

**Skills SA**

# **Skills Outlook**

July 2023



Government  
of South Australia





Department for Education



# Introduction

The Skills Outlook is an annual release of state government modeling with a focus on current and emerging skills needs that may be supported through vocational education and training (VET).

It is one way of informing South Australians about the state's future skills needs and supports a smart, sustainable and inclusive economy.

For Government 	For training providers 	For learners 	For industry 
It is a key input into determining the scope of courses supported through government subsidies and investment in skills and training pathways.	It provides a basis for identifying what types of qualifications will be in demand in the future.	It gives a general indication about where the jobs of the future are likely to be.	It shows the projected level of demand for occupations and how that may change over time.

In addition to the demand for VET set out in the Skills Outlook, there are seven industry sectors in focus which identify the drivers of demand and the types of key occupations needed.

The Skills Outlook should be read alongside skills and training policy directions, and information on key investments and initiatives that support community and economic outcomes at [skills.sa.gov.au](https://skills.sa.gov.au).

## Methodology

The Skills Outlook provides projections on the demand for new VET qualifications between 2023-24 and 2027-28 in South Australia.

These projections are underpinned by state government modelling that is updated annually.

The modelling considers a range of factors including employment growth, the need to replace workers leaving the labour force or changing occupations and the need for workers to upskill or broaden their skill set.

For the purposes of Skills Outlook, the VET sector is considered to include Certificate I, Certificate II, Certificate III, Certificate IV, Diploma and Advanced Diploma qualifications.



Tindo Solar, Mawson Lakes SA

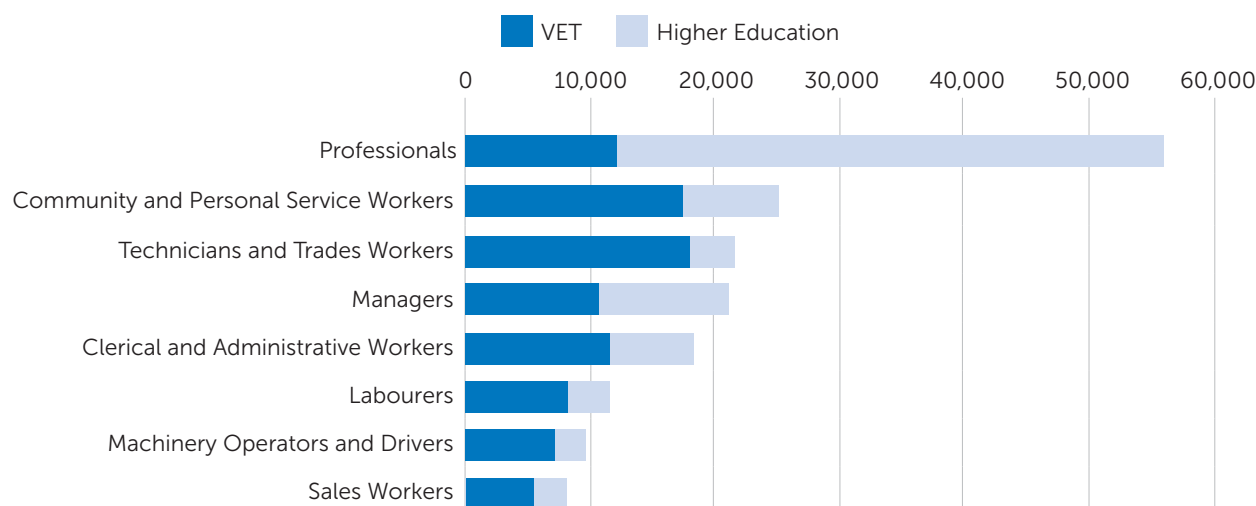
# Overview

Over the 5 years to 2027-28 it is estimated that around 90,500 vocational education and training (VET) qualifications will need to be delivered to meet South Australia's demand for skills.

South Australia is currently experiencing strong employment growth with the unemployment rate sitting at 4.0%. However, both the youth unemployment rate and the proportion of employed people that were underemployed are the second highest amongst all Australian states<sup>2</sup>.

Demand for VET qualifications represents over half of South Australia's total demand for qualifications over the period after factoring in bachelor and postgraduate qualifications delivered by the higher education (or university) sector.

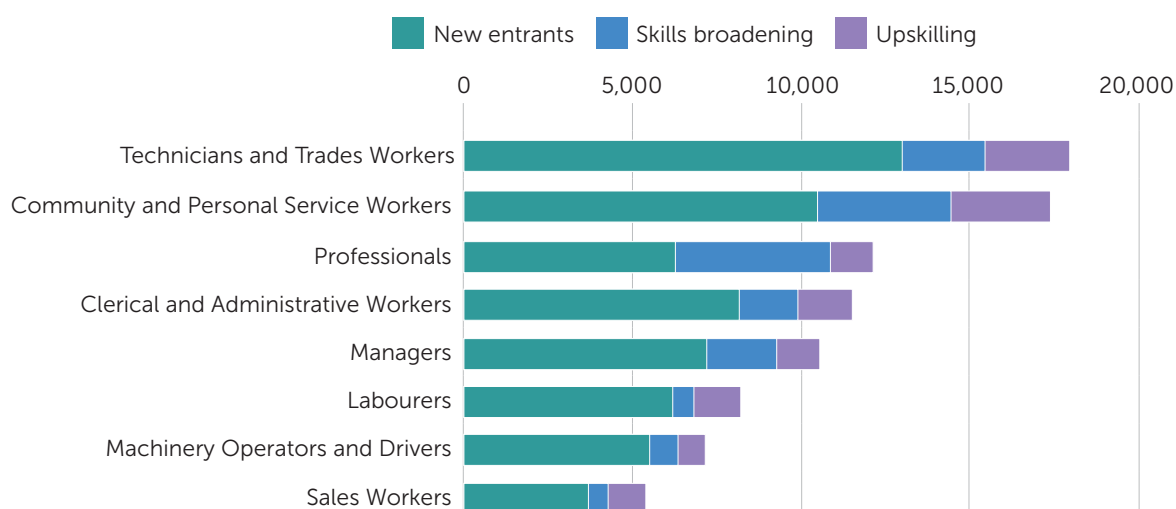
**Demand for total qualifications by sector, 2023-24 to 2027-28**



VET qualification demand is driven primarily by new entrants into the employment market (67%), followed by existing workers broadening their skills (19%), then workers upskilling (14%).

New entrants	Skills broadening	Upskilling
New entrant qualification demand flows from job openings- it represents the skills required to support employment growth and the need to replace workers who leave the labour force or change occupation.	Skills broadening occurs when an existing worker acquires a qualification at an equivalent or lower level compared to their highest qualification previously held.	Upskilling occurs when an existing worker completes a qualification at a higher level compared to their previous qualification. This may include someone who does not have a post-school qualification upskilling to a Certificate I or some other higher level of education.

**Demand for VET qualifications by type and major occupation group, 2023-24 to 2027-28**



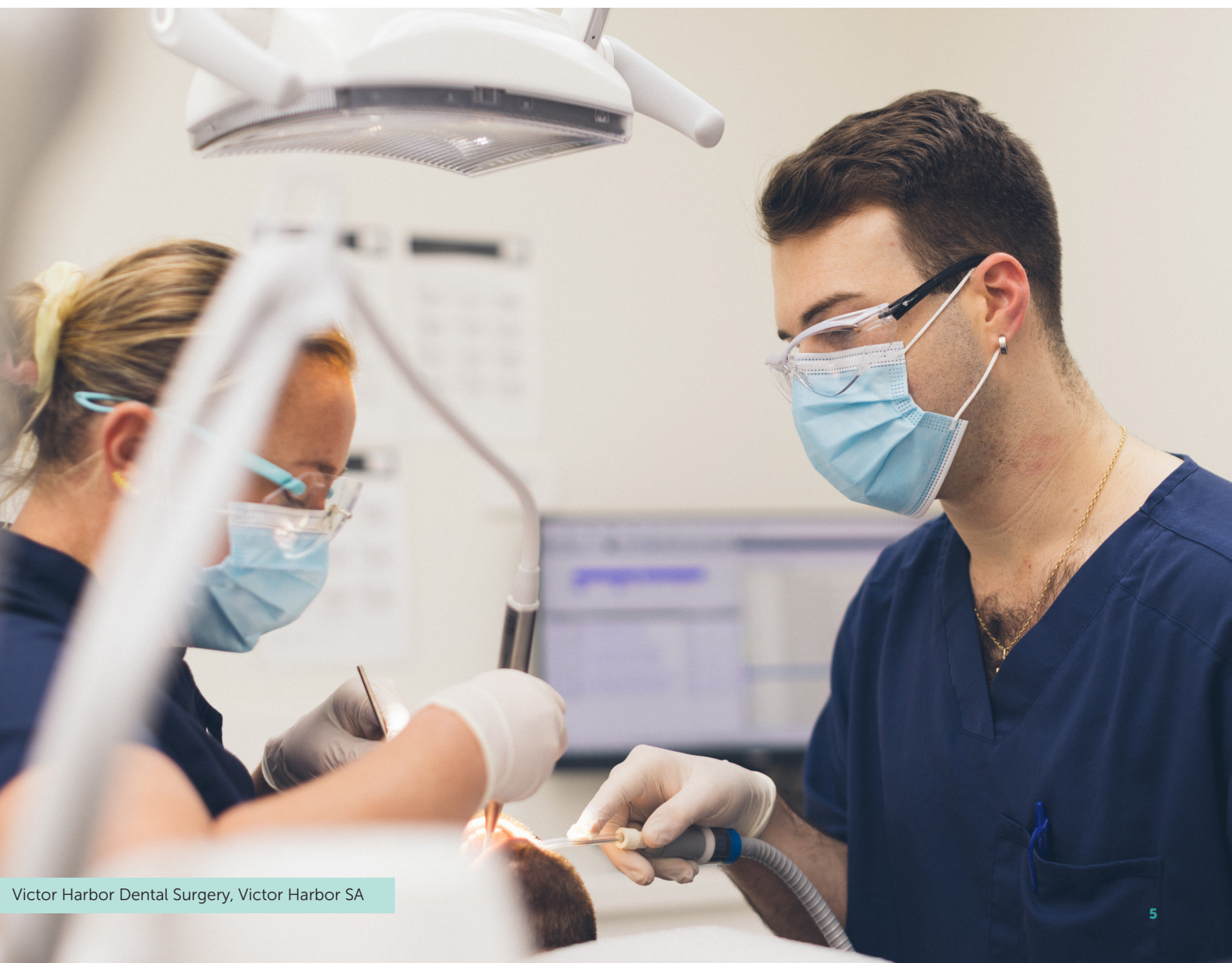
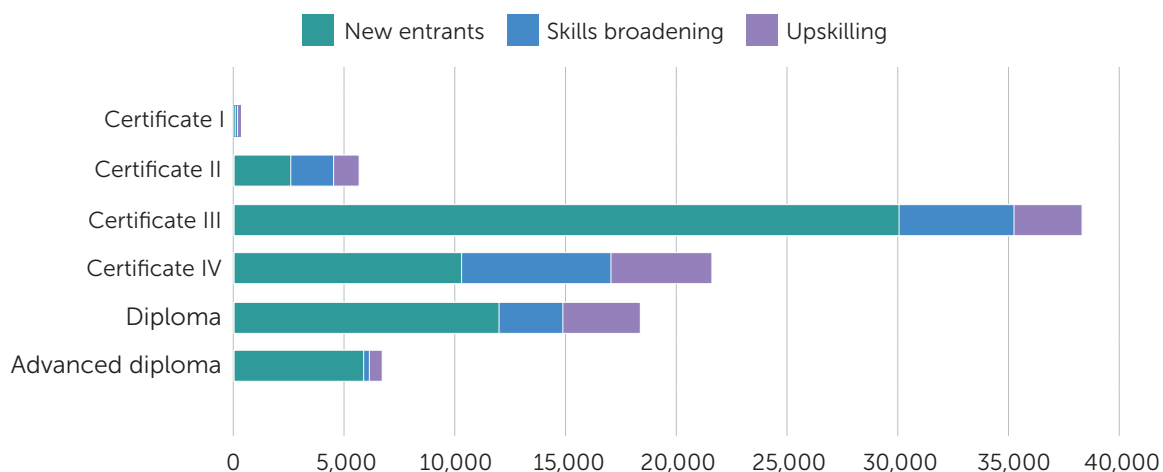
<sup>2</sup> Trend terms – Unemployment rate and Underemployed as proportion of employed; Original terms – Youth Unemployment Rate, <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release#states-and-territories>



# Qualification level

Demand for VET qualifications is comprised mainly of Certificate III level qualifications (42%), Certificate IV level qualifications (24%) and Diploma level qualifications (20%).

**Demand for VET qualifications by type and qualification level, 2023-24 to 2027-28**



# New entrants

**New entrants into the labour market primarily drive VET qualification demand and over 60,000 people with VET qualifications will be required over the next five years.**

There is demand for new entrants across a wide range of occupations in South Australia's economy, with some of the strongest need being for Technicians and Trades Workers, and Community and Personal Service Workers.

**Demand for VET qualifications by major occupation group, 2023-24 to 2027-28**



Within these major occupation groups there is a wide range of occupations projected to have the greatest demand for VET qualifications. Many more occupations will still be in demand over the coming years.





# Industry demand

South Australia's demand for skilled workers spans all industries across of the economy, including those that are emerging areas of growth and those that support the longstanding need for essential products and services.

## Demand for VET qualifications by industry division and major occupation group, 2023-24 to 2027-28

Low = less than 500 Medium = 500 to 1,000 High = 1000 to 1,500 Very high = 1500 or greater

	Managers	Professionals	Technicians and Trades Workers	Community and Personal Service Workers	Clerical and Administrative Workers	Sales Workers	Machinery Operators and Drivers	Labourers
Agriculture, Forestry and Fishing	High	Low	Low	Low	Low	Low	Low	Medium
Mining	Low	Low	Low	Low	Low	Low	Low	Low
Manufacturing	Medium	Low	Very high	Low	Medium	Low	Medium	Medium
Electricity, Gas, Water and Waste Services	Low	Low	Low	Low	Low	Low	Low	Low
Construction	Medium	Low	Very high	Low	Medium	Low	Medium	Medium
Wholesale Trade	Low	Low	Low	Low	Low	Low	Low	Low
Retail Trade	Medium	Low	Low	Low	Low	Very high	Low	Medium
Accommodation and Food Services	Medium	Low	High	High	Low	Low	Low	High
Transport, Postal and Warehousing	Low	Low	Low	Low	Medium	Low	Very high	Low
Information Media and Telecommunications	Low	Low	Low	Low	Low	Low	Low	Low
Financial and Insurance Services	Low	Low	Low	Low	Medium	Low	Low	Low
Rental, Hiring and Real Estate Services	Low	Low	Low	Low	Low	Medium	Low	Low
Professional, Scientific and Technical Services	Medium	Very high	Medium	Low	Medium	Low	Low	Low
Administrative and Support Services	Low	Low	Low	Low	Low	Low	Low	Medium
Public Administration and Safety	Low	Medium	Low	Medium	High	Low	Low	Low
Education and Training	Low	High	Low	Very high	Medium	Low	Low	Low
Health Care and Social Assistance	Low	High	Low	Very high	High	Low	Low	Low
Arts and Recreation Services	Low	Low	Low	Low	Low	Low	Low	Low
Other Services*	Low	Low	Very high	Medium	Low	Low	Low	Low

\*The Other Services Division includes a broad range of personal services; religious, civic, professional and other interest group services; selected repair and maintenance activities; and private households employing staff. <https://www.abs.gov.au/statistics/classifications/australian-and-new-zealand-standard-industrial-classification-anzsic/2006-revision-2-0>

# Sectors in focus

In addition to the demand for VET set out in the Skills Outlook, there are seven industry sectors in focus which identify the drivers of demand and the types of key occupations needed.



Construction



Defence and Space



Early Childhood Education and Care



Health and Aged Care



IT and Cybersecurity



Manufacturing and Carbon Neutral Energy



Hospitality and Tourism





# Construction

South Australia's growing population and business investment will continue to drive demand for new housing, commercial facilities and public infrastructure.

Major projects over the next decade include the Torrens to Darlington (T2D Project) component of the North-South corridor development, the new Women's and Children's Hospital and the state's first large-scale hydrogen power station, electrolyser and storage facility.

The T2D project alone is expected to create 5,500 jobs per year on average during main construction for the next decade<sup>3</sup>, with many of those supported by the VET sector.

Significant residential land releases in Adelaide's northern and southern suburbs over the coming years<sup>4</sup> will also require a range of construction trades workers and labourers.

In demand occupations relevant to the construction sector that may be supported by a VET pathway include:

- Architectural, Building and Surveying Technicians
- Carpenters and Joiners
- Construction Managers
- Contract, Program and Project Administrators
- Earthmoving Plant Operators
- Electricians
- Painting Trades Workers
- Plumbers
- Structural Steel and Welding Trades Workers
- Truck Drivers



<sup>3</sup><https://dit.sa.gov.au/nsc/torrens-to-darlington/about/careers-jobs>

<sup>4</sup><https://www.premier.sa.gov.au/media-releases/news-items/record-land-release-to-pave-the-way-for-more-accessible-and-affordable-homes>



# Defence and Space

The South Australian government has set the goal of the South Australian defence industry being 'recognised as an international leader in the defence and space industries' by 2035<sup>5</sup>.

South Australia is well placed to continue to capture valuable investment opportunities in the shipbuilding, cyber and systems, defence science and research, and space industries.

South Australia's defence sector employs more than 14,000 workers, with another 10,000 jobs expected to be added to the defence industry pipeline, plus thousands more in associated industries over the next 20 years<sup>6</sup>.

The AUKUS program will support the construction in Adelaide and delivery of next generation nuclear-powered submarines to Australia's defence force. This commitment has the potential to significantly increase demand for a range of both higher education and VET qualifications.

At its peak, up to 4,000 workers will be employed to design and build the infrastructure for the Submarine Construction Yard in Osborne, South Australia. A further 4,000 to 5,500 direct shipyard jobs are expected<sup>6</sup> to be created to build nuclear-powered submarines in South Australia when the program reaches its peak.

Supported by the South Australian and Australian governments, the Skills and Training Academy at Osborne<sup>6</sup> will support pathways into and within the submarine and naval shipbuilding workforce including developing skills required for the construction of the SSN-AUKUS nuclear-powered submarines.

South Australia is also home to Australia's Space Agency Headquarters and more than 90 space companies and organisations. As the industry expands, there will likely be a growing demand for workers with specialised skills<sup>7</sup> and knowledge in areas such as satellite engineering, data analysis and space technology.

In demand occupations relevant to the defence sector that may be supported by a VET pathway include:

- Aircraft Maintenance Engineers
- Computer Network Professionals
- Contract, Program and Project Administrators
- Database and Systems Administrators, and ICT Security Specialists
- Electricians
- Electronics Trades Workers
- ICT Managers
- Metal Fitters and Machinists
- Software and Applications Programmers
- Structural Steel and Welding Trades Workers

<sup>5</sup> <https://defencesa.com/about-defence-sa/defence-sa-strategy/>

<sup>6</sup> <https://defencesa.com/workforce-and-skills/>

<sup>7</sup> <https://sasic.sa.gov.au/>



# Early Childhood Education and Care

South Australia's Early Learning Strategy 2021 to 2031: All young children thriving and learning<sup>8</sup> is well underway and includes a significant investment in South Australia's preschool system with \$35.1 million to expand the reach, frequency and number of child development checks.

The interim report of the Royal Commission into Early Childhood Education and Care has recommended that universal preschool, currently available to all 4 year-olds, be expanded to include 3 year-olds in South Australia. This proposed expansion will increase demand for educators as well as associated allied health and specialist education services.

There will be additional demand for early childhood educators with or working towards a Certificate III qualification level or higher. This is an opportunity for new entrants and the existing workforce in both government preschools and long day care that hold a VET qualification<sup>9</sup>.

In demand early childhood education and care sector occupations that may be supported by a VET pathway include:

- Counsellors
- Early Childhood Educators
- School Services Officers
- Welfare, Recreation, Community Arts Workers
- Welfare Support Workers



Noarlunga Community Children's Centre, Noarlunga SA

<sup>8</sup> <https://www.education.sa.gov.au/departments/strategies-and-plans/early-learning-strategy>

<sup>9</sup> Page 33, <https://www.royalcommissionecec.sa.gov.au/documents/RCECEC-Interim-Report-Version-2-Website.pdf>



# **Health and Aged Care**

The health, aged care and social assistance services contributed \$12.8 billion to the South Australian economy and employed around 160,000 people. South Australia is home to one of the largest health and medical precincts in the Southern Hemisphere<sup>9</sup> and a growing health and medical industry that is projected to reach \$5 billion by 2030 supporting demand for a skilled workforce<sup>10</sup>.

An additional \$2.3 billion is being invested in new health initiatives in coming years to meet demand pressures, ease pressure on hospitals and address ramping<sup>11</sup>. This will open up a range of new jobs in public health across South Australia.

There are around 30,000 South Australians receiving support through the National Disability Insurance Scheme and around 1 in 5 people report living with a disability<sup>12</sup>. Many South Australians will also need support to help them to age well, both those who need help to remain in their own home or for those who can no longer live at home.

These health and aged care supports and services are wide-ranging, and the organisations providing the supports and services will need suitably trained employees to meet the requirements.

There are a wide range of job roles across the health and aged care sector that provide rewarding career pathways for people who want to help improve the mental or physical health and wellbeing of others.

In demand health and aged care sector occupations that may be supported by a VET pathway include:

- Aged and Disabled Carers
- Enrolled Nurses
- Massage Therapists
- Support Workers



In-home care, Aldinga SA

<sup>9</sup> ABS <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-state-accounts/latest-release>; <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed/apr-2023>

<sup>10</sup> Department for Trade and Investment <https://www.dti.sa.gov.au/upload/sectors/health-medical-industries/HMI-Sector-Plan-2020-2030.pdf>

<sup>11</sup> Department of Treasury and Finance <https://www.statebudget.sa.gov.au/our-budget/Health>

<sup>12</sup> <https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release>





# IT and Cybersecurity

South Australia is experiencing substantial growth in its technology workforce – the second highest in the nation at 15% between 2021 and 2022. In 2021, the tech sector contributed \$6 billion to the South Australian economy and employed 33,000 people<sup>13 14</sup> and is home to a range of companies, ranging from new emerging innovative start-up companies to global tech companies, all seeking to grow and expand their workforce. The demand for technology and cyber capabilities is high across all industry sectors.

Strong industry growth has resulted in increasing demand for a skilled workforce and in response tech companies have been active in sourcing talent from a variety of education pathways. Traditional sources such as university graduates continue to meet a portion of skills demand with VET graduates, both entering their career journey or reskilling from an existing role, increasingly meeting industry needs for a variety of job roles. Also, there is almost no gap in pay for entry level jobs between VET and university educated positions<sup>15</sup> in this sector.

South Australia is also home to a range of global tech companies with many planning to significantly expand their workforce over the coming years in skilled areas such as software development, artificial intelligence, machine learning, cloud computing and data analytics. South Australia is growing future-focused industries requiring a skilled tech workforce that can develop, apply and support the diverse application of emerging technologies such as cloud computing, artificial intelligence, data analytics, automation, visualisation, cyber security, robotics and more to support this growth.

In-demand IT and cybersecurity sector occupations that may be supported by a VET pathway include:

- Computer Network Professionals
- Database and Systems Administrators, and ICT Security Specialists
- ICT Managers
- ICT Support Technicians
- Software and Applications Programmers



Department for Education, Adelaide SA

<sup>13</sup> <https://techcouncil.com.au/wp-content/uploads/2022/03/2022-Tech-Jobs-Opportunity-report.pdf>

<sup>14</sup> ACS Digital Pulse 2022 (Deloitte) <<https://www.acs.org.au/insightsandpublications/reports-publications/digital-pulse2022.html>>

<sup>15</sup> Tech Council of Australia <https://techcouncil.com.au/wp-content/uploads/2022/03/2022-Tech-Jobs-Opportunity-report.pdf>





# Manufacturing and Carbon Neutral Energy

This sector includes a broad range of businesses engaged in a wide variety of activities including food production, metal fabrication, energy production and electronic equipment.

The manufacturing industry sector is the largest contributor to annual economic output in South Australia, representing 17.7% of total output. South Australia is also a global leader in the transition towards clean energy. In 16 years, the State's electricity mix has gone from less than 1% renewables to over 70% renewable energy<sup>16</sup>.

The future of manufacturing is likely to involve a shift towards more high-tech, automated and sustainable manufacturing processes. This will involve the use of advanced technologies such as 3D printing, robotics and the Internet of Things (IoT) to improve efficiency, reduce costs and increase competitiveness.

Green industries are also increasing recycling and reprocessing infrastructure as a priority and South Australia is expanding our capacity to sort, process and remanufacture glass, plastic, tyres, paper and cardboard. Additionally, there will likely be a greater focus on developing and producing sustainable and environmentally friendly products, as well as on developing new and innovative products that can be exported to global markets<sup>17</sup>.

The carbon neutral energy sector employs those working on significant projects helping to transform the State's energy to meet our aspiration of net 100% renewable generation by 2030. South Australia has the world's first big battery (the Hornsdale Power Reserve), the largest per capita roll-out of home battery systems, 22 wind farms, 3 utility scale solar farms and an emerging hydrogen sector.

The development pipeline in South Australia includes around \$20 billion of investment across 25 solar farms<sup>18</sup>, 12 wind farms, 7 hybrid projects (combining wind and solar) and 10 battery storage projects. The Hydrogen Jobs Plan will see the construction of a world-leading hydrogen power station, electrolyser and storage facility within the Whyalla City Council by the end of 2025. The Plan will deliver significant benefits for South Australia, including new jobs for South Australians, enhanced grid security and helping to unlock a pipeline of renewable energy developments and associated manufacturing opportunities.

Rail electrification projects such as the Gawler Rail line provide clean and green high performance trains with better traveller experiences, better reliability and safety. Construction has also commenced on South Australia's first border-to-border network of electric vehicle<sup>19</sup> (EV) charging stations to enable easy driving and charging of electric vehicles – which will benefit our environment.

There is forecast demand for people with skills in engineering to trades, and project management, to health and safety. Many other specialist roles will also relate to equipment, technology and services to energy projects and infrastructure requirements and many of these roles will likely be regionally based.

In-demand manufacturing and carbon neutral energy sector occupations that may be supported by a VET pathway include:

- Cabinetmakers
- Electricians
- Engineering Production Systems Workers
- Forklift Drivers
- Metal Fitters and Machinists
- Plumbers
- Structural Steel and Welding Trades Workers
- Supply and Distribution Managers
- Truck Drivers

<sup>16</sup> <https://www.energymining.sa.gov.au/home/news/archive/articles/2022/sa-continues-its-world-leading-renewables-shift>

<sup>17</sup> <https://www.greenindustries.sa.gov.au/circular-economy-benefits>

<sup>18</sup> <https://www.energymining.sa.gov.au/industry/modern-energy>

<sup>19</sup> [https://www.dit.sa.gov.au/infrastructure/public\\_transport\\_projects/gawler\\_rail\\_electrification\\_project](https://www.dit.sa.gov.au/infrastructure/public_transport_projects/gawler_rail_electrification_project)



# Hospitality and Tourism

South Australia is a destination for great food and wine, year-round events and festivals, from headline sporting events to world-class art and music festivals, and unique regional and immersive visitor experiences.

Around 60,000 South Australians are employed in accommodation and food services, and many more in creative and performing arts activities, and travel agency and tour arrangement services.

While the sector was impacted by COVID-19, more South Australians are employed in the sector than last year, visitors to and within South Australia are spending more than pre-pandemic levels, an expansion of accommodation options with new luxury hotel developments is underway and visitor nights are forecasted to increase to 30.3 million by 2027.

Building on our strengths, the South Australian Tourism Commission's South Australian Visitor Economy Sector Plan 2030 aims to grow the visitor economy to \$12.8 billion by 2030 and create an additional 16,000 jobs across the state<sup>20</sup>.

The establishment of a Major Events Fund, an increase in interstate and international marketing efforts and measures to support existing events and festivals and live music through the recent State Budgets will help deliver on this ambition.

In demand hospitality and tourism occupations that may be supported by a VET pathway include:

- Bar attendants and Baristas
- Bakers and Pastrycooks
- Chefs
- Conference and Event Organisers
- Cooks
- Hotel Service Manager
- Tourism and Travel Advisers
- Waiters



Caledonian Hotel, North Adelaide SA

<sup>20</sup> South Australian Tourism Commission [https://tourism.sa.gov.au/media/txpncuwn/satc\\_tourism-plan-2030\\_final\\_aug2019.pdf](https://tourism.sa.gov.au/media/txpncuwn/satc_tourism-plan-2030_final_aug2019.pdf)



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