## DEFENCE STATE SECTOR STRATEGY 2030











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Cover image: The Hunter class frigates will be among the world's most advanced anti-submarine warfare frigates, and represent the biggest surface shipbuilding project in Australia's defence history. Image courtesy of BAE Systems Australia.

This page: Institute for Photonics and Advanced Sensing, University of Adelaide.



# WHAT CAN WE EXPECT BY 2030?

Success in submarine construction, maintenance and design. The state is established as the premier location for information warfare.

World-class infrastructure at Osborne is delivered.

At Osborne North, the future nuclear-powered submarine fleet will have commenced construction. Whilst continuing full-cycle docking, ASC will have delivered the first of the life-of-type extensions to the Collins class submarines, providing the nation with ongoing submarine capability well into the 2040s.

RAAF Base Edinburgh will be firmly entrenched as the operational hub for information warfare for the Australian Defence Force with the P-8A Poseidon, Triton and electronic warfare aircraft supporting the intelligence enterprise.

The newly completed Osborne South shipyard will be complemented by a brand new submarine construction facility at Osborne North supporting up to 5000 highly skilled shipbuilding employees in the most advanced naval construction facilities on the planet.

Increase to
South Australia's
Army presence and
South Australian
SMEs actively
engaged in the
land sector.

The state's Army presence includes LAND19 capabilities supporting the AIR6500 integrated missile defence project. Increased support will be rolled out for LAND 400 construction and maintenance, LAND 19 and export to international markets.

Upgrades to the state's Defence infrastructure is completed.

The Edinburgh Defence Precinct will include the infrastructure to operate and support aircraft and systems operating in Australia and around the world. Edinburgh Parks will continue to grow to support the growing aerospace, space, land and systems sectors.

South Australia recognised as the place to go for a highly skilled career in the defence industry.

South Australia will be home to the workforce needed to complete naval shipbuilding programs, and complemented by a pipeline of local talent from South Australia's TAFE and University sector—workers will come to South Australia for opportunities in electronic warfare, cyber, and space. South Australia's innovation and technology hubs continue to thrive.

Technology Park, Lot Fourteen and Tonsley Innovation District will provide world-leading support to the industrial transformation required to support next generation defence capabilities connected through a high speed and cyber secure digital network.

Upgrades to
South Australia's
test and training
ranges are
completed.

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The Cultana upgrade will be completed and regularly used as a tri-service training area. Significant upgrades to the Woomera Test Range will continue into 2030, along with upgrades to the town and airfield to support the range capability.

South Australia's defence industry grows in size and sophistication.

The industry will evolve to a world-class capability supporting international defence projects through global supply chain opportunities and export success. New Defence primes will have set up their headquarters or significant operations in the state.

South Australia's surveillance capabilities are unrivalled.

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South Australia successfully delivers key naval shipbuilding projects.

South Australia
is world-renowned
for its defence
research,
development and
innovation.

The upgrade to the JORN will be completed and increased space surveillance will monitor our northern borders from the command centre in the remote sensor unit (RSU).

South Australian industry will have delivered the first two (2) Arafura class offshore patrol vessels to the Royal Australian Navy and two (2) Hunter class frigates, with another two (2) in construction at Osborne South.

The CNRS French Research centre will be established in Adelaide as a hub for world-class R&D in naval shipbuilding. South Australia will lead the development of capabilities in agile C2, information warfare, space, artificial intelligence and machine learning. Line Zero at Tonsley will support technological R&D advancements.

South Australia cemented as the nation's leader in cyber security.

The Australian Cyber Collaboration Centre will be recognised as the cyber training and capability testing centre for Australia, with South Australian SMEs leading the nation in cyber resilience and supply chain readiness.

## **OUR 2030 VISION DEFINED**

By 2030 South Australia will be recognised as an international leader in the defence and space industries.

In implementing this strategy, South Australia, 'The Defence State' will have enhanced its already strong defence industry and established sustainability by building on its highly skilled workforce, world-leading technology and infrastructure and culture of innovation driven by focused research and development.





## AT A GLANCE - SOUTH AUSTRALIA'S DEFENCE INDUSTRY

# South Australia 'The Defence State' is the nation's centre for defence industry capability.

Through innovation, world-class research and development and a highly-skilled workforce, the state's defence industry has a long and proud history of delivering some of Australia's largest and most complex projects.

South Australia's defence industry supports a strong Australian Defence Force (ADF) presence and specialist infrastructure, with key elements of the Capability Acquisition and Sustainment Group (CASG) and Defence, Science and Technology Group (DSTG) located in the state.

Army, Navy, Air Force and reservist personnel, public servants and embedded contractors are a significant component of the total Defence workforce, supported by related industry and supply chain companies.

## Defence and its relationship to the space sector

Defence SA leads the South Australian Government's efforts in the space industry and supports the development SITAEAL Australia are a global leader of the space economy via an integrated project team in the development of next-generation small satellites and satellite electric embedded within Defence SA. The team draws upon expertise propulsion technologies. from the Department of State Development, Whilst many Image courtesy of SITAEL Australia. companies span both the defence and civilian markets, there is a high degree of dual use technology. There is also a significant section of the space industry that does not address the defence market, particularly agile start-up companies in 'NewSpace'. The separate South Australian Space Industry Centre (SASIC) branding was created to ensure support for companies across both civilian and defence markets.

# The state's advantages and opportunities lie in a number of key areas:



South Australia contributes products and services into supply chains for the build and sustainment of defence capabilities. Local expertise includes system integration, software engineering, advanced manufacturing and the test and evaluation of complex systems for the land, sea, air and joint domains. This includes the Land 400 combat vehicle program and Joint Strike Fighter program, in addition to naval shipbuilding and information warfare.



South Australia has its roots in the construction, upgrade, full-cycle docking and life-of-type extension of the Collins class submarine; the construction and delivery of three Hobart class Air Warfare Destroyers; the continuous build of major warships, including two Arafura class Offshore Patrol Vessels, six Hunter class frigates and a fleet of nuclear-powered submarines that will be built at the Osborne Naval Shipyard.



## Research, Development and Innovation

South Australia is home to world-class research and development capability in Hi-Tech sectors. Key activity supports the development, enhancement and construction of major defence capabilities, along with supporting infrastructure, networks and data requirements. A significant number of Defence, Science and Technology Group research divisions are based at the Edinburgh Defence Precinct.



## Information Warfare

RAAF Base Edinburgh is the home of P-8A Poseidon aircraft, Triton unmanned aircraft system, special purpose electronic warfare aircraft, the Jindalee Operational Radar Network and space surveillance systems. The Edinburgh Defence precinct, which includes Defence, Science and Technology Group, is the centre of excellence and operational hub for the development, integration, operation and support of these complex systems.



#### Defence Infrastructure

South Australia is home to numerous key Defence precincts across the state, with major upgrades and maintenance scheduled for the Edinburgh Defence Precinct. It is also home to testing and training ranges at Woomera, Cultana and Port Wakefield.



**Defence SA** – the specialist agency established to grow and support the defence industry sector in South Australia and provide specialist advice to government and industry.

**Defence Teaming Centre –** supports defence industry access to major Defence projects and key infrastructure and IT projects.

**Defence Innovation Partnership** (**DIP**) – drives innovation through defence research and development collaboration. DIP fosters collaboration and engagement between Defence SA, Defence, Science and Technology Group, the University of Adelaide, Flinders University, the University of South Australia and other research organisations and industry.



South Australia is home to a number of key defence industry precincts focused on industry 4.0 technology development including Lot Fourteen, Tonsley Innovation District and Technology Park at Mawson Lakes. These precincts are fast-growing centres of excellence supported by high-speed fibre network connectivity.

Lot Fourteen – specialises in high technology research and collaboration in the areas of artificial intelligence, machine learning and space. Home to the Australian Space Agency, Australian Mission Control Centre, Australian Space Discovery Centre, Australian Institute for Machine Learning and Australian Cyber Collaboration Centre.

**Technology Park** – specialises in complex mission system engineering and integration.

**Tonsley Innovation District** – specialises in industry 4.0 and advanced manufacturing, training and skilling the future workforce and research supporting naval innovation and R&D.

## **INDUSTRY STRENGTHS**



South Australia has a strong history of delivering a highly skilled workforce to meet the needs of major Defence projects, including the Collins class submarines and Air Warfare Destroyers. The South Australian Government is partnering with Defence and industry to ensure it has the skilled workforce in place which is agile and ready to work both directly in key Defence projects and the supply chain.

Work on the nuclear-powered submarine program, combined with a suite of work across all domains, will create more than 10,000 highly-skilled jobs in the defence industry over the next two decades. Through the South Australian Defence Industry Workforce and Skills Taskforce, we have developed a plan to achieve this.



South Australia's defence industry, research organisations and educational institutions team together to find innovative solutions for the Australian Defence Force and defence projects. There is also a significant presence of Defence, Science and Technology Group (DSTG) research divisions based at Edinburgh Defence Precinct.

The state has a long history of success in defence research, underpinned by strong education and industry alliances. South Australian researchers have a culture of cross-university, industry and DSTG collaborations in Australia and internationally. The Defence Innovation Partnership brings these key stakeholders together to act as a catalyst for defence research and development collaboration.



South Australia is home to a critical mass of worldclass industry delivering many of Defence's largest and most complex projects.

Major defence companies across the maritime, aerospace, land, systems and cyber domains have their headquarters or significant operations in the state. A strong core of defence-related SMEs provide goods and services directly to Defence, and deliver into the supply chains of prime contractors in Australia and around the world.

South Australia also has hundreds of other SMEs that supply defence projects with a wide range of services and products.

Seven of the world's top 10 defence companies are headquartered or have a significant presence in South Australia.

"With the major Defence programs based in South Australia the future is very bright. This, coupled with the new-found understanding of the importance of sovereign industry capability, augers well for SA defence SMEs."

Ted Huber, Founder and Chairman - Acacia Systems

## Priority Area Naval Shipbuilding

#### **Overview**

South Australia's world-class, state of-the-art naval shipyard, the Osborne Naval Shipyard, is the location for the construction of two Arafura class Offshore Patrol Vessels, six Hunter class frigates and a fleet of nuclearpowered submarines. It is also home to the full sustainment program for the Collins class submarine fleet and the major upgrade of the combat management system for the Hobart class destroyers.

The state has a unique opportunity to create a sustainable and globally competitive defence industry, while contributing to our nation's sovereign capability.

The submarine and frigate programs are the most complex projects in Australia's naval shipbuilding history and will require industry 4.0 digital manufacturing techniques throughout the supply chains and across other industries such as renewable energy, space and cyber security.

Naval shipbuilding projects are set to create up to 5000 jobs in South Australia by 2030, with thousands of additional jobs in adjacent and support industries.

#### **Actions**

- 1. Develop partnerships between world-class universities and industry to ensure ongoing R&D, ship and submarine design and technology development
- 2. Establish a sustainable shipbuilding supply chain through maximising local industry participation, independent exports and global supply chain export
- 3. Support the establishment of a highly skilled workforce for the shipyard and local supply chain
- 4. Maximise utilisation of the current facilities at Osborne and grow the precinct capability in line with future projects

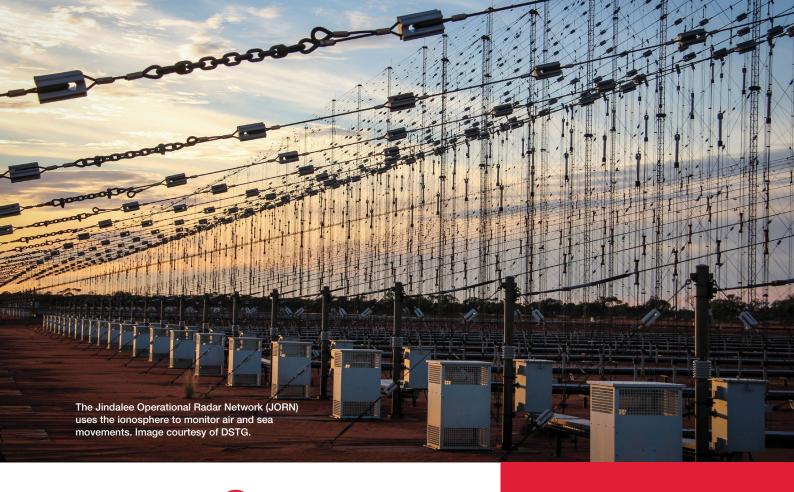
#### Saab Australia

Saab Australia has grown from just five employees when it was established in 1988, to more than 560 by 2020. The company has built a reputation as one of Australia's most experienced and trusted defence and security systems integrators. Its Australian headquarters is located in Adelaide, supported by offices in key delivery areas across the nation. A core element of Saab Australia's experience is its unparalleled history as an Australian combat system specialist, successfully developing and integrating combat systems into eight classes of ships across four Navies. Saab's 9LV provides a highly capable Combat Management System solution. Saab has delivered integrated combat system solutions based around our 9LV product, into Australian surface fleet classes Anzac, Supply and Canberra, and soon into the Arafura Class. The Australian Interface based on 9LV will also be integrated into the Hobart and Hunter Class platforms.

"The South Australian defence industry can expect strong and continued growth over the coming decades. Defence is undergoing a generational change in capability with the largest and most complex projects centred in South Australia."

**Andy Keough CSC** Managing Director Saab Australia





## Priority Area 2 Information Warfare

#### **Overview**

South Australia is central to current and future Defence surveillance capabilities. RAAF Edinburgh is the home of P-8A Poseidon aircraft, Triton unmanned aircraft system, special purpose electronic warfare aircraft, the Jindalee Operational Radar Network (JORN) and space surveillance systems.

Increasingly, all new defence capability requires access to the same high volumes of secure data as part of the next generation Australian Defence Force. Information Warfare mitigates an over-reliance on shipbuilding for industry opportunities and employment as there are multiple projects which rely on local content.

South Australia is well-placed to respond to the national need for increased systems and cyber capability through the development of human capital, regional services, and security product development. If this vision is executed, Adelaide will become the 'central nervous system' of the nation by building a critical mass of knowledge workers and industry.

#### **Actions**

- Secure support for the expansion of the ISREW and cyber operating and processing hub at RAAF Base Edinburgh
- Grow the skilled workforce and increase the number of jobs in the systems and cyber sector in South Australia through the development of a comprehensive STEM pathway through all levels of school and further education
- Establish a sustainable Information Warfare supply chain through maximising local industry participation, independent exports and global supply chain export
- Establish South Australia as an industry leader in the Asia Pacific region for systems, cyber and support
- Stimulate research and development in emerging technologies relevant to systems and cyber
- Maximise utilisation of the current facilities at Edinburgh and grow the precinct capability in line with future projects

#### Leidos Australia

Leidos Australia manages large and complex systems engineering and integration projects; and provides airborne surveillance and search-andrescue services under contract with the Australian Border Force and the Australian Maritime Safety Authority. Leidos employs around 2000 people across Australia with operations in every State and Territory, including its Airborne Solutions operations control hub in Adelaide, South Australia. The company has extensive experience in designing, implementing, and operating integrated technology solutions across civil and defence platforms.

## Priority Area 3 Business Climate

#### **Overview**

The South Australian Government aims to create a business climate that supports local industry in their endeavours to compete for both prime and global supply chain roles in Defence and security projects.

A key sector goal is to increase opportunities for local manufacturing by demonstrating the South Australian defence industry's resilience to an economic crisis (pandemic, environmental or regional conflict).

The response to COVID-19 will create both risks and opportunities for South Australia's defence industry. An increased appetite for locally manufactured defence components will result in a strengthening of local capability development and content.

#### **Actions**

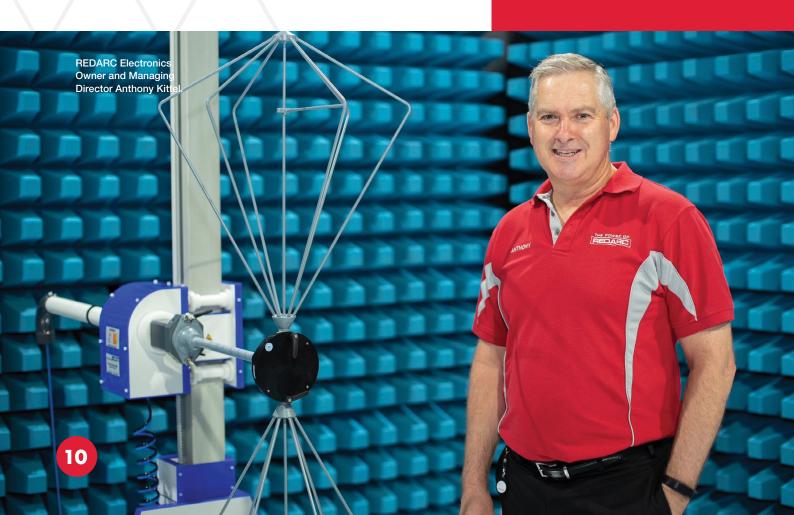
- Promote a sovereign submarine and naval shipbuilding capability by advocating for the transfer of relevant science, technology and intellectual property to Australian industry
- Advocate for greater supply chain resilience and the need for greater sovereign defence industry capability for the nation
- Advocate for South Australia's position as the home of Information Warfare and the Air Warfare Centre Distributed Ground Station Australia
- 4. Contribute to the debate on future Australian supply chain security and resilience
- Ensure South Australia continues to be the most attractive and cost-competitive location for defence business development

#### **REDARC Electronics Pty Ltd**

REDARC Electronics was established in 1979 as an Australian-owned, advanced manufacturer which now employs over 350 staff. The company manufactures electronic solutions for the automotive, transport, mining and defence industries. After making the strategic decision to enter the Australian and global defence market in 2015, REDARC now has a number of strategic partnerships across the defence industry. In 2019 the company established REDARC Defence Systems, a dedicated business to meet the growing needs of the defence industry. REDARC is now supplying battery monitoring and power management solutions to defence platforms globally.

"Industry 4.0 brings with it the exciting advancement of interconnectivity between devices, equipment, tools, visualisation systems, and their human users within the REDARC manufacturing system. Through this highly skilled deployment, I am confident that REDARC will continue to support the development of our Defence customer supply chains."

Anthony Kittel
Owner & Managing Director,
REDARC Electronics





## Priority Area 4 Trade

#### **Overview**

The South Australian Government strives to identify and maximise the opportunities for local industry to undertake independent and global supply chain export.

Defence SA supports industry through a number of international trade missions, often in conjunction with the Department of Defence 'Team Defence Australia'.

This enables defence industry participants to be supported by the Australian Government's defence export platform, including support from Australian Defence Attaches in key export locations.

#### **Actions**

- Showcase the defence industry and education sector at targeted international exhibitions and through Team Defence Australia events and trade missions
- Utilise South Australia's overseasbased positions to engage with international defence industry through targeted specific trade missions to engage the existing international supply chain in key projects
- Continue to work with the Australian Government, Austrade and the Department of Defence to promote trade opportunities for the defence industry in Australia and overseas
- Advocate for major defence projects to provide export opportunities for South Australian companies in their global supply chains
- Support South Australian industry to successfully contribute to current major Defence projects and develop their capability to seize export opportunities and contribute to global supply chains

#### Supashock

Supashock has grown from just 3 employees in 2005 to employ 80 people in 2020 as a world-class producer of advanced mobility, logistics and autonomous systems that control, monitor and improve efficiency of defence, autonomous, motorsport, commercial, automotive and other transport vehicles.

Supashock is a Tier 1 supplier within automotive and motorsport industries, on the back of this high level work, synergies were aligned into the defence industry.

Supashock's largest partner is Germany's Rheinmetall Defence and since partnering with Rheinmetall, they have developed mobility systems for defence forces globally.

The company's strategy moving forward is to continue to globalise and develop in advanced technology industries. They now have operations and personnel in the USA and Europe where they export globally in advanced autonomous and mobility systems.

"I believe the future of South Australia's defence industry is the ability to demonstrate that we can grow our sovereign industrial capability through the education and development of young people into highly skilled jobs that prevent them from wanting to go overseas or interstate."

Oscar Fiorinotto
Managing Director, Supashock

## Priority Area 5 Investment



#### **Overview**

Attracting defence and space industry investment in South Australia stimulates economic development while increasing the capability of local industry. International companies also bring new capabilities to the local market. By aligning local research with the future needs of the defence industry, additional opportunities can be created.

#### **Actions**

- 1. Establish the International Research Laboratory at Lot Fourteen
- 2. Continue to promote Lot Fourteen as a centre of defence and space innovation, Tonsley as a centre of advanced manufacturing and Technology Park as a centre of software and systems engineering
- 3. Build defence industry presence to support and sustain air, land, sea and joint capabilities

#### **Boeing Defence Australia**

Boeing Defence Australia (BDA) has more than 2500 employees at 14 domestic and three international sites. BDA set up operations in South Australia in 2015, with the state's strong defence and space environment, and broad and experienced talent pool, key drawcards for the move. Today BDA has over 300 people employed in the state, with around half supporting the P-8A Poseidon at RAAF Base Edinburgh and the other half at their Capability Hub in the CBD. The company expects to experience continued growth in South Australia to meet local and broader business opportunities.



## Priority Area 6 Workforce and Skills

#### **Overview**

South Australia must ensure it has the volume of workers with the required skill levels and experience to meet the demand for upcoming roles in naval shipbuilding, information warfare and the sector more broadly.

This will require a collaborative effort across the South Australian and Australian Governments, VET providers and local universities and Defence primes.

South Australian Government has proactively addressed the workforce development challenge through the establishment of the South Australian Defence Industry Workforce and Skills Taskforce.

#### Actions

- Collaborate with the university and VET sectors to provide education and training that spans both sectors and capitalises on the best of both
- Engage with defence industry in South Australia to ensure their workforce requirements are fully understood and education and training is tailored to suit the demands of industry
- Map the workforce of the future and contribute to the development of skills pathways supporting defence industry
- 4. Leverage adjacent sectors to support a sustainable and robust future workforce plan

# South Australian Defence Industry Workforce and Skills Taskforce

In September 2022, a joint State and Commonwealth South Australian Defence Industry Workforce and Skills Taskforce was established to ensure defence projects in South Australia will have a highly skilled workforce to draw on.

In November 2023, the Taskforce released a Report and Action Plan detailing 22 targeted initiatives following close collaboration between the Australian and South Australian Governments, in consultation with defence industry, unions and education providers.

The integrated workforce plan will generate a pipeline of STEM graduates and trade apprentices, increase participation of underrepresented cohorts, increase awareness of defence industry careers, support mid-career transitions, and deliver a new Skills and Training Academy at Osborne. Workforce initiatives also include international embedment programs and opportunities to facilitate skills and knowledge transfer between partner nations.

South Australia is focused on growing a pipeline of skilled workers to meet the future needs of the defence industry.



#### \$58 million investment

South Australian Defence Industry Workforce and Skills Taskforce Action Plan delivery.

\$59m

From the Australian Government

\$19m

From the South
Australian
Government



## Over 11,000 defence industry workers

Estimated defence industry workforce in the 2040's including direct jobs and supply chain.



## 4,000 to 5,000 jobs to deliver SSN-AUKUS

Estimated number of jobs created to build a new fleet of SSN-AUKUS submarines in South Australia.



### 4,000 construction workers

Estimated number of additional workers required to design and build the SSN-AUKUS submarine construction yard at Osborne Naval Shipyard.

## Priority Area Research, Development and Innovation

#### **Overview**

A robust and resilient defence industry with a capable SME sector requires a strong education and research base. South Australia prides itself on being visionary and creative. Establishing a collaborative environment in which defence-relevant research, development and innovation can take place is a high priority.

Universities and industry around Australia have been increasing their collaboration and engagement with Defence, and SMEs are presenting exciting opportunities to expand innovation and research activities beyond the existing work of the Defence primes.

#### **Actions**

- Strategic foresighting to inform and shape the research priorities of South Australian universities and industry to address the opportunities in the coming decades
- 2. Grow collaborative research activity across universities, industry and government through continued funding of the Defence Innovation Partnership
- 3. Align and enhance South
  Australia's research strengths to
  build scale in research activities
  as informed by Excite South
  Australia's science, research
  and innovation strategy and the
  growth opportunities
- 4. Focus national and international research relationships and collaborative activities to unlock research investment from defence companies in support of South Australia's growth opportunities

## Defence Innovation Partnership (DIP)

The Defence Innovation Partnership (DIP) is a collaborative initiative of Defence SA, Defence Science and Technology Group and South Australia's three public universities, the University of Adelaide, Flinders University and the University of South Australia.

DIP delivers innovative solutions to Defence by creating connections between researchers, industry and Defence. Building and supporting defence-relevant research collaborations through the Collaborative Research Fund and Activator Fund, DIP attracts research and development funding to South Australia and supports the translation of defence and national security research and development.



#### **Activator Fund**

Launched in 2023, the \$4.8 million Activator Fund builds on South Australia's research and development strengths and is designed to speed up the translation of innovative defence technology into real world capability for the Australian Defence Force.

To date, the Activator Fund has supported 1 collaborative project providing \$1.6 million for the project, Enhancing the RAN's Undersea Surveillance Minimum Viable Capability which aims to improve operational performance by increasing the accuracy and range of automatic detection, tracking, and localisation of undersea threats.



## Collaborative Research Fund

Launched in 2018, the Collaborative Research Fund supports collaboration across government, universities and industry as a catalyst for defence-relevant research, development and To date, the Collaborative Research Fund has supported 35 South Australian-based projects, providing more than \$3.4 million in financial support from state government, leveraging \$10.8 million from Commonwealth, industry, and university contributions.



## Priority Area 8 Infrastructure

#### **Overview**

South Australia is home to a significant presence of Defence infrastructure including the Edinburgh Defence Precinct, Woomera Range Complex, Cultana Training Area and Port Wakefield Proof and Experimental Establishment.

The state has also established significant infrastructure in support of Defence and other technology industries, including the Osborne Naval Shipyard, Lot Fourteen, Technology Park and Tonsley Innovation District.

South Australia is committed to supporting the development of Commonwealth infrastructure and the state's technologically advanced industry precincts.

#### **Actions**

- Continue to work with relevant stakeholders to ensure the ongoing viability of the Edinburgh Defence Precinct and to minimise encroachment on the RAAF Base
- Continue collaboration with the Australian Government and key stakeholders on the expansion of the Osborne Naval Shipyard, adjacent precincts and supporting transport infrastructure
- 3. Ensure the expansion of Lot Fourteen is designed to support the needs of potential defence tenants
- 4. Support the future development of the testing and training ranges at Woomera and Cultana
- Advocate for the development of the ISR precinct at Edinburgh, and data storage and distribution capabilities connecting all defence and industry precincts
- Ensure secure data storage,
   networks and infrastructure enhance
   the defence industry ecosystem



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