



READY, SET, UPSKILL:

# Maximising the ROI of skills and training

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# Executive Summary



# Executive Summary

Businesses are planning on spending approximately \$8 billion on learning and development in 2024.

Australian businesses are expecting to spend approximately \$8 billion on learning and development in 2024 (Figure i). **The expected spend on learning and development per employee reflects an increase of approximately 15% year-on-year.** This estimate is based on a survey of approximately 400 employers in Australia.

This spending comes at a time when businesses face an uncertain economic outlook in 2024. While cost of living pressures and rising unemployment continue to weigh on prospects, resilient consumer spending, the rebound in international students and other factors have brightened the outlook.

While one-third (35%) of surveyed employers are pessimistic about the broader economic outlook, 30% are optimistic. Similarly, while 29% of surveyed employers expect to make redundancies in the coming year, 70% expect to hire more people.

FIGURE i: Australian medium and large businesses investment in L&D

## Approximately \$8 billion in 2024

Australian medium and large businesses investment in learning and development.

Source: Deloitte Access Economics (2024)



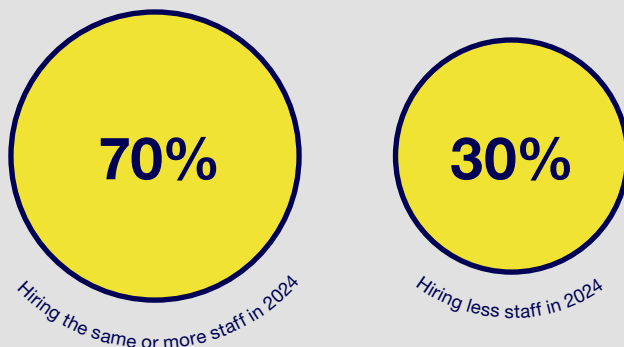
In an era of uncertainty, there is a strategic opportunity for businesses to make a robust assessment of their workforce skill needs, and tune-up their learning and development plan so employees have the skills they need for success.

**i** Four of the top five skills gaps were in digital. However, nearly half of surveyed employers admit they aren't prioritising training budgets to address skills gaps.

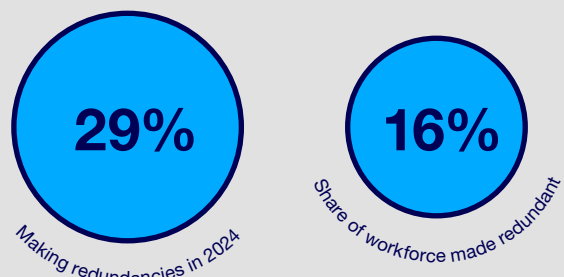
**Four of the top five skills surveyed employers said they lacked were digital, including generative artificial intelligence (AI) or machine learning, data science, coding and cyber security.** Across a range of digital skills, between 29-36% of employees surveyed said they don't have the skill level required, or the skill is out of date.

FIGURE ii: Employer redundancy and hiring expectations for 2024

### EMPLOYERS' HIRING EXPECTATIONS



### EMPLOYERS' REDUNDANCY PLANS



This skills gap has been further exacerbated by the emergence of critical technologies such as AI. Analysis shows 1.8 million new tech skills will be needed by 2030 if workers are to keep pace with changes.<sup>1</sup> Crucially, employees lack understanding regarding the extent to which generative AI is expected to disrupt their roles. Almost half (47%) of surveyed employees had never used generative AI in their role, and 73% say this is because they don't believe generative AI is relevant. This is contrasted to research which shows that 86% of all occupations will be affected.<sup>2</sup>

Despite prominent skills gaps across a range of digital capabilities, nearly half (45%) of surveyed employers admit they aren't prioritising training budgets to address skills gaps. This suggests businesses are not maximising the effectiveness of their training spend.

Furthermore, while digital skills were the most prevalent skills gaps within businesses, surveyed employers were willing to pay more for other skills. Surveyed employers were willing to pay the most for leadership and business skills (10% on average), followed by industry or job specific skills (9% on average), while surveyed employers were only willing to pay 8% more for data and digital skills.

**i** Australia's participation in learning and development is at-risk of lagging behind its international peers.

Despite an increase in spend in 2024, Australia's participation in learning and development is at-risk of lagging behind its international peers. Nearly a third (32%) of Australians participated in non-formal learning, trailing behind the European Union with almost a half (47%) of adults participating in non-formal learning. Australia ranked 24th out of 32 countries surveyed by the EU.<sup>3</sup>

**🔍** Furthermore, more than two-thirds of surveyed employees (70%) indicated they would like their employers to invest more in their learning and development, and nearly two-thirds of surveyed employers (64%) say businesses are not doing enough.

While training spend is expected to increase overall in 2024, there is a question about whether this will be enough to address skills gaps. In fact, medium and large surveyed businesses that are prioritising training budgets to address skills gaps spend 1.3 – 3 times *more* respectively on learning and development per employee on average, compared to surveyed businesses who are not. This suggests while businesses are spending more, even more investment is needed to build the pipeline of skills needed to keep pace with change.

1 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>  
 2 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>  
 3 OECD, 'Participation in formal and/or non-formal education and training, by gender, age group and educational attainment (2016): Adult Education Survey (AES), Survey of Adult Skills (PIAAC) or national surveys, 25-64 year-olds', (September 2019) Education at a Glance.



## One in eight businesses are at-risk of falling behind

Despite training spend rising overall, one in eight Australian surveyed businesses are planning on spending less on learning and development in 2024 compared to last year. **Surveyed businesses expecting poorer prospects for their business are twice as likely to plan to invest less in learning and development than those with a positive business outlook.**

This a significant risk because investing in training increases staff retention, business revenue and customer engagement; critical to maintain during challenging economic conditions.<sup>4</sup> Furthermore, almost two thirds (62%) of surveyed employers identified the broader benefits of addressing the skills gap including for productivity growth during Australia’s economic recovery.

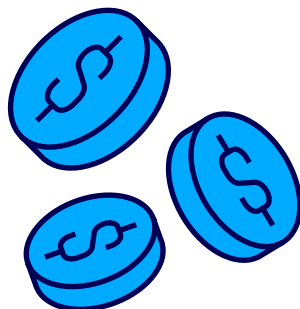
Modelling for this report finds that surveyed businesses that are planning to spend less on learning and development in 2024 are, on average, expecting to halve their training budgets (49%).

**Deloitte Access Economics estimates the fall in learning and development investment will mean missing out on skills valued at approximately \$2 billion in 2024, equivalent to \$5.6 million per day** (Figure iii) (Appendix B). This is based on the average wage premium (willingness to pay) for emerging skills of 9%.

**FIGURE iii:** The cost to the Australian economy of lost skills in 2024

## Approximately \$2 billion in 2024

The value of skills that will not be attained due to the fall in learning and development.



Source: Deloitte Access Economics (2024)

## Organisations can increase their training budget return on investment

Based on evidence from the survey, there are four ways for business to increase their training budget’s return on investment:

1. First, is simply by measuring it. Almost one in five (17%) of organisations surveyed don’t measure, or don’t know how to measure, training return on investment (ROI). This will vary between skills (i.e., regulatory or compliance training that reduces risk will achieve different returns to digital skills training). Surveyed employers who could measure training ROI say it increased productivity growth by 17% on average and revenue growth by 14% on average. As a first step, businesses should measure progression through knowledge and decision-making competence, to performance of behaviours and job tasks associated with various skills.
2. Second, is to match training programs to skills gaps more explicitly. Nearly half (45%) of surveyed employers admit they aren’t prioritising training budgets to address skills gaps. Businesses need to get their priorities in check to yield the biggest return on their investment.
3. Third, is to try and better capture on-the-job training activities. Surveyed employers and employees see on-the-job training as the most cost effective and impactful across a range of training formats (i.e., on-the-job, virtual, hybrid, externally delivered) and types (i.e., on-the-job training, free online courses, formal qualifications and certifications). Research indicates employees value learning in contexts where there is direct line of sight to the perceived application of newly acquired skills and immediate opportunities for rehearsal and mastery.<sup>5</sup> Businesses can position on-the-job training to play an important role in learning new skills by complementing learning outside the work environment and providing means to rehearse and master skills learnt.
4. Finally, is to utilise technologies like generative AI, which has the potential to make training more effective, by identifying skills gaps in the team, making learning more collaborative and helping to personalise content. But with two-thirds of surveyed employees not using generative AI in training (or being unaware), there is an opportunity for growth.<sup>6</sup>

4 Deloitte, ‘The benefits of investing in staff training’, Deloitte (8 July 2022) <<https://www.deloitte.com/au/en/Industries/consumer-products/perspectives/benefits-investing-in-staff-training.html>>

5 Forbes, ‘Why Hands-On Training Is The Key To Maximizing Job Success’, (2021) <<https://www.forbes.com/sites/ellevate/2021/10/07/why-hands-on-training-is-the-key-to-maximizing-job-success/?sh=38723e1b2e5d>>

6 ‘How Generative AI is Changing Learning and Development’, Thinkdom (29 June 2023) <<https://www.thinkdom.com/post/embracing-the-future-how-generative-ai-is-changing-learning-and-development>>





# Introduction



# 1.

## Introduction



This report is the fourth edition of *Ready, Set, Upskill*, a series that analyses the current state of skills in Australia and the role of upskilling and reskilling in helping to meet demand for skills.

The focus of this year's report is to understand the impact of the business and economic outlook on businesses' decisions to invest in training, the return on investment in training and how businesses are prioritising different types of skills. The report also includes a spotlight on the influence of generative artificial intelligence (AI) on demand for skills and upskilling in Australia.

This research draws on a range of diverse data sources, including:

- Bespoke surveys of approximately 400 employers and 1,000 employees in Australia, fielded by Ipsos in December 2023 (see next page for details)
- Job advertisements data from Lightcast
- Economy-wide data from the Australian Bureau of Statistics (ABS)
- Available research and literature on skills and reskilling, informed by a detailed desktop review
- Consultations with two leading Australian businesses to understand their perspectives and provide real life examples.

This report is set out as follows:

**Chapter 1** — explores businesses expectations for the economic outlook and the implications for their investment in training.

**Chapter 2** — provides a broader snapshot of the skills landscape in Australia, including employee and employer views regarding the most important skills today and in the future. This section also includes a snapshot on generative AI.

**Chapter 3** — explores the return on investment of different skills and how businesses can maximise their return on investment.



## BESPOKE EMPLOYEE AND EMPLOYER SURVEYS\*

### 1. Employer survey

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The employer survey was fielded by Ipsos to 416 business leaders in December 2023. Survey respondents were individuals who are currently employed as executives, board members and owners, directors, or managers.

In industry terms, the survey captured a broad range of primary and service industries. The survey focuses on employers with 100 or more employees.

### 2. Employee survey

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The employee survey was fielded by Ipsos to 1,000 employees in Australia.

Survey respondents were employed individuals over the age of 18 across all jurisdictions. The survey included those who are working full-time, working part-time, working casually, and those who are self-employed. If respondents indicated they were unemployed, they were excluded from the survey. The survey included individuals in the six ABS occupational categories with the highest levels of post-school qualifications, namely: managers, professionals, technician/trade workers, community and personal service workers, clerical and administrative workers and sales workers.

\* Figures contained in the report relate to surveyed individuals, unless otherwise specified. As such, results may not be aligned to the whole population of businesses or employees in Australia.



The training  
environment and  
economic outlook

# 2.

## The training environment and economic outlook



### Key findings

- Businesses face an uncertain economic outlook in 2024. While resilient consumer spending, the rebound in international students and other factors have brightened the outlook, cost of living pressures and rising unemployment continue to weigh on prospects.
- Sentiment from the survey findings reflects this uncertainty; one-third (35%) of surveyed employers are pessimistic about the broader economic outlook, 30% are optimistic.
- Australian businesses are expecting to spend more on learning and development this year, anticipated to reach approximately \$8 billion in 2024 – reflecting an increase of 15% on 2023.
- While training spend is expected to rise overall, one in eight surveyed Australian businesses are planning on spending less on learning and development in 2024 than they did in 2023. Modelling for this report finds the fall in learning and development investment among this cohort of businesses will mean missing out on skills valued at approximately \$2 billion in 2024.



## 2.1 The economic outlook and business intentions in an evolving skills landscape




Employers face an uncertain economic and geopolitical landscape in 2024. Ongoing global conflicts have hindered efforts by central governments to reduce inflation by exacerbating shortfalls in supply. Cost of living pressures continue to dominate the collective consciousness of many Australians, with the Consumer Price Index rising by 5.4% in the 12 months to September 2023,<sup>7</sup> and unemployment trending upwards.<sup>8</sup>

The outlook for growth in the Australian economy is modest at best. Excluding the pandemic period, the expected economic growth of 1.3% in the 2024 calendar year would be the weakest since the early 1990s recession. Over the next decade, economic growth is expected to average just 2.1% per year. If realised, it would represent the slowest rate of growth across any 10-year period since the Second World War.<sup>9</sup>

Yet, demand and consumer spending has proved more resilient than many expected, bolstered by a large pipeline of public infrastructure work, and a rapid

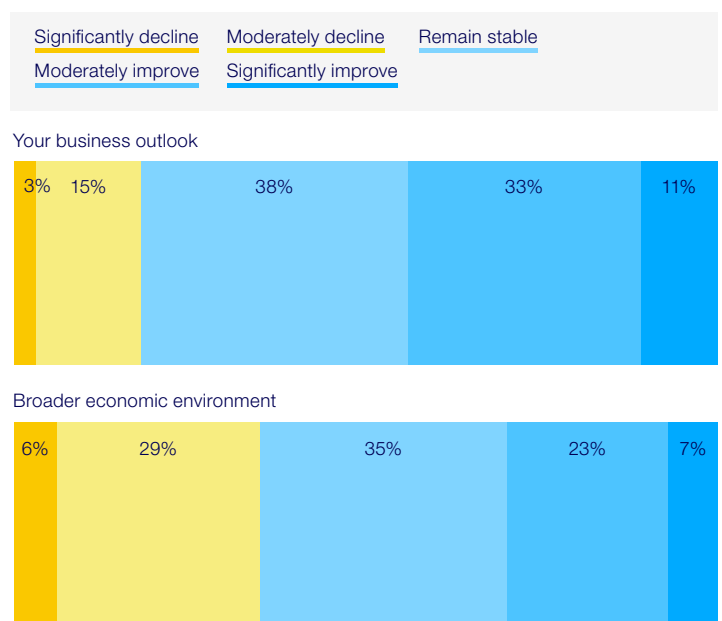
rebound in the number of international students and tourists visiting Australia.<sup>10</sup> In this environment it is not surprising business leaders are uncertain about what lies ahead. According to Deloitte’s employer survey, one-third (35%) of surveyed employers are pessimistic about the broader economic outlook, compared to 30% of optimists. As shown in the chart below, surveyed employers are more optimistic about their own business outlook than the broader environment, with 44% expecting it to moderately or significantly improve this year, compared to 18% of pessimists.

The extent of expected change to labour dynamics in Australian organisations in 2024 is evident, with surveyed businesses simultaneously planning to make redundancies as well as hire to backfill critical roles.



The survey shows 29% of surveyed employers are expecting to make redundancies in 2024, reflecting around 15% of their workforce. This is particularly pronounced in the media and telecommunications industry, with 44% of survey respondents indicating they expected to make redundancies in the coming year.

**CHART 2.1:** Employer expectations for their business environment and broader economic outlook

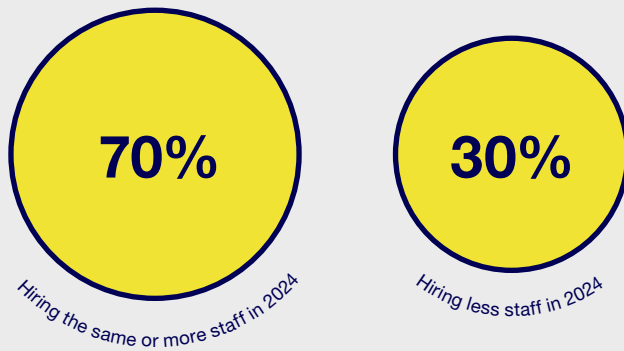


Source: Deloitte Access Economics Employer Survey (n=416).

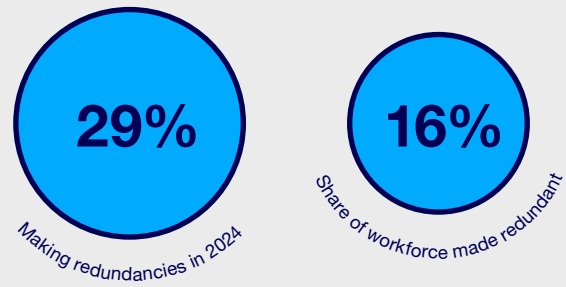
<sup>7</sup> Australian Bureau of Statistics, Consumer Price Index, Australia, September Quarter 2023 (Catalogue 6401.0, 25 October 2023).  
<sup>8</sup> Australian Bureau of Statistics, Labour Force, Australia, January 2024, (Catalogue No 6202.0, January 2024)  
<sup>9</sup> Deloitte, Business Outlook, December 2023 edition (29 January 2024) <<https://www.deloitte.com/au/en/services/economics/services/business-outlook.html>>  
<sup>10</sup> Australian Bureau of Statistics, Labour Force, Australia, January 2024, (Catalogue No 6202.0, January 2024)

**FIGURE 2.1:** Employer redundancy and hiring expectations for 2024

### EMPLOYERS' HIRING EXPECTATIONS



### EMPLOYERS' REDUNDANCY PLANS



Source: Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416).



At the same time, 70% of surveyed employers are planning to hire at least as many or more people than they did in 2023. Given the extent of expected change across the workforce, getting the skills mix right to navigate an evolving economic backdrop will be even more difficult in organisations with high talent volatility.

Research from the Australian Human Resources (AHRI) Work Outlook Report from December 2023 similarly shows some of these labour dynamics at play with research showing concurrent hiring and retrenchment broadly across the economy. It is conflicting to cull and grow the workforce simultaneously. However, this may in fact reflect backfilling efforts due to high turnover rates in key roles.<sup>11</sup> With this much talent renewal in organisations across Australia, the need to assess skill gaps and take actions to remedy has never been more glaring.

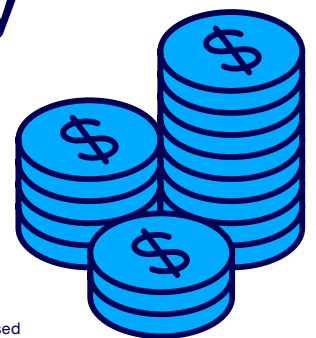
## 2.2 The training imperative

With the anticipated change over the coming year, it will be critical for businesses to meet emerging skills needs and maximise the potential of their workforce. This is increasingly pertinent for employers to reskill and optimise existing talent in a highly competitive marketplace for key roles and limited talent pools.

**FIGURE 2.2:** Australian medium and large businesses investment into L&D

**Approximately \$8 billion in 2024**

Australian medium and large businesses investment in learning and development.



Source: Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416) (2024).

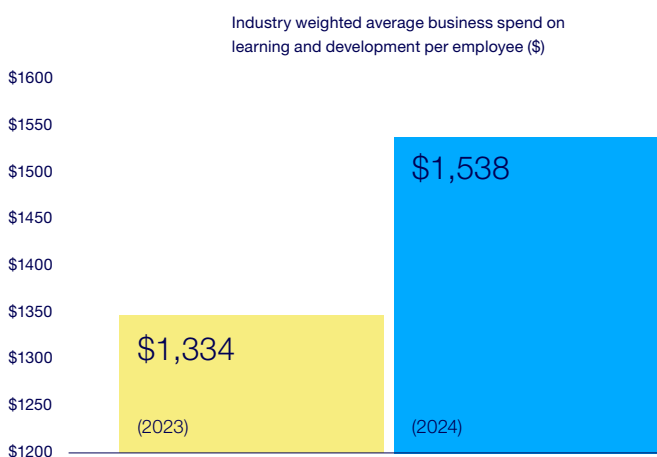
Optimistically, most surveyed Australian businesses appear to recognise the training imperative and are planning to spend more on learning and development in 2024. Investment in learning and development is expected to reach approximately \$8 billion in 2024 (Appendix A).

11 Australian Human Resources Institute, AHRI Quarterly Australian Work Outlook (December Quarter 2023) <[https://www.ahri.com.au/wp-content/uploads/AHRI\\_Quarterly-Australian-Work-Outlook-Report\\_December.pdf](https://www.ahri.com.au/wp-content/uploads/AHRI_Quarterly-Australian-Work-Outlook-Report_December.pdf)>

**Surveyed businesses are expecting to spend 15% more to a total of \$1,538 per employee on learning and development in 2024, compared to 2023 (Chart 2.2).** This is broadly consistent with the wider literature which places spending on learning and development at \$1,685 per employee in NSW,<sup>12</sup> and between \$1,100-\$3,000 per employee depending on whether learning is a business priority.<sup>13</sup>

Expenditure on learning and development from the survey was adjusted to remove outliers and weighted by broad industry categorisation to determine an aggregate spend across medium and large businesses. It is noted that there are challenges associated with extrapolating from survey data and this is discussed further in Appendix A.

**CHART 2.2:** Employer learning and development spend in 2023 and 2024<sup>i</sup>



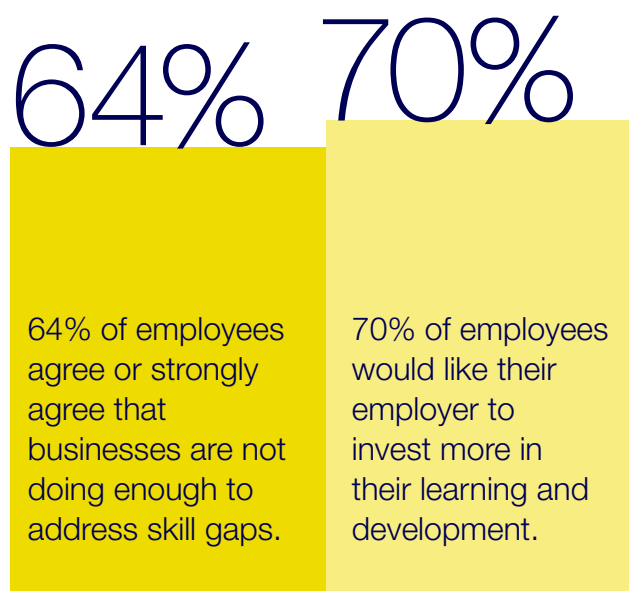
**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416) (2024). i.) Average business spend has been weighted by ABS industry composition of large businesses (200+ persons) in Australia.

**Q:** Will this investment be enough?

Surveyed large businesses who are prioritising training budgets towards addressing existing skills gaps, on average spent approximately 3 times more on learning and development per employee than surveyed businesses who were not, while surveyed medium businesses spent approximately 1.3 times more.

Businesses typically spend their learning and development budgets on designing training programs in-house, hiring external organisations to deliver training or supporting employees to attend conferences or short courses. While businesses investment into learning and development is significant, it does not recognise the time required to undertake training. Employees have consistently identified finding the time to dedicate to learning and development as one of the key barriers to learning new skills, with a quarter (25%) of employees indicating work and personal commitments represent the largest barrier to learning new skills.

**FIGURE 2.2.1:** Employer perspectives on addressing Australia’s skill gaps



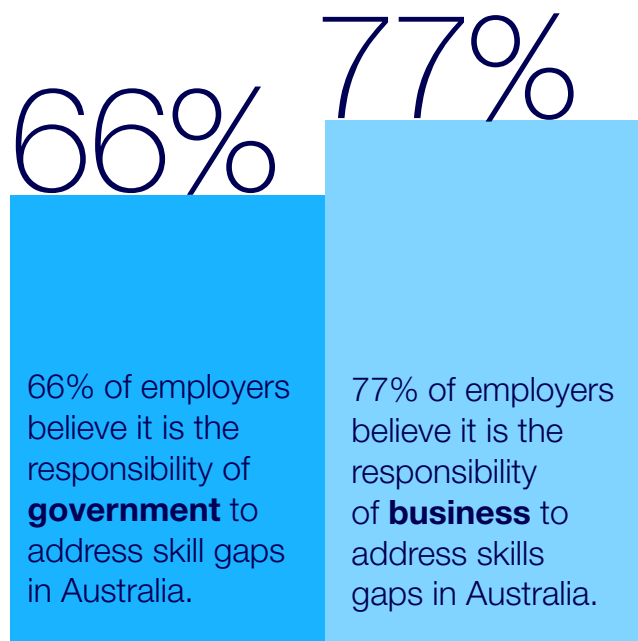
**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416).

Beyond the benefits for business performance, employers recognise the training imperative for the benefit of Australia’s economic health. In fact, most surveyed employers (78%) agree addressing the skills gap will be critical for Australia’s economic health and critical for productivity.

12 Tafe NSW, “Skills and Australian business report”, (5 June 2018) <[13 Deloitte, “The business return on learning and development” \(report commissioned by DeakinCo, March 2022\) <\[RMIT Online\]\(https://wordpress-ms.deakin.edu.au/deakinco/wp-content/uploads/sites/261/2022/03/DCO0508\_The\_Bus\_Return\_LDReport\_WEB\_vFa.pdf?\_gl=1\*vwg2kf\*\_ga\*MTY2Mjk5MzU2MS4xNzA4MzA5ODQ2\*\_ga\_JPTMKQ5P9D\*MTcwODMwOTg0Ni4xLjEuMTcwODMwOTk1MC41OS4wLjA-></a></p>
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**FIGURE 2.2.2:** Employer perspectives on their responsibility for addressing skills gaps



Source: Deloitte Access Economics Employer Survey fielded by Ipsos (n=416).

**While a majority of surveyed employers agree there is a need to address the skills gap, almost two thirds (64%) believe businesses aren't doing enough to address the skills gaps. Furthermore, 70% of surveyed employees would like their employer to invest more in their learning and development.**

Who is going to tackle this issue and how needs clarification. There are mixed views whether addressing the skills gap is the responsibility of businesses and the government; 77% agreed it is businesses' responsibility, compared to 66% for government.

### 2.2.2 Businesses at-risk

While expenditure on training is expected to rise overall, there is also a pool of businesses who are at-risk of being left behind. One in eight large Australian businesses are planning on spending less on learning and development in 2024 compared to last year.<sup>ii</sup>

These businesses are expecting to cut their training budgets in half over the coming year, spending \$587,900 less on learning and development, on average, in 2024. If this plays out, it could see 277 less skills per business on average compared with typical growth in skills.<sup>iii</sup>

To estimate the value of lost skills due to the fall in learning and development expenditure, this modelling considers the average cost of training courses in Australia (informed by desktop research).<sup>iv</sup> The analysis assumes employees learn one skill from every short course. The modelling notes some skills such as leadership can take several years to master and likely include a combination of formal learning, mentoring and on-the-job training.

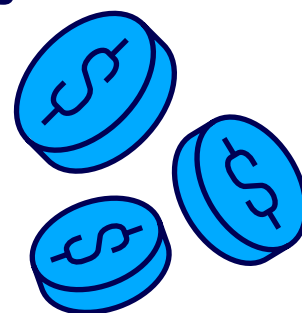
According to the survey, employers are willing to pay an additional 9% (on top of a baseline salary) for skills,<sup>v</sup> noting this is an average figure and some skills attract a higher willingness to pay than others. Applying the average value of a skill to the employee's earnings, an additional skill is estimated to be worth \$7,435 to surveyed employers.<sup>vi</sup>

Modelling for this report finds the fall in learning and development investment will mean missing out on skills valued at approximately \$2 billion in 2024, equivalent to \$5.6 million per day (Figure 2.2.3) (Appendix B).

**FIGURE 2.2.3:** The value of skills that will not be attained due to the fall in learning and development expenditure in 2024

## Approximately \$2 billion in 2024

The value of skills that will not be attained due to the fall in learning and development.



Source: Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416) (2024).

ii This captures medium and large Australian businesses.  
 iii According to the NSW Government the median number of FTEs in medium and large businesses, estimated to be 142 FTEs in medium businesses and 441 in large businesses. Based on the profile of businesses who are planning on reducing their expenditure on learning and development in 2024 from the survey, a weighted average of the median number of FTEs was estimated for businesses (343 FTEs).  
 iv This was estimated to be \$2,160 per short course, based on publicly available information on the cost of short courses. The cost estimate is only related to short courses geared towards professionals, it is noted that this can vary significantly depending on the type of course undertaken and audience.  
 v This includes a large variety of skills, including leadership and business essential skills, data and digital skills, marketing and customer skills, product and agile skills and generative artificial intelligence.  
 vi This is based on the average weekly earnings of employees in medium and large businesses, estimated to be \$1,661 per week or \$86,395 per year.



**FIGURE 2.2.4:** The lost return on investment of from reducing expenditure on learning and development



**For every \$1 dollar that is cut from learning and development budgets, businesses lose skills which are valued at \$3.40.**

**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416) (2024).

Among medium and large businesses who are planning to reduce their expenditure on learning and development in 2024, for every \$1 that is cut from learning and development budgets, businesses lose skills which are valued at approximately \$3.40 on average (Figure 2.2.4).

However, the value of skills not learnt through training would vary business-to-business, based on the size of the drop in expenditure, and depending on the specific skills which aren't developed by employees. Furthermore, it is possible that if businesses focused on improving the effectiveness of their reduced learning and development budget, this could help to offset the impacts of reducing spending.

Surveyed businesses with poorer prospects are twice as likely to plan to invest less in learning and development than those with a positive business outlook. Research demonstrates businesses stand to make more dramatic gains or losses during challenging economic times.<sup>14</sup> Investment in learning and development has consistently been proven to enhance business performance.<sup>15</sup>

**Half (or 50%) of surveyed employers reported training has led to improvements in productivity growth while 45% reported it has improved revenue growth.** Among surveyed employers who were able to quantify the impact reported that training has increased productivity growth by 17% and revenue growth by 14% on average.

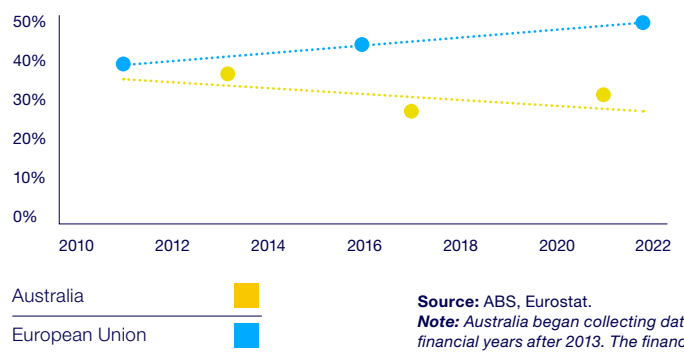
## 2.3 How does Australia fare globally?

An understanding of Australia's position on investment and participation in business training in the global landscape provides valuable context when analysing business training in Australia.

Participation in non-formal learning, which includes all learning activities outside of the formal education system, is lower in Australia compared to the European Union (EU) average.<sup>16</sup> In the 2020-21 financial year, participation in non-formal learning for Australians aged 25-64 was 32%.<sup>17</sup> In 2022, for the same age group, the EU average was 47% with Sweden topping the list at 65%.<sup>18</sup> **This places Australia 24 out of 32 when compared with the surveyed EU countries,** noting there is a one-year difference in data collection periods.

Moreover, while the EU has been trending upwards since 2013, Australia's participation in non-formal learning has been trending downwards. This suggests the gap between non-formal learning in the EU and Australia has been steadily increasing and Australia is at-risk of falling further behind.

**CHART 2.3:** Participation in non-formal learning in Australia compared to the EU



<sup>14</sup> Bain & Company, 'The New Recession Playbook', (July 15 2022) <<https://www.bain.com/insights/the-new-recession-playbook/>>

<sup>15</sup> Deloitte Access Economics, 'The Business Return on Learning and Development' (report commissioned by DeakinCo, 6 April 2022), <<https://www.deakin.edu.au/about-deakin/news-and-media-releases/articles/deakinco.-and-deloitte-report-on-significant-returns-on-l-and-d-investment>>

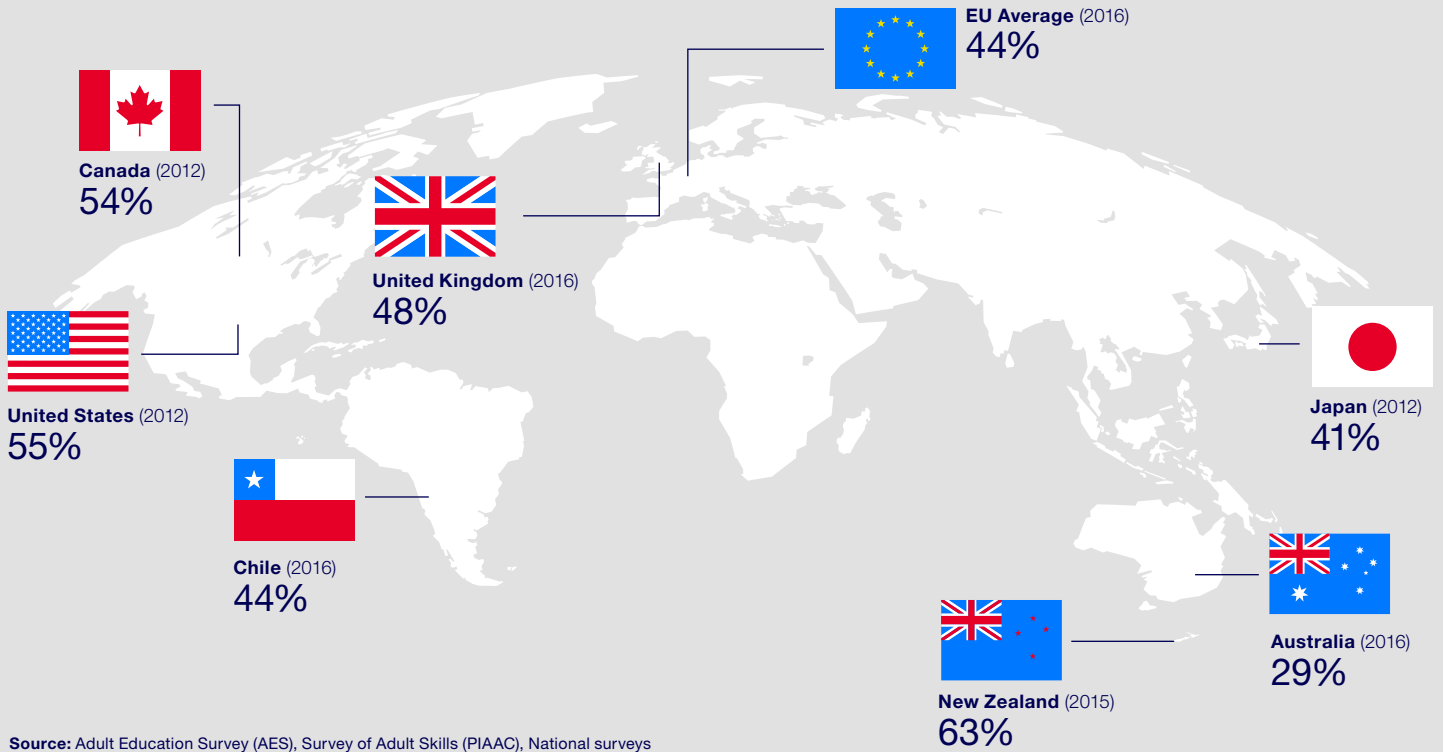
<sup>16</sup> 'Participation rate in education and training by sex', Eurostat (9 January 2024) <[https://ec.europa.eu/eurostat/databrowser/view/trng\\_aes\\_100/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/trng_aes_100/default/table?lang=en)>.

<sup>17</sup> Australian Bureau of Statistics, Work-Related Training and Adult learning, Australia, 2020-21, (11 March 2022)

<sup>18</sup> 'Participation rate in education and training by sex', Eurostat (9 January 2024) <[https://ec.europa.eu/eurostat/databrowser/view/trng\\_aes\\_100/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/trng_aes_100/default/table?lang=en)>

FIGURE 2.3.1: Adult participation in non-formal learning worldwide

## Non-formal adult learning worldwide



Source: Adult Education Survey (AES), Survey of Adult Skills (PIAAC), National surveys



Non-formal learning is not a perfect metric for business training. It includes both work-related training and personal interest learning, although most non-formal learning activities tend to be work-related.<sup>19</sup> Countries also collect data on non-formal learning in different regularities. Data from the Survey of Adult Skills and national surveys allow for a worldwide comparison of non-formal learning.<sup>20</sup>

**Participation in non-formal learning in Australia was 29%, ranking 30 out of 34 surveyed OECD countries. Data collection periods range from 2012 to 2016.**

19 'Adult learning statistics – characteristics of education and training', Eurostat (June 2021), <[RMIT Online](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Adult_learning_statistics_-_characteristics_of_education_and_training&oldid=535088#:~:text=Almost%20three%20quarters%20(73.5%20%25)%25%20E2%80%94%20see%20Figure%205.></a>><br/>
    20 OECD, 'Participation in formal and/or non-formal education and training, by gender, age group and educational attainment (2016): Adult Education Survey (AES), Survey of Adult Skills (PIAAC) or national surveys, 25-64 year-olds', (September 2019) Education at a Glance.</p>
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# Case Study: Culture Amp

Culture Amp is a global platform provider for employee experience, helping to empower companies to transform employee engagement, develop high performing teams, and retain talent.

Justin Angsuwat, Culture Amp's Chief People Officer, shared his reflections on how businesses can look to develop their employees and maximise their spend on skills.

➔ Culture Amp develops skills as part of a competency-based framework

Culture Amp's development of skills and capability is strongly grounded in a bespoke competency-based framework.

While *skills* reflect the ability to perform a particular task or activity proficiently, *competencies* reflect a combination of knowledge, skills, abilities, and behaviours that enable an individual to effectively perform in a particular role.

Justin reflected on the importance of developing a competency-based framework which clearly lays out expectations for each role, and what's required to progress. The development of the framework is a consultative process, grounded in capability mapping within the organisation and seeking input from employees on what characteristics determine success in a role.

*“Where competency-based frameworks go wrong is when people start putting words in boxes and make the progression defined by adjectives of increasing difficulty. It needs to involve an understanding of the tasks people actually do in the job.”*

– JUSTIN ANGSUWAT

Culture Amp strives to better equip managers to develop employees by providing “Managed Development Training” for people leaders. This training provides managers with the skills they need to develop employees including where to find resources and how to progress development conversations. Culture Amp is deliberate about providing leaders with time and space to focus on their (and their team's) development.

To help his employees develop, Justin highlighted the importance of creating opportunities for employees through internal mobility programs, on-the-job opportunities, and secondments. In this way, development is a key enabler of employees being offered time, space and guidance to implement skills in their jobs.

*“As we know, learning doesn’t come from doing the courses but from experience and experiential learning and so for us, skills-based development is really important.”*

If you need to build, borrow and buy skills, maximise return on the ones you buy

Culture Amp is pragmatic about what skills they build, borrow and buy. As a software as a service (SaaS) organisation, Justin anticipates Generative AI and machine learning skills will be key parts of their product strategy and business roadmap. For emerging technology skills such as Generative AI and machine learning, Culture Amp’s approach is to carefully define the skills they are looking for, hire externally and leverage those skills in training and development across the organisation.

*“How do we hire externally and how can we best empower incoming talent to develop our skill set internally?”*

Leaders may be leaving ROI on the table

Justin explained there is a disconnect between employees’ and employers’ priorities, which may have flow-on impacts for business decisions to focus on learning and development. According to Justin, businesses are most concerned with the uncertainty of the future of work, fiscal discipline and uncertainty due to geopolitical risks. In contrast, employees are concerned with their career development, job security and impacts on their roles.

In some cases, the result of this disconnect is leaders may not fully comprehend the ROI potential of development or prioritise it accordingly. This is despite research showing development underpins tangible financial and non-financial outcomes such as revenue per employee, high performer attrition, employee motivation and engagement.

*“Not only will development drive retention and engagement of your people, it will help with the bottom line as well.”*

To measure ROI, businesses should first figure out what it is they are striving for, and secondly, determine the data needed to measure impact. For example, if training is intended to target retention, then businesses may choose to measure employee perceptions and satisfaction with training delivered (which can then be correlated with retention). In contrast, if training is intended to target skills building, then outcomes should be measured against execution of roadmap activities, future workforce planning goals or assessment of current skills deficits.

# 3.

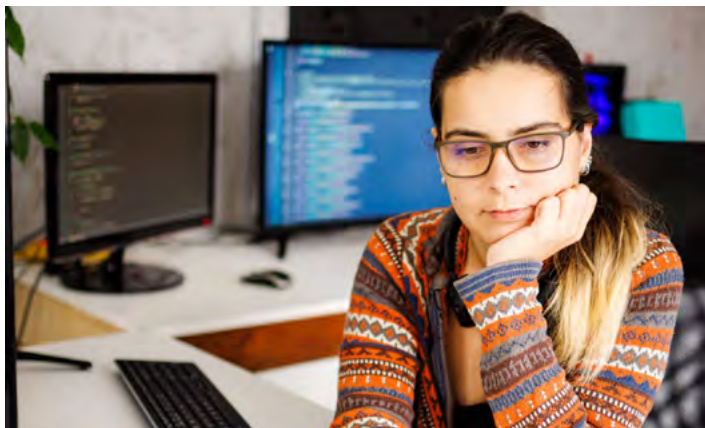
## The skills landscape



### Key findings

- In an international comparison of non-formal learning, Australia ranks 24 out of 32 EU countries.
- Four of the top five skills employers said they lack are digital skills. Surveyed employers are willing to pay an 8% premium for data and digital skills.
- Surveyed employers and employees rank leadership, communication and collaboration as the most important skills for success in a future workplace where more tasks are digitised and automated.
- Surveyed employees and employers share the sentiment that broad digital skills such as digital literacy will be more important to overall success than narrow digital skills such as data science and analytics. However, surveyed employers recognise the necessity of complex digital skills, and the digital skills mix varies by industry.
- Surveyed employees rank digital literacy as the third most important skill for future success, which is almost a 30% increase year-on-year.





### 3.1 Employers and employees face skills gaps in digital skills

The most prevalent skills gaps for surveyed employers are in digital skills. **Four of the top five skills surveyed employers said they lacked were digital, compared to two of the top five skills in 2023.** These skills cover generative AI or machine learning, data science, coding and cyber security. In response to the shortage of digital skills, surveyed employers are willing to pay a \$5,408 premium for data and digital skills.<sup>vii</sup>

Surveyed employees believe their skills gaps in digital skills are even more prevalent. Of the top five skills surveyed employees said they lacked, all of them were digital. This sentiment may be driven by fears about the impact of new technologies in the workplace. A recent Australian study found two in three Australian employees are concerned about the impact of AI on future job prospects.<sup>21</sup>

### 3.2 Skills gaps mirror the digital transition

The continued increase in demand for digital skills and urgency to remedy digital skills gaps reflects the digital transition across the Australian economy. Deloitte and the ACS found 1.3 million additional skills are needed by 2030 for Australia’s workforce to adapt to critical technologies such as AI and advanced data analytics.<sup>22</sup> Against this backdrop, it is not surprising digital skills was rated as the most lacking skill by both employees and employers.<sup>23</sup>

 In fact, 95% of Australia’s workforce will be affected as critical technologies, like generative AI, are integrated with everyday tasks.

Yet almost half (47%) of surveyed employees had never used generative AI in their current role, and 73% say this is because they don’t believe generative AI is relevant to them. This is contrasted to research which shows that 86% of all occupations will be affected.<sup>24</sup>

Surveyed employees recognise digital skills will be important to their professional success and rank digital literacy as the third most important skill for success into the future, an increase of almost 30% year-on-year. In contrast, just over 5% of surveyed employees thought data science and analytics would be the most important skill for their professional success in five years.

**CHART 3.1:** Top five skills surveyed employers lack in their organisation and surveyed employees lack in their skillset

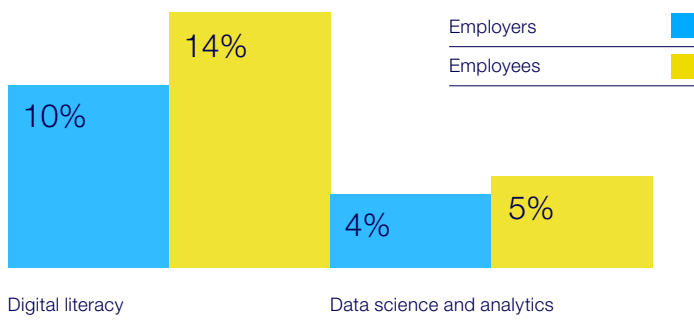
SURVEYED EMPLOYERS		SURVEYED EMPLOYEES	
1	Artificial intelligence or machine learning (33%)	1	Artificial intelligence or machine learning (36%)
2	Creativity and originality (25%)	2	Knowledge of cyber security tools or processes (35%)
3	Data science and analytics (23%)	3	Data visualisation (33%)
4	Coding and programming (23%)	4	Data science and analytics (33%)
5	Knowledge of cyber security tools or processes (23%)	5	Coding and programming (31%)

21 'AI in the workplace', Cint (21 December 2023), <<https://www.cint.com/blog/ai-in-the-workplace>>  
 22-24 Deloitte Access Economics, ACS Australia’s Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>

vii This is based on the median wage, estimated to be \$1,300 per week (or \$67,600 per year) and assumes that employees do not already possess these skills.



**CHART 3.2:** The most important digital skill for future success according to surveyed employers and employees



**Source:** Deloitte Access Economics Employer Survey (n=416) and Employee Survey (n=1000).

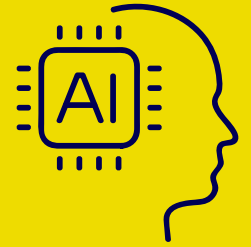
Surveyed employers share the sentiment that broad digital skills will be more important than specialised digital skills to the future success of their teams. In fact, while surveyed employers ranked digital literacy as the fourth most important future skill, they ranked data science and analytics tenth.

Employers may be underestimating the number of narrow or specialised digital skills they will need in their teams.

Within the 1.3 million skills Deloitte and ACS identified were necessary by 2030, six of the top ten were narrow digital skills. Moreover, while some (55%) surveyed employers said they will prioritise training in existing skills gaps, even fewer employers (34%) are taking a forward focus and training in emerging skill needs.

This is problematic given that three of the top five skills surveyed employers said they lacked are narrow digital skills. This aligns with a global study by Gallop and Amazon Web Services which found organisations hiring advanced digital workers were significantly more likely to experience steady growth than organisations employing only basic digital workers.<sup>25</sup>

<sup>25</sup> Marcus Law, 'Digital skills investments boost organisations and economies', DataCentre Magazine (online March 11 2023) <<https://datacentremagazine.com/articles/digital-skills-drive-gains-for-organisations-and-economy>>



# How will generative AI influence skills and upskilling?

Generative AI is unlike any technology introduced in the past. It can learn from large quantities of unstructured and unlabelled data, removing a key barrier to adoption by businesses. It can create new, multimodal content from a simple prompt by a user with no computer science background, democratising intelligence.<sup>26</sup>

While only 5% of surveyed Australian businesses are fully prepared to deploy and leverage AI within their operations, its users already comprise 32% of employees and 58% of students who are driving its uptake in a range of industries.<sup>27</sup>

Generative AI's primary contribution to the economy is the productivity gains enabled by automating repetitive and time-consuming tasks.<sup>28</sup> Deloitte's Gen AI survey concluded employees who use some generative AI tools daily save 5.3 hours a week.<sup>29</sup> Employees with the knowledge and skills to leverage generative AI will drive productivity gains. 59% of surveyed employees are planning to upskill in generative AI within the next 12 months.

There is a significant gap between employee uptake and business investment into adopting and training in generative AI tools.

More than three in four (78%) surveyed employers have either not provided, or are unaware of, generative AI training in their organisation. Furthermore, 17% of surveyed employers do not anticipate that generative AI training will ever be provided.

The current lack of business training also exacerbates the risks of generative AI, which include leaks of sensitive information, factual errors and copyright infringement.<sup>30</sup> 53% of surveyed employees have privacy concerns over using generative AI in their current role.

However, investment by Australian businesses to adopt AI is forecasted to increase seven-fold to \$27.5 billion by 2030.<sup>31</sup> This will allow businesses to take full advantage of generative AI by training employees on customised generative AI models integrated with their own data sources in a safe and responsible way.<sup>32</sup> This will also allow businesses to deliver more training and workplace experiences using AI, attracting and retaining a new generation of Gen AI native employees.<sup>33</sup>

Generative AI influences the demand for skills based on the tasks it impacts in each role which vary by industry.<sup>34</sup> In the retail trade industry, Generative AI will impact 98% of sales tasks, but only 3% of finance tasks.<sup>35</sup> Where generative AI augments rather than automates tasks, employees with fundamental technical skills in coding and prompt design can leverage its benefits the most.<sup>36</sup>

The five industries facing a 'short fuse, big bang' scenario, where generative AI has a fast and significant impact, are financial services, ICT and media, professional services, education and wholesale trade.

These industries account for 26% of the Australian economy, equivalent to nearly \$600 billion in economic activity.<sup>37</sup>

While coding has been one of the top skills in demand in Australia over the last 10 years, no-code generative AI tools are democratising programming skills, making them accessible to all employees.<sup>38</sup> Therefore, people skills such as critical thinking, problem solving, research, ethics and communication become just as important as technical skills.<sup>39</sup>

Generative AI will also create new roles. Businesses which manage customised generative AI models require specialised data skills. There will be a high demand for skills to design AI models, oversee its outputs, and review training data to ensure the AI is learning from a diverse, representative and balanced dataset.<sup>40</sup> Deloitte and ACS project a 179% growth in workers skilled in advanced data analytics and 268% growth in workers skilled in high-performance computing by 2030.<sup>41</sup>

26-37 Deloitte Access Economics & AI Institute report, 'Generation AI: Ready or not, here we come!' (2023), <<https://www.deloitte.com/au/en/services/consulting/analysis/generation-ai-ready-or-not.html>>

38-39 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>

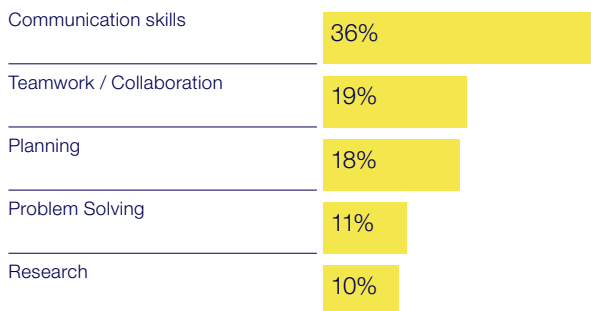
40 Deloitte Access Economics & AI Institute report, 'Generation AI: Ready or not, here we come!' (2023), <<https://www.deloitte.com/au/en/services/consulting/analysis/generation-ai-ready-or-not.html>>

41 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>



**CHART 3.3:** Top five in-demand skills for professionals from January to July 2023

% of adverts requesting this skill:



Source: Deloitte Access Economics calculations based on Lightcast data

### 3.3 Skills least susceptible to automation may become the most critical

In a future workplace where more tasks are digitised and automated, surveyed employers and employees agree that leadership, communication and collaboration will be the most important skills for success. Notably, 42% more of surveyed employers think leadership will be the most important future skill year-on-year.

With generative AI and large language models already able to automate up to 50% of business tasks, the World Economic Forum found tasks in decision-making, managing and communicating will have the lowest percentage automated by 2027.<sup>42</sup>

Furthermore, communication skills are not only amongst the least automatable, but the skills most needed for Australia’s digital transition.<sup>43</sup>

This aligns with the increase in job advertisements citing communication skills. In 2023, communication was the leading skill in job advertisements for professionals, cited in 36% of job advertisements. While communication has always been a ubiquitous skill, this represents an increase of 3% year-on-year.

### Using microcredentials to meet employer’s hiring expectations

Surveyed employees undervalue the importance of skills to employers when they hire new staff. Surveyed employees thought that the time they spent in their previous role and their formal education experience set them apart from other candidates. Yet, surveyed employers said that proven technical skills and soft skills are the two most important hiring considerations.

Microcredentials have emerged as a practical way for surveyed employees to learn and demonstrate their skills to current and prospective employers. Microcredentials can provide employees with a quick and cost-effective way to upskill.

The uptake of microcredentials has accelerated rapidly due to Covid-19,<sup>44</sup> with 20% of surveyed employees possessing microcredentials.

Notably, surveyed employees’ choice in microcredentials reflects their expectations of the skills landscape in the future. The most common microcredential attained was leadership at 37%, followed by critical thinking (35%) and problem solving (30%).

Surveyed employees underestimate the degree to which employers consider microcredentials as part of their recruitment process. 35% of surveyed employees thought employers consider microcredentials when hiring, but nearly half of surveyed employers said they consider them.

**TABLE 3.3:** Top three skills for success in five years’ time

SURVEYED EMPLOYERS		SURVEYED EMPLOYEES	
Leadership - 14%	(+42% on 2023)	Leadership - 25%	(-9% on 2023)
Communication and collaboration – 11%	(-22% on 2023)	Communication and collaboration – 18%	(-5% on 2023)
Industry specific knowledge – 10%	(-6% on 2023)	Digital literacy – 14%	(+27% on 2023)

Source: Deloitte Access Economics Employer Survey (n=416) and Employee Survey (n=1000)

42 ‘The Future of Jobs’, World Economic Forum, (30 April 2023) <<https://www.weforum.org/publications/the-future-of-jobs-report-2023>>

43 Deloitte Access Economics, ACS Australia’s Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>

44 Selvaratnam, R. and Sankey, M., 2021. The State of Micro-Credentials Implementation and Practice in Australasian Higher Education. Open Praxis, 13(2), p.228–238.DOI: <<https://doi.org/10.5944/openpraxis.13.2.130>>

# Case Study: Westpac

## Impacts of generative AI on job tasks, reskilling and L&D

Westpac is leveraging digital technologies more and more to better service their customers, which will require a focus on reskilling and internal mobility to service the shift. Accordingly, Westpac are looking to prioritise investment in skills of the future. Justin Sterns, Head of Consumer and Business Banking Institute at Westpac, believes these skills are emerging in response to new technologies, market trends, or societal shifts and are critical for organisational success.

*“Whether it's organisational change, policy change, process change, systems change, whatever it might be - change is increasing in frequency.”*

- JUSTIN STERNS

One such disruption is generative AI, which is expected to have a profound impact on the financial services sector in the future.

*“It will be a radically different way of working in five to ten years' time – AI will both augment, replace and create new roles which will certainly be accompanied by reskilling”*

Justin sees more value in generative AI beyond helping the learning and development team produce content. He is excited to see generative AI become integrated into employee task workflow and perform as an ‘always available learning coach’ that can be on hand to interject with applicable learning outcomes to their point of application.

*“The real value is shifting the way people learn. Rather than having to go out of your day job, consume learning somewhere in, then come back to your day job, the real potential of gen AI is to bring the knowledge, the guidance and support to the point of application in the workflow.”*

While investment in digital skills is critical, it's important not to forget the skills that underlie the human element such as relationship, communication or listening skills. Replacing menial tasks through automation, Justin is excited for the opportunities generative AI may bring to focus on higher order, more value aligned work.

*“Generative AI may be abrupt and uncomfortable but equally, we can be optimistic that it will elevate us out of the manual tasks to focus on the enjoyable tasks like talking to people and deep thinking”*

# 4.

## The return on investment in skills and training types



### Key findings

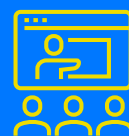
There are four key ways employers can maximise their training and development spend:



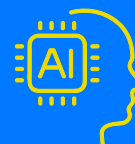
- 1. Measure ROI** - Almost one in five (17%) organisations surveyed indicated they either didn't know how to measure ROI, or explicitly did not measure ROI, of training spend.



- 2. Match training to skills gaps** – Not enough organisations are prioritising upskilling in areas of existing skills gaps. Almost half (45%) of surveyed businesses are not prioritising training and development in areas of existing skills gaps.



- 3. Better capture on-the-job training** – Surveyed employers and employees rated on-the-job training as most cost effective.



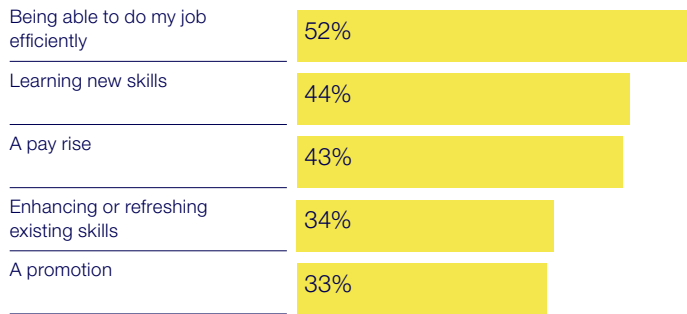
- 4. Leverage new technologies like generative AI** – artificial intelligence's biggest asset is bringing learning insights to the point of application.



## 4.1 What returns can employees and employers expect from training

The economic and productivity benefits from investment into learning and development are clear for both employers and employees. Just as surveyed employers believe addressing skills gaps will improve productivity, more than half (52%) of surveyed employees believe training will enable them to perform in their role more efficiently. Surveyed employees also see learning new skills (44%) and a pay rise (43%) as key benefits of training.

**CHART 4.1:** Percentage of surveyed employees who believe training has contributed to the following, top five responses



**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416)

The intangible benefits that are less easily measured are still critical for employee performance and motivation. For example, research shows a number of other benefits stemming from working more efficiently such as increased autonomy, mastery and competency resulting in heightened job satisfaction and improved employee retention.

**i** The current evidence indicates that individuals who perceive they have skills mastered within their role are more likely to experience positive outcomes, such as engagement, satisfaction, felt trust, creativity, performance, and reduced turnover intentions.<sup>45, 46</sup>

Australian surveyed employers identified employee satisfaction, staff attraction, ability to keep up with the latest technologies and business competitiveness as the top expected benefits of training. However, across all benefits, surveyed employers are consistently less able to demonstrate improvements using data, suggesting there is an opportunity to improve data collection and measurement of key benefits.

**For surveyed employers who did measure the ROI of training programs, training has increased productivity growth by 17% on average and revenue growth by 14% on average.**

**TABLE 4.1:** Percentage of surveyed businesses that expect improvements from training and can demonstrate this with available data, top five responses

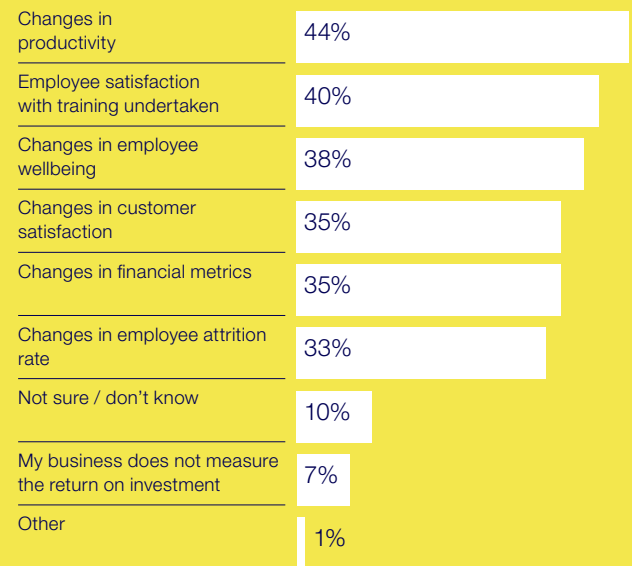
I expect that has improved as a result of training		I can demonstrate this has improved as a result of training	
1	Employee satisfaction (54%)		Employee satisfaction (38%)
2	Staff attraction (53%)		Employee attrition rate (36%)
3	Ability to keep up to date with the latest skills and/or technologies (53%)		Revenue growth (34%)
4	Business competitiveness (52%)		Ability to keep up to date with the latest skills and/or technologies (33%)
5	Customer attraction (51%)		Organisational operating costs (32%)

**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416).

45 Nerstad, C. G., Searle, R., Černe, M., Dysvik, A., Škerlavaj, M., & Scherer, R. (2018). Perceived mastery climate, felt trust, and knowledge sharing. *Journal of Organizational Behavior*, 39(4), 429–447. <<https://doi.org/10.1002/job.2241>>  
 46 Černe, M., Nerstad, C. G., Dysvik, A., & Škerlavaj, M. (2014). What goes around comes around: Knowledge hiding, perceived motivational climate, and creativity. *Academy of Management Journal*, 57(1), 172–192. <<https://doi.org/10.5465/amj.2012.0122>>



**CHART 4.2:** Methods of organisations to measure ROI of training investment (percentage of surveyed organisations)



**Source:** Deloitte Access Economics calculations based on employer survey fielded by Ipsos (n=416)

## 4.2 How can employers maximise their training spend?

The data shows surveyed employers are planning to increase spend on learning and development by 15% year-on-year, per employee. However, increased spend does not necessarily result in an equivalent increase in returns.

Harvard Business School notes the global training spend was \$357.7 billion USD in 2020 yet 75% of the 1,500 managers in their survey were dissatisfied with their learning and development function.<sup>47</sup> With this in mind, knowing how and where to spend on training is important to maximise training spend.

This research has identified four key ways employers can maximise their training and investment spend:

1. Measure ROI
2. Match training programs to skills gaps more explicitly
3. Better capture on-the-job training activities and implement skill sprints
4. Leverage new technologies like generative AI

<sup>47</sup> Steve Glaveski, 'Where Companies Go Wrong with Learning and Development', Harvard Business Review (online, October 02, 2019) <<https://hbr.org/2019/10/where-companies-go-wrong-with-learning-and-development>>

## 1) Measure ROI

Being clear with measuring learning and ROI is central to efficient learning and development spend. However, almost one in five (17%) organisations surveyed indicated they either didn't know how to measure ROI, or explicitly did not measure ROI, of training spend.

To accurately measure improvements as a result of learning, we must be able to firstly measure learning and secondly measure the completion of job tasks that relate to that particular skill. At a high level, the *Learning Transfer Evaluation Model*<sup>48</sup> provides a conceptual framework for how this occurs.

This model highlights the importance of measuring the effectiveness of learning by assessing the extent to which there are changes to the performance of behaviours associated with a particular skill. Organisations should remain wary of using inappropriate proxies for learning effectiveness that do not actually measure the constructs they purport to. For example, surveys of engagement with learning programs provide pseudo NPS for employee satisfaction with the content and does not accurately reflect how employees engaged with the learning or whether they then applied those skills and behaviours in their role. Organisations should carefully consider measurement approaches such as increases to the

performance of skill behaviours following training as an input to evaluate the effectiveness of ongoing training and ensure spend is helping support delivery of business goals.

**FIGURE 4.2:** Theoretical feedback mechanism to build more effective learning interventions and validate learning results as part of the Learning Transfer Evaluation Model

LTEM : LEARNING-TRANSFER EVALUATION MODEL		
Tier 8	Effects of transfer	Work
Tier 7	Transfer	
Tier 6	Task competence	Learning
Tier 5	Decision making competence	
Tier 4	Decision making competence	
Tier 3	Learner perceptions	
Tier 2	Activity	
Tier 1	Attendance	

Developed by Will Thalheimer, PhD with help from others.

Source: Will Thalheimer



48 "The learning-transfer evaluation model: Sending messages to enable learning effectiveness", Thalheimer, W. (2018) <<https://www.worklearning.com/wp-content/uploads/2018/02/Thalheimer-The-Learning-Transfer-Evaluation-Model-Report-for-LTEM-v11a-002.pdf>>



## 2) Match training programs to skills gaps more explicitly

Investment in certain skills will yield different ROI and different skills are needed for different purposes. This is to be welcomed and expected. For example, one study found providing first time managers leadership training returned 29% ROI in the first three months and 415% annualised ROI.<sup>49</sup> On the other hand, regulatory or compliance training is critical to reduce risk, without immediately generating additional value to an organisation. In the employer survey, surveyed respondents seemed split between which skill clusters demonstrate the highest return on investment with four skill clusters showing homogeneous perceptions of ROI.



### There is no one-size-fits-all solution.

Organisations must balance prioritising skills which hold high expectations for future returns whilst being mindful not to neglect core or compliance skills which are the fundamental capabilities crucial for day-to-day operations and are required for legal and regulatory adherence.

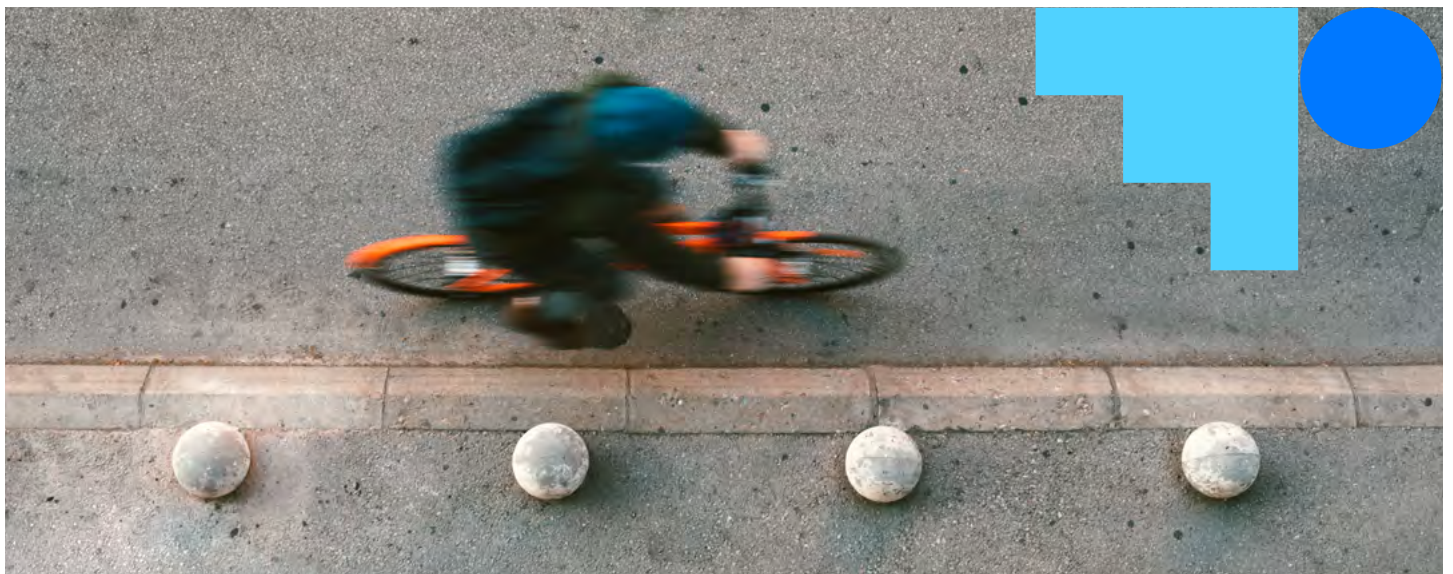
One way organisations should prioritise is through focusing on upskilling in areas where there are existing gaps in the organisation. Yet, 45% of surveyed organisations aren't prioritising their training budgets to address the skills gap. Understanding where skill deficits are most pronounced, what capabilities

these skills relate to and how often these behaviours are performed will reveal the extent to which an organisation is currently falling short of its potential and uncover opportunities where the largest return on investment is likely to be.

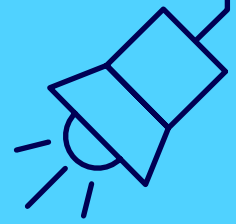
This may be why current training priorities are misaligned to the skills deficits and spending is occurring in the wrong places. Surveyed employers are willing to pay one of the highest premiums, up to 9% more, for employees with industry or job specific skills (e.g., understanding financial markets if in finance, or recruitment for an HR professional). Yet when surveyed employers were asked which skills they were planning to offer training for in the coming year, industry or job specific skills were the third priority (60% of surveyed organisations), behind leadership skills and soft skills at 71% and 64% respectively.

Furthermore, four of the top five skills surveyed employers said they lacked were digital skills. Surveyed employers are willing to pay an 8% premium for data and digital skills and yet place leadership as the most important skill for success in five years' time.

This confirms some organisations may lack the data, cohesion or capability to review, understand, plan and address their skills gaps in a meaningful manner. Keeping pace with changing skills can only be expected to grow more difficult as pace of change accelerates in line with emerging technologies.



<sup>49</sup> Leone, P, "Was it worth it? Measuring the impact and ROI of leadership training", Training Industry magazine (online, August 2019) <<https://trainingindustry.com/magazine/jul-aug-2019/was-it-worth-it-measuring-the-impact-and-roi-of-leadership-training/>>



# Westpac’s Data and Digital Capability Uplift Program

The Westpac Group’s Data and Digital Capability Uplift Program was designed to empower thousands of employees across six countries with contemporary digital and data competencies in an interactive, self-paced blended learning journey, with multiple delivery formats to ensure flexibility, inclusivity, and accessibility in the flow of work.

“Westpac’s purpose is to create better futures together for all our people, customers and communities. By enhancing their data and digital capabilities, the Capability Uplift Program reflects Westpac’s commitment to helping our people to remain future ready.” said Sandra Casinader, Group Head Enterprise Learning and Capability at Westpac Group.

Each learning pathway was primarily self-paced in nature empowering learners to complete their learning experience across 8–16 weeks. The eight learning pathways included over 380 unique, bite-sized digital and blended content assets, mapped to 29 skills and eight foundational and intermediate pathways.

To meet different learning styles, resources included videos, infographics, cheat sheets, podcasts, quick reference guides and ‘tiny task’ activities, which created a sense of familiarity,

connection, and contextual relevance for learners. The learning program also included a “Pathway Selection Tool”, to help learners identify the specific learning pathways which would meet their interests, learning goals, proficiency levels and needs of their role.

With the continued rapid pace of change in technology, the learning module content also needed to be able to evolve in line with industry developments e.g., AI/gen AI resources, and an ESG case study using design thinking principles to create carbon tracker feature in the customer facing app.

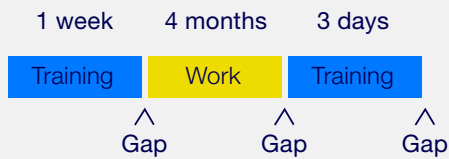
The learning pathways are progressively being rolled out over a 2-year period before becoming a BAU program available to all Westpac employees. Westpac staff are applying the learning journey across a range of areas including communication and storytelling with data, design thinking and ideation techniques, and innovation through enabling technology.

Robust measurement frameworks validate impact and aids the continued evolution of learning materials in line with learner and business needs. Prioritising both data-driven insights, and qualitative feedback – not just at the end of a learning journey but during the development phase with pilot testing, and throughout the learning journey - is crucial for informed decision-making and iterative enhancements to continue to strengthen the program.

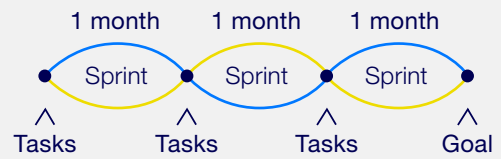




**FIGURE 4.2.1:** Traditional training methodology versus skill sprint approach

Traditional training construct:



Skill sprint approach (agile + learning = reskilling):



Training   
Work 

Source: Conceptual framework produced by N. Petch, Deloitte (2021)

### 3) Better capture on-the-job training activities and implement skill sprints

Employee and employer perceptions of cost effectiveness and impact were assessed across a range of training formats (e.g., on the job, virtual, hybrid, externally delivered etc) and training types (e.g., on the job training, free online courses, formal qualifications and certifications etc). Surveyed employees and employers alike see on-the-job training as the most cost effective and impactful training, followed by self-directed training.

Findings concerning on-the-job training are consistent with research indicating employees value learning in contexts where there is direct line of sight to the perceived application of newly acquired skills and immediate opportunities for rehearsal and mastery.<sup>50</sup> These results mirror employee preferences identifying being able to perform their job more efficiently was the number one benefit of training.

Skill sprints are an efficient manner of training in this regard. Skill sprints are focused, real world learning experiences for teams in which participants learn new skills while directly designing, developing, or delivering something to their organisation.<sup>51</sup>



The figure above illustrates how learning skills without the means to integrate into work can leave gaps where skills aren't rehearsed and are susceptible to atrophy. Reskilling in this way is more than just acquiring knowledge and focuses on honing practical skills that have a direct impact on job performance and empowers employees to adapt and excel in response to the changing demands of their roles.

Organisations play a crucial role in driving reskilling by implementing job-task learning systems which enable employees to practice and hone skills taught into classrooms or online. In order to maximise benefits, on-the-job training should complement self-directed learning to give employees opportunities to apply these new skills in their day-to-day roles and build on their learning.

<sup>50</sup> Nikita Shivdasani, "Why Hands-On Training Is The Key To Maximizing Job Success", Forbes (online, 7 October 2021) <<https://www.forbes.com/sites/elleivate/2021/10/07/why-hands-on-training-is-the-key-to-maximizing-job-success/?sh=784008542e5d>>

<sup>51</sup> Longmuss, J. & Höhne, B, "Agile learning for vocationally trained expert workers: Expanding workplace-based learning one sprint at a time" (2017), 9 Procedia Manufacturing, 262.



## 4) Leverage new technologies like generative AI



Generative AI will transform the way that businesses approach learning and development at a time where developing digital skills is imperative to businesses and workers.



Deloitte and ACS found that without a reskilling uplift, there is a cost of \$16 billion to the Australian economy by 2030.<sup>52</sup> Further, 11.2 million Australian workers will need reskilling because new technology will impact the way that they work.

Employers can use generative AI to create tailored learning and development content for their employees. While traditional learning and development is limited to general content, generative AI can analyse data on an employee's role, work history, learning history and learning style to produce personalised programs which accelerate their learning speed and retention.<sup>53</sup> Employees can continue to personalise learning with follow-up questions and live feedback, whereby generative AI acts as an always available 'coach' to bring the knowledge, guidance and deeply personalised support to the point of application in the workflow.

Beyond personalised coaching, generative AI can support learning and development practitioners to create content. For example, to analyse data from within a business and across larger industry datasets to swiftly create new content which bridges skills gaps, keeps employees up-to-date and embeds a culture of continuous skills development within businesses.<sup>54</sup>

**Businesses will need to develop strategies responding to the risks of using generative AI in learning and development.** If AI is trained on data with biases or makes factual errors, there may be systemic impacts within businesses and industries when it is used to train employees. Where generative AI collects sensitive employee and business data, it raises data privacy concerns. This highlights a shift in the role of learning and development professionals from creating programs to managing their effectiveness.<sup>55</sup>

Businesses will also need to alter their training packages to accommodate general and customised generative AI models. Where businesses originally may have trained employees on how to code, conduct research and analyse data, they may instead train employees on how and when to instead use generative AI to conduct tasks more efficiently.



52 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>

53 Chrysanthos Dellarocas, "How Gen AI Could Accelerate Employee Learning and Development", Harvard Business Review (8 December 2023) <<http://bit.ly/4c0dODX>>

54 Deloitte Access Economics, ACS Australia's Digital Pulse 2023, (report commissioned by the Australian Computer Society, 16 November 2023) <[https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse\\_2023\\_Digital.pdf](https://www.acs.org.au/content/dam/acs/acs-publications/AustraliasDigitalPulse_2023_Digital.pdf)>

55 Olivier Pestel, "The Role of AI in Learning and Development: Transforming Employee Growth and Engagement", HR Leader, (17 November 2023) <<https://www.hrleader.com.au/tech/24839-cornerstone>>



## Appendix A: Modelling the investment in learning and development in AU

### A.1. APPROACH

This report estimates the total investment in learning and development by medium and large businesses in Australia in 2024. This estimate is based on the average expenditure on learning and development of a survey sample of medium and large Australian businesses and data from the ABS and NSW Government. Further detail about the various inputs are summarised in the table below (Table A.1).

**TABLE A.1:** Inputs used to calculate the investment in learning and development in 2024

#	INPUT	VALUE	SOURCE / DESCRIPTION OF CALCULATION
1	Investment in learning and development per business in 2024 (weighted by industry, as below)	\$0.97 million	Ipsos employer survey (100+ employees only)
2	Number of Australian businesses with 200+ FTEs	4,895	ABS, Counts of Australian Businesses, including Entries and Exits
3	Number of businesses in NSW with 110-199 FTEs	1,130	NSW Innovation and Productivity Council, Business size report
4	Number of businesses in NSW with 220+ FTEs	1,619	NSW Innovation and Productivity Council, Business size report
6	Number of Australian businesses with 110-199 FTEs	3,417	(3/4) * 2
7	Number of medium and large Australian businesses (110+ FTEs)	8,312	2 + 6
8	Investment in learning and development in 2024	8.1 billion	1*7

Source: Deloitte Access Economics (2024)

### A.2. RESULTS

Modelling for this report finds that the total estimated spend on learning and development by medium and large Australian businesses (110+ FTEs) in 2024 is approximately \$8 billion. This represents approximately 2% of business expenditure overall in 2024 and an increase of 15% per employee on 2023, which was calculated in the same way as Table A.1, using inputs for 2023.

On a per employee basis and weighted for industry composition, it is estimated that medium and large businesses (100+ FTE) will spend on average \$1,538 per employee.<sup>viii</sup> There are challenges associated with extrapolating from survey data. While extrapolating survey data to the broader population is common practice in research, it does possess several inherent challenges and limitations, in particular sampling bias, generalisability (the degree to which survey results can be applied to the broader population) and temporal validity (the length of time that survey results are valid).<sup>56, 57</sup>

<sup>56</sup> J Howick, P Glasziou, JK Aronson, 'Can understanding mechanisms solve the problem of extrapolating from study to target populations (the problem of 'external validity')?' (2013), 106(3), *Journal of the Royal Society of Medicine*, 81-86

<sup>57</sup> D Khosrowi, 'Extrapolating from experiments, confidently' (2023), 13(18), *European Journal for Philosophy of Science*

<sup>viii</sup> This has been calculated as a weighted average based on the industry profile of businesses in the survey as per weighting methodology in Table A.2.

## To help limit the impact of this, the following steps were undertaken:

- Expenditure on learning and development from the survey were adjusted to remove outliers; specifically, this involved removing responses which were in the top 1% of responses for learning and development expenditure per employee. These responses were removed as they differed significantly to most other data points in the dataset.
- Expenditure was weighted by broad industry categorisation to determine an aggregate spend across medium and large businesses. Average learning and development spend for surveyed businesses with more than 100 employees was weighted against ABS industry composition for businesses with 200+ employees.<sup>58</sup> An approach to take three broad industry groupings (detailed below) was taken due to constraints in survey sample sizes. The table below provides the concordance between detailed ANZSIC industry and their broad categorisation.
- Sensitivity testing was performed to assess variance in results under an alternate scenario of five industry groupings. Analysis showed variation of less than 5% relative to the core scenario, suggesting the results are robust to different industry weightings.

Our results are broadly consistent with the wider literature on spending on learning and development per employee, with other research putting this at \$1,685 per employee in NSW,<sup>59</sup> and between \$1,100-\$3,000 per employee depending on whether learning is a business priority.<sup>60</sup> This is compared to \$1,538 per employee in our sample.

**TABLE A.2:** Employer survey respondents by industry type

INDUSTRY	% IN SAMPLE	WEIGHTS
<p><b>Traditional industries:</b></p> <ul style="list-style-type: none"> <li>• Agriculture, forestry and fishing e.g. raising animals, fishing, hunting</li> <li>• Mining</li> <li>• Manufacturing</li> <li>• Electricity, gas, water and waste services</li> <li>• Construction e.g. building, maintenance, trades</li> <li>• Wholesale trade e.g. purchase and on selling of products to businesses</li> <li>• Transport, postal and warehousing e.g. delivery, public transport</li> </ul>	24%	35%
<p><b>Professional services:</b></p> <ul style="list-style-type: none"> <li>• Information media and telecommunications e.g. TV, software, phones</li> <li>• Financial and insurance services e.g. banking, insurance and brokerage</li> <li>• Professional, scientific and technical services e.g. scientific research, engineering, law, profession</li> <li>• Administrative and support services e.g. office administration, cleaning services, packaging products</li> <li>• Public administration and safety e.g. government services, emergency and public safety services</li> </ul>	40%	28%
<p><b>Consumer services:</b></p> <ul style="list-style-type: none"> <li>• Retail trade e.g. purchase and on selling of products to the general public</li> <li>• Accommodation and food services e.g. restaurants, cafes and hotels/motels</li> <li>• Rental, hiring and real estate services</li> <li>• Education and training e.g. schools, universities, training providers</li> <li>• Healthcare and social assistance e.g. hospitals, disability support, not for profits</li> <li>• Arts and recreation services e.g. sports centre facilities, galleries, museums</li> <li>• Other services e.g. religious leaders, hair and beauty</li> </ul>	36%	37%

Source: Deloitte Access Economics (2024)

58 Australian Bureau of Statistics, Counts of Australian Businesses, Including Entries and Exits, June 2019 to June 2023 (18 December 2023)

59 Tafe NSW, "Skills and Australian business report", (5 June 2018) <[https://www.tafensw.edu.au/documents/60140/86282/TAFE+Enterprise+Training+Report.pdf/bf500d82-3956-2ed5-5b39-b80d9c090dd5#:text=Almost%20half%20\(41%25\)%20of.employee%20on%20training%20and%20development](https://www.tafensw.edu.au/documents/60140/86282/TAFE+Enterprise+Training+Report.pdf/bf500d82-3956-2ed5-5b39-b80d9c090dd5#:text=Almost%20half%20(41%25)%20of.employee%20on%20training%20and%20development)>

60 Deloitte, "The business return on learning and development" (report commissioned by DeakinCo, March 2022) <[https://wordpress-ms.deakin.edu.au/deakinco/wp-content/uploads/sites/261/2022/03/DCQ0508\\_The\\_Bus\\_Return\\_LDReport\\_WEB\\_vFa.pdf?\\_gl=1\\*vwg2kf\\*\\_ga\\*MTY2Mjk5MzU2MS4xNzA4MzA5ODQ2\\*\\_ga\\_JPTMKQ5P9D\\*MTcwODMwOTg0Ni4xLjEuMTcwODMwOTk1MC41OS4wLjA](https://wordpress-ms.deakin.edu.au/deakinco/wp-content/uploads/sites/261/2022/03/DCQ0508_The_Bus_Return_LDReport_WEB_vFa.pdf?_gl=1*vwg2kf*_ga*MTY2Mjk5MzU2MS4xNzA4MzA5ODQ2*_ga_JPTMKQ5P9D*MTcwODMwOTg0Ni4xLjEuMTcwODMwOTk1MC41OS4wLjA)>

### A.3. LIMITATIONS

- As noted above, estimates of the average investment in learning and development are informed by bespoke survey data. These surveys are based on a sample of the employer population in Australia and therefore there exists challenges associated with extrapolating from the survey data. The modelling seeks to control for this by weighting expenditure by broad industry categorisation informed by the ABS, however this approach may not completely address underlying differences between the survey sample and the broader business population.
- In addition, the analysis seeks to estimate the number of businesses in Australia with over 110 FTEs based on data from the ABS and NSW Government. In estimating this value, the analysis assumes that the profile of medium and large businesses in Australia is aligned to NSW.
- Furthermore, employer survey respondents are asked to self-report their organisation's learning and development investment. It is possible respondents have over or underestimated the quantum of this investment, biasing results. The modelling seeks to mitigate this through the removal of outliers.

## Appendix B: Modelling the value of lost skills due to the fall in L&D expenditure

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### B.1 APPROACH

This report estimates the value of skills that will not be attained due to the fall in learning and development expenditure in 2024. This estimate is based on data from the employee and employer survey fielded by Ipsos and data from the ABS and NSW Government.

At a high-level, this was estimated based on data from the employer survey on the number of large and medium Australian businesses who are planning to reduce expenditure on learning and development in 2024, divided by the average cost of a short course in Australia, which provided the number of skills that these businesses will miss out on due to the reduction in learning and development expenditure. This was then applied to the average willingness to pay for skills, based on data from the employer survey. Further details about each of these inputs is described below (Table B.1).

- The number of medium and large businesses who are planning to reduce expenditure on learning and development in 2024 was drawn from the employer survey, which found that one in eight (or 12%) of businesses are planning to reduce expenditure on learning and development in 2024 compared to 2023. According to the employer survey, these businesses were planning to reduce expenditure on learning and development by 49% (or \$587,900 on average).
- The average cost of a short training course in Australia is estimated to be \$2,160, based on information about the costs of short courses offered by RMIT Online. The cost estimate is only related to short courses geared towards professionals; it is noted that this can vary significantly depending on the type of course undertaken.
- The willingness to pay for skills was drawn from the employer survey, which found that on average employers are willing to pay 9% (on top of a baseline salary) for skills.

These figures were applied to the number of medium and large Australian businesses (defined as businesses with over 110 FTEs), which is estimated to be 8,312 businesses. This figure has been estimated using data from the Australian Bureau of Statistics and the NSW Government. Further details about the various inputs are summarised in the table on the next page.



TABLE B.1: Inputs informing the cost of digital skills gap

#	INPUT	VALUE	SOURCE / DESCRIPTION OF CALCULATION
1	Share of businesses reducing expenditure on learning and development in 2024 (compared to 2023)	12%	Ipsos employer survey
2	Number of medium and large Australian businesses (110+ FTEs)	8,312	See Table A.1
3	Number of Australian businesses (110+ FTEs) reducing expenditure on learning and development	1,006	NSW Innovation and Productivity Council, Business size report
4	Reduction on learning and development expenditure on average	-49%	NSW Innovation and Productivity Council, Business size report
5	Drop in expenditure on learning and development of businesses who are planning to spend less on learning and development in 2024, compared to 2023	\$1.2 million	A) Average expenditure on learning and development in 2024 of businesses who are planning to reduce expenditure, Ipsos employer survey
		-\$587,898	B) 4 * 5A
6	Average cost of a short training course	\$2,160	Average cost of RMIT Online short course
7	Number of skills that businesses who are planning to reduce expenditure on learning and development are missing out on	-272 skills	5A / 6
<p><i>This assumes that employees learn one (1) skill from every short course they undertake. The modelling notes that some skills such as leadership can take several years to master and likely include a combination of formal learning, mentoring and on-the-job training.</i></p>			
8	Average willingness to pay for skills (on top of a baseline salary)	9%	Ipsos employer survey
9	Average wage of employees at medium and large Australian businesses	\$1,661 per week	A) ABS, Employee Earnings and Hours, Australia
		\$86,395 per year	B) 9A * 52
10	Average value of a skill	\$7,435	8 * 9B
<b>11</b>	<b>Value of skills that will not be attained due to the fall in learning and development expenditure in 2024</b>	<b>\$2 billion</b>	<b>(10 * 7) * 3</b>
<b>12</b>	<b>Lost return on investment</b>	<b>\$3.40 for every \$1 spent on learning and development</b>	<b>(10 * 7) / 5B</b>

Source: Deloitte Access Economics (2024)

## B.2 RESULTS

Modelling for this report finds that the fall in learning and development investment will mean missing out on skills valued at \$2 billion in 2024, equivalent to \$5.6 million per day, equivalent to around \$2 million per business.

## B.3 LIMITATIONS

It is important to note that this modelling is subject to several key limitations:

- As noted above, estimates of the average investment in learning and development are informed by bespoke survey data. These surveys are based on a sample of the employer population in Australia and therefore there exists inherent challenges associated with extrapolating to the broader business population. The modelling seeks to control for this by weighting expenditure by broad industry categorisation informed by the ABS, however this approach may not completely address underlying differences between the survey sample and the broader business population.
- Furthermore, employer survey respondents are asked to self-report their organisation's learning and development investment. It is possible respondents have over or underestimated the quantum of this investment, biasing results. The modelling seeks to mitigate this through the removal of outliers.
- The modelling assumes that employees learn one skill from every short course. However, it is noted that some skills such as leadership are likely to take several years to master and include a combination formal learning (such as undertaking short courses), mentoring and on-the-job training.
- It is possible that if businesses reduce expenditure on learning and development, a substitution effect would occur. In other words, if businesses reduce their investment in employees' learning and development, these employees will not start investing their personal savings into training to offset the drop in employer-provided training. This would mean the loss in the value of skills to businesses would be less than what is reflected in the results currently.
- The modelling implicitly assumes that the value of a skill to employers is equal to the employer's willingness to pay for the same skill.
- The modelling assumes that the willingness to pay for skills remains unchanged. In reality, there may exist diminishing returns to attaining additional skills depending on the job level. In addition, it is noted that the skills captured in the average willingness to pay are varying levels of sophistication, technicality, and specificity, implying that there may be different values associated with each skill. However, the modelling uses an average when estimating the value of learning a new skill.
- Finally, the modelling is based on a modest sample of businesses who are planning to reduce expenditure on learning and development in 2024 within the employer survey (49 businesses in total), which may have implications for the representativeness of the modelling results.

## RMIT Online Workforce Development

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Technology is revolutionising the way businesses operate - across all sectors and functions, the need for upskilling and reskilling is critical. RMIT Online has developed over 80+ courses with leading industry partners like REA Group, Adobe and Amazon Web Services, to be delivered 100% online across workplaces.

Our credentials focus on upskilling employees across a broad scope of topics and industry skills, aligning with key capabilities critical for the future workforce. The programs have been designed to bridge skills gaps, attract and retain talent, and develop leadership potential within organisations. All learning culminates in a certified digital credential demonstrating ability in the skills that matter.

RMIT Online is dedicated to our mission of future-ready careers and creating a community of lifelong learners, successfully navigating the world of work.

For more information, please visit our website [online.rmit.edu.au](https://online.rmit.edu.au)

## Deloitte Access Economics

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