

# ADM

AUSTRALIAN DEFENCE MAGAZINE

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## DEFENCE WEEK PREMIUM EDITION



The aircraft, serial number A84-232, was built at Avalon by the Government Aircraft Factories.

NIGEL PITTAWAY

## VETERAN CANBERRA BOMBER GAINS NEW LEASE OF LIFE

**An Australian-built Canberra bomber has recently been extensively refurbished at Avalon Airport, home of the Australian International Airshow, in time to celebrate the 100th anniversary of the RAAF in 2021.**

**NIGEL PITTAWAY | MELBOURNE**

The aircraft, serial number A84-232, was built at Avalon by the Government Aircraft Factories (GAF) and first flew in May 1956. After a distinguished operational flying career, which involved two tours of duty with 2 Sqn in Vietnam and later in the photo mapping role in Papua New Guinea, the veteran Canberra was retired in 1984 and flown to Avalon for use as a display item on the main gate the following year.

After spending more than 25 years exposed to the elements during its time on the main gate, A84-232 was removed by a small team of volunteers working at the Avalon Airshow and externally refurbished in time

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to celebrate the RAAF's 90th Anniversary, taking pride of place at the entrance to the 2011 Australian International Airshow.

Since then the aircraft has been continuously in the care of the volunteer team and received further refurbishments prior to its participation in the static display at each airshow until 2019, but to celebrate the 100th Anniversary of the RAAF it was decided to strip the aircraft to bare metal and finish it with modern paint in order to better protect it for the future.

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**"THE WORK TOOK 600 MAN-HOURS  
TO COMPLETE AND CONSUMED 600  
LITRES OF PAINT STRIPPER AND  
120 LITRES OF PAINT"**

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The work was performed by Aviat Global, an Australian aviation service provider specialising in aircraft finishing, in conjunction with AMDA Foundation Limited and with paint supplied by PPG Coatings. Finished to original 1968 Department of Air Drawings, the work took 600 man-hours to complete and consumed 600 litres of paint stripper and 120 litres of paint.

"Given the significance of this event, coupled with the important role that the Canberra played throughout the RAAF's history, we decided to complete a professional refurbishment of A84-232 with the help of companies like PPG, which supplies paints and Coatings to Aviat Global," Mick Jennings, head of Aviation Services at AMDA Foundation Limited said.

The restoration was completed in May this year, in time to also celebrate the 37th anniversary of A84-232's first flight at Avalon. Once again resplendent in the markings it wore during its service with 2 Sqn, it will take part in the RAAF 100th Anniversary celebrations during the 2021 Australian International Airshow, due to be held at Avalon between November 23-28.



The aircraft will take part in the RAAF's 100th Anniversary celebrations.

NIGEL PITTAWAY

# GE AND TAE BEGIN ADVANCED ENGINE WORK FOR US NAVY IN AUSTRALIA

**GE Aviation and TAE Aerospace will support advanced engine work in Australia for the US Navy's fleet of F414 engines.**

Under the GE Total Logistics Support program, the US Navy's F414 engines will receive prime logistics support in Australia, with selected repairs to be carried out on engine components by GE and its partner, Queensland-based TAE Aerospace.

While the US Navy traditionally conducts its depot repair work at facilities in the US, the success of GE and TAE in supporting the RAAF F414 fleet over the past decade reportedly encouraged consideration of a program based in Australia. Since 2011, program service and availability requirements were met or exceeded, as measured on a monthly basis.

These repairs will be completed at TAE's dedicated facility in Brisbane. The first US Navy components are scheduled to be completed in August.

"We are extremely proud to provide our highest level of support to the US Navy and are committed to ensuring our reliable F414 engines continue to receive support that meets or exceeds the Navy's requirements," Al Dilibero, GE Aviation's vice president of Medium Combat & Trainer Engines, said. "This is the first time to our knowledge that F414 repairs have taken place outside of the US and our intent is to grow the list of repairs and volume of US Navy work done in Australia where it makes sense."



Aircraft Technicians from RAAF's No. 1 Squadron guide an F414 engine into position for an engine swap on a F/A-18F Super Hornet.  
DEFENCE



“Having maintenance and repair options in both the US and Australia enhances our collective capability and offers depth to a common support system,” Director General Air Combat Systems, CASG, AIRCDRE Gerry Van Leeuwen, said. “The increased work conducted here in Australia not only strengthens the national technical and industrial base of both nations but also bolsters supply chain resilience. This is an important factor in supporting operations, especially here in the strategically significant Indo-Pacific region.”

TAE Aerospace chief executive officer Andrew Sanderson said the opportunity to complete the US Navy’s F414 engine component repair work was significant, both for the business and Australia’s aerospace sector.

**“THIS IS THE FIRST TIME  
TO OUR KNOWLEDGE THAT  
F414 REPAIRS HAVE TAKEN  
PLACE OUTSIDE OF THE US”**

“We’ve worked with GE Aviation for more than a decade in support of the RAAF F/A-18 engine fleets and to now be able to apply our repair IP, skills and quality in support of the US Navy F414 engines is a great acknowledgement of TAE’s and Australia’s capabilities as a global aerospace maintenance provider,” Sanderson said.

The framework established by GE that allows US Navy hardware to be sent to Australia could be broadened to expand the scope of repair work undertaken in Australia for the US military.

## SINGLETON UPGRADE WORKS BEGIN

**A \$42.2 million overhaul of facilities at the Singleton  
Military Base is due to start this week.**

The Singleton mid-term facility refresh will improve amenities for more than 1,000 defence and civilian personnel at the base.

Minister for Defence Industry Melissa Price said the project to build a new transport workshop and upgrade existing infrastructure would maximise local industry involvement in the Hunter Region.

“This refresh will ensure the Singleton Military Area is able to continue to support Defence capability into the future,” Minister Price said. “Lead contractor, Watpac’s

**“I’M SURE THE STAFF HERE  
WILL BE PLEASED TO SEE  
THE IMPROVEMENT TO  
THEIR MESS HALL”**



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**L3HARRIS**



A soldier from 2nd Battalion RAR leans through a window to check an area during the Duke of Gloucester Cup at Singleton Military Area in 2015. DEFENCE

Local Industry Capability Plan will ensure there will be opportunities for local businesses in the Hunter Region to get involved in the project.”

Patron Senator for the Hunter and Senator for NSW Hollie Hughes attended a project briefing.

“I’m excited that this funding will provide opportunities for local small and medium-sized businesses,” Senator Hughes said. “It’s going to mean work for a host of local contractors including carpenters, landscapers, glaziers, tilers, concreters, structural steelworkers, joiners, roofers, electricians, plumbers, bricklayers and even, demolition experts.

“And, I’m sure the staff here will be pleased to see the improvement to their mess hall and other facilities.”

Construction is expected to be completed by early 2022.

### PEOPLE ON THE MOVE

Naval Group Australia has appointed Graeme Bent as Program Director and Rob Montgomery as General Manager – Program Management Office (PMO). Both Graeme and Rob bring a wealth of Defence experience to the company.

John Chandler has been appointed the new Director of the Future Submarine Program Combat System Integration (FSP-CSI) to lead the design of the combat system for the Attack Class submarine. John takes over the role from the inaugural director, Mike Oliver, who led the Program as Director since 2016.

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# UNISA RESEARCHERS ADD ADAPTIVE CAMO TO DRONES

**In conjunction with the Department of Defence, University of SA material scientists have developed a range of lightweight panels that can change colour on demand, allowing drones to match their appearance to the background colours of the sky.**

The Australian Army has drones ranging from the tiny Black Hornet – which is about the size of a whiteboard marker – to larger models with wide ranging intelligence surveillance and reconnaissance (ISR) capabilities.

Despite their ubiquity and utility, however, all military UAVs are currently hindered by the same simple problem – the sky changes colour, but they don't.

Given the huge importance of remaining undetected during ISR operations, the static colour of drones can be a significant problem, but now, thanks to researchers at the University of SA's Future Industries Institute (FII), the solution is at hand.

In a collaboration with the Department of Defence, FII researchers, led by Dr Kamil



A soldier prepares to launch a PD-100 Black Hornet Nano unmanned aircraft.

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Zuber, have developed a range of lightweight polymer panels that can change colour on demand.

The polymers are what are known as electrochromic materials, meaning they change colour in response to an electric field, and the exact colours can be tuned to specific voltages.

“Similar technology has been used in luxury cars, for dimming mirrors, and on the windows of the Boeing 787 Dreamliner,” Dr Zuber said. “But those applications are slow, require high power consumption to switch, and the electric flow must be maintained to sustain the change state.

### “THE STATIC COLOUR OF DRONES CAN BE A SIGNIFICANT PROBLEM”

“Our panels, on the other hand, have switching speeds in the range of seconds and offer colour memory, which means they retain their switched colour without a continuously applied voltage.

“They also operate in the range from – 1.5 to +1.5 volts, which means you only need to use an AA battery to activate the change.”

In addition to their chameleon-like characteristics, the panels are inexpensive, lightweight and durable, and can be either rigid or flexible, making them ideal for use on drones of all sizes and specifications.

“We have built a small-scale frame of a UAV and put our panels on it. We have demonstrated it against all sorts of different sky states and completed a range of validation testing showing how these materials can respond in actual use,” Dr Zuber said. “We have five or six different materials, and each of the materials can produce two to three distinct different colours.”

The technology is currently being refined to integrate self-awareness and autonomous adjustment into the system, so drones will be able to automatically change colour in response to changes in the surrounding environment.

“At this stage, we’ve been working mainly on the panels and the hardware, but during the latest stage of the project we’ve developed prototype electronics for the controller, which is something that could test the state of the sky and then automatically adjust the voltage to the panel to tune it to the right colour,” Dr Zuber said. “So, if the UAV passed in front of a cloud, it would turn pale, then when it moved back into blue sky, it would turn back to blue.”

## DEFENCE INDUSTRY GRANTS PROGRAM LAUNCHED

**SMEs are now able to apply for grants of up to half a million dollars after Minister for Defence Industry Melissa Price relaunched the Skilling Australia’s Defence Industry (SADI) Grants program.**

The SADI program will deliver \$39 million over the next three years, with \$17 million per year in 2020-2021 and 2021-2022, to support a skilled workforce in the defence industry sector.





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The program is a key initiative of the Government's 2019 Defence Industry Skilling and STEM Strategy, and will be delivered through the Centre for Defence Industry Capability.

**"I AM PROUD TO SUPPORT  
SMALL-TO-MEDIUM  
AUSTRALIAN BUSINESSES  
IN THE DEFENCE SECTOR"**





# BECA AND VARD MARINE TO SUPPORT NZ ANTARCTIC PATROL VESSEL PROGRAM

**Beca Applied Technologies (Beca), with the support of specialist naval architecture company Vard Marine (Vard), have been appointed by the NZ Ministry of Defence as the Technical Support Partner to the Southern Ocean Patrol Vessel (SOPV) project.**

The SOPV project is exploring options for a ship that is designed to operate in one of the harshest environments on the planet. An ice-strengthened offshore patrol vessel for Southern Ocean operations will be navigating the large distance between NZ and Antarctica, it will be traversing one of the roughest seas in the world, and must be able to operate safely in Ross Sea ice conditions. Any vessel that can meet these needs will need characteristics tailored to these demanding conditions.

Beca and Vard will join the Ministry's Integrated Project Team providing systems engineering, concept design and technical logistics input for the early stages of the project as the capability is defined and specified.



NZ is designing a ship to protect its interests in Antarctica.

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Beca has been a long-standing strategic supplier to the Ministry of Defence and NZ Defence Force, including on the Maritime Sustainment Capability and the Dive Hydro Vessel project that contributed to the delivery of HMNZS *Aotearoa* and HMNZS *Manawanui*.

**“THE SOPV HAS THE POTENTIAL TO PROVIDE MUCH NEEDED PRESENCE IN THE SOUTHERN OCEAN TO SAFEGUARD NZ’S INTERESTS”**

“We are delighted to be supporting the development of another critical capability for the people and Government of NZ,” Andrew Ford, Business Director – Defence & National Security at Beca said. “The SOPV has the potential to provide much needed presence in the Southern Ocean to safeguard NZ’s interests there. We are excited to partner with the MoD Integrated Project Team and to bring Vard’s significant polar class experience to this program.”

NZ’s Otago Class patrol vessels were designed by Vard Marine and delivered in 2010. These vessels have operated in heavy sea states and ice in the Southern Ocean, and the SOPV is intended to provide improved operability in similar conditions.

“Vard Marine is delighted to once again be supporting the Royal NZ Navy in developing another vitally important maritime capability,” Derek Buxton, VP Business Development at Vard Marine said. “This time we very much look forward to combining our expertise in multi-role ships designed for high-latitude operations with the regional defence knowledge and systems engineering expertise that Beca brings to the program.”

## SYPAQ APPOINTED AS EXCLUSIVE ANZ AGENT FOR KLEOS SPACE

**SYPAQ has been confirmed as the exclusive Australia-NZ (ANZ) agent for Kleos Space, in an announcement made to the Australian Stock Exchange.**

Kleos is a space-powered Radio Frequency Reconnaissance data provider. SYPAQ will exclusively market and sell Kleos data on behalf of the company into new and existing programs and customers, and provide direct local support to Kleos’ regional government and industry customers.

Kleos data will enhance support to ANZ Defence and Border Services, providing



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Kleos is a space-powered Radio Frequency Reconnaissance data provider.

KLEOS

### **“SYPAQ WILL PROVIDE DIRECT TACTICAL AND OPERATIONAL SUPPORT TO KLEOS’ CUSTOMERS IN AUSTRALIA AND NZ”**

additional resources to monitor suspect and illegal activities at sea, including smuggling, illegal migration, fishing, whaling and vessels in distress.

“This exciting partnership shows that SYPAQ continues to be at the forefront of innovative C4ISREW technologies,” SYPAQ CEO Amanda Holt said. “As an Australian business, our focus is always on delivering genuine sovereign industry capability for Australia.

“A key aspect of this is strategic partnering to leverage successful technology transfers from the best in the world. We are confident we have found such a partner in Kleos.”

“The Kleos business model is to sell our data products through integrators (those that add the data to other data sets before selling a derived product), channel partners (those with the technical capabilities to add value to the data product and support the aftersales appropriately) and agents where there is a need for additional support requiring exclusivity in a region,” Pete Round, Kleos Chairman and Director for Global

### **MOST READ ONLINE AT [WWW.AUSTRALIANDEFENCE.COM.AU](http://WWW.AUSTRALIANDEFENCE.COM.AU)**



1. [Hanwha to build self-propelled howitzers in Geelong](#)
2. [The Whiskey Project buys two ANZ businesses](#)
3. [Army releases vehicle upgrade roadmap](#)
4. [Hawkei set for full rate production](#)
5. [Submarines and manned/unmanned teaming](#)



Business Development said. "SYPAQ offers us access to end user requirements, existing programs and existing budgets enabling Kleos to engage with a far wider customer community quicker than if Kleos was to work directly with end users as well as being able to provide pre – and post-sales support to the region."

Acting as 'Exclusive Territory Agents', SYPAQ will provide direct tactical and operational support to Kleos' customers in Australia and NZ. SYPAQ will be the primary point of contact for both sales and support in the region.

According to Kleos, the arrangement means considerable operational cost benefits will be achieved compared to establishing a regional Kleos operations office.

The orbits of Kleos' first two clusters provide strategic coverage of the South Pacific Ocean between Australia and NZ, and the west coast of Australia.

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# FORTHCOMING EVENTS

## ADM EVENTS

More detail on ADM Events can be found on our [dedicated website](#).

- [ADM Women in Defence Awards](#) – 23 October 2020 | Online
- [Northern Australia Defence Summit](#) – 28 October 2020 | Online
- [ADM Space Summit](#) – 2 December 2020, Hyatt Hotel | Canberra
- [ADM Congress](#) – 3 February 2021, Hyatt Hotel | Canberra
- [ADM Defence Estate](#) – 23 February 2021, Hotel Realm | Canberra

## 6TH INTERNATIONAL HLS & CYBER CONFERENCE & EXHIBITION

**DATE** 14-15 September 2020  
**LOCATION** Online  
**WEBSITE** [hls-cyber.b2b-wizard.com/expo](https://hls-cyber.b2b-wizard.com/expo)

The HLS&CYBER event, the international homeland security and cyber event in Israel, returns for the sixth time, and this time, in a virtual format. The event, which will be held on September 14-15, 2020, will include a professional conference, as well as a virtual exhibition of about 100 Israeli companies in the field of homeland and cyber security and an online B2B conference arena.

## AUSCERT 2020

**DATE:** 15-18 September  
**LOCATION:** The Star, Gold Coast  
**WEBSITE:** [auscert.org.au/giveaway](https://auscert.org.au/giveaway)

The AusCERT Conference is the oldest information security conference in Australia. Each year, we attract in the vicinity of 800 participants and approximately 50 sponsors. AusCERT is hosting more than 50 speakers at AusCERT2020, as well as an array of tutorials, workshops, networking events & much more.

## DEFENCE SEAWORTHINESS SYMPOSIUM

**DATE** 17 September 2020  
**LOCATION** Online  
**WEBSITE** [kapara.rdbk.com.au/landers/fabfb4.html](https://kapara.rdbk.com.au/landers/fabfb4.html)

The Office of the Defence Seaworthiness Regulator (ODSwR) is hosting the second annual Defence Seaworthiness Symposium on 17 September 2020. This year, we are delivering a predominantly virtual event with limited ability to attend in-person at the Australian Defence Force Academy, Canberra.

## **AMDA ONLINE SUMMIT: REBUILDING AVIATION IN THE POST PANDEMIC WORLD**

**DATE** 24 September 2020  
**LOCATION** Online  
**WEBSITE** [amda.com.au/AMDA-Online/rebuilding-aviation.asp](https://amda.com.au/AMDA-Online/rebuilding-aviation.asp)

The inaugural AMDA Online Summit, Rebuilding Aviation in the Post Pandemic World will be held on Thursday 24 September from 2pm AEST with free registration now open. Join an online panel of highly respected aviation industry experts and hear first-hand insight into the way out of the COVID-19 woes currently plaguing airports, airlines, manufacturers and suppliers in Australia and around the world.

## **2020 ANI GOLDRICK SEMINAR – REMOTE AND AUTONOMOUS SYSTEMS AT SEA**

**DATE** 13 and 14 October 2020  
**LOCATION** Adams Auditorium, Australian Defence Force Academy  
**WEBSITE** [navalinstitute.com.au/latest-ani-events-and-archive](https://navalinstitute.com.au/latest-ani-events-and-archive)

The 2020 ANI Goldrick Seminar will discuss a wide range of issues around Remote and Autonomous Systems at Sea. It will comprise six sessions over 1.5 days covering an overview of Remote and Autonomous Systems at Sea (RAS); RAS in the Littoral Domain; RAS in the Maritime Air Domain; RAS in the Undersea Domain; Measuring Effective, and Legal and Ethical Considerations.

## **4TH IEEE ANNUAL SYSTEMS MODELLING CONFERENCE**

**DATE** 27 October 2020  
**LOCATION** Online  
**WEBSITE** [www.unsw.adfa.edu.au/conferences/SMC-2020](https://www.unsw.adfa.edu.au/conferences/SMC-2020)

The Capability Systems Centre runs one-day conference on the use of whole-systems approach to design and manage complex problem in socio-technical and socio-ecological systems. The daylong virtual conference on October 27th will feature showcases on the use of systems thinking and systems modelling in a wide range of areas.



**10TH BIENNIAL SIA CONFERENCE 2020**

**DATE:** 17-18 November 2020  
**LOCATION** Hotel Realm, Canberra and online  
**WEBSITE** [submarineinstitute.com/sia-conferences](https://submarineinstitute.com/sia-conferences)

The 10th Biennial SIA Conference will be held 17-18 November 2020 at the Hotel Realm, Canberra. This year's theme is 'Submarine Build and Sustainment Programs: The Strategic Nature of Reliable, Sovereign Supply Chains'. The Call for Presentations is available on the website.

**2021****43RD COSPAR SCIENTIFIC ASSEMBLY**

**DATE** 28 Jan-4 Feb 2021  
**LOCATION** International Convention Centre Sydney  
**WEBSITE** [cospar2020.org](https://cospar2020.org)

The Australian space research community enthusiastically extends the invitation to you, to meet with us for COSPAR 2020, and in so doing to forge the friendships and opportunities that will connect space research for global impact. The 2020 Assembly will combine the latest in space research findings with activities designed to enrich the global space research community – including helping equip our future leaders, and workshopping with space industry – and inspire the next generation of scientists and engineers.

**LOCATE21**

**DATE** 30 March – 1 April 2021 (rescheduled dates)  
**LOCATION** Brisbane Convention and Exhibition Centre  
**WEBSITE** [locateconference.com/2021](https://locateconference.com/2021)

Due to COVID-19, Locate20 has been rescheduled for Locate21 happening in Brisbane March 30 – 1 April 2021. The event will focus on how geospatial technologies are intersecting with business, Government and defence to address national challenges. It's Australia's premier spatial conference with the inclusion of over 50 inspiring thought-leaders including speakers from government, academia, the defence force, technology, mining, natural resources and more. We believe this conference is of interest to defence personnel.

## **LAND FORCES 2021**

**DATE** June 1-3 2021  
**LOCATION** Brisbane Convention Centre  
**WEBSITE** [landforces.com.au](http://landforces.com.au)

The biennial LAND FORCES exposition is an international industry event to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific. The Land Forces 2020 team is now setting about ensuring the event will achieve its goals of providing an effective platform for the exchange of ideas on key land forces issues and of taking Australian industry to the world.

## **ROTORTECH 2021**

**DATE** 15-17 June 2021  
**LOCATION** Royal International Convention Centre, Brisbane  
**WEBSITE** [rotortech.com.au](http://rotortech.com.au)

The new dates for Rotortech will be Tuesday 15 June to Thursday 17 June 2021. The venue, the Royal International Convention Centre in Brisbane, is unchanged. Rotortech is the region's premier helicopter and unmanned flight systems showcase and forum, featuring more than 100 participating companies and key speakers from industry and government. We believe that deferring Rotortech to its new June 2021 dates will achieve this goal by moving the event to a time where the COVID situation will have improved and the current uncertainties will have passed.

## **PROJECT AND PROGRAM MANAGEMENT SYMPOSIUM**

**DATE** 10 – 12 August 2021 (rescheduled dates)  
**LOCATION** Canberra Rex Hotel  
**WEBSITE** [pgcsymposium.org.au](http://pgcsymposium.org.au)

Foresight is more valuable than hindsight! PGCS 2020 is designed to help project and program managers, and their sponsors and senior managers, develop the skills and understanding needed to deliver projects success in the next decade. Creating the organisational capability needed to underpin the consistent delivery of successful projects in the 2020's starts at the top. Now in its 8th year, PGCS 2020 will focus on ways to build the foundations needed to create project and program success

**AVALON 2021****DATE** 23-28 November 2021**LOCATION** Avalon Airport

The Australian International Airshow and Aerospace & Defence Exposition is one of Asia-Pacific's most prestigious aviation and aerospace events and the most comprehensive aviation, aerospace and defence exposition in the southern hemisphere. Avalon hosts multiple concurrent conferences and expo streams, across the spectrum of Defence, Airlines, Business and General Aviation, Sport and Recreational Aviation, Airports, MRO, Space, Unmanned Systems, Air Safety and Ground Equipment.

**2022****INDO PACIFIC 2022****DATE** 12 May 2022**LOCATION** ICC Sydney**WEBSITE** [pacificexpo.com.au](http://pacificexpo.com.au)

INDO PACIFIC, the biennial International Maritime Exposition, will combine an extensive exhibition presence, a comprehensive conference program and a schedule of networking and promotional opportunities. It will be the 12th iteration of this internationally renowned event, and will be a critical link event for Defence, government and industry as Australia defines how it will invest \$90 billion on new ships, submarines and their systems and support.

**VARIOUS DATES****NSW DEFENCE INNOVATION NETWORK'S REGIONAL ROAD SHOW****DATE:** Various**LOCATION:** Various**WEBSITE:** [defenceinnovationnetwork.com/din-regional-road-show-2019-20](http://defenceinnovationnetwork.com/din-regional-road-show-2019-20)

NSW Defence Innovation Network and AIDN will be undertaking a series of small business focused regional forums across NSW. Register to attend and hear about the programs, grants, opportunities and services the NSW Defence Innovation Network (DIN) provides to the small business community across NSW. We encourage small businesses to engage with us and participate in opportunities across our networks, including DIN's seven partner universities, as well as with other state and federal agencies.



## **ICCPM ONLINE WORKSHOPS**

**DATE** Various  
**LOCATION** Online  
**WEBSITE** [iccpm.com/online-workshop-webinars](https://iccpm.com/online-workshop-webinars)

Designed to support project teams who are experiencing new challenges due to COVID-19 concerns – Learn how to mitigate new risk levels, effectively deploy virtual teams, manage messy problems and more. ICCPM Online Workshops and Webinars provide you with an easily accessible and engaging option to continue your training from anywhere in the world. These options provide you and your team with a conducive learning environment to support your complex project success.

## **ICCPM ROUNDTABLE WORKSHOPS**

**DATE** Various  
**LOCATION** Various  
**WEBSITE** [iccpm.com/2020-rs](https://iccpm.com/2020-rs)

ICCPM, with Series Partner QUTeX, is pleased to confirm the upcoming Workshops for the 2020 International Roundtable Series Harnessing Emergence in Complex Projects: Risk, Uncertainty and Opportunity. The International Roundtable Series is an exciting Thought Leadership initiative where senior practitioners and leading academics come together and discuss the Series Theme to produce new insights and practical steps to improve complex project success. Registrations for in-person workshops are strictly limited to comply with COVID-19 venue safety guidelines. Please refer to each event page for more details.