

Australia's Tech Jobs Opportunity – Cracking the Code to Australia's Best Jobs





About the Tech Council of Australia

The Tech Council of Australia (TCA) is the peak industry body for Australia's tech sector. Providing a trusted voice for Australia's technology industry, with over 100 members, the TCA comprises the full spectrum of tech companies.

We aim to advise and engage with Australian governments, businesses, and the wider community to help support the ongoing creation, development, and adoption of technology across industries.

Our vision is for a prosperous Australia that thrives by harnessing the power of technology.

Authorship

This work has been authored by the Tech Council of Australia. The report features research conducted by Collancer and references previous research conducted by Accenture. Where this is the case, it has been denoted in the source notes or footnotes.

This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the author and should not be attributed to either DSS or the Melbourne Institute.

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Executive summary

The past two years have represented a period of unprecedented change as we have had to adapt to living apart and working and/or seeing our friends and family online.

Now, as Australia's high vaccination rates allow the country to reopen, we are all reflecting on what we value in life and where we want to go next, as individuals, communities and ultimately as a country.

For many, this means thinking about a new career move. For an increasing number of Australians, that move will be into tech jobs. As people across the country take on these jobs – directly after training or in a transition from another sector – they are discovering that tech jobs are a ticket to a level of economic and career opportunity that far outstrips most other careers.

Tech jobs are well-paid, interesting and plentiful. Promotion is fast and opportunity is extensive. Jobs are accessible to people from all walks of life, and with a variety of skills, and there is little discrimination in pay based on education, or socioeconomic status once people break into the sector. This makes tech jobs one of the greatest forces for social mobility in Australia today.

Australia's tech jobs opportunity

- The tech sector has experienced strong growth in the last decade and is now the seventh biggest employing sector in Australia. There are now 861,000 people employed in them across Australia today.
- 1 in 16 working Australians work in tech sector jobs, and there are more software engineers and developers in Australia than **solicitors, plumbers, hairdressers**.
- These jobs, and the workers who perform them, are spread across every state and territory in Australia.

Tech jobs are good jobs

- Tech sector jobs, whether technical or otherwise, are highly paid. On an hourly basis, entry level tech sector jobs pay 32 per cent more than the economy-wide average.
- On a weekly basis, tech sector jobs pay 64 per cent more than the economy-wide average.
- Tech sector workers rate their jobs as being more flexible than other industries.
- Tech sector jobs are more secure than other jobs. The rate of people no longer working after 8 years was 4.7 percentage points lower in tech than high paying industries, and 6.2 percentage points lower than other industries.

Tech provides an opportunity for Australians from all walks of life

- Around 40 per cent of people in the tech sector do not have a tertiary degree.
- Australians who attended public schools outnumber those who attended private schools 1.5 to 1 in the tech sector.
- There is almost no gap in pay for entry level jobs between VET and university educated positions, which will allow for rapid reskilling to work in the industry.

Women are under-represented, but well rewarded

- Gender diversity remains a weakness for Australia's tech sector, with only around 1 in 4 workers being women.
- Women are most likely to enter the tech sector as an early/mid-career transition, between 25 and 30. Joining at this stage can help women accelerate their earnings, increase their superannuation and gain valuable new skills.
- Despite the relatively low share of women working in the industry, the gender pay gap in tech is half that of other highly paid sectors such as finance or professional services.
- This suggests an opportunity for more women to enter the sector, especially via reskilling, to help with the post-pandemic recovery.

We will need hundreds of thousands more workers in tech

- To meet the skills needs of the tech sector, we will need to bring an additional 286,000 people into the sector. Even now it is challenging to hire for these jobs, which underlines the size of the opportunity for all Australians.



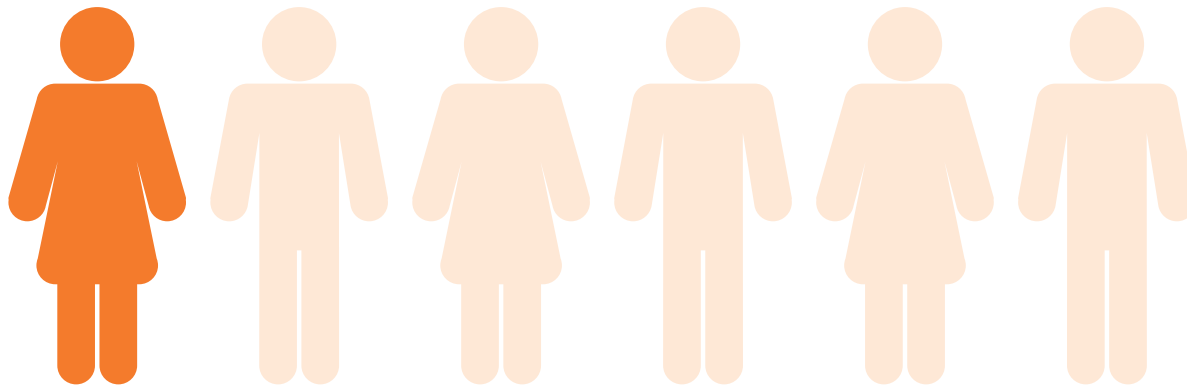
What is the tech jobs opportunity?

Tech sector jobs are an important new source of opportunity for Australians.

The tech sector has experienced strong growth in the last decade and is now the seventh biggest employing sector in Australia.

Tech sector jobs grew by 66 per cent from 2005, almost double the average growth rate for all jobs in the Australian economy¹. In 2020 during the first year of the COVID-19 pandemic, 65,000 tech jobs were created.

1 in 16 working Australians work in tech sector jobs, and there are more software engineers and developers in Australia than solicitors, plumbers and hairdressers.



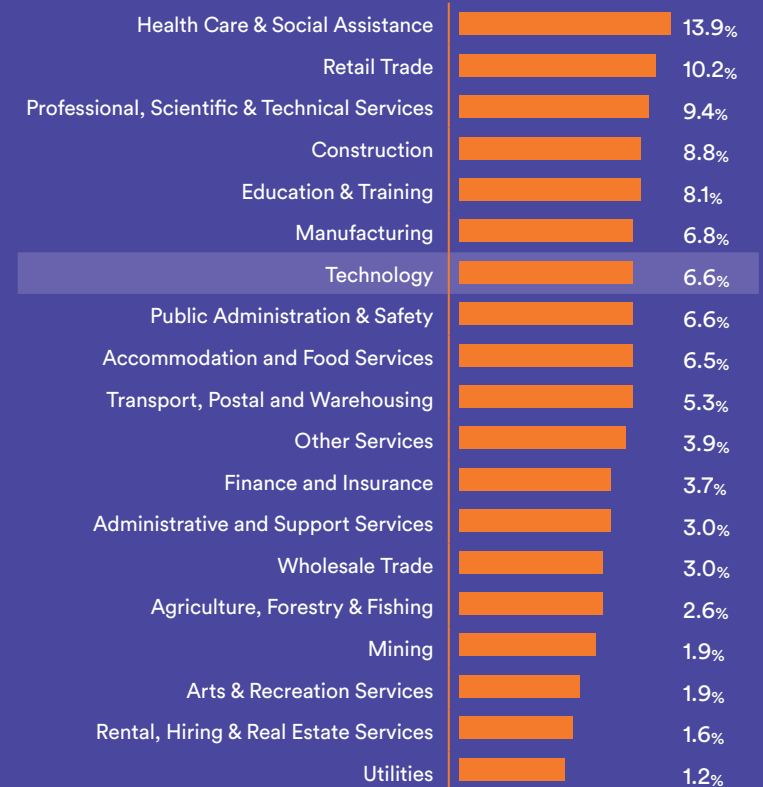
This surge in tech jobs means there are now 861,000 people employed in them across Australia today.

Tech sector jobs are spread throughout the economy. The tech sector covers jobs in companies in the direct tech sector (for example software companies), jobs in online commerce in retail and wholesale trade.

It also covers tech-related jobs in sectors across the economy, such as banking, mining, the public sector and professional services.

Exhibit 1: Tech is equivalent to Australia's seventh largest employer.

Share of Australian Workers by Industry, February 2021.



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861k Australians are employed in tech occupations.

¹ TCA, The Economic Contribution of Australia's Tech Sector, August 21.

Source: ABS, Accenture Analysis.

Exhibit 2. Top 10 regions employing ICT professionals.

Melbourne - West	1
Melbourne - Inner	2
Sydney - City and Inner South	3
Melbourne - Inner East	4
Australian Capital Territory	5
Sydney - Parramatta	6
Melbourne - South East	7
Sydney - Blacktown	8
Sydney - Ryde	9
Sydney - Inner South West	10

Source: ABS (2021), Characteristics of Employment, Accenture analysis.

Tech jobs are spread across the country

As one of the highest-employing sectors in the country, it makes sense that tech jobs are spread across every state and territory in the country (see Exhibit 3).

Tech workers are most likely to live in the middle and outer suburban rings of Australian cities, such as western and southern Sydney, west Melbourne, and the southeast of Melbourne.

This is because tech has a high share of young people, first- and second-generation migrants and people who attended public schools.

Cities like Brisbane and Adelaide are now emerging as the new centres for tech jobs growth in Australia. The southeast of Queensland is the fastest growing area for tech jobs in Australia, with five of the top ten regions for tech jobs growth. Adelaide also has two of the top ten growth regions².

²TCA, The Economic Contribution of Australia's Tech Sector, August 21.

Australia's tech sector creates employment and economic activity across Australia in cities, suburbs, and regions.

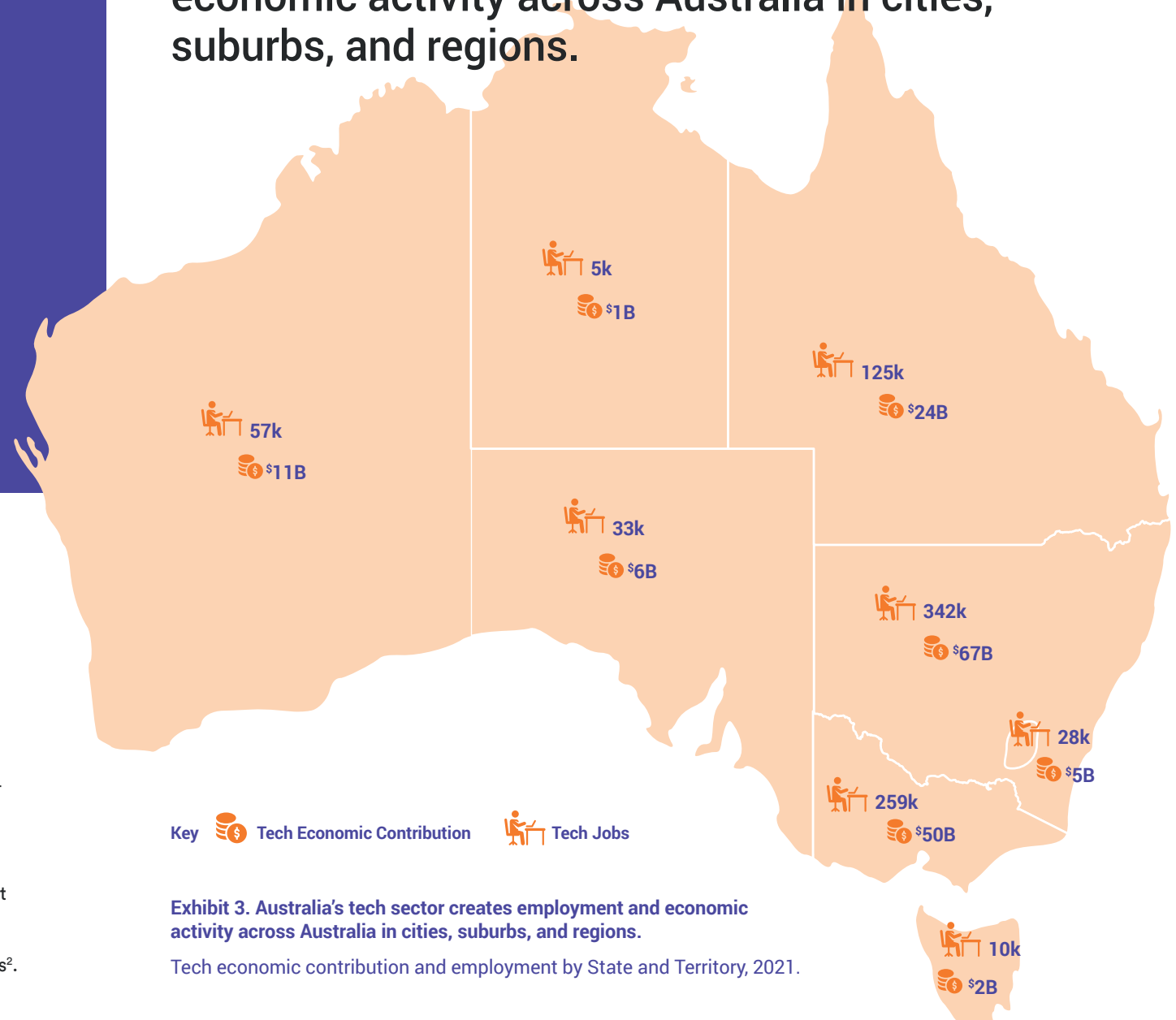


Exhibit 3. Australia's tech sector creates employment and economic activity across Australia in cities, suburbs, and regions.

Tech economic contribution and employment by State and Territory, 2021.

Source: Accenture analysis of ABS Characteristics of Employment 2021 and National Accounts 2021.

Case study: Tech jobs in regional Australia

Nick spent the first thirty years of his career in Sydney in various business management roles. At 55, Nick decided to take a break from work and make a transition into tech.

While travelling around Europe in a campervan, he completed a Graduate Diploma of Data Science online at Monash University. On arrival back in Australia, he followed his wife to Orange, reached out to a recruiter and found his current position as a Product Manager at Phocas.

Phocas is a business intelligence software company with an Orange R&D team of 40 people. Nick is an avid advocate of Orange, a regional NSW town with a surprising burgeoning tech sector.

Nick not only loves that he is able to live in Orange but also the variety of challenging problems he gets to work on in his role. He also loves that he gets to work with both the management team and the tech team, combining his skills in business management with his tech passions.



**Nick, Product Manager,
Phocas**

“

My primary role is to talk to customers about how they're using our software product and understand the problems that they've got that we can potentially solve.

It's very much a bridging role between a business problem or a customer problem and then a solution that the tech guys can create and making sure the tech guys build a pear instead of building an apple. If we've asked for a pear sort of making sure they build a pear, right?

For me, one of the striking things about moving into the tech industry is the universal availability of information - there's so many resources on YouTube and Stack Overflow.

The second thing is the willingness of people in the tech industry to impart their knowledge and share their knowledge with people who are transitioning. That's blown me away, as well as just how willing people are to take the time to explain things.

”

Who works in Australia's tech jobs and how do they find employment in tech?



What are tech jobs?

Tech jobs are highly diverse. They include roles requiring STEM or technical skills, such as data scientists and software engineers, roles with exceptional creative, problem-solving and people skills, such as user experience designers and customer success managers, and roles that combine commercial, creative and technical knowledge, such as product managers.

Further, there are many jobs in the tech sector that are also found in other industries, such as salespeople, lawyers, policy and government relations specialists, accountants and finance managers, project managers, HR managers, marketers and media and communications professionals.

How do people get into tech jobs?

The tech sector is a fast-growing and highly dynamic sector. The skills and knowledge required in jobs evolves regularly. This means the sector has high demand for workers and is prepared to take them via multiple paths.

There are five 'doors' by which a person can take-up a tech job in Australia. These are:

1. Entering the sector as a first professional job directly from university or other training
2. Moving from a non-tech job in another industry into a tech job or the tech sector
3. Returning to work after a period of not working, e.g. for family leave, to study, or because of a period of unemployment
4. Joining the Australian industry from overseas under Australia's skilled migration program
5. Moving from one tech job to another tech job

Men and women currently take different paths into tech jobs. Men are most likely to enter the sector at the start of their career directly from training, and then move between tech jobs, or migrate into Australia from a tech job overseas.

Women are most likely to enter another sector first, and then enter a tech job in their early to mid-career. This can be because they transition into a tech job from another industry, because they return to work to a new job and industry or because they come via the skilled migration program.

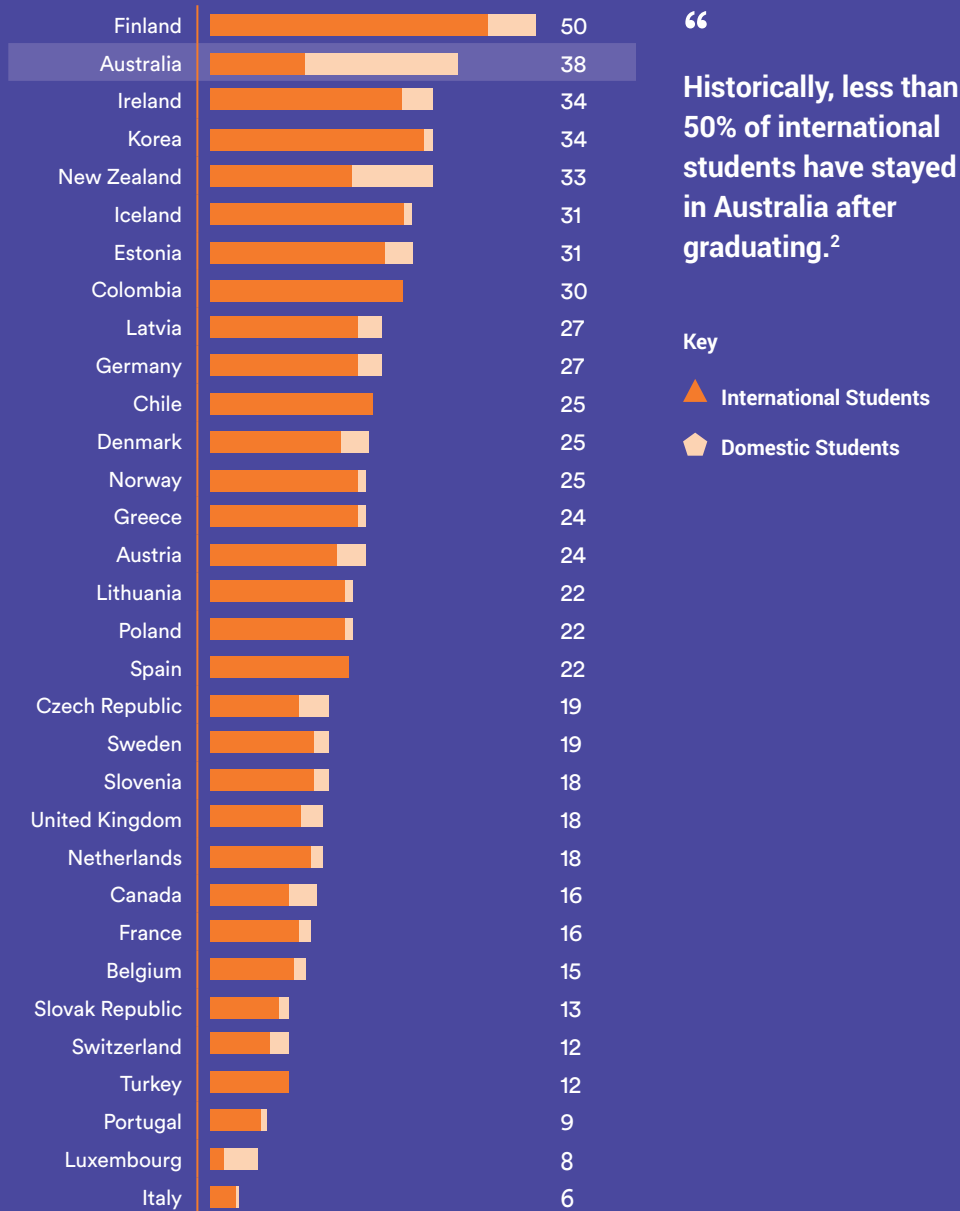
Training and tech jobs

The most likely educational pathway into tech jobs is via university. Sixty-two per cent of workers in tech occupations hold a university degree, compared to 31 per cent of all workers. However, this does not mean that those without a university education face poor pay outcomes if they enter the sector as can be seen in the next section of this report.

Australia has a high number of tertiary ICT places as a percentage of its population when compared to other OECD countries (see Exhibit 4). However, these students are disproportionately likely to be international students when compared to other similar countries, with more than 60 per cent of Australia's tertiary ICT students being from overseas.

Approximately 1 in 2 of these international students do not permanently migrate to Australia, which means that our high enrolments overstate the impact that Australia's universities have on training our tech workforce.

People with a public education outnumber private school educated people 1.5 to 1. This mainly reflects the fact that non-university educated roles are disproportionately held by public school educated people. Among university educated roles, public and private school backgrounds are nearly equally split.



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 Historically, less than 50% of international students have stayed in Australia after graduating.²

Exhibit 4: Australia is deeply reliant on international students training in tech fields. 2018, enrolled tertiary ICT students per 10,000 population, select OECD countries.¹

Notes ¹ Several OECD countries are excluded due to a lack of available data. ² Australian Universities International Directors Forum (2017). Source: OECD.Stat, Accenture analysis.

Common tech jobs

UX Designer

User experience designers make sure products work for people in the real world. They research user needs using a variety of methods from observing them in place, undertaking surveys and interviews, holding workshops and analysing data. They then work with a team to make a product or service usable, enjoyable, and accessible.

Product Manager

This critical role combining commercial, people and tech skills helps design and build products. Product managers work out customer needs and business objectives that a product or feature must meet and manages a multi-disciplinary team to turn the vision into reality.

Software Engineer or Developer

Software engineers and developers design, build, test and improve software products and systems.

Data Scientist

A data scientist uses data analysis to answer questions, solve problems and make systems work better. Their role includes defining the problem or question they need to solve, working out the best analytical methods to solve it, gathering, cleaning and structuring a dataset, undertaking analysis of it, checking their results, and then explaining their findings.

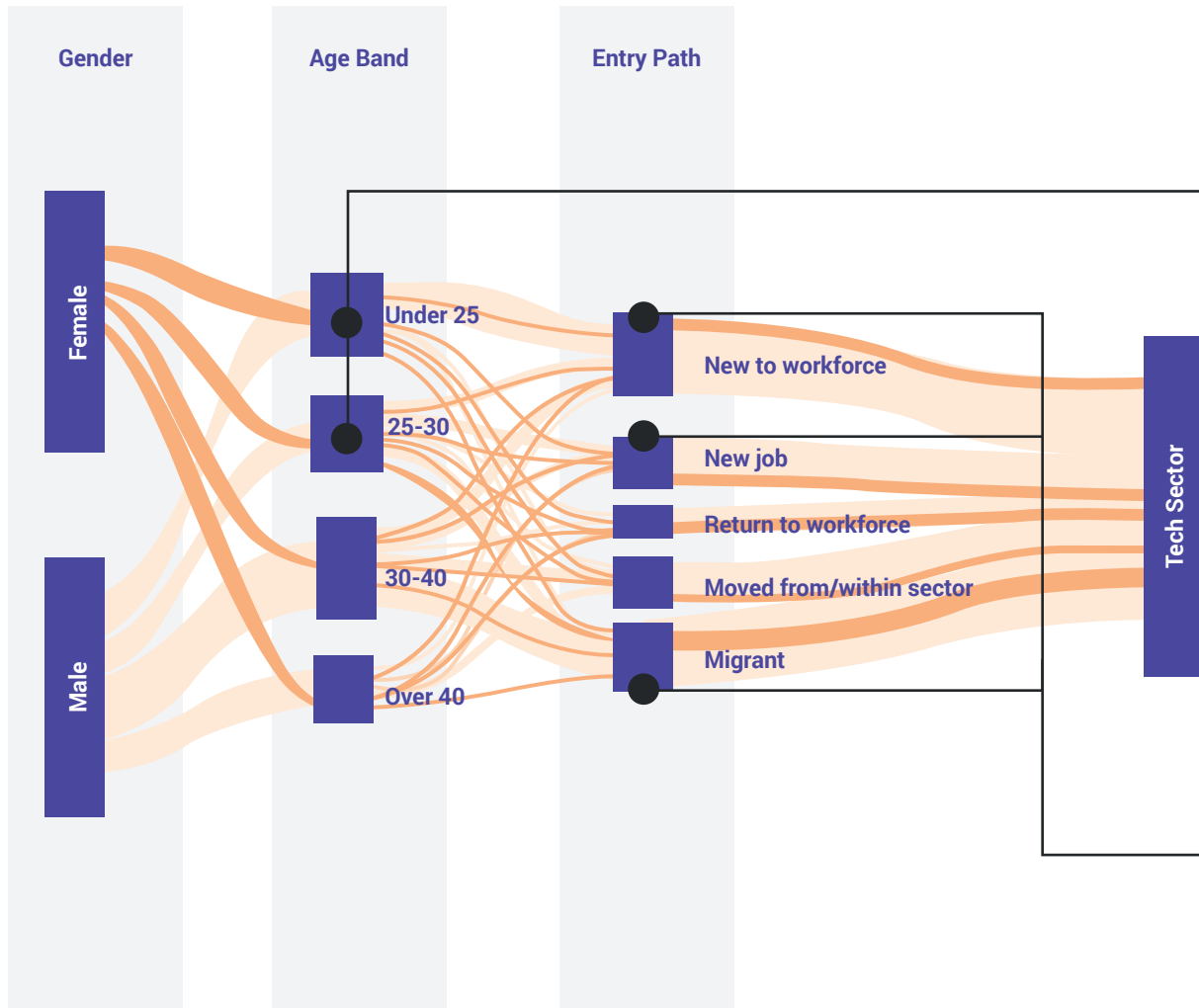
Customer Success Manager

These key team members make sure customers successfully adopt software products. They have become an important and common role as software moved to being sold as a monthly subscription product, rather than off-the-shelf. Customer success managers meet regularly with customers to help trouble-shoot adoption challenges.

This might include solving technical problems, helping with advice on culture and change management, or teaching the customer new skills so they can successfully use the product.

Exhibit 5. There are five ways people enter tech jobs – with men most likely to come directly from study and women more likely to enter mid-career.

Entry pathways into the tech sector across gender and age, 000s of entries, field of study and entry path, 2001-2020.



Women are twice as likely to enter at age 25-30 as they are before at 25 - likely due to the barriers women face when entering into STEM education fields/VET education for tech.

The most likely paths of entry for women into the tech sector are migration, or moving from an existing job outside the sector/returning to the workforce.

Note: Only includes identifiable entries into the sector, requiring a change in job identified in HILDA data – as such the total number of entries is likely underestimated for individuals who did not change job during their time in the survey. Migration is likely underestimated due to the longitudinal nature of HILDA data, and relatively low frequency of sample “top up”

Source: Collancer analysis of HILDA data, see technical appendix for further information on methodology.

Who works in tech?

Age

Tech sector workers are slightly younger on average than the rest of the economy, 52 per cent of workers are aged under 40, compared to 49 per cent for all other industries.

Approximately 22 per cent of tech workers are aged 50 and over, compared to 30 per cent for all other industries.³

Gender

Women face significant barriers to entering the tech sector, through low enrolment in VET study or through low enrolment in STEM university studies.

Women are twice as likely to enter the tech sector at age 25-30 as they are before 25 due to low rates of STEM education.

Women are nearly two times less likely to enter the tech workforce than men. The most significant barrier to women working in the tech occur in VET education and undergraduate STEM degrees, which men are seven and three times respectively more likely to undertake than women (see Exhibit 4).

Women are twice as likely to enter at age 25-30 as they are before 25, meaning that early to mid-career transitions are the primary way they enter the sector, rather than directly from the training sector.

Migrant workers are a key source of gender diversity in the tech industry. Nearly half of women in the tech sector migrated to Australia in the two years before joining the sector.

The most likely paths of entry for women into the tech sector are moving from an existing job outside the sector/ returning to the workforce, or via the skilled migration program.

Linguistic diversity

While women are under-represented in the tech sector, it is more diverse from the perspective of having a higher representation of people from a non-English speaking background.

Exhibit 6. Women's participation in tech is around half that of other industries.

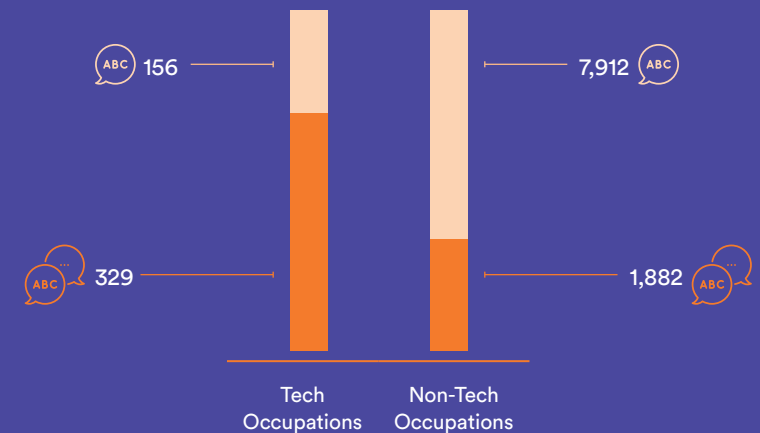
Women employed by industry as share of all workers, % 2016.



Source: Collancer analysis of ABS Table Builder. Census 2016.

Exhibit 7. Tech workers are more likely to be multi-lingual.

000s of persons, 2016.



Key English and Other Language English Only

³ Source: Collancer analysis of ABS Table Builder. Census 2016.

Source: ABS Table Builder. Census 2016, Collancer analysis. See technical appendix for list of occupations.

Case Study: The mid-career reskilling opportunity for Australian women

Jaime lives in Melbourne and was previously working as a pharmaceutical sales representative. She was looking for an opportunity to have a career that challenged her more.

Jaime decided to make a career change in her early forties to software development. Jaime undertook a 12-week bootcamp with General Assembly and then undertook a developer apprenticeship with Envato.

Envato provides a digital marketplace for creative assets. Jaime now works as a developer at Envato, and loves problem solving, the variety of projects that she gets to work on and the opportunities for career growth in tech.

“

I was just looking for something to challenge me. I speak a couple of languages and I thought that software development and engineering is another type of language. And yeah, I thought, why not try that?

I have two kids, two young boys, and I just thought it'd make me a cool mum. Having kids can also be a bit of a drawback because you want security, and you want certainty.

But if you can look at it from another perspective of being inspired and wanting to be a role model for your kids, then you know, as ambitious and as lovely as that sounds, it really was.

What I like about being an engineer is that the problems never get stale-they're always changing and they're always different.

”



Jaime,
Developer, Envato

Source: TCA interview.

Benefits to working in the tech sector

Highly paid and secure jobs

Tech sector jobs, whether technical or otherwise, are highly paid. On an hourly basis, entry level tech sector jobs pay 32 per cent more than the economy-wide average.

On a weekly basis, tech sector jobs pay 64 per cent more than the economy-wide average.⁴ This reflects a higher likelihood of full-time work in the tech sector than the economy as a whole.

This compares favourably to other highly paid industries that have traditionally presented prestigious career paths to new graduates such as finance and professional services.

Tech sector workers are also much more likely to have an ownership stake in the business through the widespread use of employee share schemes as a form of compensation.⁵ This can potentially provide employees with significant financial benefits if the company they work for is successful.

In addition to the high levels of pay, tech sector jobs are also highly secure. This is a potentially surprising finding given popular narratives about the future of work. Using longitudinal data, which follows people through time, our analysis shows that tech sector workers were more secure than other highly paid industries, and lower paid industries.

The rate of people no longer working after 8 years was 4.7 percentage points lower in tech than high paying industries, and 6.2 percentage points lower than other industries.⁶

The egalitarian nature of the industry can also be seen in the small pay gaps that exist for different educational backgrounds. Exhibit 7 shows the strikingly small pay gap between vocational and university education within the tech sector.

The pay difference between a VET qualification and a bachelor's degree is only three percentage points for entry level workers in the tech sector and much lower than other sectors.

These low pay gaps show that employers care about what skills people have, not where they obtained them, or who has them.

The earnings gap between those who have attended a private school and a public school is only two percentage points, which is four percentage points lower than the rest of the economy.

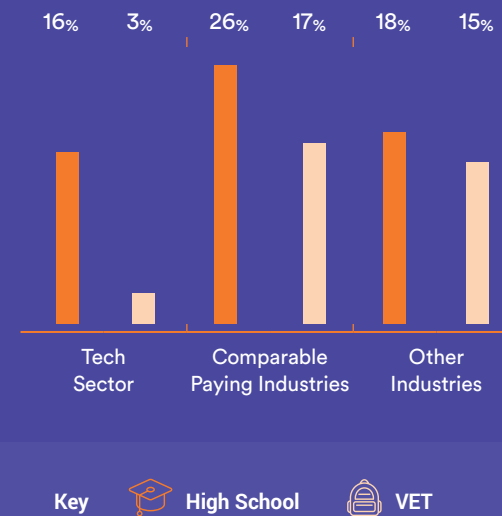
Exhibit 8. Tech jobs are amongst the highest-paid in the economy.
Difference to economy-wide average wage, %, 2001-2021.



Source: Collancer analysis of HILDA data.

Exhibit 9. Entry level wages in the tech sector are almost the same regardless of whether individuals trained at university or through VET.

Average wages gap on year of entry, high school and VET compared with bachelor's degree.



⁴ Collancer analysis of HILDA data. ⁵ The performance and characteristics of Australian firms with Employee Share Schemes, Department of Industry, Innovation and Science, 2017. ⁶ Source: Collancer analysis of HILDA data, see technical appendix for details on methodology.

Source: Collancer analysis of HILDA data, see technical appendix for details on methodology.

Case study: High-skill, high-pay jobs

John is the founding Chief Technology Officer of Quintessence Labs, a world-leading Australian company creating cybersecurity solutions utilising quantum science.

John joined Quintessence after a 35-year career specialising in cryptography and security that took him around the world.

“

As CTO I am responsible for setting the technology direction that we take in developing products for sale. I run a small team who assist me in my role. As a team we take on many tasks inside and outside the company, including prototyping new products, integrating our products with other vendors' products, defining technical requirements for our products, assisting with technical sales, demonstrating products, speaking at conferences, participating in standards organisations, and undertaking professional services and consulting engagements with customers.

I got into this role by growing old. I've had the good fortune of working all over the world in big and small companies, gaining experience in old and new technologies, and working in many roles - all related in some way to technology. But the roles have varied, such as engineering, testing, and product management. An inquisitive nature, willingness to learn skills, a desire to learn from others, and pride in my work have all contributed to me getting into this role.

”



John, CTO,
Quintessence Labs

Source: TCA interview.

Less pay discrimination based on gender

While the tech sector has significant areas of improvement in promoting greater equality of opportunity, in particular for women, the tech sector does provide for much better outcomes for people compared to other highly paid industries and the economy more broadly. This can be seen specifically in lower pay gender and educational pay gaps.

While women are under-represented in tech sector roles, there is a significant opportunity for those women who enter the tech sector. While there is still a gender pay gap for women, it is significantly lower than in other comparable paying industries.

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These low pay gaps show that employers care about what skills people have, not where they obtained them, or who has them.

Exhibit 8 shows that women in the tech sector have a gender pay gap that is 9 percentage points lower than similar high-paying industries. This demonstrates that if women can be made aware of the opportunities in tech, and encouraged to take them up, then there is likely to be a significant wages dividend for those women.

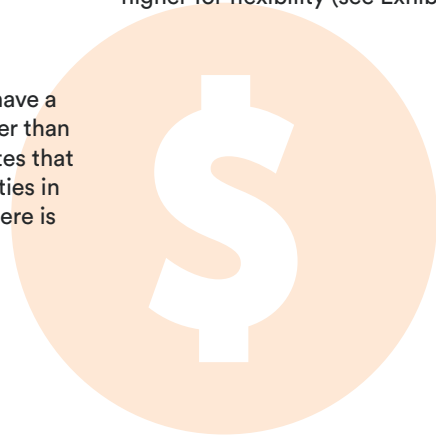
Flexibility

Tech sector jobs have been more likely to adopt technology that provides workers with flexibility, with employers allowing for working from home at a higher rate even before the pandemic.

Since the pandemic, tech firms have allowed even more people to work remotely, again maintaining their position of offering some of the most flexible jobs in the economy. This is making it easier for workers in regional areas, and for workers with other responsibilities (such as caring or studying) to work in the sector.

For example, a third of all new workers hired by Atlassian since the pandemic have been located at least two hours outside a major city.

Accordingly, tech sector workers rating their jobs higher for flexibility (see Exhibit 9).



⁷ Collancer analysis of HILDA data ⁸ For a full list of ANZSIC codes used to define comparable pay see technical appendix.

Exhibit 10. The gender pay gap is half other high paid sectors' gaps.

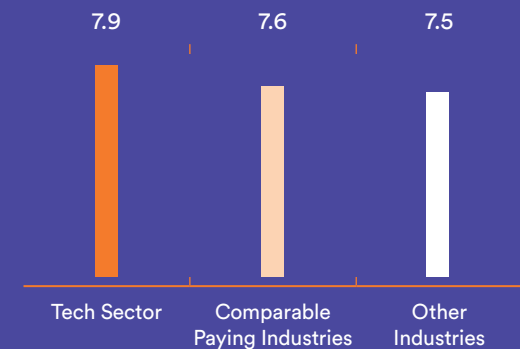
Difference from average sector expected pay by gender on year of entry⁷, selected industries⁸, (%), 2001-2021.



Source: Collancer analysis of HILDA data, see technical appendix for details on methodology.

Exhibit 11. Tech sector jobs are more flexible than other industries.

Mean job satisfaction for flexibility, scale of 1-10, 2001-2021.



Source: Collancer analysis of HILDA data.

Case study: Tech is a highly flexible industry

Jelena has a finance background and is a mother to four young children. When Jelena fell pregnant with her fourth child, she was planning to delay returning to work again.

However, after being approached by espresso Displays, Jelena took on the role as Financial Controller, where the entire finance team consists of 4 part-time working mothers.

espresso Displays is a company that designs, manufactures, and sells portable displays and accessories in multiple regions around the world. The finance team specifically needs to be prudent but efficient to use the flow of data to produce reliable and timely results.

“

To feel happy and balanced, I need to be flexible with my hours and work location. I did wonder if that was possible, to combine having young kids and working and not feel that either of those is a major sacrifice. But here I am. It is possible with espresso.

I was impressed with how espresso does it. There is no kind of restriction. There is no forcing into these nine to five workdays. So, you have to contribute, and you have to deliver, but no one is expecting you to be in the office nine to five. This was this was the only way it could work for me because I have kids I need to drive to school.

Our finance team in espresso consists fully of working mums, who want to have quality time with their kids but also would like to stay in the workforce.

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**Jelena, Financial Controller,
espresso Displays**

Source: TCA interview.

Exhibit 12. Ease of hiring across sectors of the economy.

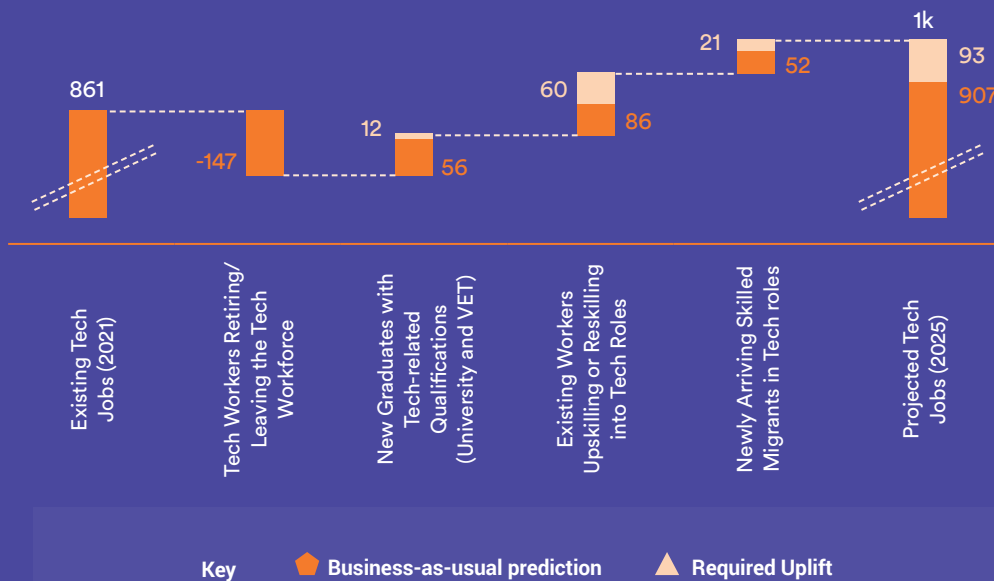
Weighted average age of job ads, # of days, 30 September / 1 October 2021.



Source: Collancer Analysis of Indeed.com data.

Exhibit 13. Reskilling and upskilling Australians in other roles will be key to achieving the jobs targets.

Projected tech sector jobs in 2025, number of tech sector workers, 000s.



Source: TCA Roadmap to Deliver One Million Tech Jobs, October 2021, Accenture analysis.

How does Australia meet the tech jobs opportunity?

The Tech Council of Australia (TCA) has a goal of employing 1 million people in tech related jobs by 2025. The biggest challenge to realising that opportunity is finding enough people to fill them.

This is because while tech jobs are amongst the most rewarding in the economy for workers, not enough Australians aspire to enter them.

This may partly be because the extent of shortages are often not fully appreciated as tech jobs are spread across many industries.

To help understand shortages in tech jobs relative to other sectors, we analysed the length of time that job advertisements stayed open on job aggregation site Indeed. We used Indeed because many common tech jobs, such as product managers or cybersecurity specialists, are not counted in official labour market data collected by the Australian Bureau of Statistics.

This analysis found that STEM and tech jobs ads remained open for longer than other key sectors, and for the average for jobs in the economy average 16 per cent older than jobs such as financial analyst, accountant, project manager, marketing manager and business analyst.

Previous research commissioned by TCA and conducted by Accenture (see Exhibit 11) has highlighted the importance of reskilling or upskilling existing workers into tech roles.

A roadmap to 1 million tech jobs

Tech jobs offer enormous opportunity for Australia. They are fast-growing, flexible, abundant, and spread across the country.

Australians from all walks of life enter them via 5 different pathways, at different times in their careers, and from different educational backgrounds.

Critically, at a time when low wage growth and job insecurity are of increasing community concern, tech jobs are amongst the highest-paid and most secure in the country.

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Tech jobs are a key source of social mobility in Australia. They are one of the best and most certain way that any Australian can improve or maintain their standard of living.

They are also interesting, allowing people to work with teams to solve interesting problems and exercise their creativity and problem-solving skills.

But despite these benefits, there is a strong risk that not enough Australians will choose to enter them in the next 4 years, creating ongoing labour shortages.

To get 1 million people employed in tech sector jobs by 2025, we need an additional 286,000 workers to join the sector.

To meet this ambitious target, reskilling and upskilling workers must become the primary way tech jobs are filled. 146,000 Australians will need to transition into the tech sector via reskilling and upskilling from other roles. That includes an additional 60,000 Australians that would not otherwise transition.

Attracting, recruiting, and reskilling these Australians into the tech sector must be the top priority for the tech industry, workers, governments, and the training sector. Training young people to enter the sector is also critical. An additional 12,000 students will also need to enter the tech sector workforce to meet the 2025 target of employing one million people in tech jobs. This is on top of the 86,000 workers and 56,000 students that are already forecast to enter the sector in a BAU jobs trajectory.

That's why Australia needs to come together to create and deliver a roadmap to one million jobs.

What industry commits to do under the Roadmap

- Set a goal of employing 1 million people in tech sector jobs by 2025, and 1.2 million by 2030
- Help reskill an additional 60,000 Australians to enter the tech sector in the next 4 years
- Employ people from a broader range of training and educational backgrounds who can be efficiently upskilled to make them ready for tech sector jobs
- Develop a cross-economy tech workforce strategy in partnership with other industries through the Digital Employment Forum

What governments need to do

- Adopt the tech sector's 1 million tech sector jobs by 2025 and 1.2 million by 2030, goals and work with industry to enable the goals to be met
- Partner with industry to grow the pipeline of workers and pathways into tech sector jobs, including by reskilling an extra 60,000 Australians to work in the tech sector by 2025 and having 12,000 extra graduates enter the tech workforce for the first time by 2025
- Support the tech industry's cross-economy tech sector workforce strategy, and work collaboratively with industry and training sectors to help workers and students train, reskill and enter tech work, including from non-tech sectors and non-traditional training courses
- Continue to help the industry attract high-skilled and specialised talent through targeted skilled migration programs. Case study: Transitioning from physical labour to a well-paid, flexible job in tech.



Case Study: Reskilling from manual labour

Guy was working in a variety of jobs in Adelaide including as a chef, labourer, and security guard. Because of the uncertainty created by the pandemic, Guy was looking for a more stable career. Guy undertook a free 4-week program for people looking to transition careers in tech facilitated by MTX Group.

MTX Group have since employed Guy as an associate trainee in Adelaide. MTX Group is a global tech consulting firm that helps customers accelerate digital transformation. After many years of insecure work, Guy loves the strong support he receives as an employee at MTX.



Guy, Associate Consultant,
MTX Group

“

I'm surrounded by supportive people. The generosity of time, patience, knowledge, that's just astonishing.

I wanted to get into tech because I could see that no pandemic was going to shut tech down in the future. I've been a physical worker for, you know, 20 odd years and not many chefs at 50 do what they were doing at 30. So, I kind of feel an earning potential and a better work life balance. Before I never got to see my partner. Now I get weekends off and nights off, you know, and so that's kind of what I was looking for in a 25-year career. Where can it take me? Tech can take me there.

For me this is a twenty-five-year project that in the beginning was really hard but once I got over a few challenges. Learning how to learn, being okay with not knowing everything and realizing no one knows everything, especially in the industry, until those three things fell into place. You go, I don't know what this is, but I know how to learn. I go off to two hours or two days, depending on the scope, and I can come back with a shiny presentation of this is what people need to do.

”

Technical Appendix

Auxiliary Finance and Insurance Services	1
Water Transport	2
Basic Chemical and Chemical Product Manufacturing	3
Heavy and Civil Engineering Construction	4
Finance	5
Gas Supply	6
Machinery and Equipment Wholesaling	7
Air and Space Transport	8
Insurance and Superannuation Funds	9
Electricity Supply	10
Commission-Based Wholesaling	11
Professional, Scientific and Technical Services (except Computer System Design and Related Services)	12

ANZSCO/ANZSIC Tech sector taxonomy

Tech Sector		Tech Industries				Other Industries
		Included Industries (ANZSIC Subdivision Code)				All Other Industries
		Internet Publishing and Broadcasting (57)	Telecommunications Services (58)	Internet Service Providers, Web Service Portals and Data Processing Services (59)	Computer System Design and Related Services (70)	
Tech Jobs	Included Occupations (4 Digital ANZSCO Code)					Tech Jobs in Other Industries
	Managers	ITC Managers (1351)				
	Professionals	<ul style="list-style-type: none"> All ICT Professionals (26xx) ICT Trainers (2232) Management and organisation analysts (2247) Other information and organisation professionals (2249) ICT Sales professionals (2252) Graphic and Web Designers and Illustrators (2324) Electronics Engineers (2334) 				
	Technicians and Trades Workers	<ul style="list-style-type: none"> Engineering, ICT and Science Technicians nfd (3100) Electronic Engineering Drafts-persons and Technicians (3124) ICT Support Technicians (3131) ICT and Telecommunications Technicians nfd (3130) Telecommunications Technical Specialists (3132) Telecommunications Trades Workers (3424) 				
Other Jobs	All Other ANZSCO Codes					Outside Tech Sector
		Tech Jobs in Tech Industries				
		Non-tech Jobs in Tech Industries				

Source: Collancer definition of the tech sector defined using combination of Accenture definition, and Deloitte's Digital Pulse 2021 report definition of Technology workers- which uses nomenclature developed by the Centre for Innovative Industries Economic Research (CIER) lead researcher, Ian Dennis FACS.



Tech Council
of Australia