



Australian Government



Government
of South Australia

South Australian Defence Industry Workforce and Skills Action Plan

Building a skilled workforce to deliver
sovereign defence capabilities



South Australia will be central to delivering some of the largest and most complex defence industry projects ever undertaken in Australia – including our first conventionally-armed nuclear-powered submarines. These projects are critical to Australia’s national security. Taking a coordinated approach across Commonwealth and state governments, industry, unions, and education and training providers, this report presents a comprehensive plan to meet the challenge of delivering these projects.

Developing the defence industry workforce in South Australia requires an urgent, focused and coordinated effort. That’s why the Commonwealth and South Australian governments joined forces to form the South Australian Defence Industry Workforce and Skills Taskforce in September 2022. This action plan summarises what the Taskforce learned and its initiatives in response. The full report is available at defence.industry.sa.gov.au or defence.gov.au/business-industry/resources-support/industry-skills-support

Strategic position

Australia is facing its most challenging and complex set of strategic circumstances since the Second World War. Geostrategic competition, disruptions to global supply chains, and economic transformations highlight the critical importance of having a strong and stable defence industry that can meet our future strategic needs.

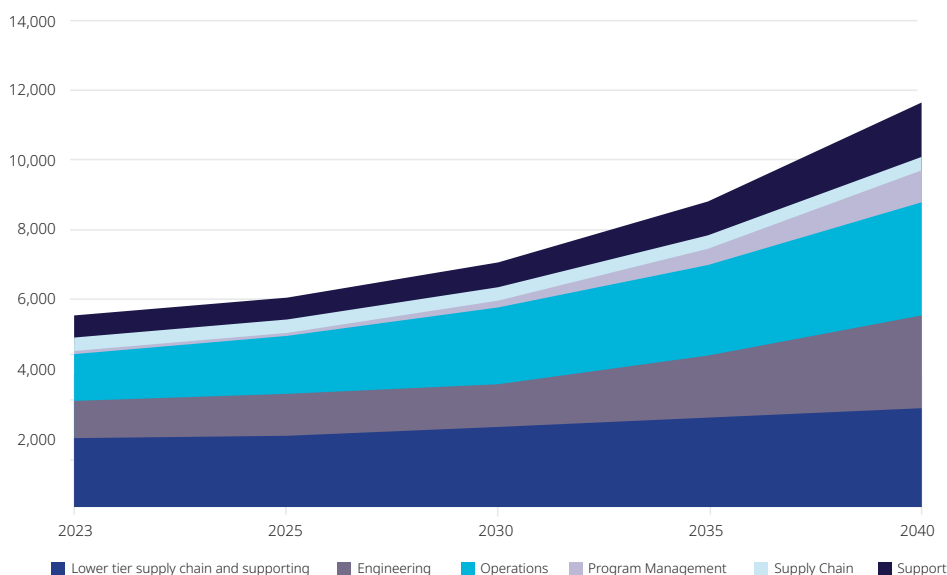
Workforce

The defence industry in South Australia is forecast to grow from its current level of around 3,500 direct jobs to more than 8,500 direct jobs in the 2040s. The predicted increase in jobs includes engineering, operations, program management, supply chain and support functions. In addition, South Australian Government analysis found around 2,000 jobs will be needed in lower tier supply chains and supporting activities, growing to 2,900 by 2040.

The national labour market is already short of workers in key areas, including those needed to deliver and support defence projects. We need to act now to be able to recruit enough people with the right skills in five years, 10 years and beyond.

South Australia is a focus because of its important role in delivering current and planned naval shipbuilding and sustainment programs. This includes Australia’s first nuclear-powered submarines (SSN-AUKUS) that will be built at Osborne Naval Shipyard – supporting the Commonwealth Government’s commitment to continuous shipbuilding.

South Australian Defence Industry Workforce Demand



Data Sources: Department of Defence and South Australian Department for Industry, Innovation and Science.



The challenge

By 2030, Australia will begin building its first nuclear-powered submarine, SSN-AUKUS, in South Australia. This presents a once-in-a-generation opportunity. SSN-AUKUS will be one of the world's most complex machines and building it will require new technologies, capabilities and skills. And from 2026, the existing fleet of Collins Class submarines will be upgraded to extend their life.

South Australia will be the manufacturing hub for building these ships and installing the cutting-edge technology they will carry. To succeed in delivering SSN-AUKUS, continuous naval shipbuilding and our other Defence projects, South Australia needs to grow the capacity and capability of its industrial base.

To find the right people for these opportunities in the long term, we need more students studying science, technology, engineering and mathematics (STEM) at school, and continuing the journey to become STEM-qualified graduates, tradespeople and professionals.

While the rate of workforce demand increases gradually, it takes time to build experience. This means we need to build the long-term workforce pipeline while meeting short-term demand – including through encouraging mid-career professionals to transfer into the defence industry.

Developing the action plan

The Taskforce recognised that we need a coordinated approach across all education and career stages, starting now.

Importantly, the Taskforce found that many pieces of the plan are already in place and need to be integrated and scaled up rather than reinvented. A major focus for the Taskforce was joining all these pieces together. The new initiatives in the action plan also connect with the existing pieces and with each other.

This includes coordinating the work of Australian Government departments and agencies, South Australian Government departments, the defence industry, unions, primary and secondary schools, vocational education and training (VET) providers, and universities.

The new initiatives in the action plan will be co-designed in line with the cooperative, integrated approach that will get us to where we need to be.

What's working

We're not starting from scratch. The Taskforce looked at everything governments, industry, education and training providers are doing and identified what's working and what we need more of. Examples are:

- ▶ the Employment White Paper – a roadmap for the future Australian labour market
- ▶ South Australia's Career Education and Pathways Strategy
- ▶ Fee-Free TAFE places targeting relevant areas of skills shortage
- ▶ South Australia's Flexible Industry Programs for secondary school students
- ▶ the Women in STEM Cadetships and Advanced Apprenticeships program
- ▶ TAFE SA's leadership of training delivery for naval shipbuilding and sustainment projects
- ▶ industry partnering with universities, VET providers and governments and actively increasing graduate intakes, delivering apprenticeship programs, providing internships and engaging with STEM programs across the education system to secure future talent.

South Australian Defence Industry Workforce and Skills Taskforce Workforce Action Plan – Initiatives Snapshot

Primary

Secondary

VET

Schools Pathways Program

Informs young Australians about the varied pathways and career opportunities within defence industry and encourages engagement in STEM. Facilitates an understanding of defence industry, provides access to defence industry career experiences, mentoring and networking opportunities, and encourages student participation in STEM activities and/or subjects.

- Up to 10,000 students and 1,000 teachers.
- \$2.6 million from 2023–24 to 2025–26.
- Commonwealth funded.

Skills and Training Academy

Establish a dedicated *Skills and Training Academy* (S&TA) using a range of training methods through new and existing facilities.

- Pilot programs from 2023, including skills for new roles.
- Facilities designed to support up to 800–1,000 students.
- Commonwealth funded.

Engineering is Elementary Program – leverage further

Educating teachers in schools through immersive STEM professional development via Questacon. The program will be reviewed and leveraged further to engage additional South Australian schools.

- 2024–27.
- Commonwealth funded.

Expand STEM scholarships for secondary students

STEM scholarships for more high school students in low-socioeconomic status groups to continue STEM subjects into their final years of high school (SACE Stage 1 and 2).

- Est. 50 scholarships per year from 2024.
- \$1.9 million.
- SA Government funded.

South Australia's technical colleges

New Technical Colleges at Findon, Tonsley and the Heights delivering defence industry and advanced manufacturing programs with industry partners.

- Approx. 200 students at each college each year.
- 150 defence aligned students each year.
- Est. \$125 million, SA Government funded.

Industry projects in schools – Beacon

Inspiring young people to pursue STEM – BAE Systems in partnership with Lumination engaging school students (years 4–8) using the latest technologies.

- 80 schools by 2026, targeting 12,000 students.
- \$1.93 million from 2024–26.
- SA Government funded.

Entry-level VET pathway for aircraft maintenance

New entry-level pathway via Certificate II Aeroskills for school students and job seekers – backed by key aerospace companies and the Department of Defence.

- 50 participants in year 1.
- Commencement in 2024 (initial one-year pilot) with opportunity to extend.
- \$450,000 per annum.
- SA Government funded.

School-aged career education resources (Little Ripples)

Resources for educators about the range of careers in advanced manufacturing and submarine building.

- 2024 onwards.
- Up to \$250,000.
- Commonwealth funded.

Expand Flexible Industry Programs

Expand Flexible Industry Programs in SA's secondary schools to enhance the accessibility of relevant industry-endorsed pathways to employment.

- 20 new schools @ 15–30 students per school per annum from 2024–25.
- \$1.5 million for two years.
- SA Government funded.

Defence Industry Pathways Program

New traineeship program delivering Certificate II and III in Defence Industry Pathways to fill critical roles such as logistics, engineering, drafting, design, safety, cyber security.

- 150 places over three years from Q3 2024.
- Commonwealth to fund \$6 million and SA Government to fund \$6 million.

Supporting Measures

Comprehensive Defence Industry Workforce Planning and Intelligence Service

Ongoing information intelligence to assess effectiveness of interventions in South Australia.

- Commonwealth funded.

STEM Evaluations Framework

Establish a consistent evaluation framework for STEM programs to better evaluate their impact.

- Commonwealth funded.

Undergraduate

Entry

Mid

STA) in South Australia to uplift the shipbuilding and nuclear-powered submarine workforce. The STA campus in South Australia will provide optimised spaces, systems and training materials.

nuclear environments; cross-skilling and apprenticeship-based learning from 2024; and facilities from 2027–28.

learners of all skill levels, per year from 2027–28.

Commonwealth Supported Places

800 additional university places for SA universities to deliver more graduates from STEM disciplines.

- 800 (200 each year).
- Jan 2024 through to 2028.
- Commonwealth funded.

Degree Apprenticeship Pilots

On-the-job, paid degree apprenticeships in partnership with universities, defence industry primes and supply chain businesses.

- 375 new apprenticeships over four years.
- \$2.5 million from 2024–28.
- Joint Commonwealth and SA Government funded.

Defence Industry Connection Program

Scholarships for eligible undergraduates and connecting students to defence industry internships, networks, and mentors.

- 300 places.
- \$3.9 million from 2024–28.
- SA Government funded.

Defence Force Recruiting - applicants to Industry Transition Program

Supporting Defence Force Recruiting candidates with an interest in Australian Defence Force service who do not meet the strict requirements to consider a career in defence industry.

- From Q1 2024.
- Commonwealth funded.

Australian Defence Force to Industry Transition Program

Active promotion of defence industry employment to transitioning Australian Defence Force personnel with relevant skill sets.

- Around 7,000 per annum transitioning from Australian Defence Force.
- Commonwealth funded.

Early Careers Program

Apprentices, undergrads and grads to access advanced technologies and training in designing, building, and maintaining submarines.

- 70 participants in 2023.
- Commonwealth funded.

Defence Industry Leadership Program

Tailored for mid-career defence industry supply chain members, delivered by industry.

- Up to 50 per annum.
- Re-commencing in 2024.
- SA Government to fund \$0.84 million over five years and industry to invest \$1.75 million.

International Placement Programs

Onboard, retain and upskill suitable workers with existing defence industry skills and experience through international placement programs. Developed under the broader AUKUS trilateral mobility program to grow necessary nuclear program experience for Australia's nuclear-powered submarine program.

- 70 pilot placements in 2023, up to 500 placements in 2027.
- Commonwealth funded.

Strategic Communications and Outreach Plan

Provide a coordinated approach to messages and communications across governments and industry.

- SA Government funded – \$1.35 million.

AGSVA industry engagement

A liaison support service to defence industry.

- Commonwealth funded.

What else we need to do

By looking at the whole picture, the Taskforce was able to see where the gaps are and identify opportunities to fill them.

Diversity

Building the skilled STEM-qualified workforce of the future requires drawing on all of Australia's diverse talent pool. In particular, this requires further work to increase the participation of girls and women in STEM education and careers. As well as bringing more women into defence industry, we need to increase the cultural diversity, neurodiversity and First Nations presence in the industry. These priorities run through all the initiatives in the plan.

STEM in primary schools

What we need: Greater support for teaching STEM. More inspiration for students.

Action plan initiatives:

- ▶ Engineering is Elementary – increasing teachers' STEM skills, knowledge and confidence.
- ▶ Beacon program – inspiring students through hands-on use of immersive technologies.
- ▶ Little Ripples – boosting students' awareness of careers in advanced manufacturing – a key sector for delivering Australia's future submarines.

STEM in secondary schools

What we need: More students engaged in STEM and greater awareness of STEM careers and pathways.

Action plan initiatives:

- ▶ Schools Pathways Program – boosting teachers' confidence in guiding students about STEM careers.

- ▶ Aeroskills Certificate II and Flexible Industry Programs (see VET pathways).
- ▶ STEM scholarships for secondary students – support for students from under-represented groups to study STEM subjects.
- ▶ South Australia's technical colleges – five new technical colleges offering industry-training programs for students in years 10, 11 and 12.

University pathways to defence industry

What we need: More university graduates in areas such as nuclear engineering and across program management, supply chain and support roles. More graduate research in areas such as cyber and computing, engineering, space and quantum physics.

Action plan initiatives:

- ▶ Commonwealth Supported Places – funded university places for targeted STEM disciplines.
- ▶ Defence Industry Connection Program scholarships – helping with the transition from study in defence-related courses to jobs in the defence industry.
- ▶ Degree apprenticeships – priority qualifications through defence industry apprenticeships.
- ▶ Skills and Training Academy – a purpose-built training facility that will deliver the skills and qualifications needed for naval shipbuilding and sustainment, and nuclear-powered submarines.

VET pathways to defence industry

What we need: More focus on hands-on opportunities and building networks with industry early.

Action plan initiatives:

- ▶ Aeroskills Certificate II – entry-level VET pathway for aircraft maintenance.
- ▶ Flexible Industry Programs – expanding pathways to jobs in ICT, cybersecurity, engineering, and electrotechnology.
- ▶ Defence Industry Pathways Program – VET pathways at the Certificate II and III levels into the defence industry at entry and mid-career levels.
- ▶ Skills and Training Academy – providing vocational training for naval shipbuilding and sustainment in readiness for nuclear-powered submarines.

Entry-level workforce

What we need: Coordinated and focused strategies to compete for entry-level talent.

Action plan initiatives:

- ▶ Skills and Training Academy – providing skills needed at the entry-level for naval shipbuilding and sustainment.
- ▶ Defence Force Recruiting to Industry Transition Program – encouraging people who are interested in the ADF, but do not take up an ADF role, to consider a career in the defence industry.
- ▶ Early Careers Program – hands-on training in the skills and technologies needed to build and maintain Australia's future submarine fleet.

Mid-career transitions to the defence industry

What we need: Fill the immediate skills gap and achieve short-term impact by supporting more mid-career workers to transition to the defence industry.

Action plan initiatives:

- ▶ Skills and Training Academy – delivering the skills and qualifications needed for a mid-career transition to naval shipbuilding and sustainment.
- ▶ ADF to Industry Transition Program – promoting defence industry employment opportunities to people transitioning from the ADF.
- ▶ Defence Industry Leadership Program – expanding numbers and increasing diversity in this well-established program.
- ▶ International placements – providing practical training and experience to upskill the naval shipbuilding and sustainment workforce, and transition workers to deliver nuclear-powered submarines.

Evidence base

What we need: Industry-wide, up-to-date evidence from employers about the labour market (supply) and the workforce and skills needed (demand). Consistent evaluation of STEM programs to ensure governments are funding the right programs and can adjust those not delivering their intended outcomes.

Action plan initiatives:

- ▶ Comprehensive Defence Industry Workforce Planning and Intelligence Service.
- ▶ STEM Evaluation Framework.

Communication

What we need: A comprehensive, long-term communication strategy to inform potential workers about how they can engage with defence industry opportunities.

Action plan initiative:

- ▶ Strategic Communications and Outreach Plan.

Skilled migration and security clearances

What we need: Streamline the intake of skilled migrants and those without security clearances into the defence industry.

Action plan initiatives:

- ▶ Australian Government Security Vetting Agency (AGSVA) industry engagement.
- ▶ The Commonwealth Government's Migration Strategy, to be released in late 2023, includes a focus on prioritising the people we need to enhance our economic prosperity and security.





Keeping the plan on track

To support ongoing coordination and implementation, the Department of Defence and the Department of State Development will lead a South Australian Defence Industry Workforce and Skills Group. The Group will play a role in ensuring initiatives are refined and adapted as we see what's working best, what can work better and how we can adapt and optimise.

How to get involved

We can't do this alone. The success of the initiatives relies on continuous collaboration between governments, industry, unions, and education and training providers to ensure we build the defence industry workforce of the future. Each initiative has different opportunities and timeframes to get involved in design, implementation and delivery.

To view the full report, learn more about the plans to prepare more South Australians for fulfilling defence industry careers, and to contribute to workforce attraction, development and retention efforts, visit defence.industry.sa.gov.au or www.defence.gov.au/sa-defence-industry-workforce-skills



defence.gov.au/about/reviews-inquiries/south-australian-defence-industry-workforce-skills-report



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