

DEFENCE WEEK PREMIUM EDITION



US Secretary of Defense Mark Esper is greeted by staff members of the Federal Emergency Management Agency.

WIKIMEDIA COMMONS

TURMOIL AT THE TOP OF THE PENTAGON

Following Joe Biden's victory in last week's election, outgoing US President Donald Trump has fired Defense Secretary Mark Esper by tweet and caused a raft of resignations amongst the Pentagon's civilian leadership.

EWEN LEVICK | SYDNEY

Trump announced on Tuesday local time that Esper was 'terminated' and has been replaced by acting secretary Chris Miller, previously director of the National Counterterrorism Centre.

Miller reportedly arrived at the Pentagon building to take over before the US military had even confirmed Esper's removal.

Media sources said that Esper had expected his

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dismissal following his opposition to using active duty troops to suppress civilian protests in Washington DC earlier this year. Esper himself told the Military Times in an exclusive interview that he was concerned the move would have taken the country in a 'really dark direction'.

Esper's 'termination', however, has been followed by several other high-profile exits. The Pentagon has confirmed that James Anderson, the acting undersecretary for defence policy, resigned within a day of Esper's sacking. He has been replaced by Anthony Tata, a former brigadier general who retired after an inquiry found he had

two affairs whilst serving, which is a breach of US military law.

"LONG-TERM SUCCESS DEPENDS ON 'ADHERING TO THE US CONSTITUTION"

Vice Admiral (ret'd) Joseph Kernan, Undersecretary of Defense for Intelligence and Security, has also left (it is unclear whether he resigned or was also 'terminated'), as has Esper's chief of staff John Stewart.

US media, including Politico, Foreign Policy,

CNN and Defense News, are reporting a sense of unease amongst US military leadership as new appointees take over amidst the President's refusal to acknowledge defeat in the election. There are also open questions around whether Esper's replacement follows US Defense Department statutes relating to the line of succession amongst Senate-confirmed positions.

CNN's Jake Tapper has cited sources saying that Esper's team were fired for resisting what they saw as a 'premature' withdrawal from Afghanistan, and other 'pending security issues.'

Anderson's farewell message reportedly encouraged his staff to remain 'apolitical' and to 'remember your oath of office'. He also said that long-term success depends on 'adhering to the US Constitution'.

Esper originally took over from James Mattis, a widely respected Marine Corps general who took issue with the possibility of active duty US troops using force against American citizens.

"When I joined the military, some 50 years ago," he wrote for The Atlantic, "I swore an oath to support and defend the Constitution. Never did I dream that troops taking that same oath would be ordered under any circumstance to violate the Constitutional rights of their fellow citizens."

For his part, Esper told the Military Times that he had worried about who his replacement would be.

"I could have a fight over anything, and I could make it a big fight, and I could live with that — why? Who's going to come in behind me?" he asked. "It's going to be a real 'yes man.' And then God help us."

MILCIS 2020 HIGHLIGHTS

For the first time, MilCIS has gone virtual this year. Chief Information Officer Steve Pearson gave his annual update to industry as a keynote, thanking his industry partners for their work this year, in particular during the COVID-19 period which has seen the organisation face many challenges.

KATHERINE ZIESING | CANBERRA

Pearson pointed out that the Defence organisation usually had about 2,000 people working from home at any one time throughout the country. This peaked at 18,000 people this year. This was only possible thanks to the introduction of virtual environment for remote access (VERA), a program that was brought forward to in response to the 2020 environment.

"VERA is our protected-level digital collaboration capability, which uses Microsoft Office 365 applications to enable secure interaction across Defence," he said.

Pearson also said that the unified communications component of the Defence terrestrial communications network (DTCN) will also improve collaboration tools on the fixed network. This program is currently several years behind schedule and was recently evaluated as requiring urgent action to address major risks.

"The Department of Defence is unconvinced its long-running fixed telecommunications network replacement project with Telstra will be a success without urgent action, despite pouring more than \$1.8 billion into the overhaul over the last seven years," according to a report in ITNews in August this year.



The Defence Cyber Plan will be released next year

DEFENCE

Details on the progression on Defence Enterprise Resource Planning (ERP) were sparse with Pearson noting the program was progressing well. In response to a question, it was confirmed that "ERP phase 1.A successfully went live in July which provided much improved cost-centre management reporting. Release 1.B is on track for go-live mid 2022. We are planning to return to government for approval of pass 3 in mid-2021."

He confirmed that SME engagement is at the front of his mind but that the value for money proposition when it comes to spending Australian tax payer dollars has not been forgotten.

"ACROSS THE YEAR WE HAVE LEARNED SOME VALUABLE LESSONS ABOUT TEAMWORK, COLLABORATION AND WORKING FROM HOME" Pearson also announced that the Defence Cyber Plan will be released in the first half of next year.

"Defence's cyber plan is very much aligned to the whole-of-government cyber security strategy," a statement on the Q&A tool confirmed. "Obviously, Defence focus is on cyber security of the Defence ICT environment, in addition to contributing to whole-of-government cyber."

"Across the year we have learned some valu-

able lessons about teamwork, collaboration and working from home. We are aiming to situate ourselves for future success," Pearson concluded.

New Head of ICT Operations Major General Murray Thompson, who only started in the role last month after taking over from Rear Admiral Michael Rothwell who is now deployed at sea in the Middle East, is drinking from the fire hydrant. His attention is with industry and the innovation opportunities they can bring to bear.

"Industry is a broad church and we shouldn't limit ourselves to traditional industry partners," he said. "Military CIS isn't just an enabler anymore; it's critical part of capability and winning."

Noting that much of the ICT innovation is now based in the commercial world, he is acutely aware of the expectations and technology drivers that Defence is seeing, not that 'applying a military lens to these technologies has numerous challenges'.





The software-programmable JCREW Increment One Block One system uses an open architecture integrated design.

NORTHROP GRUMMAN

NORTHROP GRUMMAN TO SUPPLY COUNTER-IED TECH TO ADF

The US Naval Sea Systems Command (NAVSEA) has awarded Northrop Grumman a foreign military sale (FMS) contract modification to provide the ADF with mounted and dismount variants of the Joint Counter Radio-Controlled Improvised Explosive Device (RCIED) Electronic Warfare (JCREW) systems.

Valued at \$29.9 million, this international JCREW FMS order authorised by NAVSEA includes JCREW Increment One Block One systems, as well as auxiliary kits, spares, and support equipment. Northrop Grumman Australia will also expand its incountry support capabilities to meet the ADF's operational needs.

"This JCREW FMS order further validates the field-proven effectiveness of the JCREW systems for both US and coalition military operators to counter device-controlled threats, such as improvised explosive devices (IEDs) and unmanned aerial vehicles," Roshan Roeder, vice president, communications, airborne sensors and networks division, Northrop Grumman, said. "We continue to work closely with our US Navy partners to deliver JCREW systems that will help US and allied warfighters

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maintain the tactical advantage needed to succeed across today's technology driven battlespace."

"Northrop Grumman Australia is ready to support our US counterparts with the introduction of JCREW into operational service," Chris Deeble, chief executive, Northrop

"THESE JCREW SYSTEMS WILL PROVIDE AUSTRALIA WITH ADDITIONAL OPERATIONAL **CAPABILITY**"

Grumman Australia, said. "These JCREW systems will provide Australia with additional operational capability and expand Northrop Grumman's support to the ADF."

The software-programmable JCREW Increment One Block One system uses an open architecture integrated design to maximise commonality across variants. Its software-defined nature enables new threat defeat capabilities to

be rapidly deployed; allows third-party application providers to easily integrate with JCREW systems; and reduces overall lifecycle costs.

Northrop Grumman says it works closely with the US Navy to add new countercommunications capabilities to address emerging and future threats.

Work on this Australian FMS order will take place in San Diego and is expected to be completed in 2022.



EOS COMPLETES EM SOLUTIONS INTEGRATION

Electro Optic Systems has successfully integrated EM Solutions into the EOS Group following the acquisition announced a year ago.

 \mathbf{B} risbane-based EM Solutions has had a successful first year of ownership under EOS, with continued strong growth, new contract wins and significant technology development.

Led by CEO Rowan Gilmore, EM Solutions continues to achieve growth at over 20 per cent year-on-year in both revenue and EBIT. Despite delays on critical supply chain components due to COVID-19, management still expects to meet all scheduled shipments before year-end and to outperform the original acquisition business case. This represents the seventh successive year that EM Solutions has grown its business.

This year the company has delivered its tri-band Cobra satellite communications terminals into the Australian Navy's Anzac frigate upgrade and new Offshore Patrol Vessel programs, and in November shipped the first of a series of Cobra terminals as part of a new \$14 million order for three NATO Navies. EM Solutions has also recently received an \$3 million order from a US prime contractor supplying manpack satellite terminals into a US defence program. These terminals will incorporate EM Solutions' Ka-band transceivers which are based on the same core technology that has been supplied over recent years into numerous maritime, airborne and land mobile platforms.

As a result of recent contract wins, EM Solutions now has a record confirmed order backlog equivalent to 14 months' production, and is in contract discussions with overseas defence forces that could stretch that to two years of future production. EOS is



PEOPLE ON THE MOVE

The government has announced the appointment of Dr Bernadette Boss as the new interim National Commissioner for Defence and Veteran Suicide Prevention.

also seeking to leverage the US EOS marketing and production capabilities in Huntsville, Alabama to address the large and growing North American market.

EM Solutions also continues to invest strongly in R&D, leveraging its intellectual property in electromagnetics and microwaves with EOS' technology in optics to develop

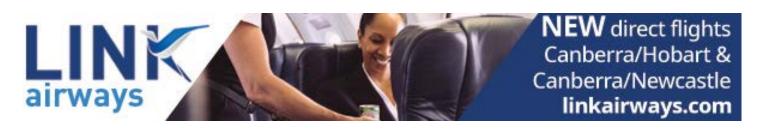
new hybrid RF-optical systems that will support forthcoming satellite systems.

"EM SOLUTIONS IS UNIQUELY POSITIONED TO DELIVER PRODUCTS THAT PROVIDE MAXIMUM FLEXIBILITY"

In November, EM Solutions and the Australian Navy will also complete the Detailed Design Review of its new "Fleet" terminal which is intended to replace certain ageing legacy systems currently in service.

"As government customers continue to evolve towards multi-orbit, multi-band satellite communications, EM Solutions is uniquely positioned to

deliver products that provide maximum flexibility and resilience," Glen Tindall, CEO of EOS Communications Systems said. "We will be developing next generation satcomon-the-move terminals that can support the optical technology that will be deployed by the EOS SpaceLink MEO Satellite Relay System."



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FIRST INDIGENOUS SUPPLIER SIGNS ONTO HUNTER CLASS PROGRAM

ASC Shipbuilding has signed a contract with Indigenous Australian company, TQCSI-Yaran, to commence work during the prototyping phase of the Hunter class frigate program.

TQCSI Yaran is a majority indigenous-owned and operated business partnered with the Indigenous Defence and Infrastructure Consortium (iDiC). The iDiC has capability in various direct and indirect procurement services to support large defence and infrastructure projects.

The Adelaide-based company will audit and undertake quality, safety, health and environmental systems certification.

Minster for Defence Linda Reynolds said the prototyping phase is on track to begin next month.

"Prototyping is an essential phase in the building of any complex warship. This will ensure that ASC Shipbuilding's workforce are thoroughly trained in using the state of the art digital equipment in one of the world's most advanced shipyards at Osborne in Adelaide," Minister Reynolds said. "This first phase is vital to the overall program, which will provide Navy with a regionally superior anti-submarine warfare capability it needs in the future.



The prototyping phase of the program is said to be on track.

BAE SYSTEMS AUSTRALIA

"I am proud that BAE Systems Australia's Reconciliation Action Plan (RAP) and strategic relationship with the Indigenous Defence and Infrastructure Consortium is opening up new opportunities for Indigenous businesses to win work and be an important part of the Hunter Class program.

"Indigenous businesses who are contributing to Defence programs are not only

"I LOOK FORWARD TO SEEING MORE INDIGENOUS BUSINESSES BEING CONTRACTED TO SUPPORT THE NATIONAL NAVAL SHIPBUILDING PROGRAM"

a key part of the Australian economy, but are also providing jobs and supporting the community they represent."

"The work that Adelaide-based TQCSI-Yaran will undertake is an important step for prototyping activities and provides practical training opportunities for Australian workers," Minister for Defence Industry Melissa Price said. "During prototyping, the processes, systems, tools, facilities and workforce competencies will be exten-

sively tested and refined before construction starts on the first Hunter class frigate.

"I look forward to seeing more Indigenous businesses being contracted to support the National Naval Shipbuilding Program."

ASC Shipbuilding, the prime contractor for the Hunter class, is a subsidiary of BAE Systems Australia who have developed a Reconciliation Action Plan and a Strategic Relationship Agreement with the iDiC.

Keep an eye out for ADM's Top 40 Defence Contractors survey in the new year as we are collating more information on RAPs and other key company performance metrics.



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The exercise took place at HMAS Moreton in Brisbane.

DEFENCE

ROBOTS AID RESCUE DURING NAVY EXERCISE

The RAN and Defence Industry have put robots to the test in a simulated counter-disaster operation in Brisbane.

Autonomous Warrior Genesis – the first of Navy's flagship events exercising Robotics, Autonomous Systems and Artificial Intelligence (RAS-AI) – saw unmanned vehicles deployed by air, land and water to respond to a fictional Humanitarian and Disaster Relief (HADR) scenario on the Brisbane River.

"USING AUTONOMOUS SYSTEMS TO RESPOND TO DISASTER SCENARIOS IS A POTENTIAL GAME CHANGER Minister for Defence Linda Reynolds said the exercise demonstrated Defence working with industry to integrate emerging technologies with Navy platforms to rapidly respond in emergency situations.

"Australia's commitment to maintaining a strong and secure region is predicated on ongoing modernisation of Defence capability as new and dis-

ruptive technologies emerge," Minister Reynolds said.

"As announced in the 2020 Force Structure Plan, the Government recognises the exploration of autonomous and un-crewed systems will further safeguard Australia's capability and achieve expanded reach across the region.

"Using autonomous systems to respond to disaster scenarios is a potential game changer for Defence by providing the agility and technological edge to rapidly support our region in times of crisis.

"Navy's recently launched RAS-Al Strategy emphasises the importance of strengthening Defence's relationship with Australian Industry to ensure together, we develop innovative new capabilities to respond to an evolving geostrategic environment."

Autonomous Warrior Genesis took place at HMAS Moreton in Brisbane in a COVID safe manner, in partnership with Emesent, Boeing Australia and EPE.

BOEING AND CLEARBOX PARTNER ON NEXT-GEN SATCOMS

Boeing Defence Australia (BDA) has signed an agreement with Sydney technology company Clearbox Systems to assist in the development of a solution for the ADF's next-generation Satellite Communication (SATCOM) System under JP9102.

JP9102 aims to deliver a system which will enable the joint command and control of deployed Joint Task Forces through resilient and responsive communications beyond the range and capacity of other communication systems.

BDA and Clearbox's collaboration will combine Boeing's knowledge of global satellite communications and local development of complex defence communications programs with Clearbox's SATCOM software development and integration expertise.

"Clearbox is renowned for its ability to integrate system software into a common



JP9102 aims to deliver a system which will enable the joint command and control of deployed Joint Task Forces.

BOEING

and intuitive user interface which makes it easier for systems operators," JP 9102 Capture Team Lead, Michael Konig, said.

"It is this ability to stitch together different software in a way that makes it seam-

"THE TWO BUSINESSES WILL COLLABORATE TO DESIGN A STRONG SOLUTION FOR JP 9102"

less for the user that aligns with Boeing's proven approach on the complex development programs such as the Currawong Battlespace Communications System and Defence High Frequency Communications System.

"The two businesses will collaborate to design a strong solution for JP9102 that provides a low risk, sovereign solution to the ADF's needs for

a flexible, resilient and agile SATCOM system."

Executive Director at Clearbox Systems, Jeremy Hallett said the company was on a mission to use technology to help Defence better operate and manage their satellite communications networks.

"We already provide our solutions to Defence to allow them to operate their current military and commercial SATCOM systems. It makes sense for us to work with a company such as Boeing to develop a solution for Defence's next-generation SATCOM system delivered under JP9102," Hallett said.

The JP9102 tender is expected to be released in the first half of 2021 with numerous companies like Airbus, Viasat, Lockheed Martin, Northrop Grumman and others set to throw their hats in the ring.







The Osborne naval shipyard will be a modern, digitally advanced shipyard.

BAF SYSTEMS ALISTBALIA

SA BUDGET A BOON FOR SHIPBUILDING RESEARCH

Flinders University has welcomed the SA Government's funding announcement in the 2020 State Budget which will fast track the development of the Line Zero – Factory of the Future to support the Hunter class program.

The SA government announced \$5 million to support a \$5 million co-investment by Flinders University for a first-of-its-kind advanced manufacturing accelerator located at the Tonsley Innovation District.

Flinders says the Line Zero initiative represents a 'significant step forward' for the Hunter supply chain to demonstrate and test – in a controlled environment – the technological value and progress that can be made over the life of the Hunter class frigate program.

"Flinders University welcomes the SA Government's funding announcement and is proud to co-invest \$5m in the new facility at our Tonsley campus," Flinders University President & Vice-Chancellor Professor Colin Stirling said. "A crucial element in research that makes an impact is taking research out of the lab and applying it in the real world and this facility will do exactly that.

"This funding announcement will enable technologies and processes tested by Flinders University and ASC shipbuilding to be honed and refined in a real-world manufacturing site – the former Mitsubishi panel stamping plant," Professor John Spoehr, Pro-Vice Chancellor, Research Impact and Director of the Australian Industrial Transformation Institute said.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



- 1. Australian company designs supersonic training missile
- 2. New facilities to support next-gen armoured vehicles
- 3. Operation Christmas Drop 2019 begins
- 4. Inside One Belt One Road: China's push into the world's infrastructure
- 5. US strategy in Asia is unlikely to change

"It also affords an opportunity for supply chain companies to work with Flinders and ASC Shipbuilding to harness the benefits of advanced manufacturing, enabling improved performance and growing their contribution to the sector and to the state and national economy."

"The Osborne naval shipyard will be one of the most modern, digitally advanced shipyards in the world – linking the digital engineering design with automated technologies and digitised work packs for shipbuilders on the ground," ASC Shipbuilding Managing Director Craig Lockhart said. "For workers and the supply chain this means they can use a range of digital technologies to do their job right, the first time – leading to productivity, safety and quality outcomes."





SIKORSKY AUSTRALIA ACHIEVES DASA CERTIFICATION

Sikorsky Australia, a Lockheed Martin company, has been officially approved as an Aircraft Maintenance Training Organisation (MTO) by the Defence Aviation Safety Authority (DASA)—a significant training accreditation currently granted to only one other defence industry organisation.

The milestone authorises Sikorsky Australia to deliver type course aircraft training to its staff, defence and industry partners under DASA's Defence Airworthiness Safety Regulations (DASR) Part 147 requirements.

For example, Sikorsky Australia can now officially train Sikorsky and defence personnel on MH-60R (Romeo) and S-70A-9 (Black Hawk) helicopter platforms in both the avionics and mechanical trade categories.

"To be recognised as an MTO and meet Australia's strict aviation training regulations, which are seen as a benchmark by many nations, is an important outcome for Sikorsky Australia and our customers," Dale Hall, General Manager, Sikorsky Australia, said. "The MTO certification directly underpins our current operations to sustain the Romeo and Black Hawk helicopters in support of the Fleet Air Arm and the Australian Army."



Sikorsky Australia can now deliver type course aircraft training to its staff, defence and industry partners.

SUPPLIED

As an MTO, Sikorsky Australia is now certified to issue Romeo and Black Hawk Types Accreditation to participants at the completion of training to a meticulous level of industry qualifications.

"THE MTO CERTIFICATION DIRECTLY UNDERPINS OUR CURRENT OPERATIONS TO SUSTAIN THE ROMEO AND BLACK HAWK HELICOPTERS"

Sikorsky Australia's MTO offers a program of theory and practical based training and assessments for aircraft maintenance qualifications that adhere to DASA's rigorous compliance regulations.

The team worked in partnership with DASA to ensure all elements of the training program from instructor guides, lesson plans, examinations, theoretical and practical modules aligned with

DASA's Part 147 regulatory standards.

"I'm proud of our training team for their sustained focus in successfully delivering a nationally recognised industry training curriculum in collaboration with DASA. DASA's in-depth advice and ongoing support during our path of creating the training courseware was invaluable in helping us to achieve this positive outcome," Hall said.





FORTHCOMING EVENTS

ADM EVENTS

More detail on ADM Events can be found on our dedicated website.

- ADM Space Summit 2 December 2020, Hyatt Hotel | Canberra and online
- ADM Congress 3 February 2021, Hyatt Hotel | Canberra and Online
- ADM Defence Estate and Base Services Summit 23 February 2021, Hotel Realm | Canberra and Online

ASDEFCON TD /IP ONLINE COURSES

DATE Various **LOCATION** Online

WEBSITE defence@majortraining.com.au

Defence have begun online delivery of its short course on the Technical Data / Intellectual Property (TD/IP) clauses in its ASDEFCON suite of templates. These clauses provide far more flexibility and scope to deal with TD/IP issues than the previous ones. Defence will offer a number of spaces to Defence Industry on each online course to ensure the new TD/IP regime is successfully adopted by industry. These positions are centrally funded by Defence.

ONLINE COMPLEX PROJECT SIMULATION

DATE 13 November 2020

LOCATION Online

WEBSITE https://iccpm.com/events/simulation-november-2020/

The next delivery for our Online Complex Project Simulation will be on the 13th November 2020. The Spatium Simulation provides a realistic environment for you to put your complex project management skills to the test and work with project leaders from different industries.

10TH BIENNIAL SIA CONFERENCE 2020

DATE: 17-18 November 2020

LOCATION Hotel Realm, Canberra and online

WEBSITE 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

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

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

The biennial LAND FORCES exposition is an international industry event to show-case 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

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

Foresight is more valuable then 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

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

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

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

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.