Australian Government

Government of South Australia

South Australian Defence Industry Workforce and Skills Report

Building a skilled workforce to deliver sovereign defence capabilities

We acknowledge the Traditional Custodians of Country throughout Australia. We recognise their continuing connection to traditional lands and waters and would like to pay respect to their Elders both past and present.

We would also like to pay respect to the Aboriginal and Torres Strait Islander people who have contributed to the defence of Australia in times of peace and war.

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Foreword

by the Hon Richard Marles MP, Deputy Prime Minister of Australia

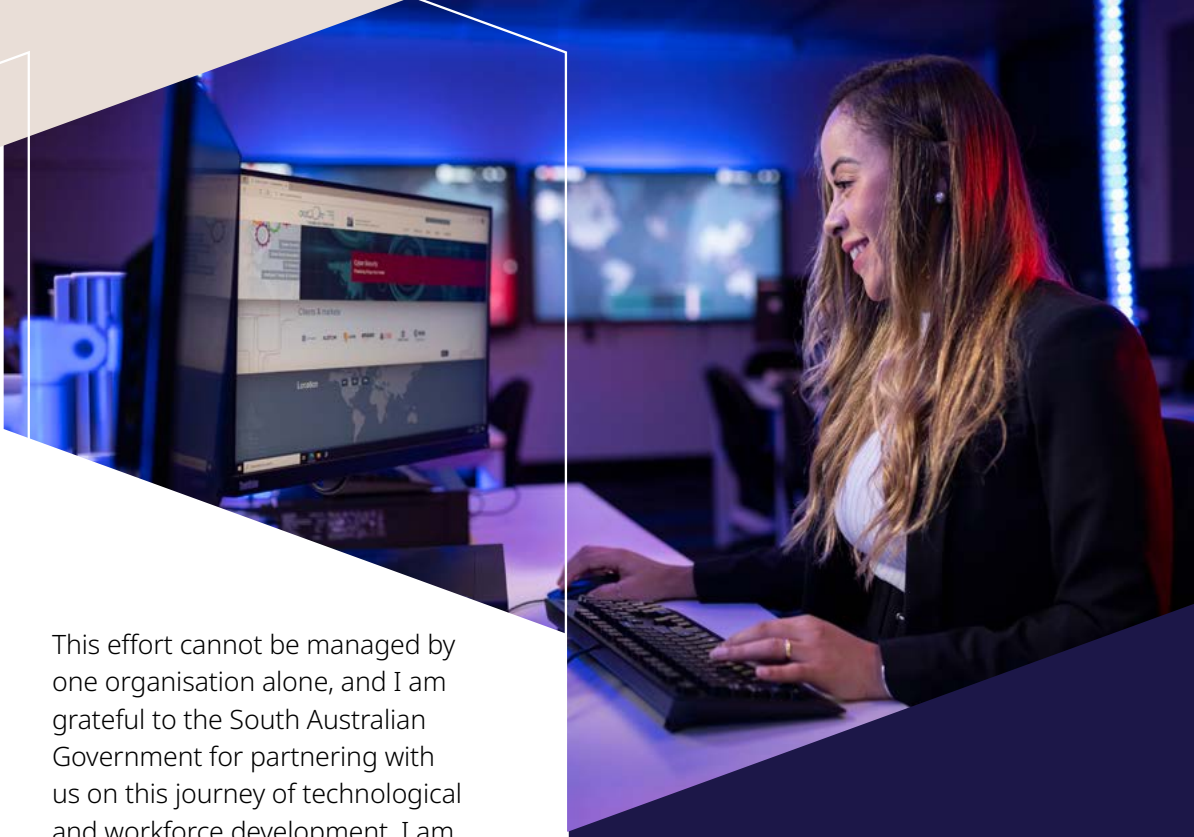
The establishment of a sovereign nuclear-powered submarine capability in Australia is the single greatest upgrade to Australia's defence capability in our history.

To power this leap, we must immediately begin building the skilled workforce who will create and sustain this capability and existing defence capabilities.

The South Australian Defence Industry Workforce and Skills Report is the result of a cohesive collaboration between the Commonwealth and South Australian governments, in consultation with defence industry, unions and education providers who will build the skills of this workforce.

This report helps to identify what is working, where we can develop, and where significant investment is needed to shape the capacity vital to building our maritime capability.

This is a once-in-a-generation opportunity that will change the face of Australian industry and Defence capability. Growing the workforce we need requires investment in the skills and job opportunities in our shipbuilding heartland of South Australia.



This effort cannot be managed by one organisation alone, and I am grateful to the South Australian Government for partnering with us on this journey of technological and workforce development. I am also grateful for industry, education providers, unions and countless others who have worked alongside us to ensure this Report reflects their experience and needs.

We expect to need an additional 5,000 defence industry workers in South Australia by the 2040s. To reach this figure in a competitive labour market we must deploy a range of programs to attract, train and retain workers.

The plan looks to a range of opportunities to grow an inclusive and skilled workforce, from university graduates through to those looking to switch careers, including women, First Nations people and Australian Defence Force veterans.

TAFE, which has long been a powerhouse of tertiary education and helping Australians to reskill, will be the heart of the vocational education and training needed for defence industry jobs, continuous naval shipbuilding and sovereign sustainment, including for nuclear-powered submarines.

We will achieve this through the National Skills Agreement, which will deliver on National Cabinet's vision of improving education and training across the country.

The training offered by TAFE will be complemented by the university sector, to furnish graduates with the skills required for niche areas including nuclear propulsion, through to the array of professions in the broader defence industry.

Across the tertiary sector, industry and unions will be primary partners in helping to attract, train and retain workers.

Through this plan we will grow a workforce that builds skills, by providing mentoring and tailored training, supporting education places, developing the skills of the hardworking teachers who will deliver STEM subjects, and creating competitive job conditions for workers.

It is a plan to create, train and retain the right people with the right skills in South Australia, as we deliver one of our nation's greatest industrial undertakings.

Foreword

by the Hon Peter Malinauskas MP, Premier of South Australia

For over eight decades South Australia has proudly lived up to its reputation as the Defence State.

From shipbuilding, weapons testing and missile launch research to our current expertise in high-tech, advanced cyber, AI and machine learning, South Australia's defence industry has been at the very cutting edge of technological advancement.

We are the nation's leading shipbuilder and are preparing for the construction of our AUKUS fleet of conventionally-armed, nuclear-powered submarines – the most complex machines ever built.

Now Adelaide is a major defence hub, in conventional industries and at the cutting edge of high technology at our hubs at Lot Fourteen, Tonsley Innovation District, Technology Park, and the Edinburgh Defence Precinct.

We take great pride in our leadership in the sector. But the global geopolitical landscape demands that we do more than simply maintain our well-earned reputation as a world-leading hub of defence industry innovation and leadership.

It requires us to increase our capacity and our knowledge base, and to commit to delivering the capability Australia needs if it is to secure its national interests into the future.

Generating the skilled workforce is one of the most critical aspects of the industrial base. And we recognise the importance and the urgency of the task.

That is why work to prepare the industrial base to support defence industry capability has already commenced in earnest in South Australia.

The South Australian Defence Industry Workforce and Skills Taskforce has enabled the South Australian and Commonwealth governments to work alongside industry, education and training providers and unions to deliver an integrated plan to develop a capable and productive workforce to support the delivery of the nation's most complex and demanding defence projects.

The plan responds to the need for more young people engaging with science, technology, engineering and maths. We need more STEM-qualified graduates, and we need to attract and retain a more diverse workforce, including women.

This is especially important in a tight labour market with strong competition from other sectors.

The plan will complement the State Government's existing investment in building a defence industry workforce through technical colleges, higher education defence scholarships, subsidised apprenticeships, traineeships and short courses, and tailored pathways for school students, with TAFE SA at the centre of the vocational education and training for the defence industry.

And not a moment too soon, for the numbers reveal the urgency of the task before us.

4,000 to 5,500 direct jobs are expected to be created to build nuclear-powered submarines in South Australia when the program reaches its peak – almost double the workforce forecast for the Attack Class program.

Current and planned naval shipbuilding and sustainment programs and other defence industry projects will drive demand for engineering and operations skill sets from 2025 out to 2040, predominantly in trade and technician roles.

A strong, globally competitive higher education sector in South Australia will generate graduates with the requisite skills to enter secure, well-paid employment in the defence industry.

Perhaps most important of all, the plan is deliberate in identifying and overcoming barriers to participation and promoting the career opportunities to under-represented cohorts across all job roles, including in leadership.

I am confident about the role South Australia will play in supporting the achievement of our nation's responsibilities under the trilateral security partnership between Australia, the United Kingdom and the United States (AUKUS).

And by delivering the workforce of the future, the Defence State will continue to do its duty to the people of our nation, and to the region.

Executive summary

Defence projects that are planned and already underway are critical to Australia's national security. South Australia will be central to delivering some of the largest and most complex defence projects ever undertaken in Australia, including building Australian conventionally-armed, nuclear-powered submarines. Ensuring South Australia has enough skilled people to deliver these projects requires a coordinated approach across government, industry, unions, and education and training providers.

Over the past year, the South Australian Defence Industry Workforce and Skills Taskforce – a joint Commonwealth and South Australian taskforce – has worked together and with stakeholders to develop initiatives to support South Australia's future defence industry workforce needs. This Report reflects what we have learned from that work. The initiatives outlined in the Report generate both near-term and sustained longer-term impacts to address workforce demands, while building on work already underway.

The initiatives respond to feedback from industry, unions, higher education, and vocational education and training (VET) stakeholders and are distributed across the learning journey, from primary and secondary school to university,

VET, entry level and mid-career. Across all initiatives, a key consideration was increasing access to defence industry careers for women, First Nations people and other under-represented cohorts in all job roles, including leadership.

The Taskforce recognises that as employers, businesses in the defence industry are responsible for attracting skilled workers, providing meaningful career pathways, retaining workers over the long term and ensuring security and safety requirements are met. At the same time, the large scale of workforce uplift needed requires a coordinated approach and a new partnership between government, industry, unions and the education and training sectors.

Sustaining workforce growth will require ongoing engagement with all stakeholders to monitor the implementation and impact of initiatives. The Commonwealth and South Australian governments will work in partnership with all stakeholders to refine and adapt these initiatives, as well as to develop new ones over time, to make sure we can deliver the workforce needed for defence capability outcomes.

Strategic context

Australia is facing the 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 a strong and stable defence industry that can meet Australia's future strategic needs.

This will be a national endeavour. The Commonwealth and the states and territories need to work together and with industry, unions and the education and training sectors to build our nation's sovereign defence capability to secure a strong and prosperous future for all Australians.

Securing Australia's national interests requires a regionally competitive maritime capability, including naval ships, Collins Class submarines and the forthcoming conventionally-armed, nuclear-powered submarines. This will require a whole-of-nation effort, with South Australia playing a central role. By the end of this decade, Australia will begin building its first SSN-AUKUS nuclear-powered submarine in Adelaide.

SSN-AUKUS is unlike anything Australia has ever built. It will be one of the world's most complex machines and building it will require new technologies, capabilities and skills. South Australia will be the manufacturing hub for this cutting-edge technology and the construction of a new capability. To succeed in delivering SSN-AUKUS, continuous naval shipbuilding and sustainment, and our other defence projects, South Australia will need to grow the capacity and capability of the industrial base.

This presents a once-in-a-generation opportunity for our nation and for South Australia. A comprehensive and integrated approach is required to upskill and retain our existing workforce while growing the pipeline across the learning journey – from primary school through to mid-career transitions. We need more students studying science, technology, engineering and mathematics (STEM) in primary and secondary school, and for them to continue the journey to become STEM-qualified graduates, tradespeople and professionals. We need increased employment opportunities for women, First Nations people, other under-represented cohorts, and security-cleared skilled migrants. Those wanting a career change should be encouraged to embrace the unique opportunities offered by a defence industry career in South Australia.

Building a skilled workforce and an enduring pipeline will not be easy – competition for labour is high and workforce shortages already exist. The 2023 Intergenerational Report and the 2023 Employment White Paper highlight that Australia's labour force participation rate will decline as our population ages. Responsive, effective education and training systems, forward-looking skills-based policy, and well-targeted migration are needed to position Australia to adapt to future labour and structural changes.

Building on action already being taken, new initiatives are needed to train and retain suitably qualified and experienced personnel. Our efforts now will help to deliver a defence industry workforce that supports not just naval shipbuilding but programs across all defence domains – contributing to Australia's sovereign defence capabilities.

The Taskforce

Developing the defence industry workforce requires an urgent, focused and coordinated effort. This is why a joint Commonwealth and state taskforce, the South Australian Defence Industry Workforce and Skills Taskforce (the Taskforce), was announced on 2 September 2022, following the 2022 Jobs and Skills Summit, by the Deputy Prime Minister, the Hon Richard Marles MP; the Minister for Defence Industry, the Hon Pat Conroy MP; and the Premier of South Australia, the Hon Peter Malinauskas MP.

In consultation with key stakeholders from government, unions, universities, training providers, business and industry, the Taskforce focused on six areas across the short, medium and long term to identify workforce issues and challenges. Each stream undertook 'sprints' to build on existing work to unpack a particular issue and identify recommendations to address that issue. The six areas are:

- The skills and knowledge pipeline between industry and the education system – to optimise and accelerate the transition from education into well-paid, secure and productive employment.
- Career awareness, attraction and retention – to increase and retain the pool of people interested in, and available for, defence industry careers.
- VET, higher education pathways and recognition of prior learning – to optimise and accelerate the acquisition and maintenance of the skills necessary throughout a career.

- Productivity – to identify opportunities to lift productivity, eliminate waste and adjust risk appetites to release skilled workers to other priority tasks.
- Diversity and inclusion – to expand the defence industry workforce by identifying participation barriers and providing opportunities for women and under-represented employee cohorts across all job roles, including leadership.
- Coordination – to maximise the impact and efficiency of the efforts over the enterprise, including existing policies across government designed to meet future workforce needs.

Over the last 12 months, the Taskforce has engaged directly with industry primes; small and medium enterprises (SMEs); union representatives; and the education sector including universities, schools, TAFEs and registered training organisations.

Defence industry workforce demand

The Department of Defence (Defence) has examined the workforce demand profile for the South Australian defence industry. Initial analysis based on current Defence programs shows that the South Australian defence industry workforce is predicted to grow from its current level of around 3,500 direct jobs to more than 8,500 direct jobs in the 2040s. Naval shipbuilding and sustainment are key drivers of defence workforce demand – building nuclear-powered submarines is forecast to create 4,000 to 5,500 direct jobs in South Australia when the program reaches its peak in 20 to 30 years.

In addition to the direct jobs, analysis from the South Australian Government has found that around 2,000 jobs will be required from as early as 2023 in lower tier supply chains and supporting activities, with forecast growth to around 2,900 by 2040. This includes businesses that provide parts, consumables and services, as well as associated research and technology activities.

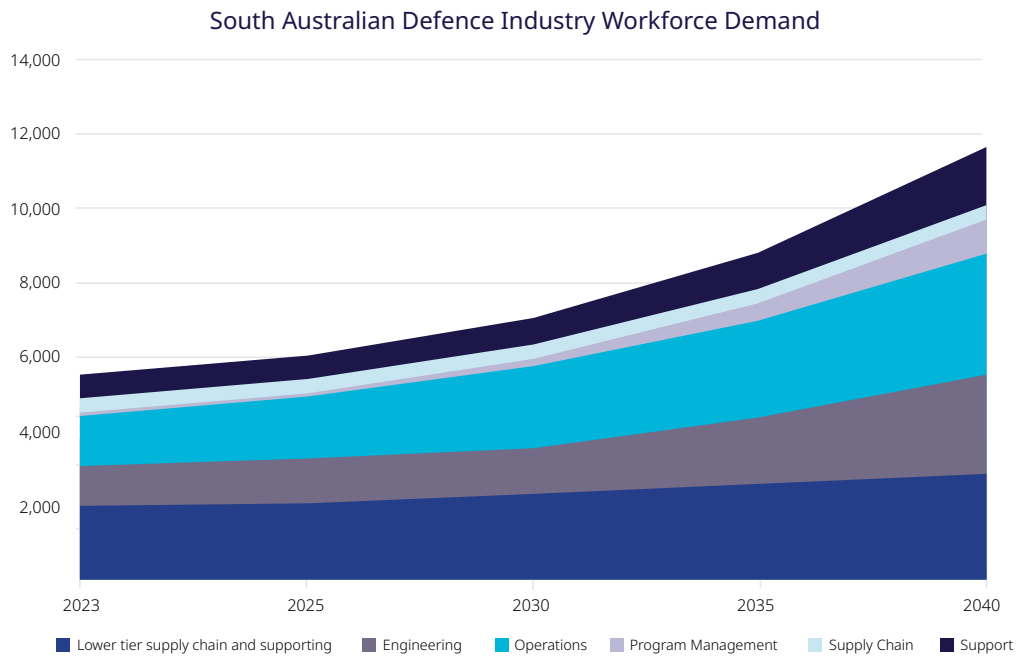


Figure 1 – Estimated South Australian workforce demand 2023 to 2040

Figure 1 reveals two key findings: demand for engineering and operations skill sets will experience steady growth from 2025; and there will be a significant and enduring need for skills within the operations job family, predominantly in trade and technician roles.

In addition to the jobs shown above, up to an additional 4,000 workers will be employed to design and build infrastructure for the Submarine Construction Yard at Osborne, where Defence will start building Australia's nuclear-powered submarines by the end of this decade.

Enduring need for skills

While the rate of workforce demand will increase over the next 20 to 30 years, it will take time to build experience and skills needed to meet Defence's demand. Importantly, this demand for skilled workers will increase not only in the defence industry but also across the broader Australian economy and industry.

Building SSN-AUKUS will be the leading contributor to the workforce growth of the defence industry in South Australia.

The most significant growth will be in: engineering, operations, program management, supply chain, and support.

- Engineering skills will include nuclear engineering, mechanical engineering, engineering management, engineering assurance, electrical engineering, combat systems engineering and safety engineering.
- Skills for operations will include fabrication operations, mechanical operations, electrical operations, operators, purchasing and subcontracts, piping operations, nuclear operations; and inventory, warehouse and logistics.
- Project management will include finance, corporate executive, and project management skills.
- Supply chain will include project cost and scheduling, and commercial skills.
- Support skills will include security, information technology, administration and human resources.

In addition, all personnel required to deliver nuclear-powered submarines will, at a minimum, require nuclear mindset training and security certification.

The path forward

South Australia has an existing highly skilled and experienced defence industry workforce, which continues to grow. Yet to meet the predicted future workforce growth, we need a comprehensive approach across the learning journey to ensure we have the skilled personnel needed in the short, medium and long term.

Education in primary and secondary schools needs to further inspire students and educate teachers about the importance and opportunities in STEM to grow the pipeline from an early age. Traineeships in the VET system need to be fit for purpose for future defence industry needs. The number of higher education places in STEM disciplines relevant to future requirements must grow; so too must the connection between higher education and the defence industry through internships, networks and mentoring. Direct entry programs must attract the right people to the right jobs, including leveraging the benefits of Defence Force Recruiting. Finally, mid-career professionals should be supported to transition, upskill and/or be promoted into roles needed in the defence industry.

Along the learning journey, fostering and promoting diversity is crucial to addressing workforce shortage issues. Currently young women make up 47% of Year 12 student enrolments in all STEM fields, but only 24% in physics and

23% in engineering and related technologies[1] – subjects in high demand to build the future of the defence industry workforce. At university the story is similar – women make up 37% of enrolments across all STEM subjects, but only 19% in engineering and related technologies[2]. At the VET level, women account for 11% in engineering and related technologies[3]; this includes women in relevant trades and technician roles.

These statistics demonstrate that increasing diversity across the spectrum will be critical to building the pipeline of skilled workers. The benefits are clear: increased diversity enhances recruitment, development and retention of a talented and motivated employee pool. It also improves innovation, productivity, problem-solving and decision-making. A diverse workforce possesses a broader range of skills and attributes, maximises Australia's potential in STEM fields, and enables organisations to adapt to evolving demands and overcome challenges more effectively.

What are we already doing?

There is substantial work underway across government, the defence industry and education systems to ensure we have skilled workers when we need them.

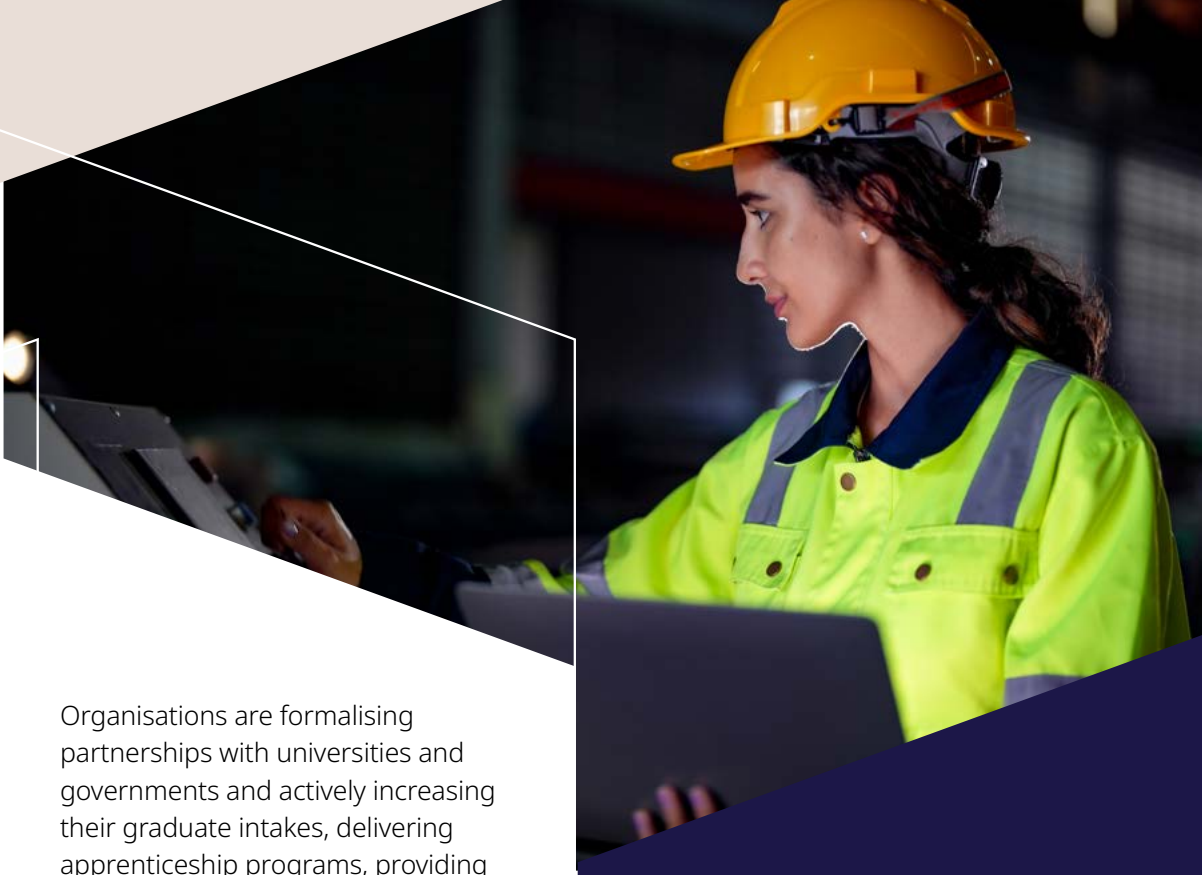
The Australian Government's Employment White Paper, released in September 2023, provides a roadmap for the policy directions the Government will take to position the Australian labour market for the future. The Australian Government is also reviewing how to boost access and a sense of belonging in STEM education, careers and industries, with the Pathway to Diversity in STEM Review providing recommendations to government in late 2023.

Industry is continuing to take concerted action to develop and retain the current workforce and attract new workers. This includes marketing campaigns, enhancing the employee value proposition, investing in reskilling and internal mobility programs, and engaging with schools to grow the pipeline and inspire the next generation to pursue STEM studies and careers in defence and technology.

1 https://www.industry.gov.au/publications/stem-equity-monitor/primary-and-secondary-school-data/year-12-subject-enrolment-stem-and-other-fields

2 https://www.industry.gov.au/publications/stem-equity-monitor/higher-education-data/university-enrolment-and-completion-stem-and-other-fields

3 https://www.industry.gov.au/publications/stem-equity-monitor/higher-education-data/vocational-education-and-training-enrolment-and-completion-stem-and-other-fields



Organisations are formalising partnerships with universities and governments and actively increasing their graduate intakes, delivering apprenticeship programs, providing internships and engaging in a range of STEM programs across the education system to secure future talent. Commonwealth and state governments have engaged with AUKUS trilateral partners to ensure their learnings in relation to building and training a shipbuilding workforce have been considered in the development of this Report.

Industry has also been active in developing tailored training programs and micro-credentials, delivering specialist skills to its workforces, sharing international learnings and embedding workers in overseas projects to transfer and deploy new knowledge and skills for projects in South Australia.

Proposed initiatives

The initiatives outlined in this Report are balanced across the learning and employment life cycle to meet short-term workforce requirements, while increasing the pipeline of potential defence industry workforce over the long term. Some initiatives leverage and expand existing programs, while others will be completely new to address gaps identified by the Taskforce. New initiatives will commence from 2024, with others to follow.

Each initiative was developed consistently with guiding principles and a focus on overcoming barriers to participation and providing opportunities for under-represented employee cohorts across all job roles, including in leadership. The guiding diversity and inclusion principles used to develop the initiatives are at Appendix A.

Building on existing activities to educate, train, attract and retain South Australia's defence industry workforce, over the coming four years, the identified initiatives will collectively:

- engage an estimated 27,000 students and 1,500 teachers in South Australian schools to encourage STEM and defence pathways for students, and educate and support the teachers to deliver immersive education

- create a pipeline of around 2,600 additional participants on a VET or university pathway relevant to the defence industry through flexible industry programs, technical colleges, and nuclear-powered submarine focused higher education places. Up to 300 students will undertake internships with defence employers through the Defence Industry Connection Program
- support around 1,000 new workers to enter the defence industry through the Early Careers Program, entry-level traineeships, degree apprenticeships pilots and successful transition of university graduates
- attract, retain, and upskill the defence industry workers through mid-career transition programs, the Skills and Training Academy and the Defence Industry Leadership Program, including up to 500 international placements to grow necessary nuclear program experience for Australia's nuclear-powered submarine program
- enhance STEM evaluations through a consistent methodology and support industry to sponsor security clearances to engage high-skilled workers from trilateral partner nations
- improve the quality and consistency of workforce data and insights for industry and government with six-monthly updates
- increase awareness of Defence projects and defence industry jobs, and connect with potential candidates through a multi-tiered communications strategy.

These initiatives will meet the expected demand for this decade and establish a strong foundation for delivering the defence industry workforce requirements into the future. The Commonwealth and South Australian governments will continually review the defence industry workforce demand and supply, evaluate the impact and measurement of the initiatives against changing workforce needs, and inform adjustments to current initiatives while recommending additional or revised initiatives.

Primary and secondary education

Students' interest and continued engagement in STEM studies is critical to creating and sustaining a longer-term pipeline for the future defence industry workforce.

What are we already doing?

The South Australian education system currently graduates 15,000 Year 12 students annually, with approximately 11,000 students studying at least one Year 12 STEM subject.

The Commonwealth and South Australian governments invest in a range of programs which aim to build students' interest in STEM, including:

- The National Teacher Workforce Action Plan – released in December 2022 to address teacher workforce shortages nationally. It aims to increase the number of people choosing to become teachers, while supporting existing teachers to remain in the profession.
- The National School Reform Agreement – a joint agreement between the Commonwealth, states and territories to lift student outcomes across Australian schools.
- STEM Professionals in Schools – a national skilled volunteering program partnering STEM professionals and classroom teachers to enhance teaching practices, improve teacher capability and deliver engaging STEM education in Australian schools.
- The South Australian Government's Career Education and Pathways Strategy – launched in June 2023, aiming to set the direction for quality career education and guidance in government schools so that students can make informed choices for their future beyond school. Under the strategy there will be a Defence and Aerospace Sector Plan 2023–25 which will better connect students with defence and aerospace career information.

- South Australia's Flexible Industry Programs – industry-endorsed nationally accredited VET pathways to entry-level employment from high school that better prepare young people for real jobs and provide a pipeline of young skilled workers for South Australia's growing industry sectors.

What have we learned?

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. Early and regular exposure of girls and young women to STEM is critical.

An Australian study of students in Year 3 (aged 7 to 8) found that by then, young people are influenced by gender stereotypes on what their potential career could be. At this stage, girls were already being influenced into caring roles (such as teaching). In this study, 22% of boys aspired to a career in STEM, compared to only 6% of girls[4]. Additionally, the most recent data shows that girls' and young women's confidence in studying STEM subjects falls as they get older. An example highlighted was that only 33% of girls' and young women aged 14 to 17 wanted to study engineering, which dropped to 26% for women aged 18 to 21. Overall, only 21% of women wanted to pursue a career in STEM, compared to 42% of men[5].

All education ministers have agreed to a Foundation to Year 10 Australian Curriculum which provides all students nationally with the opportunity to build their STEM knowledge and skills. However, from Year 9 onwards, students increasingly have a choice as to which subjects they study (for example, digital technologies is only mandatory until Year 8 in most states and territories; from Year 9 onwards it is an elective). The largest barriers to students studying STEM subjects in later high school years are lack of interest in the subjects, how teachers and parents support and advise them as to what they should pursue, not seeing how the subjects relate to their desired career pathways, and a perception that the subjects are too hard or they are not good at them.

4 https://bera-journals.onlinelibrary.wiley.com/doi/abs/10.1002/berj.3767

5 https://www.industry.gov.au/publications/stem-equity-monitor/primary-and-secondary-school-data/youth-perceptions-and-attitudes-stem

Providing real-world scenarios and role models that allow students to see value and positive outcomes from their studies can make STEM more vibrant. This is especially the case if support is provided before Year 11 and continued to the end of secondary school so that engagement in studies translates into course selection.

Teachers play a major role in influencing the interests and subject selection of children and young people. Improving teacher capacity and capability in STEM subjects to positively impact teaching quality is a key lever for lifting student engagement and performance in STEM education.

Student-centred and inquiry-based curriculum has led to improved self-confidence for women in STEM, but only when teachers have subject-matter expertise. Promoting access to successful women working in various STEM-based roles and to older student role models (Year 11 and 12 students) has also been shown to have a positive influence.

Feedback from industry cited the importance of promoting STEM to students and creating stronger connections to the application of STEM in careers. Engagement highlighted the need to reposition VET within secondary education to raise its profile across the schooling system and not have it considered as a second choice to university.

The role of teachers and career advisers was raised throughout engagement. Feedback included requests that teachers be supported with professional development and consistent resources. This would help to improve their understanding of defence industry careers and consistently describe the skills requirements and career opportunities that exist.

Proposed initiatives

In the early school years there is a need to invest more to support teachers' capacity and capability to deliver STEM. Teachers having greater confidence in STEM subjects provides better opportunities to support students' future subject selection at the secondary and tertiary levels.

Initiatives must address ongoing participation barriers, including a lack of role models, stereotyped views of career choices, and a lack of understanding of career options in STEM fields. Initiatives must also be targeted to under-represented cohorts, to increase awareness among students of STEM opportunities now and into the future.

At the secondary level, initiatives must continue to encourage engagement in STEM and broaden the focus to raise awareness of STEM careers and pathways. The proposed initiatives encourage industry and the education sector to work together to inform career choices and equip students with the necessary baseline skills to continue through the STEM pipelines – either as school leavers or through vocational or higher education qualifications.

The school-based initiatives will grow the pipeline in later years, allowing more students to have the requisite knowledge and understanding to pursue STEM careers in the defence industry sector.

Engineering is Elementary

Engineering is Elementary is an immersive professional development program for primary school educators, providing them with skills and resources to teach engineering and other STEM subjects in primary school classrooms.

The program builds teacher capacity and confidence, enhancing student learning in the classroom and enabling students to develop problem-solving and collaboration skills through engaging hands-on projects. Educators who complete any of the eight curriculum-aligned units of work in the program are provided with a free STEM resource kit to implement the design challenges in their classroom.

Delivered in partnership between Defence and Questacon, the program provides curriculum to teachers across Australia to build their confidence to teach and assess STEM subjects, develop STEM teaching strategies, engage students in critical thinking, and connect teachers together nationally through communities of practice.

Greater leveraging of Engineering is Elementary in South Australia will allow additional schools in South Australia to engage with the program.

Cost – Funded under existing arrangements by the Commonwealth and delivered by Questacon.

Timing – 2024 to 2027.

Impact – STEM-skilled, knowledgeable and confident educators, with awareness of the application of STEM to real-world problems, can build student interest and identity in STEM and inspire students to consider future careers in STEM fields. Approximately 1,500 primary school teachers will be engaged nationwide over this period.

Schools Pathways Program

The Schools Pathways Program is designed to raise school students' awareness of possible career opportunities and increase their knowledge of the defence industry and defence industry pathways, while encouraging student involvement and participation in STEM. This will increase the pool of young people with the knowledge and skills to pursue defence industry careers.

Through an industry-school partnership approach, this initiative will strengthen professional learning for teachers, ensure the information provided to students is contemporary, and allow students to see the careers available. This will include showcasing STEM leaders, including women who have been successful in a STEM field, and providing information to help encourage young people to move from school into further education, apprenticeships and internships related to the defence industry.

Quality immersion programs will provide students with unique firsthand exposure to an industry, employers and their workplaces as part of a school's career education program. Engagement with South Australian school students is an effective way for the defence industry to promote the benefits of the sector to students, engage them in school-based apprenticeship and traineeship opportunities, and build quality relationships with schools and their students to encourage the development of a viable pipeline of skilled workers.

An intergovernmental agreement between South Australia and the Commonwealth will be established for this program.

Cost – $2.6 million. Commonwealth funded and delivered with South Australia.

Timing – 2023–24 to 2025–26.

Impact – Increasing the number of teachers confident in their ability to provide STEM career information will allow greater reach to students, enabling them to make informed career choices. Up to 15,000 students and 1,350 teachers are expected to benefit from this program over the period.

Industry projects in schools – Beacon program expansion

BAE Systems, in partnership with Lumination (a specialist Australian education technology company), provides primary school students with problem-solving and innovation challenges through the Beacon program. The students use immersive technologies – virtual reality, augmented reality, artificial intelligence, robotics, 3D modelling – to develop a solution to a problem they are given. Using these technologies and applying STEM inspires the students to understand and pursue STEM opportunities. This program has been piloted and participating students demonstrated improved perceptions of STEM subjects and links to careers.

The program expansion will improve student perception of STEM subjects and increase participation of women, First Nations students and those from low socio-economic status backgrounds.

Cost – $1.93 million over three years, 2024 to 2026. South Australian Government funded and delivered by BAE in partnership with Lumination.

Timing – Scaling up from 2024.

Impact – Inspiring young people in years 4 to 8 to stay engaged in and pursue STEM subjects, plus weekly online professional learning sessions for teachers. Delivery into 80 schools by 2026, targeting around 12,000 students.

Expand STEM scholarships for secondary students

High school students from under-represented groups (low socio-economic status students and First Nations learners) can apply for scholarships to pursue STEM subjects at South Australian Certificate of Education Stage 1 and 2 levels. The fund covers the cost of tutors, laptops, excursions or any other strategy that directly supports the student to achieve in their chosen STEM subjects and pathways.

Cost – $1.9 million. South Australian Government funded and delivered.

Timing – Annually from 2024.

Impact – Estimated 50 scholarships per year from 2024; 200 scholarships over four years targeting students in low socio-economic status groups.

Expand Flexible Industry Programs

The initiative will invest in capital and facilities upgrades and equipment for the expansion of defence-relevant Flexible Industry Programs (FIPs) into an additional 20 South Australian schools to enhance the accessibility of industry-endorsed pathways to employment, and ensure a continuous pipeline of young skilled workers, particularly in critical occupations such as ICT, cyber security, engineering, and electrotechnology.

The FIPs are designed in partnership with industry to identify qualifications appropriate for school students and ensure they contain the skills, knowledge and experience valued by employers. They provide an industry-endorsed pathway to employment, better preparing young people for real-world jobs and providing a pipeline of young skilled workers.

Cost – $1.5 million over two years, 2023 to 2025. South Australian Government funded and delivered.

Timing – Implementation from 2023–24.

Impact – 20 new schools, at 15 to 30 students engaging in a defence industry related FIP per school, per annum; targeting up to 600 students per annum on a defence-relevant career path.

School-aged career education resources (Little Ripples)

This initiative provides resources to educators and parents to support conversations with primary school aged children about the range of careers in the defence industry, such as advanced manufacturing and naval engineering.

The existing set of Little Ripples career education ebooks will be expanded to show careers in advanced manufacturing and submarine building. The resources spark conversations with children about career possibilities beyond those typically discussed in school settings and depict women working in traditionally male-dominated trades.

Resources are free on the yourcareer.gov.au site (yourcareer.gov.au/resources/little-ripples). Planned engagement through schools managed by South Australia can be supported with printed resources. The national reach will be boosted through modest paid promotion.

Cost – Up to $250,000 in 2023–24. Commonwealth funded and delivered.

Timing – Complete and promote the ebook by March 2024.

Impact – Boost awareness of careers in advanced manufacturing and the defence industry, and generate student pipeline effects for the coming decade.

Vocational education and training (VET)

Defence industry requires many people with VET qualifications to fill job roles needed to deliver defence capability programs. More apprentices are needed to start now to meet the future skilled and experienced workforce targets.

What are we already doing?

High numbers of Australians already access VET, including for defence-related industries. Nationally, 4.5 million students across Australia are enrolled in nationally recognised VET courses to gain new skills or upskill in 2022[6]. Notably, only 17% of new VET enrolments in STEM fields are from women[7]. First Nations people are also under-represented in VET – 6.1% of First Nations people hold a VET STEM qualification, compared to 8.9% of the non-Indigenous population[8].

In South Australia the VET sector generates a significant number of individuals with skills relevant to the defence industry each year. In 2022 there were around 26,700 VET program enrolments and 5,600 program completions in STEM areas relevant to the defence industry. In South Australia, VET program enrolments in STEM areas relevant to the defence industry have grown in recent years, increasing by an average of 5.3% or 1200 program enrolments each year in the five years to 2022.

6 https://www.ncver.edu.au/research-and-statistics/publications/all-publications/total-vet-students-and-courses-2022

7 https://www.industry.gov.au/publications/stem-equity-monitor/higher-education-data/vocational-education-and-training-enrolment-and-completion-stem-and-other-fields

8 https://www.chiefscientist.gov.au/sites/default/files/2020-07/australias_stem_workforce_-_final.pdf

The Commonwealth and South Australian governments invest in a range of programs which aim to build the VET pipeline, including:

- The National Skills Agreement (NSA), agreed by National Cabinet and launched by the Prime Minister and the Minister for Skills and Training on 17 October 2023, will expand and transform access to the VET sector, support quality training and implement reforms to address critical skills needs. The NSA provides a total of $12.6 billion in Commonwealth funding for the VET system over five years. It includes flexible funding to support state and territory skills sectors with capacity to deliver skills for critical and emerging industries, including advanced manufacturing, and Australia's sovereign capability. The NSA delivers on the Vision and Principles endorsed by National Cabinet, which requires Skills Ministers to focus on gender equality and women's economic participation; Closing the Gap for First Nations people; and ensuring more opportunities for young people, mature-age Australians, people from culturally and linguistically diverse communities, people with disability, and regional and remote learners. The NSA is scheduled to commence on 1 January 2024.
- Fee-Free TAFE, a partnership between the Australian Government and state and territory governments, is helping to address the workforce needs of the South Australia. Of the 12,423 enrolments in South Australia in Fee-Free TAFE between January and June 2023, over a third were across courses in construction, defence, manufacturing, technology and digital. Starting in 2024, 15,000 additional Fee-Free TAFE places will target areas of skills shortage in South Australia including technology and digital skills, construction, and the defence industry.
- The Australian Government is extending the existing Women in STEM Cadetships and Advanced Apprenticeships program to support employed women to pursue industry-relevant pre-bachelor higher education qualifications in STEM fields through part-time study.
- In South Australia, TAFE SA is an educational leader in training delivery for naval shipbuilding and sustainment projects. TAFE SA works with industry partners on bespoke programs, currently offers a micro-credential in naval shipbuilding, and prepares students for employment in the defence industry. TAFE SA also supports industry through training needs analysis, transfer of technology, and fee-for-service activities to fill skills gaps. TAFE SA holds critical training infrastructure, delivering training with augmented reality welding simulators and virtual and augmented reality frigate and

engine room learning activities developed in Computer Aided Design (CAD) software. TAFE SA plays a significant role in developing a pipeline of defence-relevant skills for industry. As at October, around 6,700 TAFE SA enrolments in 2023 are aligned to defence industry critical roles.

- South Australia's Flexible Industry Programs connect school students with industry and provide such services as VET qualifications at Certificate II and III levels and employability skills training that meets specific industry requirements, delivered by registered training organisations including TAFE SA. In 2022 there were over 4,500 students enrolled in Flexible Industry Programs.
- South Australia's technical colleges are building the pipeline of students into the defence industry. Technical colleges allow students to achieve their high school certificate in conjunction with a technical qualification relevant to industry needs.
- South Australia's Department for Education connects industry and schools, raising the profile of VET and developing pathways into South Australia's industries. A team of Industry Engagement Consultants partner with industry across the state to develop opportunities for students to be exposed to the breadth and depth of an industry and help students identify the different types of roles and career opportunities available.

What have we learned?

Australia is experiencing rapid economic and technological change, characterised by a workforce needing highly developed technical skills and the ability to adopt new technologies. Over the next 10 years, more than nine out of 10 new jobs expected to be created will require post-secondary education – either higher education or VET.

The Australian Government will continue to work in partnership with South Australia to refine the targeting of government investment in VET to enable VET to be forward leaning, agile and responsive to the changing needs of employers and employees.

Industry has reiterated the need for young people to be well prepared to enter the workforce so that they can grasp the opportunities available to them. Insights suggest that the continued reform and design of flexible approaches to skills development, including micro-credentials, will be key

to addressing workforce challenges. There is an opportunity to improve awareness and understanding of VET pathways, to provide school students with a broader range of options and access to school-based apprenticeships.

Industry-led traineeship and cadetship providers report high success rates. Relationships are established early in the education phase, and skills are applied earlier and continue to be applied over several years. Participants are attracted to the financial benefits and work experience opportunities of these programs. Recent examples demonstrate that around 80% of participants stay with the company post training.

Proposed initiatives

The VET initiatives in this Report focus on more than just the courses students undertake – they aim to provide students with hands-on opportunities and build networks with industry early.

Skills and Training Academy

A Skills and Training Academy will be established to support the uplift of the industrial base for continuous naval shipbuilding and Australia's nuclear-powered submarine program, with the former playing a vital role in providing meaningful work and experience. The Skills and Training Academy will deliver:

- **Extant program customisation** – supporting and expanding existing Commonwealth initiatives for growing and upskilling the defence industry. In the immediate term, this includes supporting delivery of the Defence Industry Pathways Program and international placement programs, and delivering nuclear mindset training to workers in the shipbuilding industry.
- **New programs** – co-designing new programs with industry partners, training and education providers and state and territory governments. This will include programs to increase the supply of entry-level workers (including apprentices), and reskilling and upskilling programs. The Skills and Training Academy initiatives will support and bolster the existing training and education sector. The Skills and Training Academy will create partnerships to fill gaps in training and curriculum, and co-design new training to support naval shipbuilding and the nuclear-powered submarine program.

- **Training infrastructure** – building new infrastructure for training and skilling in South Australia in the form of a dedicated campus. This facility will enable optimised training methods (facilities, systems and training materials) for the shipbuilding industry that will:
  - develop a training and learning environment which promotes a positive shipbuilding culture and nuclear mindset
  - provide release facility capacity within the shipyards for higher value work
  - reduce the load on core staff to deliver training
  - deliver improved retention of skills and knowledge.

Cost – Commonwealth funded and delivered in partnership with South Australia, industry, and education and training providers.

Timing – Early activation of pilot programs commenced in 2023 to grow nuclear mindset awareness and upskill trainers from South Australia. Additional programs will be developed over the coming years to meet workforce requirements. The campus is planned to be completed in South Australia by 2027–28.

Impact – In the early years, the Skills and Training Academy will deliver targeted interventions to grow and skill the shipbuilding workforce. This has already commenced, with activation of pilot programs from 2023. The Skills and Training Academy will initially prioritise long-lead workforce skills for the naval shipbuilding industry and grow the entry-level pipeline. The Skills and Training Academy will work closely with trilateral partners to identify and bring best-practice training methods and standards onshore, enabling the shipbuilding industry to better access skilling opportunities relevant to the nuclear-powered submarine program. At full operation, the South Australian campus facilities are anticipated to support up to 800–1,000 people each year across all skill and experience levels.

Defence Industry Pathways Program

The Defence Industry Pathways Program provides traineeships in VET pathways at the Certificate II level and a Certificate III in Defence Industry Pathways. Participants will be employed by a Group Training Organisation and placed with defence industry employers to fill critical roles such as logistics, engineering, drafting, design, safety, and cyber security.

The program supports trainees to gain practical skills including resumé writing and interview techniques, mentoring, cultural awareness, and goal setting. Participants gain a greater understanding of, experience in, and access to a range of career pathways in the defence industry. From the six cohorts in the Western Australian program, 72% of trainees who completed the program are now employed in a relevant industry, with others returning to university or taking up apprenticeships or traineeships.

Under this initiative, the program will expand to South Australia, supporting 150 places over three years. The Skills and Training Academy will support the program by promoting career pathways in naval shipbuilding and sustainment, and providing opportunities to participate in introductory training relevant to the nuclear-powered submarine program. The initiative will engage under-represented cohorts and contribute to greater diversity in the defence industry.

Cost – $12 million over three years. Commonwealth and South Australian Government co-funded and delivered.

Timing – Establishing in 2023–24, with the first cohort to commence by July 2024.

Impact – 150 trainees employed and hosted over three years, prioritising the inclusion of under-represented groups in the program.

South Australia's technical colleges

South Australia is investing $208.8 million into building five new technical colleges across the state. All technical colleges will contribute to the defence workforce, either through advanced manufacturing and engineering or through multi-trades.

These technical colleges offer Industry Training Programs in collaboration with employer partners for high school students in years 10, 11 and 12. These programs provide hands-on experience with industry-standard equipment and practical work skills, preparing students for growing industries upon graduation. Students receive their South Australian Certificate of Education and VET qualifications, and gain connections to employers in the field. The Industry Training Programs are designed with input from employers, universities and training organisations, offering specialised industry pathways and real-world work experience. Graduates are well equipped for immediate employment or further education opportunities.

Cost – $208.8 million for five technical colleges at Findon, Tonsley, The Heights, Port Augusta and Mount Gambier. South Australian Government funded and delivered.

Timing – Findon commencing 2024; Tonsley and Port Augusta commencing 2025; The Heights and Mount Gambier commencing 2026.

Impact – Approximately 200 students will commence at each college each year (across all specialisations), adding to the pipeline of skilled workers. Around 150 students will graduate each year from the three technical colleges located in metropolitan Adelaide to careers related to the advanced manufacturing and defence industries.

Entry-level VET pathway for aircraft maintenance

This initiative provides a new subsidised entry-level pathway via Certificate II in Aeroskills for school students and job seekers to help address the skills shortage in the aviation sector. The pathway has the backing of key aerospace companies and the Department of Defence. Investment in this entry-level course will grow the avionics and aircraft technical trades pipeline for the intelligence, surveillance and reconnaissance industry partners in South Australia over the next decade to meet capability needs.

Cost – $450,000 per annum. South Australian Government funded and delivered.

Timing – Commencing in 2024 (initial one-year pilot) with opportunity to extend.

Impact – Up to 50 participants in the first year, targeting one cohort of school students and one cohort of job seekers.

Higher education

Future defence projects and shipbuilding in South Australia rely on having enough higher education qualified graduates. Graduates are needed for engineering roles in areas like nuclear engineering and across program management, supply chain and support roles. We also need a pipeline of graduates delivering research in areas such as cyber and computing, engineering, space, and quantum physics.

What are we already doing?

Currently South Australian universities generate an average of 3,000 graduates annually in STEM areas relevant to the defence industry, with around 8,000 new higher education enrolments in relevant STEM subjects.

There are significant national initiatives underway to improve our higher education system and address challenges, such as attracting more students from backgrounds currently under-represented in higher education and improving the quality of teaching and learning. Initiatives include:

- The Australian Universities Accord will devise recommendations and performance targets that will improve the quality, accessibility, affordability and sustainability of higher education, to achieve long-term security and prosperity for the sector and the nation. With a strong focus on skills growth and increasing numbers of participants from equity groups, the Accord will benefit those who are currently under-represented in the STEM to defence industry pipeline. The Australian Universities Accord Interim Report was released by the Australian Government in July 2023 and a final report will be delivered in December 2023.
- The Higher Education Participation and Partnerships Program provides funding to a number of universities to implement strategies that improve access to undergraduate courses for people from regional and remote Australia, people from low socio-economic status backgrounds, and First Nations people.

- The Higher Education Disability Support Program provides funding to eligible higher education providers to assist in supporting students with disability to access, participate in and succeed in higher education.

In South Australia there are a number of university partnerships that together strengthen our research capabilities and support a more highly skilled workforce.

- The Australian National University, in partnership with the University of South Australia (UniSA) and University of Adelaide (UA), has been awarded $5 million in funding from the Australian Research Council to bolster the nation's capabilities in sectors underpinned by nuclear and radiation science and policy.
- The South Australian Government, UniSA and Australian Industry Group will fast-track a Software Engineering Degree Apprenticeship pilot program to commence in 2024.
- Flinders University has signed a memorandum of understanding with the University of Strathclyde in Glasgow and BAE Systems to establish an Advanced Manufacturing Research Exchange to foster closer working relationships and facilitate the development of international best practice for shipbuilding manufacturing methods and processes.
- Flinders University and the University of Rhode Island are formalising a research and education partnership to bolster Australia's efforts to produce the skilled workforce needed to deliver on AUKUS.
- Flinders University is partnering with the University of Manchester, the lead university in the UK's Nuclear Technology Education Consortium, for

the Australian delivery of its nuclear masters programs and doctoral-level research training.

- UA has entered into a partnership with Babcock Australasia to develop Australia's defence workforce and skills through new initiatives and projects to support defence programs, including the nuclear-powered submarine program.
- UniSA recently launched the Global Executive MBA in Defence and Space, covering cyber security, space systems, geopolitics and defence procurement, as well as strategic business topics, with the 18-month program delivered across Australia, the UK and the US, in partnership with the University of Exeter (UK) and Carnegie Mellon University – Tepper School of Business (US).

What have we learned?

Students and employers both benefit when the skills being taught in university courses are the skills industry needs. Industry requires the university sector to produce skilled graduates who are suitably qualified and employment ready, but this will only be achieved by improving collaboration between higher education providers and industry. Currently industry is taking an active role and exploring partnership opportunities with universities to ensure the courses are contextualised to build the right skills.

We have learned that engagement with the defence industry, through early engagement such as sponsorship and work experience during the course of study, leads to affiliation with the defence industry.

Among university graduates with STEM degrees, significantly fewer women than men go on to work in STEM-related fields[9], with inflexible working conditions and job insecurity playing a role in this disparity[10]. First Nations people are also under-represented in STEM at the university level – only 0.5% of the First Nations population holds a STEM qualification, compared to 5% of the non-Indigenous population[11].

9 https://www.industry.gov.au/publications/stem-equity-monitor/higher-education-data/university-enrolment-and-completion-stem-and-other-fields

10 https://www.industry.gov.au/publications/advancing-women-stem-strategy/snapshot-disparity-stem

11 https://www.chiefscientist.gov.au/sites/default/files/2020-07/australias_stem_workforce_-_final.pdf

Proposed initiatives

The initiatives recognise the need to increase targeted support to the university sector, particularly through Commonwealth Supported Places, while also improving the links between universities and the defence industry. The initiatives are targeted to meet the workforce requirements outlined earlier in this Report. They include practical wraparound assistance, including security clearances and scholarships for eligible undergraduates, and on-the-job familiarisation activities to smooth the transition.

These initiatives for undergraduate degrees will have a medium-term impact on the skills pipeline. A STEM-based university degree takes an average of four years full time to complete, with further specific on-the-job training required.

Commonwealth Supported Places

The Commonwealth's 2023–24 Budget announced 4,000 commencing Commonwealth Supported Places, including 800 for South Australian universities, to support future defence and defence industry workforce capabilities.

This initiative will incentivise students to commence their degree in a number of targeted STEM disciplines (including physics, chemistry, mathematics, materials science, naval architecture, and computer science, as well as mechanical, electrical, chemical and nuclear engineering). This will increase the pipeline of highly skilled STEM graduates, address skills shortages and strengthen Australia's sovereign industry capabilities. It offers 200 places in South Australia each year over four years, funded for the duration of the course.

Cost – $128.5 million over four years to fund an additional 4,000 university places, with 800 university places allocated to South Australia. Commonwealth funded and delivered.

Timing – Courses commencing from January 2024 to 2028.

Impact – 200 students each year for four years (800 students total) undertaking courses to obtain qualifications relevant to defence industry employment.

Defence Industry Connection Program

This initiative will provide further support and internships to the students accessing Commonwealth Supported Places and undertaking broader defence and nuclear-powered submarine-related courses, helping them transition from study into the defence industry. .

To encourage students to complete the program, industry mentoring and engagement during the program will highlight opportunities for internships and placements and will help to connect students with the defence industry, which will increase their employability.

For jobs where security clearances are required, funding and support to facilitate security clearance applications will reduce the time between graduation and the start of employment. Expanding South Australia's existing scholarship program, bursaries will be provided to students to support placements in industry.

The existing Defence Industry Scholarship Program in South Australia has a high success rate, with around 80% of students going on to full-time or part-time employment with their host employer.

Cost – $3.9 million over four years. South Australian Government funded and delivered.

Timing – 2024 to 2028.

Impact – 300 scholarship places will be available, and diversity will be a key feature of the program.

Entry level

Attracting entry-level talent is highly competitive. A range of strategies and supports must be in place to attract and retain talent from VET, higher education and beyond to the defence industry.

What are we already doing?

Active and enduring digital campaigns are underway to attract workers to defence industry careers. Digital campaigns currently include a diverse library of case studies that showcase individuals working across the breadth of defence industry roles.

Current entry-level VET programs such as the Certificate II in Engineering Pathways and Certificate II in Electrotechnology develop a suitable pipeline of graduates for defence industry roles, specifically trade apprenticeships in high demand such as fabrication, welding, mechanical engineering, pipefitting and electrical apprenticeships. Pre-employment pathways target specific cohorts, delivering bespoke programs for women and First Nations people to increase representation in trades and technical roles.

The Australian Government is investing an additional $54.3 million in critical Australian Apprenticeship supports to improve completion rates and get people into entry-level jobs. Improving the quality of services and better targeting support will be crucial to supporting women, First Nations people, culturally and linguistically diverse cohorts, and people with disability to complete their apprenticeship.

On 25 October 2023, the Australian and South Australian governments published the National Vocational Education and Training Completions Report. Delivered by the VET Completions Taskforce, the report unpacks factors affecting completion rates throughout the entire learning journey. It proposes 17 key recommendations to improve VET completion rates.

What have we learned?

The current approach to entry-level programs in the defence industry is diffused, leading to reduced effectiveness in attracting and retaining entry-level workers. We have also heard from industry about the need to focus on expanding entry-level programs while being careful not to duplicate existing successful programs.

There are some good examples but also limited focus on supporting students' transition from the general education and training system to employment within the defence industry. Beyond traditional apprenticeship and traineeship models, higher skilled entry-level programs that offer on-the-job learning opportunities are scarce. Some industry primes have their own apprenticeship programs and are keen to continue owning them, while SMEs have identified the need for support with similar programs.

Implementing a broader, enterprise-wide approach to education and training that includes incentive-based programs, education to employment pathways for entry-level workers, and targeted initiatives for higher skills and under-represented cohorts will grow the defence industry workforce and meet increasing demands. This will also require joint policy effort by government(s) to optimise investment and the role of the education and training system.

Non-completion in the VET system is a particular area of focus, as it results in a loss of productivity for employing industries and a missed opportunity for students. VET completions data at the national level shows that rates of completion can be low, although pass rates for the subjects enrolled in are

often high. This indicates that quality of training and accessibility are high, and that there are other factors that cause non-completion. Evidence collected through the National VET Completions Taskforce also shows that completion rates are impacted by three key factors: learner motivations, features of course design and delivery, and learner characteristics.

The Commonwealth and the states and territories are working together to consider new ways to achieve better completion rates through more support for those most at risk of dropping out, engaging learners on their career options, and tailored information to support study choices more aligned with a learner's purpose. This will influence and support the learner journey from before enrolment to completion and beyond.

There is also interest from industry to explore opportunities with training providers for co-use facilities, co-location and partnering on other aspects, including course design. This can help students become job ready with the skills and knowledge that industry specifically needs.

Proposed initiatives

Entry-level initiatives are designed to have a strong short-term impact, opening the door to a stable, long-term career in the defence industry. We note that continued efforts are needed to build and optimise entry-level programs.

Defence Force Recruiting – applications to Industry Transition Program

An opportunity exists to channel those who apply for the Australian Defence Force (ADF), but do not take up an ADF role, into the defence industry. ADF candidates who are not suited for ADF service may have the skills and aptitude to contribute elsewhere.

As a starting point, information and points of contact for defence industry opportunities can be provided at the point where candidates are advised they have not been accepted for ADF service. Longer term, consideration will be given to actively channelling suitable candidates to defence industry careers.

Cost – Commonwealth funded and delivered.

Timing – From Q1 2024.

Impact – Will encourage those with an interest in ADF service who do not meet the strict requirements for service to consider a career in the defence industry.

Early Careers Program

The Commonwealth, together with ASC, will develop an Early Careers Program, providing up-and-coming professionals with the shipbuilding skills needed to build and maintain Australia's future submarine fleet. The program will be conducted in South Australia and Western Australia, with 70 participants commencing in 2023. It will support growth and development of skills critical for Australia's shipbuilding and sustainment programs, giving participants access to advanced technologies and training from leading submarine professionals.

Cost – Commonwealth funded and delivered.

Timing – From July 2023.

Impact – Will provide participants with hands-on training, encouraging them to pursue a career in the shipbuilding industry.

Degree Apprenticeship Pilots

This initiative will provide opportunities for students to attain higher education qualifications which are a priority in the defence industry via an apprenticeship. The 'earn while you learn' aspect will alleviate part of the financial difficulty of changing careers. The students will also be employed by defence industry employers while they study, which will support new workers to both study and work in areas of high need. This international model has been highly successful in the UK, which now has over 60 degree apprenticeship courses available. The first pilot Software Engineering Degree Apprenticeship has been recognised by the South Australian Skills Commission and is the first higher education undergraduate pathway to be declared as an Apprenticeship in Australia. The program is currently being developed by UniSA, with students set to commence in early 2024, and this additional investment in Degree Apprenticeship Pilots builds on the existing South Australian Government commitment of $450,000.

Cost – $2.5 million to expand the degree apprenticeship pilot in South Australia. Commonwealth and South Australian Government co-funded and delivered.

Timing – Courses and programs will be developed in 2024, with the first cohort commencing in 2025–26.

Impact – 375 new apprenticeship commencements over four years.

Mid-career

Supporting mid-career workers to transition to defence industry can make a more immediate contribution to filling the skills gap. Mid-career workers may need initial training and supervising to reskill, building on their existing skill sets and workplace experiences.

What are we already doing?

The Commonwealth and South Australian governments are already investing in a range of programs that aim to build the mid-career workforce, including:

- Defence Industry Leadership Program – supports 25 to 30 South Australian participants to undertake an Advanced Diploma or Diploma of Leadership and Management each year, with a greater than 95% completion rate.
- Sovereign Shipbuilding Talent Pool – has retained and upskilled the submarine workforce, with over 230 workers transitioned to roles at ASC (which sustains Collins Class submarines).
- Navigate Program – bolsters Defence's APS mid-career research and development workforce.
- Skilling Australia's Defence Industry Grants Program – provides businesses servicing the defence sector with upskilling and training opportunities to build skills capacity and capability.
- Defence supports ADF members exiting the permanent force – including supporting better access to defence industry job opportunities in South Australia by providing training opportunities, including up to 23 on-the-job experience days to assist with transition into the defence industry civilian workforce.
- The Department of Veterans' Affairs (DVA), through the Veteran Employment Program, raises employer awareness of the skills, values and experience that make veterans valuable members of the civilian workforce. DVA also provides a range of pre-employment and post-employment services though the Support for Employment Program. Participating

veterans are able to take full advantage of many opportunities available in the civilian workforce through advice, training and support.

- Established through grants administered by DVA, the Veterans' and Families' Hubs offer a centralised location for transitioning ADF members, veterans and families to access or be connected to services, which may include employment and housing advice, mental and physical health services, wellbeing support, advocacy, and social connection.
- Veterans SA supports the South Australian veteran community – including helping veterans achieve success in their civilian careers through an online career advice resource (Home Base SA) and establishing a memorandum of understanding with TAFE SA to provide education and training services for veterans.

What have we learned?

Industry-specific skills and capabilities are required to work in defence industry, including advanced welding certificates, digital signal processing, asset management, integrated logistics support, naval weapons systems, global satellite navigation systems, systems engineering, design for reliability, testing design and analysis, acceptance testing and evaluation.

Meeting workforce needs in the defence industry will require a strong focus on transitioning qualified workers from adjacent industries and supporting upskilling and career development of existing workers to enhance retention. This is particularly important in a highly competitive labour market where there is high demand for workers with similar skills from within the defence industry and across adjacent industries. A number of programs are already underway and are producing positive results.

Industry is seeking more flexible funding options to support people to transition into the sector mid-career. It is supportive of micro-credentials and bridging programs to address its immediate-term workforce needs. Existing efforts have already had success in developing programs for combat systems and introduction to naval shipbuilding.

While a number of programs are already underway, enhancing career mobility across the broader defence enterprise (industry, government and ADF) is essential to retain the experienced workforce. It is also a way to attract workers from adjacent industries.

Future defence maritime projects, including the nuclear-powered submarine program, will rely on the experience and skills of mid-career workers in Australia's shipbuilding industry to deliver these highly technical programs. Retention through greater mobility, complemented by upskilling and reskilling opportunities, will develop a pipeline of experienced workers, supervisors and potentially trainers to support defence projects and develop the next generation of experienced workers.

Proposed initiatives

To help address demand in the short term, the initiatives address workers seeking a mid-career change. The needs of workers at this stage vary considerably. Those in adjacent industries may have limited experience in the defence industry and require higher levels of supervision and support to transition into their new career. Others may come highly skilled and only need a small amount of upskilling or workplace-specific training. These initiatives promote 'earn while you learn' opportunities to help make the switch easier.

The mid-career initiatives are likely to have a short-term impact. With retention measures, these workers could provide the supervisory and management level in later years.

ADF to Industry Transition Program – Mid-Career

Each year, approximately 7,000 ADF members exit the permanent force. The majority of these personnel are job ready and highly skilled; others may need upskilling to undertake specific civilian roles in defence industry. Working in collaboration with the South Australian defence industry, this initiative will actively promote defence industry employment opportunities to transitioning ADF members. This includes referrals to industry through the Job Connections Program, which positively supports members to consider defence industry employment opportunities.

Cost – Commonwealth funded and delivered.

Timing – Commencing 2024.

Impact – Will encourage a greater number of skilled people to consider a stable career that contributes to defence outcomes.

Expand the Defence Industry Leadership Program

The Defence Industry Leadership Program provides participants with a Diploma or Advanced Diploma in Leadership and Management, tailored to defence industry requirements. Previously 20 to 30 places have been offered each year for participants to undertake a seven-month course. The initiative proposes an expansion of the current program up to 50 places per year.

The program also provides a series of information and briefing sessions, mentoring and coaching, field trips and industry site visits, interactive workshops, and a research project and presentation. It is well established within industry and has been operating for over a decade.

Cost – $0.84 million over four years from the South Australian Government, together with an industry investment of $1.75 million.

Timing – Recommencing in 2024.

Impact – Will provide up to 50 places each year (175 over four years) in the program and increase the diversity in defence industry leadership. This initiative has a diversity target of 15 places per year for under-represented cohorts.

International Industrial Placement Programs

This initiative will provide practical experience to upskill existing defence industry workers in critical skills needed to deliver the nuclear-powered submarine program, through international placements. It is anticipated that this program will expand over time, including enabling participation by workers from SMEs. The placements will form part of a career pathway, providing nuclear- related experience for entry level, mid-career and advanced shipbuilding workers.

Cost – Commonwealth funded and delivered.

Timing – Commenced August 2023 with initial placements and planning.

Impact – Building from an estimated 70 initial placements in 2023 to up to 500 placements in 2027.

Evidence-based decision-making

A resilient and strong defence industry with a skilled and experienced workforce relies on understanding how employers' needs change. Workforce intelligence is a result of analysing the labour market (supply) alongside the workforce and skills needed (demand) and related risks, providing an evidence base for workforce intervention and investment decisions.

Additionally, a consistent evaluation framework for the programs is needed to ensure governments are funding the right programs and can make adjustments to those not delivering their intended outcomes. This includes collecting and analysing gender-disaggregated and intersectional data to monitor progress and uncover if any programs have disproportionate effects.

What are we already doing?

There is a significant amount of work underway and already completed to gather information on the national naval shipbuilding and sustainment workforce demand, including:

- Naval shipbuilding and sustainment prime contractors have cooperated for several years to maintain a common taxonomy of job roles and contribute workforce data to build an aggregated picture in a cooperative model.
- The Department of Defence entered into an $8 million contract with the University of Adelaide in May 2023 to deliver workforce planning and intelligence services for the National Naval Shipbuilding and Sustainment Enterprise throughout Australia, including the the nuclear-powered submarine program.

- At the national level, the newly created Jobs and Skills Councils will strengthen industry engagement in the VET sector. The Councils will ensure VET qualifications are more responsive to the evolving needs of industry and drive greater collaboration across sectors to address strategic workforce challenges. During their establishment phase, the Councils will focus on workforce planning to understand current, emerging and future workforce challenges and opportunities, including skills gaps and shortages.
- At the state level, the South Australian Skills Commission and the SA Defence and Aerospace Industry Skills Council provide independent, industry-led advice to government on workforce development priorities, provide oversight of the skills system, and promote career pathways and lifelong learning. The Commission is also responsible for the declaration of vocations and trades that underpin advanced manufacturing and submarine building processes, has prime responsibility for apprentice and trainee safety matters, and presides over international trade recognition processes within the state.

What have we learned?

Establishing accurate and accessible workforce intelligence for defence industry prime contractors across Australia is challenging and will take time to develop. A significant amount of work has been undertaken to date within the maritime domain. Naval shipbuilding and sustainment prime contractors have cooperated with the Australian Government for several years to develop and maintain a common taxonomy of job roles and more recently have agreed to contribute workforce data to build an aggregated workforce picture.

Some STEM programs include an evaluation process, and evaluation toolkits are available for others. But their use is inconsistent, measures of success vary, and therefore evaluation processes are difficult to compare.

Proposed initiatives

Comprehensive Defence Industry Workforce Planning and Intelligence Service

This initiative expands the national naval shipbuilding and sustainment workforce information and intelligence service commenced in May 2023 to address industry workforce across all defence domains.

The service will provide an aggregated defence industry workforce outlook, which can inform governments and industry of the effectiveness of initiatives in South Australia and nationally.

Cost – Commonwealth funded and delivered.

Timing – Commencing July 2024.

Impact – Will provide regular up-to-date information and insights to help guide the development of the South Australian defence industry workforce and inform policy decisions, allowing government and industry to respond more quickly to supply issues.

Establish a STEM Evaluation Framework

This initiative will co-design guiding principles to enable consistent evaluation approaches for STEM programs and to provide consistent analysis across government of the impact and success of STEM programs.

This will address the need to measure and evaluate initiatives, and allow for a greater amount of data to assist with policymaking and decision-making when targeting key cohorts into the future. Agreed metrics to measure what success looks like, clear and quantifiable objectives, and increased data on STEM career outcomes will enable better support to each stage of the pipeline (early childhood, secondary, higher education, and in the workforce). This will support trackable and defensible changes to the way programs are prioritised and developed.

Cost – Commonwealth and South Australian Government joint initiative during the implementation phase of the proposed initiatives.

Timing – Commencing 2025.

Impact – Will develop a consistent evaluation framework for the programs to ensure we are funding the right programs and can make adjustments to those not delivering their intended outcomes.

Strategic communications and outreach

A targeted communications and outreach plan will consolidate information, allow people to engage with the programs and take advantage of the opportunities available, delivering the greatest reach and impact possible.

What are we already doing?

Government, industry and academia undertake their own communications initiatives designed to raise awareness and attract people to defence industry roles. These include formal advertising campaigns, career open days, cadetships, career ambassadors, in-school programs, university and vocationally led partnerships, and professional association and alumni activities.

The Australian Government maintains the yourcareer.gov.au website, which provides information for potential students on study options that fit their interests and needs, including in the defence industry. Opportunities to cross-promote the communications and outreach initiatives managed with South Australia will be included on yourcareer.gov.au to boost the national presence. The Australian Government also maintains courseseeker.edu.au and jobjumpstart.gov.au to further help students find relevant courses and jobs.

Through Defence SA, the South Australian Government is supporting the growth of South Australia's highly skilled defence industry workforce through a targeted educational campaign. The Find your place campaign is aimed at educating and attracting the future workforce to defence industry jobs in South Australia.

What have we learned?

Communications initiatives across government, industry and higher education operate independently and there is a lack of a coordinated and enduring strategy aligned with defence industry workforce requirements over the longer (10 to 30 year) term. Additionally, no single factor will attract skilled people to South Australia. Any communications campaign must include a multifaceted approach to educating people about, and attracting them to, a defence industry career in South Australia.

Proposed initiatives

Strategic Communications and Outreach Plan

This initiative will create and provide visibility of a longer-term communications and engagement strategy that articulates the vision, opportunities and activities that will have the greatest impact. Underpinned by audience segmentation, it will deliver messaging and a synchronised schedule of outreach opportunities, including a career showcase series demonstrating the diverse workforce currently in defence, integrated into a single plan for people to engage with. This will be co-designed with the defence industry and provide an engagement and event schedule to assist key stakeholders to forward plan their activity and focus associated resources. Importantly, this will ensure a coordinated approach to messages and communications across governments and industry.

Cost – $1.35 million. South Australian Government funded and delivered in partnership with the Commonwealth and industry.

Timing – Established in 2023–24 for implementation from 2024–25.

Impact – Will provide potential workers with information on how best to engage with defence industry opportunities. Diversity will be a key feature of promotion and engagement.

Skilled migration

Australia is competing globally for skilled workers. We need to consider how best to attract and retain skill sets in defence industry related occupations through migration, whether temporary or permanent.

What are we already doing?

The Department of Home Affairs has a number of existing policy levers and programs in place to support the naval shipbuilding industry to access overseas skilled workers where no suitably qualified Australians are available. These programs and levers include:

- **Bespoke visa products** – successful labour agreements with Defence and the South Australian Government are already in place.
- **Standard visa products** – a range of products are already available for use by industry, including the subclass 400 Temporary Work (Short Stay Specialist) Visa, and are well utilised.
- **Reducing visa backlogs** – the Australian Government is committed to clearing visa backlogs and has made strong progress, including finalisations of temporary and permanent skilled visa applications on hand. This enables industry to access skilled overseas workers more quickly.
- **Business, Industry and Regional Outreach (BIRO) program** – regular engagement and outreach through BIRO officers to the defence industry enables industry to better navigate complexities of the migration system.
- **Global Skills Attraction (GSA) Officer Program** – GSA officers have close engagement with multipliers, business and industry to attract overseas skilled migrants. They also collaborate with key stakeholders, including state and territory government representatives, to support promotion of their skilled migration needs and next-step pathways for highly skilled migrants.

- **Skills attraction campaign** – the recently launched 'Smart Move Australia' communications campaign has increased traffic to the Department of Home Affairs SkillSelect website as part of efforts to attract skilled migrants to occupations facing skills shortages, including those in the defence sector and other sectors which compete for the same workers.

The South Australian Government manages targeted skilled migration programs to complement South Australia's naval shipbuilding workforce and support Australia's defence industry. The key programs and initiatives are:

- **General Skilled Migration** – South Australia targets and invites experienced offshore skilled migrants to apply for a skilled visa nomination in occupations that support the defence sector.
- **Designated Area Migration Agreements (DAMAs)** – these are bespoke employer-sponsored programs that include engineering, technical and trade positions relevant to the defence industry. DAMAs contain policy concessions to standard skilled migration programs, such as a higher age limit for eligible defence professionals and tradespeople. All defence occupations offer a permanent residency pathway for eligible candidates.
- **Attraction, Connection and Retention Strategy for Skilled Migration** – the Strategy will strengthen partnerships with industries critical to supporting the defence sector such as engineering, ICT, and trades and construction.
- **Targeted international attraction activities** – South Australia undertakes skilled migration campaigns and attraction activities in overseas markets which have a demonstrated pool of priority skills in priority sectors including defence.

What have we learned?

Feedback – in particular from industry – has raised issues around visa costs, complexity and processing times, all of which were actively considered as part of the Australian Government Migration Strategy. The Migration Strategy sets out the following reforms to assist industry to have timely access to workers in areas of shortage.

Proposed initiatives

The Commonwealth Government's Migration Strategy to be released late 2023 will deliver policy shifts to ensure Australia's migration program is:

- prioritising the people we need to enhance our economic prosperity and security
- making the process simple and efficient for employers and migrants
- delivering outcomes for Australians and migrants post arrival
- restoring Australian values of fairness, integrity and inclusion

On 27 April 2023 the Minister for Home Affairs publicly released A Migration System for a More Prosperous and Secure Australia – Outline of the Government's Migration Strategy.

Security clearances

Security clearances are both a necessary and an important part of the defence industry. Reforming security clearance policy and process to ensure workers have the right clearances at the right time remains a priority for industry.

What have we learned?

Current policies and practices make it challenging for industry to recruit and onboard candidates from overseas and who do not have Australian citizenship. Key areas of security clearance reform include improving awareness and utilisation of pathways to a security clearance for foreign nationals, and exploring and implementing potential policy amendments to the mandatory citizenship requirement for a security clearance.

Proposed initiatives

AGSVA industry engagement

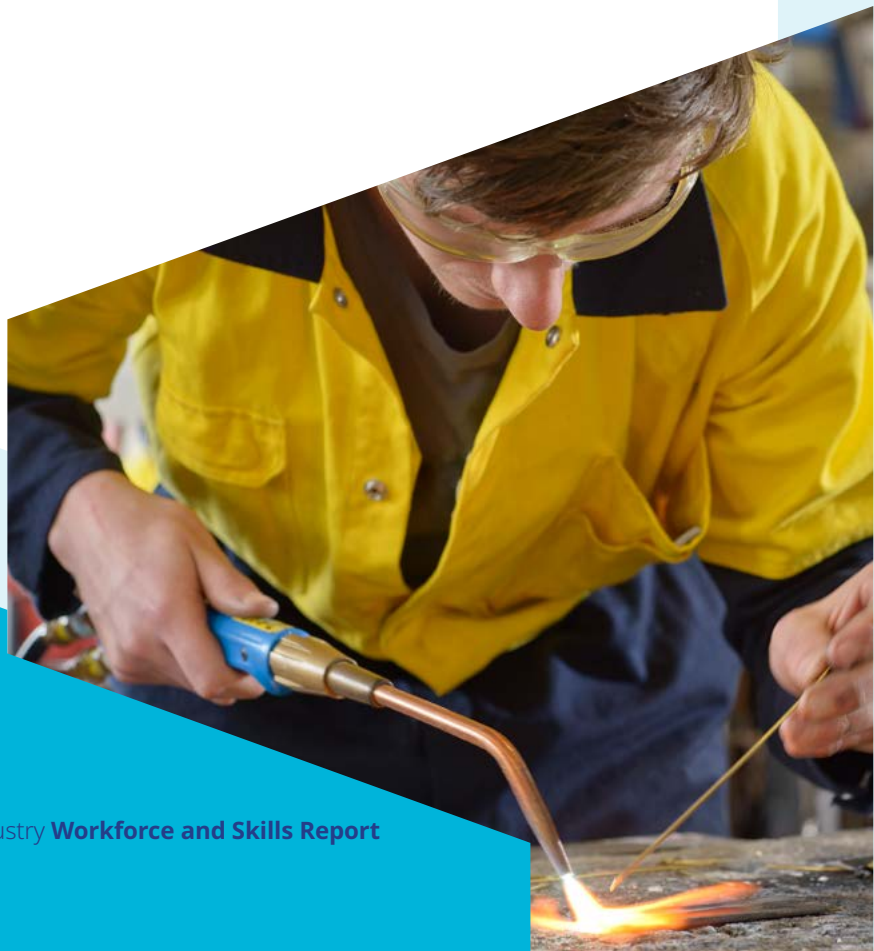
This initiative provides an Australian Government Security Vetting Agency (AGSVA) liaison support service to the defence industry, to help the sector engage with the necessary and important security clearance process. This support will provide the defence industry with:

- clear and consistent guidance on the AGSVA process and timeframes
- information forums and question and answer sessions, providing direct outreach to the defence industry
- proactive support at the onboarding stage
- adjustments to the dedicated phone line and other services on offer for the defence industry
- process maps that cover a range of circumstances, and factsheets and points of contact to guide stakeholders through the waiver, lateral transfer, recognition and international visits pathways.

Cost – To be met with existing resources. Commonwealth funded and delivered.

Timing – In Q4 2023 AGSVA will hold virtual roadshows with industry partners; in 2024 face-to-face industry roadshows will be held.

Impact – Will help industry more quickly and simply navigate the AGSVA security clearance process.



Timeline of initiatives from 2023–24 to 2026–27

The initiatives outlined in this Report have different timelines for their establishment and implementation and when they will begin assisting to build the South Australian defence industry workforce. **Figure 3** shows the estimated timeline for each initiative, providing a roadmap for industry to engage with these supports over the next four years and beyond for those intended to be self-sustaining in the long term.

In addition, **Figure 4** shows how each initiative fits across the learning journey from primary and secondary school, through to mid-career.

Figure 3 – Implementation and impact of proposed initiatives to 2024

South Australian Defence Industry Workforce and Skills Taskforce

Workforce Action Plan – Initiatives Snapshot

Partnerships | Diversity | Impact | Co-Investment

Primary	Secondary	VET	Undergraduate	Entry	Mid

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)* in South Australia to uplift the shipbuilding and nuclear-powered submarine workforce. The STA campus in South Australia will provide optimised training methods through new and existing facilities, systems and training materials.

- Pilot programs from 2023, including skills for nuclear environments; cross-skilling and apprenticeship-based learning from 2024; and facilities from 2027–28.
- Facilities designed to support up to 800–1,000 learners of all skill levels, per year from 2027–28.
- 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.

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.

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.

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 (ADF) 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 ADF personnel with relevant skill sets.

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

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.

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.

Strategic Communications and Outreach Plan

To 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.

Figure 4 – initiatives across the learning journey

Implementation and governance

A continued strong partnership between and investment from the Commonwealth and South Australian governments will be required to drive and coordinate delivery of the programs outlined in this Report. Governments will need to work closely with industry, unions, and the education and training sector.

To support coordination and implementation of the Report, the South Australian Defence Industry Workforce and Skills Group will be established to:

- develop a program of work, showing interdependencies and milestones to enable monitoring of progress and reporting of implementation by responsible agencies
- coordinate engagement with industry, unions, and the education and training sector; engagement across government agencies leading program implementation; and ongoing engagement with external stakeholders
- ensure diversity is a key feature embedded in the program and relevant initiatives
- monitor, track and report on outcomes under the Report and enable continued alignment of initiatives and the overall program with industry requirements
- propose updates to the Report to align workforce and skills initiatives with defence priorities, including the need to develop future interventions to respond to workforce data and industry needs
- propose reviews of initiatives to implementing agencies to achieve outcomes of the enduring Action Plan.

The Workforce and Skills Group will be led by the South Australian Department for Industry, Innovation and Science and the Australian Department of Defence.

Appendix A – Diversity and inclusion guiding principles

All the initiatives outlined in the Report have been developed with diversity and inclusion as a core consideration. Both the Commonwealth and South Australian governments are committed to upholding their commitments to workplace diversity and inclusion, and recognise that fostering and promoting greater diversity is critical to success. Greater diversity expands the talent pool; enhances recruitment, development and retention; and improves productivity, problem-solving and decision-making.

The initiatives have been developed consistent with guiding principles and focus on overcoming barriers to participation and providing opportunities for under-represented employee cohorts across all job roles, including in leadership. The guiding principles, exhibited throughout the initiatives, are:

Inclusive language

Avoiding bias, slang, and expressions that discriminate against groups of people, and instead using affirmative, respectful and inclusive language, is more likely to help workers feel welcomed and able to more actively engage in the workplace, which can improve retention and productivity.

Defining diversity goals

Achieving a diverse workforce begins by defining what success looks like and setting goals to achieve this. Setting goals leads to accountability. The goals should be ambitious but realistic and based on data, and backed by specific actions to be taken to meet them.

Zero tolerance on sexual harassment, bullying and discrimination

Everyone has the right to live and work free from harassment and violence. Zero tolerance on sexual harassment, bullying and discrimination means that all allegations are taken seriously, action is taken and there are proportionate consequences in line with an offender's behaviour; and the impact of their behaviour and the wishes of the person subject to the harassment are taken into consideration.

Accessibility

Accessibility allows everyone of all abilities to fully engage with all aspects of an organisation. Ensuring a workplace has an accessible environment is a key contributory factor in workplace inclusion, and this refers not just to physical accessibility but also to digital accessibility.

Unconscious bias awareness

Employees who perceive bias, both conscious and unconscious, against them in the workplace are more likely to seek alternative employment, be less engaged and be less likely to share ideas. Through training and awareness activities, supervisors and employees can learn how to recognise and understand biases they may have, and develop better policies and procedures to mitigate unconscious bias.

Flexible working arrangements and employee benefits

Offering greater flexibility in employment can widen the employee pool by attracting employees who may not have considered working in the selected role or industry, and can create greater job satisfaction and loyalty, which can lead to a strongly engaged and connected workforce.

Diversity in leadership

Diversity in leadership encourages broader awareness and increases the range of perspectives and initiatives being heard and supported. This can improve workplace culture and, through a greater diversity of perspectives being included at the leadership level, create potential for greater innovation. Diversity in leadership can shape organisational culture and can create a sense of trust among employees that their ideas will be heard, valued and acted on.

The South Australian Defence Industry Workforce and Skills Taskforce thanks the stakeholders who contributed to the development of the South Australian Defence Industry Workforce and Skills Report.

The report's publication is a critical first step in the multi-generational effort required to develop a world-class defence industry workforce and meet the nation's strategic needs for the years and decades to come.

The implementation of each workforce initiative identified in the report will rely on continuous collaboration between governments, industry, unions, and education and training providers.

To 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

defence.industry.sa.gov.au

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Australian Government

Government of South Australia