

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



VCDF Vice Admiral David Johnston delivering his address at the 16th annual ADM Congress.

DAVID JONES

ADM Congress 2019: An exchange of ideas

Nigel Pittaway | Canberra

The 16th annual ADM Congress attracted over 500 delegates from across the broad spectrum of Defence, industry and government. The 2019 event was held for the first time in Canberra's Playhouse Theatre, reflecting the increasing popularity of the one-day forum.

As with [previous iterations](#), keynote speakers from government, Defence and industry discussed a wide-range of topics, including advice for small to medium enterprises (SMEs) on working in the Defence sector, how to transition technology into export sales, and the importance of building an Indigenous Defence sector.

With a federal election on the near horizon however, the first two presentations, delivered by the Minister for Defence Industry Steve Ciobo and Shadow Minister for Defence Richard Marles, provided delegates with an insight into what each of the major political parties has on offer for Defence and defence industry.

In the opening address of the 2019 Congress, Ciobo pointed to the present government's track record and he predicted that the holy grail of two per cent of GDP for Defence spending is on track to be achieved in the

IN THIS ISSUE

ADM Congress 2019: An exchange of ideas	1
Australia at risk from cyber 'blitzkrieg'	3
Canberra SME wins Marine Corps contract	6
Stratofortress to make NZ debut en-route to Avalon	7
Myriota moves one step closer to nanosat constellation	9
Naval Group and Centrale Nantes print first hollow propeller blade	11
UC and MSVS extend agreement on security skilling	13
Forthcoming Events	17

2020-2021 financial year, two years earlier than initially forecast.

He also invited delegates to consider the ramifications of the looming election. "I think, and I would suggest to you, the forthcoming election will be a pivotal moment when it comes to Australian defence industry," he said.

Looking to the near future, Ciobo said that he is looking at a new policy to lower the threshold for Australian Industry Content (AIC) requirements from the current \$20 million benchmark down to four million dollars.

"We will release inside the next four to eight weeks the Defence policy for industry participation, and this will [set] Australian and local industry requirements to all acquisitions above four million dollars to make sure that we continue to include Australian industry," he promised.

"Defence industry is long-term and needs to transcend governments"

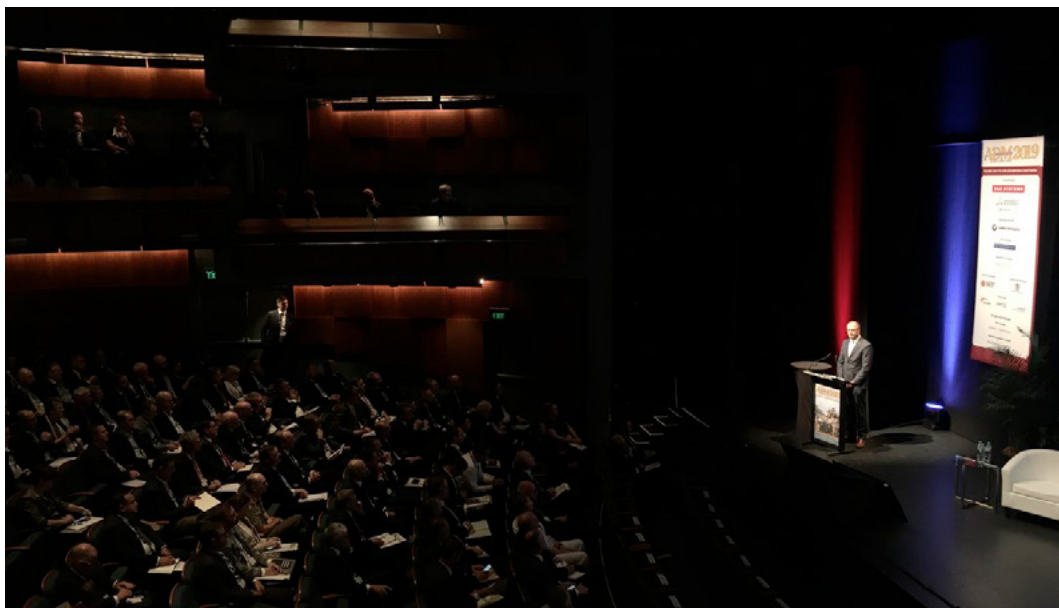
In the second keynote address, Richard Marles told delegates that the Labor Party was "completely committed" to the development, sustainment and the fostering of an Australian defence industry.

"Central to the idea of having a sustainable defence industry in this country is that defence industry is engaged in the act of export. I'm not sure that it makes sense to say that we have a defence industry in this country unless it is engaged in export," he said. "A defence industry is actually a really deep decision of a nation, it speaks to who we are as a people, it speaks to what our country is about and what it seeks to do in the world."

Marles called for the development of a strategic rational for an Australian defence industry. "It needs to be sustainable, long-term act of government – Labor and Liberal – because defence industry is long-term and needs to transcend governments," he said.

Finally, he said that the commitment to increase Defence spending to the two per cent of GDP target had "bipartisan support".

The Defence side of the spectrum at the 2019 Congress was represented by addresses from Vice Admiral David Johnston, Vice Chief of the Defence Force (VCDF), VADM Michael Noonan, Chief of Navy, Lieutenant General Rick Burr,



CASG head Tony Fraser addressing delegates.

EWEN LEVICK

Chief of Army, and Deputy Secretary of CASG Tony Fraser.

Following sessions included panel discussions on potential export opportunities, innovation and collaboration in developing defence capability, the value of industry organisations such as the Australian Industry Group (AIG), Australian Defence Alliance Victoria and the Australian Industry Defence Network (AIDN) and the value of building an indigenous defence sector.

No ADM Congress would be complete without an entertaining scrutiny of the Defence budget and Defence spending overall and this year it was provided by ASPI's senior analyst, Dr Marcus Hellyer.

Lastly, the finalists for this year's Essington Lewis awards were announced (with the full list available [here](#)), and the [2019 Women in Defence Awards](#) were formally launched.

A detailed review of the 2019 Congress will appear in the April issue of ADM.

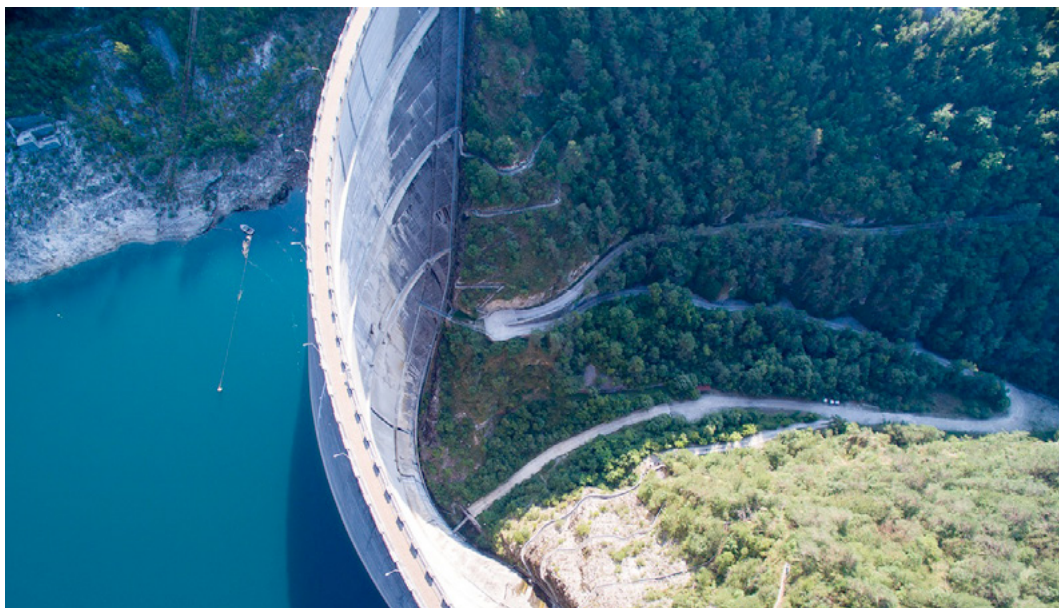
Australia at risk from cyber 'blitzkrieg'

Ewen Levick | Sydney

Professor Greg Austin, Deputy Director of UNSW Canberra Cyber, has warned that Australia and allied states are at risk of experiencing a cyber 'blitzkrieg' against civil defences in conflict with a near-peer competitor.

Professor Austin's warning is made in a paper due to be presented at the [First International Research Conference on the Cyber Storm](#) in Canberra next week, an event attended by a range of global experts and Major General Marcus Thompson, the ADF's Head of Information Warfare.

Crucially, the paper argues that the risk management strategies used by businesses in peace are "irrelevant" in war. The wartime threat posed by adversary cyber capabilities will be multi-vector, multi-wave, multi-locality, involve civil and military targets, affect intended and unintended targets, and accompany social media operations. Whilst governments are aware of this threat, Austin argues that



The report raises the spectre of cyber 'blitzkrieg' on critical national infrastructure.

PIXABAY

we are insufficiently prepared to meet “such complex, multifaceted onslaughts on a rolling basis over protracted periods.”

The report uses the word ‘blitzkrieg’ to highlight the fact that cyber capabilities are, alongside EW, the only weapons that can be delivered almost instantly “at all levels of command” and onto civil targets such as power stations and dams. This necessitates the need for cyber civil defence alongside traditional civil defence tasks including evacuations, shelter and blackout management, decontamination, and others; a need that is, on the whole, unmet.

Austin puts forth a hefty list of gaps in national preparedness for cyber blitzkrieg, including: planning and documentation, private/public planning, decision-making tech, information sharing, situational awareness, communications, legal, education, and many more. The long list of gaps creates a long list of policy recommendations, including the formation of task forces, a Cyber Civil Corps, a National Cyber War College, “at least one” civil defence research centre, elevating resilience spending by up to 1000 per cent, and others.

“It has become quite clear that none of the four main actor sets (government, military, private sector, or universities) can rise to any of the challenges by acting in isolation,” Austin argues. “The problem set almost certainly needs new energy, new vision, and a new paradigm.

“Change will need to be driven through a new institutional centre of gravity that is multi-stakeholder.”

In short, competition in cyberspace is escalating – an observation that will come as no surprise to readers. It is the scale of capabilities, however, on which Austin sheds light. The US has announced the legality of targeting power stations and dams in wartime, presumably by cyber means; Russia has attacked critical infrastructure in Ukraine and elsewhere; and the UK has revealed that it is prepared to black out Moscow by cyber means in a crisis. Other examples not listed in the report include the famous Stuxnet attack on Iranian nuclear infrastructure and the WannaCry ransomware attack that hit Britain’s NHS.

“An increasing number of states now accept that cyber civil defence is not only a necessity, but also that it is achievable,” Austin concludes. “Yet few countries have set in place the mechanisms... let alone provide their citizens, stakeholders and partners with a narrative that can explain the difficulties and complexity of the task.”

“Change will need to be driven through a new institutional centre of gravity”

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [US carrier gets first 3D printed metal part](#)
2. [Canada confirms selection of Type 26 frigate](#)
3. [Future Submarine SPA signed in Canberra](#)
4. [Leidos tapped for ISR integration](#)
5. [Litening pods for RAAF C-130Js?](#)

Canberra SME wins Marine Corps contract

Eggler Technology Training, a Canberra based SME specialising in online and class-delivered military education and training programs, has secured a number of professional development training contracts with the US Marine Corps (USMC).

“This is a significant achievement for the company”

The company will deliver these specialised military vehicle technology professional development training programs to the USMC later in the year.

“This is a significant achievement for the company and continues to build Eggler’s reputation as a world leading Australian Defence exporter of high-technology, military professional development training program and courses,” Mark Eggler said.

Eggler Technology Training regularly exports its specialist military technology and systems engineering professional development training program to governments and defence companies around the world.

According to a statement, over the past few years the company’s specialist military technology education and training programs have added hundreds of thousands of dollars to the Australian economy.

Eggler will launch the world’s first online Diploma of Military Vehicle Technology Design on 28 February.



US Marines fire the main gun of an M1A1 Abrams tank during a training exercise at Camp Lejeune.

USMC

Stratofortress to make NZ debut en-route to Avalon

The organisers of the Wings over Wairarapa Air Festival have announced that a Boeing B-52 Stratofortress will make its NZ debut next week.

According to Wings Chair Bob Francis, the flypast is a very rare chance to see a military aircraft of this size and significance in NZ.

“If you want power, noise, the ground shaking type of experience, then the B-52 will give that to you in spades”

“If you want power, noise, the ground shaking type of experience, then the B-52 will give that to you in spades,” Francis said.

“We’ve had excellent support from the US Embassy over several months, enabling us to get the B-52 to our Air Festival.

“They’ll travel over 8,000 miles from Guam to be with us.”

“When we got this request from the local organisers, the Embassy was happy to do all that we could to facilitate,” US Ambassador to NZ Scott Brown said. “The plane’s participation means the crew is flying a considerable distance out of

their way, but it has been our pleasure to contribute and build on the airshow’s past successes.”

The B-52 will fly past Hood Aerodrome on the afternoon of 23 February. It is unable to land on the runway due to its weight.

The strategic bomber has been operated by the USAF since the 1950s. The plane has a typical combat range of more than 14,080 kilometres without aerial re-fuelling, and is capable of carrying up to 32,000 kg of weapons.

Beginning with the successful contract bid in June 1946, the B-52 design evolved from a straight wing aircraft powered by six turboprop engines to the final prototype YB-52 with eight turbojet engines and swept wings. The aircraft



The B-52 fleet is expected to hit 100 years of service in the 2050s.

US DOD

made its maiden flight in April 1952, and has been in active service with the USAF since 1955.

In 2010, all B-52s were transferred from the Air Combat Command to the newly created Air Force Global Strike Command (AFGSC). As of December 2015, 58 remain in active service with 18 in reserve.

Superior performance at high subsonic speeds and relatively low operating costs have kept the B-52 in service despite the advent of later, more advanced aircraft, including the cancelled Mach 3 B-70 Valkyrie, the variable-geometry B-1 Lancer, and the stealth B-2 Spirit.

Following upgrades between 2013 and 2015, it is expected to serve into the 2050s – an extraordinary 100 years of operational service.

Immediately after the flypast in NZ the B-52 will head off to the Avalon Air Show.

Myriota moves one step closer to nanosat constellation

Myriota has partnered with Tyvak Nano-Satellite Systems to develop and launch multiple satellites in 2019, taking the company a step towards its goal of having a constellation of 50 nanosatellites.

Each satellite will run Myriota's patented software which enables two-way communications between ground-based micro-transmitters and low Earth orbit nanosatellites to securely share data over narrow bandwidths. The direct-to-orbit platform enables massive-scale, low-cost communications for IoT devices anywhere on Earth.

"This partnership is an important milestone for our company," Myriota's CTO and co-founder Dr David Haley said. "It represents a valuable next step for our business in expanding our constellation."

"The satellites we're launching with Tyvak incorporate leading small satellite technology. The architecture is designed to maximize satellite operational availability, providing an always-on service for our customers from the moment they launch."

"The satellites will allow our customers to communicate with devices from anywhere on the planet using Myriota's low cost,



David Haley and Iain Cartwright from Myriota, and Marco Villa from Tyvak.

MYRIOTA

“The architecture is designed to maximize satellite operational availability”

long battery life, secure service while we continue to build a constellation towards providing real-time connectivity.”

Myriota selected Tyvak from more than a dozen worldwide providers.

“We are very excited to expand our reach to new territories and applications while contributing to South Australia’s ecosystem development,” Marco Villa, Tyvak’s COO, said.

“Myriota has been a great partner to work with from day one and having recently completed the first program review, we look forward to executing this mission and enabling their business objectives.”

According to Myriota’s CEO David Haley and DST’s Dr Christine Shanahan, the company’s nanosat constellation may one day be used [to connect the ADF](#) across the battlefield.

“It’s the long battery life and small size of our solution, and its ability to communicate directly with a satellite even under [constraint], that make it very attractive for [military] applications,” Haley said.

“As we have more satellites we have a decrease in latency, we have another means of moving information around on the battlefield,” Shanahan said.

Naval Group and Centrale Nantes print first hollow propeller blade

Naval Group and Centrale Nantes have printed the first demonstrator of hollow propeller blades by metal additive manufacturing as part of the European H2020 project RAMSSES.

The program, funded by the European Commission, aims to reduce the environmental impact of ships. Naval Group and Centrale Nantes’ hollow blades intend to improve ships’ operational capabilities.



The blade is designed to improve energy efficiency, endurance, radiated noise and vibrations in ship propellers.

PIXABAY

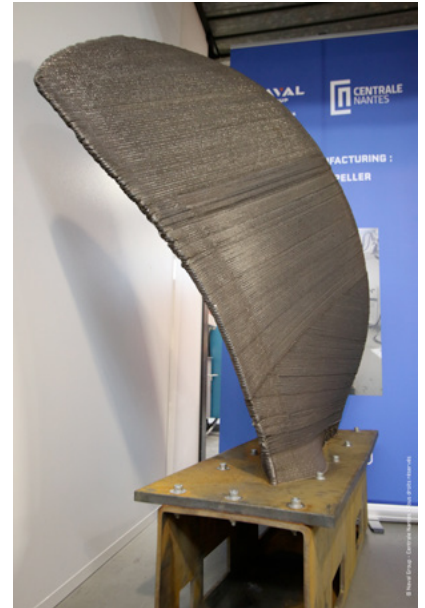
The teams are using additive manufacturing to design propellers of six metres in diameter using the wire arc (WAAM) process, which allows for the printing of large parts with complex geometry.

The hollow blade demonstrator, representative of a container ship propeller, was printed in stainless steel on a one-third scale in less than one hundred hours, with a total weight of 300kg. The process will allow for weight gains of over 40 per cent compared to conventional processes.

Sirehna, a spin-off from Centrale Nantes and subsidiary of Naval Group, is piloting the blade design to improve energy efficiency, endurance, radiated noise and vibrations.

"Although additive manufacturing is increasingly present in industry, the programming and design of complex parts, such as propeller blades for ships, represents a considerable challenge," Patrice Vinot, Propeller Package Manager for RAMSSES, said.

"The potential of the process revealed by this case study means that we now anticipate unparalleled performance for the propellers of tomorrow."



The 3D printed demonstrator hollow propeller.
NAVAL GROUP

ANNOUNCEMENTS

Defence has announced that it is seeking "information regarding any Space Situational Awareness sensor technologies available from Australian Industry vendors or under research and development." The notice is available [here](#). For more on how Defence intends to tap into Australian space industry capabilities, be sure to attend ADM's inaugural [Space Summit](#) on 30 April at the Hyatt in Canberra.

For the first time, [Australian Frontline Machinery](#) is offering Army and RAAF aviation assets for sale at auction, including a Bell Kiowa helicopter, PC-9/A Roulette planes, a Westland Scout helicopter, and equipment. The assets can be viewed [here](#) and will be available for inspection by appointment at the Avalon Airshow.

UC and MSVS extend agreement on security skilling

The University of Canberra has extended a Memorandum of Understanding (MoU) with the Microsecure Corporation and Vertical Scope Defence Industry Recruitment partnership (MSVS) to address Australia's skilling requirements for sovereign strategic and security capabilities.

The collaboration will include training, research and development, sourcing of grant funding, the certification of technologies, accreditation, and compliance to incubate, augment and address skilled workforce placement shortages in ICT, cyber and national security.



The MoU will see UC supporting MSVS Micro Secure Secret Stealth Systems.

UC

"Together with UC, MSVS will develop and deliver the next generation of cyber and security experts," David Jam, Managing Director of Vertical Scope, said.

The implications of the collaboration will affect Defence, national intelligence and security agencies, Services Panels, Tenders and other Sovereign Special Projects.

The MoU, which extends to 2022, will see the University supporting the MSVS Micro Secure Secret Stealth Systems (MS4), along with code, cyber, crypto, and communications security platforms.

"The University is delighted to enter into this relationship with MSVS, and will be working towards the accreditation of the MSVS platforms," UC Vice-Chancellor and President Professor Deep Saini said.

"This is the starting point of a long-term, potentially game-changing collaboration which looks to address a very important need for the country. It will also

PEOPLE ON THE MOVE

Northrop Grumman has appointed Chris Deeble as chief executive of Northrop Grumman Australia. "Chris' extensive experience in leading complex programs and his deep understanding of acquisition and sustainment programs, organizational strategy and operational excellence will serve him well as he leads our continued growth and investment in Australia," Kathy Warden, Northrop Grumman CEO, said.

Darryl Johnston is retiring as Communications Manager from DST after 19 years in Defence, to be replaced by Wendy Bilboe. "I have met many good people doing some fantastic stuff to assist and equip our ADF and to tell their stories and I have made many good friends along the way," Johnston said.

Quickstep Holdings has appointed Leanne Heywood as a Non-Executive Director, filling an existing casual vacancy. It is anticipated that Heywood will be appointed prior to the February 2019 Board meeting. "We are delighted to have an individual with Leanne's breadth and depth of experience joining Quickstep's Board of Directors," Chairman Tony Quick said.

“This is the starting point of a long-term, potentially game-changing collaboration”

provide enhanced knowledge and skill sets, as well as practical, hands-on experience for UC students.”

MSVS and UC are initiating compliant sponsorship and trusted relationships with Defence and vetting agencies, which will address requirements for nominated UC staff and students to work with MSVS.

“These initiatives will combine real-world experience and successful delivery with academic excellence and rigour,”

Frank Lazzarotti, Managing Director of Microsecure Corporation, said.

“They will help to realise employment and commercial opportunities, and drive careers in the cyber and security sphere worldwide.”

CONTACT DETAILS

MANAGING EDITOR

Katherine Ziesing

T: 0419 014 308

katherineziesing@yaffa.com.au

ONLINE EDITOR

Ewen Levick

T: 02 9213 8249

ewenlevick@yaffa.com.au

ASSOCIATE PUBLISHER

Kylie Leonard

T: 07 3087 5101

kylieleonard@yaffa.com.au

ART DIRECTOR

Ana Heraud

SUBSCRIPTIONS

Martin Phillpott

Toll Free 1800 807 760

martinphillpott@yaffa.com.au

CONTRIBUTORS

Julian Kerr

T: 0418 635 823

jhrhkerr@bigpond.net.au

Nigel Pittaway

M: 0418596131

cnpittaway@bigpond.com

Copyright © 2019



PUBLISHED BY

Yaffa Media Pty Ltd

17-21 Bellevue St,

Surry Hills NSW 2010

T: 02 9281 2333

www.greatmagazines.com.au

ADM CANBERRA OFFICE

PO Box 4783, Kingston ACT 2604

T: 02 6203 9535

ADM BRISBANE OFFICE

PO Box 9165,

Wynnum Plaza Qld 4178

T: 07 3348 6966

www.australiandefence.com.au

SUBSCRIPTIONS GREATMAGAZINES.COM.AU **CALL** 1800 807 760 **EMAIL** SUBSCRIPTIONS@YAFFA.COM.AU

All material appearing in ADM is copyright. Reproduction in whole or in part is not permitted without permission in writing from the publisher. The publishers accept sole responsibility for the contents of this publication, which may in no way be taken to represent the views of the Department of Defence, the Australian Defence Force or any other agency of the Commonwealth of Australia.

Forthcoming Events

ADM EVENTS

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

- [ADM Space Summit](#) – 30 April 2019
- [Women in Defence Awards](#) – 11 July 2019
- [ADM STEM and Defence Summit](#) – 14 August 2019
- [ADM Defence Estate and Base Services Summit](#) – 12 September 2019
- [ADM North Australian Defence Summit](#) – 23-24 October 2019

BMT's Introduction to Fleet Life Cycle Management (Canberra)

Date 18-22 February 2019

Location Canberra

Website <https://www.bmt.org/training/introduction-to-fleet-life-cycle-management-course/>

BMT's, five-day Introduction to Fleet Life Cycle Management course covers all aspects of naval life cycle management. The modules provide detailed insight into Asset Management and its applications to naval ships and support systems in Defence's maritime environment.

Avalon Airshow 2019

Date: 26 February – 3 March 2019

Location: Avalon Airport

Website: airshow.com.au/airshow2019

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.

Emerging and Disruptive Technology Assessment Symposium (EDTAS)

Date 05-06 March 2019

Location Perth

Website <https://www.minister.defence.gov.au/>

Western Australia will host a major space technologies symposium that will bring together internationally recognised academic, industry and Defence leaders to explore and shape the long-term vision for space technologies.

Project Leaders as Humble Iconoclasts

Date 14 March 2019

Location Online, 13:30-14:30

Website <https://iccpm.com/events/project-leaders-as-humble-iconoclasts-with-dr-kaye-remington/>

A 1-hour webinar hosted by Dr Kaye Remington, internationally renowned author, academic & complex project specialist. In preparation for her book *Leading Complex Projects*, Kaye and her research team interviewed over 100 successful senior project leaders. These highly successful project leaders consistently exhibited certain key characteristics and behaviours. In this webinar, Kaye discusses some of the outstanding characteristics that distinguished those leaders.

What Does a Project Manager of the Future Look Like?

Date 28 March 2019

Location EAST Hotel, Canberra

Website <https://iccpm.com/events-2/what-does-a-project-manager-of-the-future-look-like/>

The future success of an organisation relies on the ability to manage a diverse body of talent that can bring innovative ideas, perspectives and views to their work. The challenge and problems created by workplace diversity can be turned into a strategic organisational asset if an organisation is able to capitalise on this melting pot of diverse talents. Come and join our ICCPM hosted Breakfast Panel Discussion where our panellists will be sharing their experiences and perspectives from different industries and positions on managing and leveraging diverse talents.

The National Police, Defence and Emergency Services Women's Leadership Summit

Date 29 March

Location Hyatt Hotel, Canberra

Website www.wla.edu.au

The National Police, Defence and Emergency Services Leadership Summit is a major annual event for women at all levels to connect, share ideas and build their leadership skills. Created by Australia's leading authority on women's leadership, Women & Leadership Australia, the Summit has been developed in consultation with a broad range of stakeholders across these sectors.

Export Control Training Session

Date 03 April 2019

Location 60 Clarence St, Sydney

Web <https://www.stickytickets.com.au/81012>

Join us for a 1-day face-to-face training course to de-mystify the complex area of Export Control regulations. The course will address an overview of the ITAR, EAR, and DEC; how the ITAR and EAR apply to all areas of your business; advice on employing dual and third country nationals; licensing and permit requirements; and more.

ASPI China Masterclass – Canberra

Date 15 Apr 2019

Location Hotel Realm

Website <https://www.aspi.org.au/>

The ASPI China masterclass is a one-day intensive event that will give participants a strategic understanding of how China is seeking to shape the world around it. Participants will learn and debate with specialists on China with deep knowledge of the current security, political and thematic landscapes. The Masterclass will track China's global and regional ambitions, and review the Chinese Communist Party's (CCP) investments in cyber, intelligence, defence, space & social credit. This event will offer a deeper understanding of China, the CCP and its rapidly evolving place in the world and explore the policy implications for Australia and the Indo-Pacific region more broadly.

ASPI China Masterclass – Melbourne

Date 17 April 2019

Location Melbourne

Website <https://www.aspi.org.au/>

The ASPI China masterclass is a one-day intensive event that will give participants a strategic understanding of how China is seeking to shape the world around it. Participants will learn and debate with specialists on China with deep knowledge of the current security, political and thematic landscapes. The Masterclass will track China's global and regional ambitions, and review the Chinese Communist Party's (CCP) investments in cyber, intelligence, defence, space & social credit. This event will offer a deeper understanding of China, the CCP and its rapidly evolving place in the world and explore the policy implications for Australia and the Indo-Pacific region more broadly.

BMT's Introduction to Fleet Life Cycle Management (Perth)

Date 01-05 May 2019

Location Perth

Website <https://www.bmt.org/training/introduction-to-fleet-life-cycle-management-course/>

BMT's, five-day Introduction to Fleet Life Cycle Management course covers all aspects of naval life cycle management. The modules provide detailed insight into Asset Management and its applications to naval ships and support systems in Defence's maritime environment.

IMDEX Asia 2019

Date 14-16 May

Location Changi Exhibition Centre, Singapore

Website imdexasia.com

Coming to its 12th edition, the biennial IMDEX Asia is Asia Pacific's premier international maritime defence show and a must-attend event in the global naval and maritime security calendar. With established conferences and real-time discussions on maritime security, IMDEX Asia draws a plethora of global leaders and distinguished guests.

AusCERT Conference 2019

Date 28-31 May

Location Surfers Paradise Marriott, Gold Coast Australia

Website <https://conference.auscert.org.au>

The AusCERT Conference is the oldest information security conference in Australia. Each year, we attract in the vicinity of 700 participants and approximately 50 sponsors. This year's conference is focused on gaining as many tools for you and your team's toolbox as possible to ensure you are armed and ready for any battle you may face.

Paris Air Show

Date 17-23 June 2019

Location Le Bourget

Website siae.fr/en/

The 53rd Paris Air Show will once again bring together all the players in this global industry around the latest technological innovations. The first four days of the Show will be reserved for trade visitors, followed by three days open to the general public.

PGCS 2019

Date 20 – 22 August 2019

Location The Canberra Rex Hotel, Canberra

Website <https://www.pgcsymposium.org.au>

Now in its 7th year, PGCS 2019 will focus on ways to build the foundations needed to create project and program success. Creating the organisational capability needed to underpin the consistent delivery of successful projects in the 2020's starts at the top. Leadership and a sustained focus are required to build a culture of excellence that can balance innovation with surveillance and accountability, encourage learning, and manage knowledge effectively.

Australasian Simulation Congress

Date 2 – 5 September 2019

Location Gold Coast Convention and Exhibition Centre, Gold Coast

Website www.simulationcongress.com

The Australasian Simulation Congress provides a focused opportunity for industry development, business growth, training, discussion and distribution of information related to Simulation, Modelling, Training and Decision Support. Simulation Australasia can help you directly engage with industry, policy makers, Government and relevant stakeholders to facilitate you and your organisation achieving the success only a truly international Congress can provide.

Australian Cyber Conference 2019

Date 7-9 October 2019

Location Melbourne Convention and Exhibition Centre

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

The Australian Cyber Conference 2019 will provide business leaders with insights and best practices taught by the industry's top experts through keynotes, panel sessions and live demonstrations. Attending the conference will enable you to network with these practitioners to help you better understand and manage current threats, as well as identify and prepare to meet emerging challenges.

Pacific 2019

Date 8-10 October 2019

Location Sydney Convention Centre

Website pacific2019.com.au

As the only comprehensive international exhibition of its kind in the Indo-Asia-Pacific region, PACIFIC 2019 will again provide the essential showcase for commercial maritime and naval defence industries to promote their capabilities to decision-makers from around the world.

MilCIS 2019

Date 12-14 November 2019

Location Canberra Convention Centre

Website <http://www.milcis.com.au/>

In November each year, the Defence Chief Information Officer Group (CIOG) partners with the UNSW Canberra and the Institute of Electronic and Electrical Engineers (IEEE) to present MilCIS. The annual Military Communications and Information Systems (MilCIS) Conference welcomes military and government organisations, academia, and defence industries to contribute to the future direction of military communications and information systems.