

ADM DEFENCE WEEK PREMIUM EDITION

AUSTRALIAN DEFENCE MAGAZINE
SERVING THE BUSINESS OF DEFENCE



It is unclear what Thales' legal injunction means for subsequent ANAO reports into Defence programs.

DEFENCE

ANAO releases scathing report into Hawkei

Katherine Ziesing | Canberra

The Australian National Audit Office (ANAO) has released a [report](#) into the Land 121 Phase 4 project to acquire the Thales Hawkei.

The report acknowledges that all the material it drew upon cannot be released publically. In formal language, the 'Disclaimer of Conclusion' essentially means that the ANAO has blacked out many parts of their supporting evidence and is not able to "express a clear conclusion on the audit objective" in light of that measure. The redacting of material is formed on the basis that "it would prejudice the security, defence or international relations of the Commonwealth; it would unfairly prejudice the commercial interests of any body or person."

Nevertheless, the report is bluntly brutal in its assessment of the management methodology during the decision making process leading up to First and Second Pass. In October 2015 the Commonwealth entered into contract with

IN THIS ISSUE

ANAO releases scathing report into Hawkei	1
The Age of Surprise: Army lays out modernisation priorities	4
Far-sighted SME brings work to local community	6
Logistics in a nutshell	8
Army orders more Carl-Gustafs from Saab	10
UNSW seeks new Defence innovation precinct	11
UniSA's 'rocket man' joins national project to launch satellites	12
Forthcoming Events	14

Table 2.1: The fundamental requirements for the Protected Mobility Vehicle — Light, 2009

Fundamental requirement	Examples
1. Survivability	Able to withstand: <ul style="list-style-type: none"> • landmine/improvised explosive device • bullets and projectiles Fitted with a remote weapon system
2. Mobility	On-road and off-road manoeuvrability Deployable by sea, rail, and C-130 Hercules aircraft Deployable by CH-47 Chinook helicopter ^a
3. Payload-carrying capacity	Different variants to carry between 1000–2000 kilograms
4. Command, control, communications, computers and intelligence (C4I) readiness	Built-in computer hardware A screen for each crew member Exportable power supply ^b
5. Useability	Noise and vibration management Climate control Legal and safety compliance
6. Sustainability	Reliable Maintainable Durable Technical manuals

Note a: The requirement for airlift underslung beneath a helicopter was originally (2007) to apply to selected vehicles only, but by 2009 was extended to all vehicles. This requirement is discussed further at paragraphs 2.36 and 2.38–2.40.

Note b: The removal of the requirement for exportable power in 2017 is discussed in paragraph 2.16.

Source: ANAO analysis of Defence 2009 Key Requirements Matrix.

Thales Australia for the acquisition and support of 1,100 Hawkei PMV-L and 1,058 companion trailers.

“Defence did not provide robust benchmarking of the Hawkei and the Joint Light Tactical Vehicle (JLTV) option to the government at Second Pass, to inform the government’s decision in the context of a sole source procurement,” according to the report. “At Second Pass, Defence advised the government that the Hawkei would be approximately 23 per cent more expensive to acquire than the JLTV but would also be more capable. Without robust benchmarking of cost and capability, Defence was also unable to apply competitive pressure in its negotiations with Thales. Defence did not inform the minister appropriately when material circumstances changed immediately after Second Pass.”

The report explores the timeline of the project, from the examination of the US JLTV program involvement and comparative benchmarking from 2009, the Manufactured and Supported (MSA) campaign for the project in 2011, through to the contract negotiations for the Hawkei which are still ongoing with change proposals commonplace. Defence gave formal approval for the Hawkei to enter Low-Rate Initial Production on 11 August, 2017.

Thales provided design approval for the Hawkei in March this year, with a number of known deficiencies and a plan for rework, according to the report.

“At a meeting of the Defence–Thales Strategic Relationship Board in March 2018, Defence stressed that ‘the ongoing Hawkei reliability problems were a concern’,” according to the ANAO report. “The schedule pressures built into

the project, together with the recent reliability issues, have resulted in contract schedule changes during 2017–18. Defence has observed, in the context of the 10 July 2018 Gate Review, that:

Over the past 18 months the schedule 'float' between the contract and MAA [Materiel Acquisition Agreement] schedules has reduced from approximately six months, to one and two months for IOC [Initial Operational Capability] and FOC [Final Operational Capability], respectively. The critical path to IOC remains primarily dependent upon the successful completion of PRAT [Production Reliability Acceptance Test]."

In order to respond to these delays, the next period of testing under PRAT will now involve eight vehicles rather than four and will be undertaken over eight months rather than 14 in order to make up lost time.

However, a Gate Review in July this year noted that "the vehicles are now in their sixth cycle of reliability failure—redesign—retest but the results to date remain well below the requirement. Despite more than seven years of development Army's Protected Mobility Vehicle — Light has not yet achieved the required level of reliability which has been significantly reduced during the period."

ADM Comment: The fact that Thales sought a [legal injunction](#) over the matter in May via the Federal Court and later received a letter from the Attorney General telling the ANAO to back off essentially (available in the appendices of the report) sets a precedent. What this means for subsequent ANAO reports into Defence programs remains to be seen.

As to whether Defence conducted 'effective procurement processes between 2011-2014' the ANAO is not convinced and is outright sceptical of their ability to keep government decision makers informed. Box 1 on P38 is particularly enlightening reading on this point. A letter (P76 for those reading the report at home) co-signed by Defence Secretary Greg Moriarty and Chief of the Defence Force General Angus Campbell disagrees with the ANAO assessment that the LRIP contract was signed with a 'lack of appropriate scrutiny'.

The contractual back and forth in a developmental program is no surprise to those experienced in this space. Good planning only covers so much when you have unknown unknowns to account for. Looking at any other ANAO report into developmental programs, like Thales' own Bushmaster (which is a frequent character in this report), is testament to this. Hindsight is a wonderful thing but not available in the moment when key decisions are being made.

A response letter from Thales Australia CEO Chris Jenkins is also illuminating, highlighting the fact that the ANAO didn't much like Bushmaster either. Selective comparisons with the JLTV program are unhelpful given that program's performance issues as well, according to his statement available in the appendices. Jenkins rightly points out that the policy settings surrounding Australian industry content and sovereignty have also changed significantly over the life of the Hawkei program.

While that last point might be true, once again hindsight is a valuable thing. The

"Hindsight is a wonderful thing but not available in the moment when key decisions are being made"

change in policy settings to favour more Australian content whilst acknowledging the cost premium could not have been predicted at the time of contract signature that saw Hawkei effectively used as a support base for Thales' Bushmaster production capability and the not insignificant R&D efforts from Thales to bring Hawkei off the page and onto a test track.

"Hawkei delivers life-saving capability to the ADF, designed and manufactured in Australia," Thales said in the wake of the report. "The Bushmaster program demonstrated beyond question that maintaining a sovereign capability in protected vehicle design, engineering and manufacture saved Australian soldiers' lives.

"It is disappointing that the ANAO places zero value on maintaining this life-saving industrial capability; zero value on Australian content and zero value on Australian jobs.

"Thales Australia welcomes the engagement with industry during the preparation of the ANAO report, resulting in the exclusion from the final report of sensitive details that might have endangered soldiers' lives or unfairly prejudiced commercial interests if published," the statement concludes.

ADM's questions to the ANAO about the frequency of use of the Disclaimer of Conclusion were not answered in time to make publication.

The Age of Surprise: Army lays out modernisation priorities

Ewen Levick | Adelaide

In a presentation made on the sidelines of Land Forces, Brigadier Chris Mills laid out Army's modernisation priorities in light of anticipated changes to the way wars will be fought.

"The characteristics of future conflict, and the tools with which it will be fought, are in a place of radical change," BRIG Mills said. "This is the Age of Surprise."



Protected mobility is one of the priorities spelt out by BRIG Mills.

DEFENCE

"As a result, I believe the Australian Army needs to change its modernisation focus. We must rethink our mental paradigms."

Those paradigms include changes to the fundamentals of soldiering: the likelihood that small arms weapons will overmatch body armour over the next decade; the evolution of half-drone, half-missile loitering weapons; the steady proliferation of autonomous systems, such as self-driving patrol vehicles already in use by Israel and other states; and direct energy weapons, which BRIG Mills believes will soon evolve at the same pace as UAV tech is evolving today.

So how will Army adapt?

BRIG Mills spelt out two options.

"First, we can become even more technologically enabled. However, this option is expensive and still doesn't remove the risk completely.

"When everything seems to be a priority, perhaps some clarity is needed on what is not"

"The alternative is to look to technologies that give the Australian Army an indirect advantage. By way of example, the Chinese decided that rather than invest billions of dollars matching [the US] carrier-for-carrier, to invest in cheaper long-range missiles that can destroy these carriers at strategic distance."

Army believes that a similar approach for Australia necessitates investment in new technologies, tactics, techniques, and training that use the size of massed armies, and their needs, against them. BRIG Mills then outlined the following five priority areas.

First is the Land Combat System. "Army must acquire the digital capabilities to enable the land force to communicate, sense, understand, and act in a high threat environment faster than the adversary."

"This is best described as Army's future nervous system; the system of systems that pass and process information."

Second, future offensive fires capability. According to BRIG Mills, the ADF's current system is 'well-below' those of potential adversaries.

The third priority is armoured manoeuvre and protected mobility, which remains essential for Army's core mission of closing with and engaging the enemy.

Fourth, BRIG Mills highlighted the importance of autonomous systems. "These will provide the opportunity to augment, enhance, and eventually replace components of the future Land Force," BRIG Mills said.

Finally, Army aims to focus on integration. "Army must seek to enhance the capabilities that exist within its planned network integration centre and work with the Joint Force network integration centre."

The speech comes after the [Defence Innovation Hub](#) also outlined its investment priorities, which echo those laid out by BRIG Mills, although somewhat imperfectly: ISR, space, cyber, and EW; key enablers such as machine learning; and land combat, amphibious warfare, and special operations.

It can be difficult to map out exactly what Army's priorities are given the range of capabilities outlined by the Hub, BRIG Mills, and others. When everything seems to be a priority, perhaps some clarity is needed on what is not.

If there is one common theme amongst the multitude of threads, however, it is a desire to gain speed – to move to the next iteration of all technologies faster than adversaries and retain the capability edge that Army realises it is losing.

Far-sighted SME brings work to local community

Ewen Levick | Adelaide and Sydney

This year's Land Forces saw eye-catching kit on display, from infantry fighting vehicles to Bushmasters, Hawkeis, and more. Yet the show also saw 328 SMEs set up shop to advertise to the 15,000 attendees that passed through the doors.

ADM spoke with Clint Evans, general manager of Nowra-based SME Global Defence Solutions (GDS), at Land Forces about the benefits of bringing work back to Australia, the art of patience, and the challenges faced by SMEs looking to meet the needs of Australian soldiers.

GDS is a provider of deployable tent and shelter systems for the ADF and other security forces throughout the Pacific. The company demonstrated its EASi Container at Land Forces, a new solution designed to be customised to meet the rigorous standards expected by the ADF.

"Structurally, it's a solid container. Possibly the most solid in the world, to be honest," Evans said. "Unlike a standard 20-foot container, where the walls, floors, and everything factor into it, what we've done is beef up the frame, and that allows us to do anything."

The flexibility gained by bringing capability back to Australia has allowed GDS to tailor their product to the needs of soldiers in the field.

"We'd be given a whole lot of specific requirements," Evans said. "To try and pass that on to overseas suppliers was a huge risk. If the customer turned around and said we want cut-outs here, here and here, we'd have to go back to the supplier."

"With the launch of the EASi product, we only source the core frame from overseas and now do the full fit-out and integration in Nowra."

"It's all about working with the end user to provide a configuration that suits



It's time to think inside the box! GDS General Manager Clint Evans and colleague Jeromy Bendall at Land Forces 2018.

EWEN LEVICK

them at their budget. That's something we couldn't do in the past."

Bringing work back to Australia also has benefits beyond the GDS team. It has created contracts for local trades, spreading work throughout the community. This is what Australian Industry Content looks like in practice – benefits beyond the numbers seen on sheets of paper.

"We're not big at all, 20-25 staff," Evans said. "But we subcontract out our electrical and refrigeration requirements, and I like to think of our subcontractors as extensions of company staff. They come to our barbeques and things like that.

"So this isn't just about creating jobs within GDS – it's also creating work in the community."

When asked how a small company selling large equipment handles the 'boom-bust' cycle traditionally associated with Defence work, Evans shrugged.

"We're more catered towards being patient, waiting for the opportunity," he said. "Patience is a virtue. Focus on what you want to achieve, and don't be in a rush to get there.

"And we've got a great crew. That makes my life a lot easier."

For Evans, the core focus is on making sure GDS kit meets the needs of the end user.

"You want to please the end users, that's why we're all here. It's easy to get lost in the standards and requirements and forget about that," Evans said.

"Nothing's worse as an SME than going on base and seeing a capability sitting there – which ticks all the boxes, it meets the military requirements, it meets Australian standards, CASG is happy – but the soldiers don't use it," Evans said. "That hurts SMEs."

So how can Defence ensure open communication between soldiers and the SMEs looking to build them the best kit possible?

As ADM has [covered](#) previously, Army [believes](#) ad hoc meetings aren't the solution. It wants to "minimise pointless meetings and focus on deeper engagement."

For Evans, however, the answer is simple. "Just getting everyone together in the same room would be a huge help."

Has the renewed policy focus on AIC had an impact at ground level for SMEs?

Again, Evans shrugged. "AIC has always been important. To hear now that it's playing a major role? It's always played a major role in our community.

"This year we delivered two items that we've made from scratch, and we were proud to put that kangaroo logo on. So proud, in fact, that we did it twice on each product.

"I get my kick out of that."

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [General Dynamics enters the ring for Land 400 Phase 3](#)
2. [Saab chooses Safran for Sea 1180 sensors](#)
3. [HMAS Anzac docks at Henderson for upgrade](#)
4. [General Atomics expands Team Reaper](#)
5. [Rheinmetall launches bid for Land 400 Phase 3](#)



Logistics is getting materiel "to the right person, in the right place, and at the right time."

DEFENCE

Logistics in a nutshell

Julian Kerr | Adelaide

For those whose knowledge of Integrated Logistics Support (ILS) leaves something to be desired, Ian Mortimer of Melbourne-based Logistic Engineering Services spelt out to an ILS conference at Land Forces the importance and the fundamentals of this vital process in optimising support for a capability "to the right person, in the right place, and at the right time."

A more detailed definition by the US Defence Acquisition University, quoted by Mortimer, described ILS as "an integrated and iterative process for developing materiel and a support strategy that optimises functional support, leverages existing resources, and guides the system engineering processes to quantify and lower life cycle cost and decrease the logistics footprint, making the system easier to support."

The dark art of Logistic Support Analysis (LSA) was summed up by Mortimer as "a rigorous and comprehensively analytical approach and a series of formalised processes which are usually iterative and tailored to suit the program goals, scope and constraints."

These processes he spelt out as Reliability, Availability and Maintainability (RAM); Failure Modes, Effects and Criticality Analysis (FMECA); Supportability Analysis (SA), Reliability-Centred Maintenance (RCM); Level of Repair Analysis (LORA); Maintenance Task Analysis (MTA); and Life Cycle Costing Analysis (LCC).

For defence contractors, standards and guidance were provided by DEF (AUST) 5691 - Australian Defence Organisation Logistic Support Analysis Handbook, and DEF (AUST) 5692 - Logistic Support Analysis Record Requirements for the Australian Defence Organisation, he noted.

ILS strategy and concepts involved definition of the new capability requirement, initiation of an LSA program, development of an LSA strategy, comparative analysis/alternate support concepts, and implementation of a Front End LSA.

Key ILS outputs and milestones required an Operational Concept Document with mission profiles, usage rates, and an integrated ILS support concept, together with a Function and Performance Specification.

These should be followed by development of a Statement of Work, a Test and Evaluation master plan, finalisation of a Support System Strategy/Solution, selection of a ASDEFCON template, and development and release of a Request for Tender (RfT).

“The dark art of Logistic Support Analysis was summed up by Mortimer as ‘a rigorous and comprehensively analytical approach’”

Post tender and contract, acquisition considerations included a statement of work, ILS planning, Requirements and Logistics Support analyses, Support Systems definition and synthesis, followed by Support System delivery.

For ILS sustainment, considerations included urgent operational requirements (surge, contingency/exigency), change of operating envelope, defects, modifications, block upgrades, technology insertion, supply chain, and obsolescence.

No ‘one size fits all’ method covered ILS implementation, Mortimer commented, stressing the need to start early, identify gaps, and engage in training and awareness as quickly as possible.

At the end of the life cycle, disposal had to take into account issues such as problematic substances, excess inventory, treat requirements, IP, security caveats, and export controls.

Ultimately however, the options were “on-sell, gift, mince or sink.”

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 © 2018



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.



Soldiers will be pleased to hear the new system weighs less.

HANS BERGGREN

Army orders more Carl-Gustafs from Saab

Saab has received an order for deliveries of the new Carl-Gustaf M4 weapon system to Army.

Army is Saab's sixth customer for the Carl-Gustaf M4 launcher since its launch in late 2014. Deliveries for the latest system will take place during 2020.

The new version introduces a range of enhancements. These include a lighter weight design (less than seven kilograms), a round counter, improved safety,

and compatibility with potential future intelligent sighting systems and programmable ammunition.

The weapon is backward compatible with all ammunition types.

"With the introduction of the M4 version the Australian Army will have a weapon with the latest technology and improved ergonomics providing an increased tactical flexibility to deal with most situations on the battlefield,"

Görgen Johansson, head of Saab's Dynamics business, said.

The Carl-Gustaf has seen **extensive operational service** with Army. News of a lighter-weight system will come as good news to soldiers as operational demands, particularly in Afghanistan, increasingly require the carriage of larger ammunition and weapons systems.

"Enhancements include a lighter weight design, a round counter, improved safety, and compatibility with potential future intelligent sighting systems"



UNSW Canberra is currently finalising a formal proposal for the ACT Government.

PIXABAY

UNSW seeks new Defence innovation precinct

UNSW Canberra has announced it is seeking to establish a new Defence and Security Innovation Precinct as part of its proposed new city campus in Canberra's CBD.

The Defence and Security Innovation Precinct is proposed to be located along Constitution Avenue, in the centre of Canberra's research and innovation corridor from Belconnen to the airport, linking science, education, technology, defence and other government agencies.

"It is the ideal home for R&D teams to work with some of the world's leading experts in defence research"

"This planned precinct will open the door to new collaborative opportunities because of the access it will grant to government, global defence industry, R&D organisations, UNSW researchers, partners and students," UNSW Canberra Rector, Professor Michael Frater, said.

"It is the ideal home for R&D teams to work with some of the world's leading experts in defence research in areas like space and cyber.

"We are inviting members of the Defence industry to join us in the precinct and take advantage of this outstanding opportunity."

The Defence and Security Innovation Precinct will be led by the UNSW Defence Research Institute.

"Earlier this year we established the UNSW Defence Research Institute, which draws on the expertise of our researchers to provide Defence with solutions to real world problems," Professor Frater added.

"The University has a 50-year partnership with Defence and the Canberra community. This proposed precinct would strengthen those ties even further."

UNSW Canberra is currently finalising a formal proposal for the city campus for the ACT Government to consider.

The proposed city campus would include a range of accommodation options for a significant number of research organisations on site.

According to Professor Frater, an extensive range of stakeholders in the ACT Government and community will be engaged throughout the project.

UniSA's 'rocket man' joins national project to launch satellites

An engine expert from the University of South Australia (UniSA) will spend the next three years working on a \$3 million international project to build Australia's first launch pad to send satellites into space.

UniSA engineer Dr Saiful Bari has been tasked with helping to develop two high thrust engines – one that can launch satellites into orbit before melting and the other that can be continually re-used.

The second challenge will be a world first if it comes to fruition.

The Responsive Access to Space (RAS) project, led by defence technology company DefendTex, includes researchers from UniSA, RMIT, University of Sydney, the Defence Science and Technology Group, Germany's Universitat de Bundeswehr and commercialisation company Innosync.

Dr Bari will lead the UniSA team in the injection modelling and air-fuel mixing phase to develop a flight-ready rotating detonation engine.



The project aims to build Australia's first launch pad to send satellites into space.

PIXABAY

"We are looking at two options," Bari said. "The first is a cheaper, much smaller engine that can launch small satellites before melting. It is much smaller in size than a normal launch pad. Currently, we must hire launch pads from the US or Russia because Australia doesn't have this capability."

"The second option is to develop an engine which can be launched and returned to Earth, so it can be used a number of times. To date, nobody in the world has been able to do that, despite intensive international research efforts in the US, Russia, China and Japan."

Several benchtop rotary detonation engines have been built in these countries and sustained several seconds of operation before crashing to the Earth, Dr Bari said.

The RAS project has been awarded \$3 million under the fifth round of the Cooperative Research Centre Projects (CRC-P) Program and attracted more than \$10 million of cash and in-kind contributions from industry and university stakeholders.

The investment builds on the government's \$41 million commitment over the next four years to establish an Australian space industry. The agency launched at the beginning of July.

"UniSA engineer Dr Saiful Bari has been tasked with helping to develop two high thrust engines"

PEOPLE ON THE MOVE

Anthony Fraser has been appointed as the new head of CASG, replacing outgoing Deputy Secretary Kim Gillis. Fraser served in senior positions within the military and Defence acquisition prior to working in private industry and becoming Airbus Head of Country Australia and NZ. More details on Fraser's appointment are available [here](#).



In addition to the recent Junior Engineer (Sam Ogden) and Technical Coordinator (Sam Gook) appointments, NIOA has employed Natasha Grobbelaar and Dale Goodhew as junior engineers to increase capability to support the medium calibre component of the Land 17 Phase 1C.2 155mm munitions program and additional domestic munitions manufacture opportunities that are underway.

TOP COMMENTS

[HMAS ANZAC docks at Henderson for upgrade](#)

With three ANZACs on the concrete at Henderson and the first two AWDs still working up, how many operational surface combatants could the RAN put to sea? Seven at the very best between the east and west coast. Makes you think.

-Johnno

As per normal, approximately a third of the fleet would be ready to deploy at short notice, with approximately a third in work up mode and a third under maintenance/refit. It would currently look something like: Deployable 1-2 FFG, 2-3 Anzacs; Working up 0-1 FFG, one DDG, 2-3 Anzacs; Maintenance/Refit/NUSHIP one DDG, three Anzacs.

- Michael Coote

Forthcoming Events

ADM EVENTS

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

- [ADM Defence Estate & Base Services Summit](#) – 19 September 2018
- [ADM Defence in Northern Australia Summit](#) – 10-11 October 2018

ANI Goldrick Seminar

Date 17 Sep, 2018

Location ADFA, Canberra

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

ANI will be holding its annual Goldrick Seminar at ADFA – with the title Naval Shipbuilding as Strategy. The event is well-attended every year by senior serving officers and by defence industry.

ICCPM 2018 Thought Leadership Roundtable

Date September 21, 2018

Location Canberra, Melbourne

Website admin@iccpm.com

The International Centre for Complex Project Management (ICCPM) is delighted to invite you to attend this open discussion workshop which seeks to bring together the collective wisdom of senior leaders from both public and private sector organisations to share perspectives on project leadership.

18th Australian Space Research Conference

Date 24 Sep – 26 Sep, 2018

Location Mantra on View Hotel, Gold Coast

Website <http://www.nssa.com.au/18asrc/>

The 18th Australian Space Research Conference (ASRC), will be held at Gold Coast in Queensland over September 24-26. The ASRC is intended to be the primary annual meeting for Australian space research. It welcomes space scientists, engineers, educators, and workers from across the university, industry and government parts of the space sector, and is not limited to Australian-based research. International participants are most welcome. The scope of the conference includes fundamental and applied research, operational matters, technology, and use of space data and facilities. We are accepting [abstracts](#) until July 14.

Systems Modelling Conference 2018

Date 04 October 2018

Location Adams Auditorium, UNSW Canberra

Website <https://www.unsw.adfa.edu.au/conferences/systems-modelling-conference-2018/home>

Systems thinking and modelling is the science of integration, where every system is conceptualised as a set of inter-related components. Systems thinking and

systems modelling provides a problem solving approach that helps us develop the capacity to understand and manage complexity in a systemic way and how to deal with it in multi-stakeholder situations. The Capability Systems Centre in partnership with IEEE runs a one day conference on the use of whole-systems approach to design and manage complex problem in socio-technical and socio-ecological systems. The daylong conference on October 4th will feature showcases on the use of systems thinking and systems modelling in a wide range of areas.

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 Australia, 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.

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 by 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.

TEAM DEFENCE AUSTRALIA EVENTS

- **AUSA 2018** – 8-10 October 2018, Washington DC, US
- **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.