

Defence Business

Issue 56 October 2022

Land Forces

Growth Strategies
Skills Taskforce



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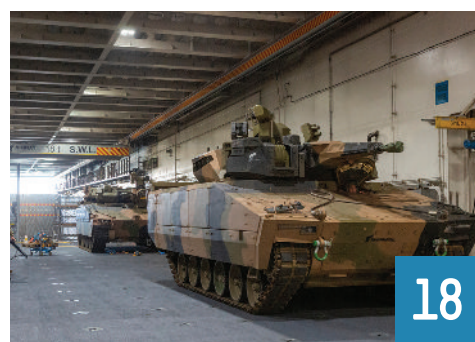
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COVER CAPTION
Australian Army soldier Sapper Tyson Broad from the 3rd Combat Engineer Regiment, onboard an MRH 90 Taipan from the 5th Aviation Regiment, during Exercise Kalimantan.

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FROM THE DESK OF THE CEO

Audra McCarthy, Chief Executive Officer

Welcome to the 2022 Land Forces edition of Defence Business. There has never been a more exciting time to be working in Defence and defence industry. The wheels the former Liberal Government set into motion are gaining traction with the new Labour Government pushing forward with the 2020 Defence Strategic Plan. Best of all, we are starting to see a lot more consultation with industry and Defence officials.

In fact, there is a lot to be inspired about in this edition, from excellent stories on how we grow our defence capabilities, to learning about export controls and how not to get caught out.

The Defence Teaming Centre (DTC) was pleased to learn about the Labor Government's commitment to local industry and their strong push to keep as much work as possible on our shores. It's important to understand this is not about creating jobs for Australians. First and foremost, it's about creating a sovereign industrial sector so that Australian industry has the know how, know why and equipment necessary to supply and maintain a regionally superior capability for Defence. Australians enjoy a free and democratic lifestyle and it's important Australians and their lifestyle are kept safe.

Earlier this year upgrades at RAAF Base Edinburgh in South Australia were completed allowing the first of Australia's twelve P-8A Poseidon's to receive their five-year heavy maintenance cycle on our shores, rather than offshore. We are seeing billions of dollars being invested across the different sectors of Defence to build our sovereign capabilities, most notably was the \$2.7B investment into the new Joint Air Battle Management System in July, and only last month the Federal Government announced their intention to form a Defence Industry Workforce and Skills Taskforce.

The taskforce will bring together key stakeholders, academia, SMEs and industry to form solutions on how we grow and upskill our workforce to deliver critical defence projects. Turn to page 25 to read more about the taskforce, which the DTC intends to be involved in to represent the needs of our members.

A known issue within the Australian defence industry is the void of medium sized businesses in the landscape. Interestingly, the Minister for Defence Industry, the Hon Pat Conroy MP, has recently spoken about this issue. He said business support policies must not only support small to medium sized businesses, but provide support to medium sized businesses to grow and stay engaged in defence supply chains. As Rebecca Humble, Chief Strategy and Corporate Affairs at Nova System raised at our Defence Leaders Breakfast in August, government needs to be able to offer different incentives to grow SMEs. Read more about how Australian defence industry can grow on page 8.

The DTC actively advocates to government to reduce the cost of doing business with Defence and in the defence supply chains. This is a long endeavour, and while we are starting to see some changes coming through, more needs to be done to simplify and streamline procurement process and the speed of procurement decisions.

According to the 2020 Force Structure Plan, the preparation period for Australia's Defence has been reduced from 10 years to five years. This reduction requires Defence to make and execute procurement decisions faster to give industry the necessary lead times to manufacture and deliver the capabilities required. In the meantime, we are uplifting the knowledge of our members to better understand the Defence contracting tools and practices.

With a more aggressive acquisition program in place, Government needs to acknowledge the areas of excellence and expertise Australia needs to seamlessly support the war fighter when deployed. The value of the Quad and AUKUS enables Australia to collaborate with its allies to better support industry to invest, and build the capabilities needed and valued by Defence. At the end of the day, it's not economically viable to do everything, hence the importance of alliances with allied countries. By specialising in key areas, in partnership with our allies, Australian industry will be able to create the volumes necessary to achieve economies of scale and become competitive in key, specialist areas. To achieve this, our government must be forward leaning in negotiating a strong involvement and position for Australian industry in trade agreements. Traditionally, our trade agreements have remained focused on the export of primary products and the importation of high value-added goods and services. Australia needs to start manufacturing and exporting higher value-added goods and services. But before we begin the manufacturing process, we need to identify the common capability constraints across our allied partners. This paves the way to identify where, and what, we should specialise in, such that the consolidated resource and effect of coalition forces is uninterrupted.

This edition of Defence Business Magazine has been compiled to inspire and inform you about the future of our sector, and Defence. We have enjoyed putting this edition together and look forward to celebrating the achievements of DTC members at our annual dinner and awards ceremony next month. Happy reading!



Defence Teaming Centre
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Dinner & Awards Ceremony 2022

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



MC:
Katherine Ziesing

Strategic Communications Manager
Hanwha Defense Australia Pty Ltd



Guest Speaker:
Dr Brendan Nelson

President of Boeing Australia,
New Zealand and South Pacific

Thank you to this year's
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Ceremony Sponsors:



Sitting Down with Innovative Defence Industry Business Leaders

Derby Rubber

With CEO, Michael Clayton



What led you to start working within the defence industry?

My interest in defence capability started when I was very young. I often attended the Avalon and Edinburgh Air Shows and naval ship local open days with my family. Fast forward a few decades, to when I was structuring the business growth strategy for Derby Rubber, and it was clear that diversifying into defence was a natural fit for the business and an opportunity that I was passionate in leading.

When I commenced my role at Derby Rubber in 2015, I immediately saw the potential of the business.

We have an extensive history of delivering on major government, construction, mining, train building and rail infrastructure projects. Harsh conditions, abrasion resistance, vibration dampening, product performance and longevity are where we excel. We are transferring this technical experience and manufacturing capability to our defence projects.

What was the path you took to get to where you are today?

Throughout my schooling I had a natural attraction to STEM subjects and music. When I commenced a Chemical Engineering degree, at age 17, I also joined the Royal Australian Navy Reserves as a musician. I was fortunate to be able to balance both careers and to serve in the Navy for over 20 years. My Reserve work followed my professional work as I relocated from Adelaide to Brisbane and Sydney to pursue various opportunities in polymer engineering and manufacturing.

As an engineer, I find rubber a fascinating material. It is used extensively in many applications and products and allows me to connect with people at all levels across many industries, including defence.

What do you feel is the biggest strength of Derby Rubber right now?

The business has extensive technical capabilities, and our new site has given us the capacity to grow. However, our biggest strength right now is our people capability. Traditional manufacturing businesses often define their capability as a list of machines and the materials that they process. We realise that building our people capability deepens our overall business capability, improves our service offering, fosters an innovative and supportive culture, and sets our sights on the future. I am excited about where our ambitious team can take us.

What have been the biggest challenges you have had to overcome at Derby Rubber?

2019 was a defining year for Derby Rubber and for me as the leader. The business was to relocate from Sydney



to Adelaide to realise its growth potential. However, before the plans could be initiated, an arsonist entered the property over a weekend and destroyed our home of 55 years, our stock and much of our plant. Within two weeks post-fire, we had made the decision to rapidly relocate from Sydney to Adelaide. It was a mammoth effort from my team. Within 100 days of the fire, we despatched our first export shipment, with a combination of relocated and new plant, newly trained production staff and in a new building. It was a remarkable effort.

The defence industry presents us with a new set of challenges and significant barriers to entry. However, the benefits can be immense; including long-term, consistent contracts, high-margin work and the opportunity to realise rapid growth. We engaged with the Defence Teaming Centre and ODIS early in our defence journey. We received grants to prepare our defence entry strategy and to lift our existing ISO 9001 and ISO 14001 certifications to a "defence ready" level. As a small business, it has been challenging to manage resources as we prepare the business for the defence supply chain, particularly in areas such as cybersecurity and in achieving and maintaining DISP certification. It's a long game, but one that we are prepared to resource.

Why did Derby Rubber become a member of the Defence Teaming Centre?

Derby Rubber joined the Defence Teaming Centre in 2019, the same year that we relocated to Adelaide. Derby Rubber was relatively new to the defence industry, having just completed a contract for Land 121 Phase 4. We were also newcomers to the state of South Australia. DTC membership was attractive for defence training and as a connector to the businesses that we were targeting for defence and non-defence work, particularly in SA.

How has the Defence Teaming Centre assisted Derby Rubber in becoming "Defence Ready"?

Our initial expectations of DTC membership have been greatly exceeded since we joined three years ago. Within weeks of joining the DTC we attended the Defence 101 training to learn about the current defence landscape and the pathways to enter the defence supply chain for upcoming major projects. My staff and I have since attended training in cybersecurity, quad charts, Shipley capture management and Indigenous procurement.

The DTC's networking events and breakfast briefings have placed our small business "in the mix" with the Primes and their Tier 1 suppliers. We have welcomed many key defence procurement decision makers to our manufacturing premises, which has led to supplier onboarding audits. The DTC provided us with support in the lead up to major defence trade shows, as well as connections during the exhibitions.

As I look to bringing our next generation of leaders through the ranks, I placed my first employee on the DTC's Defence Industry Leadership Program (DILP). The feedback has been incredibly positive. The combination of leadership training and defence awareness has developed their leadership skills, built resilience and fostered respectful values. I can't recommend DILP highly enough.

If you could give only one piece of advice to other CEO's looking to branch out into defence industry what would it be?

Entering the defence industry is not designed to be easy. It must be embedded into your strategic plan, your systems and supported by the executive team. Join the DTC and industry groups, connect and learn from those that have gone before you.

Helping our customers harness the extraordinary power of technology to build a future we can all trust



Growth Lessons from Successful Defence SMEs

By Lucy Brewer



Nova Systems Chief of Strategy, Bec Humble (left), at the Defence Leader Breakfast.

Growing from an SME to a Prime, particularly in Australia's defence industry, is not without its challenges. Nova Systems and SAGE Group, both leading companies in the defence industry, with their origins in Adelaide, have proven they have the blueprints for successful growth.

Since Nova Systems was founded, more than 20 years ago, the company has significantly expanded its capabilities. It is now a global engineering services and technology solutions leader, with more than 1,000 employees across the world and a turnover of more than \$300 million per year.

"What I have learned over my career is that you need to engage the workforce and take them on the journey," said Nova Systems Chief of Strategy, Bec Humble.

"You're never going to get everyone on side, but if you can inject a sense of purpose and vigour into the majority workforce, you're heading in the right direction."

SAGE, also a global group, started in a backyard shed in South Australia, and now encompasses five companies, and more than 600 people across two continents. Throughout its journey from an SME to a Prime, the company has focussed on sustainable growth and developing its culture.

"Seek good advice and surround yourself with great people that can help you make the right decision," said SAGE Group General Manager, Adrian Fahey.

"Have a strong focus on sharing the air. Make sure your team understand when you are doing well and when you are challenged."

Both Bec and Adrian also stress the importance of flexible working to maintain the right culture. Nova Systems holds events throughout the year to thank its employees and their families and was recently ranked #11 in the 2022 Best Places to Work survey. SAGE Automation is also embracing the flexible working trend.

"Don't see this as a challenge but as an opportunity. Embrace it and learn how that can work within your business. It actually opens up a whole new group of resources you may not have had access to in the past," said Adrian.

"Make sure you continue to find new ways to value your time... what are you doing to differentiate the experience for your team... one of the great things about a growth company such as SAGE is that it creates exciting new opportunities for people."

In the post-Covid, inflationary state of the world, there is much discussion about

"Seek good advice and surround yourself with great people that can help you make the right decision."

Australia's sovereignty in defence, and what businesses can do to ensure the country's defence capability.

"There's a clear shift from the long-held assumption we had at least a decade to respond to a threat," said Bec.

"A window of opportunity - unlikely to be repeated - currently exists to ensure critical Defence capability is kept in Australian hands to deliver true sovereignty.

"If immediate action is not taken, we need to accept the likely further erosion of Australian defence capability and the risk posed by relying on other nations for our national security.

"We need to be focusing on our own national interests and prioritising areas of defence that can be retained and nurtured here in Australia.

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F-35A Lightning II aircraft A35-025 takes off from RAAF Base Darwin during Exercise Rogue Ambush 21-1. SAGE Automation deliver a complete upgrade of the electrical and control systems for two fuel farms at the base. As critical infrastructure to support RAAF operations, the fuel system is capable of storing and pumping millions of litres of aviation fuel.



SAGE Group General Manager,
Adrian Fahey.

“For small to medium-sized businesses, we should be looking at partnering opportunities and bringing solutions to the Department of Defence... at the other end of the spectrum, could there be incentives to help grow Australian small and medium enterprises and accelerate procurement timelines to speed up capability realisation?”

With the current workforce issues in Australia, and indeed, the world, both Bec and Adrian believe teaming to be critical across the defence ecosystem. Nova Systems engages with more than 350 strategic partners that make up its supply chain and has previously partnered with government and industry for a number of defence projects.

“Given the current workforce issues we are all facing, partnering is critical across the Defence ecosystem – between Defence, industry, and academia. The government can also help support industry by providing long-term certainty and confidence to grow and invest,” said Bec.

“A great example of industry partnering is Nova Systems’ work with NORSTA Maritime which is reshaping naval sustainment through an innovative Regional Maintenance Provider model, while creating a pipeline of apprenticeships and opportunities for SMEs in the region.”

SAGE Automation also prioritises partnering and teaming, and Adrian sees it as an opportunity to accelerate the defence industry as a whole.

“Our journey in defence has been built off the back of working with other like-minded companies, from small agile new tech businesses, through to Primes,” said Adrian.

“It will remain a key strategy of our own... we have an amazing capability here in Australia in defence and it continues to grow but we also have this great opportunity to continue to learn from larger international partners.”

Impending Changes to ITAR

By Eva Galfi - Principal, International Trade Advisors



The Defence Teaming Centre, in conjunction with International Trade Advisors, is hosting a series of training seminars designed to upskill South Australian defence companies about the legislative requirements for managing export-

controlled technology. The seminars focus on the International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR), with the aim of translating these U.S.-based regulations for applicability to defence projects undertaken by Australian industry.

“The U.S. State Department’s DDTC is once again undertaking a reorganisation and revalidation of the ITAR, which will result in some potentially significant changes in how we manage ITAR in Australia.”

The Importance of Training

Having staff that are knowledgeable about U.S. export controls can present commercial opportunities as well as help to avoid unnecessary headaches. The Commonwealth expects the Australian defence industry to have strong compliance programs in place in order to safeguard U.S. origin export-controlled technology. Australia purchases roughly 60% of our defence assets from the United States. With the advent of AUKUS, this figure may increase.

In addition, AUKUS may result in significant opportunities for the Australian defence industry to tender for projects with the U.S. and U.K. governments. In order to be competitive in these tenders, we will have to demonstrate that we have staff that are knowledgeable about how to safeguard export-controlled technology and that we have a strong culture of compliance with export controls. The same holds true when tendering for projects with Australian primes and the Commonwealth. Being able to evidence the ability to safeguard ITAR and EAR controlled technology can be a significant competitive advantage in a tender.

Learning Where Compliance Can Go Wrong

They say if you can’t be a good example, then be a horrible warning. Unfortunately, there are many large companies with robust export compliance programs that have inadvertently violated the ITAR or EAR and suffered reputational damage, fines, penalties and costly audits as a result. Knowing what the rules are is not enough. Staff that understand where compliance pitfalls lie take responsibility for leading the export compliance function, which can be key to avoiding costly errors and reputational damage.

There are many things Australian defence companies can do to mitigate risk and ensure that staff working with export-controlled technology are complying with legislative requirements, without creating a commercial roadblock. Understanding the best way to inform key stakeholders about the ITAR and EAR, and finding ways to monitor compliance in an efficient, continuous way, are both key to mitigating the risk of violations. Coming together with peers in a training format allows experts responsible for the export compliance function to share experiences with one another and learn about industry-best practice.

Coming Legislative Changes

Keeping up to date with U.S. export controls is also a must for defence companies working with U.S. origin defence assets. The U.S. State Department’s DDTC is once again undertaking a reorganization and revalidation of the ITAR, which will result in some potentially significant changes in how we manage ITAR in Australia. The first of these changes, most of which relate to key definitions, come into effect on 6 September.

Several proposed changes, including how the U.S. views dual and third country nationals with respect to the ITAR, are currently under consideration. The most significant proposed change affecting the Australian defence industry would be the change to the definition of “re-export”. The proposed change would disregard a natural person’s country of birth and use only currently held citizenship or permanent residency as criteria when assessing a person’s ability to access ITAR articles.

“Unfortunately, there are many large companies with robust export compliance programs that have inadvertently violated the ITAR or EAR and suffered reputational damage, fines, penalties and costly audits as a result.”

Australian industry needs to be aware of key changes in order to ensure that ITAR controlled assets are managed in compliance with the regulations. This particular change to the definition of re-export is also important to companies facing an engineering skills shortage as it would allow greater flexibility in utilising staff with dual nationalities to work on projects involving ITAR controlled technologies.

Taking It ‘Home’

Training should be more than an annual or occasional box-ticking exercise. Staff attending training should walk away with not only new knowledge, but some practical applications for using that knowledge for commercial gain and risk management. A well-led training session will encourage insightful questions, attendee interaction and engagement with the training materials. Companies sending staff to training can expect them to return with ideas and suggestions for process improvements; capitalising on their enthusiasm can create momentum for developing the robust compliance program the Commonwealth and U.S. Government expect Australian industry to possess and maintain.

DTC’s next ITAR and EAR training sessions, taught by International Trade Advisors, will be held on 19 September and 28 November in Adelaide’s CBD. For more information, visit the DTC website at [dtc.org.au](https://www.dtc.org.au)



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US tech entrepreneur and founder of Anduril, Palmer Luckey.



- **US tech entrepreneur Palmer Luckey visited Australia following the May 2022 announcement of a \$140-million deal between Anduril, the Royal Australian Navy and DSTG for extra large, autonomous undersea vehicles (XL-AUV).**
- **Anduril launched in 2017, is valued at \$4.6 billion and has offices in the USA, UK and Australia.**
- **Founder of Anduril, Palmer is best known as the inventor of the Oculus Rift headset and founder of Oculus VR which he sold to Facebook in 2014 for billions. He visited Sydney, where he is setting up an R&D facility – the first outside the US.**
- **Defence Business caught up with the 29-year-old.**

The Billionaire Whiz Kid Shaking Up Defence

Can you enlarge on your vision to bring a Silicon Valley approach to Defence Technology?

The historical approach over the last few decades has been that most defence contractors work on a cost-plus contract schedule, where they get paid for their time and materials, with a fixed percentage of profit on top which fundamentally incentivises bad program management.

The longer a program goes on, the more money gets made. The more complex the system is, both at the beginning and at the end of the process, the more money there is to be made.

Anduril is taking a different approach where, instead of relying on the government to fund all of the technology development on a cost-plus contract, we use our own money to decide what to build, how to build it, when it's done. Then we sell that technology to the government.

When we go to a government and try to sell something, we're not going with a white paper, explaining an idea. We go to them with a working system, a working product.

Of course we work with our customers to modify those products to their needs and to add new capabilities.

But fundamentally, we build products using our own money, which means the government is never on the hook for a failed idea or failed execution. By the time they're involved, the risk is much lower for them.

The goal of Anduril is to save taxpayers hundreds of billions of dollars a year by making billions of dollars a year.

Our goal is to use this new way of doing things to try and take money away from legacy programs that are extraordinarily expensive, and put it towards capabilities that were designed to be efficient from the very beginning, and then executed in an efficient way.

You talk about a manufacturer-ready vehicle at the end of 2025. Compared to typical timeframes for defence projects, that sounds incredibly ambitious.

Well, get ready to hear some more ambition.

Contractually, we're supposed to deliver the first three vehicles as a production-ready prototype by 2025.

But we work really fast and we're planning to deliver even earlier.

We've decided that it's important to try and get this done very quickly. It's less expensive for the customer and we get to production faster.

The reason we're able to do this is because we've already developed the core technology that we are building this new vehicle on top of.

We already have a vehicle that can dive to 6000 meters, that already has weeks of endurance, thousands of miles of range.

So making a much larger version of it is going to be a challenge but it's one that we are very confident we'll be able to do quickly and efficiently.

Australia has wound down its manufacturing base but COVID-19 has brought back the need to have sovereign capability. Do you have an opinion on this regarding future manufacturing and does Anduril have a role to play?

I think we've got a role to play.

There are two problems. There's the Anduril side of manufacturing, and then there's the broader economic and geopolitical situation.

For Anduril, it is pretty easy. We manufacture stuff in the United States, we manufacture it in other allied nations. And we're going to be making these vehicles right here in Australia.

The first three are going to be made in Sydney. And then, as we expand in the future, when we make more of these both for Australia and for export to the rest of the world, we're going to be building another manufacturing plant in a different part of the country.

The bigger problem is that the United States, in particular, used to have massive industrial capacity.

And so when we got into conflicts, we were able to turn that manufacturing capacity towards building the weapons that won those wars.

Unfortunately, the United States basically shipped it all off to China. Australia has done much the same.

We've put ourselves in a position where if we ended up

in a conflict with China, in particular, we wouldn't be able to actually manufacture all that much of anything. So you end up in a spooky situation where you might be going into a war only with the tools that you enter the war with, with very little prospect of mass manufacturing replacements. That's something that the United States and Australia and all of Europe really need to get their minds wrapped around. That's not a healthy situation. That's not a position of strength.

What about inputs, such as critical minerals? Is there an issue with supply in regards to that?

All of our stuff is sourced from US allies.

So a few years ago, we decided that we were going to get China completely out of our supply chain.

We had already gotten all of our chips out of China and all of our sensors out of China. But we had, for example, fasteners, or screws or rubber gaskets that were still being made there. We decided we were going to get completely out of China, only work with US allies. And that's our whole supply chain now.

And we're going to be doing the same thing for this vehicle. You mentioned, will it be a challenge? Yes, it is definitely a challenge.

There are a lot of materials that are easier to get from China or easier to get processed in China.

But that's just part of working in defence, you have to

make sure that you're not dependent on China for your critical components. Because if you are, they can just cut you off. And all of a sudden, you can't make anything.

So the time to be figuring out the alternate supply is not the middle of a war.

You're in an intense competition for talent. Now that you've got the boots on the ground, how do you see the situation in Australia?

Every industry is really having a hard time hiring enough talented people.

We've got a few things that help us. The first is that we do provide a really interesting place for people to work, where they can work on problems they can't work on anywhere else, where we give them the freedom to move very quickly and build very interesting systems.

We also offer the normal stuff, you know, we have a nice office, we pay people well, we actually pay people to take vacations... because it makes people more productive in the long run. We have a lot of the normal work benefits. But the real thing that helps us hire people is going to people who are working in advertising or social media or search engine optimisation and saying, 'Hey, what you're doing doesn't really matter in the long run. Are you really going to spend your life making advertisements 0.1% better at making money?'

'Is that really what you want to be doing? Or would you rather be working on something that is of great

importance, that is worthy of great respect?'

And that is something you'll never be able to do from inside of Google or Facebook or Apple.

That's actually our most powerful message. A lot of people join Anduril even though they could make as much money or more somewhere else, because they want to work in a company that gives them that sense of pride in their work.

So can a person working in search engine optimisation make the jump to the high level of precision and quality standards required by defence?

Oh, absolutely. We do this over and over again.

In a lot of technological areas, the consumer space is actually far ahead of what's in defence.

For example, the best artificial intelligence people are not working in defence companies. For the most part, they're working at Google, they're working at Facebook, actually, a lot of them work at Snapchat. So Snapchat, you wouldn't think of it is kind of a high-tech company.

But they have one of the best computer vision and artificial intelligence teams in the world, they're top ten.

And we hired a lot of people from Snapchat. Now they are building algorithms that allow us to detect enemy weapons platforms, even when they're trying to disguise and hide themselves. And they're using the exact same skills they use to make, you know, a moustache photo filter on your phone that works in all lighting conditions.

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Anduril's autonomous undersea vehicle, XL-AUV.

It's actually very fascinating where, you know, these talents that were being kind of wasted before are now being put to much better use in the defence industry.

Can you give a quick 101 about Lattice and how it works?

The core product that Anduril builds is not a piece of hardware, it's a piece of software called Lattice. About two thirds of our company actually works on software.

Lattice is an artificial intelligence sensor fusion platform that takes data from many different sensors, both sensors that Anduril makes, but also sensors that are made by other companies.

It then fuses them in real time into a picture of everything that's going on, and it filters that data so that people only have to interact with the data that's relevant to their mission.

In order to be useful, Lattice has to be integrated with lots of different systems. It has to be integrated with our towers, with our submarines, with our helicopters, but we've also integrated it with fighter jets, with naval destroyers, with cruise missiles, with all kinds of existing weapons platforms.

And to do that, you have to have an open architecture that allows any company to plug into the Lattice network, and to communicate through it, and to receive data from it.

You have a goal to be the world's best defence company but you don't have this space completely to yourself.

My goal is not just for Anduril to be one of the most successful defence primes.

I actually hope that we can change the way that government writes contracts, so that everyone is forced to work the way that we work.

I think that everyone should live in fear.

This is one of my favorite things.

You should be worried if you're a defence contractor that if you don't deliver on time, that you are going to lose money. And that will be bad for your business.

Right now, a lot of defence primes actually end up making more money when their contracts run overly

long, when things take longer than they should.

We need to convince government to change contracts, so that everyone feels like they have to have skin in the game. And they are going to be punished if they don't deliver to spec and on time.

That's not something most defence contractors are pushing for, obviously. But I think it's the only way that we can solve this problem in the end.

At the moment, Australia is facing a capability gap for its submarine fleet. Is there an opportunity for your XL-AUV to be a part of the solution until we get to nuclear-powered subs?

They're definitely part of the solution. I mean, the situation you talked about is exactly why we're accelerating the development process.

Will your autonomous underwater vehicle have an attack capability?

I think that's a better question for the Navy. They're the ones that are going to be managing most of the payloads on this. But you know, we're building the vehicle, and certainly it is capable of carrying all kinds of capabilities, including offensive ones.

It's a modular platform where instead of having a pressure hold, everything has to be integrated inside of - each individual system, the power system, the propulsion system, the sensor system - they're all individual waterproof modules. And it makes it very easy to add new sensors, new payloads, even if they don't perfectly fit inside the vehicle.

We can even add what we call tumor payloads, where they are larger than the vehicle normally is - a lump sticking out the side. But you can integrate it in a few days or a few weeks, rather than the traditional process where it would be a major engineering project for months or even years.

Are there teaming opportunities for Australian companies?

Yes, we're actually very deep into that. We've been working on that for many months.

Now, I am not ready to announce specific partners yet,

but we actually are already working with 40 different Australian companies, most of them small and medium enterprises, on various parts of the of the XL-AUV project. That's both on the manufacturing side, and also on the technology side.

There's a lot of companies we've been working with in Australia and most of them are not already doing work with the Australian military.

They don't have the kind of overhead to handle it from the sales side and legal compliance side and the product management side. So by working with us, they're able to work on these problems without having to do it all from scratch themselves.

What has struck you in your time that you've been in Australia?

Australia's got a pretty small population, it's about one and a half times the population of the Los Angeles metro area, which is where I grew up.

And despite having a small population, Australia has a very strong technical community, it has a very strong technology industry and a lot of really, really smart people. Definitely more than you would expect given the size of the country.

That's one of the reasons that we're not just building dive vehicles here. We're also designing new payloads, designing new systems for them here, because you've got a really strong base of people who are passionate about working with the Australian Defence Force.

You've got land capability as well. Is there something on the horizon as far as Land Forces goes?

Yeah. I can't talk about the details but we've got some stuff coming in the near future on that side, especially on the counter drone systems side. It's kind of a starting point.

So our goal is not just to be building maritime systems, we want to be building things across air, land, sea and space here.

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Sitting Down with Innovative Defence Industry Business Leaders

SABRN Tech

With Founder & Managing Director, Dr Abhilash (Abe) Chandra



What led you to start working within defence industry?

I have had a very close affiliation with the ADF over the past 22 years, and I am passionate about ensuring that our deploying soldiers, sailors, and aviators are given the best health support, especially in combat situations.

What was the path you took to get to where you are today?

I am a Vascular and General Surgeon, with a lot of experience in Trauma Surgery. I recognised that there was gap in providing adequate healthcare to our injured soldiers in future conflicts, and therefore, an opportunity to improve the situation. I prepared myself from a business perspective by doing a Master in Business Administration, and established SABRN as an entity in 2021.

What do you feel is the biggest strength of SABRN Tech right now?

SABRN is developing a 'mini-ED' payload that is transportable using a number of unmanned vehicles. This will provide significantly better surgical capability faster to the injured soldier while reducing the risk of injury or death to the search and rescue teams. In this aspect, SABRN's greatest strength is considerable expertise in providing good quality healthcare, knowing the potential injury patterns to patients, and ability to design appropriate solutions to reduce the risk of death.



SABRN Tech Founder and Managing Director Dr Abe Chandra (left) showcasing the Pod at the 2022 Chief of Army Symposium in Adelaide in August 2022.

What have been the biggest challenges you have had to overcome?

My biggest weakness has been my lack of experience in business. I have tried to learn the 'language' by doing an MBA. The other big challenge has been funding to develop the pod.

Why did SABRN Tech become a member of the Defence Teaming Centre?

The DTC is a very good way to establish contacts within Defence Industry SMEs.

Has the Defence Teaming Centre assisted SABRN Tech in becoming "Defence Ready"? If yes, how?

Yes, I am part of the DILP Program. I am learning numerous things about how to pitch to Defence.

If you could give only one piece of advice to other CEO's looking to branch out into defence industry, what would it be?

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LAND 20 22

Global defence leaders and procurement specialists will be seeking to strengthen connections, build new networks and delve into new capability during Land Forces 2022 in Brisbane.

The event combines a world-class industry exhibition with a three-day conference program.

If history is anything to go by, governments, primes and defence SMEs are all expected to make significant announcements during this period.

The event is forecast to eclipse the success of last year, which was the largest land defence event staged in Australia.

It comes at a time when Australia faces what has been described as “the most complex set of strategic circumstances that we’ve had since the end of the Second World War”.

Against this backdrop, organisers promise the conference program will offer “a mix of strategic insight, practical informative sessions and networking functions.”

One of the highlights is the Land Forces 2022 Defence and Industry Dinner on Day 2, with more than 700 people expected to attend.

Australian Army soldiers from the 3rd Battalion, Royal Australian Regiment equip a gas mask during a chemical, biological, radiological and nuclear defence (CBRND) serial following a section attack during the 2022 Duke of Gloucester Cup in Singleton.



Urgency and Ukraine - Vital Inputs for Future Land Strategy



Australian Army Infantry Fighting Vehicles, Hanwha Defense Australia Redback and the Rheinmetall Defence Australia KF-41 Lynx, onboard HMAS Adelaide at Fleet Base East, NSW.

The seminal findings of the 36-year-old Dobb Report will have a direct bearing on the Federal Government's strategy for Australia's Land Forces over the next five years.

The Albanese Government believes Australia has entered Dobb's 10-year warning period that another country "means to do us harm".

"And, of course, in the 2020 Defence Strategic Update for the first time we've observed that we're now within that 10-year window," said Defence Minister Richard Marles.

"That does give a sense of urgency around the way in which we think about our planning that we've not had before."

Rhetoric focused on the long term is steadily being supplemented with ministerial phrases such as action that needs to be taken "right now in the next few years".

Lessons From Ukraine

Not surprisingly, analysts are drawing on lessons from the war in Ukraine to inform future strategy.

The Defence Strategic Review will undoubtedly assess the conflict – including the role of land forces in modern warfare – as it forms recommendations around Defence's force posture and force structure.

"Our Army, like others are studying this conflict

very closely," said Acting Head of Land Capability, BRIG Ian Langford, at the ADM Congress in June.

"Of particular note, Army's future investments in capabilities to include operational level, long range offensive fires, a resilient digital battle management system, a world class aviation system and a credible close combat system are being informed by these real world events."



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Land 400

BRIG Langford likened the future Infantry Fighting Vehicle (IFV), known as Project Land 400 Phase 3, to the Royal Australian Air Force's Joint Strike Fighter (JSF), and the Royal Australian Navy's future frigate.

"It will determine to a certain degree how government chooses to project military power, operate in high threat environments, prepare for all ranges of contingencies, achieve deterrence, balance its force structures and prepare for the type of future conflicts envisioned like those currently being witnessed in Ukraine."

He added: "Army needs Land 400 to plug the M113 capability gap with a credible, effective and deployable solution, particularly in terms of the protection of soldiers who fight in close combat."

As Defence Business goes to print, a decision is expected on whether Rheinmetall or Hanwha will be selected to deliver infantry fighting vehicles under Land 400 Phase 3. Despite the defence review, the government has said this \$27B project will proceed. However, the former Morrison Government is understood to have reduced the bid quantity from 450 vehicles to 300.

BRIG Langford said that while the future IFV does not represent the totality of Army's land capabilities it was at the "core of the close combat team" as it relates to the task of closing with and killing/capturing enemy forces. "Many either see this role as confronting, distasteful or no longer relevant to war with the advent of modern technology," he said.

"And yet, what we see in threats such as Ukraine suggest otherwise. Army must be able to fulfil this role given that there is no viable alternative in the short to medium term."

He went on to point out that "recently there has been some critique of the combined-arms approach as a concept which has outlived its usefulness.

"The success of a range of militaries using large volumes of cheap, consumable armed drones and missiles, does not discount the importance of developing flexible forces with multiple options to produced combined-arms outcomes."

Fourfold Focus

BRIG Langford said Army was responding in four key ways to the war in Ukraine:

"First, the ways in which we conceptualise how to employ land warfare, especially across the Indo-Pacific region, warrants continual review to ensure that operating approaches are effective against contemporary and forecasted threats.

"Secondly, Army must continue to focus on how it operationally generates its forces, to include how it trains, educates, and prepares its people and equipment.

"Thirdly, Army must continue to prioritise its development and application of emerging technologies, to include robotics, tactical drones and automation, for this is how small armies generate the types of "small, cheap and many" tactical asymmetries needed to win in war.

"And lastly, Army must continue to balance its capabilities to ensure its maximum utility to the joint force - this includes its planned acquisition of long range offensive fires, its ability to set and command operational theatres through its battle management systems and its own contribution to joint force projection through its planned acquisition and upgrade of its aviation and littoral projection capabilities."

Bushmaster

The Federal Government has approved the Land Force Level Electronic Warfare Project valued at nearly \$75 million.

The Project Land 555 Phase 6 will modify existing Bushmaster Protected Mobility Vehicles and install Electronic Warfare systems into these vehicles.

Minister for Defence Industry, Pat Conroy, said the systems would improve the Australian Defence Force's ability to monitor and control the electronic environment and, where necessary, deny or degrade the electronic systems of adversaries.

The Government has awarded delivery of the Force Level Electronic Warfare System project to Raytheon Australia Pty Ltd.

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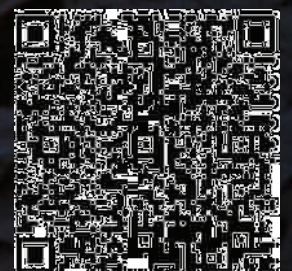


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The Defence State pavilion at the Indo Pacific International Maritime Defence Exposition, May 2022

As the state's lead government agency for all defence matters, South Australia's Defence SA team is heavily focussed on supporting local industry, especially when it comes to trade shows as a key opportunity for SMEs to engage with major players in defence industry.

Defence SA Chief Executive Richard Price said there is no better place than a trade exposition for SMEs to engage with international defence primes to put themselves in the frame for supply chain work on major defence projects.

"At trade expositions, all the major defence primes relevant to that sector are there, on-site, ready to engage. There are opportunities to showcase your capabilities that you would never otherwise get," said Richard.

While this may seem overwhelming, companies who form part of the South Australia – The Defence State stand are provided with a range of support mechanisms to ensure their trade show experience is a successful one.

"At Defence SA our team have more than 100 years of combined Defence and defence industry experience and that is all available at your fingertips when you are a part of The Defence State Stand.

"At Land Forces 2021, for example, there were more than 700 companies who exhibited – Defence SA are able to provide advice on not only who of those 700 companies

you should be meeting with, but also why and what opportunities may be available for your company in terms of future projects or partnerships," said Richard.

In the lead up to the 2022 Land Forces event, Defence SA received a record number of expressions of interest, with more than 70 companies keen to take up the opportunity. Participating on the Defence State stand comes with a range of benefits including being in a prime position within the exhibition halls for maximum brand exposure, which SMEs would not have access to if they were to exhibit on their own.

"A key part of Defence SA's offering is networking opportunities and a platform to showcase your company's capabilities," said Richard. "We hold networking events with state and federal ministers and facilitate 'meet the primes' opportunities on our stand where participants are introduced to the primes along with other VIPs, including key Defence decision-makers for major projects.

"Defence SA can also support companies with promotion

of news stories across our networks to ensure your messages reach the right audience while building brand awareness."

Mike Hartas General Manager of Defence Sales at REDARC Electronics can attest to the support provided by Defence SA having attended several trade expositions as part of The Defence State stand.

"The support provided by Defence SA has been invaluable in establishing REDARC Defence Systems as a valuable part of the defence industry landscape in Australia and introducing us to key international businesses," said Mike.

"Defence SA has supported us in establishing our defence business customer base through introducing us to global supply chain managers and helping ensure our preparation for defence shows is at the standard expected on the global stage."

Defence SA supports industry participation at key events aimed at creating new opportunities to grow the state's defence industry. Learn more at defencesa.com

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Clock Ticking on Defence Strategic Review

Deputy Prime Minister and Minister for Defence, the Hon Richard Marles MP and Minister for Defence Industry, the Hon Pat Conroy MP met with a number of prime representatives at a roundtable event in Adelaide on 7 July, 2022.

There will be no topic more hotly debated at Land Forces than the current Defence Strategic Review.

By the end of this month (October), just 120 days remain before the newly-minted Federal Government expects the Review's final report.

The March deadline for the Review coincides with the date set by Defence Minister Richard Marles to make a decision on Australia's submarine strategy under the AUKUS alliance (see story page 24).

"We are seeking to have both bodies of work complete in the first part of next year so that they're happening concurrently... together they will underpin our defence policy, I think, for years to come," the Minister said.

The circumstances Australia currently face are dramatically different to a decade ago when the last review was undertaken.

"The strategic environment has deteriorated significantly," the Minister said. "And we really do face a much more difficult world."

Under the microscope are force structure, force posture and preparedness, and investment prioritisation.

"We are wanting to apply a critical eye to the Integrated Investment Plan, which is that 10-year schedule of procurements for the Defence Force," says Defence Minister Marles.

The newly minted AUKUS alliance is another game changer in the Minister's eyes.

"Exploring how our capabilities can better integrate and operate with the United States, the United Kingdom and other key partners will also be an important element of the Review," he said.

Consensus – and Conflict

Respected think tank, ASPI, maintains "there's broad agreement about the need for faster acquisition processes to generate mass and develop the ability to deny, degrade, disrupt and, where needed, punish any potential adversary at a long distance from Australian shores."

Yet beyond that consensus, the Review must navigate a minefield of strongly held but widely diverging views about how to achieve those aims.

David Crowe, a political analyst at the Sydney Morning Herald, described it as a "snap review" while the new Albanese government weighs up "pivotal decisions on nuclear submarines, a fleet of guided-missile destroyers and plans to build a bigger army".

So What Can We Expect?

Ulas Yildirim is a wing commander and staff officer for space strategy and concepts with the Royal Australian

Air Force, and a RAAF visiting fellow at ASPI.

"There have already been several recommendations from prominent analysts on what the review should focus on," he contends.

"Thus far they have been mainly about how to prioritise limited resources during a particularly difficult fiscal period by acquiring long-range strike capabilities, boosting industrial capacity to build missiles and developing an acquisition system more suited to the times Australia is facing. These are all welcome.

"... these recommendations reflect a series of discrete capabilities for which the requirement to seamlessly plug into existing systems has been assumed away. Based on the narrative so far, one would be forgiven for thinking that achieving interoperability between these new capabilities and the ADF's current materiel, as well as that of our allies and partners, is automatic. Unfortunately, that is far from the truth."

This is not necessarily the view of the ADF. The ASPI article includes a disclaimer that Yildirim's views "are his and do not reflect the official position of the RAAF, the Department of Defence or the Australian government."

Wing commander Yildirim argues that "the ability to integrate with the ADF's existing capabilities as well as achieve interoperability with allies and partners must form the cornerstone of future acquisitions.

He warns that “without integration, these new capabilities won’t deliver the desired force-multiplier effects that are likely to be at the core of the review.”

Cyber Warfare

Leading the review are former Minister for Defence, Professor Stephen Smith and former Chief of the Defence Force, Air Chief Marshal Sir Angus Houston AK AFC (Ret’d).

Steve Cropper is a Strategic Communication Adviser to the Security Industry and an Information Operations Contractor to the Australian Army.

In Australian Cyber Security Magazine, he contends that “there’s more to worry us than bombs alone” if there is an armed conflict in the Indo-Pacific.

“Critical infrastructure (aviation, rail, telecoms, electricity, ports, etc) are always prime targets in any armed conflict,” he wrote.

He points out that in the Ukraine, nuclear, electric and hydro infrastructure was among the first hit.

“Here, Australia’s second round of amendments to the Security of Critical Infrastructure Act 2018 (SOCIA) came into effect earlier this year. Now it includes data centres among critical infrastructure, recognising that they are key to our national security.”

He warns: “In the event of general mobilisation,

critical infrastructure will be hit first but that will be more than the railway lines, ports and airfields. Several joint cybersecurity advisories warn that key data service providers in Australia have been targeted by malicious cyber actors.”

Sovereign Capability

It will be interesting to see where sovereign capability sits in the list of priorities, given the disruption to supply chains experienced during COVID-19.

After speaking with representatives of defence industry, Minister Marles said “Australia’s geo-strategic environment underscores the need for a robust, sovereign and internationally competitive defence industry base.

“That is why the Australian Government is committed to building a genuine, long-term partnership with defence industry, large and small, both locally and internationally.”

Defence Industry Minister Pat Conroy said the Australian Government was focused on strengthening Australia’s sovereign capabilities, bolstering local manufacturing, and creating new jobs.

“The defence industry partnership is essential to developing the sovereign industrial base to provide the ADF the capabilities it needs, in the areas of greatest criticality, when it needs it,” he said.

“The Australian Government seeks to maximise opportunities and remove barriers for Australian industry participation in Defence procurement.”

Part of this is a commitment to maximising Australian industrial participation within Defence capability acquisition and sustainment projects.

“Our defence industry plan is not only about our nation’s security – it’s about economic prosperity as well,” said Minister Marles.

Wolf in Sheep’s Clothing?

Is the review a cost-cutting exercise?

That’s unlikely. In a doorstep interview outside Parliament House, Defence Minister Marles was asked: “Is Labor going to be cutting back on spending in Defence?”

He replied: “No, we’re not. And we’ve made really clear that we’re committed to a spend in Defence the equivalent of 2 per cent of GDP. We’ve made it really clear that we are committing to the funding envelope which underpins the Integrated Investment Plan, which is the 10-year procurement schedule for defence.

“What the review will do is apply a critical eye to that to make sure that each of those procurements is fit for purpose, given the strategic circumstances that we face.”

In other words, it’s all about bang for buck – and investing long before the first bang.

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Can Feds Fix Subs Capability Gap?

March is looming as a critical month on the Australian defence calendar, with hotly anticipated announcements on the Defence Strategic Review (see page 22) and the nation's future submarines strategy.

Of critical interest is the capability gap – some might call it a chasm - between the expected delivery of nuclear powered submarines in mid-2040 and the limited life expectancy of the existing Collins Class fleet.

While we will have to wait for the details, Defence Minister Richard Marles has clearly stated the government's aim to ensure there are "no capability gaps".

"I think the one thing we do know is that extending the life of Collins will be part of the solution," he said.

"We also know that Osborne is Collins central, if I can put it that way. And so Osborne is going to have a really important role. Osborne is where we will develop the capability around nuclear-powered submarines."

The Minister told ABC radio presenter, David Bevan,

that the fastest way to get nuclear subs is to build them in Australia.

"The industrial capabilities of both the United States and the United Kingdom when it comes to building subs are at full capacity," he said.

"So, were we to make a decision, for example, that we wanted to buy these submarines off the shelf, have them built overseas, we would be putting ourselves in a very long queue and it would take a long time to get the capability."

Osborne Centrepiece

One of the new defence minister's first major site visits was to the Osborne shipyard in South Australia.

"The reason I'm here is not by accident," he told reporters.

"This is a critical part of our nation's future. Indeed, Australia's defence starts right here. It starts right here at Osborne.

"... in the context of AUKUS, because Australia needs to play its part in contributing to the industrial base of all three countries, and the way in which we will get the eight submarines in the quickest possible time is by having that capability to build submarines right here at Osborne."

It's welcome news for local industry, following the demise of the Naval submarine contract.

"To have the affirmation and confirmation of the Albanese Government that Adelaide will be the home of our national shipbuilding effort is something that I think should fill a lot of South Australians with confidence, particularly within the defence sector, to continue to invest in their own capability and technological advancement," said SA Premier Peter Malinauskas.

He added: "There is no more complex undertaking than building nuclear submarines on the planet, and that is going to be happening right here in Osborne.


"...to have the Deputy Prime Minister here today, confirming the Albanese Government's commitment to this industry, not just with the Hunter-class program but also with the AUKUS nuclear submarines, is great news".

Cost and Local Content

When questioned on the cost of the nuclear-powered submarines and the level of local industry content, the government remains coy.

"Give me nine months" said Marles during an AUKUS-focused trip to the USA in July, which leads to the highly publicised March timeline for an announcement.

However, he has repeatedly said that an Australian build is the fastest way to get new subs into the water. By extension, that bodes well for a high level of Australian content.



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Premier of South Australia Mr Peter Malinauskas MP delivers an address at the Chief of Army Symposium 2022 in Adelaide.

DTC CEO, Audra McCarthy with Premier of South Australia Mr Peter Malinauskas at the roundtable forum.



DTC Welcomes Defence Skills Taskforce

The DTC has applauded the establishment of a joint South Australian and Commonwealth taskforce to meet the growing needs of the defence industry.

Premier of South Australia, Peter Malinauskas, held a roundtable forum in Canberra a day ahead of the Labor Government's jobs and skills summit in September to announce his intention to establish a Defence Industry Workforce and Skills Joint Taskforce. The purpose of the Taskforce is to ensure SA has the skills and workforce to successfully deliver current and future defence projects.

Audra McCarthy, CEO of Defence Teaming Centre, welcomed the Premier's proposal. She highlighted that Australia's shipbuilding program, of which a significant proportion will be delivered in SA, is a significant undertaking requiring a partnership between government at the State and Federal levels to support the national effort.

"Our Government has a significant task at hand to keep Australians safe in the current geo-political climate. This means Defence needs superior capability and technology that can be delivered, sustained, maintained and upgraded independently" she said, "but this needs a skilled workforce.

"Not only are we needing skills, but the volume of students entering the training pipeline is well below the forecast volumes expected by the sector.

"The fulfilling jobs available through Australia's defence industry sector, especially those available within small to

medium sized businesses, is underrepresented at schools and career fairs.

"We are not seeing the enrolment and graduation/completion rates meet the forecast demand of the sector, making it difficult for Australian industry to attract the workforce and skills necessary to deliver Defence the capability it needs.

"Our small to medium sized industry sector is at the very heart of the defence industry sector, creating the job stability necessary to support a sovereign industrial capability."

The new SA Defence Industry Workforce and Skills Taskforce will comprise key stakeholders from government, unions, universities, training providers, business and industry. It will consider and make recommendations on key defence industry workforce and skilling issues in South Australia, including:

- Aligning State and Commonwealth strategies to develop the defence industry workforce
- Growing the pipeline of STEM qualified graduates
- Ensuring investment in education and training for the defence industry is targeted to address priority needs, including new models of training
- Transitioning skilled workers from other sectors into the defence industry
- Increasing the participation of women and Indigenous Australians in STEM careers and the defence industry

"Our small to medium sized industry sector is at the very heart of the defence industry sector, creating the job stability necessary to support a sovereign industrial capability."

- Increasing awareness and access to education and training pathways into defence industry careers, with a focus on under-represented cohorts
- Ensuring school leavers are aware of defence industry opportunities and get the skills they need for defence industry jobs.

Minister for Defence Industry, the Hon Pat Conroy MP, said the joint taskforce will be focused on skilling the SA workforce that is essential to delivering critical defence projects, (this includes the Hunter Class Frigates, and the Life of Type Extension of the Collins Class submarines).

"We need to act now if Australia is to have the skills and workforce needed to build our defence capability," he said.

"The Albanese Government is working in partnership with the states and territories to have the right skills at the right time to deliver the defence projects fundamental to our national security."

The Taskforce will be co-chaired by State and Commonwealth officials with costs to be met within existing resources.

Local Defence Industry Alliance Established

A new South Australian defence industry alliance has been formed in Adelaide's north, aiming to trigger growth and create new jobs in the sector.

The Edinburgh Industry Alliance – developed in collaboration with the City of Playford – will work with stakeholders to address supply chain challenges and build on the need for onshore sovereign industrial solutions.

Nine local companies based in the area will be joining the alliance: Aimpoint RPL, BiORG, Century Engineering, Eptec Group, Levett Engineering, Lionsgate Business Park, Sonnex, Williams Metal Fabrication and XTEK Limited.

Chair of the alliance and Head of Armour & Composites at XTEK Limited, Craig Schmidt, said this is an opportunity to provide total product and service solutions for the needs of customers such as government and other industry.



"This is exciting on many levels, including the opportunity presented to government and primes to come into an area and be confident that industry will collaborate to ensure the best outcomes for a customer," he said.

"All nine members will seek to ensure the maximum utilisation of our industry capability in advanced engineering, manufacturing and supply chain programs

for defence and specialised areas in Australian and international markets."

Adelaide's northern suburbs are also home to the Edinburgh Defence Precinct, Defence Science and Technology Group (DSTG) and major defence primes including BAE Systems Australia, SAAB Australia, Lockheed Martin Australia, Raytheon Australia, General Dynamics and Northrop Grumman.



Defence Industry Leadership Program



Applications for Defence Industry Leadership Program Close November 17

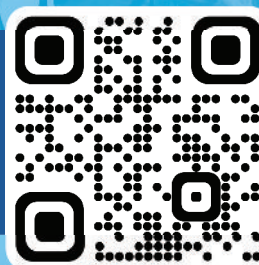
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DTC MEMBER CAPABILITY MATRIX

	CAPABILITIES																																											
											ENGINEERING							MANUFACTURING					PROFESSIONAL SERVICES																					
	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					
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Safeguarding Ukraine's Data to Preserve its Present and Build its Future



Amazon Web Services (AWS) is working alongside the Ukrainian government and other private and public organisations to support the people of Ukraine. AWS employees have been working with Ukraine government officials to help keep vital government services operating, support Ukrainian customers and partners to keep their applications secure, assist the country in preserving its digital history, and more.

Earlier this year, as Ukrainians watched Russian tanks and troops mass at its borders, the government began the physical preparations to defend its country and its people.

Less noticed were the digital fortifications also underway – plans to secure the data that is an essential record of Ukraine as a nation and of those who call it home.

Before the Russian invasion, Ukrainian law required certain government data and select private sector data to be stored in servers physically located in Ukraine. A week before the Russian military invaded the country, Ukraine's parliament passed legislation to allow government and private sector data to be moved to the cloud.

To accomplish that, Ukrainian leadership put out a public call for help. AWS was among the first organisations to respond.

AWS technical experts were able to quickly establish secure communications with officials in government ministries in Kyiv and with Ukrainian representatives across Europe.

On 24 February, the day of the invasion, members of the AWS public sector team met with members of the Ukrainian government. The discussion focused on bringing AWS Snowball devices – ruggedised computer and storage hardware – into Ukraine to help secure, store, and transfer data to the cloud. By the morning of 26 February, a set of Snowballs arrived in Kraków, Poland. Late that night and early into the next day, they reached their destinations in Ukraine.

These Snowball devices would become the foundation

for the effort to preserve Ukraine's data.

Working across time zones and language barriers, AWS solutions architects partnered with their technical counterparts in Ukraine to quickly begin the process of securely moving critical Ukrainian government data to the cloud – including from 27 Ukrainian ministries, 18 Ukrainian universities, the largest remote learning K–12 school (serving hundreds of thousands of displaced children), and dozens of other private sector companies.

In spite of all the physical destruction, the government can serve its citizens. That has not been the case in many wars or natural disasters.

When people and governments have started to rebuild, they've often been forced to do so almost from scratch. In that context it is why, in modern war, data has become both a target and vitally important to protect. All of this data that has been moved to the cloud describes the lives and the nation Ukrainians hope to reclaim and rebuild when the war is over.

"We used to assume that this is just how it is in war – everything gets destroyed and you have to rebuild from nothing," said Liam Maxwell, director of the Government Transformation team in the AWS public sector business and a volunteer in AWS's efforts to aid Ukraine. "But by migrating to the safety and security of the cloud, the government and its citizen services prevail."



President Volodymyr Zelenskyy awarded AWS the Ukraine Peace Prize for the support AWS has shown the Ukraine government and the Ukrainian people. The prize was handed to the AWS team by Mykhailo Fedorov, Ukraine's Minister of Digital Transformation, who said that AWS, "literally saved our digital infrastructure, [by enabling] state registries and critical databases to migrate to the AWS cloud."

"From the day I began working with the AWS team, I have been impressed by their singular focus on helping the Ukrainian people and ensuring that our government can continue working despite external disruption," said Vadym Prystaiko, Ukraine's Ambassador to the United Kingdom. "What is also amazing is that, in responding to our immediate needs, we have never lost sight of the future, of building a better Ukraine augmented by new, cutting-edge cloud technologies."

AWS said it was honoured to be working alongside the Ukrainian government.

"We will continue to aid the relief efforts and to bring our technical expertise and services to those who need them.

"More broadly, AWS is committed to helping our customers and partners in the defense, intelligence, and national security communities deliver their most critical missions. AWS is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centers globally.

"The AWS cloud provides secure, scalable, and cost-effective solutions that helps the U.S. Department of Defense, Navy, Air Force and Special Operations Command meet mandates, drive efficiencies, increase innovation, and secure mission-critical workloads. AWS also proudly supports the unique needs of the U.S. Intelligence Community through improved security and increased mission impact. AWS is also committed to supporting the modernisation of the Australian Defence Force, including industrial base support, through its long-term relationship with the national defence, security and intelligence community."



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- NATO.

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The company offers appropriately qualified personnel with security clearances up to NV1. Furthermore, Vipac has worked with the Australian Government since 1992 and has garnered a reputation for quality which extends to presenting at prime industry forums.

Projects that Vipac has worked on include the Joint Strike Fighter F-35A for Lockheed Martin that required support and analysis during its detailed systems design



Lockheed Martin's JSF F-35A required support and analysis from Vipac during its detailed systems design phase.



The Royal Australian Navy's Collins-class submarines needed noise control and management plans that Vipac ultimately provided.

phase; THALES' Bushmaster PMV, currently in use by defence forces around the world, which required vibration and interior noise reduction; the noise, vibration and shock testing, plus analysis and controls of an ANZAC-class frigate, HMAS Ballarat; and noise control and management plans for the Royal Australian Navy's Collins-class submarines.

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