

ADM AUSTRALIAN DEFENCE MAGAZINE DEFENCE WEEK

PREMIUM EDITION

SERVING THE BUSINESS OF DEFENCE



A Type 16 Combat Mobility Vehicle on show at DSEI Japan.

NIGEL PITTAWAY

The seeds of collaboration – DSEI Japan 2019

Nigel Pittaway | Tokyo

The inaugural Defence and Security Equipment International (DSEI) Japan Show was held at the Makuhari Messe exhibition centre in Chiba Prefecture, Tokyo, between November 18 and 20, with around 200 Japanese and foreign companies represented in the halls.

Although official attendance figures were not available, organisers reported around 5,000 people had registered to attend the event, which was opened on the first day by Masanori Nishi, former Administrative Vice-Minister for Defence.

Although perhaps a modest event when compared with large international defence shows such as the parent DSEI in London, or our own Land Forces and Pacific, DSEI Japan 2019 was nevertheless an

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Mitsubishi Heavy Industries' offering for the 8x8 armoured combat vehicle, which is based on the Type 16.

NIGEL PITTAWAY

important beginning for a local defence industry that is slowly warming to the idea of co-operation with international companies.

Indeed, the words 'collaboration', 'co-operation' and the phrase 'joint venture' were a constant thread running through the three-day event. Japan has traditionally been a difficult market for western manufacturers to penetrate, due to a desire to locally design and manufacture equipment for the Japan Self Defence Force, however the situation is changing, if slowly.

Japanese companies are increasingly looking to the export market and in turn, this is leading to more engagement with their international counterparts. One example of an opportunity for international suppliers is the Japan Ground Self Defence Force's competition to acquire an 8x8 wheeled armoured combat vehicle, which has some similarities to Australia's Land 400 program, albeit for a troop-carrying vehicle without a turret.

Mitsubishi Heavy Industries (MHI) unveiled its proposal at DSEI Japan, based on the company's Type 16 Mobile Combat Vehicle (an example of which was also on display at the show) but, importantly, Patria (AMV) and GDLS (LAV 6.0) have also been invited to submit vehicles for testing.

Australian companies attending the event included EOS Space Systems, who were talking with Japanese authorities about their Space Situational Awareness (SSA) capabilities; and the Aerospace, Maritime, Defence and Security Foundation, who were promoting the Land Forces 2020 show to be held in Brisbane in September next year.

A detailed report from DSEI Japan 2019 will appear in the December/January issue of *ADM*.

“Japanese companies are increasingly looking to the export market and in turn, this is leading to more engagement”

The world's largest blast facility is in Wollongong

Lincoln Parker | Wollongong

Blowing stuff up used to be a rite of passage for young Aussie kids. Once a year in June we would buy bangers, throw-downs and all sorts of gun powder-inspired products. Toys, letter boxes and anything that looked like it needed blowing up, got blown up. Children would then scientifically analyse the aftereffects of the blast – to share and compare their results with other scientifically minded kids.

Then blowing stuff up was banned and some of childhood's fun extinguished.

It was therefore exciting for me to visit the University of Wollongong (UoW) recently to see the National Facility for Physical Blast Simulation (NFPBS). Here, you can blow things up as much as you like.

The NFPBS is the brainchild of Alex Remennikov, Professor of Structural Engineering at UoW, and has only been open for a little over a year. Prof Remennikov recognised both the need and the potential for this kind of facility about five years ago. After forming a collaboration of eight Australian universities and the Defence Science and Technology Group (DSTG), the project won further support from the Australian Research Council.

Before the NFPBS there was no way for researchers, industry, government or the military to conduct highly-controlled blast experiments at much lower cost, greater safety and higher fidelity than field trials. The facility enables researchers to better understand blast behaviour, which will lead to improved security and safety of infrastructure.

It is the largest blast facility of its kind in the world at 3,000 square metres; the only other like it is currently at the US Army Protective Design Centre in Omaha, and is not accessible to the public, to industry, or to universities.

The primary application of the facility is for the protection of critical infrastructure



The facility is suitable for testing scale models of infrastructure facilities.

UOW

and elements of critical infrastructure. By its design the facility is suitable for testing scale models of infrastructure facilities such as bridges, buildings, and dams. This is made possible because the shape of the blast simulator is designed in such a way that the shock wave is transitioned or shaped in a special configuration that very closely resembles shock waves produced by explosive charges in the field. It enables replication of all key parts of the shock waves – the shock, peak pressure, expansion or the positive phase, and then followed by the negative phase or suction phase.

“The facility can achieve nearly 100 per cent repeatability of blast loads,” Prof Remennikov said.

“The primary application of the facility is for the protection of critical infrastructure”

The facility is also flexible, enabling ‘behind the wall effects’ to be conducted and studied. For example, studying the effects of an explosion behind walls or windows can provide valuable lifesaving data for designers and manufacturers.

It is here that Prof Remennikov is approaching industry to encourage use of the facility to test blast resistant applications, in particular elements of facades – windows, doors, and walls.

In the past this would have required many weeks of preparation and testing somewhere in the field. NFPBS can do this type of (controlled) testing within just a couple of days. For example, most recently the NFPBS was used to test blast resistant windows for a Singaporean company that provides blast resistant doors for civil defence shelters in Singapore.

International Recognition

The International Symposium on Military Aspects of Blast and Shock (MABS) is the global peak body for the industry. It is primarily dominated by NATO countries and for Australia to win a position on the executive committee is significant. It was from this position that Prof Remennikov and his team presented the Australian bid at the MABS Conference in the Netherlands in 2018.

They won. For the first time ever, the 26th International MABS Conference will be held in Wollongong, with the NFPBS being showcased, via live testing, to all international partners. Participation is expected from the US Department of Defense (Army, Navy) and Homeland Security, along with many European countries.

It turns out that blowing stuff up is not just fun, but also crucial for designing safe and dependable infrastructure. The NFPBS enables world leading research and development to occur in Australia, and drive innovation of new products.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [CEA to provide new Army ground based air defence radar](#)
2. [Boeing Defence Australia lends support to UK and US](#)
3. [Defence Export Facility now open to rare earth miners](#)
4. [LHDs declare final operational capability](#)
5. [Sub rescue techniques tested off WA](#)

US defence contracts are about to change

Ray Harvey | Melbourne

The Cybersecurity Maturity Model Compliance (CMMC) is a US Department of Defense (DoD) certification process intended to improve cyber security practices across the entire Defence Industrial Base (DIB). It designates five levels of maturity ranging from “Basic Cybersecurity Hygiene” to “Advanced.”

“Companies will have to demonstrate compliance with the required practices and processes of a specific CMMC level before they will be certified”

Unlike many existing frameworks, the CMMC includes compulsory certification by a third-party auditor before a contractor can be designated as compliant. Each one of the five security levels builds upon the capability requirements of the level below. As of June 2020, new US Requests For Information (RFIs) will begin to specify the CMMC Compliance Level that contractors must possess to participate.

The intention of CMMC is to protect US Federal Contract Information (FCI) and Controlled, Unclassified Information (CUI), as both exist and move through the supply chain. All companies conducting business with the DoD, including sub-contractors, must be certified.

So how will this affect Australian contractors? That’s the \$64 million question.

To date, there has been no mention of extending compliance requirements to supply chain partners outside of the US. However, given that Australian contractors hold and work with US Technical Data (TD) and CUI, that almost certainly guarantees it will.

Furthermore, the following description of specifically [relevant regulation](#) hints at the scope of impact: “The CMMC effort builds upon existing regulation,



CMMC is intended to protect US federal contract information and controlled, unclassified information. GERD ALTMANN (PUBLIC DOMAIN)

specifically, 48 Code of Federal Regulations (CFR) 52.204-21 and Defense Federal Acquisition Regulation Supplement (DFARS) 252.204-7012, and incorporates practices from multiple sources such as NIST SP 800-171 rev 1, Draft NIST SP 800-171B, the United Kingdom's Cyber Essentials, and Australia's Essential Eight."

Currently, the standard has just passed Draft V0.6, which defines the first three levels. This provides a fairly insightful view into the final operational version of the standard (CMMC Rev 1.0) due for release in January next year. The DoD expects ninety per cent of the Defence Industrial Base (DIB) to sit within these first three levels.

The important takeaway is that companies will have to demonstrate compliance with the required practices and processes of a specific CMMC level *before* they will be certified as compliant. Companies will have to be certified as compliant to the CMMC Level of a particular contract (or sub-contract) in order to participate.

The CMMC Schedule sheds light on the serious intent behind the standard:

- CMMC Rev 1.0 will be released in January 2020
- It will be included in RFIs starting in June 2020
- It will be included in RFPs starting in Fall (September/October) of 2020

The scope of CMMC and the potential implications are significant. In order to fully discuss what the Model is and how it works, we have broken the analysis into four parts.

In part two of this series, we'll look a little deeper into what the CMMC is intended to do, and in part three, we'll analyse how it's structured. Our fourth and final article will suggest some practical, immediate steps Australian contractors can pursue in getting ready for CMMC.

Note: Ray Harvey works as a Custodial Information Security Specialist, BDM Defence/Aerospace/Space at Cider House ICT in Melbourne.

WA announces first defence research grants

Teaming people with artificial intelligence in warfare strategies, addressing biological warfare and communication with autonomous underwater vehicles are some of the projects which will benefit from the Defence Science Centre's inaugural defence research grants.

WA Premier Mark McGowan announced the inaugural research grants during his opening address at the Submarine Institute of Australia's SubSTEC5 conference in Fremantle this week.

The Defence Science Centre grants aim to bring together universities, businesses and government to undertake research that will support defence and national security capability.

"The research grants will bring some of the leading defence industry stakeholders together in WA to find solutions or new ways to tackle defence and national security issues," Premier McGowan said. "It's part of a bigger program of works

to benefit the industry through cross-industry innovation and strengthens our state's defence capabilities.

"The first round of grants fund projects which will see WA universities collaborate with national and international universities, some of the world's biggest defence industry companies and the Commonwealth's DST Group."

Curtin University Vice-Chancellor Professor Deborah Terry congratulated the uni's grant recipients, adding that the projects put forward compelling cases for developing complex research into practical outcomes for Australia's defence industry.

"The research grants will bring some of the leading defence industry stakeholders together in WA"

"These projects are both outstanding examples of Curtin University's commitment to industry collaboration and making an impact through research that makes a real difference," Professor Terry said.

"Underwater autonomous drones will have a large impact on Australian Defence operations and Professor Yue Rong's research into undersea wireless communication will support enhanced capability for our Navy.

"Associate Professor Daniel Gucciardi's research into optimising military team performance via fit-for-purpose reflection protocols tailored for the defence context will inform the future success of the military workforce."

Defence Issues Minister Paul Papalia said the SubSTEC5 conference was timely as the Commonwealth would soon make a decision about whether to transfer all Collins class submarine maintenance to WA or remain at Osbourne in SA.

Premier McGowan continues to make the case to move Full Cycle Docking (FCD) of Collins class submarines to WA from SA. Mid Cycle Docking is currently conducted in the west.

Opponents of the plan to move FCD cite the difficulties in relocating skilled FCD workers from Adelaide to Perth given significant demand for those skills in other Adelaide-based programs, such as the Hunter class frigate build.



The announcement comes as WA pushes to gain Collins FCD work.

DEFENCE

AIDN calls for review of Australian Industry Capability program

The Australian Industry & Defence Network (AIDN) has called for an urgent review of the Australian Industry Capability (AIC) program.

"The current AIC policy framework is well intentioned and has been warmly received by Australian industry," Lester Sutton, National Board Chair of AIDN, said. "However, the AIC Program as implemented is not facilitating development of sovereign industry capability or business opportunities for the local Australian defence supply chain to the extent envisioned.

"Australian industry is now at risk of losing out on sovereign industry capability, billions of dollars of work, and thousands of local jobs."

According to AIDN, its members are reporting 'significant frustration' in getting Australian industry involved to the extent envisioned across major new defence programs, including big ticket items like Sea 1000, Sea 5000, and Land 400 Phase 2.

The industry body is calling for a number of reforms, including: the creation of an assurance regime to monitor, review and audit contractual commitments; the improvement of enforcement mechanisms; and new incentives to lower the number of local subsidiaries.

"These are relatively straightforward changes, which we believe can and need to be implemented without delay," Sutton said.

"AIDN members are grateful for the significant reform achieved in defence industry policy by the government over the last five years and fully support the drive to generate more local capability and corresponding jobs through the transfer of overseas technology. But we need to ensure the intent and extent of these good policy settings, particularly around AIC, are actually achieved."

"Australian industry is now at risk of losing out on sovereign industry capability"



The first Boxer combat reconnaissance vehicle delivered to Army.

DEFENCE

ADM Comment: AIDN's statement comes as no surprise to those who spend a lot of time with the SME community. There have been rumblings for some time that the mega programs mentioned above may talk a good game but the details of contracts and cash flow are not what industry was led to believe. Indeed, on the shipbuilding front there is talk that both BAE Systems and Naval Group will be using their own supply chains almost in their entirety for the first one to three boats/ships in class.

Once again, no company was willing to speak on the record on the issue for fear of endangering their business. This is the value of bodies like AIDN to be able to raise the matter.

AIC plans are [publicly available](#) but the list does not reveal what happens when they are not followed. Indeed, many of the docs listed on there are so vague and lacking in detail that they are almost unhelpful.

There has yet to be a case, that has been made public at least, where a prime has been held to account for failing to comply with their AIC offering. But since the offerings are so vague, it would be hard to *make* a case, *ADM* suspects.

Either way, it will be interesting to see how government, Defence and primes respond to the AIDN claim.

Army's Tiger helicopters provide valuable fire assistance

Major Matt Grant | Defence

As a part of wider effort, military members from the Australian Army's 7th Brigade and 16th Aviation Brigade have deployed in support of Queensland and NSW Fire and Emergency services.

In Queensland, Tiger helicopters, aircrew and mission support personnel have assisted through flying specific fire-mapping missions at night to supplement Queensland Fire and Emergency Service (QFES) activities.



An ARH-Tiger ready for a night-time fire-mapping mission.

DEFENCE/TROOPER JONATHAN GOEDHART

“The accuracy being provided by the Tiger aircrews is first class”

At night, the cooler air provides an opportunity to map the fire perimeters so QFES fire-predicting specialists can analyse them. What they glean from this data helps better deploy firefighters where they are needed and with the right plan of action.

Acting Chief Superintendent Kevin Reading, from QFES, said Tiger helicopter crews were flying a number of profiles during the night, using the aircrafts’ manoeuvrability to tightly map the fire lines.

“The accuracy being provided by the Tiger aircrews is first class,” Acting Chief Superintendent Reading said. “They have been able to value-add to our operations in Queensland by gathering information through late-night missions that we then assess in the early morning and, ultimately, pass on to the firefighters on the ground at the start of their day.”

As well as linking in with the QFES mapping software, Army Tiger crews have also been able to provide thermal imagery of potential flare-ups they have detected during their missions.

BAE Systems Australia welcomes summer interns

BAE Systems Australia has welcomed 21 interns who will gain hands-on work experience over the summer holidays in a range of engineering and business management roles.

The students will spend the next 12 weeks undertaking paid work and gaining experience which may lead them to future careers in the engineering sector.

This year, more than 1,000 third year university students applied for the roles.

Four of the roles will be filled by Career Trackers interns, a national non-profit organisation supporting the long-term career aspirations of Aboriginal and Torres Strait Islander university students. BAE Systems Australia entered into a long-term



Graduates may have a chance to work on the AMCAP upgrades underway at BAES Australia's Henderson facility. EWEN LEVICK

partnership with Career Trackers last year.

"It's really important for students to have meaningful work experience ahead of making decisions about their future careers," BAE Systems Chief Executive Gabby Costigan said. "Advancing the next generation of employees within our business is an important element of our strategy.

In 2020, BAE Systems Australia employ around 200 graduates in training in the business.

BAE Systems Australia CTO Brad Yelland recently revealed the extent of the workforce challenge his company is facing.

"BAE Systems Australia is 200 engineers short of what we need. But in the next three years, we will need an additional 1500 engineers," Yelland said.

"Let's be optimistic and say that half of [eligible graduates] actually want to work in defence industry," he said. "We're now down to around 4000 engineers. BAE Systems Australia needs a third of those, so I don't know what the rest of you are going to do."

"It's really important for students to have meaningful work experience ahead of making decisions about their future careers"

PEOPLE ON THE MOVE

Lee Kormany, General Manager Maritime, Land & Future Systems at Nova Systems (Nova), has been elected to the Defence Teaming Centre (DTC) board of directors. Kormany has held several management positions, ranging from engineering management roles through to her current role as GM.

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Forthcoming Events

ADM EVENTS

More detail on **ADM** Events can be found on our dedicated website:

- [ADM 2020 Congress](#) – 19 February 2020

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.

Defence Seaworthiness Symposium

Date 21-22 November

Location ADFA, Canberra

Website www.defence.gov.au/seaworthiness/Contact_Symposium.asp

The Office of the Defence Seaworthiness Regulator is hosting the inaugural Defence Seaworthiness Symposium in Canberra 21-22 November 2019. The theme of the symposium is 'Reforming to Transform – Seaworthiness as a Defence wide priority'. Day 1 will consist of an address from VADM Michael Noonan and presentations from Capability Managers and their representatives as well as an informative panel discussion. Day 2 will consist of 2 concurrent workshops facilitated by staff from the Office of the Defence Seaworthiness Regulator. Places are strictly limited.

Corrosion and Prevention 2019

Date 24-27 November 2019

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au

The annual ACA conference is a premium networking event and a source for the latest information about corrosion mitigation. The conference has a rich program of keynote presentations and technical papers under a range of industry 'tracks'. Corrosion and Prevention 2019 will feature an integrated exhibition, showcasing products and services of the corrosion mitigation industry.

Women in Corrosion Breakfast 2019

Date 26 Nov 2019

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au/sessions/women-in-corrosion-breakfast

The ACA is hosting its first ever 'Women in Corrosion' breakfast event during the Corrosion & Prevention Conference, at Crown in Melbourne this November. This breakfast event will take the format of a relaxed panel discussion with six superstar women in corrosion.

Space Systems Breakfast Seminar

Date: 28 November 2019

Location: Lot Fourteen, Adelaide

Website: au.mathworks.com

Join us for a breakfast seminar to hear about trends in the rapidly evolving global space industry, and learn how engineers use MATLAB and Simulink for satellite and space mission modelling, satellite communications system design and satellite data analysis including deep learning. MATLAB and Simulink technical experts will provide demonstrations, best practices, programming tips and insights.

The 26th Session of the Asia – Pacific Regional Space Agency Forum

Date: 26 – 29 November 2019

Location: Nagoya, Japan

Website: www.aprsaf.org/annual_meetings/aprsaf26/meeting_details.php

The 26th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-26) will be held in Nagoya, Japan from 26-29 November 2019.

AIC Industry Engagement Briefing

Date 02-05 December

Location Brisbane, Sydney, Perth

Website bit.ly/2KvQkel

You are invited by Bell/BAE Systems and Textron Systems to attend the AIC Industry Engagement Briefings; in Brisbane on December 2nd, Sydney on December 3rd, and Perth on December 5th. The purpose of the briefings is to engage Australian Industry and identify potential roles in the pursuit, delivery and support of the Bell and BAE Systems team pursuit of the Land 4503 Armed Reconnaissance Helicopter (ARH) Replacement, Textron Systems pursuit of Land 129 Phase 3 – Shadow 200 Tactical Unmanned Aircraft System (TUAS) replacement, and Sea 129 Phase 5 – Maritime TUAS.

The Road to Land Forces 2020

Date 04 December 2019

Location 123 Eagle Street, Brisbane

Website www.eventbrite.com.au

AIDN QLD, supported by Deloitte, have designed a workshop to assist AIDN QLD members and the wider Defence Industry community to plan their individual organisations' journey to Land Forces 2020. This interactive workshop will include targeted trade show and marketing information, and attendees will be provided with a number of electronic templates and tools.

Meet North Queensland's Major Contractors

Date 11 December 2019

Location Mercure Townsville

Website www.eventbrite.com.au

Are you a North Queensland business interested in participating in major contractor supply chains? The Department of State Development, Manufacturing, Infrastructure and Planning invites you to attend our next Defence Hub North Queensland supply chain development event. The Meet North Queensland's Major Contractors forum will provide insight into how your business can get involved.

Townsville Industry Breakfast

Date 11 December 2019

Location The Ville Casino

Website www.eventbrite.com.au

Come along and hear from project leaders on future work and business opportunities in North Queensland, including the forward procurement pipeline, the Australian-Singapore Military Training Initiative, and the Queensland Defence Industry Hub.

2020

AIDN National Defence Industry Gala Dinner 2020

Date 19 February 2020

Location QT Hotel Ballroom

Website consec.eventsair.com/aidn-2020/dinner/Site/Register

AIDN National invite you to attend a defence industry gala event not to be missed. The dinner will include pre dinner drinks and canapes on arrival followed by a gourmet two course dinner served with premium beverages. Guests will enjoy an evening of networking, socialising and fun which includes a VIP guest speaker, presentation of the AIDN National Young Achiever Award and Silent Auction with all proceeds donated to Legacy

Certificate IV in Responding to Organisational Complexity | Adelaide

Date 19-21 February, 2020

Location to be confirmed

Website iccpm.com/events/certificate-iv-adelaide-2020

Developed and offered exclusively by ICCPM (RTO number 41394), the Certificate IV in Responding to Organisational Complexity helps project leaders develop the skills and attributes they need to respond to complexity, as defined in the Complex Project Manager Competency Standards. This is a highly interactive course which introduces project leaders to useful tools and methodologies with a strong focus on the practical application of concepts to real-world situations.

Certificate IV in Responding to Organisational Complexity | Canberra

Date 24-26 March, 2020

Location to be confirmed

Website iccpm.com/events/certificate-iv-canberra-2020

Developed and offered exclusively by ICCPM (RTO number 41394), the Certificate IV in Responding to Organisational Complexity helps project leaders develop the skills and attributes they need to respond to complexity, as defined in the Complex Project Manager Competency Standards. This is a highly interactive course which introduces project leaders to useful tools and methodologies with a strong focus on the practical application of concepts to real-world situations.

Asia-Pacific Security Innovation Summit

Date 16-17 April, 2020

Location Queenstown, NZ

Website www.apsisummit.com/page/apsi-summit-2020

The theme of this year's APSI summit, to be held in Queenstown on the South Island, is Strengthening Security Resiliency Through Partnerships and Alliances.

AusCERT 2020

Date: 02-05 June 2020

Location: The Star, Gold Coast

Website: www.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.

Rotortech 2020

Date 16-18 June 2020

Location Royal International Convention Centre, Brisbane

Website www.rotortech.com.au

RotorTech 2020 is the region's premier helicopter and unmanned flight systems showcase and forum, bringing together operators, manufacturers, suppliers, regulators and government across the Indo-Asia-Pacific. With a comprehensive three-day free industry conference program, RotorTech 2020 will also feature manufacturers technical workshops and an industry exhibition showcasing more than 100 helicopter and unmanned flight related companies.

43rd COSPAR Scientific Assembly

Date 15 – 22 August 2020

Location International Convention Centre Sydney

Website www.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 workshoping with space industry – and inspire the next generation of scientists and engineers.

Project and Program Management Symposium 2020

Date 25-26 August 2020

Location Canberra Rex Hotel

Website www.pgcsymposium.org.au

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. Now in its 8th year, PGCS 2020 will focus on ways to build the foundations needed to create project and program success.

Land Forces 2020

Date 01-03 September 2020

Location Brisbane Convention Centre

Website www.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

2021

Avalon 2021

Date 23 – 28 February 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.