

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



The Senate hearing looked under the bonnet of the redacted ANAO report on Hawkei.

DEFENCE

Senate concerned about precedent set by ANAO report on Hawkei

Katherine Ziesing | Canberra

When the [Australian National Audit Office report](#) into Hawkei was released in September, it [turned a few heads](#).

The redacted report, exercised under Section 37 of the Auditor General Act 1997, was the subject of a Senate hearing on Friday last week. All parties were in the room to explain just what was behind the extraordinary redaction measure.

The hearing was to look who knew what, when they knew, and why various players exercised their powers as they did. The issue was the reasoning behind the redaction; national security and commercial interests.

"I'd like to emphasise that the effect of the certificate was not to redact any information from the report that the Department of Defence had advised me would prejudice national security or defence," Grant Hehir, Auditor-General, Australian National Audit Office (ANAO) told the Joint Committee of Public Accounts

IN THIS ISSUE

Senate concerned about precedent set by ANAO report on Hawkei	1
Will a UK Wedgetail buy benefit Australian industry?	3
UNSW team drives Australian presence in space	4
Tactics and innovation in military drone racing	6
Digital skills essential for Australian business growth	8
Icebreaker looking for industry partnerships	9
Australia takes delivery of another F-35	11
Forthcoming Events	13

and Audit. "The issuing of the certificate has resulted in the Parliament not being fully informed about the operation of government, because Parliament does not gain access to the un-redacted report.

"There is a lack of accountability mechanisms surrounding the decision taken by the executive to issue a certificate. For example, there is limited transparency to Parliament regarding the executive's substantive reasons for issuing a certificate."

The Auditor-General also admitted that this particular report saw more correspondence than usual with both the Defence Secretary and Chief of the Defence Force.

"Now my concern is that the precedent has been set that ...[commercial players] can try and blackmail the Attorney-General"

The whole affair was best summed up by Labour MP Julian Hill: "My concern is the chain of events. There were no outstanding issues according to the Auditor-General on defence and national security matters. Then a private company [Thales Australia] is concerned and upset based on their own commercial interests.

"And then there's this mysterious six-month long process where all of a sudden there's national security concerns. You can understand why that raises concerns that either there's a conspiracy and a cover-up, or you weren't doing your job properly as the Defence Department improperly picking up serious information which was about to be published. I can't

understand there's any other possibility, and neither of them are good.

"Now my concern as a Parliamentarian here is that the precedent has been set that, if a commercial player doesn't like the impact on their commercial interests because of negative comment, they can run off to the court and try and blackmail the Attorney-General into issuing a certificate which is then cloaked in national security. That's a concerning precedent."

Senator Rex Patrick was also politely irate in his line of questioning, as his office had been trying to gain access to a number of documents related to the case under Freedom of Information and other channels open to members of government, but to no avail.

ADM Comment: The whole hearing speaks to the future of the ANAO as an independent body. Mr Hill raises an important point in terms of precedence; at what point do commercial interests intersect with national security and the government's drive for exports?

Hehir also commented on the fact that other agencies and departments are now looking closely at how Section 37 can be applied to their audits.

"I would note that one thing that has occurred to us since this issue arose is that, for the first time in the course of our work, agencies are starting to raise issues with us about seeking certificates on matters," Hehir said.

"While some of the conversation has been about how this has only happened once, one of my concerns around some of the issues and processes here is that people are starting to flag this as a course of action early in processes. So that's one issue that has concerned me."

It will be hard for the ANAO to remain frank and fearless in its advice to Parliament if every audit becomes subject to possible Section 37 action.

Will a UK Wedgetail buy benefit Australian industry?

Nigel Pittaway | Melbourne

The [recent announcement](#) that the UK's Ministry of Defence (MoD) was in discussion with Boeing regarding the sole-source acquisition of the Wedgetail Airborne Early Warning and Control (AEW&C) aircraft, made by Britain's Defence Secretary Gavin Williamson, was welcomed here in Australia.

ADM [understands](#) that the UK is seeking to acquire five Wedgetail aircraft to replace the RAF's ageing Boeing Sentry AEW.1 Airborne Warning and Control System (AWACS) capability.

On October 3, a joint media release from Defence Minister Christopher Pyne and Minister for Defence Industry Steven Ciobo, titled "Australia poised to win from UK Wedgetail procurement", said that if the deal went ahead it would "further deepen" Australia's relationship with the UK and was an endorsement of "a crucial part of Australia's air combat capability."

The Ministers described Wedgetail as being widely recognised as the most advanced aircraft of its type in the western world and one which has achieved a mission success rate of 98 per cent during the four years it has been deployed to the Middle East.

In their joint release, Ministers Pyne and Ciobo also said that Australia's experience in operating the Wedgetail presented "a significant opportunity" to work closely with the UK through co-operative development and industry collaboration.

"Australian industry, including the more than 200 Australian companies that have contributed to our own Wedgetail acquisition and sustainment, stands to benefit from what could become one of Australia's most significant defence exports," Minister Ciobo said.



Exactly how Australian industry will benefit from the British Wedgetail buy is far from clear.

DEFENCE

"A UK procurement will add to the global fleet of Wedgetails, already including Australia, Turkey and South Korea, which can be supported and sustained by Australian industry and create hundreds of Australian jobs."

"It is too soon to predict the dollar value of any work that could come to Australia"

With words like, "one of Australia's most significant defence exports" and "hundreds of Australian jobs", it's no wonder the potential deal will be welcomed here. But exactly how Australian industry will benefit, and by how much, is far from clear.

"The announcement by the UK presents a significant opportunity for Australian industry and for co-operation between our nations' supply chains," a Defence spokesperson said in response to *ADM's* questions regarding the basis for such promises and how the claims could be substantiated.

The spokesperson then provided the same paragraphs included in the Ministers' release (and quoted above) to back this statement up.

Defence did note that, according to Boeing Defence Australia's estimates, more than 600 Australian jobs have already been created to support Wedgetail projects.

"Defence expects Australian industry to be particularly well placed to contribute to mission systems development and ground segments including training, systems engineering and product support," the spokesperson added. "It is too soon to predict the dollar value of any work that could come to Australia."

So, the question remains: Will a UK Wedgetail buy benefit Australian industry?

UNSW team drives Australian presence in space

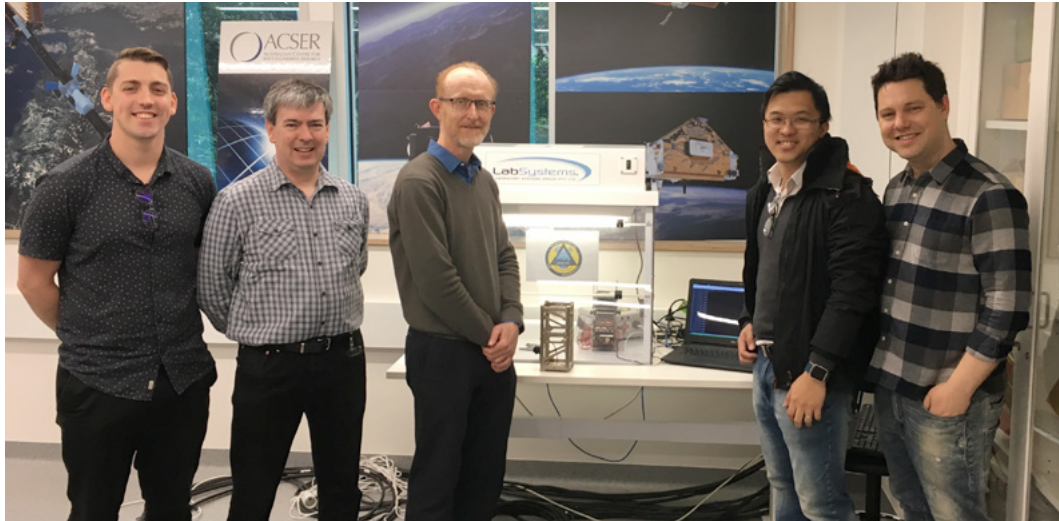
Ewen Levick | Sydney

Attend any [space-related conference](#) in Australia, and you'll find one acronym crops up time and again – UNSW. The university has a [significant presence](#) in the space game, so *ADM* caught up with Prof Andrew Dempster, Dr Joon Wayn Cheong, Dr William Crowe, Dr Eamonn Glennon, and Benjamin Southwell at their lab, the Australian Centre for Space Engineering Research (ACSER), at UNSW's Sydney campus to find out more.

ACSER has pioneered the development of cubesats through the UNSW-ECO and INSPIRE-2 projects, which pack a range of capabilities into satellites roughly the size of a shoebox. The Centre is the first Australian entity to build and operate a cubesat in space.

"We were funded from small pockets of leftover research funds cobbled together from within UNSW," Dr Cheong said. "Despite this significant lack of resources, our cubesats' success is a testament to Australia's determination to enter the space sector by hook or by crook."

This determination to get to space by any means necessary is evident even from launch. The team's satellites hitched a lift to the International Space Station, where they were quite literally thrown out the back door by a remotely-operated robotic chute.



Benjamin Southwell, Dr Eamonn Glennon, Prof Andrew Dempster, Dr Joon Wayn Cheong, and Dr William Crowe with a model of the cubesat in the ACSER lab, UNSW Sydney.

EWEN LEVICK

“Our cubesats’ success is a testament to Australia’s determination to enter the space sector by hook or by crook”

The team is particularly proud of the GPS receiver embedded in the satellites. Commercially-available receivers are designed to shut down when used above certain speeds, primarily to prevent the tech from being used to guide missiles. To get around this, the team harnessed their 20 years of GNSS experience and built their own receiver from the ground up.

“The credit-card sized GPS receiver was wholly developed by members of ACSER UNSW, including the software, firmware and hardware. It has been proven to operate nominally in Low Earth Orbit (LEO) which, travelling at 28,000 kilometres per hour, is highly challenging,” Dr Cheong said.

The team has also taken advantage of rapid prototyping to keep their project agile.

“Rapid prototyping and putting relatively untested modules in space is the mantra of the cubesat philosophy, which is to fail fast and fail cheaply,” Dr Cheong said.

“ACSER embraced this and has allowed the 3D printed structure, GPS receiver and many previously untested software to be all validated in space via only a handful of cubesat missions.

“In UNSW-EC0, we embraced 3D printing and electroplating technology to iteratively produce our structure, which mechanically holds the cubesat together. This is the first time such a structure has been flown in space.”

The team has developed three capabilities of interest to Defence: GNSS reflectometry, or observing signals reflected off the ocean surface from space to track global sea states (developed with SEASKIP, a start-up that emerged from ACSER); space situational awareness of objects that can’t be tracked from the ground (developed with HEO Robotics, which also spun off from ACSER); and GNSS interference geo-localisation, which uses phased array technology to identify, characterise and geo-locate GPS jammers (developed with GPSat Systems Australia).

These capabilities also have commercial applications: sea state estimation assists in ship route planning, and situational awareness helps in fault diagnosis for telecommunications and other large, expensive satellites in geosynchronous orbit.

ACSER is now partnered with Gilmour Space to enable sophisticated GPS signal tracking systems to be integrated with their rocket avionics.

Currently, funding remains the biggest challenge facing ACSER's efforts to advance Australia's presence in low earth orbit and beyond.

"Ideally, we'd have a road map of satellite developments," Prof Dempster said to *ADM*. "The funding model to make that happen is still not clear, due to many uncertainties associated with the [Australian Space Agency](#)."

"However, there is increasing interest from the military to employ some of our cross-pollinated technologies, such as GNSS Reflectometry and GNSS Interference Geolocalisation."

The team still hopes to get another cubesat into space in the next few years, and also aims to inspire the next generation of the technology.

"We hope the successes from UNSW-ECO and INSPIRE-2 missions, despite the issues we faced, will help future cubesat missions benefit from our experience – especially Australian ones."

TOP COMMENTS

[Canada opts for Type 26 frigate](#)

If the British had a Type 26 in the water now, the US may have been interested as well. Either the Type 26 is impressing the hell out of everyone, or BAE has the world's greatest ship sales person. – **Michael Coote**

Tactics and innovation in military drone racing

Ewen Levick | Sydney

International military teams have competed in the first ever Military International Drone Racing Tournament (MIDRT) at Victoria Barracks in Sydney.

Teams from Australia, NZ, Thailand, the UAE and UK fought it out on the track in a number of races and freestyle events with the hope of being crowned the world's best military drone racing team.

Major General Gus McLachlan, Commander Army Forces Command, welcomed the international teams to Sydney.

"The teams have travelled a long way to be here and we are pleased that they have come to Australia to participate in this adaptive and exciting sport," MAJGEN McLachlan said.

ADM caught up with MAJGEN McLachlan to find out about how the skills on display would translate into tactical and innovation outcomes for Army.

"The ability to see and think spatially in 3D, the ability to manoeuvre these things and look inside of buildings, to me that's an exciting addition to our dexterity," MAJGEN McLachlan told *ADM*.

"The other thing that excites me is the innovation this sport requires. Our new Chief uses this phrase '[Army in Motion](#)' – the message is that change is normal, so let's

“This notion of disruption applies just as much to us as it does to a taxi company facing Uber”

get it into our mindset. That’s why this is a great sport to introduce.

“This notion of disruption applies just as much to us as it does to a taxi company facing Uber. The adversary doesn’t have procurement rules.

“Of course, there’s a balance between protecting the taxpayer and making smart Defence decisions, and being able to keep ahead of a rapidly adapting environment. The big projects – ships, submarines, armoured vehicles – necessarily are quite deliberate.

“However, we’re getting better at acknowledging that other projects, like this one, need to be done differently.”

One of the Australian pilots competing at the tournament, Captain James Jenkins of 2RAR, said that the skills learnt in drone racing were directly applicable in tactical situations.

“The skills here are really about the fine motor skills. We won’t use these drones tactically, but the base concepts we learn when we’re racing here are directly applicable to flying Black Hornet. We can conduct a reconnaissance of a beach before amphibious operations, for example, to find out what’s there. It’s a game changer in that regard.”

ADM also spoke with LTCOL David Thorsen, Director of Strategy and Force Planning for the NZDF, about what NZ hoped to gain from the tournament.

“This is a great opportunity to test the waters,” LTCOL Thorsen said to ADM. “We’re in the early stages of building a [drone culture](#).

“It’s the way of the future, right? The ability of any tactical commander to put eyes somewhere and improve that situational awareness, whilst being more efficient and safer – it’s a smart way of doing operations.”

“Our capability branch has recognised that the amount of technology coming online now, with such short lifespans, needs a different rate of acquisition. That’s the value in us being here and experimenting.”

For the record, CAPT Jenkins edged out the NZDF’s Kevin MacKenzie to come second in the tournament, behind industry competitor Henry Corbell from XTEK.



Governor-General Sir Peter Cosgrove presents Captain James Jenkins the runner up trophy for the International Drone Racing Tournament.

DEFENCE

Digital skills essential for Australian business growth

Narayan Sreenivasan | Dassault Systemes

The recent [Workforce Development Needs Survey Report 2018](#) conducted by the Australian Industry Group (AiG) raised a significant red flag about the lack of digital skills within the current Australian workforce.

“Australia is in position to be a front-runner when it comes to upskilling our digital workforce”

The AiG stressed that it was the first time that its annual survey had highlighted a shortage of skills in this area, specifically around ‘skills in business automation, Big Data and artificial intelligence solutions’.

In reality, many Australian employees do have excellent digital skills, but those skills are too specific to one particular industry and not easily adaptable. As the face of manufacturing in Australia continues to evolve rapidly, particularly through technologies like additive manufacturing, it is imperative that our digital skills become more broad and agile.

Pundits now tell us that the average employee will change careers five to seven times during their working life. Therefore, training future Australian workforce with agile skills that are transferable across numerous industries is crucial.

The South Korean digital experience is one worth noting. Given a limited domestic market, South Korea relies on an export-driven knowledge economy. The South Korean government created a Ministry of Knowledge Economy and has invested heavily in supporting the development of digital skills through tertiary and university education. South Korea University’s School of Mechanical Engineering (KUME), for example, has developed specific, industry-based digital curriculums.



The AiG stressed that it was the first time that its annual survey had highlighted a shortage of digital skills.

THINKSTOCK

The link between education initiatives and developing an agile workforce in South Korea is now paying dividends. This was evident in 2015 when the price of oil declined. Thanks to this commitment to building digital skills, South Korea was in a position to diversify into 'horizontal' industries and effectively minimise the fallout, shifting focus to wind power, offshore platforms, power plants, and subsea oil production facilities.

Australia can look to replicate South Korea's success on the higher education stage. Many university leaders are beginning to realise the benefits of developing digital skills plans, often with the active participation of small businesses.

Placing a strong focus on digital skills now by all industries is vital for business growth and remaining globally competitive. And the opportunity doesn't just belong to large industries or organisations.

For example, in SA, the [Virtual Shipyard](#) training program is a current example of practical forward thinking. The program is positioning SA's supply-chain to take advantage of the wealth of Defence shipbuilding opportunities that will become available from 2020, including the Future Frigates and Future Submarines.

Fourteen local companies are currently being supported in developing the digital capabilities used worldwide to test construction, manage the entire lifecycle of projects, and link companies into the supply chains of prime contractors.

Australia is in position to be a front-runner when it comes to upskilling our digital workforce. We are uniquely positioned to serve both the demands of a promising – if limited – domestic market, whilst also looking at building our international reach and capabilities. We must focus now on driving our sustainable knowledge economy and fully utilising the opportunity and the appetite for digital transformation for our existing and future workforces.

Otherwise, we risk the Australian workforce being left behind and other global players stepping in to take up the slack.

Note: Narayan Sreenivasan is Dassault Systemes' Business Transformation Leader, Asia Pacific South.

“Fourteen local companies are currently being supported in developing the digital capabilities used worldwide”

Icebreaker looking for industry partnerships

Australia's newest icebreaker has been designed for more than just science. A \$1.91 billion investment by the Commonwealth, the RSV *Nuyina* will act as a scientific research platform, icebreaker and resupply ship in one.

Meeting these incongruent needs – a ship that is quiet enough to allow scientists to use acoustic instruments, and powerful enough to break 1.65 metres of ice at a continuous speed of three knots – was the challenge faced by prime contractor, Serco Australia.

The result was a Silent-R noise radiation specification powered by a hybrid propulsion system, which includes diesel generators on flexible mounting systems

to absorb vibrations. This, combined with a moon pool to deploy oceanographic equipment and a wet well sampling space, will allow scientists to sample live animals and map the sea floor while the vessel is breaking ice.

Australian Antarctic Division krill biologist Rob King said the unique wet well system was a game-changer for krill research.

"This is an unprecedented capability that no other vessel in the world has been equipped with. It will allow us, while we're breaking ice, to be sampling animals, which has been a dream for marine biologists working in the Southern Ocean for as long as I can remember."

Serco Australia CEO Mark Irwin said the design of the vessel was carefully considered.

"Through our role in the design and build of the vessel, Serco worked with scientists and specialists in the Australian Antarctic Division to consider what the future for scientific research in the Southern Ocean will look like, and how this vessel can best meet the research and operational needs required over its 30-year lifetime.

"The result is a vessel that offers unrivalled scientific, logistics and icebreaking capabilities."

At 160.3 metres long and 26,000 tonnes, the *Nuyina* will be more than one-and-a-half times longer than the current icebreaker, the *Aurora Australis*, and around three-times heavier. It will have a 1,200 tonne cargo capacity, enabling it to carry 96 20-foot shipping containers inside its holds. This will enable the vessel to conduct longer and more extensive voyages to the Southern Ocean and Antarctica, and resupply Australia's four Antarctic stations.

Construction of the vessel is being undertaken in Galati, Romania by shipbuilder Damen. In September, the *Nuyina* was successfully floated and transferred to the wet dock where construction will continue on the superstructure.

When complete, the *Nuyina* will rise to 10 decks at navigation bridge level and measure 50.2 metres from the keel to the top of the weather radar.

"This is an unprecedented capability that no other vessel in the world has been equipped with"



A concept image of the RSV *Nuyina* on ice.

SERCO

Serco will operate and maintain the vessel after its arrival in Hobart in 2020. Irwin said the project is expected to create hundreds of jobs for the region and provide opportunities for Australian businesses.

"We look forward to engaging with local industry as we move towards the operation and maintenance phase of this project. There will be a range of support services required over the expected 30-year life of the vessel, such as repair and maintenance, docking, security, cleaning, providoring and stevedoring."

Expressions of Interest for industry partnerships are expected to open at the end of this year. The company has already commenced recruitment for key crew positions including the Master, Chief Engineer and Chief Officer. More information can be found .

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Canada opts for Type 26 frigate](#)
2. [Army artillery munitions to be made in regional Queensland](#)
3. [Lull between major projects hits ASC](#)
4. [Australia should consider nuclear subs: ASPI](#)
5. [Major changes afoot in the north](#)

Australia takes delivery of another F-35

The 10th F-35A to be delivered to the RAAF has arrived at Luke Air Force Base (AFB) in Arizona, joining Australia's [other JSF aircraft](#) on the flight line.

The aircraft will operate on the Australian Autonomic Logistics Information System (ALIS) which performs maintenance management, fault diagnostics, supply support, mission planning and training management across the F-35A fleet.

"Our 10th JSF was delivered to RAAF's No. 3 Squadron at Luke AFB last week following a range of acceptance testing activities authorising delivery," Minister for Defence Christopher Pyne said.

"This is a key milestone in our acquisition of the JSF, which is the most advanced, affordable fifth-generation multi-role stealth fighter to meet Australia's need to defeat emerging threats well into the future.

"Until now, all aircraft deliveries went to the F-35 International Pilot Training Centre, which required RAAF maintainers to perform ALIS-related tasks using the American system," Minister Pyne added.

"Operating on Australian ALIS is an important achievement before the JSFs arrive in Australia in December this year."

Minister for Defence Industry Steven Ciobo said Australian industry was critical in the establishment of the Australian ALIS.

"Operating on Australian ALIS is an important achievement before the JSFs arrive in Australia"



The RAAF's 10th F-35A on the flight line at Luke Air Force Base.

DEFENCE

"Lockheed Martin ALIS administrators and maintenance technicians have been directly supporting the RAAF's operations at Luke AFB," Minister Ciobo said.

"Effective collaboration between Defence and industry is essential to the Australian F-35A Project and it is pleasing to see continued success in this area.

"More than [50 Australian companies](#) have directly shared in more than \$1 billion in global JSF production contracts to date."

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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

BMT's Whole Life Warship Capability Management course

Date: 22-26 October 2018

Location: Adelaide

Website: <http://www.bmtdesigntechnology.com.au/training-courses/whole-life-warship-capability-management/>

BMT's Whole Life Warship Capability Management course is run over five days and is accredited by the Royal Institution of Naval Architects. The course covers: warship concept development and design management; regulation, seaworthiness and safety systems; platform systems and fundamentals of naval architecture; above and below water battlespace systems; production, sustainment and cost engineering.

Meet the Minister – Minister for Defence Industry

Date 26 October 2018

Location Kedron-Wavell Services Club

Website <https://www.eventbrite.com.au/>

This industry breakfast will feature Minister Ciobo as our key speaker and give attendees an insight into our new Minister for the Defence Industry and Minister Ciobo's future plans for the industry. Attendees will also have the ability to submit questions to the Minister via their Eventbrite ticket order for the Q&A segment of the industry breakfast.

WA Indo-Pacific Defence Conference 2018

Date 30 October 2018

Location Crown Towers – Perth, WA

Website <http://perthusasia.edu.au/defence-forum-2018>

The 2018 Western Australian Indo-Pacific Defence Conference will convene strategic thinkers from the military, industry, academic and government in Perth, home to Australia's largest naval base, a growing defence industry, and a vibrant civic and academic community. This conference will promote the State's defence capability to national and international defence stakeholders. The aim is to provide new and relevant information from high-level speakers to educate and inspire our local industry, and to assist them in becoming world class and globally competitive (export ready).

NZDIA 2018 Forum

Date 30 October – 1 November 2018

Location Central Energy Trust Arena, Palmerston North (NZ)

Website <http://www.nzdiaforum.co.nz/page/528148>

The 2018 NZDIA Forum is our 21st forum. We aim to bring together industry (local, regional and international) and a wider range of government interests than has been achieved previously. The NZDIA forum has, for 20 years, been the most important event on NZ soil for defence and industry to come together. This year we are creating the opportunity and space for a wider cross section of industry: local, Australasian and global with a broader interest in national security encompassing defence, to come together. The speaking and workshop program is coming together as we identify how best to deliver excellent value to our traditional constituency and new attendees.

Veterans Film Festival

Date 1 November – 3 November

Location Palace Electric Theatre, ADFA, Canberra

Website www.veteransfilmfestival.com

The RSL National Veterans Film Festival (VFF) is an annual event, putting the spotlight on stories about veterans, first responders, their families and the influence of warfare on our society. The festival presents a curated program of carefully selected feature films, short films and media art from Australia and around the globe. Our focus is on recent work by talented indie filmmakers. However, within our program we also present mainstream films, retrospectives and provide opportunities to meet with filmmakers and content creators via Q&A's, panels, etc. All films submitted to the official competition will be eligible to compete for the coveted Red Poppy Awards.

SIA Biennial Conference

Date 7-8 November 2018

Location Rex Hotel, Canberra

Website www.submarineinstitute.com/sia-conferences

Join submarine professionals and key decision makers as the ninth in the biennial series of conferences run by the Submarine Institute of Australia returns to Canberra to explore the issues and opportunities emerging from the decision to extend the lives of the Collins class submarines.

Armistice and After – An Exhibition

Date 11 November 2018

Location Hall School Museum and Heritage Centre

Website <http://www.museum.hall.act.au>

'Armistice and After' records the participation of the Hall district diggers in the triumphs of 1918 and the euphoria that accompanied the end of hostilities. It also records the difficulties of repatriation and adjustment to civilian life in a world where the promises of peace and prosperity never quite materialised. The

exhibition is the closing chapter of our ANZAC exhibition – ‘When Hall Answered the Call’. All are welcome to the opening by Andrew Leigh MP at 11.00 am on Remembrance Day 11 November.

ACA Corrosion & Prevention 2018

Date 11-14 November 2018

Location Adelaide Convention Centre

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

As always, the focus of the ACA's annual conference and trade exhibition will be the safe and effective management of the continuing challenge posed by corrosion. More than 400 delegates are expected to attend the conference and extensive exhibition supported of key industry suppliers. Industry experts will deliver five plenary presentations—including the F P Thompson Lecture, which will be delivered by Professor Brian Kinsella, Curtin University, Australia.

MilCIS 2018

Date 13-15 November 2018

Location National Conference Centre, Canberra

Website 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.

Australian Warrior Expo

Date: 15-17 November 2018

Location: Brisbane Showgrounds, Exhibition Building

Website: www.australianwarriorexpo.com.au

The Australian Warrior Expo (AWE) is Australia's premier Law Enforcement, Military, Emergency Services and Security Expo and is the only event of its type in Australia. AWE is dedicated to showcasing the latest products, technology, equipment and services to this niche market. AWE will bring both professionals and agencies together including Government Procurement Managers, Decision Makers and Operators.

Avalon Airshow 2019

Date: 26 February – 3 March 2019

Location: Avalon Airport

Website: <https://www.airshow.com.au/airshow2019/index.asp>

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.

IMDEX Asia 2019

Date 14-16 May

Location Changi Exhibition Centre, Singapore

Website www.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.

Paris Air Show

Date 17-23 June 2019

Location Le Bourget

Website <https://www.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.

Pacific 2019

Date 6-8 October 2019

Location Sydney Convention Centre

Website www.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 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.

TEAM DEFENCE AUSTRALIA EVENTS

- **Euronaval 2018** – 23-26 October 2018, Paris, France
- **Indo Defence 2018** – 7-10 November 2018, Jakarta, Indonesia

For more information go to the business.gov.au TDA webpage [here](#). TDA EOIs will open a few months prior to the event – to keep up to date [register](#) for the CDIC newsletter.