

ADM **DEFENCE WEEK** AUSTRALIAN DEFENCE MAGAZINE SERVING THE BUSINESS OF DEFENCE **PREMIUM EDITION**



The project marks the final government approval for the Land 121 Program, which is replacing the ADF's legacy fleet of ageing vehicles and trailers. RHEINMETALL

Land 121 delivers a game changer for Army

Katherine Ziesing | Canberra

News that the final phase of Land 121 [has been announced](#) is very welcome. The final tranche of 1,044 additional new-generation medium and heavy trucks, 872 modules and 812 trailers, worth a total of \$1.4 billion under phase 5B has been a long time in the making.

The additional medium and heavy trucks and their associated modules and trailers will facilitate logistics support through the movement of assets and supplies in combat, humanitarian, natural disaster relief and training, according to the government announcement this week.

Deliveries will start in 2019 and will run to 2024.

The new vehicles will build on the fleet currently being delivered by Rheinmetall (trucks and modules) and Haulmark Trailers (trailers) along with a significant

IN THIS ISSUE

Land 121 delivers a game changer for Army	1
RAAF Poseidon fires first Harpoon	3
Australian start-up targets Wasp replacement and beyond	5
Defence's contribution to national prosperity: UK report	7
Abrams tanks feature next-gen battle management on Hamel	9
Global tech leaders in pledge against autonomous weapons	10
Forthcoming Events	13

Australian supply chain.

Rheinmetall is partnering with a range of domestic companies, including Varley in Newcastle, Holmwood Highgate in Brisbane, and ECLIPS in the ACT to supply the modules and trailers.

"This project marks the final government approval for the Land 121 program, which is replacing the ADF's legacy fleet of ageing vehicles and trailers, many of which are in excess of 30 years old and becoming increasingly costly and difficult to maintain," Minister for Defence Industry Christopher Pyne said at the announcement at Haulmark Trailer's Brisbane facility.

"Australian industry involvement is in the order of half a billion dollars for acquisition, with ongoing sustainment being carried out by Australian or Australia-based companies."

Delivery under Land 121 Phase 3A of some 2,146 4x4 and 6x6 unprotected Mercedes Benz G-Wagons was completed in 2016, whilst Land 121 Phase 3B acquired 2,536 trucks and 3,858 modules from Rheinmetall. Land 121 Phase 4 sees 1,100 Hawkei replace the balance of the Land Rover fleet through a \$1.3 billion contract with Thales Australia.

ADM Comment: The new fleet of Army vehicles under the various phases of Land 121 has been a long time in the making. I remember one of my very assignments with ADM was heading out to Haulmark Trailers to see then Minister for Defence Dr Brendan Nelson and DMO CEO Steven Gumley sign contracts for the program in 2007.

While both Air Force and Navy have seen a significant recapitalisation of their platforms since the 1980s (think the evolution of the fast jet fleet over that time alone), Army has been using trucks that were manufactured before I was born.

In many cases, sustainment efforts have seen the manufacture of one-off parts as the OEM doesn't support the models any more.

"Rheinmetall is partnering with a range of domestic companies, including Varley in Newcastle, Holmwood Highgate in Brisbane, and ECLIPS in the ACT"



The new trucks are so large that Army now has to deal at working at height OH&S concerns.

RHEINMETALL

“Land 121 has been a long journey and is now at the point of delivering an excellent capability to Army”

As a participant on the Defence and Industry Study Course (DISC) last year I was lucky enough to head to the School of Transport to have a drive in the old and new transport vehicles along with a few other vehicles, like the Bushmaster and Hawkei. The difference could not have been starker. Sitting in a Unimog versus one of the new Rheinmetall vehicles, they were worlds apart in every way; technology, comfort, drivability.

There are of course changes to be made with the next generation of trucks. They are so large that Army now has to deal at working at height OH&S concerns. The load handling system is now automated at a much higher level, meaning training has needed to change significantly to accommodate this.

At the end of the day, Land 121 has been a long journey and is now at the point of delivering an excellent capability to Army.

RAAF Poseidon fires first Harpoon

Nigel Pittaway | Melbourne

An Air Force Boeing P-8A Poseidon maritime surveillance aircraft has fired a Harpoon anti-ship missile for the first time this week.

The weapon was an ATM-84J, an inert training version of the Harpoon, and it was launched from the aircraft during the RIMPAC 18 (Rim of the Pacific) exercise being held off Hawaii. The missile successfully struck its intended target, the former US Navy Landing Ship Tank (LST) the USS *Racine*, as part of a SINKEX conducted within the Pacific Missile Range Facility off the coast of Hawaii.

The weapon was one of several strikes on the former USS *Racine* during the course of the exercise. The ship was finally sunk by a Mk.48 torpedo fired from the US Navy's Los Angeles class attack submarine USS *Olympia*.

The Harpoon launch was the first from an Australian P-8A, but it has previously



An ATM-84J Harpoon is released from a P-8A Poseidon aircraft during RIMPAC 2018.

DEFENCE



The moments following the strike on the former USS Racine.

YOUTUBE

“The missile successfully struck its intended target, the former US Navy Landing Ship Tank (LST) the USS *Racine*”

been deployed by US Navy aircraft. The RAAF’s Poseidon achieved [Initial Operational Capability](#) (IOC) in March, five months ahead of the original schedule and is now working towards Final Operational Capability (FOC) in 2022.

While not a formal milestone in the journey towards FOC – Australia acknowledges the testing previously carried out by the US Navy – it nevertheless marks an important stage in the maturity of the aircraft in service with the RAAF.

“The opportunity to fire the Harpoon, as well as two Mk.54 torpedoes in the exercise, is a real affirmation of the progress we’ve made over the last 18 months, since delivery of the first aircraft,” Group Captain Darren Goldie, Officer Commanding 92 Wing, explained. “I think it’s yet another demonstration of the acquisition going to plan, and the capability being realised on, or ahead of time.”

No.11 Squadron deployed one aircraft, together with the Mobile Tactical Operations Centre (MTOC) and around 55 personnel to RIMPAC, with a further 10 people embedded within the various exercise command headquarters, including liaison officers aboard the US Navy aircraft carrier, USS *Carl Vinson*.

The P-8A is operating alongside maritime patrol aircraft from the US Navy, Indian Navy, Republic of Korea Navy, Japan Maritime Self Defense Force and the Air Forces of Canada and NZ.

“It has been really successful. It’s a real opportunity over a few weeks to participate in a multi-national anti-submarine warfare and anti-surface warfare exercise,” GPCAPT Goldie continued. “With no air to air threat, it allows us to work with other nations, participating in everything from a single aircraft, single submarine at periscope depth – as simple as it gets – right through to the other end of the spectrum, which is a multi-domain surface, sub-surface and air search for a surface or sub-surface assets, and the appropriate prosecution at the end.”

Australian start-up targets Wasp replacement and beyond

Julian Kerr | Sydney

The [July edition](#) of *ADM* covered the agile acquisition system that has seen the Australian Army become the world's [largest user](#) of nano UAS. Now, small unmanned aerial systems (sUAS) are now well on their way from suburban garages to the hands of the ADF.

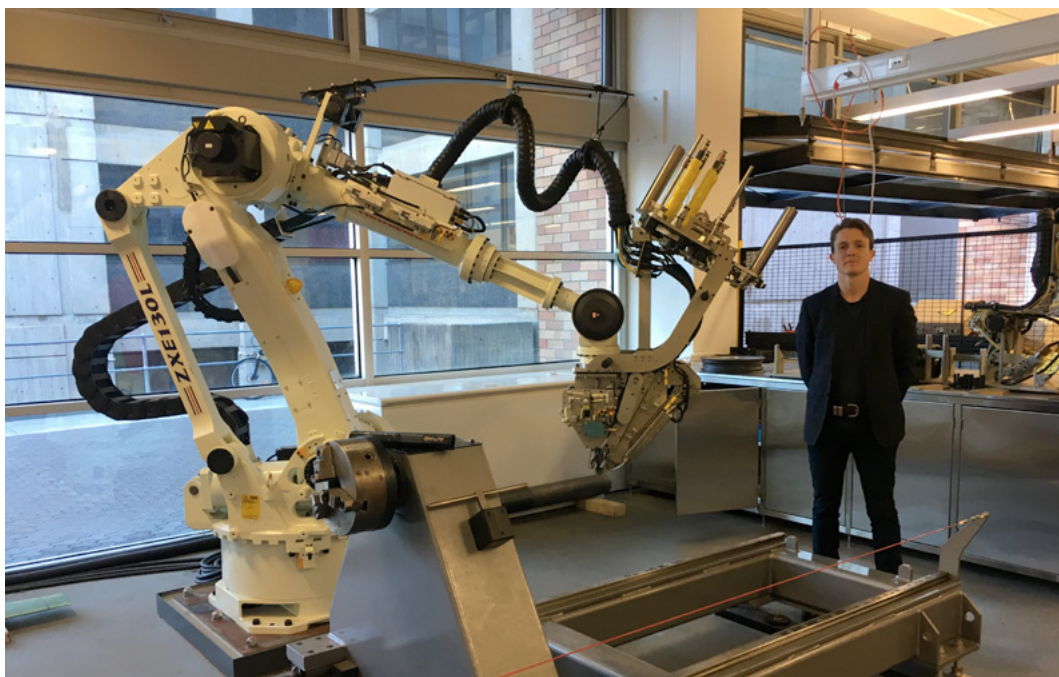
“The DIH contract had been awarded on the basis of a clean-sheet design focused specifically on Defence’s requirements”

Fledgling SME JAR Aerospace has confirmed work is well advanced on a fully-functioning prototype that will demonstrate by November the company’s technical concept for a next generation sUAS to replace the AeroVironment Wasp, which is in Army service until the mid-2020s.

Incorporated in January 2017 by “four blokes who started up in a garage on the Central Coast,” the company then formulated a partnership with UNSW’s Innovation Centre and attracted first and second round investment. This April, JAR Aerospace was awarded a \$275,000 concept exploration contract via the Defence Innovation Hub (DIH) under Land 129 Phase 4B (Wasp Replacement).

Similar contracts went to SYPAQ Systems, which will further develop its [Corvo X VTOL](#) (Vertical Landing and Take-off) sUAS, and the University of Sydney, which will develop a lightweight UAS that combines vertical take-off capabilities with horizontal fixed wing flight for extended speed and endurance.

Lochie Burke, JAR’s Chief Marketing Officer, told *ADM* the DIH contract had been awarded on the basis of a clean-sheet design focused specifically on



JAR Aerospace CMO Lochie Burke at the UNSW testing facility.

EWEN LEVICK

Defence's requirements, although the young company's general credibility had benefitted from its first product, the multi-rotor X-12 drone.

Work on prototype development of the Wasp replacement had advanced to the extent that capability was already being added.

Additional funding was anticipated from DIH to progress the prototype and work is running well ahead of schedule. "We're fully convinced of the tremendous potential of the design," Burke said.

The company now has 25 staff based in Sydney's Caringbah, 15 of them full-time.

"We can put a six kilo drone in the sky and potentially hit something three kilometres away"

Chief Operating Officer Sam Lewinson noted that the prime requirement is VTOL capability, to allow troops to remain under cover while launching the aircraft.

Taylor Thomas, JAR's Lead Aerospace Engineer, said the company intended to integrate a number of new technologies in its proposed Wasp replacement to enhance performance and capability.

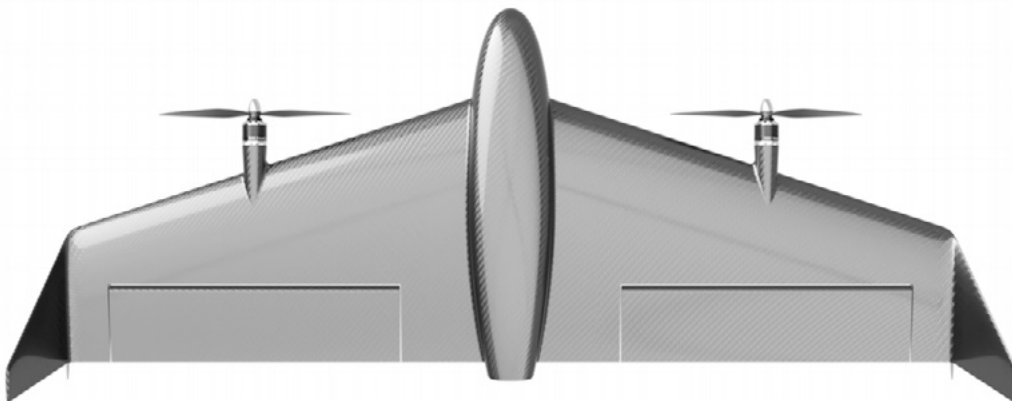
These included advanced encryption technology to protect the system from hacking and improve endurance.

"We're going to achieve endurances above 50 minutes at velocities more than capable of keeping up with moving vehicles. We're developing an advanced power system that not only provides more energy but also reduces the power consumption of certain subsystems when they are not required."

Thomas disclosed the weight of the benchmark twin rotor platform would be less than two kilos, with payloads of up to 300 grams. These would include electro-optics, infrared, hyperspectral imaging, "and a number of other options I can't disclose."

"The technical capabilities will included autonomous flight as and when required. We'll be integrating some commercial-off-the-shelf components for the baseline design, but we'll be ensuring the maximum-possible Australian content, and we're developing all the software locally."

While the focus was on Land 129 Phase 4B, the company saw significant potential in non-military applications, including search and rescue operations and other maritime procedures for a marinised commercial variant.



The twin rotor platform will weigh less than two kilos.

JAR AEROSPACE

Defence's contribution to national prosperity: UK report

Ewen Levick and Katherine Ziesing | Sydney and Canberra

“Export promotion needs to be incorporated into Defence leadership objectives and the benefits shared”

In 2015, the UK Ministry for Defence (MoD) was asked to make ‘promoting prosperity’ one of its formal objectives for the first time in its history.

The Ministry has since begun fleshing out how that might be achieved, and has recently released a [report](#) into the contribution of Defence to the economic prosperity of the UK.

The report, put together by MP Phillip Dunne on behalf of Defence Minister Gavin Williamson, takes a broad definition of prosperity – “the broad economic wellbeing of the United Kingdom.” It also uses an unconventionally broad definition of ‘Defence’, using the term to “capture the whole effort from the Ministry, Armed Forces and industry.”

The use of broad definitions sets the tone for a report that attempts to quantify the unquantifiable – what exactly is Defence worth to the British taxpayer?

The most conventional measure is by contribution to GDP. The report notes that the MoD and industry (what it together calls Defence) contributes £44 billion to Britain’s GDP – £37 billion from the Ministry and £7 billion from average annual exports.

Yet the report itself notes that this is a simplistic measure: “Defence’s role as a customer and industrial partner with high growth sectors in the economy generates more growth. It is hard to quantify.”

In addition, the Armed Forces protect shipping lanes, undersea cables, the



The report notes that Defence contributes £44 billion to Britain’s GDP, partly by promoting tourism.

UK MOD

UK's exclusive economic zone, maintain Britain's nuclear deterrent, and conduct operations around the globe in the interests of stability and the rules-based global order. It is impossible to quantify the cost to the British people should the military fail in any of those functions. The report's reference to Syria losing US\$200 billion between 2011 and 2016 as a result of civil war is a flawed attempt, and is also inconsiderate given the unmentioned human cost of that conflict.

Numbers aside, the report makes a number of recommendations that fall into three basic themes.

"Not everything can be measured in dollars or pounds"

First, the MoD should "embed prosperity as an explicit objective into its decisions," meaning considerations of economic impact should be key in procurement decision-making.

Second, procurement should be more agile. The report notes that procurement results have been "process-heavy, focused more on upfront capital cost than driving value through life of the capability."

Third, the report points to the historic correlation between defence research and technological advances across society. It argues that this still occurs but Defence is not the player it once was in this space as commercial concerns expand, particularly in terms of data.

Amongst these three overarching themes, the report makes some interesting specific recommendations. For example, it argues that the Armed Forces should be incentivised to provide strategic support for exports. Specifically, export promotion (testing and evaluation, for example) needs to be incorporated into Defence leadership objectives and the benefits shared with participating units.

It also argues for a more 'Team UK approach', and for Defence to "adopt a culture more focused on finding the right procurement solutions and less on defining and avoiding obstacles."

ADM Comment: The report's call for 'Team UK' echoes loudly in Australia, with the Team Australia brand well recognised when it comes to organising trade missions. Major procurement decisions, including the Boxers and Hunter-class frigates however, were beset by state infighting. The culture is often one of state competition, not national collaboration when it comes to individual projects.

Perhaps that is because the arguments revolve around visible numbers – direct employment statistics, for example – that are politically expedient in the short term. Numbers look good in press releases and are an easy reference, but often fall short of measuring the true value of Defence to the wider economy.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Defence invests in new space surveillance capabilities](#)
2. [UMS commits to Australian base for Pacific expansion](#)
3. [RAAF tanker in automatic air-to-air refueling](#)
4. [Tasmanian SME partners with DMTC on manufacturing](#)
5. [BAE Systems Australia wins Future Frigates under Sea 5000](#)

The numbers must be accounted for – we’re talking about the business of Defence after all, a significant taxpayer dollar outlay. Yet there’s something to be said for thinking beyond a zero-sum numbers game when defining ‘prosperity’. The report’s indifferent reference to Syria’s lost GDP is an example of this tendency to try and quantify the unquantifiable. Not everything can be measured in dollars or pounds.

Abrams tanks feature next-gen battle management on Hamel

Leonardo’s next-generation battle management hardware successfully supported the Army’s M1A1 tanks during the recent Exercise Hamel.

The hardware provides the Army’s armoured cavalry units improved connectivity within the ADF as well as increased US and coalition battle management system interoperability in the field.

The system was featured for the first time in an operational exercise and connected the main battle tanks to the Army’s battle management network. Prior to integrating the battle management hardware, the tanks had not been able to communicate on the network.

“In close cooperation with the Australian Army, together we have provided a combat-proven system that gives commanders, leaders, and soldiers improved situational awareness and is a mission-critical tool to ensure success on the battlefield,” Jerry Hathaway, vice president and general manager of DRS Land Electronics business, said.

“DRS looks forward to leveraging our recent US\$841 million US Army battle management system hardware award into

“The system successfully connected the main battle tanks to the Army’s battle management network”



An Australian M1A1 Abrams tank fires its Browning .50 cal during an assault as part of Exercise Hamel 2018.

DEFENCE

integrated, scalable solutions for emerging Australian needs. These ultra-rugged computers are part of a long line of combat-proven hardware, for a wide range of platforms, we have provided our allies in the Australian Army.”

The Army is demonstrating the Leonardo DRS battle management hardware with the goal of showing that it is able to be used continuously in a complex, manoeuvre-intensive operational environment.

The system gives users the capability to run all battle management system applications, and integrate communications, cameras, and other sensors in one computer.

The BMS tablet capability was used by tank platoon leaders, 2ICs, and troop commanders on their tanks to conduct mission planning and digital rehearsals within the unit and present their plans to attached units.

The DRS equipment also helps provide future capabilities like the health and usage management system, weapons system integration, sensor integration, and future upgrades to the network architecture.

TOP COMMENTS

Australia confirms Triton purchase

I would still like a clear statement of what value the Triton brings over the current mix of JORN/manned aircraft. The fact that the upgrades are limited to Edinburgh, Darwin and Butterworth seems to suggest that the ADF sees the primary operating area for Triton as the areas to the north of Australia. This is despite the fact the abilities in that area to dispose of a drone in short order has grown and will increase over time. I have said this before, but the thresh hold for taking out a UAV is a lot lower than taking a manned aircraft and the Triton is neither expendable nor easily replaceable. **—Johnno**

Triton can survey a much wider area than the P-8A because it operates 20,000 feet higher and can do so for far longer whilst being cheaper to operate. Triton has an endurance of up to 30 hours whereas the P-8A has an endurance of about four hours equipped for ASW. There are also very few SAM systems in the region with the ceiling to reach it. **—Joel Robertson**

Global tech leaders in pledge against autonomous weapons

A who's who of CEOs, engineers and scientists from the technology industry have signed a global pledge – including Google DeepMind and Elon Musk and – to “neither participate in nor support the development, manufacture, trade, or use of lethal autonomous weapons.”

Released in Stockholm at the 2018 International Joint Conference on Artificial Intelligence ([IJCAI](#)), the pledge was co-organised by UNSW's Toby Walsh and signed by 150 companies and more than 2,400 individuals from 90 countries working in artificial intelligence (AI) and robotics.



'Spot', a quadruped prototype robot, walks down a hill during a demonstration at Marine Corps Base Quantico.

US DOD

"AI has huge potential to help the world — if we stigmatise and prevent its abuse"

Corporate signatories include Google DeepMind, University College London, the XPRIZE Foundation, ClearPath Robotics/OTTO Motors, the European Association for AI, and the Swedish AI Society. Individuals include head of research at Google.ai Jeff Dean, AI pioneers Stuart Russell, Yoshua Bengio, Anca Dragan and Toby Walsh, and British Labour MP Alex Sobel.

The pledge, organised by the Future of Life Institute, challenges governments, academia and industry to follow their lead, saying: "We, the undersigned, call upon governments and government leaders to create a future with strong international norms, regulations and laws against lethal autonomous weapons. ... We ask that technology companies and organisations, as well as leaders, policymakers, and other individuals, join us in this pledge."

"I'm excited to see AI leaders shifting from talk to action, implementing a policy that politicians have thus far failed to put into effect," Max Tegmark, president of the Future of Life Institute, said. "AI has huge potential to help the world — if we stigmatise and prevent its abuse. AI weapons that autonomously decide to kill people are as disgusting and destabilising as bioweapons, and should be dealt with in the same way."

Lethal autonomous weapons systems (LAWS) are weapons that can identify, target, and kill a person, without a human 'in-the-loop'. This does not include today's drones, which are under human control, nor autonomous systems that merely defend against other weapons.

"We cannot hand over the decision as to who lives and who dies to machines. They do not have the ethics to do so. I encourage you and your organizations to

pledge to ensure that war does not become more terrible in this way," organiser Toby Walsh, a professor of artificial intelligence at UNSW, said.

"Clearpath continues to believe that the proliferation of lethal autonomous weapon systems remains a clear and present danger to the citizens of every country in the world," Ryan Gariepy, Founder and CTO of both Clearpath Robotics and OTTO Motors, said. "No nation will be safe, no matter how powerful."

In addition to the troubling ethical questions surrounding lethal autonomous weapons, many advocates of an international ban on LAWS are concerned that

they will be difficult to control – easier to hack, more likely to end up on the black market, and easier for terrorists and despots to obtain – which could become destabilising for all countries.

In December 2016, the United Nations' Review Conference of the Convention on Conventional Weapons (CCW) began formal discussion on LAWS. 26 countries attending the Conference have so far announced support for some type of ban, including China.

Such a ban is not without precedent: biological weapons and chemical weapons were also banned, not only for ethical and humanitarian reasons, but also for the destabilising threat they posed.

The next UN meeting on LAWS will be held in August 2018, and signatories of the pledge hope their pledge will encourage lawmakers to develop a commitment to an international agreement between countries.

"The pledge was co-organised by UNSW's Toby Walsh and signed by 150 companies and more than 2,400 individuals from 90 countries"

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Forthcoming Events

ADM EVENTS

More detail on **ADM** Events can be found on our dedicated website: admevents.com.au

- [ADM Women in Defence Awards](#) – 27 July 2018
- [ADM STEM in Defence Summit](#) – 21 August 2018
- [ADM Defence Estate & Base Services Summit](#) – 19 September 2018
- [ADM Defence in Northern Australia Summit](#) – 10-11 October 2018

Defence + Industry Conference and Gala Awards 2018

Date 1-2 August 2018

Location Canberra

Website CASG

The annual CASG and Defence Industry gathering in Canberra to discuss policy and programs with a range of speakers discussing the way forward. A Gala Awards night will take place on the evening preceding the event, where *ADM*'s Essington Lewis Awards will be presented, recognising excellence in collaboration. **Registrations closed on July 22.**

BMT's Submarine Design and Engineering course

Location Adelaide

Date 6-10 August

Website trainingcourses@bmttdt.com.au

This course is ideal for anyone currently working or considering working with submarines; offering a comprehensive design and operational appreciation of conventional submarine technologies. This course is accredited by the Royal Institution of Naval Architects. Since its inception in 2009, this Australian course has earned a reputation for providing delegates with practical and current knowledge, and is an important collaboration between BMT and other submarine experts from around the world. The network of presenters provides significant professional development and networking opportunities for those working in the submarine industry.

Project and program management symposium

Date 14-15 August

Location Rex Hotel, Canberra

Website www.pgcsymposium.org.au

The annual Project and Program Management Symposium provides a forum that brings together project management people to share knowledge and improve the governance and controls skill sets available to deliver successful project outcomes for the nation. A highlight of the symposium is its access to thought

leaders from the USA and Europe. Each year, selected speakers from overseas are brought to the symposium to share knowledge and provide an international perspective on project and portfolio management.

Scindicate 2018

Date 29-30 August

Location Scindicate Labs, Fisherman's Bend, Melbourne

Website <https://scindicate2018.eventbrite.com.au>

SCINDICATE is the new brand name for the previous annual external engagement event called Partnerships Week. SCINDICATE delegates will experience technology demonstrations, workshops, briefings and laboratory tours, as well as opportunities for networking and forging new collaborations. Delegates can choose to attend on either day, and the program will include key elements repeated across both days.

Williams Foundation Seminar: The Imperative for an Independent Deterrent

Date 23 August 2018

Location National Convention Centre

Website <http://www.williamsfoundation.org.au/events>

With the retirement of the long-range F-111, Australia's future air strike capability now rests in the capabilities of the F/A-18F Super Hornet and F-35A, both equipped with appropriate long-range strike weapons and supported by a capable air-to-air refueling force. An independent strike capability expands the range of options to achieve Australia's strategic ends; signals a serious intent and commitment about Australia's national security; and has the capacity to influence strategic outcomes short of resorting to armed conflict.

Hunter Valley Defence Conference 2018

Date 30-31 August 2018

Location Crowne Plaza Hunter Valley

Website [HunterNet](#)

The 2018 Defence Conference will focus on driving collaboration and engagement between Defence Primes, the region's SME's, academia and Defence. A highlight of the conference will be the spectacular low flying aerial show from Matt Hall Racing, followed by a gala dinner.

Land Forces 2018

Date 4-6 September 2018

Location Adelaide

Website www.landforces.com.au

Presented in collaboration with the Australian Army, LAND FORCES 2018 is an international industry exposition to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific.

ISCILP 2018

Date 5-6 September 2018

Location Adelaide Convention Centre

Website <https://www.landforces.com.au/ICSILP/program.asp>

This year's conference brings Army and Defence Science and Technology closer than ever before in exploring future capability options for warfighting success in a fast-changing environment. Many of the delegates attending ICSILP18 will play key roles in harnessing novel technologies for the development of the required solutions. This presents an excellent networking and knowledge exchange opportunity.

ANI Goldrick Seminar

Date 17 Sep, 2018

Location ADFA, Canberra

Website <https://navalinstitute.com.au/>

ANI will be holding its annual Goldrick Seminar at ADFA – with the title Naval Shipbuilding as Strategy. The event is well-attended every year by senior serving officers and by defence industry.

18th Australian Space Research Conference

Date 24 Sep – 26 Sep, 2018

Location Mantra on View Hotel, Gold Coast

Website <http://www.nssa.com.au/18asrc/>

The 18th Australian Space Research Conference (ASRC), will be held at Gold Coast in Queensland over September 24-26. The ASRC is intended to be the primary annual meeting for Australian space research. It welcomes space scientists, engineers, educators, and workers from across the university, industry and government parts of the space sector, and is not limited to Australian-based research. International participants are most welcome. The scope of the conference includes fundamental and applied research, operational matters, technology, and use of space data and facilities. We are accepting [abstracts](#) until July 14.

NZDIA 2018 Forum

Date 30 October - 1 November 2018

Location Central Energy Trust Arena, Palmerston North (NZ)

Website <http://www.nzdiaforum.co.nz/page/528148>

The 2018 NZDIA Forum is our 21st forum. We aim to bring together industry (local, regional and international) and a wider range of government interests than has been achieved previously. The NZDIA forum has, for 20 years, been the most important event on NZ soil for defence and industry to come together. This year we are creating the opportunity and space for a wider cross section of industry: local, Australasian and global with a broader interest in national security encompassing defence, to come together. The speaking and workshop program is coming together as we identify how best to deliver excellent value to our traditional constituency and new attendees.

Veterans Film Festival

Date 1 November – 3 November

Location Palace Electric Theatre, ADFA, Canberra

Website www.veteransfilmfestival.com

The RSL National Veterans Film Festival (VFF) is an annual event, putting the spotlight on stories about veterans, first responders, their families and the influence of warfare on our society. The festival presents a curated program of carefully selected feature films, short films and media art from Australia and around the globe. Our focus is on recent work by talented indie filmmakers. However, within our program we also present mainstream films, retrospectives and provide opportunities to meet with filmmakers and content creators via Q&A's, panels, etc. All films submitted to the official competition will be eligible to compete for the coveted Red Poppy Awards.

SIA Biennial Conference

Date 7-8 November 2018

Location Rex Hotel, Canberra

Website www.submarineinstitute.com/sia-conferences

Join submarine professionals and key decision makers as the ninth in the biennial series of conferences run by the Submarine Institute of Australia returns to Canberra to explore the issues and opportunities emerging from the decision to extend the lives of the Collins class submarines.

MilCIS 2018

Date 13-15 November 2018

Location National Conference Centre, Canberra

Website www.milcis.com.au

In November each year, the Defence Chief Information Officer Group (CIOG) partners with the UNSW Canberra and the Institute of Electronic and Electrical Engineers (IEEE) to present MilCIS.

TEAM DEFENCE AUSTRALIA EVENTS

- **AUSA 2018** – 8-10 October 2018, Washington DC, US
- **Indo Defence 2018** – 7-10 November 2018, Jakarta, Indonesia
- **Euronaval 2018** – 23-26 October 2018, Paris, France

For more information go to the business.gov.au TDA webpage [here](#). TDA EOIs will open a few months prior to the event – to keep up to date [register](#) for the CDIC newsletter.