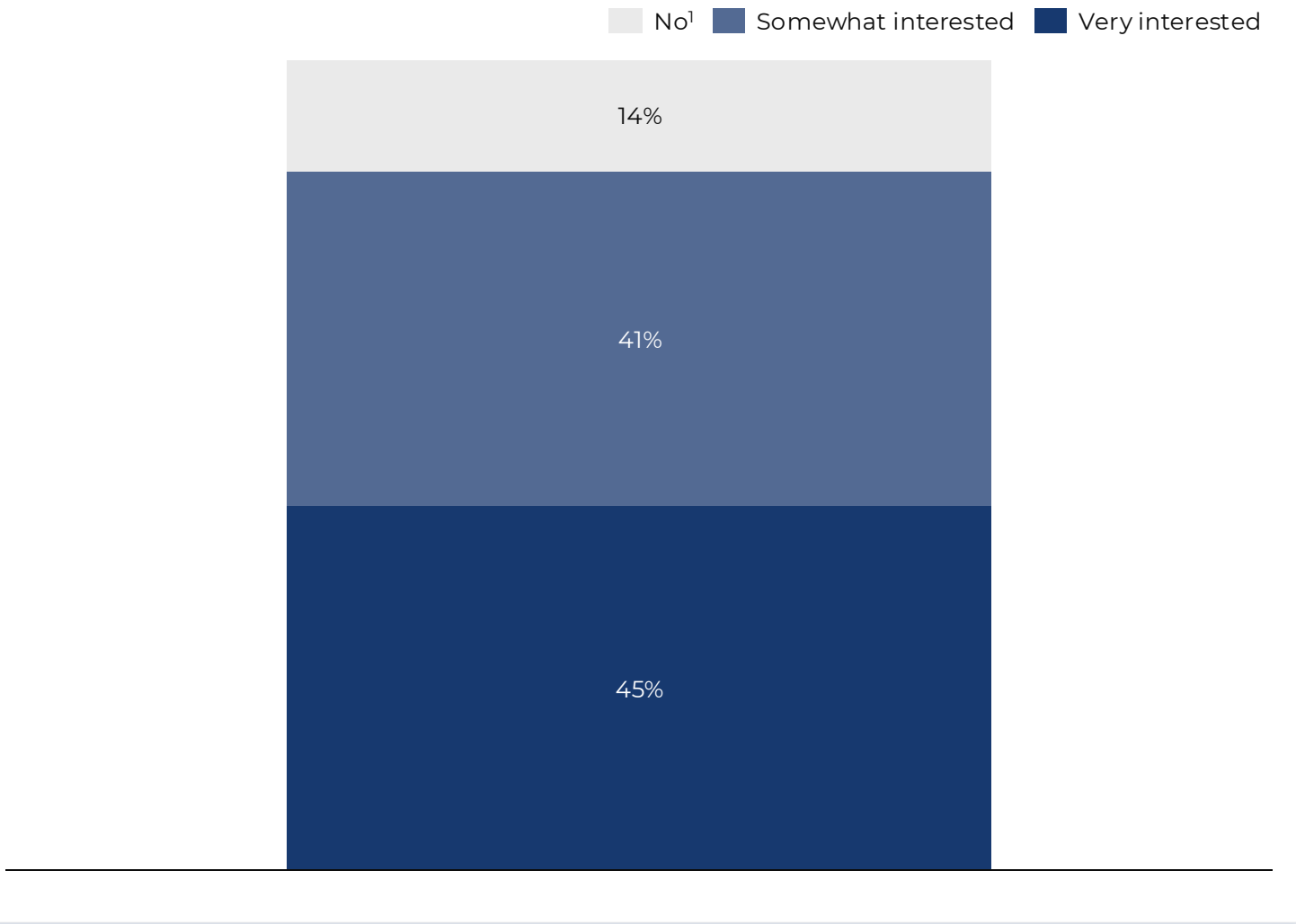
Among the 14% of workers who are not interested in training to use AI, the most common reasons are a lack of trust in AI (20%), a lack of job relevance to using AI (19%), and comfort with existing AI skills (17%). For Technology workers, the primary reason for not being interested in AI training is comfort with existing AI skills, for Business workers it is a lack of trust in AI, and for Finance workers it is a lack of relevance to their job.

Importantly, individuals showed a strong interest in both formal and informal types of training.

Sources: LinkedIn (2024) *Workplace Learning Report 2024;* Mandala analysis of survey of FSO members and SMBs.

Interest in training to use AI

Question: 'Would you be interested in training to use AI?', N=447[2]



Notes: 1. 'No' includes 'Unsure' responses; 2. Totals may not sum to 100% due to rounding errors.

Survey respondents are most interested in learning about the fundamentals of AI and how to implement it

Training topics individuals are most interested in

Insights based on combined FSO and SMB survey

Question: 'What topics and material would you be interested in?', Free text responses

AI fundamentals and applications

- Basic understanding of AI and its capabilities in an easy-to-understand way
- Types of AI and their practical applications across industries
- Use cases in business, finance, marketing, education, and other sectors
- Introduction to machine learning, natural language processing, and computer vision

Practical AI implementation and usage

- How to effectively use AI tools and technologies in daily work
- Implementing AI in existing business processes and workflows
- Automating tasks and improving efficiency using AI
- Prompt engineering and optimising AI outputs
- Creating content, analysing data, and generating insights with AI

AI ethics, security, and best practices

- Responsible use of AI and ethical considerations
- Data privacy, security, and compliance in AI applications
- Best practices for AI adoption in organisations
- Evaluating AI tools and ensuring accuracy of AI-generated content
- Future trends and potential impacts of AI on various industries

Sources: Mandala analysis of survey of FSO members and SMBs.

Case study: CommBank AI For All

- In May 2024, CommBank launched "AI For All," a microlearning series aimed at providing everyone at the bank with the foundational skills around how to work with AI.
- The series features bite-sized learning videos teaching basic AI concepts and responsible use of AI. These foundational topics aim to build awareness and engagement in AI by aligning messaging across the group's employees.
- Employees can also access role-specific AI training of varying complexity, such as how to improve fraud detection through AI.
- With over 38,000 collective views across nine modules since launch, the initiative demonstrates strong employee interest in developing AI literacy. It also highlights success in promoting a consistent organisational attitude towards AI, where technology is embraced at the core of decision making.
- This effort is part of CommBank's strategy to develop world-class data and AI capabilities, aiming to maintain leadership and improve customer experiences. Chief Data and Analytics Officer Dr. Andrew McMullan sees empowering employees with future skills as crucial to building a customer-obsessed culture.

Source: CBA (2024)

Section 5

Action plan

VET must adapt its offerings to meeting growing AI skills demands to remain industry-relevant

	Short term (less than 1 year)	Medium term (1-2 years)	Long term (more than 2 years)
Summary	• Develop non-accredited courses for fast delivery to market with a focus on, **transferable, broad-based generative AI skills** for the FTB sector • **Begin to explore and develop accredited training products** for generative AI, building off unaccredited courses	• Introduce accredited courses focused on **transferable, broad-based generative AI skills** • **Monitor FTB sectors** for sector-wide trends in usage and adoption of generative AI for particular roles through ongoing consultation and engagement with industry and workers	• Expand coverage of **transferable, broad-based** generative AI **skills** for the VET sector • Develop more **technical courses** focused on AI more broadly • Develop **more specialised courses for FTB** with industry, focused on industry specific skills where use cases are clear
Training Products	Introduce new generative AI non-accredited short courses, micro-credentials, certifications endorsed by the FSO that are focused on: • Fundamentals: concepts and terminology, types, and limitations • Practical Applications: common tools and platforms, prompt techniques, use cases • Safe and Responsible Use: privacy and data protection, integrity and accuracy, risk assessment Begin to develop accredited products	Introduce accredited training courses that leverage non-accredited short courses on generative AI fundamentals, applications and ethics. Monitor for industry-specific use cases for AI, and develop relevant training products such as: • Generative AI for Business Analytics • Generative AI for Coding	Continue to build on AI UoCs and skill sets and introduce AI-related Qualifications into the VET system Introduce more technical AI courses such as: • Applied AI • AI Development and Deployment • AI Strategy and Governance • AI for Industry 4.0 Expand industry-specific course offerings to cover more AI-related tasks and applications
Teaching and assessment requirements	• Attract high quality educators from industry to champion AI in classroom • Ensure rapid upskilling of trainers • Develop practical assessments for students that require use of AI tools	• Develop industry partnerships for real-world projects and assessments	• Establish group of experts and educators to regularly review and update AI-related content across all levels of training • Explore AI-assisted learning platforms to enhance skill set delivery
Cross-cutting requirements	• **Enhanced trainer and teacher currency:** fast changing skills demands will require support for trainers and teachers to deliver training • **Industry collaboration:** VET providers and industry should work closely ongoing to ensure training programs evolve with changing skills demands • **Learner-centred approach:** VET providers and industry should ensure training programs are learner-centred • **AI Principles:** understanding AI principles will be important for having a continued understanding of AI even with significant advances in the technology		

Source: Mandala analysis.

Stakeholder consultations have identified several learnings when implementing AI into their organisation

Stakeholder consultation findings on integration of AI

Ai integration	Insights
Strategic implementation	**AI strategy** • Organisations with a clear vision and strategy for AI and that have a strong understanding of AI use cases were better able to implement AI in a targeted manner to address particular processes and specific business needs
	Pilot tests and safe implementation • Doing smaller tests within a particular department can ensure processes are properly tested and get necessary buy-in to roll out AI more broadly in the organisation. Safe implementation will also ensure that necessary security measures are in place.
Transparency and collaboration with workers	**Transparency on AI integration** • Organisations need to be transparent with employees about AI integration plans to ensure employees have ample time and support to upskill in new technologies and capabilities • Organisations have seen a more receptive response to AI from employees when they outline the purpose of AI and its role to augment jobs as opposed to replace jobs
	Collaboration with workers • Organisations which collaborate with workers in the implementation of AI (as opposed to a purely top-down approach for integration) are likely to see more beneficial impacts from AI, due to having a better understanding of the specific processes involved
Measuring AI's impact	**Measuring AI** • Many organisations have noted challenges quantifying the impact of AI but understand the importance of introducing these technologies and the learning curve involved in exploring best use cases and applications
Educating on AI and AI champions	**Educating on AI** • Organisations have had more success introducing AI into departments and processes when workers understand the capabilities and limitations of AI, reducing issues around trust
	AI champions • Having trusted AI champions within the organisation has been an effective way of getting buy-in on AI and better understanding its benefits and use cases. Supporting these AI champions within the business will also be important

Sources: Mandala interviews.

Case study: Big banks using AI

- Australia's major banks are embracing AI to improve the efficiency of home loan approvals and enhance customer experience. ANZ Bank has implemented AI tools for tasks such as document verification and summarizing customer files, drastically reducing processing times from hours to seconds. Similarly, NAB leverages AI to analyse the emotional sentiment of customer phone calls, using these insights to refine service quality and better address client needs.
- The adoption of AI offers clear operational advantages, but it has also sparked concerns about potential job losses, particularly in customer-facing roles such as call centres. The Finance Sector Union has warned that thousands of positions could be at risk as automation expands within the industry. Banks, however, argue that AI acts as a "co-pilot" to support human workers, suggesting that new roles and opportunities may arise alongside AI integration.
- This shift highlights the delicate balance between harnessing AI for productivity gains and addressing its broader implications for the workforce. As Australian banks continue to innovate, their experience may serve as a model for navigating the challenges and opportunities posed by AI in financial services.

Sources:: ABC (2024)

Organisations will need to consider different factors when implementing AI depending on their level of AI maturity

NASCENT:

Limited or no AI adoption. No elements in this framework in place.

ADOPTED:

Basic AI projects implemented. Usage is led by individual not organisation. Few elements in this framework in place.

DEFINED:

AI strategy and governance in place. All elements of Preparation category are in place

MANAGED:

AI implemented in business processes. All elements of Preparation and Implementation in place.

OPTIMISED:

Continuous improvement and innovation with AI. All elements of Preparation, Implementation and Monitoring and Review in place.

PREPARATION	IMPLEMENTATION	MONITORING AND REVIEW
Develop a clear AI strategy Identify preferred uses and goals for using AI across your organisation based on your organisational level of maturity.	**Pilot tests and safe implementation** Doing smaller tests within a particular department can ensure processes are properly tested and get necessary buy-in to roll out AI more broadly in the organisation. Safe implementation will also ensure that necessary security measures are in place.	**Assessment and improvement** Establish a process for continuous assessment and improvement through, for example: • **Regular Reviews:** Periodic reviews of AI maturity and progress. • **Feedback Mechanisms:** Channels for feedback from stakeholders. • **Adaptation:** Adjustments to the AI strategy based on feedback and new developments.
Assess current capabilities and needs Evaluate your employees' skill levels with AI tools and implement training programs. Training could include AI fundamentals, practical implementation and usage of AI, AI ethics, security and best practices.	**Embed into existing processes and workflows** Implementing AI in existing business processes and workflows such as automating tasks and improving efficiency using AI such as creating content, analysing data, and generating insights.	**Measure impact of AI adoption** This could be through: • Financial Metrics • Employee Surveys / Feedback • Customer Satisfaction
Identify AI champions Trusted AI champions within the organisation can be an effective way of getting buy-in on AI and better understanding its benefits and use cases.		
Develop guidelines for safe and ethical AI use Address concerns about accuracy and integrity through an AI policy for employees.		

Sources: FSO analysis.

Appendix

We interviewed 40 senior leaders representing sectors, employees, employers, government and business

Stakeholders engaged in consultation

Sector representatives	• Australian Digital Inclusion Alliance (ADIA) • Community Colleges Australia • Infoxchange • Institute of Certified Bookkeepers (ICB)
Employee representatives	• Australian Council of Trade Unions (ACTU) • Finance Sector Union (FSU)
Employer representatives	• Australian Industry Group (Ai Group) • Australian Banking Association (ABA) • Commercial & Asset Finance Brokers Association (CAFBA) • Communications and Information Technology Training (CITT)
Associate members	• Atlassian • Australian Computer Society (ACS) • Australian and New Zealand Institute of Insurance and Finance (ANZIIF) • Australian Public Service Commission (APSC) • Commonwealth Bank of Australia (CBA) • Equinim College • Generation Australia • Goanna Solutions • MFAA (Mortgage and Finance Association of Australia) • NBN Australia • Small Business Association of Australia (SBAA) • TAFE NSW • Women in Adult and Vocational Education (WAVE) • Year13
Government & jobs and skills councils	• Digital Transformation Agency (DTA) • Independent Tertiary Education Council Australia (ITECA) • *Industry Skills Australia (ISA)* • *Manufacturing Industry Skills Alliance (MISA)* • *Mining and Automotive Skills Alliance (AUSMASA)* • National Artificial Intelligence Centre (NAIC) • *Public Skills Australia (PSA)* • *Services and Creative Skills Australia (SaCSA)*
Other	• ANZ • Australian Retirement Trust (ART) • Block, Inc. • Council of Small Business Organisations Australia (COSBOA) • Microsoft • SEEK • Xero • Zurich Australia

Focus of interviews

Future outlook of AI	• Short, medium, and long-term forecasts of AI adoption • Opportunities and threats presented by AI in the future
Adoption of AI	• Current AI adoption plans; Industry-wide investment in AI • Considerations around AI strategy, workforce upskilling, and regulation
Barriers to AI adoption	• Most significant barriers facing industries and organisations in adopting AI • Uncertainty around AI regulation
Training	• Prevalence of workers with self-taught AI skills • Most important topics and training formats for upskilling workers in AI

Supplementary survey analysis

Individual AI adoption by demographics

Male and female individual adoption of AI across industries

Individual adoption of AI by industry and gender

Lowest in group Highest in group

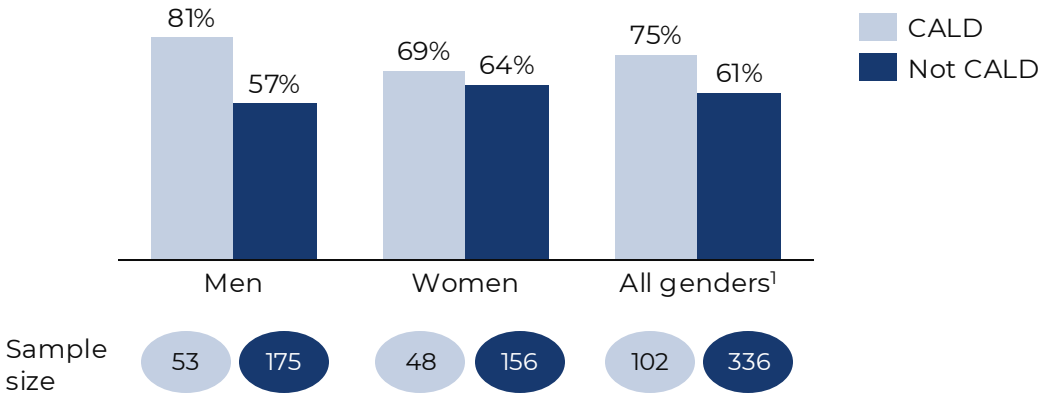
Question: 'Do you use AI for work?'[1], N=447; 'Which of the following fields is your organisation most closely aligned with?', Multi-select question, N=522; 'What is your gender?', N=447

		Industry			Overall
		Finance	Technology	Business	
Women	Adoption rate	66%	79%	65%	65%
	Sample size[2]	59	47	138	208
Men	Adoption rate	68%	70%	58%	62%
	Sample size	68	104	120	232

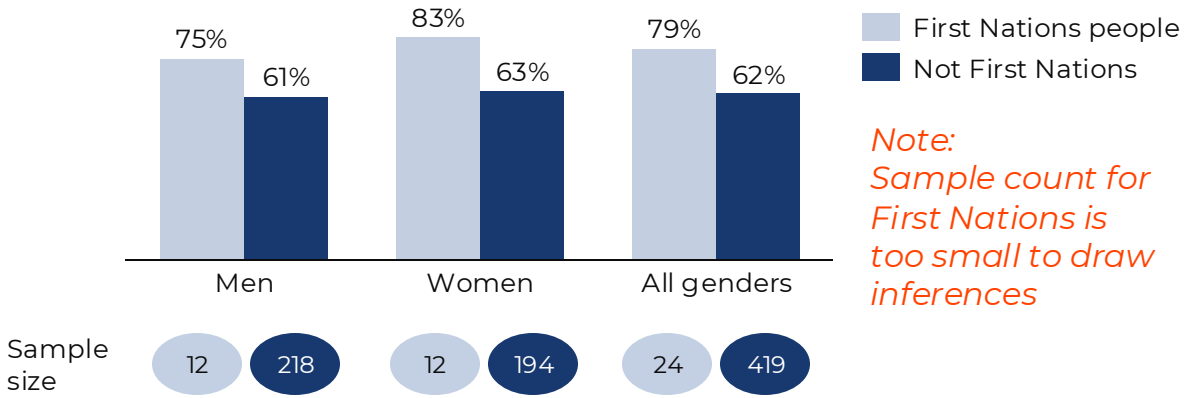
Notes: 1. N=129 for Finance, N=155 for Technology, N=264 for Business. 2. Respondents could choose more than one industry they work in, meaning the sample sizes for each industry sum to more than the overall sample size.
Sources: Mandala analysis of survey of FSO members and SMBs.

Adoption of AI by demographic characteristics

AI adoption by gender and CALD status

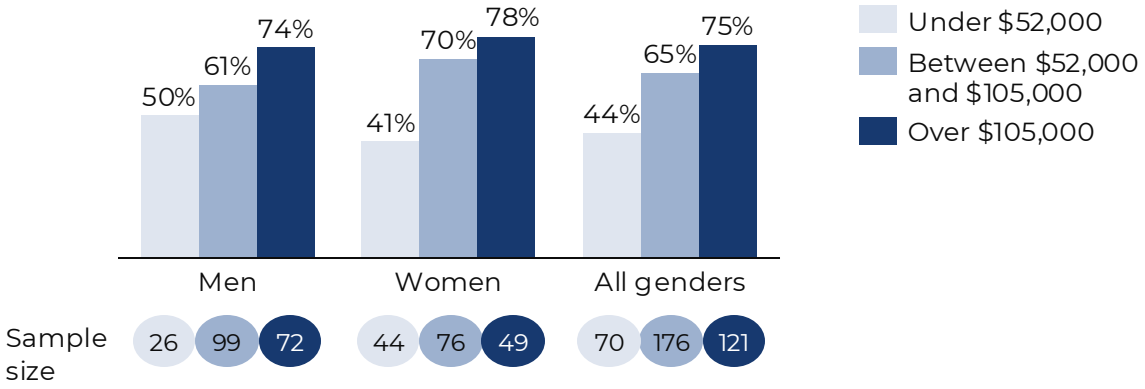


AI adoption by gender and First Nations status

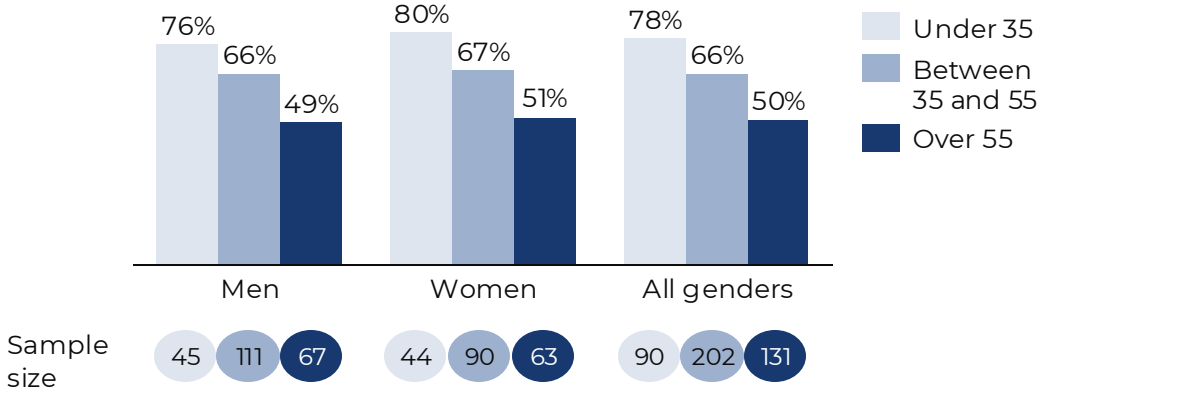


Note:
Sample count for First Nations is too small to draw inferences

AI adoption by gender and income status



AI adoption by gender and age



Notes: 1. All genders includes 'Non-binary' and 'Prefer not to say' responses. 2. Sample sizes differ across demographic characteristics because the questions were not mandatory and could be skipped. 3. See survey instrument for detail on the questions asked.
Sources: Mandala analysis of survey of FSO members and SMBs.

Adoption of AI is highest for large organisations and those in the tech sector, while smaller businesses have the lowest uptake of AI and AI tools

Organisational AI adoption and top tools used, by industry and by size

Lowest in group | Highest in group

Question: 'Does your organisation use AI?'[1]; 'What AI tools do you use in your work?'[2]

Group		Adoption of AI	AI tools used		
		Organisational adoption	AI assistant	Machine learning	Predictive analytics
Industry	Finance	62%	87%	28%	23%
	Technology	70%	88%	24%	22%
	Business	57%	91%	15%	12%
Size[3]	Micro	33%	80%	14%	9%
	Small	58%	83%	21%	14%
	Medium	65%	87%	30%	36%
	Large	72%	96%	11%	4%

Notes: 1. N=128 for Finance; N=155 for Technology; N=263 for Business; N=85 for Micro; N=144 for Small; N=137 for Medium; N=71 for Large. 2. N=86 for Finance; N=114 for Technology; N=162 for Business; N=35 for Micro; N=96 for Small; N=92 for Medium; N=56 for Large. 3. Business size based on the following: Micro (<5 employees), Small (5-19 employees), Medium (20-200 employees) and Large (>200 employees).
Sources: Mandala analysis of survey of FSO members and SMBs.

While all firms report privacy and trust concerns, large organisations are most affected, and skills gaps impact Finance and Business more acutely

Concerns and restrictions in relation to the use of AI at work, by industry and size

Lowest in group Highest in group

Question: 'Do you have any concerns about the use of AI at work?'[1]; 'What is restricting your use of AI at work currently?'[2]

Group		Concerns about the use of AI: Data privacy and security	Concerns about the use of AI: Over-reliance on technology	Restrictions to the use of AI: Lack of skills	Restrictions to the use of AI: Distrust in quality of AI
Industry	Finance	53%	41%	35%	32%
	Technology	58%	41%	27%	33%
	Business	60%	43%	37%	36%
Size[3]	Micro	54%	41%	33%	31%
	Small	52%	40%	30%	31%
	Medium	57%	40%	31%	35%
	Large	73%	47%	39%	36%

Notes: 1. N=128 for Finance; N=155 for Technology; N=263 for Business; N=85 for Micro; N=144 for Small; N=137 for Medium; N=71 for Large. 2. N=108 for Finance; N=132 for Technology; N=220 for Business; N=75 for Micro; N=116 for Small; N=117 for Medium; N=61 for Large. 3. Business size based on the following: Micro (<5 employees), Small (5-19 employees), Medium (20-200 employees) and Large (>200 employees).
Source: Mandala analysis of survey of FSO members and SMBs.

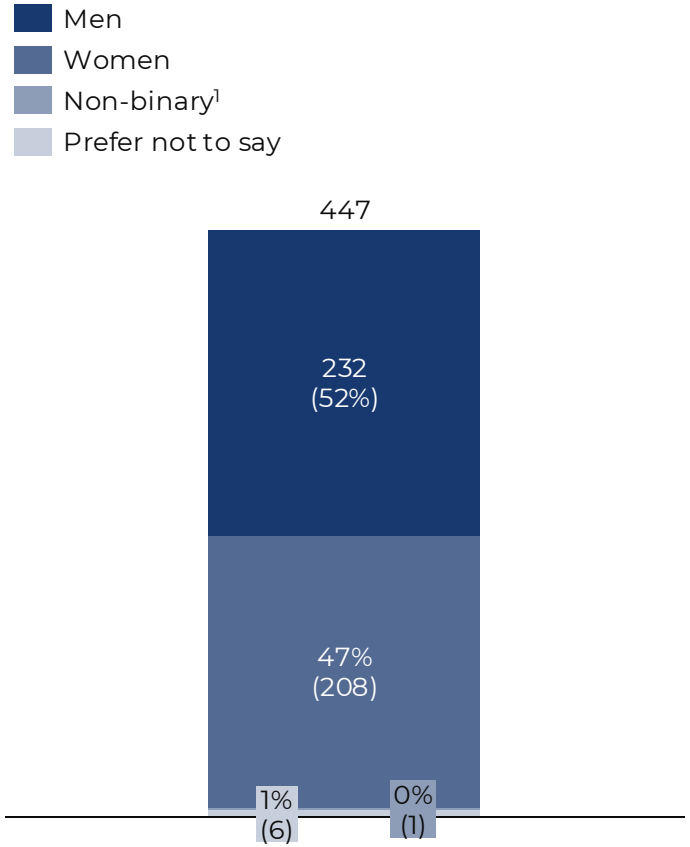
Supplementary survey analysis

Survey sample overview

Survey samples: Individual attributes

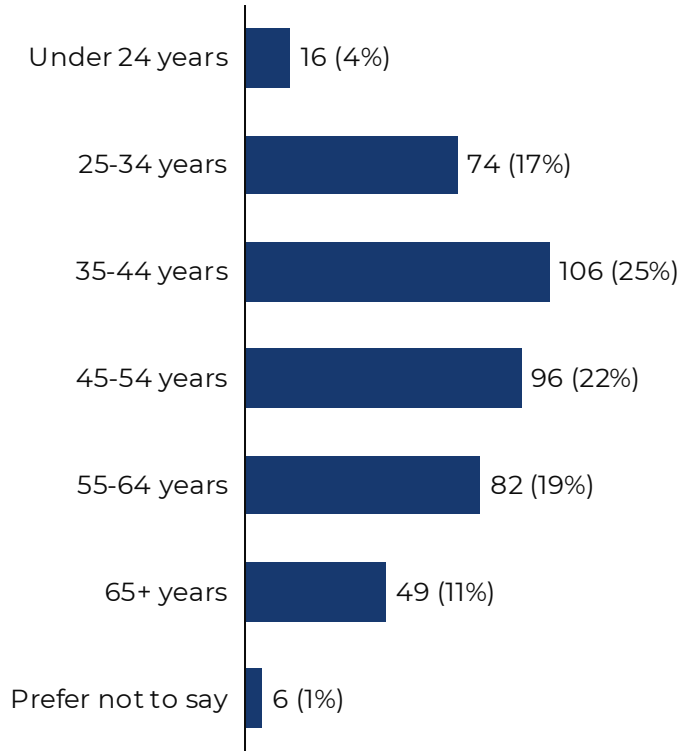
Sample size by gender

Question: 'What is your gender?', N=447



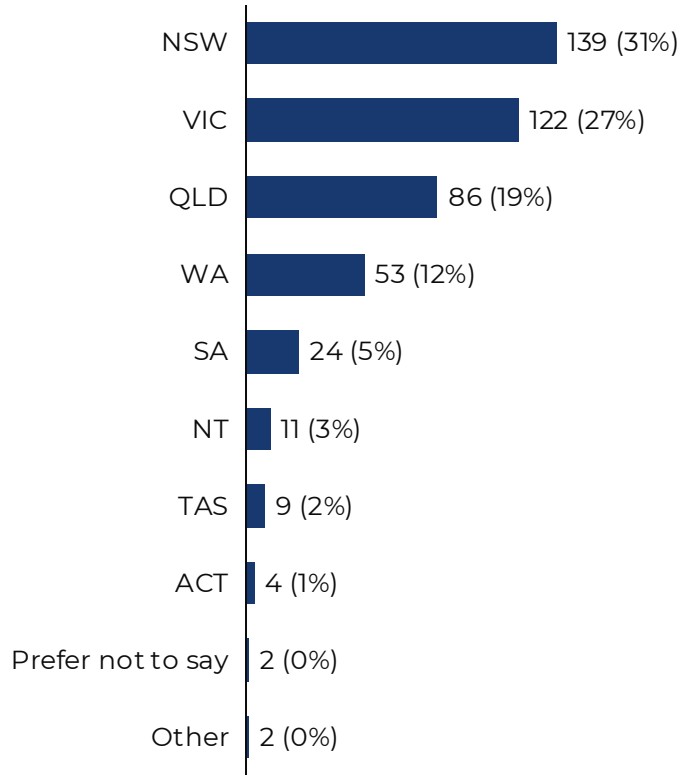
Sample size by age

Question: 'What is your age?', N=429[2]



Sample size by state / territory of residence

Question: 'Which Australian State or Territory do you live in?', Multi-select question, N=447

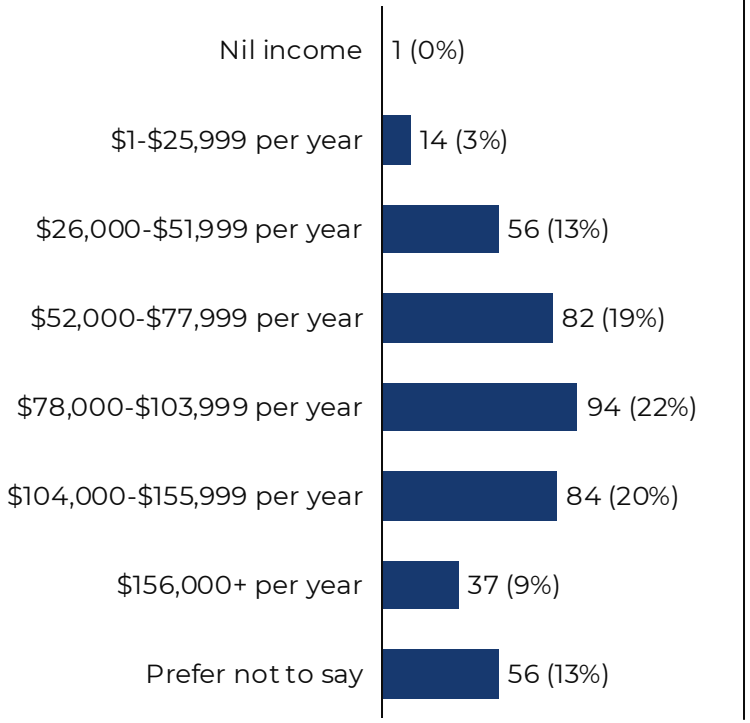


Notes: 1. Our analysis using gender survey data omitted 'Non-binary' and 'Prefer not to say' responses. 2. Sample sizes differ by question, because the questions were not mandatory and could be skipped.
Sources: Mandala analysis of survey of FSO members and SMBs.

Survey samples: Individual attributes

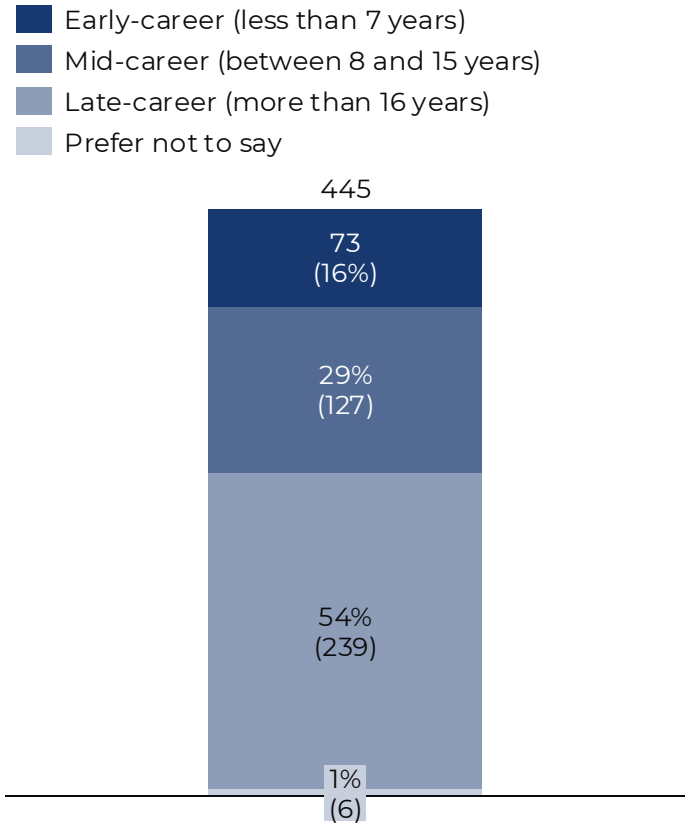
Sample size by income

Question: 'What is your total personal income each week, before any deductions or tax?', N=424



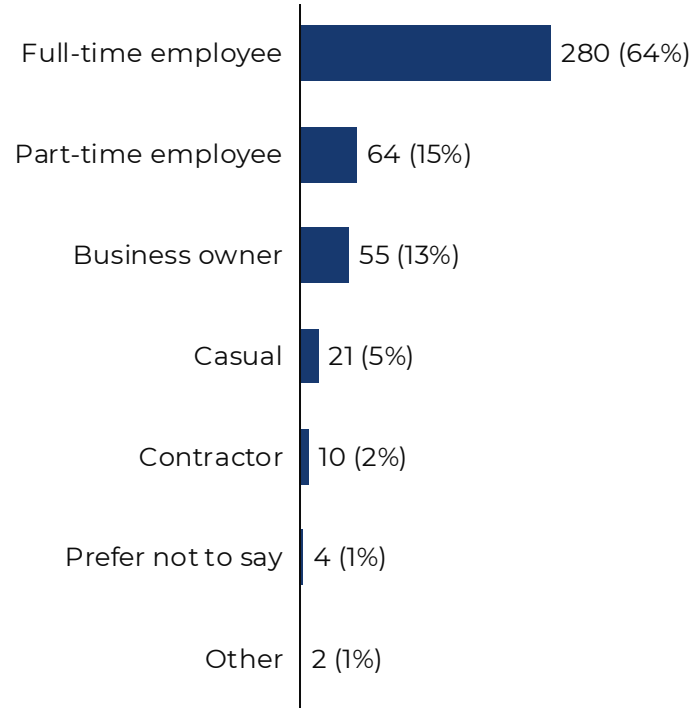
Sample size by career stage

Question: 'What stage are you at in your career?', N=445



Sample size by working arrangement

Question: 'What are your working arrangements?', N=436

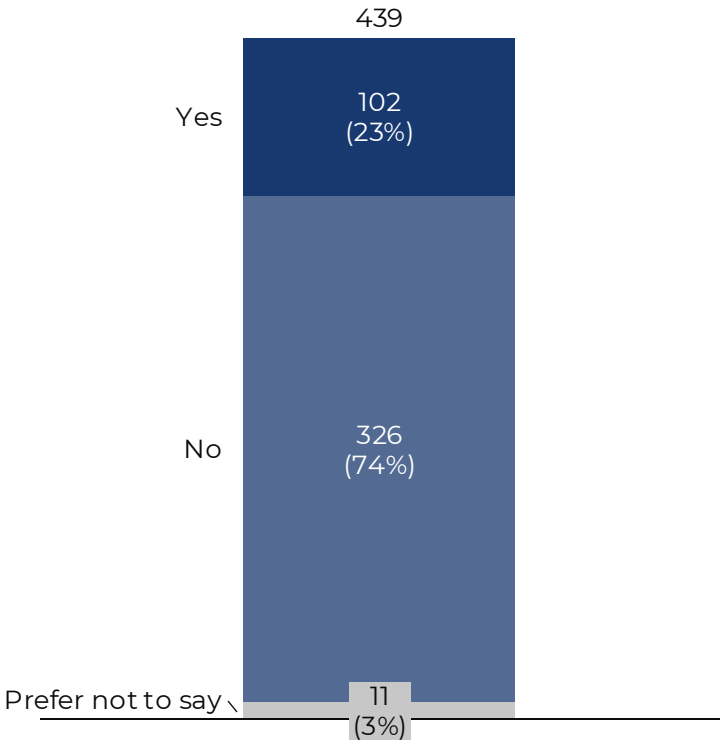


Note: 1. Sample sizes differ by question, because the questions were not mandatory and could be skipped.
Sources: Mandala analysis of survey of FSO members and SMBs.

Survey samples: Individual attributes

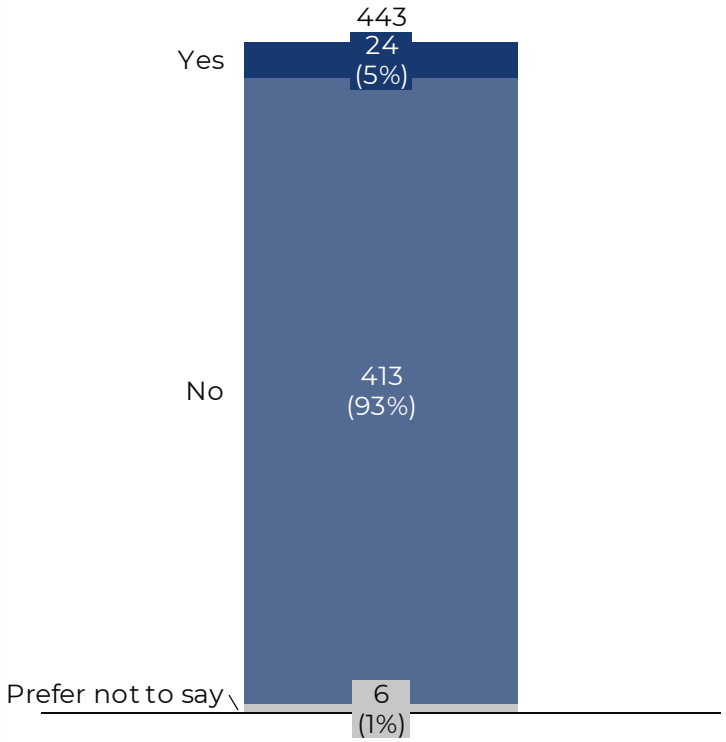
Sample size by CALD status

Question: 'Do you identify as culturally and linguistically diverse?', N=439



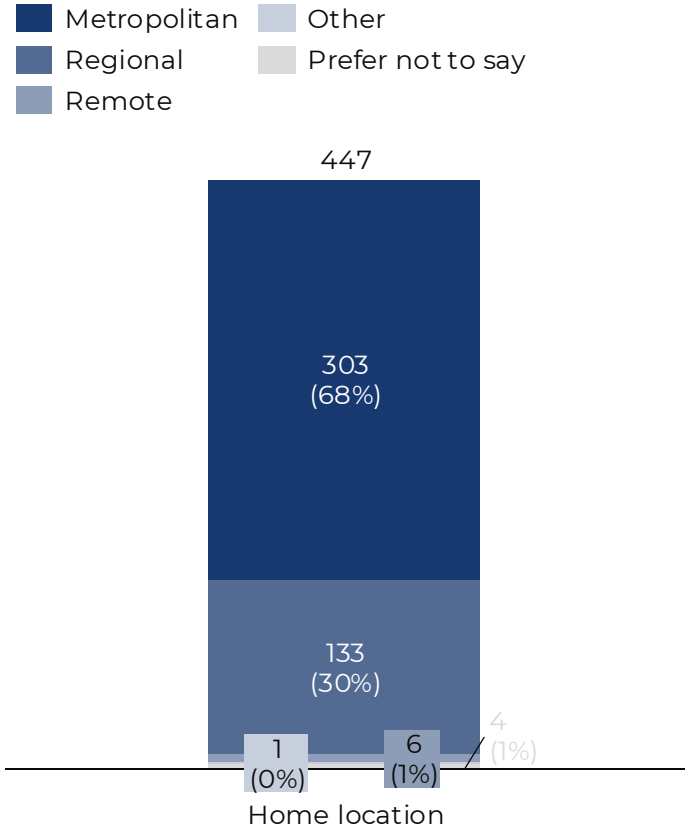
Sample size by ATSI status

Question: 'Are you of Aboriginal and/or Torres Strait Islander origin?', N=443



Sample size by area of residence

Question: 'Where is your home or primary residence located?', N=447

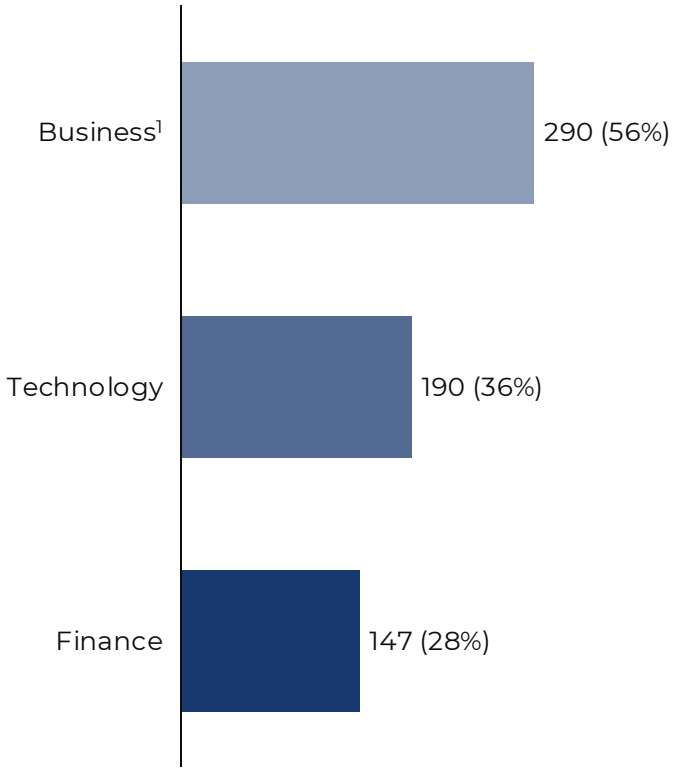


Note: 1. Sample sizes differ by question, because the questions were not mandatory and could be skipped.
Sources: Mandala analysis of survey of FSO members and SMBs.

Survey samples: Organisational attributes

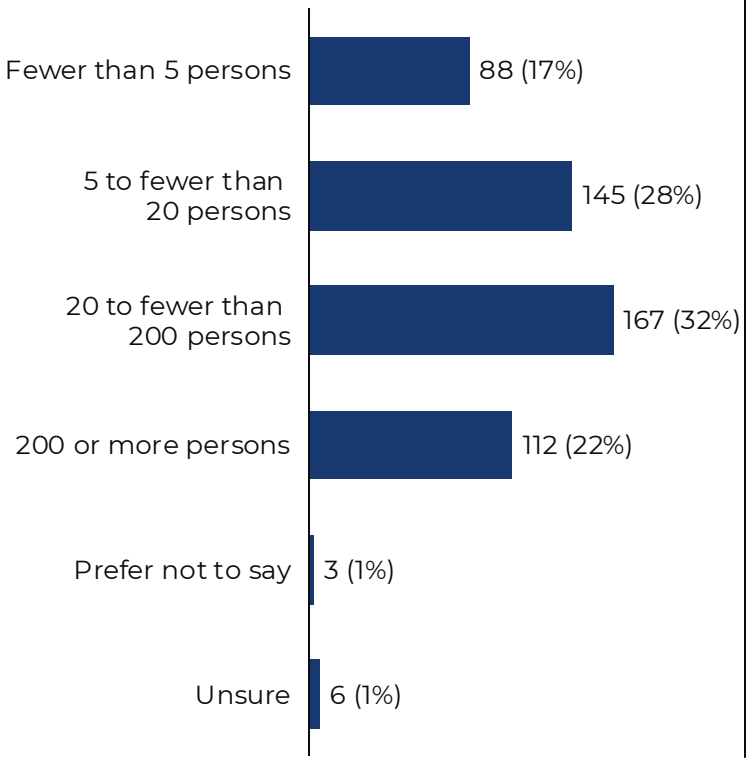
Sample size by industry

Question: 'Which of the following fields is your organisation most closely aligned with?', Multi-select question, N=522



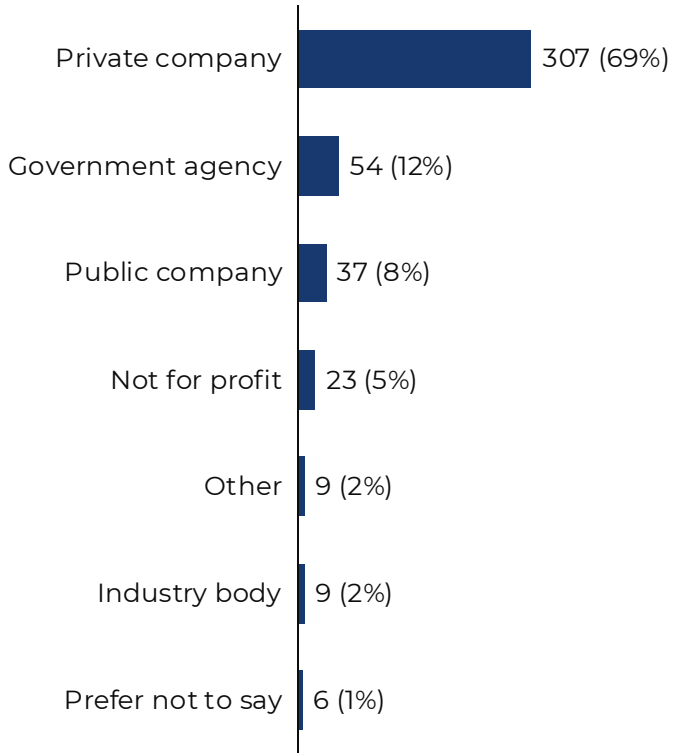
Sample size by organisation size

Question: 'What is the size of your organisation?', N=521



Sample size by organisation type

Question: 'What type of organisation do you work in?', N=445

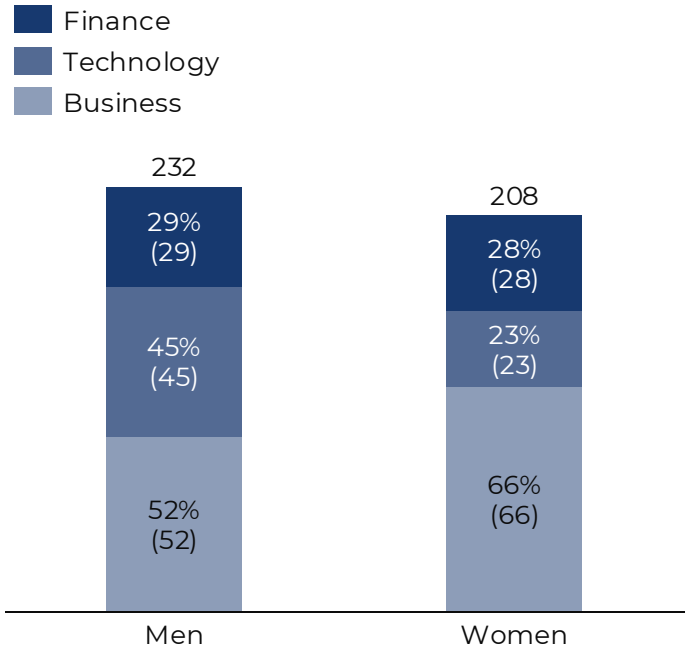


Notes: 1. 'Business' includes 'Other' responses. 2. Sample sizes differ by question, because the questions were not mandatory and could be skipped.
Sources: Mandala analysis of survey of FSO members and SMBs.

Survey samples: Individual / Organisational attributes

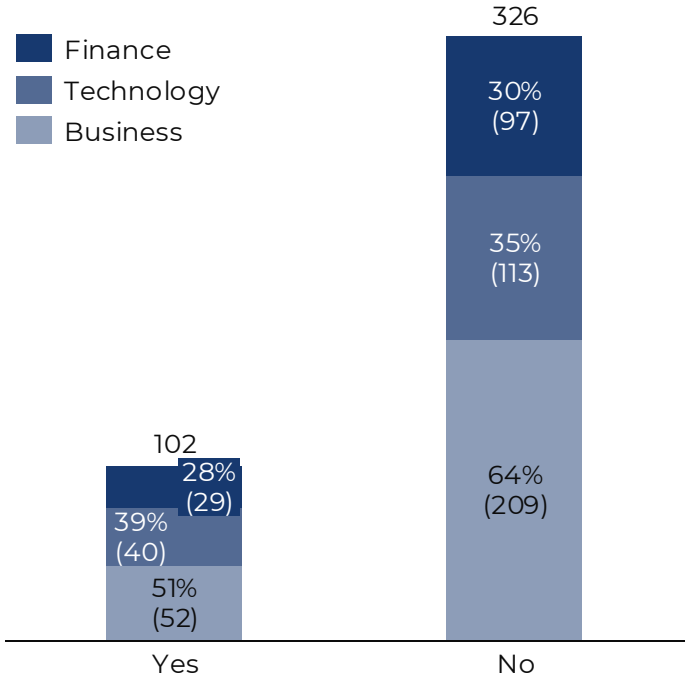
Sample size by industry and gender

Question: 'Which of the following fields is your organisation most closely aligned with?', Multi-select question, N=522; Question: 'What is your gender?'[1], N=447



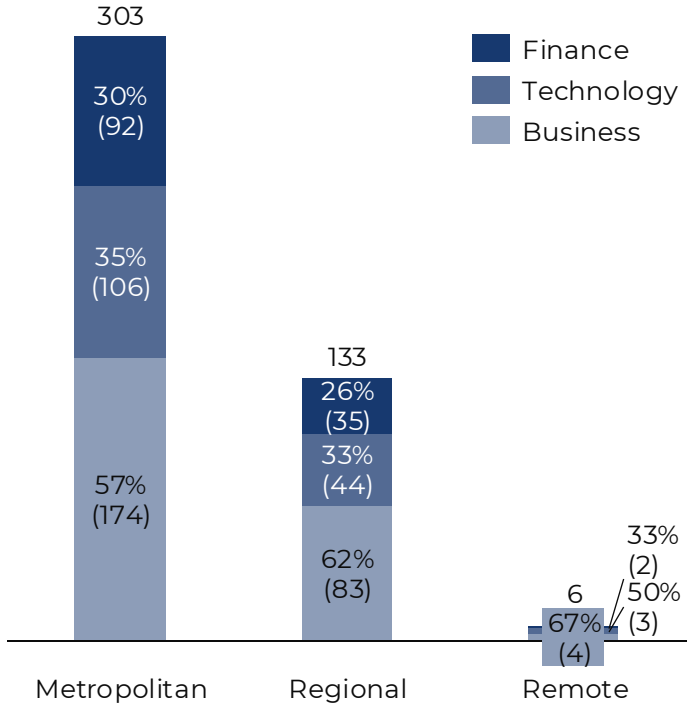
Sample size by industry and CALD status

Question: 'Which of the following fields is your organisation most closely aligned with?', Multi-select question, N=522; Question: 'Do you identify as culturally and linguistically diverse?'[2], N=439



Sample size by industry and area of residence

Question: 'Which of the following fields is your organisation most closely aligned with?', Multi-select question, N=522; Question: 'Where is your home or primary residence located?'[3], N=447



Notes: 1. 'Non-binary' and 'Prefer not to say' responses are omitted from the graph due to relatively low response counts. 2. 'Prefer not to say' responses omitted from the graph due to relatively low response count. 3. 'Other' and 'Prefer not to say' responses are omitted from the graph due to relatively low response counts.
4. Sample sizes differ by question, because the questions were not mandatory and could be skipped.
Sources: Mandala analysis of survey of FSO members and SMBs.

Literature review

Sources reviewed

Australian Government reports (1/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Generative AI: Language models and multimodal foundation models	Report authored by a group of independent experts for the Australian government. The report addresses the opportunities of large language models (LLMs) and provides examples of strategies put in place by advanced countries to address the potential opportunities and impacts of AI.	• Information-based industries are the early adopters of generative AI. If generative AI is shown to benefit these businesses, there is likely to be broader uptake of generative AI throughout the economy. • The speed of innovation makes it almost impossible to accurately forecast all opportunities with AI, including rate of adoption by businesses. • The concentration of generative AI activities in a few large multinational companies will likely prevent Australia from contributing to the generation of new generative AI tools. • Australia's comparative advantage lays in developing policies to govern the use of AI.	DISR (2023a)			
Tech Trends Position Statement: Generative AI	Position statement on generative AI published by the Australian e-safety commissioner.	• Smaller businesses or start-ups are less likely to have the necessary resources to navigate new AI regulatory measures. • New regulations should be introduced cautiously so as not to dissuade adoption. • A risk based regulatory model, such as the approach adopted by the European Union, has been suggested by experts as the best approach to balance the risks with benefits of adoption of AI in businesses. • To build trust in AI systems, which will encourage adoption, AI developers should prioritise transparency and accountability.	DISR (2023b)			
List of Critical Technologies in the National Interest	The Australian Government's Critical Technologies Statement. AI is one of the seven technologies identified as critical to Australia's future.	• Australia is focusing on 3 areas of AI to transform existing industries and build new ones: – Better health – aged care and disability services – Better towns – cities and infrastructure – Better natural resource management • $1b has been earmarked for AI, robotics and quantum technologies	DISR (2023c)			
Implementing Australia's AI Ethics Principles: A selection of Responsible AI practices and resources	A report from the National Artificial Intelligence Centre (NAIC), funded by CSIRO, with steps for businesses to implement Australia's AI Ethics Principles.	• 82% of businesses believe they are practicing AI responsibly, but only 24% had responsible measures in place. • System owners, development teams, and senior directors within an organisation have different roles and responsibilities to support AI ethics.	DISR (2023d)			

Sources: DISR (2023a); DISR (2023b); DISR (2023c); DISR (2023d)

Australian Government reports (2/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Australia's AI Ethics Principles	The Australian Government's list of 8 AI Ethics Principles, as part of Australia's AI Ethics Framework.	• Australia has a voluntary framework for 8 AI principles: Human, societal, and environmental wellbeing, human-centred values, fairness, privacy, reliability and safety, transparency and explainability, contestability, and accountability.	DISR (n.d.)			
Safe and responsible AI in Australia. Australian Government's interim response	Australian Government's interim response to community consultation on how best to harness the opportunities and mitigate the risks of AI.	• Low public trust in how AI systems have been tested and developed is a handbrake on its adoption by Australian businesses. • There are at least 10 Australian legislative frameworks that may require amendments to respond to applications now possible with generative AI. • Some governments (e.g. USA, Canada, Singapore) have asked their leading AI companies to commit to a voluntary set of standards to promote the development of AI that is consistent with the law and a set of guiding principles.	DISR (2024a)			
National Robotics Strategy	The Australian Government's National Robotics Strategy. AI is identified as an enabling technology that will assist robots. The report discusses multiple case studies where AI and robotics come together.	• The government wants to position Australia as a global leader in AI integration with robots to perform tasks such as harvesting crops or providing care. • The University of Adelaide's Australian Institute for Machine Learning has over 180 researchers dedicated to AI research and development. • AIML develops AI systems that work with robots to perform tasks. E.g. unloading shipping containers.	DISR (2024b)			

Sources: DISR (n.d.); DISR (2024a); DISR (2024b)

Public organisation reports (1/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Making the most of the AI opportunity – Research paper 1	The first of three research papers published by Australia's Productivity Commission. A report into the uptake of AI, the productivity opportunities and the role of government.	• Short courses and unaccredited AI training opportunities are preferred by businesses over tertiary education courses because they are generally more relevant and up to date. • Government should take the lead in procurement of AI and set an example of how AI can be used to increase productivity. • Uncertainty hampers adoption. Businesses need the government to clarify their responsibility for AI harms under existing regulation.	Productivity Commission (2024a)			
Making the most of the AI opportunity – Research paper 2	The challenges of regulating AI.	• Regulatory uncertainty is a barrier to adoption. • Guidelines should provide users of AI with clear requirements and obligations. • Existing Australian law covers most of the foreseeable risks with AI. Introducing unnecessary new regulations will discourage adoption of AI.	Productivity Commission (2024b)			
Making the most of the AI opportunity – Research paper 3	Considerations for data policy.	• Australian businesses need to be educated as to how various AI products have been developed to counter the risk that unintended bias affects commercial decisions.	Productivity Commission (2024c)			
Australia's AI Ecosystem Momentum Report (Feb 2023)	A report commissioned by the National AI Centre tasked with investigating how Australian businesses plan to grow by using AI.	• A survey of 100 Australian IT business leaders (37% FTB) found that Australia is well placed to increase its adoption of AI. • Focusing on siloed adoption (i.e. AI just for one aspect of the business) limits the potential productivity increase.	CSIRO (2023a)			
Australia's AI Ecosystem Momentum Report (Dec 2023)	A report by the CSIRO tasked with identifying how Australia can be more effective at turning AI research into commercial opportunities.	• An increase in the number of AI companies headquartered in Australia is helping facilitate the increased adoption of AI by Australian businesses. • There are 544 businesses in Australia whose primary business is to make and sell AI products or services. Of those businesses, 88% focus on selling to the software industry, 43% to the IT sector, 20% in delivering professional services and 11% work in financial services.	CSIRO (2023b)			

Sources: Productivity Commission (2024a); Productivity Commission (2024b): Productivity Commission (2024c); CSIRO (2023a); CSIRO (2023b)

Public organisation reports (2/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Artificial Intelligence Index report 2024	Stanford University's Institute for Human-Centered AI, 2024 AI index report. Comprehensive report over 500 pages long with useful graphics.	• Support for the use of AI by Australian businesses is slowly improving (40% of people supportive), and is ahead of the US (37%) and Canada (38%) but is behind the UK (46%). • In the English speaking world, Australia has the fourth most AI university study programs (84). Compared to UK (744); USA (667); Canada (89); India (45). • Compared to the 2022 survey results, there has been an 18% point increase in the number of Australians who indicate products or services using AI make them nervous.	Stanford University (2024)			
AI in Australia – Policy Observatory	An online dashboard run by the OECD to track changes in the uptake of AI in Australia and relevant AI policy changes in Australia.	• Since 2020, there has been a 400% increase in venture capital investments in AI in Australia. • The percentage of Australians who listed an AI related skill (e.g. machine learning) on their LinkedIn profile fell from 41% in 2017, to 34% in 2022.	OECD (2023)			
The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers	Report on the results of a survey of 5,334 workers and 2,053 firms in manufacturing and financial sectors across Australia, Canda, France, Germany, Ireland, the United Kingdom, and the United States.	• Large businesses in finance and insurance services, along with manufacturing, are more likely to use AI. • Within finance, businesses are most likely to use AI for data analytics (52% of businesses that use AI), followed by fraud detection and customer service and advice. The majority of businesses in finance have adopted AI for multiple uses. • AI use is higher amongst males, younger people, and more educated people.	OECD (2024)			
The digital and AI revolution, jobs and skills	AI Group's Centre for Education and Training surveys a cross-section of Australian businesses every two years to learn more about skills and workforce challenges across the economy.	• 251 Australian businesses completed the survey across various industries. • AI was the fourth ranked digital capability most in demand by businesses, behind cyber security (1st); basic digital skills (2nd) and big data (3rd). • 41% of businesses have not explored how they could use AI in their organisation. • Small and medium sized businesses are less likely to use AI. 27% of small businesses, 29% of medium businesses, and 7% of large businesses had not engaged with AI.	AI Group (2024)			
Invisible bystanders	Results from interviews with Australian nurses, retail workers and public sector workers about the use of AI in their workplace.	• Australian workers have a low understanding of AI and how it is used, and they are wary. • Failure to include Australian workers in the development, training and deployment of AI is creating trust issues which are hampering its widespread adoption. • Workers feel like AI is being imposed and they are not involved in co-design.	UTS (2024)			

Sources: Stanford University (2023); OECD (2023); OECD (2024); AI Group (2024); UTS (2024)

Business reports (1/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
2023 PayPal eCommerce Index	PayPal's annual report into e-commerce in Australia.	• 42% of Australian e-commerce businesses are already using AI. • The top 3 uses of AI in Australian e-commerce businesses today are: writing web content (15%); providing personalised product recommendations (15%) and creating visual design elements (14%).	PayPal (2023)			
Australia Information Technology Report	An information technology report that describes the current state of AI development and investment in Australia. Published at the end of Q1 2024.	• Between 2024-2026 there will be a 250% increase in the number of data centres in Australia that serve cloud and AI purposes. An increase from 20 to 29 AI data centres. • Australia has favourable demographics that are supportive of increased AI adoption. Population aged 15-64 forecast to increase at a compound annual growth rate of 0.7% over 2023-2027. • Higher domestic energy costs could hamper AI adoption given the power required to keep data centres cool.	BMI (2024)			
AI AMPLIFIED What Gen Zs think of AI	A report commissioned by year13, a Gen Z and tech education organisation. The report explores what Gen Zs in Australia think of AI and concludes that young people need to know why they need to develop AI skills.	• A survey of 1,048 Australians aged 15 to 24. • Only a quarter (28%) of young people say they are very to extremely interested in learning generative AI skills. This suggests that a large portion of the future working population (72%) don't see the potential importance of being skilled in generative AI. • Most young people (84%) say they have used AI – mainly ChatGPT (71% have used) compared to Snapchat My AI (27%). • Only 15% of young people have used generative AI at work. Generative AI tools are used for personal reasons (64%) and as a study assistant (60%).	Walker (2024)			
AI Attitudes in Australia	A research report that explores Australian IT businesses' attitudes towards AI.	• A July 2023 survey of 318 Australian IT businesses found that 72% of them were already using AI in their organisation. • 60% of businesses were concerned about using AI because of concerns around control and potentially a loss of control. • 51% of businesses indicated that they have AI staff training in place.	Datacom (2023)			

Sources: PayPal (2023); BMI (2024); Walker (2024); Datacom (2023)

Business reports (2/2)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
IBM Global AI Adoption Index 2023	The annual AI adoption report published by IBM.	• IT organizations in India (59%), the UAE (58%), Singapore (53%), and China (50%) are leading the way in the use of AI, compared with lagging areas like Australia (29%), Spain (28%), and France (26%). • The biggest barrier for a business to adopt AI is limited skills and expertise (33%), the data is too complex (25%) and ethical concerns (25%).	IBM (2023a)			
AI in marketing: How to leverage this powerful new technology for your next campaign	IBM's discussion on the marketing use cases for AI.	• The top marketing use cases for AI are: content generation, audience segmentation, customer service chatbots, programmatic advertising (automating personalised ad placements), search engine optimisation (SEO), and e-commerce).	IBM (2023b)			
What is artificial intelligence (AI) in business?	IBM's discussion on the business use cases for AI.	• The top business use cases for AI are: IT operations, marketing and sales, customer service, content generation, cybersecurity, and supply chain management.	IBM (2024)			

Sources: IBM (2023a); IBM (2023b); IBM (2024)

Consultancy and peak body reports (1/3)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Gen AI: A guide for CFOs	Recommendations for how CFOs should use generative AI in the whole organisation and the finance function.	• Generative AI has many different use functions in finance, which are in the categories of cognitive decision making, adaptive performance optimisation, autonomous performance monitoring, data-centric investor relations, and predictive cost and risk control. • The highest value specific applications (as determined by both feasibility and impact) are likely to be predictive cash flow forecasting, enhanced working-capital management, and market and competition monitoring.	McKinsey (2023a)			
Unleashing developer productivity with generative AI	A study of the task taken for developers to complete tasks using generative AI, which found it saves time, is more helpful for less complex coding tasks, and is more helpful for less experienced developers.	• Developers can complete coding tasks twice as fast with generative AI. Generative AI is particularly impactful for less complex tasks, such as code documentation, code generation, and code refactoring. • There are larger productivity impacts for less experienced developers.	McKinsey (2023b)			
The state of AI in early 2024: Gen AI adoption spikes and starts to generate value	A McKinsey publication on results from a 2024 survey of AI use in 1,363 businesses from around the globe. The report also includes results from previous surveys.	• Generative AI is being used by 65% of businesses, with 50% of those businesses using AI for more than one business function. • More people (42%) are now using generative AI outside of work compared to the 2023 survey, which is helping drive regular use of generative AI within organisations (13%). But there has been no change in use of AI at work within the financial services sector or technology sector. • Businesses that see the largest returns from using generative AI, are also more likely to follow a range of other best practices (e.g. operating model, recruitment).	McKinsey (2024a)			
Generative AI and the future of work in Australia	A comprehensive 62 page report by McKinsey that focuses on the potential of harnessing generative AI in Australia's future workforce.	• By 2030, 30% of task-hours in the financial services sector could be automated by generative AI. Slightly less for professional services (28%) and IT (28%). • STEM professionals and business professionals were identified as the two occupations most likely to be affected by the adoption of generative AI.	McKinsey (2024b)			
A new future of work: The race to deploy AI and raise skills in Europe and beyond	A report by McKinsey on many different types of skills shortages, including AI skills shortages, expected by businesses from now to 2030.	• One in four respondents said failing to access the needed skills could impede their ability to leverage AI value. • In general, companies will need to retrain, hire, or contract workers to address skills shortages.	McKinsey (2024c)			
Gen AI's next inflection point: From employee experimentation to organizational transformation	Results from surveys of employee use of generative AI, which shows significant differences in use between workers.	• There is significant variation in the use of generative AI by employees. 9% of employees are non-users of generative AI, while 21% are heavy users and 70% are light users. • Organisations that have implemented generative AI more tend to have more heavy users. 'Experimenters' have 26% heavy users, whereas 'early adopters' have 43% heavy users.	McKinsey (2024d)			

Sources: McKinsey (2023a); McKinsey (2023b); McKinsey (2024a); McKinsey (2024b); McKinsey (2024c); McKinsey (2024d)

Consultancy and peak body reports (2/3)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Meeting the AI Skills Boom	A report by the TCA on the steps needed to capture the AI jobs opportunity and address skills shortages. The report forecasts a ~500% increase in AI jobs (e.g., developing) between now and 2030.	• VET and short-course offerings are a key part of addressing emerging and rapidly changing skills demands in AI, and to ensure skills re industry relevant • Awareness of AI skills and training pathways is important. • Initiatives are needed to improve AI literacy across the workforce, including for senior management. • 84% of Australian knowledge workers[1] are using generative AI at work.	Tech Council of Australia (2024)			
PwC's 27th Annual Global CEO Survey - Australian insights: The reinvention imperative	Report by PwC with results from a 2023 survey of 27 Australian business leaders about their views on transforming business models with technology changes. Includes results specifically about GenAI.	• 23% of leaders moderately or strongly agree that generative AI has been adopted across their company • 52% of leaders moderately or strongly agree that in the next three years, generative AI will require most of their workforce to develop new skills	PWC (2024)			
AI Empowers Employees, Not Just Companies	2022 Report from BCG about the benefits of AI to workers, current adoption, and the importance of key factors such as trust in building adoption.	• In 2022, 34% of workers reported using AI at least moderately in their job, but this rate increased when they were reminded about specific AI products. This indicates a potential risk for surveying, where people use AI but do not remember it in the moment when asked.	BCG (2022)			
Generative AI in the Finance Function of the Future	Qualitative report on generative AI applications in the finance industry.	• AI can be used for decision making in finance, with applications including reconciliation and anomaly detection, credit scoring, compliance and fraud detection, and spend category analysis. • Generative AI can be used for content and writing, including writing contracts, reports, or communications, generating financial scenarios, and providing business intelligence insights. • The most impactful applications are likely to come from using AI and generative AI together to generate insights.	BCG (2023)			
From Potential to Profit with GenAI	Report by BCG from 2024 with results from a global survey of 1,406 executives on their views about AI and GenAI	• Globally, 66% of executives are ambivalent or outright dissatisfied with their organisation's progress on AI and generative AI so far. The top reasons given were 1. Lack of talent and skills 2. Unclear roadmap and investment priorities 3. No strategy for responsible AI and generative AI.	BCG (2024)			
Global Opinions and Expectations about Artificial Intelligence	A report from Ipsos containing the results from a 2021 survey of 19,504 workers in 28 countries about their beliefs on AI.	• Trust in AI is correlated with perceived understanding of AI. • Women, older people, less educated people, and people with lower incomes are less likely to say they have a good understanding of AI.	Ipsos (2022)			

Sources: Tech Council of Australia (2024); PWC (2024); BCG (2022); BCG (2023); BCG (2024); Ipsos (2022)

Consultancy and peak body reports (3/3)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Trust in Artificial Intelligence	Results from a survey of over 17,000 people across 17 countries that are leaders in AI. The authors asked the respondents about their attitudes towards AI.	• Trust in AI is higher for work applications. 34% of Australians are willing to trust AI, and 23% are willing to accept AI. However, 40% of Australians are willing to trust AI for work purposes, and 46% are comfortable with AI at work. • 44% of Australians believe that the benefits of AI outweighs risks and 39% of are satisfied with the current regulations to make AI safe, which is similar to the US and UK. • 75% of Australians are aware of AI, 41% have subjective knowledge of AI, and 65% want to learn more. • 24% of Australians believe AI is used in their employing organisation.	KPMG and University of Queensland (2023)			
Generative AI: Australia update	Report by Deloitte that updated its 2023 report on use of generative AI in Australian businesses.	• Generative AI use by Australian employees has increased from 32% (2023) to 38% (2024). • More than a quarter (27%) of employees use generative AI without their manager knowing. This poses a significant risk for misuse of confidential information. • Employers are more concerned about the potential of factual errors caused by AI now (87% of employers) than they were in 2023 (73%). • There has been no change from 2023 to 2024 in the percentage (16%) of Australian businesses that provide generative AI training to their employees.	Deloitte (2024)			
Embracing the future: Towards the safe and ethical use of AI for the mortgage and finance broking industry	Results from roundtables of 75 Australian MFAA members on the AI use cases, challenges, and risks for mortgage and finance brokers.	• Mortgage and finance brokers are increasingly using generative AI, but adoption was varied. – The main uses for broking businesses were marketing and client communications, and to a less extent productivity tools. – In particular, members noted benefits for recording client meetings, automating marketing collateral, preparing and streamlining client communication, and language translation. – Those who have used AI tools have had increased efficiency. • Mortgage and finance brokers would like more information, training, and education on using AI tools. Potential solutions mentioned included micro-training modules, targeted webinars, and learning by trial and error.	MFAA (2024)			

Sources: KPMG and UQ (2023); Deloitte (2024); MFAA (2024)

Academic literature (1/3)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
The role and impact of ChatGPT in educational practices: insights from an Australian higher education case study	Results from a detailed case study of 74 tertiary education students (64% business students) on the benefits of using ChatGPT as a tool to support their studies.	• ChatGPT accounted for approximately 17% of the students' improved academic performance after being coached in how to use the generative AI fully. • Empirical evidence suggests that ChatGPT enhances pedagogical practices through personal and on-demand support.	Sandu et al. (2024)			
Development of AI Systems in terms of People-Process-Data-Technology	Research based on 12 large Australian businesses, which assessed the success of a framework for using AI.	• A lack of AI skills within businesses is hampering the successful uptake of AI. • There is a lack of accessible frameworks to help guide businesses on how to best adopt AI. • The pace of change in AI is contributing to unpredictable business outcomes.	Monshizada et al. (2023)			
How competition is driving AI's rapid adoption	An article that found industry competition determines industry AI adoption.	• Findings based on econometric modelling. • Simulation ran on assumption that 70% of businesses will have adopted some form of AI by 2030, and 35% of businesses will be using AI to its full capacity. • Peer competitive pressure is the largest influencer of the decision to adopt AI.	Bughin & Seong (2018)			
The Adoption of ChatGPT	An academic study of ChatGPT adoption across 100,000 workers. The study focuses on adoption by occupation, age, experience, and gender, with a key finding of lower adoption amongst women.	• Women are 20% less likely to have used ChatGPT, a gap which exists across occupations, within workplaces, and for the same tasks. • Younger and less experienced workers are more likely to use ChatGPT- every year of age and experience is associated with a 1.0 and 0.7 percentage point lower likelihood of using ChatGPT. • Workers who use ChatGPT have higher incomes before using ChatGPT, more education, and higher grades. An additional year of schooling increases adoption rates by 0.1 percentage points, and a standard deviation increase in high school GPA increases adoption by 2.1 percentage points. • Training is the most important barrier to adoption- 42% of workers want training to use ChatGPT. • Out of 11 occupations, software developers and marketing specialists had the highest adoption, whereas financial advisors had the lowest.	Humlum & Vestergaard (2024)			

Sources: Sandu et al. (2024); Monshizada et al. (2023); Bughin & Seong (2018); Humlum & Vestergaard (2024)

Academic literature (2/3)

Title	Summary	Key takeaways	Source	Themes		
				Adoption	Adoption barriers	Tools to address
Generative AI in Real-World Workplaces: The Second Microsoft Report on AI and Productivity Research	An academic article with the results from Microsoft's most recent study on the use of AI for productivity, using randomised control trials at work instead of in labs.	• Generative AI is supporting productivity, but use varies by role, function, and organisation, and benefits are linked to adoption. • Many workers are using their own AI tools. Of those who had used AI, 78% were using AI tools not provided by the organisation. • 29% of those who used generative AI were 'Power users', meaning they are familiar with generative AI, use it several times a week, and save more than 30 minutes a day using it. • Workers within sales and product development are more likely to use CoPilot than those in legal and supply chain roles. • Workers in customer service and sales are most likely to say Copilot improved their productivity.	Jaffe et al. (2024)			
Generative AI at work	Results from a study of voice generative AI in a real world environment, which found it primarily benefits lower-skilled workers productivity.	• Using Voice generative AI for customer service improved productivity by 14% on average, with a larger improvement (34%) for novice or low-skilled workers but minimal impact on experienced and highly skilled workers. – Voice generative AI improves productivity by decreasing the time to handle a chat, increasing the number of chats that can be handled in an hour (potentially by increasing the number of chats that can be handled at once) and slightly increasing the successful resolution of chats. • Voice generative AI appears to be providing the tools, behaviours, and knowledge of the most productive workers to less productive workers. • Workers who follow AI recommendations carefully have larger gains in AI productivity.	Brynjolfsson et al. (2023)			
Experimental evidence on the productivity effects of generative artificial intelligence	Results from a study on worker productivity using ChatGPT, which showed productivity improved for writing tasks.	• ChatGPT decreased the average time taken for writing tasks by 40% and increased output quality by 18%. • Less skilled workers benefitted more from using ChatGPT, reducing differences in productivity between workers.	Noy & Zhang (2023)			

Sources: Jaffe et al. (2024); Brynjolfsson et al., (2023); Noy & Zhang (2023)

Academic literature (3/3)

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AI and Jobs: Evidence from Online Vacancies	A study of job advertisements for AI skills from 2010-2018, which found that AI skills advertisements have increased.	• Job advertisements for AI skills were already increasing prior to 2018, particularly for firms that are 'exposed' to AI.	Acemoglu et al. (2022)			
Tracking Firm Use of AI in Real Time: A Snapshot from the Business Trends and Outlook Survey	Results from surveys of current and future use of AI for business purposes between 2023 and 2024, which found adoption has increased.	• The bi-weekly use of AI for US workers rose from 3.7% in September 2023 to 5.4% in February 2024. • Large businesses are more likely to use AI, followed by micro-sized firms. – For large businesses with over 250 employees, about 7% of firms and 9% of workers use AI. – For micro businesses with 1-4 employees, 5.5% of firms use AI. – For medium businesses with 100-249 employees, 4.8% of firms use AI. • Adoption varies significantly by sector. – The information sector has 18% firm adoption and 22% worker adoption. • Firms are expecting to increase their use of AI.	Bonney et al. (2024)			

Sources: Acemoglu et al. (2022); Bonney et al. (2024)