Defence Business Sur 55 May 2022

NationalNa



Defence Teaming Centre Connecting • Developing • Advocating

Boylen +



THE LIGHTEST AND MOST TECHNOLOGICALLY ADVANCED STRUCTURAL FIRE PROTECTION SYSTEM IN THE WORLD

Ideal for structural fire protection of vehicle decks, engine rooms, hangars, storage rooms, duty free shop areas and any other "A" class space.

- Lightweight
- Non intumescent
- Non Combustible
- Hydrophobic system
- Reversible panel Double lifespan
- Robust & versatile Applicable for Engine rooms
- Fast Installation
- Fully washable facing
- Low maintenance
- **Corrosion resistant system**
- Excellent acoustic & thermal properties
- IMO compliant
- Rapid Access® Composite SFP

A-60 CLASS FIRE DIVISION

RAC^{PLUS} (RAPID ACCESS COMPOSITE ^{PLUS})





www.cbgsystems.com

In This Issue

05 From the Desk of the CEO

06 INDO PACIFIC 2022 Records Set to Tumble at Pacific

08 A U K U S Nuclear Subs to Be Hot Topic at INDO PACIFIC 2022

> **12** MEMBER FOCUS CAS Growth Insights

16 DTC: Building Collaboration and Long-Term Defence Relationships for 25 Years

> **19** The Program Spanning Army, Navy and RAAF

21 S K I L L S The DNA of Shipbuilding

24 Defence Industry Leader Program (DILP)

27 S K I L L S Building Australia's Naval Shipbuilding Capability, One Career at a Time

> **30** The RSB OPK9 Program

32 Taking the Financial Initiative

33 A U K U S Minister Touts 60% Local Content for Nuclear Subs 34

Providence Consulting Group: Committed to South Australia

35 Negotiating Defence Contracts

36 DTC Member Capability Guide

41 Wire Additive Manufacturing for Shipbuilding

42

DTC Sponsors, Prime Members, Charities of Choice and Associate Members



In the beginning – Mick O'Neill chronicles the establishment of the Defence Teaming Centre.



The AIR5428 program, bringing together all arms of the ADF -Army, Navy and Royal Australian Air Force (RAAF) - has already graduated more than 70 pilots.

 \bigcirc

Defence Teaming Centre

Lot Fourteen, Margaret Graham Building Frome Road, Adelaide SA 5000 08 7320 1000 www.dtc.org.au **CEO** Audra McCarthy

COVER CAPTION

USS Hawaii, a Virginia Class United States submarine makes her way to berth at Diamantina Pier, HMAS Stirling, WA.

DTC BOARD OF DIRECTORS

Kevin Beaulne - Boeing Defence Australia Tim Dore - Defence Teaming Centre (Secretary) Francesca Doyle - Codan Communications Sean Flaherty - GPA Engineering Mike Hartas - REDARC Lee Houlson - Lockheed Martin Australia (Vice Chair) Frederick Hull - Axiom Bec Humble - Nova Group Tony Kyriacou - Flinders University Andrew McCauley - Saab Duncan Milne - Babcock Australasia (Treasurer) Wendy Smith - Vipac Engineers & Scientists Adam Watson - BAE Systems Australia (Chair)

Boylen +

THIS MAGAZINE IS PUBLISHED BY BOYLEN FOR THE DEFENCE TEAMING CENTRE 08 8233 9433 www.boylen.com.au

ADVERTISING ENQUIRIES

sales@boylen.com.au
DESIGNERS

Madelaine Raschella Elliott Henry Rivera

PHOTOGRAPHY Department of Defence FREQUENCY

Bi-annual ISSN 1836-9502 DEFENCE TEAMING CENTRE

CHARITIES OF CHOICE Legacy Club of Adelaide Returned and Services League of Australia (SA) Royal Society for the Blind The Repat Foundation - The Road Home

Defence Teaming Centre is not an agent or part of, nor affiliated with, the Australian Government or the Department of Defence.



2022

Dinner & Awards Ceremony

Thursday, 3 November Adelaide Convention Centre

Celebrate the achievements of defence industry and be part of a memorable night as we announce the winners of the four prestigious DTC awards and reveal the recipient of the DTC's Chair Award.

Time: 6:30pm Welcome Reception and 7:30pm Dinner

Tickets: \$250 for DTC Members or \$350 for Non Members

DTC Member Branded Table of 10: \$2,250 includes company logo featured on the table stand

Non Member Table of 10: \$3,500

Enquiries: events@dtc.org.au

Visit DTC's website for tickets & details: www.dtc.org.au

ViPAC ©rsb === | 0PK9

Guest Speaker: Dr Brendan Nelson

President of Boeing Australia, New Zealand and South Pacific

BOEING



FROM THE DESK OF THE CEO

Audra McCarthy, Chief Executive Officer

Welcome to the DTC's 2022 Indo-Pacific edition of Defence Business. After a three-year break between events, we are excited to see the INDO PACIFIC 2022 event proceeding. International events such as this, gives Australian industry affordable access to both domestic and international opportunities from the convenient location of Sydney. The in-person networking and learning experiences offered by this event are invaluable to industry and we are looking forward to the opportunity to engage with members, stakeholders, Defence and government in the single location.

This edition includes a number of exciting updates on our members such as exclusive insights into how Customs Agency Services grew their defence portfolio. We also cover an update on the AUKUS agreement and the AIR5428 program. Lastly, we also take a stroll down memory lane as we celebrate the 25year history of DTC. In 2021 we celebrated 25 years of collaborating and teaming in South Australia for Australia's defence industry. I for one am thankful to our founding members, government and Defence who launched what was considered, at the time, a leading industry engagement model. Today, the DTC continues to go from strength to strength with our organisation considered to be the peak defence industry body for connecting, developing and advocating for Australia's defence industry. Over the years, we successfully advocated for

- The reversal of the government decision to support ships and submarines being built in Australia by Australians
- Greater provision of support and advice to Australian SMEs helping them navigate the defence sector¹
- Reforms to grant programs to make them more accessible and easier to manage by SMEs
- Changes to DISP to give industry access to DISP prior to a defence contract being awarded

These changes have not only delivered significant value

to our members, but Defence and the wider defence supply chain.

Having been in business for over 25 years, we are pleased to celebrate the support provided by our 20+ year members, Mincham Aviation and Saab Australia. Interestingly over 20% of our members have been with us for greater than 10 years, with nearly 70% of those having been a member for over 15 years, this is testament to the value provided to our broad membership base. It is a staggering figure, given the challenges presented to industry from operating in the defence sector, including defence spending booms and busts, long bid cycles, program cancellations and changing certification requirements. Our membership community continues to grow with representation across the spectrum of the Australian industrial base, with the primary reason companies joining the DTC being for our unique ability to connect and develop industry.

As this magazine edition goes to print, we are concerned by the recent announcement to cancel the AIR7003 program to fund the Red Spice

program. This is the second defence program to be cancelled adding to the escalating sunk costs incurred by industry in engaging the defence sector. Of greatest concern to the DTC is the impact of these decisions on tiers 2 and 3 of these program's supply chains. These tiers are typically comprised of SMEs who are in negotiation with the prime or have an MOU with the prime but are yet to sign a contract. These are businesses who have leaned forward to invest at risk into their business to scale up for the impending work, only to lose it all overnight through one government decision.

It is now apparent that our approach to creating a sovereign defence industrial capability needs reform. Our current approach is focused on maximising opportunities for Australian industry to compete, however, this approach is increasing the financial pressure on defence industry and will sound the deathknell of sovereign Australian defence industry. Industry is accepting inordinate amounts of risk to bid on defence programs and SMEs, who are typically forced to compete on price alone, are not compensated for this risk.

The traditional approach to supporting industry is through grants. However, growing capability, experience and knowledge and making this world leading and efficient requires repeated application. Our sector needs purchase orders which allow industry to invest, grow and become more efficient. The DTC will be making submissions to Defence and government on how procurement policies need to change to better support this.

In closing, DTC members have continued to go from strength to strength and we are looking forward to working closely with members and the wider defence community to continue building a well-rounded defence supply chain that will form part of Australia's greater sovereign eco-system. As we look towards securing a bright future for defence industry I would like to reflect on the achievements of our members, the innovative solutions we have created and the obstacles we have overcome. It is important we commemorate these milestones as we can sometimes get into the habit of only focusing on the bigger picture, and this can get overwhelming. By celebrating achievements, we are not only highlighting our successes to our peers, but we are inspiring each other and continuing to learn and adapt in this continually challenging landscape.

This year's Dinner & Awards Ceremony we will be commemorating DTC members who have been innovative, resilient and collaborative. I encourage all members to submit an application into the award category which applies to their businesses. Applicants who make it to the final round of judging will have their success story shared with the wider defence community at our annual awards night in November. We look forward to celebrating with you all then.

¹Providing the creation of the Centre for Defence Industry Capability was established, which is now known as the Office for Defence Industry Support (ODIS).

1111/202

0

8

1

MAREE

HMAS Ballarat's MH-60R helicopter prepares to launch during a Regional Presence Deployment in the Indian Ocean.

Records Set to Tumble at Pacific

Records toppled left, right and centre at PACIFIC 2019, cementing it as the premier international maritime exposition for the Indo-Asia-Pacific region.

This year, the event is again set to create new records as it taps into pent up demand following the lifting of many Covid restrictions.

The Expo will showcase 700+ naval defence and commercial maritime organisations from around the world.

The conference program will feature 50+ conference sessions, presentations, forums and symposia from leading maritime organisations including the Royal Australian Navy.

The program covers a range of topics from the spectrum of opportunities and issues currently facing the maritime industry, academia and government within Australian and the Indo-Pacific region, including shipbuilding and sustainment, nuclear technology, autonomous drone use in the maritime sphere, emergency response and many more.

Major stakeholder conferences include:

- Sea Power Conference 2022 will focus on Australia and the Indo-Pacific, Grey Zone operations at sea and the Maritime Ecosystem (industry, technology and education).
- IMC2022 will focus on the latest developments in marine engineering and maritime technology; both in the areas of defence and commercial shipping.
- AAUS Conference focus on applications and issues for uncrewed vehicles in the maritime domain.

Pitchfest and Awards

The popular Innovation Pitchfest is back. It features a series of three-minute presentations from defence, academia and industry, to an audience of potential customers, research partners and venture capitalists. Eleven Australian innovators from both the defence and civil sectors have been shortlisted for the prestigious INDO PACIFIC 2022 Innovation Awards, worth \$30,000. Among them are a company manufacturing flameresistant wall insulation panels for ships that both increase protection and reduce weight; and a company using artificial intelligence to examine every frame in the video feed from a maritime surveillance sensor to detect sub-pixel targets the human eve can't see.

Meet Key Delegates

INDO PACIFIC 2022 will again feature an extensive delegations management system designed to help exhibitors and delegations to connect and coordinate business engagement.

The RAN will invite navy chiefs and senior navy leaders from around the world to attend. In the order of 35 countries are expected to participate. With the support of other Australian government agencies and a range of civil industry stakeholders, invitations were also being extended to international leaders in defence equipment acquisition and materiel, marine transport, security, environmental affairs, cargo handling, port services and maritime technology across the globe, with particular emphasis on the Asian and Indo-Pacific regions.

Nuclear Subs to Be Hot Topic at INDO PACIFIC 2022

INDO PACIFIC 2022 is being staged at one of the most pivotal peacetime moments in Australian defence history.

The impending Federal election – dubbed by some as a "national security election" - has seen an escalation in the tension over the future of the nation's submarine fleet. Although there is bipartisan support for the AUKUS nuclear submarine pact, areas of contention include Australian content, the time it will take to have Australian nuclear powered subs in the water and what the plan is for the interim.

There have been suggestions of an early announcement on key decisions relating to the project. The Canberra Times reported it was being "fast-tracked", quoting Defence Minister Peter Dutton as saying revealing the design of "which boat we are going with" is to be made "within the next couple of months."

As we go to print, there has been no such news.

Chief of the Nuclear Powered Submarine Taskforce, Vice Admiral Jonathan Mead, has been consistent in his messaging that Australia needs to develop a robust sovereign capability.

"We can only move forward and contribute more to our region's stability, security and prosperity if we commit to

build a robust, resilient and internationally competitive Australian defence industrial base," he said.

"This will advance Australia's economy and create and sustain thousands of Australian jobs."

As to the location, he went on to say that "the Government has outlined its intention to build these submarines in Adelaide.

"This is with the backing of a strong sovereign defence industry."

After a site inspection last December, Vice Admiral Mead stated: "I think it is likely that the site will be Osborne."

Minister for Defence Industry Melissa Price is on the record as saying the agreement will create "decadeslong opportunities" – but also acknowledged that "with a change of this magnitude, there will also be some challenges during the transition period".

It is these challenges that has some in defence industry nervous.

There is no argument that Australian defence industry will benefit greatly, it is uncertain how much work will flow through to local companies.

The build strategy will have a large bearing on this.

The Australian Strategic Policy Institute includes this in a report it has published that highlights some of the issues facing the project. The joint authors are Andrew Nicholls who has been a senior adviser to three defence ministers, Jackson Dowie - PhD in nuclear physics and Dr Marcus Hellyer, ASPI's senior analyst for defence economics and capability.

They state that while much of the mainstream commentary is around the choice of submarine, the most important decisions revolve around which country to partner with (US or UK), followed by "the submarine design, about the build strategy, about the schedule, and more."

"Those choices will involve hard prioritisation decisions about what's most important. Is it capability, schedule, Australian industry content or something else?"

The authors go on to posit: "A fundamental choice is the build strategy. The government has stated that the SSNs will be built in Adelaide; however, it hasn't committed to a continuous build.

"A continuous-build approach (one driven by a schedule designed to replace the first boat after around 30 years with no break in production) is appealing to Australian industry and current and future workers but would

INGENIA

ENGINEERING \checkmark FABRICATION \checkmark MEET THE SMART GROUP

The Smart Group are industry professionals, offering specialised engineering design and fabrication services through partnered companies Ingenia and Smart Fabrication.

By collaborating to utilise the vast experience that exists across both teams, the Smart Group delivers innovative, reliable and world-class solutions that are tailored to the unique requirements of Defence.

Smart Fabrication and Ingenia: Individually strong, **POWERFUL** together.

- 🖾 enquiries@ingenia.com.au 🌐 www.ingenia.com.au
- sales@smartfab.com.au () www.smartfab.com.au

INGENIA

face many challenges - boats would be delivered on an inefficient three- or even four-year drumbeat, driving up cost and increasing the capability gap.

"Alternatively, an 'economic' approach that focused on the most efficient possible approach would deliver capability faster but require massive annual spending and produce the prospect of a 'valley of death' at the end of production.

"Either approach replicates a nuclear-submarine production capability in Australia as our own sovereign cottage-industry version of what the UK and the US already have."

On the announcement last year, Chief of the Nuclear Powered Submarine Taskforce, Vice Admiral Jonathan Mead, said:

"There has been much speculation about the nuclearpowered submarine program since its announcement on 16 September – which boat design will be selected? How much it will cost? When will construction commence? How long it will take?

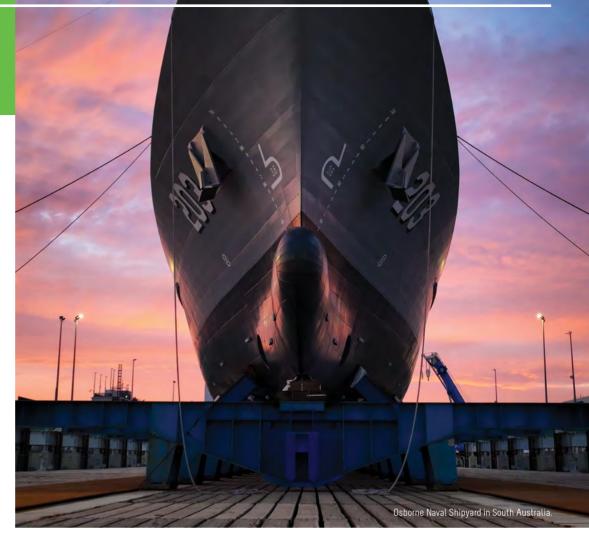
"It is important to understand that acquiring a fleet of nuclear-powered submarines is a multi-faceted task and requires significant input from a wide range of





Sovereign Capability & Sustainment

High-spec equipment for the extreme environment



stakeholders. It is not an overnight task. Australia has never undertaken a capability acquisition of this scale.

"The 18-month period of intensive consultation, which has already commenced, is imperative."

It is a defined period that will allow us to work through the key questions with experts in industry, academia and Australian nuclear organisations to inform the Government's decision on the future nuclear-powered submarine program.

The Federal Opposition has made a point of emphasising "the 20-year capability gap" and asked the government, do they have a plan, are they talking to our American and UK counterparts.

These questions are yet to be answered.

In the meantime, the Morrison Government has pushed ahead with in other areas, announcing that a new submarine base would be built on the east coast of Australia to support the nuclear-powered submarines.

It says the new Future Navy Base will add capacity and capability to Fleet Base West in Western Australia, home of the Navy's Collins-class submarines, which will also receive significant funding to support Australia's nuclear-powered submarines and enable regular visits from the United States and United Kingdom's nuclear-powered submarines.

The Department of Defence estimates that more than \$10 billion will be needed for facility and infrastructure requirements to transition from Collins to the future nuclear-powered submarines, including the new east coast submarine base.

"Under our AUKUS partnership with the United States and the United Kingdom we will have access to the best technology in the world to support our efforts to deter threats against our national interest in the Indo-Pacific," said Prime Minister Scott Morrison.

"This new 20-year investment is vital for our strategic capabilities, but it will also provide long-term economic opportunities at both our submarine bases on the east coast and on the west coast."

Three preferred locations on the east coast have been identified, being Brisbane, Newcastle, and Port Kembla. At the announcement, Minister for Defence Peter Dutton said the new base "will ensure Australia has the infrastructure and facilities ready to support those submarines when they enter service."

Political Goodwill

No matter the outcome of State and Federal election, there is strong bipartisan support for AUKUS.

Federally, Opposition Leader Anthony Albanese has reiterated that AUKUS would not have proceeded without Labor's backing, which was a "precondition of American support".

During South Australia's election campaign in March, Labor's Peter Malinauskas said he thought there was "a lot of merit" in developing a nuclear industry around the AUKUS security pact arrangements. Since he made those comments, he has been elected State Premier.

The scientific community is also touting the benefits of AUKUS. Australia's Chief Defence Scientist, Tanya Monro, said it would open up markets "for smart Australian companies, and it opens opportunities for Australian researchers to work much more intimately within those three countries".

In February, the Financial Review reported: "In November (20210), the federal government said it would invest \$70 million in a quantum technology commercialisation hub that would help Australian businesses collaborate inside AUKUS.

"Michelle Simmons, the former Australian of the Year who leads the effort at the University of NSW to build a quantum computer out of silicon, said she viewed the emerging rules about whom technologists could and could not collaborate with as an overwhelming positive for Australia's quantum technology sector."

More AUKUS news on page 33.

(L-R) Chief of the Defence Force General Angus Campbell AO, DSC, Secretary of Defence Greg Moriarty and Prime Minister of Australia the Honourable Scott Morrison MP, during a press conference to announce the AUKUS alliance and nuclear submarine acquisition at Parliament House, Canberra.



It is worth remembering the sage advice of Dr John Coyne, Head of the Northern Australia Strategic Policy Centre, who wrote of the risks and rewards in the last issue of this magazine. His points included:

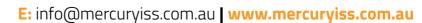
- "The news that Australia's future conventional submarine fleet will go nuclear is probably the most significant defence capability announcement in a generation," he wrote.
- "For industry, the impacts are worrying. Almost overnight, 40 per cent of the government's investment in local shipbuilding disappeared."
- "For the defence industry, the next five years look to be a very uncertain time. But this isn't all bad news. There'll be rewards for those companies able to pivot at speed and scale to support a rapidly changing market with yet to be defined demands."
- "For those that can establish strong collaborative and agile networks of SMEs, there'll be abundant opportunities. But there will be no room for regretting the past, nor time to linger thinking in the moment."

TRUSTED, CONFIDENT, SECURE

Mercury is one of Australia's leading independent cyber security firms, providing assessment and assurance services throughout the defence industry.

- Penetration testing
- Accreditation support
- Technical advisory
- support Cyber secur
- Cyber security uplift
- MERCURY CALL AND A CAL

yber security upliftere



DNV Verified SOW Davit Arm printed using WAM® for Austal

With Lloyd's Register, DNV-GL and the American Bureau of Shipping introducing accreditation and certification pathways for metal components made by additive manufacturing, it is now easier for you to improve your supply chain with AML3D and Wire Additive Manufacturing (WAM[®]).

You too, can have metal components that are made:

- By a proven, certified⁴ additive manufacturing process
- 50% more resistant³ to metal fatigue
- Up to 2 x stronger1 than designed working load
- Using material that is up to 30% stronger² than traditionally cast or forged parts
- Manufactured up to 75% faster⁵ than forging or casting without tooling investments
- Up to 95% material waste saving⁶ when compared to billet machining

Improve your metal part supply chain today!

Call +61 8 8258 2658 or email info@aml3d.com





+61 8 8258 2658

info@aml3d.com www.aml3d.com



WAM[®]: Wire Additive Manufacturing. Aust. Patent 2019251514. AML3D[®], WAM[®], WAMSoft[®], ARCEMY[®] are all registered trademarks for AML3D Limited. Image: Austal Davit Arm used with permission from Austal. Panama Chock Demonstration Piece produced for AML3D display. 'Product received verification from key industry body. Learn more: https://bit.ly/3ElEaiK ²Intertek a National Association of Testing Lab: Learn more: https://bit.ly/3jiOAVn 4AML3D internal study. *Certified through Lloyd's Register, with ISO9001:2015 QMS, AWS D.20 and BizSafe3 compliance. ⁵Demonstrator WAM[®] Pipe Spool Learn more: https://bit.ly/3Gyhqw0 *Demonstrator WAM[®] Propeller Project completed with 50kg deposition compared to traditional Subtractive Raw Material of 462kg to make 22kg finished part. 2022-03-28 AML3D Defence Business FP

AML3D optimised DfAM Panama Chock

CAS Growth Insights



Starting a new business venture is not an easy thing to do, there are obstacles that can make or break you. Many of us are familiar with the challenges that come along with building a successful business, although the specifics of these challenges look different for almost every company business can learn how to avoid the most common struggles from their peers.

If you are a manufacturer you are probably familiar with Customs Agency Services (CAS), led by second generation siblings Louise Rigoni and Mark Callus. Established in Adelaide in 1976 as a custom clearance and freight company, CAS has worked diligently to build a national business that is supported by a network of global freight partners in over 2000 international locations. The team at CAS have also recently won their industry's highest accolade as Australia's International Freight Forwarder Of The Year for the third time.

CAS oversees a diverse portfolio and specialises in defence, aerospace, general freight and e-commence logistic solutions. In 2019 they were listed as one of the top 20 SME's in the defence sector in the Australian Defence Magazine, and have continued to make this list every year since.

One of CAS's most notable achievements has been their ability to overcome businesses challenges in one of the most disrupted logistics environments since World War II.

"Our customer diversity was really important for us, it has enabled us to shrug off recently cancelled major defence projects and pursue other defence and aerospace, general freight, and e-com opportunities," Mark, Director of CAS said about how they have continued to be recognised as a Top 20 Defence SME year after year.

"Defence is very patchy, even when it is going very well, you might find that one year there is a lot, and the next year there is not. The abrupt cancellation of the \$90B Future Submarine Program in 2021 and the cancellation of the \$1.3B SkyGuardian Program in April 2022 reminds us all of the importance of diversity, not only with the industry your normally involved with but diversity within defence by having different defence customers, and different domains in air, land and sea."

CAS's ambitious path into the defence sector began ten years ago, but the spark was lit thirty years prior in the early 1980s when CAS was contracted by a defence prime to undertake customs clearance and freight work. As with all work undertaken by CAS the move into the defence sector was not taken without a considered approach. Their first

strategic step was to look at the service they were offering and find out if it was good enough to succeed. Second to that was to invest into their people and make sure their skills meet the needs of Defence.

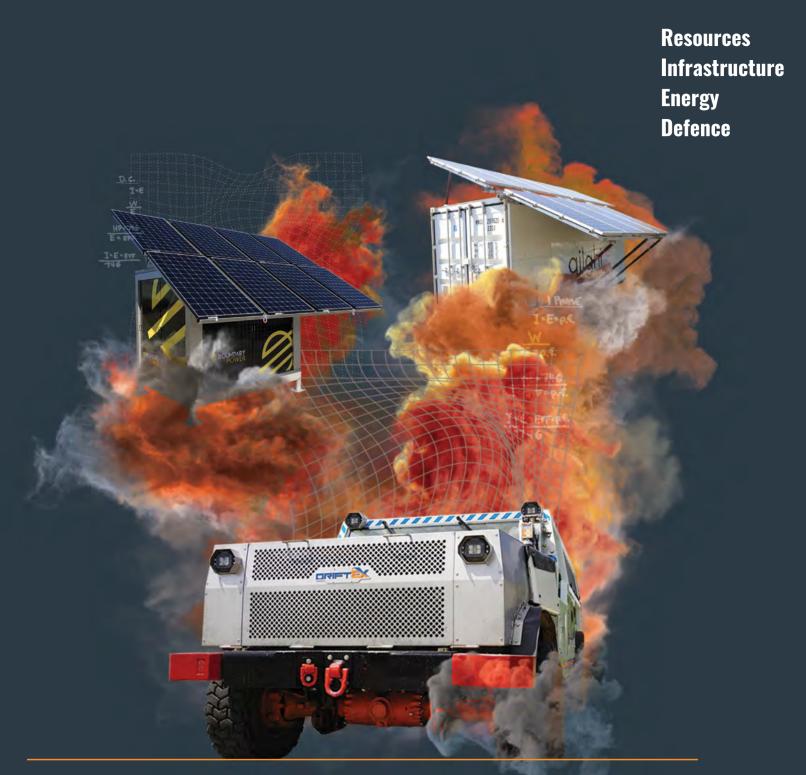
Fast-forward to today and CAS's defence portfolio has grown from 2.5% to anywhere from 25% to 50% depending on the programs going at the time.

"I think defence is one of those areas, with any area of business, if you are passionate about it you can make it happen, because when you go through those lean times it is not just the leanness of it all, you remember why you are doing it, because you actually enjoy it and you can see the long term future for the business and the opportunity and challenges it provides for your team," Mark explained. "You can actually see your contribution to the Australian economy and the defence of the country as well. I think sometimes if you've got a bit more of a passion of that niche it really gets you a long way. I think people can see passion and they know that passion can mean that you will do whatever you can to support that customer, and that is what defence is really looking for someone that is going to go above and beyond in the hard times to make it happen when they really need you.

"We made the strategic decision to diversify our business away from just general freight, which means doing international and domestic air and sea freight of any type of product, which is what we traditionally did. We decided that it would make sense to go into a niche, and we thought that we already have a little bit of exposure there with that defence prime, so we decided to leverage off of that knowledge and IP that we had and try and move into defence.

"When you look at how you become successful in defence it also means that people need to have a good hard look at their business and what their product and service is that they are offering. There is no point spending a lot of time, money, effort, and years to get defence work if you haven't had a good look at your business and if it has the capability to be successful.

"Getting ready for defence, it really is like a long-term marriage. Firstly, it's the courtship, then it's the engagement, and then the marriage, which at the business end can take years for that cycle to close, so people really need to be very patient, very driven, motivated, and willing, as a minimum, to invest hundreds of thousands of dollars and not see a return for at least three years.



Over 50 years of quality, performance and innovation

to improve safety & efficiency in harsh environments



ampcontrolgroup.com



"I don't think it's one of those things people can do half-heartedly as well, it's not something you can do on the side, or you can spend a few hours a week on. You really need to be committed to it. Having someone really focused and committed on understanding it first and building those relationships and then putting in those bids and then negotiating, closing the contracts and then the fun part begins, actually having to deliver what you've promised."

Mark admits CAS's defence journey has not always been linear, no business journey is, but they have weathered the storm and through old fashioned hard work have been able to establish themselves as one of the top logistics companies in Australia's defence industry.

One of the key factors Mark contributes to CAS's success is the development of CAS Defence Business Strategy. He said the CAS team was fortunate enough to already have an established business which gave CAS the leniency to indulge in the research component of the strategy and peruse this new business avenue.

Part of this research involved learning about the wants and needs of CAS future potential customers, which Mark credits the Defence Teaming Centre (DTC) for.

"The networking that the DTC in particular gave us helped us to understand who the customer is and what the customer wants," Mark said. "The DTC gave us that touch point, or compass, in terms of where we needed to be and how we can get there.

"Businesses need to be speaking to defence industry bodies. They need to see if their capability is a genuine fit and then perhaps these bodies can introduce them to businesses who would be a good fit in the defence space.

"It's not just the primes that people should be talking to and focusing on. A lot of the SMEs in Australia provide solutions to those primes as well. The primes are not the only

entry point, sometimes an easier entry point maybe the tier below that, which is other SMEs that are supplying direct into the primes."

Defence primes are aware that supporting the defence industry can have cyclical highs and lows, so primes are always encouraging potential suppliers to not only diversify in other segments in Defence but are also of a certain minimum business size and critical mass, and expanded capability. To increase CAS's scale and capability CAS recently became a part of Australasia's largest privately owned freight forwarder, Mondiale VGL, who are regionally headquartered in New Zealand.

Louise and Mark have retained a significant but minority shareholding in CAS and have received positive support from their defence customers, particularly regarding that CAS's defence certifications remain in place as does their contribution to their Australian Industry Capability (AIC).

"Defence really wants businesses to be robust and to be diversified, we received a

warm reception from the primes that we deal with that our new relationship with a New Zealand logistics business give us additional capability and scope," Mark said.

"Australia's commitment, in terms of defence, is very strong, and is only going to continue to get stronger based on what is happening around the world. It certainly is an exciting industry and a rewarding industry, you just need that patience. We still see a bright future in defence and aerospace in Australia."



Division of MONDIALE VGL



AUSTRALIA AND NEW ZEALAND

Leaders in Marine HVAC Technology. OEM and Supplier of genuine HVAC Refrigeration, Ventilation, Fire Suppression, CBRN Systems and Parts

Supporting the Navies of Australia and New Zealand for over 30 years

Design, manufacture, testing, supply & servicing of Marine HVAC and refrigeration systems



Adelaide 5 Christopher Court Salisbury North SA 5108 +61 8 7289 2123 Perth 18 Sparks Road Henderson WA 6166 +61 8 9437 5340 Auckland Devonport Naval Base Queens Parade Devonport 0624 +64 9 445 6792

A COMPANY OF ENGLE

E-PLAS ENGINEERING & HIGH PERFORMANCE PLASTICS SPECIALISTS



E-Plas Engineering and High Performance Plastics are Proven in the Field

Like the Australian Defence Force, We Stand by Our Reputation Integrity, Durability, Dependability and Strength

Delivering Under Pressure, E-Plas Products Represent the Industry's Best

E-Plas' range includes specialised plastics providing myriad solutions to issues Encountered in Defence applications with extreme demands

From environmental challenges such as temperature extremes, abrasion, corrosion, Submersion, load-bearing stress to high impact resistance, clarity and protection

Premium product, international manufacturer support

Our wide range of High Performance and Engineering Plastics are available as Stock shapes: Rod, sheet, tube, tape, cut or machined to design specifications By E-Plas Manufacturing Department

• TIVAR UHMWPE LININGS • QUICKSILVER TRUCK LINING • HDPE • CERAM P

- SUSTARIN ACETAL SUSTAMID NYLONS POLYCARBONATE BAKELITE
- PTFE POLYURETHANE POLYPROPYLENE PEEK PVC PETG PE100











E-PLAS - VIC, QLD, NSW, SA, WA Australia Wide Delivery & Service Email: sales @eplas.com.au Ph: 1800 806 475 www.eplas.com.au

DTC: Building Collaboration and Long-Term Defence Relationships for 25 Years



In the beginning – Mick O'Neill chronicles the establishment of the Defence Teaming Centre.

In 1994 Mick O'Neill transitioned from a State General Manager role with AWA Defence Industries (AWADI) into an industry development role with a South Australian government agency. The mandate of the Multi-Function Polis (MFP), was to showcase best practice in urban, economic, social, and environmental development, taking world leading success models to South Australia. With this mandate Mick engaged consultants from Silicon Valley (Collaborative Economics) who had facilitated regional and economic development in 30 regions across the US to apply best practice in Australia.

The Industry Cluster Development program had not been embraced outside of the US at that time, but is now regarded as best practice. The goal of the process was to accelerate the growth of targeted sectors or "clusters" by engaging industry leaders to plan and map the future of their own sector, developing strategic projects that would make a difference to the growth of the cluster, fostering collaboration amongst businesses and developing partnerships with government and universities. The objective, was the establishment of a collaborative community, generating "collaborative advantage" for the region.

In 1996 the defence sector was targeted as one of the clusters for a Pilot. The purpose of the pilot was to test the feasibility of the concept, demonstrate the benefits and deliver opportunities for growth for South Australia. Building on a number of collaborative initiatives and forums already existing, the pilot engaged established and emerging defence industry leaders to identify strategic projects to grow the cluster. Lloyd Groves from Vision Systems was the inaugural chair and driver of the project and more than 50 leaders and executives from industry universities and government were engaged in the process. Over a year initiatives evolved, action plans developed and commitments sought to execute and fund them.

During the pilot, a visit to Silicon Valley was undertaken to confirm benefits and learn from the experience of numerous clusters, including a defence cluster. During this visit, the project team were introduced to and inspired by an organisation similar to the Defence Teaming Centre (DTC) and the vision was established to create a similar entity for South Australia. The secret to DTC's success is the unique co-contribution model between government and industry. Seed funding was provided by the South Australian Government, with additional seed funding from industry led by Peter Goon from Australian Flight Test Services.

In Summary

The unique foresight of government, to work in partnership with industry and stakeholders resulted in the establishment of a best practice model for economic development (industry cluster development) into South Australia.

Mick's role was to promote the process and its benefits, engage leaders, support and assist the consultants in facilitating workshops and subsequently guide and support project teams to develop action plans and execute them. DTC pioneers Lloyd Groves, Peter Goon, Charles Rudder, Steve Lukacs, Phil Campbell, Mike Terlet, Mick and many others worked closely together to lead initiatives and mature the model. The priority for the program was the establishment of the DTC as a commercial entity, which occurred on 16th September 1996.

What were the early aims of the DTC?

Industry identified the need for a focal point for building long-term relationships within the sector. The goal was to build understanding and trust to enable collaborative bidding and shared project experience and resources.

The primary objectives were:

- 1. Facilitating collaborative bidding on targeted defence projects, with initial priorities including:
 - Providing access to market intelligence
 - Lowering transaction costs in establishing teaming arrangements
 - Helping companies with domestic and international marketing through collaboration with other member companies
 - Serving as a window on the local industry for outside firms and agencies searching for business connections and opportunities in SA.

2. Creating a capability database

- Industry identified the need to share capability data amongst member companies to facilitate teaming and resource sharing
- They also wanted a mechanism to promote their capabilities to the outside world in a consistent, cohesive, and professional format
- 3. Improving the workforce and training system. The objective was to increase the size and capability of the skilled workforce to match the needs of companies. Proposed actions included:
 - Developing a roadmap of government and private sector bodies involved in education and training
 - Promoting cadetships and apprenticeships
 - Continuously communicating industry skill needs to educational and training providers

25 Years on...have the original objects been achieved?

The DTC has had a profound influence on the growth and development of the defence industry in South Australia, and Australia broadly, in both tangible, and perhaps more importantly, intangible ways.

In the early years the Board and Executive were conscious of the need for early wins, (runs on the board) to ensure credibility and industry commitment.

Facilitating collaborative bidding on key projects was the priority. DTC was successful in bringing together prime contractor, Lockheed Martin, who had not previously operated in SA, with a group of local SMEs to win a \$30M contract with RAAF. Other collaborative contracts followed based on this model, and numerous other bids were submitted which supported the development and maturation of relationships and trust between members.

The DTC has also had a significant impact in addressing the workforce and capability development challenges of the sector. Being the focal point for the defence sector has enabled the collection of data, trends, and issues to develop and suggest policy to government to support the growth of the sector.

What about the intangible?

Prior to the establishment of the DTC in 1996, the traditional approach to forming ventures and fostering collaboration was transactionally focused. The approach lacked a strategic focus and an emphasis on embedding the cultural change of enduring trust. Sustainable strategic collaboration was the holy grail and proved difficult to achieve. The DTC has therefore been instrumental in achieving the holy grail through its founding principles and objectives. The proof of success can be seen in the relationships developed by the DTC and through industry's active participation in its activities and governance.



Original DTC Logo



2018 DTC Logo

Many DTC members have enjoyed commercial wins along the way and success in areas such as workforce development and joint marketing have reinforced the benefits of collaboration and having an industry voice. The most important outcome is the desire of members to take a strategic focus to the sector as opposed to focusing solely on their own companies and leaving the rest to government. The DTC is responsible for the introduction of the concept of "co-opetition" and taking this nationally. This saw Australian companies unite and attend international trade missions under the single banner of Team Australia. Prior to the DTC's lobbying, Australian companies were fragmented, and competitiveness prevailed.

In the early years, Lloyd Groves was invited by the then Defence Minister, Bronwyn Bishop to represent Australian SMEs at national and international forums. This gave Australian SMEs representation and a voice to inform policy and procurement decisions. This has since proven to be ground-breaking for Australian industry, where the majority of defence supply chains is comprised of Australian SMEs.

CONFERENCE

CUM-ANDROX RM

SIA

Leveraging his relationships with DTC as the focal point for the sector, Frank Wyatt from Enterprising Partnerships facilitated a series of roundtables enabling CEOs open and confidential dialogue around strategic issues facing their businesses and the sector broadly. South Australia is now the Defence State and its defence industry now has a global identity which has Government recognition and support, and the DTC was instrumental in achieving this for industry.

What are the DTC's greatest successes?

The very existence of the DTC after 25 years is a testament to its success. The organisation continues to bring businesses together to collaborate, share experience and team for opportunities otherwise considered beyond the reach of the individual participants.

Entities such as the DTC experience evolving life cycles just as products and companies do. The organisation has endured peaks and troughs in defence budgets and has

Nuclear-Powered Australian Submarines Challenges & Opportunities

7-9 NOVEMBER 2022 • HOTEL REALM, CANBERRA ACT



Submarine Institute of Australia

www.submarineinstitute.com

SIA 11th Biennial CONFERENCE 2022



continued to evolve to deliver ongoing value to members. A critical success factor for the DTC is its ability to empathise with its members. Just like its SME member companies, the DTC is a small business, subject to the same challenges and frustrations of business owners, giving its advocacy conviction and relevance.

A key highlight of the DTC is the profound impact on defence procurement policy achieved through the lobbying for a continuous naval shipbuilding program. Under the leadership of the then CEO Chris Burns, the DTC fought hard and lobbied Government to undertake a more strategic approach and focus on Australia's defence industry. This arguably influenced the acquisition model for the Collins replacement submarines. The DTC created a catalyst for a national debate involving State and Commonwealth politicians that culminated in the reversal of the initial procurement process and a decision to build the new submarines in South Australia. While this was ultimately a political decision the DTC played a key role in getting this on the national agenda.

Even after the recent cancellation of the Naval Group contract Adelaide remains the committed location for the construction of nuclear-powered submarines and continues to benefit from the continuous build policy for surface ships.

How does the DTC differ from other defence industry associations?

One key principle underpinning DTC's establishment is its focus on facilitating commercial collaboration and initiatives to address strategic issues. Whilst the organisation does lobby from time to time, the organisation's main goal is to be a strategic partner with Government, Defence, primes, and academia to create cohesive and effective defence supply chains.

The DTC is regarded as a trusted and professional independent body capable of mediating and working collaboratively with stakeholders. The organisation now chairs forums such as the AIC Forum and the CIOG Engagement forum. These constructs enable industry to come together to resolve issues, without compromising ACCC or Defence probity provisions.

The DTC is the only defence industry association to have established an industry development framework that guides the journey of a business new to the defence

sector. The defence industry sector needs mature, sustainable businesses and the DTC's industry development programs focus on taking "defence ready" businesses and creating "defence mature" businesses.

What is the future for the DTC?

"At the time of its establishment, we did not envisage that DTC would still be operating so successfully 25 years later. Its ability to navigate its lifecycles and reinvent itself so successfully have been quite amazing. I expect this to continue", said Mick O'Neill, DTC contributing founder.

The defence sector has never been more important to South Australia, and the issues and challenges remain as acute as ever. Therefore, an effective industry voice and representative body have never been more important. The organisation



must continue its focus on the formation of collaborative teaming arrangements as the scale of projects now being executed under the continuous naval shipbuilding program is huge. "With the defence sector comprising thousands of small businesses, the sector lacks size and scale. There is a massive void of medium sized businesses in the sector and this gap must be closed quickly to maximise Australian industry' involvement in major programs," said current CEO, Audra McCarthy. "Industry need an independent, trusted and professional organisation to identify the opportunities and broker the introductions for SMEs".

The final flyover of the PC9 aircraft for RAAF Base East Sale.

The Program Spanning Army, Navy and RAAF

The Australian Defence Force (ADF) has been increasing in size and strength since the Commonwealth announced in 2020 a \$270 billion investment into the capability and potency of ADF to ensure Australia remains ready and adaptable to the changing nature of warfare.

Part of this investment will go into building Australia's sovereign defence industry and increasing ADF personnel to almost 80,000 by 2040, amid strategic risks posed by Russia and China.

Part of this sovereign capability is bringing together all arms of the ADF. Looking back only a few decades ago, Army, Navy and the Royal Australian Air Force (RAAF) were very separate entities. Although they worked in harmony together, it was not often they would be training on the same system. As we push forward into this new era, projects such as AIR5428 play an even more vital role in the protection of Australia's shores.

While the AIR5428 program was launched in 2013, phase 1 of the program did not commence until a few years later when Team 21 won the contract in December 2015. Fast track to 2022 the program has already graduated more than 70 Army, Navy and RAAF pilots, with the training system only officially being delivered to the ADF at the start of 2022.

"Aviation training is built on establishing core skill sets. Training for all Aviation Specialist roles is focused on the core Air and Space needs of Defence, commencing with the fundamentals of aviation," a Defence spokesperson said.

"The AIR5428 projects are designed to meet the ongoing Initial Employment Training (IET) needs for all of the Aviation Specialist employment roles for the Joint Force. These training needs are clearly defined to ensure that defence and industry partners are able to provide the appropriate training solution to meet capability requirements for further Aviation Specialist training.

"On completion of Basic Flying training within the AIR5428-1 training system (Pilot Training System), Army Pilots proceed directly to helicopter training at 723SQN Joint Helicopter School which is the delivery agency for the AIR9000 Phase 7 Helicopter Aircrew Training System.

"Navy Pilots arrive at 723SQN having completed Basic and Advanced Flying Training within the Pilot Training System. The trainee graduation standards from both systems allows for effective management of the standard, quantity and timings required for ongoing production of Army and Navy pilots to 16th Aviation Brigade and Fleet Air Arm respectively.

"As change occurs due to the evolution of the individual elements of the AIR5428 projects, Defence will apply lessons learnt across the training system which includes all Fundamental Inputs to Capability. The current force is assessed, including lessons learnt from current projects, to produce the requirements of the future force," the Defence spokesperson added.

The Invitation to Register (ITR) for AIR05428 Phase 3, Air Mission Training System (AMTS) was released on 21 Jan 2022 with this phase set to close 11 Apr 2022 and shortlisted respondent to be notified on June 2022. This phase is set to replace the current training capabilities provided by the Air Mission Training School and School of Air Traffic Control.

"...the program has already graduated more than 70 Army, Navy and RAAF pilots, with the training system only officially being delivered to the ADF at the start of 2022." PC-9/A and PC-21's from Number 257 Advanced Pilots Training Course of No.2 Flying Training School conduct a flyover of the Perth metropolitan region in Thunderbird formation as part of the decommissioning ceremony of the PC-9/A.



APC Technology is an innovative leader with the skills & experience to engineer world-leading defence-ready technology.

With nearly 40 years of proven capability, we build long lasting, high performing solutions designed to go wherever the action is.



PROTOTYPING DESIGN MANUFACTURING TESTING SUSTAINMENT BUILD TO PRINT BUILD TO SPEC



Phone +61 8 8363 0400 apctechnology.com.au "The program is set to provide innovation to the approach to training and education for Defence crews. The program is expected to maximise the use of simulation and improve the integration of new technology."

The program is set to provide innovation to the approach to training and education for Defence crews. The program is expected to maximise the use of simulation and improve the integration of new technology.

As Australia's military capability grows, so too will the opportunities for SMEs to obtain more work within defence industry. The government has already started updating its policies to align with its new strategic direction.

In the 2022-2023 budget it was announced the Commonwealth Procurement Rules had been revised and the threshold for SMEs defence contracts had been increased from \$200,000 to \$500,000.

Minister for Defence Industry Melissa Price said the increased threshold was a major win for small and medium businesses and significant in supporting a competitive Australian defence industry.

Prime Minister Scott Morrison said the government's investments in Australia's national security spanned air, land, sea, space and cyber capabilities.

"In these uncertain times it is vital that Australia is well-positioned to tackle the challenges our country and our region face," he said.

"This Budget sets out the investments we're making that will boost the Defence budget above 2 per cent of GDP not only helping keep Australians safe but supporting local jobs and industries right here at home."

Of the three arms of ADF, Navy will require the largest workforce boost and new training systems as Australia transitions to nuclear-powered submarines under the AUKUS partnership. Part of this boost will be to build a new submarine base to support the nation's new nuclear-powered submarines

Defence will engage with state and local governments to determine the optimal site for the new nuclear-powered submarine base, which will be informed by the ongoing work of the Nuclear-Powered Submarine Taskforce. This initial work is expected to be completed by the end of 2023.

The DNA of Shipbuilding

Building on a family dynasty that has been in operation for more than 140 years, Luerssen Australia was established to bid for the SEA 1180 Offshore Patrol Vessel (OPV) Program.

After an extensive evaluation process spanning approximately two years, Luerssen Australia had the honour of being selected as the Prime Contractor and designer for the OPV Program. Prior to establishing Luerssen Australia, the Lürssen (now NVL Group) naval shipbuilding had been focussed in Germany, making the establishment of a stand-alone shipbuilding enterprise in Australia a significant vote of confidence by the Group.

"It is a privilege for Luerssen Australia to be the Prime Contractor on the Arafura Class Offshore Patrol Vessel Program," said CEO of Luerssen Australia, Jens Nielsen.

"We were pleased to be selected at the end of 2017 to build twelve OPVs based on an existing and proven Luerssen OPV80 design."

"At the beginning of what has proven to be a very cooperative relationship with the Commonwealth, we signed the contract approximately two months later and started construction on Arafura after only a further seven months, in September 2018."

About the Arafura Class

The OPVs, which will be known as the Arafura Class, will improve upon and replace the capability delivered by the existing Armidale Class patrol boats. The Arafura Class will primarily undertake constabulary missions, maritime patrol and response duties.

The Arafura Class will provide greater reach and endurance than the existing Armidale Class, as well as superior surveillance capabilities. The new vessels will be capable of undertaking missions over greater distances than is currently possible with the existing patrol boat fleet.

Luerssen Australia is building two OPVs in Osborne in South Australia, and a further ten in Henderson in WA. All 12 OPVs will be delivered by 2030.

In a major milestone for the Royal Australian Navy and Luerssen Australia, the first of the new Arafura Class OPVs, NUSHIP Arafura was officially launched in December 2021 in Osborne, South Australia.

"The launch was an important milestone in the life of NUSHIP Arafura and it was an opportunity to celebrate and recognise the hard work and commitment of hundreds of people who have contributed to the program," said Mr Nielsen.

"Everyone who has worked on NUSHIP Arafura has a unique place in the Royal Australian Navy's history and you should be proud of your achievements. Together we have built a formidable vessel for the Navy."

"Luerssen Australia has an ambitious schedule, is working hard to involve as many local companies as possible, and continues to embed in Australia our knowledge built up over 140 years of shipbuilding."

"I am proud of the high level of AIC on the program and the large number of close relationships we have forged with our partners, the Program Office and the broader Defence community over the past four or so years."



Luerssen - A Success Story For Australian Industry

Luerssen Australia is employing Australian workers, in Australian shipyards, using Australian steel to provide the Royal Australian Navy with the vessels it needs for the future. These activities create jobs, deliver a sovereign naval shipbuilding capability and help establish Australia as a hub for naval vessel exports.

Currently on the OPV Program, Luerssen Australia has achieved an Australian Industry Content (AIC) level of more than 63%, exceeding the targeted 60%, and is aiming to increase this even further.

"I am proud of the high level of AIC on the program and the large number of close relationships we have forged with our partners, the Program Office and the broader Defence community over the past four or so years," said Mr Nielsen.

"Luerssen Australia firmly believes that building on our passion and history, with your support, we are helping shape the future of Australian shipbuilding, and by doing this we will provide the best possible vessels to the men and women in Australia's Navy."

Luerssen Australia is working hard to involve as many local companies as possible, and continues to embed its specialist shipbuilding knowledge into Australia, which has been built up over nearly one and a half centuries.

By deeply embedding its commitment to AIC in its supply chain, Luerssen Australia is providing opportunities to Australian small and medium enterprises to provide services to the OPV Program and create local jobs.

World Class Capabilities

Drawing upon of its extensive design, shipbuilding and sustainment capabilities,

Luerssen Australia is able to bring world-class solutions to Australia's naval needs. Luerssen Australia is a subsidiary of NVL Group. NVL stands for Naval Vessels Lürssen and it is an independent, privately owned group of renowned Northern German shipyards and related companies, formerly known as Lürssen Defence. The group is headquartered in Bremen, Germany, and has a strong heritage. Together, the shipyards of NVL Group have completed more than 1,000 naval and coast guard vessels since the late 1870s, and have built and repaired ships for both the German Navy and fleets in over 50 countries.

In addition to the design and manufacture of naval and coast guard vessels, NVL Group also provides extensive lifetime support to its customer navies through NVL Services.

Opportunities For Growth

Luerssen Australia has a long-term strategy for building and sustaining minor warships and large vessels in Australia and wants to be actively part of necessary improvements in ship building and sustainment infrastructure development, in line with the Commonwealth's continuous naval shipbuilding strategy.

Luerssen Australia has rapidly grown over the last four years and this will continue in the foreseeable future with a wide range of roles to fill in the coming months.

This significant growth has seen Luerssen Australia recently bring on board its 150th employee, a milestone for the company since it only commenced its Australian operations in June 2018.

This continuous growth further establishes Luerssen Australia as a critical partner in helping Australia create a world-class sovereign shipbuilding industry.

Would you like to advertise in Defence Business?



boylen.com.au

Contact Jamie Richardson today on 08 8233 9433



Accredited Defence Testing



EMC/EMI, Environmental, Mechanical, Acoustic, Electrical and Telecommunications Testing. Naval vibration, shock and SRS testing specialist.

ALL TESTING AND CERTIFICATION IN ONE LOCATION CALL 1800 001 411

SYDNEY Unit 2, 9 Packard Av, Castle Hill NSW 2154 MELBOURNE 2 Brex Court Reservoir VIC 3073

Please consult A2LA Certificate Number 2765-02 for complete listing of accredited services.

www.austest.com.au austest@austest.com.au





ADELAIDE 13 Newfield Rd,

Defence Industry Leader Program (DILP)

Emerging leaders from Defence and defence industry were given the exceptional opportunity of networking with some of South Australia's greatest defence leaders at the first Defence Industry Leader Program (DILP) networking event held last month. DILP participants, mentors, and alumni were invited to the exclusive networking event at Electra House in Adelaide, which had an impressive guest panel session featuring Flavia Tata Nardini, CEO & Co-Founder of Fleet Space Technologies and Ken Millar, Managing Director of Level 5 Solutions and Defence Industry Specialist.

The candid panel session provided excellent insight into what it takes it be a great leader and how weaknesses can be turned into strengths. During the Q&A session with the panellists Guler Kocak asked Flavia for her advice in relation to breaking through the glass ceiling as a female CEO in the defence industry. In response to her question Flavia offered to mentor Guler through her leadership journey, as the two are a perfect match with both of them currently working in the space sector.

The exclusive event also raised money for the Military and Emergency Services Health Authority (MESHA), DILP's charity partner, with more fundraising activities scheduled throughout the 2022 program.

Julia Phillis, Manager of DILP, said it the networking session was empowering for the 2022 cohort, who were able to share their own journey with the group, including the lowlights, which is a challenging undertaking.

"Strong leadership is the core of building a sustainable defence industry," Julia said, "We have seen many participants of the program transition into high leadership roles and with the current challenges our industry is facing it is imperative we start developing tomorrow's defence industry leaders."

DTC has partnered with Skills Lab RTO, who is part of the Sage Group of companies and a long-term DTC member, to deliver this hand-on leadership course which continues to develop tomorrow's defence industry leaders.

The major assessment of the program is a project addressing a need within Defence Industry. This represents an investment in the future leaders and the value of their contribution to the future needs of Defence Industry.

For more information about DILP or to register your interest in joining the 2023 program email DILeadershipProgram@dtc.org.au











SOLUTIONS THAT WORK



LED Lighting



Explosion Proof Batchers



Liquid Batch Control

INNOVEC CONTROLS PTY LTD www.innovec.com

Suite 5, 56-62 Chandos Street, St. Leonards NSW 2065 Australia Phone +61 2 9906 7158



1001

Tens of thousands of embarked maritime flight hours Operated from more than 40 classes of ships Several thousand deck landings Powerful heavy fuel engine



AT INDO PACIFIC 2022 IN SYDNEY, VISIT US AT BOOTH #3N24.

CAMCOPTER® S-100 UNMANNED AIR SYSTEM



Supporting the Royal Australian Navy for BOUGAS Delivering readiness and reliability of Armidale Class and Cape Class Patrol boats in the North.

Search: Thalesgroup

lin

93



Building Australia's Naval Shipbuilding Capability, One Career at a Time

For the past four years, the Naval Shipbuilding College (NSC) has been working with Australia's Naval Shipbuilding Industry to help build the required future workforce and helping job seekers find jobs in naval shipbuilding

An Australian Government initiative established in 2018, the NSC is part of a collaborative industry/government team working together to build the workforce needed for a sustainable naval shipbuilding industry in Australia

The NSC is managed by KHA Defence Solutions (KHADS), a joint venture bringing the power of international Kellogg Brown & Root Pty Ltd (KBR) together with the expertise of Huntington Ingalls Industries (HII) – America's largest military shipbuilding company and a provider of professional services to partners in government and industry.

The ambition of the Australian Government's shipbuilding enterprise is unprecedented in Australia's industrial history. To succeed, it will require the unparalleled development of a sovereign naval shipbuilding and sustainment capability that reaches into every state and territory. This capability will be underpinned by a high level of collaboration across industry to identify, attract, train, and retain the shipbuilding workforce.

The NSC is uniquely positioned to work closely with Government, industry, education and training providers, to formulate and support the execution of plans to address the workforce development needs and requirement of current and emerging roles.

The NSC's Program Director, Michael Humphreys, said the NSC continues to expand its workforce solutions for

the shipbuilding industry and to support this endeavour is partnering with a wide range of stakeholders including all spheres of government.

"This level of collaboration is unprecedented and demonstrates a sector-level commitment to growing the talent pool by establishing workforce pipelines in every part of Australia. These relationships also support a coordinated effort towards the promotion of naval shipbuilding as a career of choice, ensuring jobseekers can upskill and become industry referral ready for cutting-edge careers of the future," Mr Humphreys said.

Thousands of people will be needed across the country for decades to come to design, build, maintain and upgrade the Royal Australian Navy's future fleet thousands of jobs will be available over the next two years in the areas of engineering, supply chain, project management, fabrication and operations. These jobs are very secure, underpinned by Australia's commitment to the continuous shipbuilding program, and the shipbuilding primes and their supply chain partners.

"One of the NSC's key outcomes is the execution of plans to address the workforce development needs of current and emerging priority roles across engineering, operations, project management, quality, procurement and supply chain, along with support roles."

Visit the Prochem Stand 2B24 at Indo Pacific 22

a pon company

Marine Valves

High Pressure Valves & Fittings





1300 287 777 www.prochem.com.au





Packaging and Defence Product Specialist

Protecting Defence Lives and Assets

KEY CUSTOMERS

Department of Defence BAE Systems Australia THALES Australia SAAB Australia ASC Shipbuilding BABCOCK

CAPABILITIES

Specification, Design, Engineering, CNC Machining Fabrication, Sub-Assemblies, Contract Manufacturing. Military grade material sourcing, Foam, FRAS Foam, Custom Cases and Enclosures, Value adding, Storage and Warehousing, Design for Export.

Form Cut is a pro-active Defence focused organisation, developing Packaging, Handling and Storage solutions for the safe and secure transit of defence material.

Form Cut also supplies seals, gaskets, sub-assemblies, occupant protection systems and a growing range of our own product lines.



DISCRIMINATORS

Specification, Design and Manufacture of Packaging to DEF(AUST)1000C

- Protective Packaging
- Reusable Packaging
- Packing Frames
 - acking frame

- Shielding and Linings
- Thermal and Acoustic Insulation
- Seals, Gaskets and Washers
- Flotation Systems
- Surface Protection
- Blast Mitigating Flooring
- ILS, TLS
- Cartons & Containers

Address

1 Tonsley Boulevard TONSLEY South Australia Australia 5042

SAIGLOBAL ISO 9001 Quality

Direct Contact Enquiries +61 8 8322 6700

Enquiries +61 8 8322 6700 sales@formcut.com.au

Design | Create | Protect

The NSC has established a training and education provider network in every state and territory of Australia and are endorsing courses at TAFE SA and university partners, to ensure graduates or apprentices leave with the skills required by industry and contribute to a sustainable pipeline of skilled workers. These courses are complemented by the NSC's suite of specialist courses including Naval Ship Systems for Designers, Naval Ship Systems for Engineers and Introduction to Naval Shipbuilding.

Through the NSC's national Workforce Register, Candidate Engagement Consultants provide personalised

"One of the NSC's key outcomes is the execution of plans to address the workforce development needs of current and emerging priority roles..." career and training advice, and through the JobsPortal the NSC connects job seekers with vacancies in the Naval Shipbuilding Enterprise.

The Workforce Register provides candidates the opportunity to receive tailored educational and career advice, so they can acquire the skills, training and experience required by naval shipbuilding employers and help them to secure employment within the enterprise. The launch of the JobsPortal in April 2021, in coordination with the rollout of a new and improved Workforce Register, allows for greater accessibility and connectivity for both job seekers and employers within the Naval Shipbuilding Enterprise. Some 400 jobs have been posted since the JobsPortal launch in April, with more than 900 applications throughout this time.

The JobsPortal is making it easier for Australians to move into exciting careers in the shipbuilding sector, allowing job seekers to search for vacancies in the shipbuilding sector, update their job profile, select target organisations, and apply quickly and securely.

"We've now made it even easier for job seekers to search for shipbuilding jobs online and connect with employers with the launch of the NSC's JobsPortal, developed by the NSC and industry. This easy-to-use online platform is a game-changer for job seekers and shipbuilding industry recruiters," Mr Humphreys said. "The NSC's JobsPortal allows job seekers to find exactly

what they're looking for, with shipbuilding job vacancies

around the country posted by industry in one convenient place, as well as allowing industry recruiters to connect with screened workers who are registered on NSC's national Workforce Register."

The JobsPortal has been rolled out to the prime shipbuilding organisations in Australia and demonstrated to a number of further organisations since 2021.

Organisations who are registered will have direct access to industry referral ready candidates and candidates undertaking study for pipelining of future work who have been pre-screened by the NSC Talent Acquisition team against agreed criteria:

- Australian working rights (Citizens, Permanent Residency and working VISA)
- Security clearances
- Skills and experience in their profession.

The NSC's easy-to-use online platform can help organisations find exactly what they are looking for by connecting recruiters with candidates all in one convenient place.

The JobsPortal currently sees an average of more than 100 job vacancies across the sector advertised each week, with the capacity for this to be increased over time with suture enhancements.

If you're interested in learning more about the NSC's JobsPortal capability, please contact the NSC team at workforce@navalshipbuildingcollege.com.au.

We solve mission critical problems, at pace.





The RSB OPK9 Program

By Tyler Maund

The Royal Society for the Blind (RSB) is helping change the lives of veterans suffering with Post Traumatic Stress Disorder (PTSD) with the RSB OPK9 program.

The program, which commenced in 2013, is a pathway to recovery, providing veterans of the Australian Defence Forces (ADF) with highly-trained assistance dogs that help relieve the struggles of depression, anxiety and stress, allowing veterans with PTSD to live a more fulfilling life.

According to research by Military and Emergency Services Health Australia (MESHA), veterans in the program have reduced suicidal thoughts and are less reliant on medication.

Annette Lambert is one of many veterans living with PTSD, following 14 years of service in the Royal Australian Navy as a Nursing Officer, and having experienced a traumatic incident during her last deployment in 2005.

"After my last deployment it became obvious that I had PTSD, I just got sicker and sicker," she said.

"I wasn't able to work, things didn't go well."

One in six veterans will experience PTSD following service, which is twice the incidence in the general population.

"It's a lot more common amongst veterans than the general population because of the situations you are thrown into."

Annette lives in Goolwa, South Australia with her assistance dog Dave, and despite initial reluctance to have another pet following the passing of her previous dog, has been in RSB OPK9 for five years.

"I didn't really want another dog," she said.

"South Coast Veterans Association (SCVA) took me under their wing, they were raising money for RSB OPK9 at the time."

"The trainer said it takes two years so you might as well put your name down. I applied, and eight months later I had Dave."

Annette and Dave bonded instantly and since then they haven't looked back.

"We just clicked, the trainer had a feeling that we would."

Dave, a German Shepherd cross Labrador is now seven year old, and helps Annette with more than just companionship.

"He's hilarious and he's got real personality.

"He's learnt so much, if I drop something he picks it up, he gets his lead for me, he's very clever.

"I have knee and back injuries. He is trained to help me up and down stairs so I can lean on him physically. He helps me a lot as well as with my anxiety."

Dave provides Annette with support that helps her socialise in a public setting, something that she has struggled with as a result of PTSD.

"Before I had him it was a nightmare going out to the shops," she said.

"I have knee and back injuries. He is trained to help me up and down stairs so I can lean on him physically. He helps me a lot as well as with my anxiety."

"Half the time I would leave without my shopping because I would get overwhelmed. "He's made me socialise more, it's given me the confidence to go up to people on my own, when I've got him with me."

Annette believes RSB OPK9 has helped change the quality of her life, ticking off a major milestone recently in building a new house, which has been a long term goal.

"Dave has given me the peace of mind and calmness to settle," she said.

"Normally I would have spent about three months a year in hospital.

"I've gone out and found a builder and built a house, something I've been wanting to do for 13 years.

"You can congratulate Dave, he's been a big part of that."

Whilst many veterans experience PTSD following service, the triggers and struggles are unique to each person, meaning that you cannot pair any assistance dog with any veteran; which is why every RSB OPK9 dog is trained particularly to suit the requirements of each veteran.

"They match the dog to whatever the requirements the veteran has," Annette said. "They work on what your needs are, how old you are, what physical injuries you have. "Everyone's PTSD is different, the triggers are different."

Every veteran in the program is paired with a dog that has been educated by internationally accredited specialist trainers through a comprehensive training course.

Funding

Funding for RSB OPK9 has never been more important, with each puppy in the program costing tens of thousands of dollars to train, and more puppies being educated for veterans every year.

RSB OPK9 dogs typically have a working life of 8-11 years before retirement, at which time veterans can apply for a new assistance dog, however Annette says many veterans decide to keep their retired dog as well.

The dogs in RSB OPK9 are of world class breeding, with all initial equipment required supplied to the veteran by the RSB OPK9 team and ongoing support available as the program continues.

This year, RSB OPK9 will see its 50th assistance dog graduate since the program started. Thus far the program has seen a 97.8% success rate amongst its participants.

Having experienced the program for five years, Annette is quick to recommend RSB OPK9 to other veterans who are dog lovers.

"Not everyone likes dogs, but for any veteran that does, it's a great program."

Veterans can find out if they are eligible for an RSB OPK9 dog through the Department of Veterans' Affairs Psychiatric Assistance Dog Program. To learn more about the program, contact RSB on 1300 944 306.





Randstad's purpose is to support people and organisations in realising their potential Randstad has operated in Australia since 2009 and has over 1,000 experts across 26 locations providing specialist recruitment and HR solutions across the broadest range of skills, disciplines and industry sectors.

Randstad defence was recently created to provide a focused offering to the defence sector including:-

- · permanent and temporary recruitment
- HR solutions
 - workforce managed solutions
- · career development
- redeployment
- outplacement
- · recruitment process outsourcing
- managed services
- specialist consulting

Taking the **Financial Initiative**

"While the end of financial year is fast approaching, there is still time for business owners and operators to be pro-active with taxation," Lee said.

Loss Carry Back:

eligibility criteria and provides a refundable tax offset for tax previously paid.

Temporary Full Expensing of Assets:

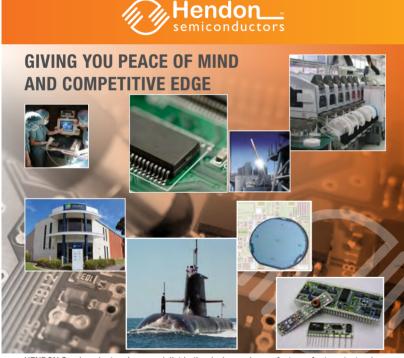
6 October 2020 and 30 June 2023. A limit on the and this is currently \$60,733 for the year ended 30

Other Strategies:

2022 such as:

to speak with a taxation specialist to ensure you're in the

Buck, please contact Lee Fuller on (08) 8409 4333 or



HENDON Semiconductors is a specialist in the design and manufacture of microelectronic products, offering advanced SMT lines, PCB assembly, full functional test with scalable production capability

- Electronic & Electrical Application Design & Manufacture
- Thick Film Hybrid Design & Manufacture Group
- · Project Management
- Production Engineering Support
- Prototyping service to volume production
- Product Life Test, Qualification & Failure Analysis
- Manufacturing with IPC trained operators
- Certified to ISO-9001 and ISO-14001

HENDON has been delivering custom electronic solutions for over four decades to the defence, automotive, medical, rail, lighting & home appliance markets.

hendonsemiconductors.com.au | +61 8 8401 9800 | hendon.info@hendonsemiconductors.com



Chief Fluid Systems is THE specialist provider of fluid conveying products and technical services to the Defence industry. Our products can be found on the following:

- Propulsion systems
- Helicopter refuelling Waste transfer
 - Steering systems
- Weapons systems
- Radar systems
- Underway replenishment
 Air & HP air systems

Potable water

RO plants

www.chieffluidsystems.com.au



Ph: +61 2 9726 8008 Email: admin@chieffluidsystems.com.au

Minister Touts 60% Local Content for Nuclear Subs

Defence Minister Peter Dutton says he is aiming for greater than 60% local industry participation in the AUKUS submarine project.

His statement came several weeks after the Federal Budget revealed funding to triple the size of the Osborne submarine shipyard.

And on April 18, Minister Dutton also announced the Collins fleet would undergo a \$381 million revamp at Osborne.

The work will replace the vessels' optronics systems, which he described as "aged technology".

"It'll give a much quicker read on what the submarine can see outside," he said. "It means the periscope doesn't have to be exposed and to provide that extra point of vulnerability for the submarines."

Questioned on Australian content, Mr Dutton said "when you look at the massive expansion that's required here at Osborne, that the US and the UK have already been out inspecting, we can expect, not just the jobs, but it's the multiplier into the local economy.

"That's important, as you're seeing with the life-of-type

extension, of the full cycle docking, these are thousands of jobs sustainable for a long period of time to come."

He went on to say: "I think it's important to point out that whichever boat we go with, whether it's the US or the UK, it's a big vessel.

"I mean the Virginia class submarine is, from memory, about 116 metres and the number of people involved in the construction of something of that scale, is much bigger than what we had planned for the submarine contract from the French.

"So I think you'll see more jobs, not less here in South Australia. As I've said before, my concern is not the number of jobs that we'll have, but how we can fill those.

"So we'll be working very closely with our counterparts in industry and at the state government level to see how we can find people for those jobs. I think frankly, that's the biggest issue."

60% Local Content?

Mr Dutton was repeatedly questioned about local content and he said he hoped "that it'll be higher than 60 per cent".

He was asked: "Can you give the local contractors a guarantee of what percentage is going to be locally made?"

"Well, we're in discussions with the US and the UK at the moment. We don't know which vessel we're going to go with, but we'll make that announcement soon," he said.

"So that will influence the decision as to what quantity is to be built locally, what local content we can have, but it's been a deliberate policy of the Coalition Government to increase as much as humanly possible, the amount of local content because we know already there are about 100,000 people employed in South Australia and across the rest of the country in Defence industry.

"The multiplier back into our economy for the money that we're investing – the sheds that are built, the land that's acquired, the renovation on whatever asset it is, the apprentices that are employed, the R&D – I mean it's a phenomenal economic multiplier, and it's part of the success that we presided over and it's helped us through the course of COVID."

STRATEGY | TRANSFORMATION | DELIVERY | ENTERPRISE PROTECTIVE SECURITY

Providence

Australian and veteran owned professional services consultancy firm, Providence has grown a reputation as a genuine capability partner, committed to helping clients solve problems, realise ambition and achieve success.

Trusted Defence capability partner since 2005.

Our experts operate nationally with offices in

Adelaide

Canberra

Sydney

Experience. Success. Together.

providenceconsulting.com.au



Providence Consulting Group: Committed to South Australia

The development of Australian defence industry continues to be a key Federal Government priority, as evidenced by recent announcements on the trilateral security pact between Australia, the United Kingdom, and the United States (or 'AUKUS'), the switch to the development of nuclear submarines, the four sovereign Industrial Capability Priorities, and the security of critical infrastructure (SOCI) legislation. South Australia is at the forefront of national defence industry capability, with growing high-tech industries that support Defence, space and renewable energy.

On 5 May 2022, Providence Consulting Group, a Canberra-based SME delivering success for clients for over 16 years, will officially open its first South Australian office in Adelaide's Lot Fourteen Landing Pad. Providence CEO, Adash Janiszewski, is excited for the long-term opportunities emerging in SA, and his plan for more highly credentialled South Australians



to join the Providence Team. Providence is not simply highly regarded for providing strategy, transformation, and delivery support to clients across governments and industry, but also for the way it partners with clients to deliver success through the Providence Promise.

Providence also delivers a unique service offering focused on enterprise protective security – specifically, risk-based protective security advice which assists clients to navigate and meet their security obligations under the Protective Security Policy Framework, Defence Security Principles Framework, and the Defence Industry Security program, and in the future the SOCI legislation. Enhanced understanding and implementation of these arrangements will be a critical enabler for governments, academia, and industry to unlock the benefits of AUKUS and the other recently announced initiatives, leverage scientific research and development, assure supply chains, and expand and protect sovereign capability.

While the Adelaide office will officially open on 5 May, Providence knows SA; they have partnered with the Defence Science and Technology Group over the past seven years, supported numerous Defence maritime projects in the state, and welcomed many South Australians into their team to work remotely, servicing clients across the country.

Leading the company's expansion into Adelaide is Margot Forster, Director Strategy and Business Development South Australia at Providence Consulting Group.

HELPING BUSINESSES BECOME CYBER RESILIENT

OpSys Australia has been fighting the good fight by protecting businesses of all sizes to combat cyber threats. No matter your needs, the multi-disciplined team at OpSys are here to help you.

	24X7 MONITORING
•	SOVEREIGN CAPABILITY
Ø	CYBER THREAT HUNTING
	INCIDENT RESPONSE AND TRIAGE
\mathcal{P}	REAL-TIME ALERTING
Ū	AUDITING
	IT MANAGED SERVICES
	CLOUD SERVICES
ıt ⇔	MOBILISATION

83 Sturt Street, Adelaide SA 5000 08 7099 3700 www.opsys.com.au



f in y d

Negotiating Defence Contracts

By Stefan Jury and Andrew Fisher, Jones Harley Toole

Defence contracts have a number of unique challenges arising from the inevitable complexities in providing goods or services to defence projects.

The anticipated period of the project is often measured in years or even decades. Any contract signed at the start of the project with the intent that it will continue to be binding for the life of the project needs to balance the need for clearly defined deliverables with the reality that new technology will be developed, and existing technology will evolve, over the period of the contract.

The buyer will be hoping for flexibility around the process of design changes and maximum discretion regarding consequential amendments to the contract price and other terms. The provider will want to limit that flexibility and discretion so that directions or change proposals issued by the buyer during the contract term do not lock the provider into a cycle of incrementally increasing costs and diminishing returns. The switch to new or different technologies poses a host of other challenges, as the supply chain providers to the Attack-Class submarine project are all-too aware. The termination of this project has sharpened the focus of many in the industry on clauses allowing early termination for convenience and related issues.

less control you have over the management of these risks.

It is vital for sub-contractors to properly understand, assess and cost the risks arising in defence contracts. There are many and they may not be immediately apparent. There is likely to be limited scope to change the contract as presented.

Special attention should be made to:

- Defect Rectification Periods: These may extend for many years beyond the reasonable life of the work
- The liability limitation clauses: They may not be as beneficial as they may first appear.
- 3. The effect of directions and the ability of the subcontractor to recover its costs of complying with the directions: There may be recovery thresholds and discretions in the head contractor which could limit or deny recovery.
- Intellectual Property clauses: The sub-contractor will need to carefully assess that it does not give away more rights than intended.
- Product delivery terms: It is important to determine where the transport, insurance and loss risks lay.

- 6. The right of the Department of Defence or the buyer to commandeer the supply chain: National defence is obviously a reasonable basis for the exercise of step-in rights, however contracts may go significantly further when defining the scope of reasons that trigger this right, and there may be insufficient protections for a supplier who could find themselves with no recourse if non-defence contracts fall into default because the exercise of step-in rights diverts their production facility solely to defence.
- 7. The right of the contractor to terminate the contract. The contractor will have the right to terminate for breach, but the subcontractor may not. This leaves the subcontractor with difficult recourse. It will need to consider whether in any case it can terminate as a matter of law and in any event will be left to pursue the contractor through the courts. The practical remedy of suspending or terminating the contract is unlikely to be available.

Our approach is to assess the risks arising from the contract, determine how they might be mitigated; either by insurance, processes or contract changes and assist to determine the further costs that are reasonable to add to the contract price.

So, don't be shy about questioning the risks and discussing with your head contractor how they can be mitigated or costed.

strategy n, [strat-e-gy]

- 1. Long term plan for success
- 2. In marketing or war, of critical importance



_																	ſ	: A F		RII	IT	IES	3																
															EN	GINE	EERI					MAN		сти	RING					PR	OFE	ssic	NAL	L SEI	RVIC	ES			
																																							ity
		Cyber Security		Intelligence, Surveillance & Recon	Systems Engineering	Testing Equipment	Software Engineering/Architecture	Electronic Warfare	Communications/Network	Machine Learning/Artificial Intelligence	-	Construction & Infrastructure	cal	او	_		onic				ics	etal	Medium to Heavy Steel Fabrication		tes	E	Design/Creative		Workforce/HR Support	Banking/Finance	Bidding/Tender Writing	Communications	Project Management	ints	Logistics/Transport	Research & Development	Training & Education	Through-Life Support	Inspection, Testing, Certification & Asset Integrity
	Robotics	oer Se		ellige	tems	ting l	tware	ctron	unmu	chine	Industrial	Istruc	Mechanical	Structural	Electrical	=	Mechatronic	Software	Systems	Safety	Electronics	Sheet Metal	dium	Plastics	Composites	Precision	ign/(al	rkford	ıking/	ding/	nmu	ject N	Consultants	jistic:	earch	ining	ough	oectio
	Rob	суb	ICT	Inte	Sys	Tes	Sof	Ē	Cor	Ma	р́ц Ц	Co	Me	Stru	Ele	Civil	Me	Sof	Sys	Saf	Еle	She	Me	Pla	Cor	Pre	Des	Legal	Ň	Bar	Bid	Cor	Pro	Cor	Log	Res	Tra	Thr	lnsp
Airbus Australia Pacific Limited														•	•			•																					
ASC Group		•	•				•											•	•												•	•	•	•					•
BAE Systems Australia	•				•	•		•					•	•					•		•																		
Lockheed Martin Australia Pty Ltd																		•	•																				
Rheinmetall Defence Australia													•					-							•														
Saab Australia Pty Ltd																									-														
																		•	•																				
3D Metal Forge Ltd													•		•																								
3na 4th Harmonic			•		•														•														•	•					
Acacia Systems							•			•								•	•																	•			
ADCG Pty Ltd																																							
Adelaide Relocations																																		•					
Adelaide Training & Employment Centre																																							
Adept Techlogy	Е																																						
Adlingtons Australia Pty Ltd																																							
Aerobond Pty Ltd														•								•			•	•													
AFL Service											•	•	•						•		•	•			•														
Airspeed Pty Ltd																									•														
AJ Distributors													•	•	•																								
Akera										_			_			_			•		_		_			_	•	_					•	•			_		_
Alliance Automation																													-										
Allied Cleared Pty Ltd									•									_											•					•			•		
Altair Aluminium Dynamics														•																									
AMC Search										•					•	•			•																				
AMI Group												•			•		•	•	•		•	•										•				•	-	•	•
AML3D	•														-		-		•		•	-	•			•										•			
AMW Professional Services					•			•											\bullet										•				•	•					
APC Technology	•								•		•		•		•						•															•			
Aptus Business Solutions			•						•										•														•	•		•	•		
Archtis Limited																		•	•																				
Arentz & KKG Engineering																							•																
Arican Advisory Capital																																		•					
Arkidelo Defence Pty Ltd											•		•													•	•										•	•	•
Ascent Professional Services													•																				•	•					
ASG Group		•	•						•									•	•		•						•				•		•	•					
Austbrokers Terrace Insurance Brokers																																							
Austest Laboratories Australian Driving Institute													•		•		•																•	•			•		
Australian Industry Group Apprentice																		•																			•		
and Trainee Centre																																							
Australian Metrology and Calibration						•																																	
Automated Solutions	•									•								•																•					
AV Integration Pty Ltd													•											•		•	•						•	•					
Avinet			•															•	•	•																			

																С	ΑP	ABI	LIT	TIE S	5														
														EN	GINE	ERIN				MAN		CT <u>UR</u>	ING				PR	0 <u>FE</u> :	ssio	NAL	SER	VICE	S		
				u			ıre			lligence																									Accet Interrity
	Robotics	Cyber Security	ICT	Intelligence, Surveillance & Recon	Systems Engineering	Testing Equipment	Software Engineering/Architecture	Electronic Warfare	Communications/Network	Machine Learning/Artificial Intelligence	Industrial	oursuraction & minastructure Mechanical	Structural	Electrical	Civil	Mechatronic	Software	Systems Cafaty	Electronics	Sheet Metal	Medium to Heavy Steel Fabrication	Plastics	Composites	Precision	Legal	Workforce/HR Support	Banking/Finance	Bidding/Tender Writing	Communications	Project Management	Consultants	Logistics/Transport	Research & Development	Training & Education	Through-Life Support Inspection Testing Certification & Asset Interrity
Axant Corporate Advisory																															•				
Axiom Precision Manufacturing								•			•			•		•					•	•									•		•		T
Babcock Pty Ltd								-								-				-	-	-		-											
Beca Pty Ltd	Г			•			•									•	•														•	•	T		
BL Shipway & Co							-						-		-		•																		
BMT																															•				
Boeing Defence Australia	E																•	•														-	-		-
Boileau Business Technology			•																													-	_		
Broadway Property Advisory																																-	-		
Caledonia Group															•	_															•	_	•		
Capral Aluminium																																			
Castech									_		•					_																			
CBG Systems Pty Ltd																							•						•						
Century Engineering											•									•	•									•				•	•
CGI Inc																		•												•					
City of Prospect																																			
CK Property Group																																			
Cleard Life Vetting Agency										•														•									•		
Cobham																																•			•
Codan Limited			•																																
Coherics										•												•	•	•		•					•		(•	
Commonwealth Bank of Australia																									Т								T		T
Consunet Pty Ltd										•							•	•													•		•		•
Contrak	Г																					•	•											•	Т
Coras																		•				•										•			
Customs Agency Services	Г																															•	Т		T
CYLAD Consulting																										•						•			
Dassault Systèmes Australia	Г																																		T
Daronmont Technologies																																			
Dedicated Systems Australia																-															•				
Defence Coating Systems							-	-	-								-	-																- 1	-
Defence Seals & Spares																												•			•		-		-
Dematec Automation										_						•		•										-		_	•				
Derby Rubber																•		-					•	•									-		
																						•	•	-											
De Stefano & Co																														-	•	-	•		
DEWC Services				•			•	•	•					•			•														•				
DHL Global Forwarding (Aust) Pty Ltd		-	-	-																						-									
Easy Skill Australia	•		•	•			•	•	•	•	•															•			_	•	•			•	
Ebor Systems											•						-												•				•		
Electromek			•					•	•		•			•			•																		
Elexon Electronics											•						•																•		
elmTEK Pty Ltd							•	•								•	•	•															•		
EM Solutions																																			
Enerven									•								•	•	•								•		•	•	•			•	
Engie Electrical and Communications			•																																
	1 C	1	1						-							-						-							-	_		-			

																С	ΑP	A B	ILI	TIE	S																
														EN	GINE	ERIN						CTU	RING					PR	OFE	SSIO	NAL	. SEF	RVIC	ES			
				Intelligence, Surveillance & Recon	ering	ent	Software Engineering/Architecture	ire	s/Network	Machine Learning/Artificial Intelligence Industrial	nfrastructure										Medium to Heavy Steel Fabrication						upport	e)	Writing	0	nent		port	elopment	ation	pport	Inspection. Testing. Certification & Asset Integrity
	Robotics	Cyber Security	ICT	itelligence, Sui	Systems Engineering	Testing Equipment	oftware Engine	Electronic Warfare	Communications/Network	Machine Learnir Inductrial	Construction & Infrastructure	Mechanical	Structural	Electrical	Civil	Mechatronic	Software	Systems	Safety Electronice	Sheet Metal	ledium to Heav	Plastics	Composites	Precision	Design/Creative	Legal	Workforce/HR Support	Banking/Finance	Bidding/Tender Writing	Communications	Project Management	Consultants	Logistics/Transport	Research & Development	Training & Education	Through-Life Support	spection. Testir
Ezy-Fit Engineering Group	~	с С		-	S	-	S	ш	ප 	2 5	: 0	2	S	ш	ප l	2	S	S	S L	n w	≥ ●		с С	•		_	<		8	ප l	<u> </u>	с П	نــ	~	-	-	5
Finlaysons	Г																	T								•											
Force Ordnance	L															•								•		-	-										
Form Cut Pty Ltd	E																							•													
Fortinet																																					
																							-											•			
Frazer-Nash Consultancy Ltd															•			•														•					
Fyfe Pty Ltd	F																		•																		
Gama Consulting Pty Ltd															•																•						
GBT Industries	F																																				
General Dynamics Land Systems Australia												•				•		•											•		•			•		•	
GPA Engineering	•														•	•	•		•																		•
Grove Scaff	П								1									Т	T																		
Hastwell																																					
Heatlie BBQs	Π.																	Т																			
Hendon Semiconductors																																					
HTR Engineering												•	•	•	•	•	•																				
Hughes Public Relations	-	-	•	-		-	-	•	•			-	•	•	-	-	-	•							-		•		-		•	•					
	E																																				
Humanihut Pty Ltd HYDAC International	L										•									•		•											•			•	
	E																																				
ICF Insurance Brokers Pty. Ltd.	L																															•			-		
Indigenous Training and Recruitment	E.																																		•		
Insight Via Artifical Intelligence		•	•	•			•			•				•		•	•	•	_						•	_		_	•		•	•		•	•		
Intertek Group																																					
Intract Australia Pty Ltd													٠	•	•																						
Inventure Partners																												•									
locane Pty Ltd		•	•						•									•												•		•					
Ionize Pty Ltd			•																																•		
J3Seven																															•				•		
Jim Allen & Associates Pty Ltd																		•													•						
Johnson Winter & Slattery																																					
Jones Harley Toole																										•											
KAEFER Integrated Services												•	•								•																
Kennewell CNC Machining												•												•													
Key Tubing and Electrical	•													•		•		•							•									•			
Kinexus People																																					
KPMG Australia	Г	•	•		•		•		•	•					•		•	•	•							•	•	•	•		•	•	•	•	•	•	•
K-TIG																	-	•				•															
LaserBond Ltd	Г														•									•							•			•		•	
Lecon																																					
Leedall - Future Thinking	Г		•		•				•								•	•							•					•		•					
																	-	-							-		-			-				•	-		
Lencom Antennas	F											•																						•			
Level 5 Solutions																																•					
Levett Engineering Pty Ltd												•												•							•						
Logic Figures Pty Ltd																									•		•		•			•			•		
Logi-tech	İ.																																				

																	С	ΑP	AB	3 I L	ITI	IES	5																
															EN	GINE						MAN		CTUF	RING	;				PR	OFE	ssio	NAL	_ SEI	RVIC	ES			
	Robotics	Cyber Security	ICT	Intelligence, Surveillance & Recon	Systems Engineering	Testing Equipment	Software Engineering/Architecture	Electronic Warfare	Communications/Network	Machine Learning/Artificial Intelligence	Industrial	Construction & Infrastructure	Mechanical	Structural	Electrical	Civil	Mechatronic	Software	Systems	Safety	Electronics	Sheet Metal	Medium to Heavy Steel Fabrication	Plastics	Composites	Precision	Design/Creative	Legal	Workforce/HR Support	Banking/Finance	Bidding/Tender Writing	Communications	Project Management	Consultants	Logistics/Transport	Research & Development	Training & Education	Through-Life Support	Inspection, Testing, Certification & Asset Integrity
Lubrication Engineering Pty Ltd	Γ				•						•							•	•	•							•											•	•
Luerssen Australia Pty Ltd																				•							•						•						
MacTaggart Scott Australia	Г				•								•																									•	
Maxiport Engineering Pty Ltd																								•	•	•													
MECHVAC Engineering	Г										•	•	•	•								•	•																
MG Engineering																																							
Migration Solutions																													•										
Mincham																	•					•	•		•	•	•											•	
Minor Hotels																																							
Monkeystack																											•												
Mott MacDonald			•									•	•	•	•	•											•						•	•					
MRS Property																																							
Navantia Australia	Г												•	•			Т		•	•							•						•			•		•	
Neumann Space																																							
Norseld Pty Ltd	Г																Т																				•		
Nova Systems																																					•		
Nylastex Engineering Solutions	Г										•		•	•			Т					•	•	•	•	•	•						•					•	•
Odense Maritime Technology																																							
Oilpath Hydraulics	Г					•					•						Т	•			•																		
Oliver Techlogies Pty Ltd											•																												
Oomiak Pty Ltd	Г										•		•										•				•											•	
Operational Systems (OpSys)																																					•		
Para Bellum Solutions	Г	•		•					•			•					Т	•											•					•					
Pfitzner Performance Gearbox Pty Ltd																																							
Phillips Ormonde Fitzpatrick	Г																Т											•											
Piper Alderman																																							
Pirtek (Adelaide) Pty Ltd	Г											•					Т																						
Plasteel SA											•	•							•			•	•			•	•											•	
PMB Defence	Г											•					Т				•															•			
Praxis Aerospace																	•		•	•							•						•						
Priori Analytica	Г		•		•		•			•							Т	•	•															•					
PREDICT Australia										•	•							•																				•	
Prism Defence																																							
Protube Engineering Pty Ltd	•										•						•																						
PRP Manufacturing													•								•			•	•	•													
QinetiQ Australia Pty Ltd		•					•						•				•		•	•																			
QMS NDT & NACE						•					•	•	•							•		•			•											•		•	
Quisk Design																																							
Raytheon Australia Pty Ltd					•																																		
REALM Solutions (SA) Pty Ltd																																				•			
Red Piranha	1																		•																				
REDARC Electronics																	•		•		•																		
Rowlands Metalworks													•									•																	
RUAG													•	•			•					-				•													
SABRN Tech Pty Ltd											•		-	-						•				•															
SAGE Automation							•		•	•	•									-				-												•			
									•	•							•	•	•		•																		

																	U.	ΑP	AB			IE S																
															ENG	INE						IANU		CTUR	RING					PR	OFES	5510	NAL	_ SEF	RVIC	ES		
				Intelligence, Surveillance & Recon	eering	nent	Software Engineering/Architecture	fare	ns/Network	Machine Learning/Artificial Intelligence		Construction & Infrastructure											Medium to Heavy Steel Fabrication				e.		Support	ce	r Writing	ns	ement		sport	velopment	cation	Through-Life Support
	Robotics	Cyber Security		telligence, Sı	Systems Engineering	Testing Equipment	oftware Engir	Electronic Warfare	Communications/Network	achine Learn	Industrial	onstruction 8	Mechanical	Structural	Electrical	Civil	Mechatronic	Software	Systems	Safety	Electronics	Sheet Metal	edium to Hea	Plastics	Composites	Precision	Design/Creative	Legal	Workforce/HR Support	Banking/Finance	Bidding/Tender Writing	Communications	Project Management	Consultants	Logistics/Transport	Research & Development	Training & Education	Through-Life Support
	ž		ICT	<u>ء</u>	Ś	Ĕ	Š	Ξ	ŭ	Σ	5	ŭ	Σ	St	Ξ	ö	Σ				Ξ	с,	Σ	P	ŭ	P	ð	Ľ	3	ã	ö	ŭ	Ā	ŭ	Ľ	æ		Ê
SAI Global Assurance			•										_						•	•					_												•	
Sarah Constructions																																						
School of Information Operations		•		•				•		_		_	_	_					_					_	_					_		_		•		_	•	
Shadow Business Development																																						
Shipley Asia Pacific																															•			•			•	
Shoal Group																	•																			•		
Silver Raven Pty Ltd											•	•		•		•				•		•	•	•	•	•			•		•		ullet	\bullet	•	•		(
SiNAB																															•							
Sinclair Product Design					•								•	•								•	•	•	•	•	•											
Smart Fabrication																							•															
Sonnex Pty Ltd												•	•	•		•						•	•															
Sphere Advisory																														•								
St Patrick's Technical College												Т		Т			T	Т		Т																	•	
Stramech Engineering											•		•	•									•															
Supashock						•	•			•	•	Т	•	•	•		•		•							•	•									•		•
Sydney City Marine							-			-					-		-	-	-							-	-									-		
TAFE SA																																					•	
Talent International																																						
TBH																																		•				
Technoweld														•																								
Tekuma					•								-	-	•	•																	•					
Thales Australia							-						-		-	-																		-				
					•								•										•		•	•												
Toolcraft Aerospace Manufacturing						•							•						•			•	•	•	•	•												
TQCSI-Yaran Pty Ltd																			•														•					
Trident Cyber Pty Ltd		•	•						•		-		-										-									_		•				
Trymoss Engineering Pty Ltd																							•	•												•		
Ultra Electronics Australia				•	•	•	•	•	•	•		_	•	•	•				•	•	•	_	_	_	_		•	_		_		_	•			•		
United Fasteners SA Pty Ltd																																						
Verseng Group										_			•										•	_		•				_		_				_		
Vintek Pty Ltd																															•	•						
Vipac Engineers & Scientists Ltd		•			•	•					•	•	•		•		•	•									•					_		•		•		•
Vocus																																•						
Walter Breunig Intelligent Platforms				•		•		•	•	•	•								•																			
Williams Metal Fabrications Pty Ltd											•	•											•															•
X-Rust											•		•		•																							•
Xynoptik Pty Ltd			•		•		•						•							•							•		•					•	•			9
Yaran Business Services																													•									
Zircotec Australia											•			•		•													•					•			•	
Zone Culture																													•								•	



Wire Additive Manufacturing for Shipbuilding

The Australian Defence, Royal Australian Navy and commercial shipbuilding industry are growing steadily, and the demand for ship construction and the extended life of these assets is high. Some of the challenges shipbuilders and other industry manufacturers face are the expectation of reducing the cost of operation, construction and lead times while maintaining a premium product. As a whole, to enhance the sovereign capability, improve cost, lead time and quality of labour intensive and often complex metal parts, the industry needs to look at alternative manufacturing opportunities that have been made possible due to the evolution of industry 4.0. One of these opportunities is Additive Manufacturing (AM), specifically Wire Additive Manufacturing, or WAM. Large scale AM, using the Wire Additive Manufacturing process, has gained in popularity in recent years, with proof of concept activities showing its potential as an alternative to traditional manufacturing methods within the metal manufacturing supply chain. These include casting, forging and subtractive processes. These manufacturing methods face challenges in today's economy, particularly the recent strain on the supply chain. Metal components that are subtractively machined from a solid billet rely heavily on material availability, lead times, design limitations based on restrictive billet dimensions, and high machining costs.

So the question must be asked, why is the industry not making the switch to a time saving, material and energy-saving manufacturing methodology that is highly suitable for producing large-sized metal parts? And one that allows for local, sovereign manufacture?

As with any emerging technology, it is a matter of education on the process, including materials available, verification of the technology in action and proof, and incorporation of data resulting from the structural integrity testing within the manufacturing process.

Verification and compliance to standards for components are core to industry acceptance, which was part of the driving force behind AML3D's three-metre long SOW Davit Arm that was designed and manufactured for Perth based shipbuilder Austal Limited in 2020. The project provided key stakeholders with the opportunity to assess the suitability of WAM as a manufacturing method while also endorsing the validation and certification approach for use in future applications.

AML3D, guided by standards and class organisations such as Lloyd's Register, ISO, ASTM and DNV-GL, created a test and validation process that allowed for WAM as a new manufacturing method to produce primary structural components for sea-going vessels. The program utilised a range of testing methods, including destructive and non-destructive testing, and targeted inspections all of which followed AML3D's existing Lloyd's Register Additive Manufacturing Facility certification assurance processes.

The program enabled AML3D to feedback results from the WAM test samples into the ergonomically designed Davit Arm, producing an aluminium component that featured an optimised Design for Additive Manufacturing (DfAM) but was fit for purpose; function tested to more than twice its design working load.

You can learn more about Wire Additive Manufacturing and the part it can play in improving sovereign capability for the metal part manufacturing supply chain at INDO PACIFIC 2022, where AML3D Managing Director/ CEO, Andy Sales, will be presenting on Additive Manufacturing for shipbuilding and the verification process for primary structural components using the Wire AM process.



In Defence | detail matters

Our top 6 current pre-tender legal issues:

Map out and quantify your legal risks Bed down clear contracts with your key suppliers and employees Consider and quantify obligations to pass through to suppliers and partners Sort out IP access, protection and sharing rules Consider the Trade Practices rules, they could apply Enter into a Collaboration Agreement with key partners and suppliers

T: +61 8 8414 3333

E: Stefan Jury sjury@jht.com.au | E: Brenton James bjames@jht.com.au | Andrew Fisher afisher@jht.com.au

Jones Harley Toole

Lawyers | Protecting your business



Charities of Choice

Legacy Club of Adelaide Returned Services League of Australia Royal Society for the Blind The Repat Foundation - The Road Home

Associate Members

Australian Business Defence Industry Defence Reserves Support SA Edith Cowan University Flinders University HunterNet Indigenous Defence & Infrastructure Consortium National Safety Council of Australia Queensland University of Technology

Regional Development Australia

RMIT University The University of Adelaide University of South Australia

BUILDING CAPABILITY AND PERFORMANCE

South Australia's largest locally owned accounting and advisory firm – William Buck – proudly supports businesses and service providers in the defence sector.

William Buck's scale and expertise can help design, develop, implement and optimise your business processes so your business can maximise its production output, employee efficiency and gross margins, while reducing commercial risk, building capability and improving overall financial performance.

For a fresh approach to your business performance or personal wealth, contact Business Advisory Director, **Lee Fuller**.



GET IN TOUCH

lee.fuller@williambuck.com 08 8409 4333 Level 6, 211 Victoria Square Adelaide SA 5000

HOW WE CAN HELP

- Strategic and succession planning
- Merger and acquisitions
- Financial analysis and board reporting
- Due diligence
- Local branch establishment
- Bank finance
- Tender and contract costing
- Grant application assistance
- Wealth creation
- Budgeting and forecasting



Defence doesn't do second best.

Time to improve your image?



+ Web Design & Development + E-Commerce
+ Responsive & Mobile + Content Management Solutions
+ Strategy + Graphic Design + Publishing & Advertising

boylen.com.au



Unlocking opportunities for Australian industry

Transforming Naval Missions

Rolls-Royce's world-leading naval technologies will deliver futureproof power and through-life operational adaptability for Australia's new Hunter-class program. This includes MT30, the world's most modern, power dense marine gas turbine and our unique Mission Bay Handling System.



Rolls-Royce - powering Australia's Hunter Class frigates

Supporting BAE Systems/ASC Shipbuilding's contribution to a sovereign shipbuilding capability for Australia. Partnering with local industry to develop manufacturing, sustainment and design canability.

Building Rolls-Royce Australia defence expertise, through training, knowledge transfer and on-site support to overseas build programs. Creating export opportunities for Australia's defence industry and powering our Navy's future.