

# Skill shortage in Australia

## What qualifications/skills will you need for the jobs of the future?

	<b>Higher skilled occupations</b> In addition to post-school qualifications and technical skills, communication, teamwork and organisation skills will be valued.
	<b>Lower skilled occupations</b> While post-school qualifications may not be necessary, workers who are reliable, motivated, hard-working well-presented and have relevant experience will be valued.
	<b>General skills</b> Transferable skills, adaptability, resilience, digital literacy, critical thinking, creativity, problem solving and presentation skills will all be important.

## Future trend of Soft Skills



### Skills for collaborating

Rather than focusing on individual performance, organizations are more than ever trying to develop a culture where the most valuable employees are those who can collaborate and share information to improve efficiency and achieve organizational goals. The trends of rapid change in markets and technologies, and of multiple generations in the workforce at the

same time, trigger the need for collaboration. As organizations become increasingly dynamic and horizontally structured, this need for collaboration impacts all types of roles. For example, IT employees must now engage with a set of cross-functional colleagues, business partners, vendors and customers.



### Foundational skills

Strong foundational skills, such as literacy and numeracy skills, including digital and financial literacy, are extremely important for most jobs in the knowledge economy. Strong foundation skills are essential to develop or train within any new, more specialized skill areas.



### Skills for learning and adapting

In a world where vocational and technical skills will constantly need to adapt to new technologies and job requirements, people need to be taught skills that enhance their ability to adapt to new situations and acquire new skills. At the same time, as the world of work becomes more flexible, employees are expected to take more responsibility for their skills development.

### Skills essentials 1—Collaborating

- |                           |                             |
|---------------------------|-----------------------------|
| ✓ Transparency            | ✓ Organisational awareness  |
| ✓ Communication           | ✓ Social/cultural awareness |
| ✓ Teamwork                | ✓ Sociability               |
| ✓ Relationship management | ✓ Teaching others           |

### Skills essentials 2—Learning and adapting

- |                  |                   |
|------------------|-------------------|
| ✓ Perseverance   | ✓ Experimentation |
| ✓ Resilience     | ✓ Adaptability    |
| ✓ Sociability    | ✓ Self-confidence |
| ✓ Curiosity      | ✓ Initiative      |
| ✓ Responsiveness |                   |



### Entrepreneurship skills

There is a widespread view that teaching entrepreneurship skills are indispensable for professional development in the 21st century. In part, this is about being able to identify problems, create solutions, and take action to implement these solutions, even if you are an employee, not the boss. This is also about preparing people to be self-reliant and resourceful in an economy with increasing participation by small businesses and self-employed contractors.

### Analytical skills

Data is becoming increasingly available and growing exponentially, with big data derived from online activity, sensors, and the internet of things, new analytical tools, and artificial intelligence. As data becomes more accessible, workers in almost all industries, and across most roles, will be expected to use available data to derive value from it — creating evidence based solutions, and improving products and services. For some roles, this will require being able to analyze and present raw data, while for others, it will require the ability to interpret data analysis and apply findings.

### Skills for adding value

Australia continues to move away from being a commodity industry, towards being a knowledge-based economy. With the ongoing challenge of increasing international competition, resource related pressures, and empowered and demanding consumers, industry will need to source workers with skills to create valuable products and services using fewer resources. They will struggle where new technologies and increased connectivity is unavailable or inaccessible.

#### Skills essentials 3—Entrepreneurship

- ✓ Negotiation
- ✓ Communication
- ✓ Customer engagement
- ✓ Persuasion
- ✓ Creative thinking
- ✓ Self-management
- ✓ Experimentation
- ✓ Financial literacy
- ✓ Self-confidence
- ✓ Initiative
- ✓ Critical thinking
- ✓ Problem solving
- ✓ Self-marketing

#### Skills essentials 4—Value creation

- ✓ Creative thinking
- ✓ Problem solving
- ✓ Resourcefulness
- ✓ Reasoning
- ✓ Data analysis/interpretation
- ✓ Customer engagement
- ✓ Experimentation
- ✓ Critical thinking

#### Skills essentials 5—Non-automatable

- ✓ Empathy
- ✓ Sociability
- ✓ Teamwork
- ✓ Social cultural awareness
- ✓ Communication
- ✓ Persuasion
- ✓ Adaptability

#### Skills essentials 6—Social platforming

- ✓ Design mindset
- ✓ Cross-cultural competency
- ✓ Computational thinking
- ✓ Cognitive load management
- ✓ New media literacy
- ✓ Virtual collaboraiton

## Future trend of Technical Skills



### Digitisation

Digital technologies are already changing the interaction between businesses and their consumers, customers and fellow customers, employers and employees, and employees and their colleagues. Digitisation speeds up some aspects of a job, enabling workers to perform better in other areas. The result is that computers often reallocate — rather than displace — jobs, requiring workers to learn new, more varied skills. This is true of a wide range of occupations, not just in computer-related fields such as software development, but also in administrative work, health care and many other areas. It also changes the way that consumers access products and services — apps will be used more for problem-solving (e.g., financial planning), completing tasks (e.g. Project management), or accessing services previously accessed through other media (e.g., using a health app rather than visiting a professional).

Digital fabrication technologies, such as Computer Numerical Control (CNC) machines and 3D printers, are also becoming more common.



### Artificial Intelligence (AI) and machine learning

In the past four years, the number of start-ups involving AI has increased 20-fold.<sup>1</sup> AI will be applied in almost every industry where there is any kind of data, from genes to images to language. Robots have already become established in labour intensive industries. Recent developments in deep learning algorithms means AI systems can now perform tasks associated with high skilled professions, including financial and legal services, advertising, health diagnostics, surgery, dentistry, and veterinary services.



### Big data

With increased digital interaction and its resulting data, along with the promise of more efficient and consumer centric products, big data is set to transform how problems are solved in a wider variety of contexts. Energy utilities, consumer banking and insurance, and infrastructure planning are just a few areas investing in the use and exploration of big data. Big data is more than just a large dataset. The volume of data is created by the systematic, often automated collection, mining and analysis of billions of transactions or data points. From credit card payments, to mobile phone broadcasts and search engine submissions, the world of big data is virtually infinite. However, this is still an emerging field and caution needs to be applied to some

claims on what big data can achieve.



### Augmented Reality (AR) and Virtual Reality (VR)

Gaming and videogames are currently driving much of the innovation in AR and VR. AR and VR are being used in the music, film, education and training, manufacturing, engineering, and tourism industries. There is also scope for workplaces to use AR and VR to increase collaboration, communication, and information sharing. By 2025 the AR and VR market will grow to \$80 billion (US), about the size of today's personal computer market.



### Mobility and connectivity

While it may seem that the whole world is currently online, in reality only 47% of the world's population have access to broadband Internet.<sup>10</sup> Connectivity still has huge scope to revolutionise the way we work and live. Social sharing, communication, and global networking are in an upward trend and will continue to increase. Collaboration technologies allow for real-time communication across a number of devices. The 'office' can be anywhere. It also makes it easier to work together on projects and share information.

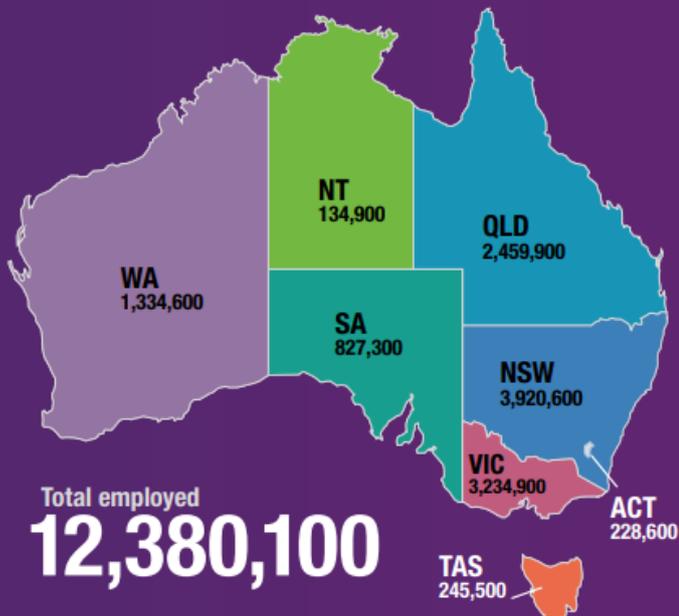


Australian Government  
Department of Jobs and Small Business

# AUSTRALIAN JOBS 2018

## Australian employment snapshot

(at Nov 2017)



To find out more, go to [jobs.gov.au/australian-jobs-publication](http://jobs.gov.au/australian-jobs-publication)

## Where Australians work

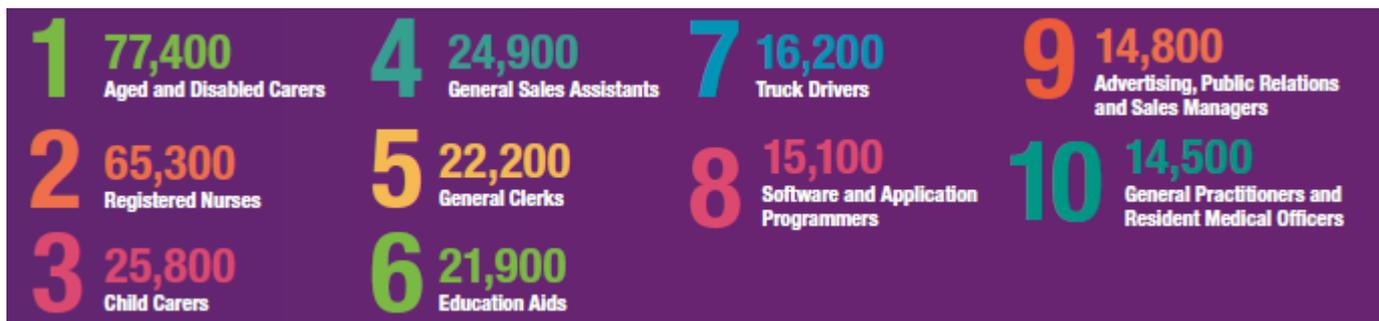


### Jobs of the future

Many factors, including Australia's ageing population and the advance of technology and automation, will continue to change the nature of jobs and the types of jobs available in Australia. While technology is decreasing the demand for some occupations, it is also creating opportunities for workers to develop, use or supervise the operation of new technologies.

Technology and the automation of work has resulted in an increase in the share of people employed in jobs that involve non-routine tasks which are difficult to automate or require a human presence (such as Aged and Disabled Carers, Chefs, Teachers, Plumbers, and Software and Application Programmers).

The 10 occupations projected to add the largest numbers of new jobs over the 5 years to May 2022 are:





# AUSTRALIAN JOBS 2018

## Australia's top five growing industries



### Health Care and Social Assistance

EMPLOYS  
**1,663,900**  
AT NOV 2017

Projected to add  
**250,500 new jobs**  
over the five years to May 2022



**43**  
Median Age



**44%**  
Work part-time



**33%**  
Live in regional Australia



**78%**  
Female

#### Top 3 hiring occupations

- Registered Nurses
- Aged and Disabled Carers
- Child Carers



### Professional, Scientific and Technical Services

EMPLOYS  
**1,033,000**  
AT NOV 2017

Projected to add  
**126,400 new jobs**  
over the five years to May 2022



**39**  
Median Age



**23%**  
Work part-time



**18%**  
Live in regional Australia



**57%**  
Male

#### Top 3 hiring occupations

- Accountants
- Software and Applications Programmers
- Solicitors



### Construction

EMPLOYS  
**1,167,200**  
AT NOV 2017

Projected to add  
**120,700 new jobs**  
over the five years to May 2022



**39**  
Median Age



**15%**  
Work part-time



**32%**  
Live in regional Australia



**68%**  
Hold post-school qualifications

#### Top 3 hiring occupations

- Carpenters and Joiners
- Electricians
- Plumbers



### Education and Training

EMPLOYS  
**1,024,300**  
AT NOV 2017

Projected to add  
**116,200 new jobs**  
over the five years to May 2022



**44**  
Median Age



**40%**  
Work part-time



**31%**  
Live in regional Australia



**71%**  
Female

#### Top 3 hiring occupations

- Primary School Teachers
- Secondary School Teachers
- Education Aides



### Accommodation and Food Services

EMPLOYS  
**896,100**  
AT NOV 2017

Projected to add  
**97,600 new jobs**  
over the five years to May 2022



**27**  
Median Age



**60%**  
Work part-time



**35%**  
Live in regional Australia



**55%**  
Female

#### Top 3 hiring occupations

- Waiters
- Kitchenhands
- Bar Attendants and Baristas

## Ratings Summary – Labour Market Analysis of Skilled Occupations

This list shows labour market ratings for the skilled occupations assessed by the Department of Jobs and Small Business in 2017-18.

### Key to ratings

Abbreviation	Rating
NS	No shortage
S	Shortage
M	Shortage in metropolitan areas
R	Shortage in regional areas
D	Recruitment difficulty
R-D	Recruitment difficulty in regional areas
M-D	Recruitment difficulty in metropolitan areas
CNR	Cannot rate
–	No rating

### Definitions of ratings

Rating	Description
No shortage	Research did not identify any shortages.
Shortage	Skill shortages exist when employers are unable to fill or have considerable difficulty filling vacancies for an occupation, or significant specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and in reasonably accessible locations.
Recruitment difficulty	Recruitment difficulties occur when there may be an adequate supply of skilled workers, but some employers have difficulty filling vacancies for an occupation for reasons which include: the specific experience or specialist skill requirements of the vacancy; differences in hours of work required by the employer and those sought by applicants; or particular locational or transport issues. Please follow the relevant occupation link for more information on the nature of each recruitment difficulty
Cannot rate	For some occupations assessed at the state and territory level, there is insufficient evidence to determine a rating. A national rating may be provided, but this does not necessarily reflect the specific state or territory labour market conditions.
No rating	The occupation was not specifically assessed in the state or territory and a rating is not available.

## Professionals

### Business, Human Resource and Marketing Professionals

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Accountants	NS	R	NS	D	NS	NS	S	NS	NS

### Design, Engineering, Science and Transport Professionals

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Architect	CNR	M-D	CNR	CNR	CNR	D	-	NS	S
Surveyor	S	S	M	S	NS	-	-	-	S
Civil Engineering Professionals	S	S	S	S	D	NS	CNR	S	S
Electrical Engineer	NS	NS	NS	S	R-D	-	CNR	-	NS
Mechanical Engineer	S	M-D	NS	S	NS	-	-	-	S
Mining Engineers	-	-	-	-	-	-	-	-	NS
Agricultural Consultant/Scientist	-	-	-	-	-	-	-	-	S
Geologist/Geophysicist	-	-	-	-	-	-	-	-	D
Medical Laboratory Scientist	-	-	-	-	-	-	-	-	NS
Veterinarian	-	-	-	-	-	-	-	-	S

### Education Professionals

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Early Childhood (Pre-Primary School) Teacher	NS	NS	NS	NS	NS	NS	NS	D	NS
Primary School Teacher	NS	NS	NS	NS	NS	NS	NS	NS	NS
Secondary School Teacher	NS	NS	NS	NS	NS	NS	NS	NS	NS

### Health Professional

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Medical Diagnostic Radiographer	S	R	NS	-	S	D	S	CNR	S
Sonographer	S	S	S	-	S	CNR	CNR	S	S
Optometrist	-	-	-	-	-	-	-	-	S
Hospital/Retail Pharmacist	NS	R	NS	-	R	NS	S	S	R
Occupational Therapist	R	NS	NS	S	NS	CNR	S	NS	R
Physiotherapist	S	S	S	S	S	R	S	NS	S
Podiatrist	-	-	-	-	-	-	-	-	NS
Speech Pathologist	-	-	-	-	-	-	-	-	NS
Midwife	CNR	M	NS	R	CNR	CNR	S	CNR	S
Registered Nurses	CNR	R-D	NS	R	NS	D	CNR	NS	NS

## Technicians and Trades Workers

### Automotive and Engineering Trades Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Automotive Electrician	-	-	-	-	-	-	-	-	S
Motor Mechanics	S	S	S	S	NS	D	NS	S	S
Motor Mechanic (General)	S	S	M	S	R	NS	NS	S	S
Diesel Mechanic	S	S	S	S	M	S	NS	CNR	S
Motorcycle Mechanic	S	S	CNR						
Sheet metal Trades Worker	M	S	S	NS	NS	NS	S	CNR	S
Structural Steel and Welding Trades Workers	S	S	NS	S	R-D	NS	S	S	S
Metal Fabricator	S	S	NS	S	R-D	NS	S	S	S

Welder (First class)	S	S	NS	CNR	CNR	CNR	CNR	S	S
Aircraft Maintenance Engineer (Avionics)/(Mechanical)	-	-	-	-	-	-	-	-	S
Metal Fitters and Machinists	S	M-D	S	S	CNR	D	NS	CNR	S
Fitter	M	NS	S	S	CNR	NS	NS	CNR	S
Metal Machinist (First Class)	S	S	CNR	S	CNR	S	CNR	CNR	S
Locksmith	-	-	-	-	-	-	-	-	S
Panel beater	S	S	S	S	S	S	R	S	S
Vehicle Painter	S	S	R	S	S	S	S	NS	S

#### Construction Trades Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Bricklayer	NS	S	NS	S	NS	S	S	S	S
Stonemason	-	-	-	-	-	-	-	-	S
Carpenters and Joiners	S	S	D	D	NS	D	S	S	S
Painting Trades Worker	S	M	S	S	NS	NS	R	S	S
Glazier	-	-	-	-	-	-	-	-	S
Fibrous Plasterer	S	S	NS	S	CNR	NS	-	S	S
Roof Tiler	-	-	-	-	-	-	-	-	S
Wall and Floor Tiler	-	-	-	-	-	-	-	-	S
Plumbers	S	S	M-D	NS	NS	S	D	S	S

#### Electro technology and Telecommunications Trades Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Electrician (General)	S	R	D	R	NS	NS	S	NS	NS
Air-conditioning and Refrigeration Mechanic	S	S	S	S	NS	NS	NS	S	S
Electronic Instrument Trades Worker (General) and (Special Class)	-	-	-	-	-	-	-	-	NS
Telecommunications Trades Workers	-	-	-	-	-	-	-	-	S

#### Food Trades Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Baker	S	S	S	S	NS	CNR	R	NS	S
Pastry cook	-	-	-	-	-	-	-	-	S
Butchers and Small goods Makers	-	-	-	-	-	-	-	-	S
Chef	S	R	R	NS	R	NS	R; M-D	NS	R

#### Skilled Animal and Horticultural Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Arborist	-	-	-	-	-	-	-	-	S

#### Other Technicians and Trades Workers

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Hairdresser	-	-	-	-	-	-	-	-	S
Cabinetmaker	S	S	S	S	NS	CNR	CNR	S	S

# Community and Personal Service Workers

## Careers and Aid

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Child Care Worker (certificate III)	NS	NS	NS	NS	R	NS	CNR	NS	NS
Child Care Worker (diploma)	NS	NS	NS	NS	R	NS	NS	S	NS

### New South Wales

The NSW Business Chamber's inaugural Workforce Skills Survey has found that member businesses are highly concerned about the impact of skills shortages on their future growth, with members reporting skills shortages equating to more than 54,000 jobs statewide.

More than half (53.8%) of the businesses participating reported experiencing a skills shortage now, while nearly two thirds (60.9%) expect to have a skills shortage over the next 12 months. The overwhelming majority (84.9%) of respondents expressed concern about the impact skill shortages may have on their businesses.

Respondents also reported that skills shortages have had a negative impact on their business's ability to meet customer service objectives (12.1%), meet quality standards (10.2%) and develop new products, with 10.3% reporting delays in product development.

More than a quarter of employers (28.5 per cent) said it was easier to hire someone already qualified than to train someone, and 23 per cent said they did not have the budget to train workers. More than one in five (22.6 per cent) said their staff were too busy to train a new worker.

Academics have challenged employer perceptions saying some businesses are experiencing difficulties in recruitment because of the wages they offer, as opposed to a genuine skills shortage.

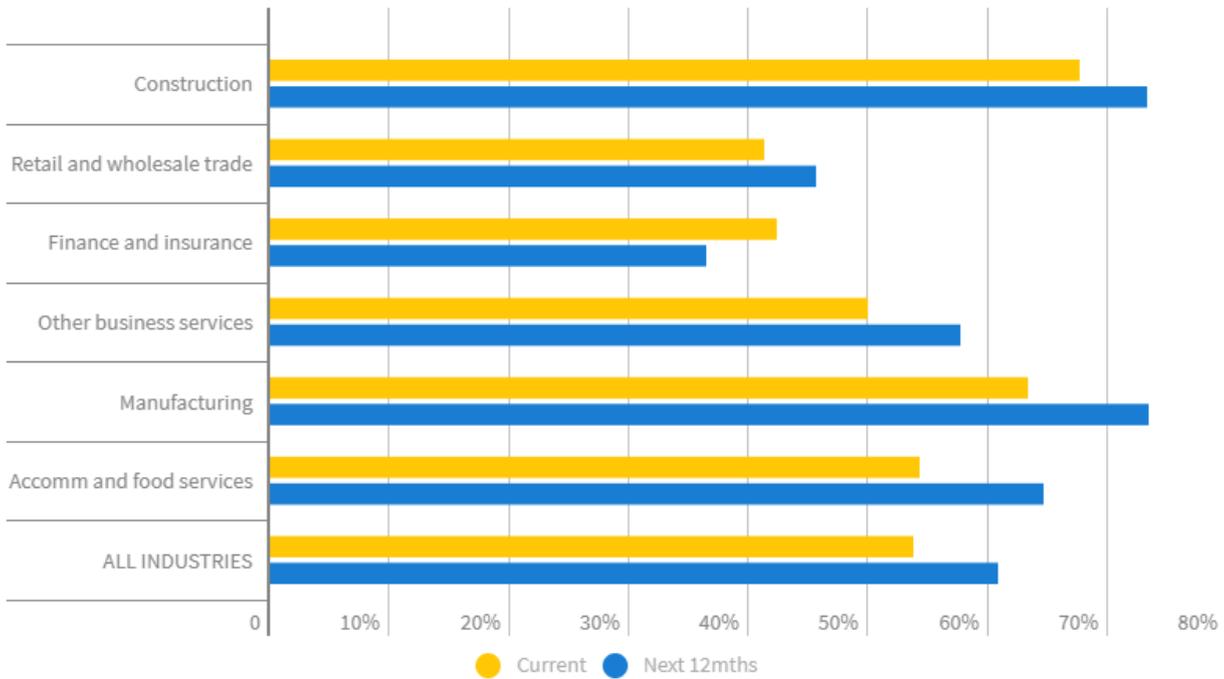
Statewide, key factors contributing to skills shortages include competition for skilled employees (21.1%), high wages costs (17.7%) and a lack of availability of adequate training (10.9%). Employers estimated their skills shortage equated to an average of 3.7 full time jobs, with the Construction (6.2 FTR), Other Industries (4.3 FTR) and Manufacturing (3.5 FTR) sectors recording the highest results. Regions reporting the highest skills shortages included Western NSW (70.6%), Murray-Riverina (60.0%) and Illawarra/South Coast (58.5%) regions.

In regional areas, the most likely factor contributing to skill shortages was candidates lacking specialist knowledge required to perform the role (29.2%) followed by the loss of experienced staff (18.0%) and the geographic location of the business (14.7%).

In regional NSW, geographic location was identified as a far more significant barrier for a business's ability to recruit skilled workers than for businesses in metropolitan areas. Respondents from the Murray Riverina (23.2%), New England North West (22.2%) and Western NSW (22.0%) regions found the geographic location of their business played a significant factor in securing staff when compared with Sydney (7.7%).

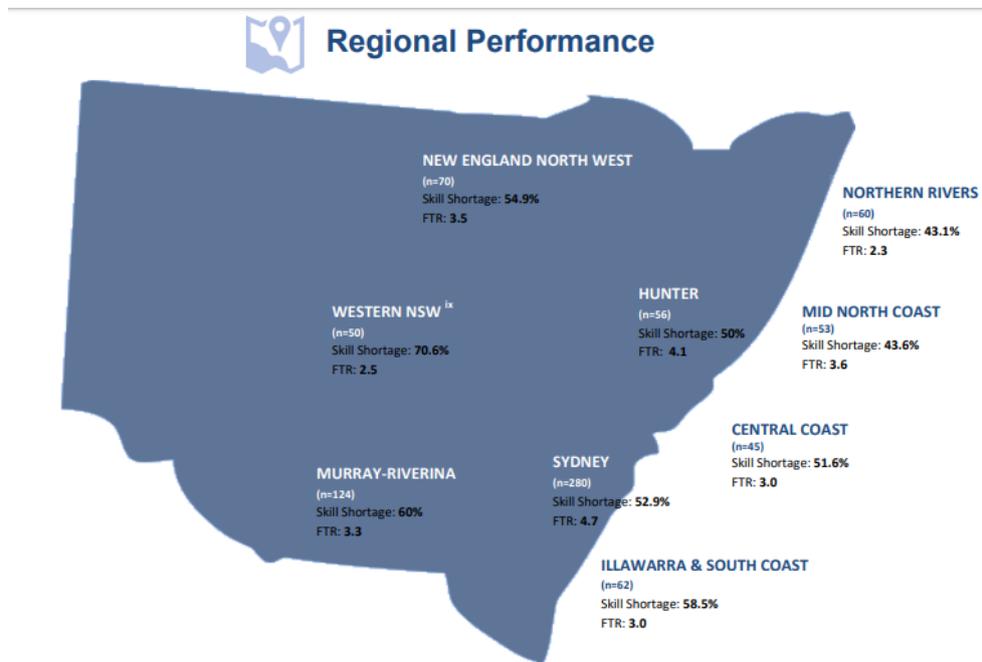
Respondents also assessed the effectiveness of current government assisted employment programs in helping to address their skills needs. The Australian Apprenticeships Incentive Program (39.6%) was the top response, followed by 457 Visa arrangements (26.0%) and Disability Employment Services (15.0%).

### Skill shortage - current & forecast next 12mths



Industry	Skill Shortage (Current) % Yes	Skill Shortages (Past) 12 months % Yes	Skill Shortages (Next 12 months) % Yes	FTR
Construction (n=39)	67.7%	40.0%	73.3%	6.2
Retail and wholesale trade (n=99)	41.3%	19.1%	45.6%	2.3
Finance and insurance (n=35)	42.3%	6.7%	36.4%	2.1
Other business services (n=151)	50.0%	32.0%	57.7%	3.4
Manufacturing (n=108)	63.3%	20.7%	73.4%	3.5
Accommodation and food services (n=50)	54.3%	18.8%	64.7%	2.2
Other Industries (n=319)	56.0%	27.3%	63.3%	4.3
All industries (n=801)	53.8%	24.8%	60.9%	3.7

## Regional performance



## South Australia

### Employment Outlook

The South Australian economy continues to undergo a structural shift, moving away from employment in traditional manufacturing to the provision of services and advanced manufacturing. In SA ageing population along with the introduction of the NDIS is leading to strong employment growth in health care. The increasing demand for services and advanced manufacturing is driving employment growth in professional, scientific and technical occupations, with a flow on effect being strong demand for education and training, due to increasing demand for workers with higher level qualifications. Future defence projects scheduled in the state are expected to further support demand for professional and technical services.

Employment in accommodation and food services is also expected to rise, as a lower Australian dollar and increasing wealth in Asian countries make our state an attractive tourism destination, particularly in the food and wine industries.

Employment in arts and recreation services is also on the rise, with strong growth expected in occupations such as fitness instructing resulting from an increasing focus on personal health and a desire to achieve work-life balance, coupled with sufficient levels of disposable income. Total employment in South Australia is forecast to grow by 0.9 percent per year to 2020, which compares to a national growth rate of 1.6 percent per year.

This translates to approximately 36,000 jobs being created in South Australia over the five-year period leading to 2020. Combining employment growth with the need to replace workers leaving the workforce or changing occupations, it is estimated there will be approximately 122,000 job openings over the period 2015 to 2020.

The employment projections reveal strong growth in the health care and social assistance industry, followed closely by professional, scientific and technical services. The decline in mining and manufacturing employment is expected to continue, at least in the short-term.

Strong growth expected in the health care and social assistance industry will ensure it remains the largest employer by industry sector in the state, employing approximately 17 percent of the South Australian workforce by 2025.

Some of the occupations expected to experience strong employment growth include those related to health care, such as aged and disabled care and nursing support and personal care. Strong growth in professional, scientific and technical services is expected to cause increasing demand in occupations such as building and engineering technicians, medical technicians, environmental scientists, psychologists, ICT support technicians, software and applications programmers, and education providers such as teachers, lecturers and tutors.

### Industry demand for new qualifications

Table 2: Short term job openings (2014-15 to 2019-20)

Job Openings	Baseline	Improved	Subdued
Expansion Demand	36,000	55,000	24,000
Replacement Demand	86,000	87,000	86,000
Job Openings	122,000	142,000	110,000

Table 3: Top 5 projected average annual employment growth rates by industry for South Australia (%)

Industries	Historical 15 Years	Baseline		Improved		Subdued		
		Short term	Long term	Short term	Long term	Short term	Long term	
<b>South Australia</b>								
Health Care and Social Assistance	3.7	2.4	2.5	2.9	2.8	2.1	2.2	
Professional, Scientific and Technical Services	3.1	2.2	2.3	2.7	2.6	2.0	2.0	
Accommodation and Food Services	1.2	2.0	2.0	2.4	2.3	1.7	1.7	
Arts and Recreation Services	3.2	1.4	1.4	1.9	1.8	1.1	1.2	
Education and Training	1.6	1.1	1.2	1.6	1.5	0.9	0.9	
<b>Total</b>	<b>1.2</b>	<b>0.9</b>	<b>1.0</b>					

Note: Short term includes 2014-15 to 2019-20 and long term 2014-15 to 2024-25

Industry demand will require approximately 230,000 new qualifications to be delivered between 2015 and 2020.

The majority of this demand is driven by new entrants and existing workers gaining qualifications at an equivalent or lower level, representing 38 percent and 31 percent of total demand respectively. It’s interesting to note that industry demand requires existing workers to gain a qualification at the same level or lower far more often than they require workers to gain a higher level qualification.

By 2025, approximately 61 percent of workers will be expected to hold a Certificate IV level qualification or higher, while around half of all workers will be required to hold a Diploma or above. VET qualifications account for approximately two-thirds of total qualification demand, illustrating the significant importance of vocational training in meeting industry demand. Projected strong employment growth in the health care and social assistance industry is expected to have a significant impact on the demand for qualifications in SA.

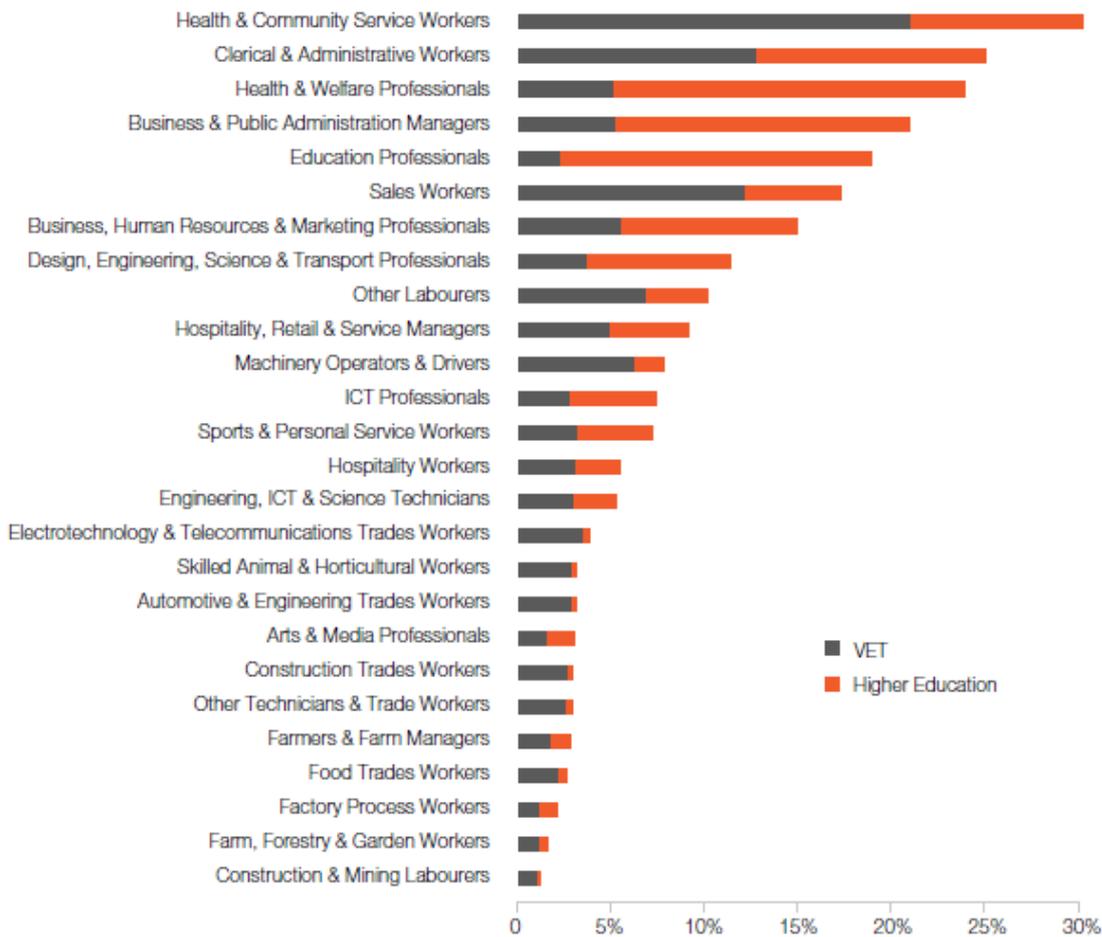
Over the period 2015 to 2020, delivering qualifications to health and community service workers and health and welfare professionals is estimated to make up 22 percent of total training activity in SA. Much of this is VET demand. To meet the skills needs for health care occupations, approximately 33,000 VET qualifications will need to be delivered, nearly double the amount of higher education qualifications (18,000).

**Table 6: Total industry demand for new qualifications (2014-15 to 2019-20)**

Qualification Level	Base	Improved	Subdued
Post Graduate	26,000	28,000	25,000
Bachelor degree	53,000	57,000	50,000
Advanced Diploma/Diploma	37,000	40,000	36,000
Certificate IV	27,000	29,000	26,000
Certificate III	61,000	65,000	59,000
Certificate II	25,000	26,000	25,000
Certificate I	2,000	2,000	2,000
<b>Total</b>	<b>231,000</b>	<b>247,000</b>	<b>222,000</b>

Components may not add to total due to rounding.

**Figure 1: Total industry demand for qualifications by occupational group, VET and Higher Education, 2014-15 to 2019-20**



## Victoria

### Overview

Metropolitan Melbourne has a large and diverse economy that has progressively moved from manufacturing to a more globally focused, knowledge-based service economy. It is rapidly expanding with growth corridors to the north, west, southeast and northwest of the Metropolitan area. The economy shows strong growth especially in Financial and Insurance Services and Construction.

Southern Melbourne is strongly influenced by Manufacturing, Professional and Health Care and Social Assistance industries. Western Melbourne is strongly influenced by the Financial and Insurance Services, Professional Services, and Public Administration industries due to the inclusion of the Melbourne CBD in the sub-region. Eastern Melbourne contains industrial areas, agricultural production and is a key centre for research, technological development and advanced manufacturing. Northern Melbourne has strategic infrastructure such as Melbourne Airport along with excellent road, rail and freight networks.

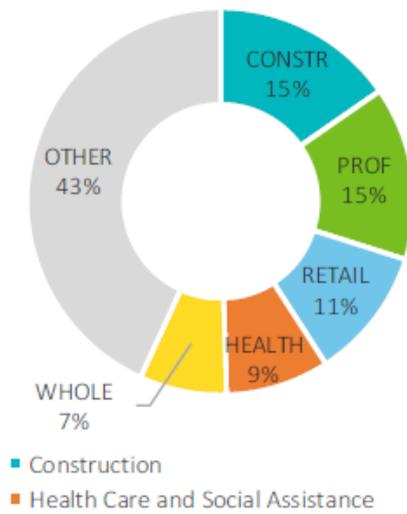
A number of key Training Providers service the Metropolitan Melbourne area, including: Chisholm and Holmesglen Institutes in the South; RMIT University, Victoria Polytechnic and the William Angliss Institute in the West; Box Hill Institute, Swinburne University and the Holmesglen Institute in the East; and Melbourne Polytechnic and the Kangan Institute in the North.

### INDUSTRIES

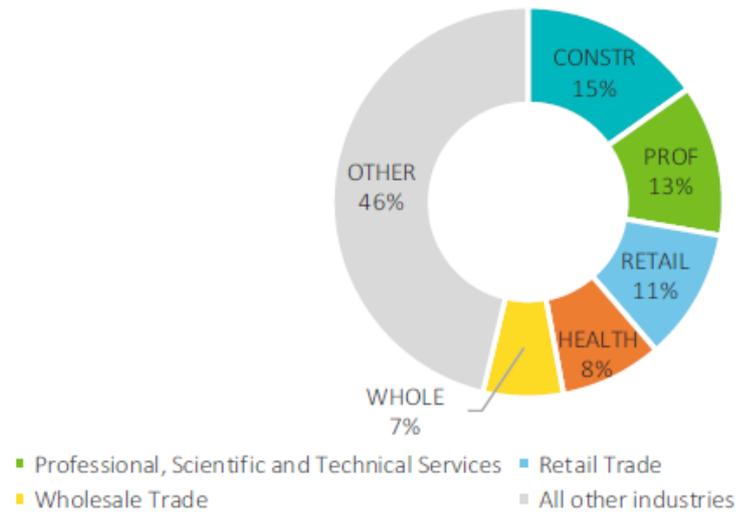
**FIG. 1: BUSINESS COMPOSITION (2016)**

The following show the top five industries based on the share of total business establishments in 2016 for Metropolitan Melbourne and their comparative proportions for Victoria.

## METROPOLITAN MELBOURNE



## VICTORIA



## JOBS AND TRAINING

The following figures only show occupations that are supplied by VET graduates. Some of these occupations may be supplied by both VET and higher education graduates, for example Accountants. Occupations recurring more than once in figures 2 to 4 are marked with a diamond to show the extent to which high volume job vacancies, and large forecast job demand, are reflected in 2017 forecast government subsidised training commencements.

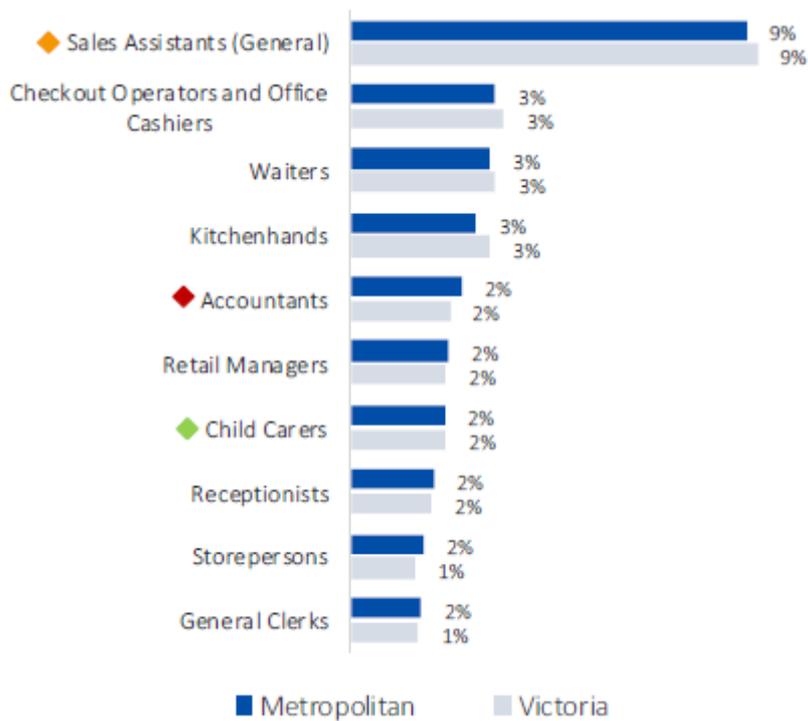
### ADVERTISED VACANCIES (2017)

The top ten occupations based on the share of total advertised job vacancies in the 12 months to June 2017 for Metropolitan Melbourne and their comparative proportions for Victoria.



### TOTAL DEMAND FOR WORKERS (2017–2021)

The top ten occupations based on the share of total forecast of demand for workers over the next 5 years for Metropolitan Melbourne and their comparative proportions for Victoria. Demand for workers may arise from new jobs created, staff turnover and/or retirements.



## ADVERTISING EMPLOYERS

The following companies and organisations have recorded the largest number of job postings in Metropolitan Melbourne in the 12 months ending June 2017 (ordered alphabetically). The data is based on internet vacancies only, and as a result, may not reflect all job openings over the period. Apprentices are generally employed by small firms and thus their employers are unlikely to be represented below.

Of the top advertisers in the region, universities are strongly represented. These educational institutions represent a quarter of the top 20 advertisers in the region. The remaining top advertisers represent a wide variety of industries ranging from government, banking, utility services and retail.

- AGL Energy
- Ascot Vale Leisure Centre
- Australia and New Zealand Banking Group
- Coles Supermarket
- Deloitte Touche Tohmatsu Limited
- Federal Government
- La Trobe University
- Mercy Health
- Monash University
- National Australia Bank
- News Corp
- Public Transport Victoria
- Royal Automobile Club of Victoria
- RMIT University
- State Government
- Swinburne University of Technology
- Telstra Corporation Limited
- The Just Group
- University of Melbourne
- Woolworths

## QLD

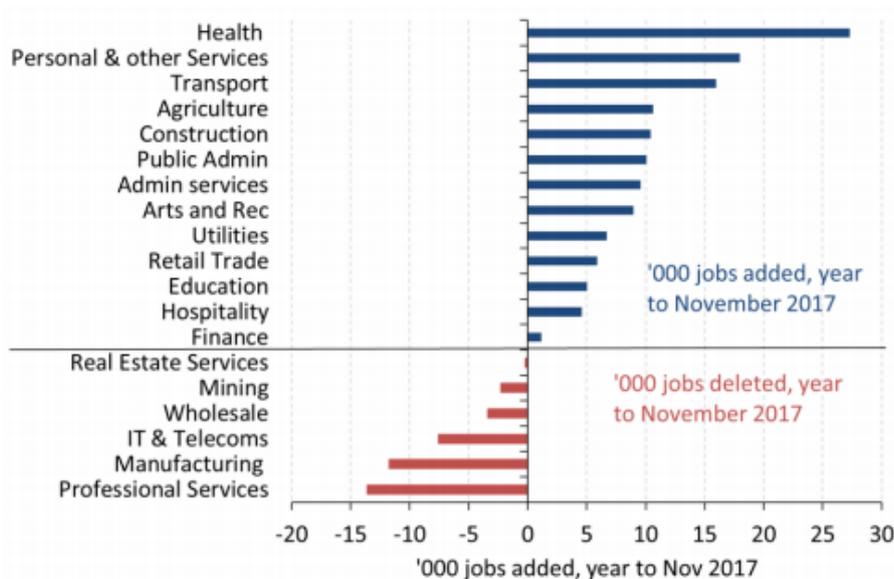
### Queensland's labour market is accelerating and tightening

Queensland's economy is recovering strongly in 2017-18. In the year to December 2017, state final demand grew by 2.6% p.a. and employment grew by 114,000 or 4.8% p.a. This was the strongest growth rate for jobs of any state in 2017. Queensland's growth is expected to accelerate in 2018-19, as mining output increases and activity becomes more broad-based across other industries and locations. The workforce will grow and skill shortages may emerge.

As of late 2017, half of Queensland expected to experience difficulty in finding and retaining skilled staff in 2018.

The more detailed employment data indicate that of the 96,000 jobs added to Queensland's economy in the year to November 2017 (latest available at this level of detail), 27,300 (28% of all new jobs) were in the healthcare sector, which now employs 13.9% of all workers in the state.

### Employment growth in Queensland, year to Nov 2017



Source: ABS Labour force Australia, detailed quarterly.

Other major industries that added 10,000 or more jobs in Queensland in the year to Nov 2017 included personal services, transport, agriculture, construction and public administration (chart 6). Jobs were shed over the year to Nov 2017 in a limited range of industrial and business-oriented services segments including manufacturing, mining, professional services, telecommunications and retail trade. This closely mirrors national jobs growth patterns in 2017 and over recent years.

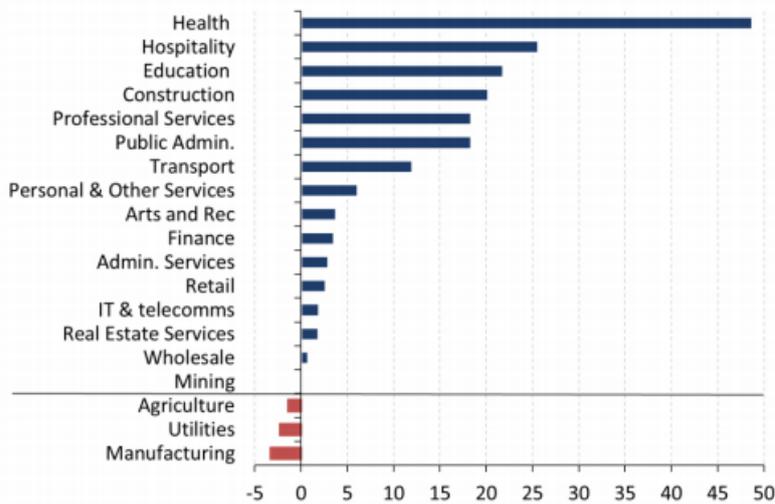
Looking ahead, the Australian Department of Jobs and Small Business expects Queensland to add a total of 181,300 jobs over the five years to 2022, compared with 2017 employment levels (up 7.6% over the five years from 2017 to 2022).<sup>2</sup>

The Department expects Queensland will need to add significant employment numbers in:

- 48,700 jobs in healthcare;
- 25,600 jobs in hospitality;
- 21,800 jobs in education;
- 20,200 jobs in construction; and
- 18,300 jobs in each of professional services and public administration.

The Department of Jobs and Small Business had expected Queensland to lose a further 3,300 jobs in manufacturing over the next five years, as of November 2017. But recent positive developments in food and other segments of manufacturing plus the announcement of new defence industry contracts all suggest that manufacturing is more likely to add (or at least recover) jobs than to shed jobs over the next five years in Queensland.

## Expected employment growth in Queensland, five years to 2022



Source: Department of Jobs and Small Business, *Employment projections for the five years to Nov 2017*.

## Western Australia

Western Australia is currently experiencing challenging conditions in its domestic economy, which have flowed through to a softening in the labour market. Subdued business and consumer confidence, slower population growth, continuing global uncertainty, variable commodity prices, and the ongoing transitioning of many of the State's major resource projects from construction to their less labour intensive operations phases have all been key factors moderating labour market conditions in the State.

Employment growth has slowed over the past four years in Western Australia. Overall, there was a slight fall in the State's average employment level over 2016-17 compared to the previous year. The State recorded a contraction in employment of -0.4% over 2016-17, compared to 0% growth in 2015-16. This growth rate was significantly lower than the equivalent growth rate nationally over the past year of 1.3%, and it was well below the State's average yearly rate recorded over the past decade of 2.1%.

The State's employment growth by industry for 2016-17 was mixed, with only nine of 19 industries recording an increase in employment.

## Employment by industry in Western Australia, 2015-16 and 2016-17

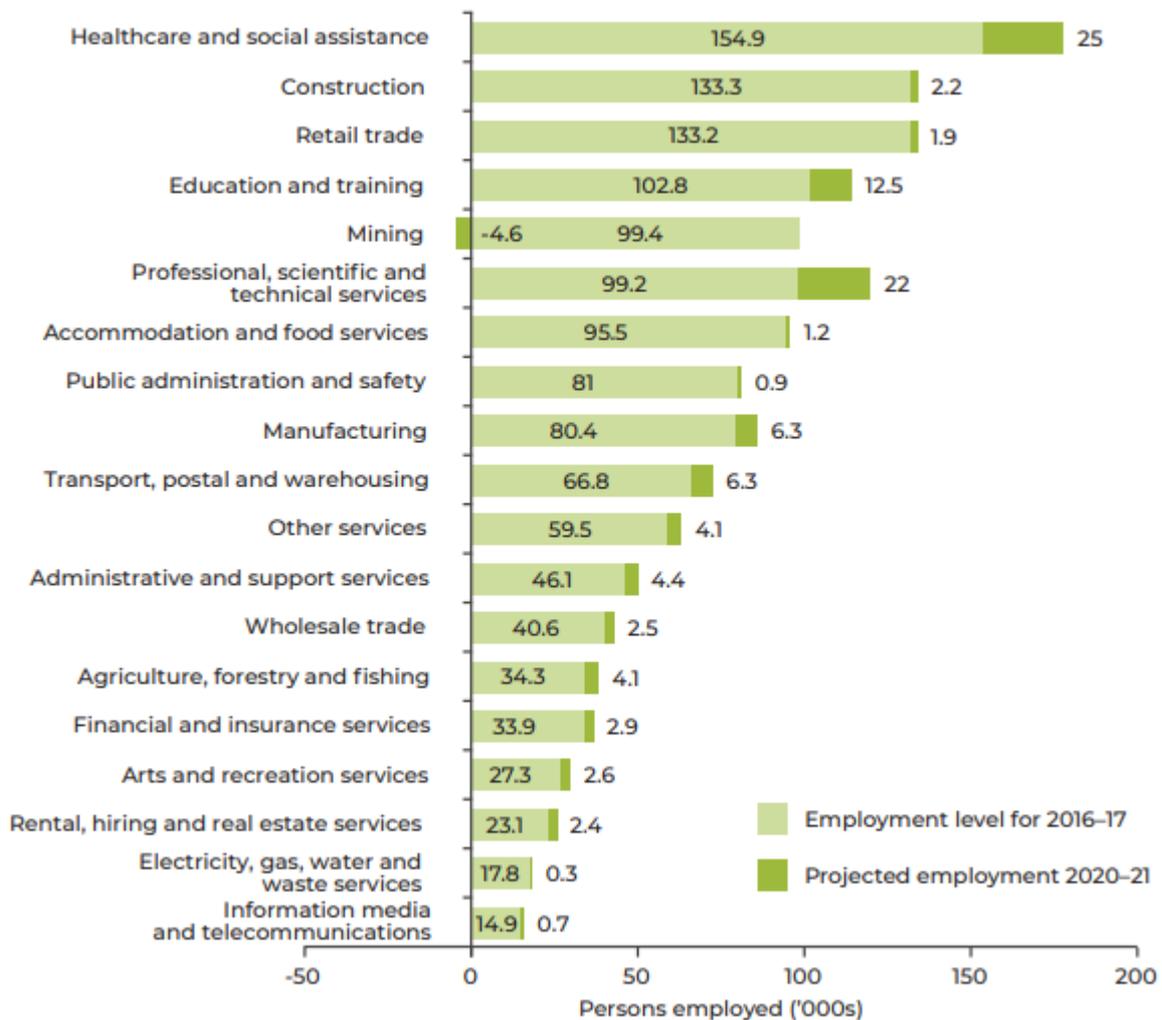
Industry	Employment levels			Composition of employment growth	
	2015-16	2016-17	Change	Full-time	Part-time
Agriculture, forestry and fishing	27,400	34,300	6,900	4,200	2,700
Mining	104,000	99,400	-4,300	-5,500	1,200
Manufacturing	80,600	80,400	-200	-500	400
Electricity, gas, water and waste services	14,800	17,800	3,000	3,300	-300
Construction	149,200	133,300	-15,500	-13,700	-1,800
Wholesale trade	38,200	40,600	2,600	800	1,800
Retail trade	137,200	133,200	-4,200	2,300	-6,500
Accommodation and food services	91,800	95,500	3,800	700	3,100
Transport, postal and warehousing	71,800	66,800	-4,800	-6,000	1,200
Information media and telecommunications	16,100	14,900	-1,200	-1,800	600
Financial and insurance services	29,700	33,900	4,300	4,600	-300
Rental, hiring and real estate services	24,700	23,100	-1,500	-200	-1,300
Professional, scientific and technical services	100,400	99,200	-1,100	-500	-600
Administrative and support services	43,400	46,100	2,800	-100	2,900
Public administration and safety	79,000	81,000	2,000	1,000	1,000
Education and training	97,200	102,800	5,600	2,800	2,800
Healthcare and social assistance	157,500	154,900	-2,600	-3,700	1,100
Arts and recreation services	27,000	27,300	300	-1,200	1,500
Other services	59,700	59,500	-200	-300	100

The State Training Plan 2018–2021 lays the foundation to build a highly skilled workforce through an innovative, sustainable and contemporary education and training system which provides the skills needed by Western Australian industries and enables people to realise their potential.

The purpose of the State Training Plan is to consider the long-term training and employment needs for Western Australia. Forecasts from Victoria University’s Centre of Policy Studies<sup>15</sup> (CoPS) show that over the coming four years that growth in the State’s industry employment levels is expected to be broadly based.

According to the CoPS forecasts, the Healthcare and Social Assistance sector will remain the largest industry, by employment size, in the State over the coming four years and will increase its workforce by 25,000 workers to a total of 179,900 workers in 2020-21. This strong growth is not unexpected when considering the ageing population and the rollout of the National Disability Insurance Scheme in Western Australia.

Figure 1: WA projected employment growth by industry, 2015–16 and 2019–20



### Increasing participation of young people in VET and the labour market

In today’s labour market most workers will need to complete a VET or higher education qualification to be successful<sup>19</sup>. Entry-level, lowskilled<sup>20</sup> jobs are disappearing. According to the Business Council of Australia<sup>21</sup> there are 20 percent fewer full-time entry-level, low-skilled jobs for young people in today’s labour market than there were in the Baby Boomer era. This means that without qualifications, entry into the labour market is more difficult for young people. This situation is expected to worsen as automation and other technological advances hit the Western Australian labour market and more low-skilled job roles disappear.

A concerted effort is needed to dispel some of the myths surrounding VET courses, apprenticeships and traineeships. There is a continued belief by parents, schools and career advisors that university is the only avenue to a successful career.

Figure 2: Job clusters identified by Foundation for Young Australians



**THE GENERATORS**

jobs that require a high level of interpersonal interaction in retail, sales, hospitality and entertainment.



**THE ARTISANS**

jobs that require skill in manual tasks related to construction, production, maintenance or technical customer service.



**THE TECHNOLOGISTS**

jobs that require skilled understanding and manipulation of digital technology.



**THE INFORMERS**

jobs that involve professionals providing information, education or business services.



**THE COORDINATORS**

jobs that involve repetitive administrative and behind-the-scenes process or service tasks.



**THE DESIGNERS**

jobs that involve deploying skills and knowledge of science, mathematics and design to construct or engineer products or buildings.



**THE CARERS**

jobs that seek to improve the mental or physical health or well-being of others, including medical, care and personal support services.