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I have been guilty of using a flat head screwdriver to loosen a Phillips head screw. Sure, it takes a little longer because the tip doesn't quite fit, and I run the risk of ruining the screw head because the screwdriver slips, but I still get the job done.

Just as there are screws and screwdrivers of different shapes, sizes and heads, there are industry associations of different shapes, sizes and objectives. This does not necessarily mean these associations are competitors; rather, each organisation serves a different purpose or cause.

The Defence Teaming Centre was formed in 1996 and the objectives of the founding businesses were truly visionary for two reasons.

Firstly, the organisation's principal objects remain largely unchanged from the original constitution:

The principal purpose of DTC is to promote and develop Australian businesses with an interest in the defence industry, predominantly those businesses with industrial, manufacturing, engineering and professional resources, with key objects to:

- promote collaborative activities between the defence industry participants;
- act as a facilitator for collaborative bidding by defence industry participants in targeted defence projects;
- facilitate and contribute to the growth of the defence industry in Australia;
- assist and support defence industry participants in their interactions;
- advocate on behalf of defence industry participants in defence policy formulation process; and
- educate businesses to assist them to participate in the defence industry.

Secondly, from its very inception, the organisation never restricted its activities to South Australian industry alone. The language used by the founding members in the first constitution was entirely focused on Australian industry, demonstrating a desire to think holistically about Australian industry.

The defence industry sector is rapidly evolving. Recent media attention around the need to develop Australian industry to guarantee jobs and opportunities for Australian businesses is something the DTC have focused on for over 20 years.

The Defence Teaming Centre has been delivering industry leadership programs for over 10 years; recently adding a Professional Certificate in Defence Industry Leadership to our suite of services through our partnership with the University of Adelaide. Over the past 12 months we have been collaborating with defence primes to design supply chain development programs that will help industry to meet the needs of defence supply chains. We are embracing technology to deliver development services to interstate members and industry located in New Zealand, and we will continue to develop and grow these services as resources permit.

So, what does this all mean?

Industry associations stand for different objectives. They have different resource structures and different business models. Industry should be encouraged to join the association that meets their need and their organisation's purpose. So long as these differences exist, it is unreasonable to suggest the organisations are competing.

It must also be kept in mind that just because an organisation's head office is located in a particular State or Territory, this does not necessarily mean their services are isolated



to that region. After all, if banks can deliver services to customers located in towns where there are no physical branches, there is no reason for the DTC's services to be pigeonholed to South Australia alone.

The DTC encourages businesses from all over Australia to contact us to assess whether or not our wide array of services align with the needs and objectives of your own business. The DTC is a valuable partner for the right fit.

This edition of Defence Business comes at an unexpected and strange time for us all. The landscape with COVID-19 is constantly evolving, but experts suggest that it looks to be set-in for at least the next few months. This has changed the way many of us live, work, and do business, and I want to reassure members that the DTC is here to assist in any way that we can.

Wherever possible, the DTC is adapting its member offering to better suit the changing circumstances – this means moving Defence Industry 101 Training, and any other

events that can be adapted, to an online webinar. It also means being available on phone and online to assist members with any enquiries, or to discuss any development or teaming needs.

I want to encourage members to reach out to both the DTC and the wider defence industry community with any challenges or hardships they might be facing during this time. It is important that we continue to support each other as a community through this uncertain time.

Yours sincerely, Audra McCarthy

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WGA Leads The Way In Innovation

By Tracy Pierce



A unique cradle to suit the Royal Australian Navy's Cape Class vessels, with the capability to be changed over to suit Armidale class vessels in an emergency, is being designed by Wallbridge Gilbert Aztec (WGA).

The ability to repurpose the cradle for both classes of patrol boat is believed to be a first for Australia's Defence Force.

"This kind of project has not been done previously and requires a significant amount of engineering design," says Rodger Weste, WGA's Manager Industrial.

"While we have ship straddle lifts in some states, they are different to a transporting cradle, which transports the vessel from the shiplift through a rail system to the desired location."

Maintenance and protection of the Navy Armidale Class Patrol Boats is undertaken by 'dry docking', which is achieved by lifting the 300t vessels out of the water and securing them on heavy-duty cradles.

WGA designed and developed all of the Armidale Class Patrol Boat (ACPB) cradles currently used at HMAS Coonawarra. It also repurposed three obsolete cradle types to suit the ACPB vessels.

Collaboration

Collaboration has always been the key for WGA to ensure its projects reach the desired customer outcome, in line with its core value of "client focus".

Teamed with Lucid Consulting, WGA is a member of the current Defence Infrastructure Panel for Infrastructure Engineering Assessment services, and has undertaken contracts with other defence majors such as Naval Group, Broadspectrum and ANI.

WGA has been working closely with multiple stakeholders, including Austal and Lloyds Register, on the ACPBs. It has also collaborated with the Fleet Support Unit within Defence, and Estate & Infrastructure Group on the new Cape/Armidale Class cradle set, in order to ensure the best outcomes.

"Collaboration has always been the key for WGA to ensure its projects reach the desired customer outcome, in line with its core value of 'client focus'."

Through a series of pre-feasibility meetings, the organisations worked together to assess the scope of the project.

These meetings were critical in establishing successful best practice options to ensure the process of changing vessel types on the new cradle set would be seamless.

"WGA understands that defence is a truly national endeavour and we try to use the local workforce as much as possible," said Rodger.

"It's about our offices collaborating and giving real value to our clients by providing streamlined access to services throughout the nation."

Decade Of Defence

WGA has been working in the defence space for over a decade. It has a reputation for a strong focus on delivering infrastructure projects, with experience across a range of procurement and delivery types unique to defence.

Along with project management, structural and mechanical design, certification, construction management, delivery and commissioning for the Armidale Class Patrol Boats, they have designed new equipment shelters. These accommodate the Armoured MAN SX-45 vehicles with Giraffe Agile Multi-Beam mounted radar systems under Land 19 Phase 7.

"WGA understands that defence is a truly national endeavour and we try to use the local workforce as much as possible."

As part of AIR7000 Phase 2B, WGA oversaw the refit of offices and hangars, apron line marking, an antennae farm and tower, and secure spaces to cater for the replacement Maritime Intelligence, Surveillance, Reconnaissance and Response aircraft.

They also designed an engineering solution that enabled BAE Systems Australia to fix the large island modules to the deck of the Royal Australian Navy's largest ship, the Landing Helicopter Dock, with the minimum of infrastructure investment.

Future Growth

Defence SMEs will play an important role in the future growth of WGA, with the company seeing DTC's membership as providing further opportunities for collaboration.

"We anticipate growth in the defence space and see ourselves working closely with the DTC in order to help us deliver on a wide range of projects," said Rodger.

WGA has over 330 staff and is headquartered in Adelaide, with offices in Whyalla, Darwin, Melbourne, Perth and New Zealand.

From transporting the 150-year-old, 450 tonne City of Adelaide Clipper Ship from Scotland to Adelaide, to designing the new Royal Adelaide Hospital to remain fully operational following a one in 500-year earthquake, there has been no shortage of novel projects for the WGA team to work on.

Rodger said a "history of ambition" drives the company forward. Now, with more than 35 years' experience in delivering innovative, buildable and economic solutions across diverse sectors, WGA is about to embark on another exciting defence maritime project.



South Australia's PMB Defence and Greece's Sunlight Systems awarded contracts for critical submarine equipment studies and design.

Contracts for the design of the Main Storage Batteries Stages 1 and 2 for the Attack Class submarines have been awarded, another major milestone for the program.

PMB Defence, based in Adelaide and Sunlight, based in Greece have been contracted to provide design, prototyping and qualification activities for the Main Storage Batteries. Both organisations will provide Naval Group with the data necessary to select one as the preferred MSB design for the Attack Class program in 2022.

The Main Storage Batteries are responsible for supplying power to the propulsion system of the submarine and to other equipment on-board the ship. They directly impact the safety of the submarine when diving, making them a critical piece of equipment for the platform.

PMB is a leading supplier of high quality energy and specialised engineering solutions for submarine platforms in Australia. Since 1989 they have continuously supplied MSBs for the Collins Class and more recently have been contracted to design the UK's next generation submarine battery. Sunlight is a worldwide recognised submarine battery designer and manufacturer with an extensive knowledge of submarines.

John Davis, CEO, Naval Group Australia said: "The supply contract will be awarded to the organisation that provides a technically superior design, represents the best value for money and demonstrates a strong commitment to the program's Australian Industry Capability requirements. Naval Group will continue to work with both parties in a range of areas moving forwards to ensure best program outcomes and the maximisation of the involvement of Australian industry in all phases on the contract."

PMB's Chief Executive Officer, Stephen Faulkner, welcomed the news. "PMB looks forward to applying its unique understanding of Australian submarine operations to the design and manufacture of a superior Attack Class submarine battery system. This contract supports PMB's ongoing growth of its skilled workforce and defence exports from its Australian facilities."

"The supply contract will be awarded to the organisation that provides a technically superior design, represents the best value for money and demonstrates a strong commitment to the program's... requirements."

In Sunlight's Australian Industry Capability Plan they have outlined their commitment to local manufacturing in Australia including the transfer of technology, skills and knowledge if successful.

Mr. Dimitris Naoumidis, Sunlight's Advanced Batteries BU Director said: "Sunlight prides itself on being provided with the opportunity to be part of the Attack Class program. Sunlight is committed to assisting Australian industry and meeting and exceeding the expectations of the Commonwealth of Australia for maximum endurance and performance of the Attack Class Submarine batteries. As outlined in our Australian Industry Capability Plan that has been submitted as part of the selection program, new jobs and revenue will be created."

SUPPLY CHAIN

Apr - Jun 2020 Defence Business







While Defence is unique in that "sovereign capability" restrictions limit the spread of supply chains, it is far from immune.

For example, COVID-19 has closed two facilities related to the F-35 Strike Fighter, one in Italy and another in Japan. Swiss multi-national manufacturer and supplier, ABB, which supplies to global defence clients, has also had to close factories. Manufacturers such as Fiat, Chrysler and Hyundai have had to stop assembly lines because of parts shortages.

Mac Thornberry, the ranking member on the U.S. House Armed Services Committee, warned that supply chains for defence weapons and equipment could be threatened.

"... maybe we can also take this opportunity to use it as a wakeup call that being so dependent — whether you're talking about military equipment or you're talking about pharmaceutical components or whatever it is you're talking about — being that dependent upon one country is not a good and healthy thing and we need to diversify our suppliers," he said.

Australia Not Immune

Roy Morgan research found that some 15% of Australian businesses had already been affected by the coronavirus by mid-February. By March, the number being reported was 60% and growing.

Companies with exposure to China and Italy are currently the worst affected. It remains to be seen (at time of writing), whether this will extend to companies with supply chains that rely on output from the likes of Germany, the UK and the USA.

As an island nation, Australia has always been affected by the "tyranny of distance". While this currently offers a slight advantage in giving authorities extra time to prepare for COVID-19 and therefore limit its spread, it also exacerbates international delivery, especially by sea but also with the cancellation of direct flights with China.

Wake Up Call

- "Many are facing a supply crisis that stems from weaknesses in their sourcing strategies that could have been corrected years ago," according to supply chain and procurement veterans Bindiya Vakil and Tom Linton writing in Harvard Business Review.
- "After the March 2011 earthquake and tsunami in Fukushima, Japan, many multinationals learned painful lessons about the hidden weaknesses in their supply chains weaknesses that resulted in loss of revenue, and in some cases, market cap.

"While most companies could quickly assess the impacts that Fukushima had on their direct suppliers, they were blindsided by the impacts on second- and third-tier suppliers in the affected region.

"Almost nine years later, it seems the lessons of Fukushima must be learned anew as many companies worldwide scramble to identify which of their "invisible" lower-tier suppliers — those with whom they don't directly deal — are based in the affected regions of China."

Both Linton and Vakil have strong industry credibility. Vakil is a founding member of the Global Supply Chain Resiliency Council and sits on the Advisory Board of the MIT Center for Transportation and Logistics. Linton is a senior adviser to Resilinc, a provider of supply-chain-mapping services and risk-monitoring data. He previously served as chief procurement officer of Flex, LG Electronics, Agere Systems, and Freescale Semiconductor.

How Long, How Deep?

How long and how deep the supply disruptions will extend is unknown. Part of the reason for this is the semi-opaque nature of reporting from China.

Apple has become the 'poster child' for the supply disruption. It has warned of supply shortages for its iPhone and advised it would not be able to meet earnings estimates.

Microsoft has warned that "the supply chain is returning to normal operations at a slower pace than anticipated ... we do not expect to meet our More Personal Computing segment guidance as Windows OEM and Surface are more negatively impacted than previously anticipated."

While the F-35 shutdowns have been related to containment, rather than constriction of supply, the head of acquisition and sustainment at the Pentagon, Ellen Lord, said the project could be affected by parts supply in the future.

While she is getting daily updates, that is not the case for many companies in the commercial sector.

Majority Unaware

Peter Guarraia, who heads up Bain & Company's Bain's Global Operations practice, is on record as saying that as many as 60 per cent of companies below Tier One are unaware of their exposure.



"While it's too early to forecast the total cost of coronavirus on Chinese and global businesses, our experience shows that taking a wait-and-see approach to uncertainty often results in higher costs and greater disruption," he said in a thought-piece with fellow partner Allison Kahler.

What Action To Take

Kahler and Guarraia say companies that "act now to mitigate risks will fare better both during this crisis and through the recovery.

"Leadership teams can start with a few key questions that will highlight the company's exposure to supply chain disruption caused by the coronavirus:

- Which of our suppliers, or our suppliers' suppliers, could face delays or interruption, and what are the alternative sourcing strategies?
- How can we communicate with customers in advance to safeguard sales and service?
- Do we have a command centre with a cross-functional crisis response team that has access to vital data and top management?
- Have we mapped out several likely scenarios and developed contingency plans for each one?"

Alternatives

There has been considerable discussion about companies becoming too reliant on any one supplier – or any one country.

Business leaders have urged companies to rethink their supply chain to build in redundancies.

This is easier said than done – but it is not impossible.

For example, how does a smaller manufacturer with one overseas factory cope when that factory is shut down? While everyone is thinking about COVID-19, this facility could just as easily be shut down by fire or flood.

Where possible, many companies are now talking about dividing work between facilities and countries. This will add cost but lower risk.

The problem of finding alternatives is made easier when generic components can be pieced together to produce the bulk of your product. But what about highly specialised equipment, which is commonplace in defence?



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An alternative is to work with a "hungry" potential supplier so they are able to step in to produce to your specifications at a moment's notice. While this takes time, it lowers risk and adds competition into your supply chain.

Delivery is also a critical component. Many companies are announcing that they are facing delays at some docks. Having an alternative supply route is advisable, from a risk management perspective, while acknowledging that it is unlikely to be ideal for cost containment.

The more complex your supply chain, the more difficult it becomes to work in alternatives. However, if you can't simplify your supply chain and build in redundancies in a post-coronavirus world, you can expect to come under pressure from disappointed customers and partners.

Defence Is Not Immune

More than 200 of the Fortune Global 500 firms have a presence in Wuhan, China. The US Air Force is concerned that its supply of spare parts and other critical items could be disrupted by the coronavirus, the National Defense Industrial Association reported in the second

"On March 17... Pentagon officials began what will be a daily series of phone calls with defense industry associations, including the National Defense Industrial Association, to discuss COVID-19 updates and get feedback on impacts on industry."

Defense News quoted Aerospace Industries Association CEO Eric Fanning as saying "the normal ways of doing business are definitely going to change.

"We're trying to get to the place where we're not reacting on a day-to-day basis to what's happening and getting in front of some of these things and maybe making some proactive decisions.

But everyone is kind of looking to everyone else to take the lead on how to address this."

He went on to explain that "supply chains are global, they're interrelated, they're incredibly complex. Having real good situational awareness into them is difficult to begin with, then you add any instability on top of it, it gets harder. And this definitely is added to that."

COVID-19 illustrates that many companies are not fully aware of the vulnerability of their supply chain relationships to global shocks, says Deloitte

"Fortunately, new supply chain technologies are emerging that dramatically improve visibility across the end-to-end supply chain, and support companies' ability to resist such shocks.

"The traditional linear supply chain model is transforming into digital supply networks (DSNs), where functional silos are broken down and organizations become connected to their complete supply network to enable end-to-end visibility, collaboration, agility, and optimization."

It concludes that "organizations that deploy DSNs will be ready to deal with the unexpected."

Check Your Contracts

If coronavirus has impacted your supply chain, check the details of your contracts to see what penalties might apply for missed deadlines. Many contracts include time-related clauses, with prescribed processes for failure to deliver and agreed financial remedies. However, you may be exempt for disruptions caused by the pandemic nature of the crisis (force majeure), including the imposition of quarantines or travel restrictions. Depending on the severity of the missed delivery and the nature of the relationship with your customers, it may be advisable to seek preliminary legal advice.







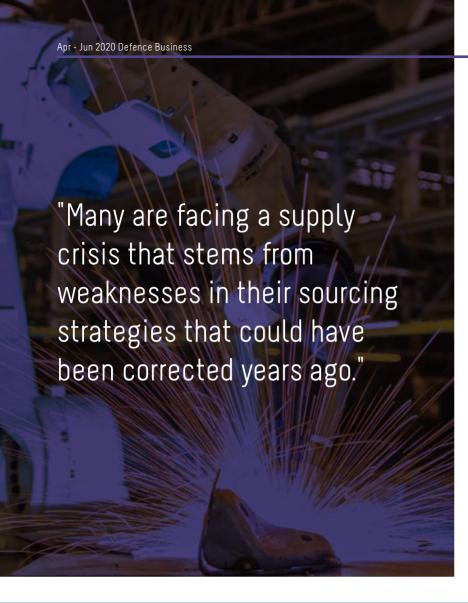


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This advice may extend to renegotiating customer contracts in light of what we have learned in the pandemic.

You may also need to examine whether or not you are subject to termination, or whether you can terminate a contract with companies in your supply chain. A further consideration is whether your contracts can be over-ruled by Australian laws, if challenged.

Profitability And Cashflow

Although you trade profitably, the unique circumstances of this global crisis may result in a severe hit to your cashflow... and no cashflow can bring a profitable business to its knees.

It is worth reinforcing some of the keys to trading through periods such as this:

- Invoice as soon as you can. Don't wait until the end of each month, especially
 if liquidity is an issue.
- 2. Enforce payments terms.
- 3. Chase up late payments as a priority. Employ a person for a few (or more) hours a week if you need. You may have to cut staff in other areas but having someone keeping payments rolling should be viewed as an investment, not an expense.
- 4. The government and financial institutions have rolled out billions of dollars of assistance. Take every single concession on offer. Know what tax breaks are available and how you access them. You may be too busy, as implementing safe working procedures, work from home policies etc have added to your workload. In that case, speak with your accountant.
- 5. Let your bank help you. A reminder: Australian banks will defer loan repayments for small businesses affected by COVID-19 for six months. If you haven't heard from your bank, now is the time to make sure you are benefiting from this.

Australian Banking Association CEO, Anna Bligh, said "small businesses are the most vulnerable part of the economy and have the most urgent need for assistance.

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"While this is first and foremost a health crisis, this pandemic has begun to have serious impacts across the economy, with small businesses beginning to feel the devastating effects."

She advised businesses to be proactive.

"Banks stand ready to support customers and if anyone is in need of assistance, they shouldn't wait but come forward as soon as possible," she said.

"In particular any business financially impacted by the effects of COVID-19 should contact their bank to be assessed on a case by case basis to access the assistance on offer" she said

The type of assistance offered will depend on individual circumstances, but can include:

- Waiving fees and charges
- Interest free periods or no interest rate increases
- Debt consolidation to help make repayments more manageable.

Referring to the deferment loan repayments, Ms Bligh said "this is a multi-billion dollar lifeline for small businesses when they need it most, to help keep the doors open and keep people in jobs.

"Banks are putting in place a fast track approval process to ensure customers receive support as soon as possible."

When Duplication Is Not Enough

The 'new' wisdom is that supply chains need to have built in redundancies.

Hardly a media outlet has not tackled the topic of over-reliance on one company for the sourcing of products and components.

However, it is not just an over-reliance on one company that has caused problems, it is over-reliance on one country, in this case the global manufacturing powerhouse that is China.

What we have seen is that many companies have had several sources for the same input, which meant that if (for example) a factory burned down, another factory could ramp up production to bridge the gap.

However, it is often the case in China that a region – and even a single city – will be the focus for a single industry. Ouhai reportedly produces 90% of the world's branded eyeware. Gurao, in south east China, is known as the 'town of underwear' because it produces most of the worlds bras and underwear.

The Economist stated that locations such as Gurao had the advantage of "excellent supply chains". Local factories make sub-components, so there is no concern with shipping disruptions and the like.

Yet it is specifically these factory clusters have caused massive problems during the coronavirus pandemic.

If your fallback factories are located in the same area, a provincial shutdown affects all of your supply options.

One overseas report stated: "It was standard for parts to be provided by at least two

different suppliers... (but) part providers tended to be in the same region... sourcing wiring harnesses from three different companies failed to protect Hyundai's South Korean plants."

Global Disbursement

According to Corrs, companies should:

- seek greater geographical diversification in their supply chain
- assess onshore critical functions
- invest and use automation technology such as robotics to reduce the risks of epidemics to production and transport
- adopt more conservative approaches to 'lean' supply chains and 'just-in-time' inventory management.

Advisory firm Ey reports that the impacts have been felt by "companies, from small third-tier suppliers to billion-dollar conglomerates, with the likelihood many will not recover for years to come."

It has a good article on its website which is devoted to sharing insights to support an accelerated recovery journey.

It is also "a call to action for companies that are currently not set up to withstand a major unpredictable event, such as the current coronavirus outbreak, to build a resilient supply chain in preparation for future disruptive instances."

The company argues that there "needs to be substantial discussion on how to prevent the next unpredictable tidal wave from having the same impact."

It lists five key pillars to help companies build a resilient supply chain:

- Conduct end-to-end supply chain risk assessments and prioritize critical focus
 areas. In the short term, responsiveness and speed are everything. Proactively
 engage supply chain ecosystem partners, such as suppliers and logistics service
 providers (LSP), to conduct a risk health check:
- 2. Develop a robust risk management process and diversify supplier network.

 Enterprises should map out supply chain networks from end consumers to tier-N suppliers. For each supply chain node/arc-like channel, warehouse, factory, supplier, or transportation mode, firms should establish a methodology to measure risk.
- 3. Implement digital and automated manufacturing capabilities paired with strong manufacturing excellence
- 4. Evaluate and adjust procurement category strategic priorities. An agile procurement operations system enabled by various technologies and factoring category strategic priorities across variables such as cost, quality, delivery, innovation, etc. will also help drive resiliency.
- 5. Invest in more collaborative and agile planning and fulfillment capabilities. These capabilities are extremely important for business performance even in normal business conditions and they increase the supply chain resilience in pandemic events like the coronavirus outbreak we are living today.

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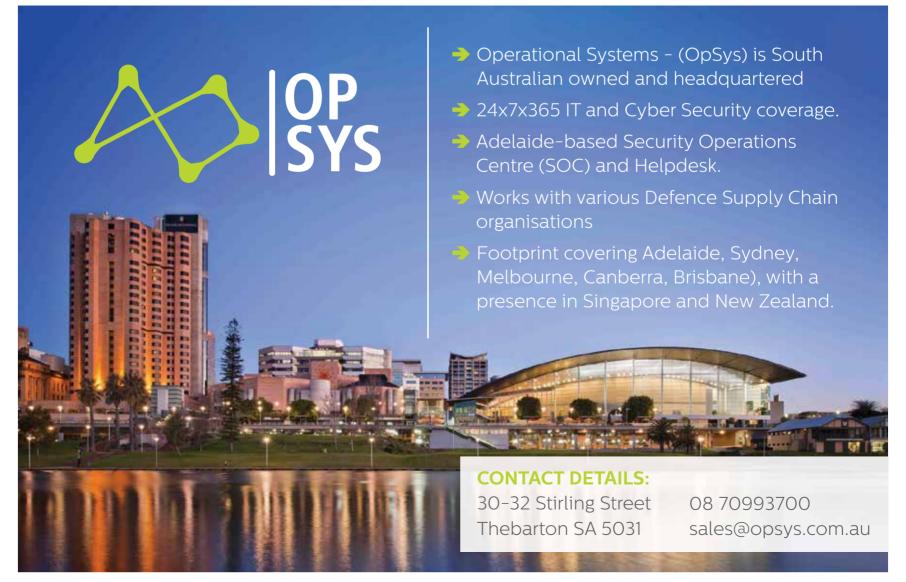
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Capability Statement Best Practice



Service with Pride







Apr - Jun 2020 Defence Business CAPABILITY STATEMENT

A capability statement for the defence industry, or quad chart, is designed to be short and powerful. It's a sales tool – but a sales tool based on a relentless presentation of provable facts, not hyperbole. It is unlikely that you can prepare it in a single afternoon. It usually takes weeks of strategic thinking and fine tuning to distil the winning essence of your business into a single page. The Defence Teaming Centre and other organisations offer workshops and other assistance in helping you to self-analyse and to prepare the final document. A strong capability statement can be critical to success, because if done properly, it allows a time poor executive to glance at a single sheet of information and want to know more about your firm.

1. Core Competencies / Capabilities

- A succinct summary of your company's core competencies, target markets and applications, and potential opportunities in the marketplace.
- Include your client base.
- Specific existing clients and suppliers and if relevant, potential.
- Other trading activities that add value.

2. Differentiators, Including Facilities and Equipment

Know your target audience. Is it program managers, senior purchasing executives or procurement staff?
Is it small business representatives, primes or end-users?
You may need several versions for of your capability

document to be relevant for different audiences. If you know your audience, then you know what problem you are solving or need you are fulfilling. Write your content accordingly. You are competing with other companies. It is critical to highlight your key differentiators and advantages. What do you offer that is unique? Also state, where appropriate, future products, features of services that would stimulate the interest of readers.

3. Past Performance

This is a "brag sheet" – but it's based on pure facts, not marketing rhetoric that any communications graduate can whip up in half an hour. Use specific examples, with facts, figures and KPIs to prove the strength of your capabilities. Don't forget the client's requirements, how they were achieved, the quality standards etc. Where appropriate, provide meaningful testimonials and/or contact details so that interested parties can validate your claims.

4. Corporate Data

Make sure to also include the appropriate corporate data, including corporate structure, ACN, ABN, quality accreditations etc. Details of key contracts.

5. Contact Information

Where possible, include a person's name and contact information, as well as more generalised information such as company address, locations, website, contact phone numbers etc.

Some Notes On Layout:

 Consider professional design. Too many capability statements look like a technician or proud owner has stuffed as many words as possible onto a single page. This can look unprofessional and makes a poor first impression.

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- Display your company logo. It's your brand. Market it at every opportunity.
- Use bullet points. In the current age of information overload, people tend to scan information.
- Consider whether or not you wish this to be publicly available on the internet. If the answer is yes, make sure it is a searchable document so that it can easily be found online

Member Quad Chart Reviews

The DTC offers tailored quad chart reviews to all members, to help them put their best foot forward. Contact business@dtc.org.au to organise your quad chart review

Defence Industry 101 Training

The DTC also offers Defence Industry 101 Training. These sessions are designed to give companies new to working in, or looking to work in the defence industry, an introductory overview of Defence. The sessions, held most months (in person or on webinar) also provide instructions on how to build an effective quad chart. Please note that Defence Industry 101 Training is member-only. All upcoming sessions are listed at dtc.org.au/events-list/.

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Collaboration is the key to creating new opportunities in defence.

It allows companies to combine their capabilities and resources to access projects that might otherwise be closed to them. We know that the defence sector is complex; the rules and barriers to entry are numerous and expensive to traverse. While joint ventures are common in defence, banking, mining and insurance, they are rarely used by smaller companies. They come with significant, but surmountable, challenges.

To help overcome some of the key hurdles we worked closely with the DTC to establish a simple framework for smaller enterprises to collaborate. We used our international experience dealing with complicated and very large joint ventures to create a complete but simple toolkit for DTC members.

The toolkit is not a series of documents to merely sign, but a guide to the types of issues that the members should consider and discuss with their potential partners.

We strongly recommend that any collaboration should be advanced in stages. There is no point in negotiating expensive final binding joint venture agreements until the fundamental commercial direction is established. Careful and deliberate progress is important as potential partners are often competitors.

We see the broad steps as:

- 1. The parties agreeing to keep the information they share about themselves and the potential project confidential.
 - This will overcome the parties' natural reluctance to share relevant information with a competitor. If there is not transparency, the joint venture is unlikely to be successful.
 - We have drafted a standard confidentiality agreement designed to enable the parties to discuss the project and each parties' capabilities without the fear of a loss of confidence.
- 2. The parties then having a broad discussion about the scope of the project and what they can each provide to the project.
- 3. When they have agreed their broad objectives as outlined in the Memorandum of Understanding, they then sign it.
 - The purpose of this document is to record the project, whether the parties intend to deal exclusively with each other, their broad objectives and the resources each will provide.
 - Although it is not legally binding, the document imposes a moral obligation on the parties to work through the issues with a view to entering into a more formal contract. Even though the memorandum is not absolutely necessary, it is useful because it focuses the parties on the key issues they need to consider before investing further time and energy.
 - Of course, any party can walk away at any time from the discussions if they are not satisfactory. It is important at this early stage for the parties to establish a strong mutual respect and trust. We do not expect the parties to agree on all matters, but it is important that they see that they can work with each other.
- 4. The parties agreeing to work together to prepare and submit a tender.

 They then work towards signing a binding agreement to submit a tender by signing the Joint Tender Agreement. This is a much more detailed agreement

- where the parties detail the exact tender proposal, describe in detail the resources they will make available, including intellectual property, employees and equipment, set out the tasks they will need to undertake and the nature of their joint venture if the tender is successful.
- The parties will then, using the Joint Tender Agreement as a guide, work through all the issues leading up to submitting a tender.

 This agreement provides a framework for one of the parties to manage the process. The parties agree to contribute their share of the costs to prepare the tender and amongst other things, provide a competitive price for their portion of the proposed work.
- 6. If the tender is successful, the parties commit to entering into a formal and more complicated joint venture agreement to undertake the work. It is important that the parties consider early whether they can work together and whether a joint venture makes economic sense. It is only then need they work through the tender process. We have not drafted a standard joint venture agreement because the terms will differ widely for different projects. If the tender is successful, the drafting of the final joint venture agreement will be relatively straight forward because the parties will have a very good understanding by then of their mutual roles and responsibilities. These would be recorded by the tender manager during the tender process. Overall, this approach will likely result in a simpler document process and significant savings in legal fees.

Throughout the process the parties will need to carefully consider:

- 1. The information they give each other. The information should be limited to that required for the tender. Existing client information and intellectual property ought not be disclosed unless absolutely necessary. In considering the information flow, each party will need to be mindful to protect its business interests.
- 2. The resources it can realistically make available. If it needs to provide intellectual property, does it have the right to provide it. Will it need to obtain permission or resources from an associated company.
- 3. The financial impact of the tender process and if successful, the project on its cashflow. Often companies overlook the long lead times before money starts flowing. Companies may want to prepare a cash flow analysis early just to determine whether the process is feasible.
- 4. The time commitment involved in working through the issues; it can be quite considerable.

The Future Submarine, Future Frigate and OPV projects will be a great triumph of the integration of both local and international companies working together to deliver an outstanding capability. We hope that many DTC members will take the necessary steps to successfully participate in these world leading projects. Then we need to ensure their business is up to defence requirements and they can supply the quality required by the Commonwealth. Without proper formal processes and properly considered agreements, the goal is simply not achievable.

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Letter to Owners and Marketing Managers

- + Boylen has a record of reducing website and digital marketing costs.
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- + In another case, an ASX-listed defence-related company asked us to "take a zero off the end of the bill we get each month" from another supplier. We achieved this.
- + In these challenging times, many of us are reviewing our cost structures (and we certainly are).
- + If you would like us to review your digital investment and provide an alternative quote, we would be happy to assist.
- + We are happy to share the details of the two cases above and to explain how we went about it.

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DEWC Launches Electronic Warfare Courses

(Below) DEWC T&E CEO Glenn Murray, Flinders Deputy Vice-Chancellor of Research Professor Robert Saint, DST Chief of the Cyber and Electronic Warfare Division Dr Dale Lambert, and Director of Joint EW with the Joint Capabilities Group Paul McMahon signing a partnership.







Leading electronic warfare company DEWC, has now officially launched their School of Information Operations (SOIO). Offering courses focused on electronic warfare, DEWC's SOIO is located in South Australia at Innovation House, Mawson Lakes, and delivers educational services to its clients, which include the Australian Defence Force, as well as the broader defence industry and academia. The specialised training sessions and workshops cover areas including Electronic Warfare (EW), Communications, EW operation support, Undersea warfare (USW), Cyber, Maritime Operations, as well as other areas as required by government, defence industry and educational institutions.

Premier of South Australia, Steven Marshall, officially launched the school in February. "The school is set to play an important role in building a workforce with the required skills in electronic warfare and other related areas to meet the current and future needs of defence and the defence industry," he said.

"EW, Intelligence, Surveillance and Response (ISR), and Space are rapidly evolving fields and a vital capability for submarines, frigates and offshore patrol vessels, and other key projects across Army and Air Force. We must develop a pipeline of highly skilled workers with expertise in electronic warfare to ensure our local businesses are in the best position to secure work on these projects."

The SOIO provides students with relevant technical, operational and practical skills critical to both Defence and the broader defence industry. The principles and concepts of our courses are reinforced through the real-world operational experience of our facilitators, enriching student learning outcomes. The SOIO training solutions are designed to provide users with a structured education from basic concepts and overviews to high-level specialised courses across the Information Operations (IO) domain.

The SOIO is a collaboration between DEWC T&E and Leonardo, Europe's foremost designer, manufacturer and supplier of multi-domain EW products and capabilities. Leonardo has over 100 years of experience in delivering defence capabilities, and a deep understanding of Cyber and Electromagnetic Activities (CEMA).

Glenn Murray, DEWC T&E's CEO said "the collaboration with Leonardo's Academy in Lincoln (UK) is a significant benefit for students, as the partnership allows them to access the combined experience, expertise and capabilities of these two companies".

"SOIO delivers the skills and capabilities required of defence and industry. Our trainers'

comprehensive experience in frontline military operations and instructional roles ensures students receive practical and effective training".

Leonardo's expertise combined with DEWC's broad range of experience in operational support in EW related Australian Defence projects, research, testing and operations brings about a successful training outcome for both students and defence industry partners.

More recently, DEWC T&E entered into a collaboration with the Defence Science Technology Group (DST), Joint Capabilities Group (JCG) and Flinders University, establishing the Professional Electronic Warfare Training, Education and Research (PEWTER) memorandum of understanding (MOU) to develop an EW talent pipeline for the Australian Defence Organisation and defence industry.

The parties involved in the PEWTER MOU will bring the necessary resources to create and scale a Centre of Excellence at Flinders University to facilitate professional EW training, education and research to stimulate and sustain EW workforce development.

According to Dr Dale Lambert, Chief of Cyber and Electronic Warfare at DST, "the Commonwealth, Flinders University and DEWC all agree that there is an urgent need to increase the quality and quantity of personnel who have the requisite skills and background that will meet Australia's strategic EW needs and capabilities."

Flinders University Vice-Chancellor Professor Robert Saint said that "it is through shared knowledge and expertise - forged in firm partnerships - that we as agencies, businesses and institutions achieve not just our own aims, but bigger collective aims such as protecting and promoting our national interests. If Australia is to remain secure, stable and a prosperous nation, we need to protect our interests."

According to Dr Dale Lambert, "together the parties recognise that they have the capability and interest in building the supply of personnel with EW skills and expertise, who are appropriate for the needs of DST Group, the Australian Defence Force and the related Defence Industries. Having a skilled EW workforce comprising both practitioners and researchers across the ADF, APS, Academia and defence industry is key to ensure that the ADF EW capabilities being acquired are fit-for-purpose, realised and future proofed."

DEWC T&E CEO Glenn Murray says of the collaboration, "this strategic partnership will

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build on our shared expertise in delivering EW-related skills fundamental to building a workforce capable of supporting major defence projects, the Australian Defence Force, DST and defence industry nationally."

"The partnership will utilise DEWC's SOIO EW expertise to support the building and delivery of EW related education and training".

"SOIO will assist in the delivery of educational and training to provide students and researchers with the relative technical, operational and practical skills sought by defence and related industries."

"SOIO has the capability and expertise to deliver what the PEWTER partnership requires. Our hands-on day-to-day involvement and constant exposure to EW activities associated with the Air Force, Navy and Army provides our instructors with the unique skills needed to deliver enhanced EW training to students. Underpinned by DEWC's collective involvement in the Australian Defence Force as ex-serving members that have been employed as instructors of EW sensor systems, in EW tactics development, EW standards training and as developers of training doctrines, curriculum courseware and EW scenario development, SOIO has the capacity and capability to offer operationally relevant training."

For enquiries on training schedules, check out SOIO website www.soio.com.au or email DEWC at enquiries@soio.com.au



SA Premier Stephen Marshall: Michael Lenton, CEO of Leonardo Australia: Glenn Murray, CEO of DEWC T&E.



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Strategic Human Resource Planning To Support Growth

Despite recent financial market distress, the Australian economy has been flagged by many experts to be one of the most stable in the world. When we combine this fact with the current record-breaking sums being spent on defence in Australia, local defence business can expect ongoing growth even if the rest of the economy is impacted by a recession.

When small to medium-sized companies think about growth, they realise they need to start planning for larger premises, more equipment and machinery, etc. It's infrastructure-style thinking.

Not all companies put enough time into strategic planning to ensure they have enough qualified staff on hand to fill these premises and operate this machinery.

As competition intensifies for the best people, the number of qualified staff may not be sufficient to keep up with the company's growth trend. In this article, we look at how strategic growth planning must cover staffing as well.

Staffing Can Inhibit Growth

Ask the owner of any small business about the chicken and egg scenario they faced when employing their first member of staff; when making the right choice was vital to get over this problematic period of growth. They will tell you how hard it was to find the perfect person to fill the new role.

Although the challenge of employing staff eases as a company grows, it never goes away entirely. However, larger companies face a completely different staffing challenge. Namely, finding enough qualified, reliable staff.

Where it might be easy to find one or two trained machine operators or other skilled staff, how do you tackle finding ten or even twenty to cover rapid expansion?

Preparation Can Help

Most business owners are aware that staffing issues are somewhere on the radar. And although they may not plan for staffing shortages, they certainly understand that this is a specific hurdle that will need to be jumped at some stage, to enable growth.

Unfortunately, simply knowing that a problem may exist doesn't mean you are prepared for it. Only by planning staff levels and reorganisation of the enterprise to manage more staff, can you be sure that a staffing shortage will not hold back corporate growth.

Skills Shortages

If we use engineering as an example, engineering firms face a new challenge in relation to finding sufficiently qualified employees.

Defence engineering can lose potential staff to any one of a number of more attractive technology sectors.

Twenty years ago, it was normal to see young people taking on engineering, which

ensured a regular source of skilled, available labour for the sector. Fast forward to today, and those same young people are more likely to choose a tech-related field.

Tips and Tricks for Solving Short-Term HR Problems

So, what can you do if you suddenly find that the single blocker to the expansion of your company is staffing? Long-term planning is the real key, but here are a few tricks and tips to help you get over the short-term problem:

- Turn your best staff into teachers. Every company has a handful of people that are not just extremely good at their job, but also have the social skills needed to pass this knowledge on. If this means taking one of the best employees out of the machine shop for a while, to train several new staff, so be it.
- Streamline your operation. Is every member of staff being used optimally? If you can find enough staff that are actually underutilised, this can help you to fill your staffing shortages in the short-term.
- Offer overtime, but not to everyone. Select your best, most efficient and productive staff and ask them if they are willing to put in extra hours each week for the short-term.

Taking a Long-Term View to Human Resources

The tips in the previous section might help you get over a short-term staffing problem.

However, the only way to ensure you never hit such an issue in the future, is to plan your staffing strategy months or even years ahead.

This means not only planning to take on more technical specialists, you will also need to plan for more supervisors, managers, etc. This might seem a daunting prospect, but it is very easy to do when you split things down to production units.

A production unit is a group of specialists, their supervisors and managers, as well as the support staff they need.

Work out how many of each kind of staff you need every time you take on a fixed number of engineers. For example, five new technicians might require one supervisor, 0.5 managers, and one additional person in a support role.

You should know how many extra specialists you need to meet a specific production goal, and this number will drive the number of additional staff you plan to take on. Using the concept of production units enables you to scale staffing simply.

In Conclusion

There will always be short-term staffing issues, due to matters outside of your control. However, these should only affect your day-to-day tactical business operations, and should be solved easily by inducting just a handful of new staff. On the other hand, planning for long-term continuous growth means tackling staffing problems before they arrive, through strategic planning.



Defence Encourages Women To Consider A Career In Cyber

Cyber security is struggling with a forecast global workforce shortage of some 26,000 people.

To help with this shortfall, a Women in Cyber: Find Your Path event has introduced women to the possibility of a cyber or cyber-related role within Defence.

Director-General of the Australian Signals Directorate, Ms Rachel Noble PSM, said that the fact that women have been traditionally under-represented in science and technology fields, such as cyber security, needs to change.

"It is paramount that we achieve gender balance if we are to have the best workforce to achieve our mission of revealing their secrets and protecting our own." Ms Noble said.

"That is why the Australian Signals Directorate supports a range of programs to encourage women to pursue careers in science and technology, including cyber security, and to develop our next generation of leaders."

Minister for Defence, Senator the Hon Linda Reynolds CSC, said gender diversity was critical to building a robust and sophisticated cyber capability.

"With cyber now recognised as a warfighting domain, the demand for highly skilled cyber specialists will only increase," Minister Reynolds said.

"We need diverse teams to defend and protect our networks and missions systems against a diverse range of threats.

"Women are under-represented within the global cyber security workforce, and Defence is no different.

"I applaud any opportunity to change this trend and encourage women to expand their potential into technical or cyber-enabling roles."

The Women in Cyber event included an introduction to cyber from Navy, Army, Air Force and the Australian Cyber Security Centre.

Participants took part in a hands-on 'Capture the Flag' activity and engaged in a panel discussion about women finding their pathway into cyber.

Head of Information Warfare for the Australian Defence Force, Major General Marcus Thompson, said Defence is committed to increasing the number of women in cyber roles.

"Women make up around 15 per cent of the Defence cyber workforce – this is far too low," Major General Thompson said.

"We know that diversity strengthens teams and encourages innovation, and we recognise the risk of group-think and want greater diversity in our cyber capability."



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DEFENCE PRIME CONTRACTOR SERIES



Boeing Creates Opportunity For Australian Industry In Sovereign Communications Programs

It's not surprising that the collection, analysis and dissemination of intelligence data is a sovereign industrial capability priority for the Commonwealth Government of Australia. Communication in operations has always played a crucial role in the functionality and success of the Australian Defence Force (ADF). By calling it out as a sovereign priority, the Commonwealth has reinforced that communication is not just critical to operational outcomes but also a crucial self-reliance capability.

Since 1998, Boeing Defence Australia (Boeing) has been maximising the local contribution and development of Australia's sovereign communications capability via programs such as the Defence High Frequency Communications System (DHFCS) and the Currawong Battlespace Communications System.

"In 2018, Boeing spent more than \$192 million with 675 Australian suppliers," said Nick Gothard, Director Supply Chain Management, Boeing Defence Australia. "It is thanks to them that we are able to deliver key sovereign programs in support of a strong defence industry and the development of local capability."

Boeing's Australian-designed and –delivered DHFCS program is recognised as a world-leading capability, enabling the secure exchange of information between fixed stations and mobile platforms, using one integrated system. It performs more like a mobile phone system than a traditional high frequency system as calls from both mobile and fixed stations, call connection and data transfer are fully automated from user to user – with no requirement for operator intervention. Offering a cost-effective alternative to more expensive communication solutions, DHFCS is highly survivable and is the only alternative when satellite communications are not available or have been disabled.

Over the past decades, Boeing has completed numerous upgrades which have increased the levels of automation in DHFCS to make it easier for operators to use, reduced physical equipment for more efficient sustainment and taken advantage of developments in technology. Recent upgrades include Direction Finding, Signal Improvement and transition to Voice over Internet Protocol (VoIP).

"Our solution will bring the best of Australia's defence industry, to ensure the enhanced DHFCS remains a sovereign and self-sufficient ADF capability..."

"Last year marked 10 years since Boeing Defence Australia introduced the current DHFCS into service," said Murray Brabrook, Director Joint Systems. "Since then Boeing has made sure it has remained a world-class capability. As a result, no other Australian contractor has the same level of experience in high frequency communication."

Boeing recently submitted a tender response for Joint Project 9101, a program to enhance DHFCS so that it can meet the evolving information exchange requirements of its users to 2040 and beyond. Boeing, along with technology partner, BAE Systems Australia, can bring unmatched experience to this program to deliver a worldwide, resilient and scalable communications capability with increased capacity and automation, and flexibility to insert emerging technologies. With a commitment to

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maintaining the highest levels of sovereignty, almost 90% of Boeing's solution will be delivered by Australian industry.

"Our solution will bring the best of Australia's defence industry, to ensure the enhanced DHFCS remains a sovereign and self-sufficient ADF capability, but also creates enduring opportunities for Australian businesses to contribute and grow their capability," said Brabrook.

In 2015, Boeing was awarded the Land 2072 Phase 2B contract to develop an integrated, distributed communications system to meet the information exchange needs of deployed military forces. Otherwise known as the Currawong battlespace communications system, this program features next generation technology that is redefining the capacity, flexibility and responsiveness of the ADF's deployed communications.

"Presented with a complex problem to modernise the ADF's existing communication system which was developed in the 1990s, Boeing's approach was to collaborate with the customer, end-users and suppliers in an iterative design process," said Brabrook.

Currawong's cutting-edge secure wideband voice, data and video services over wireless and wired infrastructure allow for faster and more reliable secure communications providing a superior advantage to the ADF on operations. With an agile, modular network design, the system is interoperable and can be right-sized for various mission needs.

To date, all components of the Currawong battlespace communications system have been delivered ahead of schedule. Key to this success is Boeing's agile delivery

methodology. This involves a rapid development and feedback cycle whereby initial concepts are prototyped and tested with Defence end-users in the remote, dusty, muddy conditions of real deployment environments to discover issues and identify improvements. By seeking early and regular feedback, the product moves through an evolutionary build-test-refine development cycle which ensures all components are completely fit-for-purpose prior to going into production.

Boeing heavily depends on more than 200 Australian small and medium enterprises to provide critical parts and components on Currawong.

"There is real value in creating a culture of tight collaboration throughout a program," said Brabrook. "Through pooling the knowledge, skills and effort from Boeing, the customer and our network of suppliers, we have been able to deliver better outcomes for the ADF."

Having mastered high frequency and battlespace communications, Boeing Defence Australia is turning its attention to satellite communications. Leveraging experience in the development and delivery of sovereign communications programs and the established satellite communications capability of Boeing Defense Space and Security, the company is currently seeking expressions of interest from local small and medium enterprises across 18 work packages that will contribute to current and future space and satellite communications projects. Interested Australian businesses can find details of these work packages and register their interest on the ICN Gateway.

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Employees And Contractors: Avoiding Some Potential Pitfalls

By Christopher Beames (Partner) and Henry Materne-Smith (Law Clerk), Johnson, Winter and Slattery

In industries where workflows can be heavily dependent upon particular customer contracts and their requirements and timelines, a flexible workforce can be vital to businesses' survival. One way that some businesses (both large and small) seek to adapt is through limiting their employee base and engaging contractors to assist in times of peak activity. Such arrangements can raise important, yet often overlooked, questions. Here are three questions to consider that could help to avoid potential disputes or

Contractors and Sham Contracting

problems down the track.

A recurrent issue in many industries is the proper classification of workers. This issue has grown as companies have been attracted by the flexibility, efficiency and cost savings of engaging workers as independent contractors rather than as employees. While this approach is appropriate for some engagements, a couple of points need to be kept in mind.

Firstly, engaging someone as an independent contractor is not as easy as simply calling them one. The law looks to the substance of the relationship rather than its label. Where a company purports to hire an independent contractor but the relationship is really one of employment, the law will treat it as such, with all of the consequential obligations that follow for the employer.

The Fair Work Ombudsman's website provides an online table of key factors to consider when determining whether a worker is an employee. It is the overall balance of factors that is important. For example, if a worker performs ongoing work under the direction and control of the company, is obliged to work standard hours, is provided with tools (or a tool allowance) and is paid regularly, then they may be an employee, regardless of what their contract says. Businesses should therefore give careful consideration to the circumstances and appropriate arrangements when engaging workers for a new project.

Deliberately (or recklessly) disguising an employment relationship as an independent contractor arrangement – referred to as 'sham contracting' – can also have consequences for employers. The most obvious is breaches of the Federal Fair Work Act 2009 (sections 357-359), which prohibits employers from representing to a worker that they are engaged as an independent contractor when in substance they are an employee

The Fair Work Act also specifically prohibits employers from:

- dismissing (or threatening to dismiss) a worker who is an employee in order to engage them as an independent contractor to perform the same, or substantially the same, work; and
- knowingly making false statements to current or former employees to persuade them to become independent contractors performing the same, or substantially the same, work.

In addition to fines, an employer who contravenes these provisions may be required to compensate underpaid workers for allowances, superannuation, leave entitlements and penalty rates. These employers might also have contravened workplace laws on record-keeping, pay slips, written part-time work agreements and making unlawful deductions. The risk of legal action in these circumstances is real; as Fair Work Ombudsman Sandra Parker has recently said: 'Employers should be on notice that the Fair Work Ombudsman will take the strongest possible enforcement action when we find instances of sham contracting occurring".

This is also confirmed by a string of recent court decisions on these issues, such the Fair Work Ombudsman's actions against Eagle Tours Pty Limited, Care Providers Pty Ltd, Quest South Perth Holdings Pty Ltd and Grouped Property Services Pty Ltd.

When Is Redundancy Pay Due?

Employers should also take note of a recent change in the courts' approach to redundancy pay. When a person's employment is terminated because the employer no longer requires the job to be done by anyone, the employee is generally entitled to redundancy pay. However, where a company regularly engages employees for a particular contract or work stream, and then lets them go when that contract or work stream ends, many employers assume they will not have to make redundancy payments, relying on the exception in the Fair Work Act for terminations "due to the ordinary and customary turnover of labour".

However, this exception has recently been a narrower interpretation by the Federal Court (Fair Work Ombudsman v Spotless Services Australia Ltd). The Court has held that employers need to demonstrate a common and longstanding practice of ending employment (rather than, for example, redeployment to other contracts). This practice also needs to be made clear to employees before and during their engagement, and consistent with relevant contractual terms and policies. For companies hiring and releasing labour as contracts are won and completed, the redundancy pay implications could be significant and therefore warrant close attention.

Intellectual Property – Who Owns It?

Contractors and sub-contractors involved in a defence project may be working with (and/or creating) valuable IP (intellectual property) – including information that may be subject to protection by way of patents or registered designs. Particular issues can therefore arise in relation to:

- how IP (and other confidential information such as trade secrets) will be secured;
- whether the IP can be sub-licensed for use by subcontractors;
- how IP property and confidential information will be effectively returned; and
- who will own any new, improved or supplemented IP created during the course of a project.

If not considered properly from the outset, these issues can result in long-running disputes, particularly regarding IP ownership (e.g. University of Western Australia v Gray). Once again, the nature of the relationship between the parties is important – not just between prime and contractor, or contractor and sub-contractor, but between the company and its workers.

As a general rule, IP created by employees will belong to their employer, whereas IP created by independent contractors will belong to the creator if the contract is otherwise silent (another reason why it can be important to determine whether a worker is truly an employee or a contractor).

The position can become more complicated however where new IP is derived by one party from the IP of another, as is common in software development for example. The situation can also be altered through (often complex) contractual agreements between the relevant parties.

Crucially, both employers and independent contractors should not assume that they will necessarily own the IP in work carried out for them by their workers, or in their own work, or can use it for other projects in the future, without close scrutiny of the relevant issues and contractual arrangements.

Take-home Message

In an industry where labour requirements are always changing, and where projects and businesses rely heavily on IP, employers should ensure that their arrangements and agreements deal appropriately with potential issues. The best time to deal with all of these issues is before the contract begins and/or the workers are engaged. Once a project has already started, it may be too late.

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How The DTC Helped Me

AML3D

AML3D Shaping The Future Of Manufacturing

By Tracy Pierce

For entrepreneurs and business owners, networking, mentoring and access to the best people are critical factors for success. When global executive Andy Sales was setting up world leading wire additive manufacturing company AML3D, he knew that he needed to surround himself with the best business minds, and utilise the knowledge and connections that industry associations such as DTC offer, in order to make his business a success.

"We heard about DTC through our business relationship with Len Piro (former Deputy Chief Executive of the SA Department of Trade and Economic Development and Chief Executive Automotive Industry Transformation Taskforce)," said Andy. "He introduced us to Les Shearn, an industry Facilitator at the DTC. We became members to prepare long term for Defence supply and get our name known in industry, and to keep up an awareness of Supplier & Contract opportunities into Defence."

AML3D blends welding science, robotics technology, metallurgy and CAD software to produce an automated 3D printing system that enables fast and cost effective manufacture of metal components and structures. Compared to traditional manufacturing where buying large cast, forged or billet material to make components can take weeks or even months of lead time, often relying on facilities overseas, the 3D system builds in days or hours. This eliminates two or three steps in the supply chain system, and brings the manufacturing process in house and closer to the source need. Headquartered in Adelaide, AML3D is the only metals diversified large-scale WAM production facility in the Southern Hemisphere.

30 years in the welding industry has given Andy a strategic insight into his customers' needs and the instinct to realise that a great business is more than just a great idea.

"You have to know that you've got something that industry wants. But you've also got to have a realistic understanding of the shortcomings.

"I was completing my Masters in the UK, doing lots of research on 3D printing technology, and I had a lightbulb moment around 2014 when I realised the technology was starting to pick up globally and I needed to act quickly. I've always been a risk taker, but starting this business is the biggest risk I've taken so far. There are disadvantages to every technology, and it's by overcoming those disadvantages that you have success. But you've got to be a realist."

Defence was always going to be a key sector for AML3D and with a long-term defence strategy in mind, Andy has made effective use of DTC's support services. Meetings, introductions and seminars have helped Andy to gain insights on the latest defence industry trends, to source relevant strategic business opportunities, undertaken business-to-business matching to introduce him to companies who are interested in using AML3D's innovative and ground breaking technology, and advising on relevant and beneficial defence industry events.

"Through the DTC we've gained a good awareness of the defence industry and activities that are planned for the future. Also we've been invited to and attended a number of small events arranged by DTC, so this has been beneficial in establishing a network and introductions. It's been an interesting process, meeting people and pitching the business to them."

Collaborative activities with other DTC members are also on the cards in future.

"We have had recent discussions with two or three companies, these are in the pipeline for the near future."

A defence industry strategy is nothing without a commitment to quality, and as a Quality Engineer working on resource large projects in Australia and throughout the world, one of Andy's first objectives was to get certification. "When I started this business, I knew that quality accreditation was paramount, particularly in defence. Primes are not going to use your services or goods unless you can prove that quality systems are in place." AML3D Limited is now the world's largest certified printer in metal, fully certified through Lloyds Register, ISO 9001:2015, and compliant with AWS International Standards.

"You have to know that you've got something that industry wants. But you've also got to have a realistic understanding of the shortcomings."

One of AML3D's core beliefs as a company is to place value on its employees, and Andy firmly believes in putting people before the product. Invest in people, and they will in turn invest in your product. He also believes that it is a myth that automation will take away jobs.

"In fact, from my experience you actually need more people! To build a decent sized component using traditional methods you might have four or five people involved in the process. When you automate it with robots, you still need four to five people. And some of those people need higher skills – so there is a good case for up skilling of the trades. You're never going to automate an electrician or a plumber or a boilermaker. There is an incredible amount of opportunity for all people, just like with the Hunter Class and Attack Class programs, we still need a huge workforce. AML3D will need to employ more people to set up our capability, we need more equipment to have the capability, and then we need skilled people to demonstrate to our customers that we can do the job."

With Defence primes taking an interest in the technology, the future is looking good for AML3D, but Andy and the team are not going to rest on their laurels.

"We're still in a growth phase, and we still need to continue to prove our capabilities to customers. It's an interesting and challenging phase. We are doing one off prototypes right now, but we're focussed on getting to a level where we're making hundreds of parts. And we're not just looking to remain a 3D printing company, we're looking to expand our services by implementing machining services, advanced robotic welding, possibly expanding and leaning more towards an advanced manufacturing company that will include other specialised processes.

"Utilising the DTC, we want to continue with awareness activities by promoting ourselves more aggressively though implementing a marketing strategy; to become compliant to Defence standards and start preparing for this in the immediate term; finally to gain supplier acceptance status to support future Defence contracts."

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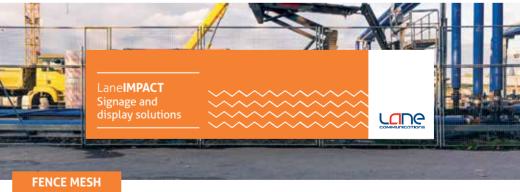












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34 NEWS IN BRIEF Apr - Jun 2020 Defence Business

LAND 19 Win For REDARC/Kongsberg Alliance

REDARC Defence Systems has been selected as Kongsberg Defence Australia's preferred partner and supplier of electro-mechanical components for the NASAMS system's Fire Distribution Centre (FDC) as part of project LAND 19 Phase 7B.

Established in 1979, REDARC Electronics Pty Ltd is an Australian, privately-owned, advanced electronics manufacturer successfully supplying patented solutions to the Australian and international heavy commercial and defence vehicle sectors. As a design-to manufacture business, REDARC is uniquely positioned to support defence requirements, both now and in the future.

In 2019 the company launched REDARC Defence Systems Pty Ltd, a dedicated business to meet the growing needs of the Australian Defence market for wholly Australian Owned Defence medium sized enterprises that can foster the development of intellectual property in Australia.

Mr Mike Hartas, REDARC Defence Account Manager said, "REDARC Defence Systems is proud to work with KONGSBERG on the LAND 19 Phase 7B program in Australia. KONGSBERG's approach to Australian Industry Capability is testament to what can be done when the Defence companies and Australian industry want to work together to deliver real capability to the Australian

Defence Force. The transfer of technology to Australian industry will ensure the capability delivered under LAND 19 Phase 7B will be enduring and supportable in Australia." REDARC offers a blend of commercial off the-shelf, modified off-the-shelf and customised and build-to-print electronic solutions that improve the capability, safety



and flexibility of a variety of defence vehicles and applications. REDARC have supplied battery monitoring and power management solutions to defence vehicles domestically and internationally.

With over 250 years combined experience in their engineering department, a purpose-built design and manufacturing facility and a hand-picked production team, REDARC has the capability to conceptualise, design, test and manufacture complex electronics products for defence applications.

Program Identifies Needs Of Transitioning Veterans

A pilot program to help military veterans embrace new futures has identified key obstacles to re-training and delivered valuable information to support returned or retired service people at a transitional time in their lives.

The Federal Government's creation of a commissioner to investigate defence and veteran suicides highlights the complex challenges facing those who have completed service, and the broader impacts on families and communities

Led by Associate Professor Ben Wadham, Flinders University developed a one-of-a-kind program in Australia last year - the Military Academic Pathway Program (MAPP) - which incorporates international best practice in veterans' academic pathways.

A military veteran himself, Associate Professor Wadham says "Our aim was to establish a veteran entry pathway that minimised the red tape people experience when leaving the Australian Defence Force and considering university as an option."

Significantly, almost half of participants in the pilot program were younger veterans who had served in arms corps and had minimal exposure to military study entitlements due to their junior ranking.

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Service Delivery Partners





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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

Are you in the team?



Connecting, Developing & **Advocating for Defence Industry**

- The Defence Teaming Centre (DTC) develops and promotes Australia's defence industry to meet the needs of the sector through targeted programs and introductions.
- The DTC membership includes Prime Defence Contractors, SMEs, Professional Service Providers and Academic Institutions supplying and supporting Defence capability.

Don't miss out - join the DTC team and be connected to the knowledge and expertise our dedicated staff bring.

Customs Agency Services joined the DTC 11 years ago and during this time, our logistics solutions business has steadily grown year on year. Defence is now our single largest market vertical. There are many factors underpinning this success, however one is definitely the DTC. The DTC gave us both the networking opportunities and the confidence to find and secure opportunities in Defence across Australia.

Mark Callus Director, Customs Agency Services Pty Ltd

lacktriangle The support of organisations such as the Defence Teaming Centre at European trade shows in 2018 allowed us to more quickly identify and commence the capture of opportunities both in Australia and overseas. The relationships and network capacity they add to Australian SME businesses travelling for International trade shows has been invaluable.

Anthony Kittel Owner & CEO, REDARC

& Rowlands Metalworks as an SME looking for opportunities within the defence sector, has found the DTC to be the go to organisation, connecting all supply chain participants with regular meaningful engagements from local networking events to major international conferences we have generated many opportunities that offer long term sustainable business.

Michael Slattery Business Development Manager, Rowlands Metalworks Pty Ltd



Membership with DTC offers:

Connecting:

- · Targeted and personalised referrals of members to Primes and other members
- · Comprehensive listing in the DTC Member Capability Guide in every edition of Defence Business magazine
- Discounted access to networking opportunities supported by facilitated introductions
- · Regular Newsletters, Bulletins and important Industry updates
- · Subscription to Defence Business magazine
- Free posting of member relevant news in Newsletters, Defence Business Magazine, DTC social media
- Tradeshow support
- Facilitated formation of collaborative business relationships between members using ISO44001

Developing:

- Free access to Defence Industry 101 Training
- · Personalised quad chart reviews and development assistance
- Discounted access to industry development workshops
- · Discounted access to defence industry leadership training
- · Ongoing free access to telephone advice on defence supply chain matters

Advocating:

- Representation on the Australian Industry Group Defence Council
- · Advocate on behalf of SMEs on issues related to Australian defence industry, including industry policy and workforce skilling issues
- · Annual Member Dinner and Awards Ceremony to recognise Member achievements
- · Promote the maximisation of Australian industrial capability in Defence projects
- · Promote the standardisation of conducting business in Defence supply chains to reduce the cost of doing business for SMEs
- Member achievements









1 - 3 SEPTEMBER 2020



Network and connect with Army, the Australian Defence Force, industry and government at the premier land forces exposition for Australia and the Indo-Asia-Pacific region.

LAND FORCES 2020 will highlight defence capability and strategy and showcase platforms, equipment, support and technologies.

- Key Australian Army, Australian Defence Force, government and industry conferences and briefings
- International defence, government, industry and academic delegations
- Comprehensive industry exhibition

Don't miss this opportunity to network and connect with key thought leaders through this established, world-class biennial exposition.

2018 HIGHLIGHTS

15,331 Total attendances	624 Companies from 26 countries	328 Australian small businesses
31 International Service Chiefs	74 Delegations from 36 countries	21 Conferences and symposia

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