

ADM DEFENCE WEEK PREMIUM EDITION

AUSTRALIAN DEFENCE MAGAZINE
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A RAAF C-130J Hercules conducts a handling display over Sydney Harbour.

DEFENCE

Litening Pods for RAAF C-130Js?

Nigel Pittaway | Melbourne

The RAAF is considering repurposing a number of Northrop Grumman AAQ-28(v) [Litening targeting pods](#) for use on its Lockheed Martin C-130J-30 fleet.

The pods were acquired some years ago as part of the incremental Hornet Upgrade (HUG) program undertaken on the RAAF's F/A-18A/B 'Classic' Hornet fleet. But with the Hornet now preparing to leave service the pods will become surplus to requirements, as the F/A-18F Super Hornet and EA-18G Growler use the rival Raytheon AAQ-228 Advanced Targeting Forward Looking Infrared (ATFLIR) pod and the F-35A Lightning II has an in-built Electro-Optical Targeting System.

Commander of the RAAF's Air Mobility Group (AMG), Air Commodore Bill Kourelakos says use of the pod on the C-130J will provide enhanced situational awareness for crew and it would be used in conjunction with other initiatives, such as the Link 16 Tactical Data Link recently fitted to the fleet and Ka-band satellite communications (SATCOM), which is currently undergoing trials.

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"If we were able to put a pod on the wing of the aircraft, we could obtain imagery of an objective area ourselves and pipe it through the SATCOM and be a provider of imagery back to Joint Headquarters," he said.

"But it can't be at the expense of our primary mission, which is moving people and cargo. We are not in the business of turning the C-130J into a surveillance platform."

Uses for the imagery obtained by the Electro-Optical Infrared (EO/IR) Litening pod could include surveying damaged airfields during Humanitarian Aid and Disaster Relief (HADR) operations.

"If we were going into a disaster area, where a cyclone has been through the airfield for example, we can overfly the airfield, obtain imagery and analyse it to decide if we are able to land," AIRCDRE Kourelakos said.

"And then that imagery would also assist planners in determining what might be required in the next load into that disaster area."

The US Air Force's Arkansas Air National Guard has already integrated the Litening pod onto a C-130 and *ADM* understands that the RAAF intends to leverage this work and, as a result, local modification of the fleet would presumably be straightforward.

"The hardpoints to mount those pods already exist on our aircraft, so there will be no structural modification or design required," AIRCDRE Kourelakos adds.

Although the modification is still subject to Defence approval and no firm date has been set for when it will be installed and demonstrated, *ADM* understands that local testing of the C-130J/Litening combination could occur before the end of the year.

The pod will be installed on one of the RAAF's C-130Js (A97-448), which has the Ka-Band SATCOM capability and Link 16 and also underwing external fuel tanks, which enhance the aircraft's Forward Arming and Refuelling Point (FARP) capability. Together the initiatives are being undertaken under the Plan Jericho umbrella and the aircraft is known within Air Mobility Group as the 'Jericho Demonstrator'.

ADM also understands that this aircraft will be on display at the 2019 Australian International Airshow at Avalon in late February.

"If we were able to put a pod on the wing of the aircraft, we could obtain imagery of an objective area ourselves"

Canadian report compares national shipbuilding efforts

Ewen Levick | Sydney

A [report](#) from the Canadian Global Affairs Institute, authored by Jeffrey Collins, has compared Australia and Canada's national shipbuilding programs as both states seek to overcome the boom-bust cycle of the shipbuilding industry.

The programs – Australia's \$90 billion Naval Shipbuilding Plan (NSP) and Canada's C\$73 billion National Shipbuilding Strategy (NSS) – are the largest



HMAS *Ballarat* sails in formation with the Canadian Navy's HMCS *Winnipeg* and the Japanese Navy's JS *Izumo* in the South China Sea.

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“The rational approach to naval shipbuilding is not devoid of procurement politics and regionalism”

procurement projects either state has ever undertaken.

Collins notes that common troubles have emerged in both.

“In Canadian eyes, Australian defence policy appears to be getting it right... [and] that such projects are being acquired amid a constant turnover of people in the prime minister's chair makes the contrast with Canada's ever-constant drip of procurement woe headlines even starker.

“But dig a little deeper and it becomes clear that Australia has seen its share of procurement challenges.”

The Collins-class submarine is, perhaps unsurprisingly, foremost amongst these in the report. The AWDs also get a mention at \$2.5 billion over budget and over two years behind schedule. As work on the NSP shifts into higher gear, Collins notes the ANAO's finding that the program is at ‘extreme risk’ as cost assumptions have not yet factored in major design changes to the Hunter-class frigates and Attack-class submarines.

Doubts also persist in regard to in-service support costs, the capacity of Australia's steel industry to meet demand, and the likelihood of delays to the Attack-class resulting from intellectual property transfer disputes that caused last year's ‘roadblock’ in negotiations with Naval Group.

Canada has also had its fair share of issues. All NSS projects are reportedly three to five years behind schedule; major skills and infrastructure shortages at shipbuilding yards increased cost estimates; and recent court actions by US firm Alion disputing the selection of the Type 26 as Canada's next frigate delayed the build.

These common troubles, the report argues, share common causes.

“For one, the rational approach to naval shipbuilding is not devoid of procurement politics and regionalism,” Collins argues. “Determining which province or state will be home to billions in contracts over many years remains a zero-sum game no matter how arms-length the process of yard selection.”

"The likely explanation lies in the ability of the NSS and NSP to offer governments the ability to do highly visible multi-year projects that employ thousands of people."

Past experience also plays a role: "As Australia and Canada experienced with overseas submarine purchases, foreign builds bring problems in obtaining spare parts and maintenance support."

"It's not always clear in the long term how much cheaper building ships overseas is when intellectual property transfer costs and overseas in-service support are factored in."

Finally, both states suffer from scheduling issues.

"Failure to [keep to schedule] opens production gaps and necessitates that Ottawa and Canberra consider alternative options," Collins notes.

In short, the report comes to a conclusion obvious to anybody following the progress of major naval builds across the world: "Even with the best-laid plans, naval shipbuilding is complicated."

Technical data protection a priority for Australian and US regulators

Kevin Cheney and Ray Harvey | Newcastle

The US International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR) are export control regulations administered by the US government, but with extraterritorial jurisdiction over the items they cover. Australian businesses, in areas spanning high tech military to dual use technologies, must ensure their compliance with these regulations.

In September 2018 we wrote [an article](#) that explained the regulations to readers, with a particular focus on the explanation of the regulations and the measures



The protection of technical data is a priority for US and Australian regulators.

STEPHEN DAWSON/ UNSPLASH

that need to be considered to maintain compliance. We have since been made aware via ADF personnel in the US of the biggest risks in the current environment.

The protection of Technical Data was highlighted as the greatest priority, with the US Departments of State (ITAR) and Commerce (EAR) likely to treat any such breach very seriously. The recent expansion of the Australian Cyber Security Centre (ACSC) and amalgamation within the Australian Signals Directorate (ASD) suggests the Australian Government is similarly looking at the protection of technical data as a priority for industry. This is supported by the increase in cyber and intelligence activity attributed to external adversaries who have succeeded in obtaining data from a small number of Australian businesses.

“Some Australian suppliers are already participating in contracts that specifically challenge them about their security posture”

ACSC has initiated a Top Four and Essential Eight list of strategies to mitigate cyber security incidents. These strategies need to be implemented by all players in Defence industry, from primes to the smallest SME, to protect the technical data inherent to ADF capability.

Defence Industry enterprises can expect to face increasing emphasis on improving their security posture. The reality of evolving cyber threats makes this a certainty.

The US has a number of requirements in place to protect technical data. The National Institute of Standards and Technology (NIST) 800-171 regulations are the US recommended security requirements for protecting the confidentiality of Controlled Unclassified Information (CUI). The regulation applies when CUI is resident in non-federal systems and organisations. The security requirements apply to all components of these systems and organisations that process, store, or transmit CUI, or that provide security protection for such components.

As computing platforms and technologies are ubiquitously deployed worldwide and systems and components are increasingly interconnected through wired and wireless networks, the susceptibility of CUI to loss or compromise grows.

The purpose of NIST 800-171 is to provide US federal agencies with recommended security requirements for protecting the confidentiality of CUI when the CUI is resident in a non-federal information system, such as contractors. The standard applies to any prime contractor or sub-contractor who works on US government projects, where it is highly likely they have access to CUI and thus need to implement the necessary controls.

Australian supply chain enterprises should familiarise themselves with NIST 800-171, as they are increasingly likely to encounter it in future contracts. Some Australian suppliers are already participating in contracts that specifically challenge them about their security posture against NIST. Primes have indicated that the guidelines in 800-171 will be a future contract discriminator.

It should also be noted that the intentions of ITAR and NIST 800-171 overlap in many areas. Enterprises mindful of both stand to gain significant security benefits. Such enterprises will also gain access to contract negotiations that exclude non-participating enterprises.

Note: Kevin Chenney is a senior consultant with Goal Professional Services. Ray Harvey works in Internal Threat Business Development at Cyder House Defence, a Goal Group member.

US carrier gets first 3D printed metal part

America's largest military shipbuilding company, Huntington Ingalls Industries, has delivered the first 3D printed metal part to the US Navy for installation on an aircraft carrier.

The news is a milestone in the integration of additive manufacturing into the design and fabrication of components for nuclear-powered warships.

“The advancement of additive manufacturing will help revolutionize naval engineering and shipbuilding”

The milestone was recognized during a brief ceremony at Naval Station Norfolk. The part was presented by the Newport News Shipbuilding division to RADM Lorin Selby, Naval Sea Systems Command's chief engineer.

The part—a piping assembly—will be installed on the aircraft carrier USS *Harry S Truman* and evaluated for a one-year period.

“We are pleased to have worked so closely with our Navy partners to get to the point where the first 3D metal part will be installed on an aircraft carrier,” Charles Southall, Newport News' vice president of engineering and design, said. “The advancement

of additive manufacturing will help revolutionize naval engineering and shipbuilding. It also is a significant step forward in our digital transformation of shipbuilding processes to increase efficiency, safety and affordability.

“This is an accomplishment we all should be proud of.”

US Naval Sea Systems Command last year approved the technical standards for 3D printing after collaboration with the company and industry partners that involved putting printed test parts and materials through an engineered test program.



The USS *Harry S Truman* will be the first aircraft carrier to contain a 3D printed metal part.

US NAVY

The digitized process could lead to cost savings and reduced production schedules for naval ships.

The world's [largest 3D metal printer](#) is operated by Melbourne-based company Titomic, and was developed in cooperation with Advanced Robotics Australia and the CSIRO.

Where other 3D metal printers are largely only capable of building one kilogram per day to a max volume of one cubic metre, Titomic's machine can manufacture parts of up to 45 kilograms in one hour to a max volume of 40 cubic metres.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Greece shows interest in buying FFGs](#)
2. [Austal USA offices raided by US Navy over LCS build](#)
3. [Land programs centred around joint](#)
4. [New Poseidon order to fill UK capability gap](#)
5. [RAAF deploys for US warfare training](#)

Australian manufacturing in a global context

Jens Goennemann | Melbourne

Australia has been a rather lucky country to have avoided the worst of the GFC some 10 years ago. However, we are not immune to global market uncertainty. As AMGC's [Building Resilience in Australian Manufacturing report](#) points out, we see "rapid and unpredictable global fluctuations in price and demand" in our marketplace.



The three characteristics of resilient manufacturers are superiority, diversity and flexibility

REDARC

How is Australian manufacturing coping? Well, it's been highly volatile, with upswings and downswings 20 per cent deviation from trend between 1996 and 2015, the same period without a recession. This is compared to 14 per cent for the Brexiteers and eight per cent for Germany.

With attention given to all sorts of volatility lately, we think it's a good time to return to AMGC's Resilience report. If we're in for ups and downs, we may as well think about how to better manage them.

AMGC studied 136 companies trying to figure out why some performed bet-

ter than their industry's average in a downturn. We found that over 25 per cent of Australian manufacturers that were riding high before the GFC were in the bottom quartile of profitability post-GFC. This does not bode well for an industry which employs 1.27 million Australians.

The good news is that we did uncover what makes Australian manufacturers more resilient in turbulent times. Resilient manufacturers were more likely to display one or more of the following three attributes:

1. Superiority: They collaborated with research institutions, invested in R&D, and adopted servitisation – making them superior.

2. Diversity: They exported, operated in multiple markets and global supply chains and across different product types. Their business pursued different industries based on market needs, making them more diverse.

3. Flexibility: Or they adapted to change input costs to be more flexible.

Consider one of our local manufacturing stars: Sutton Tools. Sutton is a company that achieved a century anniversary in 2018 and therefore could rightfully be called resilient.

Sutton decided after the 90s recession-we-had-to-have that they needed to grow into new markets to insulate itself against future shocks. Sutton learned that it had work to do for being world-class, leading to a big uptick in R&D investment and collaboration with universities and organisations such as the Defence Materials Technology Centre.

One of their projects is in tungsten carbide milling cutters: precision engineered tools for the machining of super alloys such as titanium, Inconel and exotic stainless steels for the aerospace industry.

This dogged pursuit of superiority and diversity has helped establish Sutton Tools as an internationally successful and resilient company, for example as a supplier to subcontract component manufacturers for Airbus and Boeing.

Australian manufacturing's 26-month long run of uninterrupted expansion took a slight hit in December, only to continue its expansion in January again. Let this be a reminder to think about volatility, and how to push through it.

Note: Jens Goennemann is the Managing Director at the Advanced Manufacturing Growth Centre

“Australian manufacturing's 26-month long run of uninterrupted expansion took a slight hit in December, only to continue its expansion in January again.”

Mount Vince rifle range sold

Assistant Minister for Defence Senator David Fawcett, Assistant Minister for Children and Families and Federal Member for Capricornia Michelle Landry and Federal Member for Dawson George Christensen announced the approval of the sale of the Mount Vince Rifle Range to Mackay Regional Council, via an off-market sale process.

“The 170-hectare site will support a rural fire brigade depot and also provides an opportunity to reinstate shooting activities in the area for use by civilian rifle clubs.”

Minister Fawcett said this was a great outcome for Mackay, the local community and the Department of Defence.

“The 170-hectare site will support a rural fire brigade depot and also provides an opportunity to reinstate shooting activities in the area for use by civilian rifle clubs.

“The sale of Mount Vince Rifle Range demonstrates the Government’s commitment to unlocking surplus Commonwealth properties for uses that support the Australian community.”

Mackay mayor Greg Williamson said the Council was pleased to help secure a future for target shooting in the Mackay region.

“We have been working closely with Mackay and District Target Rifle Association on this agreement and we are looking forward to working with them in the future now the contract has been signed,” Williamson said. “The range will be used by multiple clubs on a weekly basis and we are hopeful that this arrangement will allow the sport to continue to grow in our region.

“Being one of the few long distance shooting ranges in Queensland, it is also an attractive venue for major events that bring economic benefits to the region.”



The rifle range will now play host to civilian shooters rather than the ADF.

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PEOPLE MOVEMENTS

Jamie Alonso has been announced as the new Chief Executive Officer of the Cardno's Asia Pacific Region effective immediately.

Cardno's Asia Pacific region has 1,500 staff across 35 offices including key centres in Sydney, Melbourne, Brisbane, Perth, Wollongong and Wellington, NZ. The Asia Pacific teams service clients across core sectors of Water, Land Management, Transport, Energy, Defence, Property and Buildings, Utilities, Government, Industrial, Mining and Resources.

Jamie has close to 30 years' experience providing civil engineering services across various disciplines for the private and public sector. He has an intimate knowledge of Cardno's operations across Asia Pacific having held a number of senior management roles across an 18-year tenure including operational management, P&L management as well as strategic and business development positions.



Jamie Alonso



Kim Scott

Kim Scott has joined the Board of TAE Aerospace as a non-executive director. On welcoming Mr Scott to the Board, TAE Aerospace CEO and Managing Director Andrew Sanderson said he looked forward to working with the experienced industry leader to help shape the future of the company, both here in Australia and now more globally.

"Kim's mix of skills and experience will yield significant benefits for our business. He brings strategic leadership skills, technology and innovation knowledge and marketing experience from his executive career with Tenix and BAE Systems, as well as insights gained from a decades-long music career as part of Australian rock band, The Mark of Cain. This, combined with his more recent venture capital and consulting activities, provides us with a great new perspective that will prove valuable across everything and everywhere we deliver," Sanderson said.

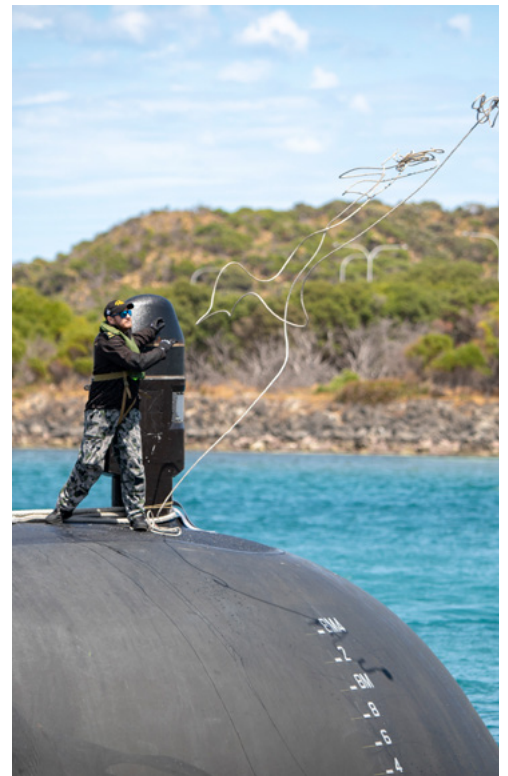
Everyday Australian to experience life on a submarine

ADM Staff writers

In a bid to explain to the public what the Silent Service actually does, eight lucky Australians were announced as the winners of Defence's national competition to experience life as a submariner.

Minister for Defence Personnel Darren Chester said Defence received close to 200 entries for the competition and congratulated the winners.

The successful entrants – Damon Dawson, 19, Cessnock NSW; Sarah Cox, 18, Darwin NT; Jack Evans, 18, Gold Coast QLD; Katelyn Mayne, 20, Hobart TAS; Tahlia Purdie, 25, Melbourne VIC; Kirkley Whiting, 19, Esperance WA; Noah Edberg, 27, Harrison ACT; and Melvin Wong, 23, Brompton SA – explained in 50



Eight everyday Australians will get to experience life at sea in a Collins class submarine with an eye to a career in the Silent Service.

DEFENCE

“They have seen for themselves that the environment is unique and while the space is limited, the experience is vast.”

words or less the submariner role they would choose and why.

Damon Dawson's choice was Acoustic Analyst Submariner because he aspires to be part of the team providing real-time intelligence to commanders.

Tahlia Purdie is interested in the Marine Technician role because she is fascinated by submarine propulsion systems and how they work. Tahlia wants a career where she can work with her hands and apply her mind to solve problems.

For West Australian Kirkley Whiting, the best option is Electronics Engineer. He's excited by the challenges of the job, the uniqueness of it and the opportunity to work on world

class technologies as part of a close community of people.

“Today our competition winners explored Australia's largest Navy base, HMAS Stirling, in Garden Island, WA,” Chester said. “They experienced Navy simulators at the Submarine Training and Systems Centre, testing their fitness during a physical training session, honing their skills on the Weapon Training Simulation System and observing where Australia's submariners work, on-board HMAS *Sheean*.

“They have seen for themselves that the environment is unique and while the space is limited, the experience is vast.”

While submariner numbers are no longer reported publically, Director-General of Submarines Commodore Tim Brown outlined the gains that the Collins fleet has made since the adoption of the Coles review at the Submarine Institute of Australia [conference](#) in November last year. The fleet has been meeting its material ready days benchmarks for over a year, the submarine workforce has grown by 45 per cent in the past three years, and the Collins fleet participated in over two dozen exercises in 2018 with 2019 set to be even busier.

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PUBLISHED BY

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Forthcoming Events

ADM EVENTS

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

- **ADM Congress 2019 – 13 February 2019**
- [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

ADM'S
CONGRESS
NEXT WEEK!

AIDN National Gala Dinner 2019

Date 13 February 2019

Location: National Gallery of Australia, Canberra

Website consec.eventsair.com/aidn-2019/dinner/site/register

The AIDN National Gala Dinner will be held at the stunning Gandel Hall, National Gallery of Australia on Wednesday 13 February 2019 commencing with pre dinner drinks and networking from 7.00pm. 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.

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.

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.

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.

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.