

South Australian Defence Industry Workforce and Skills Action Plan 2024 Update

Published November 2024



Australian Government



Government
of South Australia

Background

On 10 November 2023, the Hon Richard Marles MP – Deputy Prime Minister and Minister for Defence, and the Hon Peter Malinauskas MP – Premier of South Australia, released the South Australian Defence Industry Workforce and Skills Report and Action Plan.

This represents a coordinated approach to create, train and retain the highly skilled and experienced defence industry workforce needed to deliver some of the largest and most complex projects critical to Australia's national security.

It supports the overarching strategic framework driving the development and delivery of nation-wide defence programs including the *Defence Industry Development Strategy*, *National Defence Strategy* and *Integrated Investment Program*. This underpins growth, support and engagement with Australian defence industry, including the Sovereign Defence Industrial Priority of continuous naval shipbuilding and sustainment.

The Action Plan contains 22 initiatives, designed in partnership with industry to have immediate and sustained impact – catering to current workforce demand and projected future need.

The *South Australian Defence Industry Workforce and Skills Action Plan: 2024 Update* outlines how each funded initiative has progressed in the year since the plan's publication and highlights both early successes and the next areas of concerted efforts.

Since the plan's publication, further Australian defence industry capability and workforce development initiatives have been announced – including the future establishment of the Australian Defence Technologies Academy, aligned with the new Adelaide University and located in Adelaide's central innovation district Lot Fourteen.

In the past year, the South Australian Government has signed Memorandums of Understanding with key global defence primes. These agreements mark a commitment to working together to develop South Australia's defence industry workforce and skills.

The Action Plan outlined an initial co-investment of \$58 million from the South Australian and Australian Governments.

SA Defence Industry Workforce and Skills Group is now tracking the impact of more than \$300 million in support for defence industry-aligned workforce development initiatives, including \$208 million in South Australian Government funding to establish five Technical Colleges across metropolitan and regional South Australia and \$35 million in Australian Government funding for 1,030 AUKUS-aligned university places.

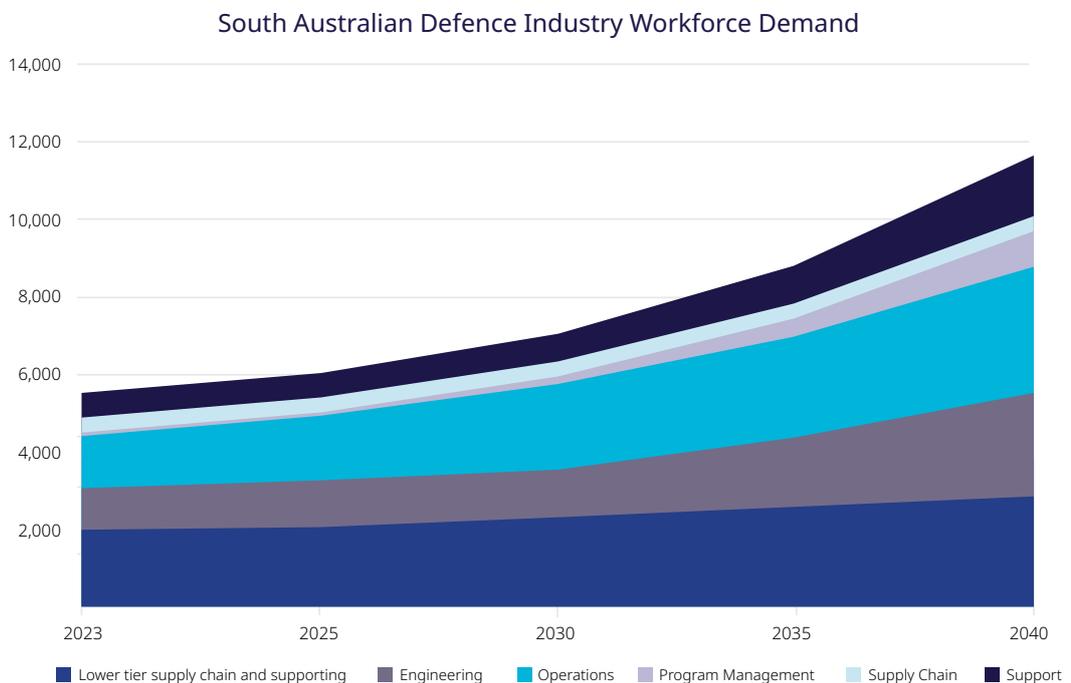
What's driving this investment?

This Australian Government and South Australian Government co-investment in defence industry workforce development is commensurate with the size of the challenge ahead: securing the skilled people required, in a time of global labour shortages, to fill the estimated 11,000 roles required by the South Australian defence industry by the 2040s.

Significant early investment, detailed in the SA Defence Industry Workforce and Skills Action Plan, is required to accelerate the workforce development efforts already underway and establish innovative new programs to make defence industry careers more attractive and accessible.

Engaging school students in STEM learning, positioning defence as an industry of choice for career seekers, establishing new models of education, and a commitment to retain and upskill South Australia's existing pool of talented defence industry workers are all time-critical activities.

The Action Plan offers a central coordination point from which government and partners can support the uplift of Australia's sovereign capability required to meet its objectives and commitments set out through Defence's Integrated Investment Program. Put simply: the work currently underway will help determine Australia's economic and security standing in the decades to come.



Data Sources: Department of Defence and South Australian Department of State Development.

Highlights

Since the Action Plan's launch in November 2023, over 80 per cent of the 22 workforce development initiatives have commenced. Development of the remainder is well underway, progressing in line with indicative launch dates.

Thanks to the aligned efforts of stakeholders across industry, unions, the education and training sector, and several State and Australian government agencies, key outcomes from year one include:

- **Engaging a diverse cohort of school students in the Science, Technology, Engineering and Maths (STEM) learning they'll need to pursue defence industry careers.**
 - **School Pathways Program** – almost 5,000 secondary students, 550 teachers, and 114 schools from across metropolitan and regional South Australia have participated in the School Pathways Program, learning about career opportunities within the defence industry and engaging in STEM activities.
 - **Engineering is Elementary** – 146 educators (113 in-person, 33 virtual) from 39 schools participated in the program, equipping participants with the knowledge and resources to teach engineering fundamentals to primary school students.
 - **School-aged career education resources (Little Ripples)** – E-books and supporting materials have been distributed to introduce the exciting world of STEM, published on the Department Employment and Workplace Relations' Your Career website: yourcareer.gov.au.
 - **STEM scholarships for secondary students** – 71 scholarships have been awarded to support First Nations students and students from low socio-economic status groups to continue STEM subjects into their final years of secondary school.
 - **Industry Projects in Schools – Beacon** – From Term 4, 2024 the program will expand to include 80 schools by 2026, with 12,000 students participating.



“The Beacon program has provided extensive opportunities for young people from diverse backgrounds to undertake hands-on STEM based learning, allowing them to develop their computational thinking skills such as problem solving, critical thinking and collaboration skills.

The program is creating a pipeline of young people who have an appreciation for STEM and the opportunities it can provide.”

Georgette Elston, Head, Resourcing and Early Careers, BAE Systems Australia

- **Creating attractive new education and employment pathways.**

- **Technical Colleges** – Five colleges will partner with industry to offer secondary school students specialisations in advanced manufacturing, engineering and multi-trades. Findon Technical College opened in January 2024, with over 230 students now on a direct pathway into a defence industry career. Another four technical colleges across metropolitan and regional South Australia are on track to open in 2025 and 2026.
- **Entry-level VET pathway for aircraft maintenance** – 25 students from 12 schools are now completing a Certificate II Aeroskills through this new entry-level pathway. The pathway has been included in the VET for school student courses from 2025 onwards.
- **Defence Industry Pathways** – Declared the Defence Industry Worker as a new vocation. This vocation is aligned to the Certificate III in Defence Industry Pathways Program, which will deliver direct traineeship opportunities in defence industry.
- **Commonwealth Supported Places** – Additional 1,030 Commonwealth Supported Places have been allocated to the University of Adelaide and Flinders University across four years. These universities delivered around 120 places in 2024 and will support more STEM commencements and eventually graduates in the years to come.
- **Defence Industry Connection Program** – Up to 300 students can make industry connections, participate in paid internships and gain work experience with defence primes and businesses in the defence supply chain. Delivered by the Australian Industry Group, the \$3.9 million program is now welcoming registrations from eligible university students and interested employers.

“The Connection program will be instrumental in shaping the future workforce of the South Australian defence industry.

Companies will be able to use the program for talent acquisition with the intention that students will gain employment in the defence industry after their internship.

The program provides a valuable opportunity for students to experience the defence industry and gain hands-on experience while continuing to study towards their degrees.”

Estha van der Linden, South Australia State Head, Australian Industry Group



- **Degree Apprenticeships Pilots** – An Australian first, the establishment of degree apprenticeships allows South Australian students to combine university study with paid defence industry work (an apprenticeship). The first cohort of 13 students have commenced the Software Engineering Degree Apprenticeship with the University of South Australia, BAE, ASC and Consunet. Flinders University launched the second Degree Apprenticeship for Mechanical Engineering in September 2024, with students commencing in 2025.
- **Expand Flexible Industry Programs** – 20 schools have been engaged in the expanded FIP relevant to defence industries. Training is on track to commence from 2025.

“We look forward to working with government and industry to ensure South Australians can take advantage of the exciting opportunities within the local shipbuilding sector, including AUKUS.

This announcement builds on the positive work already being done by ASC in collaboration with industry such as the Degree Apprenticeships, Trade Apprenticeships, increased STEM awareness in schools and our partnerships in the Technical Colleges.

We are proud of the initial milestones, and we remain positive on the future of these initiatives in supporting ASC’s capability development for AUKUS.”

Paul McPherson, Workforce Training Partnerships Manager, ASC



- **Upskilling existing defence industry workers to become future leaders and employment enablers.**

- **Early Careers** – The 2023 apprentices and graduates continue to progress through the Early Careers program. Apprentices are in their second year of the apprenticeship program, graduates are still within rotation and undergraduates have completed their placements.
- **Defence Industry Leadership Program** – 40 mid-career defence industry workers completed this industry-aligned leadership training in 2024, delivered by Defence Teaming Centre. 35 per cent of this cohort were women, with targets to grow both the number and diversity of participants in future years.
- **International Placement Program** – A number of short-term placements occurred over 2023 and 2024 aimed at formulating knowledge transfer, while stress testing the mobilisation process and informing future support systems. The next cohort of long-term placements is expected to commence in 2024 and 2025 in support of upskilling the Australian industry workforce to deliver the nuclear-powered submarine program.
- **AGSVA Industry Engagement Program** – a record number of 82,331 clearances completed nationally in 2023-24. This was an increase of over 29 percent or 18,600 compared to financial year 2022-23.



Initiative in action: Engineering is Elementary

Questacon's Engineering is Elementary program is a free professional development opportunity designed to enhance teachers' skills in delivering STEM education.

Chloe Heffernan, a STEM coordinator from South Australia's Flaxmill School P-6, utilises Questacon's Engineering is Elementary program in her classroom and recognises the importance of introducing kids to Science, Technology, Engineering, and Maths (STEM) early.

"Primary school kids are the key. If you don't engage them early in STEM thinking, by high school it's too late," Heffernan said.

"The program makes such a difference. It builds a positive STEM identity for our kids. It's not even a 'lightbulb' moment for them, it's like their brains are exploding!

"It's so much more than just learning the concepts; a key benefit is the growth mindset. If students haven't been exposed to STEM or engineering, they think there's just one right answer to a question. By adding the real-world context though, they suddenly understand that they're trying to actually fix things and make a difference."

Questacon delivers the Engineering is Elementary program nationally, supported by the Australian Department of Defence.

The program is recognised in the *SA Defence Industry Workforce and Skills Action Plan* for its impact, engaging South Australian primary school students in STEM learning and shaping their early career aspirations.

Initiative in action: Findon Technical College

The South Australian Government is establishing five Technical Colleges across regional and metropolitan South Australia. Once open, all colleges will contribute to the state's defence workforce, offering high school students specialisations in advanced manufacturing and engineering or multi-trades.

Findon Technical College was the first to open in 2024, with defence and manufacturing industry partners including BAE Systems Australia, Liebherr, and Axiom Precision Manufacturing helping to shape the curriculum and provide students with real industry insights and work experience.

Year 11 student, Rory was amongst a cohort of students who completed work experience at Osborne Naval Shipyard with BAE Systems Australia. He was able to see the Hunter Class frigate project and said it opened his eyes to the defence industry careers available locally.

"It gives you a pretty big insight into what they've got to offer," Rory said.

"It's really handy that we have the best tools that are up to industry standard, and we get to work with them and be ready for the workforce."

"Being able to go into a career in fabrication, that's really my main goal, and having this opportunity is a really good way to do it."



What's next

Several of the Action Plan's workforce development initiatives are scheduled to go live, or offer another round in 2025. Highlights include:

- **Mechanical Engineering Degree Apprenticeship** offered at Flinders University.
- **Software Engineering Degree Apprenticeship** offered at the University of South Australia.
- **Defence Industry Pathways Program** will be established in South Australia, with entry-level trainees embarking on a Certificate III qualification with TAFE SA and defence industry placements.
- **Shipbuilding Employment Pathways** will be available for apprentices in the engineering and electrical streams with Certificate III qualifications.
- **Port Augusta Technical College** will open, with the remaining colleges (The Heights, Tonsley, and Mt Gambier) to welcome students from 2026.
- **Entry-level Aeroskills for Jobseekers** will target 25 participants who will undertake the Certificate II in Aeroskills to help build their skills to transition to Certificate IV trade skill courses in the aviation sector.
- The **Defence Industry Workforce Planning and Intelligence Service** in partnership with the Department of Defence and the University of Adelaide will continue to evolve, and generate industrial workforce intelligence that Defence, its defence industry partners, state and territory governments, unions and academia can use to inform targeted co-designed workforce supply solutions.
- Design for the **Skills and Training Academy** will continue. Tailored education, training and skilling pilot initiatives for the submarine and naval shipbuilding workforce are being scoped for early activation.





Initiative in action: Degree Apprenticeships

In 2024, the University of South Australia was the nation's first higher education provider to pilot a hybrid Degree Apprenticeship program, inviting a cohort of software engineering students to combine their studies with paid industry placements.

Participant Daniel Tweedale is a mature-aged student and BAE Systems Australia apprentice. As someone who learns more effectively through hands-on experience, Daniel says the blend of apprenticeship and academic studies “not only allows me to succeed, but to thrive”.

“The opportunity to apply classroom theory directly into real world scenarios is a very effective way to learn,” he said.

“In the workplace, we engage with real projects and benefit from mentorship by experienced software engineers.”

“The work-study model of the program has been life changing for me, enabling me to pursue a degree while maintaining a healthy work-life balance—something I deeply value as a father. It allows me to earn a stable income without the added burden of tuition fees and paves the way for a promising career ahead.”

Through the *SA Defence Industry Workforce and Skills Action Plan*, the Australian and South Australian Governments are supporting the establishment of Degree Apprenticeship programs that prepare students for roles within the state's fast-growing defence industry.

While this program is nation-leading, the model has already proven successful in the United Kingdom—transforming career seekers into highly skilled, work-ready graduates.

Initiative in action: Defence Industry Leadership Program

The Defence Teaming Centre's (DTC) Defence Industry Leadership Program has played a pivotal role in nurturing the growth of more than 300 defence industry leaders since its establishment in 2010.

The nine-month program is designed in collaboration with the defence industry to develop the leadership capabilities of emerging leaders and mid-career defence industry workers.

In 2023, Strategy Analyst at Nova Systems, Sarah Tellis enrolled in the program to enhance her industry knowledge and expand her network. She also wanted to develop her own leadership and management style and bring out the best in those she leads.

"Having more self-awareness has made me more confident in my leadership role," Sarah said.

"It has improved my ability to give feedback effectively and advocate for my team, even when engaging with colleagues who may hold more senior positions.

"The skills and insights I gained from the program have been invaluable. It's not just about learning the technical skills to enable you to become a strong leader but also about understanding the broader strategic context and how to navigate complex challenges in the constantly evolving internal and external environment the industry is facing every day."

Through the *SA Defence Industry Workforce and Skills Action Plan*, the South Australian Government is supporting the program's expansion to up to 50 places available each year —prioritising participants from currently under-represented cohorts to support greater diversity within the nation's future defence industry leadership.

"Being able to go into a career in fabrication, that's really my main goal, and having this opportunity is a really good way to do it."



South Australian Defence Industry Workforce and Skills Taskforce

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 (STA)* campus in South Australia to provide optimised and contextualised training to support the nuclear-powered submarine and shipbuilding workforce.

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.

- 2023–27.
- 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, the Heights, Mount Gambier, and Port Augusta delivering advanced manufacturing, engineering and multi-trades programs with industry partners.

- Approx. 200 students at each college each year.
- 150 defence aligned students each year.
- \$208 million, SA Government.

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 pilot.
- 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 III in Defence Industry Pathways to fill critical roles such as logistics, engineering, drafting, design, safety and cyber security.

- 150 places over three years from 2025.
- Commonwealth and SA Government funded.

Supporting Measures

Comprehensive Defence Industry Workforce Planning and Intelligence Service

Ongoing information intelligence to inform workforce risks and intervention focus areas in South Australia and across Australia.

- Commonwealth funded up to \$8 million.

STEM Evaluations Framework

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

- Commonwealth funded.

Undergraduate

Entry

Mid

- Pilot program from 2023 launched by the Commonwealth to support early workforce growth ahead of campus completion, including: skills for nuclear environments, cross-skilling, and traineeship and apprentice initiatives.
- Campus facilities anticipated from 2027-28 to support 800-1,000 learners of all skill levels.
- Commonwealth funded.

Commonwealth Supported Places

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

- 1,030 places.
- 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.

- Intake of up to 74 apprentices, graduates and undergraduates, over a four year period ending in December 2026.
- Commonwealth funded.

Defence Industry Leadership Program

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

- Up to 50 per annum.
- Recommended 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 returned in 2024. Up to 500 placements expected by 2027.
- Next cohort of 'long-term' placements is expected to commence in early 2025.
- Commonwealth funded.

Strategic Communications and Outreach Plan

Engagement with defence industry, federal and state government departments, and academia has informed the development of the Strategic Communications and Outreach Plan. Defence industry attraction narrative is used in market by stakeholders in their own content.

- SA Government funded – \$1.35 million.

AGSVA industry engagement

Establish Customer Outreach Team and hold outreach meetings with defence industry. Continue to provide enhanced awareness of clearance requirements, resulting in improved clearance timeframes.

- Commonwealth funded.

Get involved

Developing a pipeline of skilled defence industry workers in South Australia will take sustained and collaborative effort.

The SA Defence Industry Workforce and Skills Group commends the proactivity and foresight of the employers who have partnered with government on the implementation of the Action Plan's initiatives—investing time and resources now to build the workforce of the future.

Engagement with industry, education and training providers, workers, unions, and communities was instrumental to the development and implementation of the Action Plan, and continued partnerships will prove critical to its success.

To participate in any of the 22 workforce development initiatives—for instance, as a student, host organisation, or delivery partner—contact us at:

Email: defenceindustryworkforce@sa.gov.au

Website: statedevelopment.sa.gov.au/defence-industry



Published November 2024.

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