

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



Questions on the Future Submarine made up the bulk of the hearing.

NAVAL GROUP

Senate Estimates looks at shipbuilding programs in depth

Katherine Ziesing | Canberra

The latest round of Senate Estimates into Defence proved interesting reading. There was a large focus on the workforce surrounding the National Shipbuilding Program and how its constituent arms are progressing.

Future Submarine

Senators Rex Patrick and Penny Wong were relentless in their drive to clarify workforce, shipyard planning and schedule details.

Senator Patrick is concerned that Naval Group have been led to believe that Full Cycle Dockings will be moving to WA, allowing them to plan their new yard for the Attack class accordingly. Both Minister for Defence Senator Linda Reynolds and head of submarines Rear Admiral Greg Sammut contend that the company

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needed to plan around *something*, confirming that no government decision has yet been made on the issue, which is due to be made by the end of the year.

"They didn't predicate that full-cycle dockings would be relocated from Adelaide, but it was necessary to start design work on the submarine construction yard," RADM Sammut said. "That has enabled us to be in a position today whereby we can commence construction of the combat system physical integration facility by the end of this year and construction of the propulsion land based test site, and whereby we also will have done the initial planning for the whole construction hall, because they are the first three facilities we will need."

Senator Patrick also highlighted the fact that the latest round of project milestones are running about six months behind schedule for the latest round of reviews, despite protestations from RADM Sammut to the contrary.

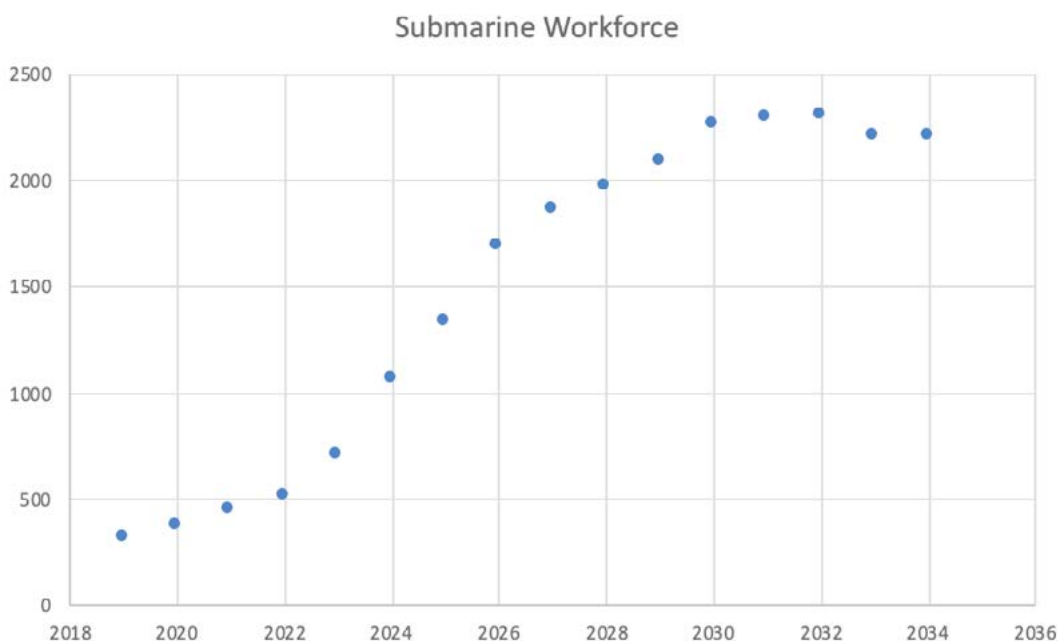
"It's pretty plain, Minister, that you end up with a milestone and you either achieve it or you don't. By the evidence I just heard from the admiral, you are six months late," Senator Patrick said.

Senator Patrick's questions on notice and FOI requests also make up about a third of the workload generated by the committee, according to Minister Reynolds who chided him that perhaps Defence officials also have their day jobs to perform while also answering his long and repetitive questions.

Despite comments from Naval Group executives over the intervening years that the detailed design would be carried out in Australia, RADM Sammut said that only *elements* of the work would be done in country. The bulk of the work would be done in Australia by 2025, RADM Sammut confirmed.

Workforce

The finer details around the workforce as it relates to shipbuilding matters has been an ongoing issue for many hearings now. Different numbers at different



points have been the bane of the senators with the length of the piece of string changing in each hearing.

RADM Sammut was able to deliver a detailed baseline that will be referred to from this point going forward.

"In relation to the average of 1,100 direct jobs and how we developed them; I have our workforce projections out to 2023 in terms of direct jobs.

"They are based on our interactions with our prime contractors, Naval Group Australia and Lockheed Martin Australia, and will comprise the companies, of course, that have all the direct employment for delivery of the Attack class submarines. They are projections at this stage."

"The finer details around the workforce as it relates to shipbuilding matters has been an ongoing issue for many hearings"

ERP conflict of interest

Chief Information Officer Steve Pearson also came under intense questioning about the largest program in the Group's book: ERP. While the program has not publicly announced any delays, a series of internal reviews have been undertaken over the past 12 months to address a number of emerging issues.

One such independent audit was undertaken by a company called Sinapse under a limited tender, where the CIOG's son worked in a part time capacity. The

possibility of a conflict of interest did not occur to the CIO.

"So basically no-one who is giving you advice knew that your son worked for the proposed contractor?" Senator Penny Wong asked.

"No. They would not have. I raised that subsequently on reflection," Pearson said.

"And it didn't occur to you to raise it previously?"

"If I had my time again, I would have," Pearson said.

CIO Group was also under pressure for the misfire of a new entitlements management system that saw the Commonwealth spend ~\$10 million on a program that will produce 'learnings' for ERP after it was cancelled after three years. An expensive lesson it seems.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Airbus offers upgraded Tiger + H145M for Land 4503](#)
2. [Levett Engineering sells to private equity firm](#)
3. [Global submarine programs hit obstacles](#)
4. [Quickstep wins more F-35 work](#)
5. [The reasons behind the Land 400 Phase 3 decision](#)

Minister Price sets challenge for Defence and industry

Ewen Levick | Perth

Government and industry delegates convened this week for the National Defence Industry Skilling and Workforce Summit to brainstorm ways to grow the skilled workforce.

The summit, run by KPMG at Perth's Optus Stadium, was opened with a traditional welcome by Robyn Collard, a Nyungar Yorga woman. Collard was followed by Minister for Defence Industry Melissa Price, who took the opportunity to announce an expanded Defence Industry Internship Program. The program will now provide 70 internships nationwide.

"The program links engineering students with defence industry by facilitating 12 week internships with defence industry small businesses," Minister Price said. "The government is investing \$1.9 million in the Defence Industry Internship Program in 2019-20."

Minister Price also ventured unusually off-script and challenged industry to better communicate the value proposition of defence industry to key target audiences, particularly in regional Australia.

"If you're in a location like Townsville, where there's a significant Defence presence, there's also going to be a big industry presence," Minister Price said. "So you're likely to know what opportunities are there."

"But if you live in Geraldton, in my electorate, there's no Defence presence. When you talk to parents in Geraldton about defence industry, they think you're talking about sending their child off to war. There's a language problem. I'm challenging you to think about those parents."



Attendees were broken into groups on the first and second days to brainstorm.

EWEN LEVICK

Minister Price also gently reprimanded those present for using terms that may not be understood by the people they need to recruit.

"The other issue I struggle with is the term 'STEM'," Minister Price said. "If your parents didn't go to university, I can tell you they probably don't know what that means.

"I met two very educated women in Karratha the other day and I was talking about this conference and opportunities in the defence industry. I said, 'I really want us to stop talking about STEM'. And they didn't know what I was talking about.

"They were 25 and 45, both highly educated," Minister Price continued. "I use that example to show that the question for all of us is, are we doing enough? I'd say probably not."

BAE Systems Chief Technology Officer Brad Yelland then took the stage to outline the true scale of the skills shortage to attendees.

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

"In that time, Australian universities will graduate about 34,000 engineers. That may seem like a lot, but of those, only around 25 per cent are eligible to work in defence industry," Yelland said. "That's about 8500 people.

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

Yelland also outlined his own experience in becoming an engineer to inform ideas about how to address the skills shortage. He originally aspired to be a lawyer, but a sudden interest in Formula 1 pushed him into aerospace engineering. Interestingly, Yelland revealed that he once held the lowest-ever HSC score amongst engineering graduates from RMIT. His score remains the second-lowest on record, pipped by another RMIT engineering graduate who now also works at BAE Systems.

"School scores are clearly not indicative of ability," Yelland said. "Perhaps we need to adjust the system to make sure those that really want to become engineers, can."

Attendees were then separated into groups to come up with ways to grow the national skilled workforce. Ideas focused on four strategic themes – engage, attract, train and retain, and collaboration - and included better equipping teachers to communicate career pathways, potentially pooling skilled labour, coordinating and staggering project schedules, and speeding up visa approval processes. These were then refined, expanded, and stress tested on the second day of the summit.

Other speakers on both days included Senator Michaelia Cash; First Assistant Secretary of Defence Industry Policy Division Dr Sheridan Kearnan; Brigadier Simon Gould, Lead ADF Total Workforce Model Centre of Excellence; local MP and Assistant Minister for Vocational Education, Training and Apprenticeships Steve Irons; and Ian Irving, Chief Executive of the Naval Shipbuilding College.

"The question for all of us is, are we doing enough? I'd say probably not."

ADM Comment: Perhaps the most interesting messages of the summit were delivered early on. Minister Price, now clearly settled in the portfolio, was unusually frank in her off-script remarks. She delivered a softly spoken but strongly worded opinion: neither Defence nor industry are moving outside their bubble and getting the Australian public on side.

“Are we spreading the message far and wide? Or are we preaching to the converted?”

Brad Yelland hit a similar note, saying that few university graduates are comfortable seeking jobs in defence industry, especially given engagement days on campus are often hit by protests. Ian Irving, meanwhile, said that shipbuilding opportunities in Australia are so exciting that ‘graduates should be banging on the door’. So where are they?

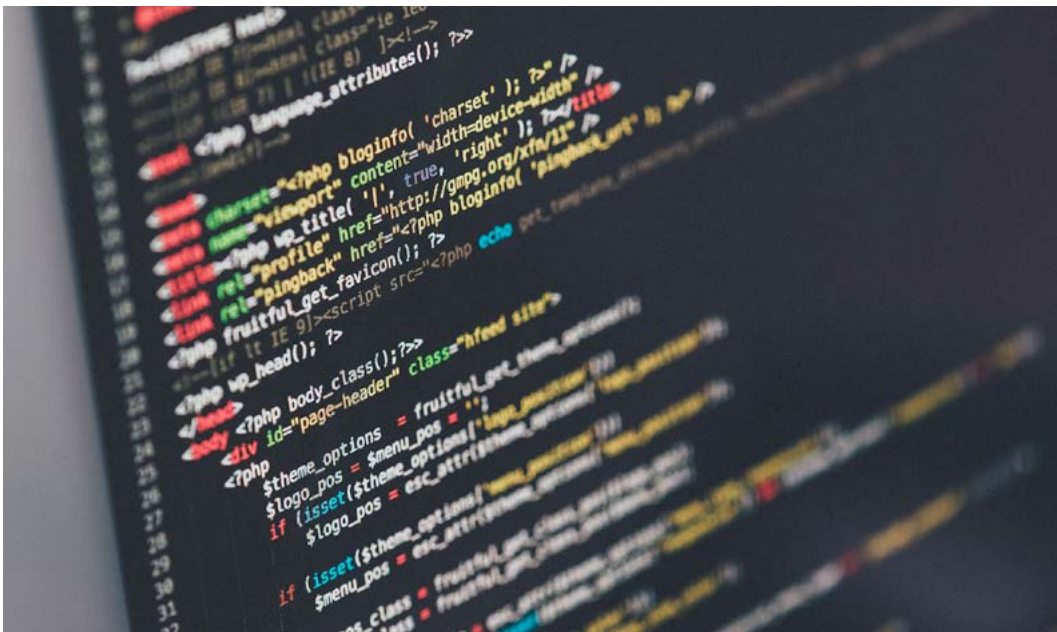
Minister Price summed up the problem to a room full of Defence and industry figures: “We’ve made a good start, but are we spreading the message far and wide? Or are we preaching to the converted?”

The argument for increased connectivity: KPMG

Peter Griffiths | Canberra

The Department of Defence has long recognised the challenges of improved integration across its joint force elements as well as the need to better leverage all the supporting functions expressed as fundamental inputs to capability (FIC). These considerations are today addressed as Divisional, Command or Service initiatives with periodic broader reviews such as the First Principles Review of 2015 which found:

“Defence is suffering from a proliferation of structures, processes and systems with unclear accountabilities. These in turn cause institutionalised waste, delayed



There is no silver bullet to digital connectivity problems.

PIXABAY

decisions, flawed execution, duplication, a change-resistant bureaucracy, over-escalation of issues for decision and low engagement levels amongst employees.”

We contend that Defence needs to address the connectivity across its component parts set against a broad organisational context in order to effectively adopt and exploit the technologies and digital tools available today and those which will develop in the future. This is far more than a single technology, big bang in which Defence has traditionally invested significant resources, and needs to be managed in a way that enables user communities to maximise impact from the information at their disposal and anticipate the impacts of their decisions left and right across the ADO. Equally Defence can be assured that such an approach will meet its stringent, cross domain security and cyber requirements.

Short term we see this being achieved by individual examples of liberating existing data to provide more complete and actionable information for senior decision makers to lead, guide and manage their accountabilities and also describe their impacts to adjacent capabilities, services and support functions. This will require investment in connectivity such as the 5G ecosystem currently being considered and likely partnerships with platform providers to build and bring this to life.

“Defence needs to address the connectivity across its component parts set”

Building on the confidence of this approach, the evolution will likely involve expansion to the approach to mass use of equipment and device sensors to provide more complete operating pictures of capability and the ability to link this readily to choices and decisions in procurement and sustainment. This will need ultimately require a different operating model for many elements of Defence with differing skills and capabilities in the workforce. It will require reinvestment, re-training and ultimately up-skilling.

To do this we are proposing Defence should take cognisance of the eight elements of a connected enterprise drawn from Government and Industry research, which enables leaders to make sense of and prioritise their thinking in response to this future. Those elements are: adopting insight driven strategies and actions, adopting innovative platforms and services, mission centric by design, enabling seamless interactions, building responsive sustainment and supply chain, empowering a digitally enabled workforce, adopting an agile and digitally enabled technology architecture and leveraging fully the value of partner and alliances.

We believe this approach will step the ADF towards the more instantly informed enterprise where leaders have far greater insight as to status, performance and opportunities and ultimately towards the world of a more automated Defence Force which relies on autonomous capabilities, robotics and edge computing.

Full details of the KPMG report into global defence trends can be found [here](#).

Note: Peter Griffiths is the Lead Partner for Defence & National Security at KPMG Australia



The autonomous M113s were demonstrated at Majura.

DEFENCE/BAES

BAE Systems Australia and Army showcase autonomous M113s

Two fully [autonomous armoured vehicles](#) were the centrepiece of a landmark demonstration for the Australian Army this week, providing crucial insights into the capabilities of integrated autonomous technologies on future battlefields.

The 'battlefield simulation' demonstration was held at the Majura Training Site where the Chief of Army observed the two M113 vehicles in operation.

In a six month project, engineers and technicians installed hardware and soft-

ware in the vehicles enabling them to operate autonomously. The innovative autonomous technologies being explored could remove soldiers from future battlefields and enable a range of other applications including intelligence gathering and logistics support. The on-board systems have been designed to comply with the rules of engagement, which always require human in the decision-making loop.

"This project highlights our commitment to leading the development of new technologies and collaborating across industry and academia to advance autonomous capabilities," BAE Systems Australia CEO Gabby Costigan said.

"BAE Systems Australia's autonomous systems capability leverages more than three decades of collaboration between BAE Systems Australia and the Commonwealth Government through Programs such as Nulka and Evolved Sea Sparrow Missile (ESSM).

"Autonomous technologies will support soldier responsiveness in an accelerating warfare environment"

"Autonomous technologies will support soldier responsiveness in an accelerating warfare environment - increasing their ability to outpace, out-manoeuve and out-think conventional and unconventional threats."

The BAE Systems autonomous technologies used for this project have already supported Australian and UK Autonomy programs such as Taranis, Mantis, Kingfisher UAS demonstrators as well as the multi-all terrain vehicle (MATV) and Digger unmanned ground vehicle (UGV) demonstrators.

With the technologies now integrated into the [M113 prototype](#), the vehicles will now be used by the Army to experiment with to better understand the opportunities to employ autonomy on the battlefield as part of its recently released Robotics and Autonomous Systems Strategy.

The vehicles will also be used as test vehicles for technology developed by the Commonwealth's recently announced Trusted Autonomous Systems Defence Cooperative Research Centre (TAS-DCRC).

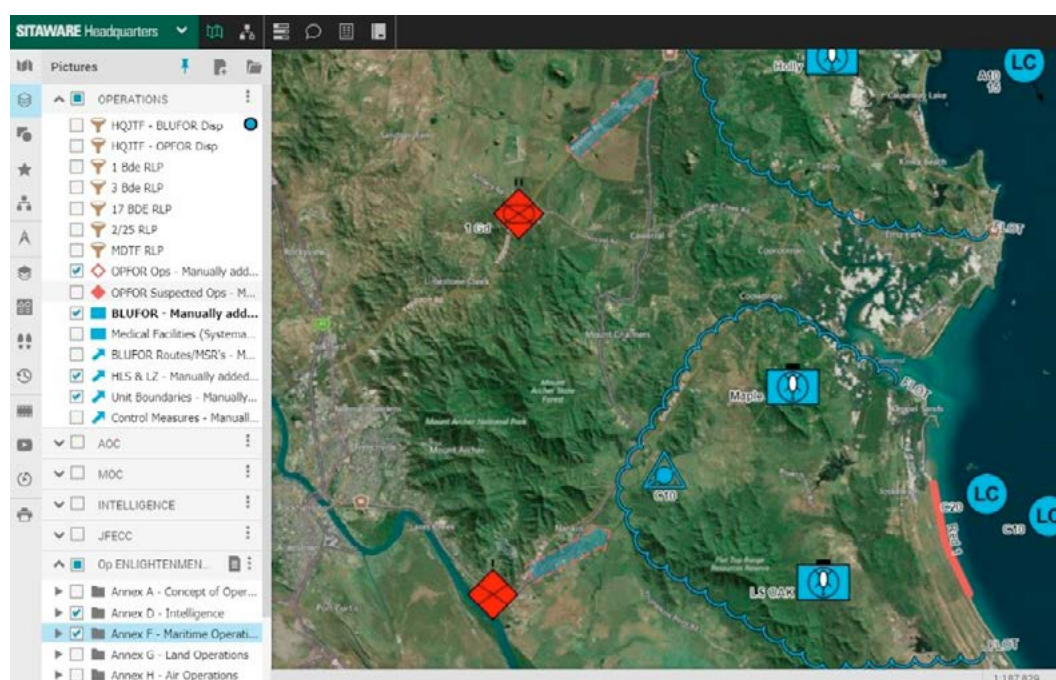
BAE Systems is a founding member of the CRC and the industry lead for Land Autonomy.

Army selects Systematic for track management capability

The Australian Army has selected Systematic to deliver its interim Track Management Capability (TMC).

The program will see Systematic's [SitaWare Headquarters solution](#) equip the service with a range of advanced command-and-control (C2) capabilities.

TMC is focused on providing coalition interoperability to Army by consolidating information from Battle Management Systems (BMS) to produce the Common



SitaWare Headquarters supported Exercise Talisman Sabre 2019.

SYSTEMATIC

Tactical Picture and Recognised Ground Picture, and provide coalition interoperability, among other functions.

"SitaWare supports the Chief of Army's desire to become a Joint and integrated force supporting 'accelerated warfare' by placing C2 at the centre of the service's capabilities," Systematic's Vice President for the Asia-Pacific Region, David Horton, said. "TMC will also incorporate aspects of data fusion and track correlation, for which SitaWare's ability to draw upon multiple data sources makes it uniquely suited to the task."

TMC will further interoperability using SitaWare's Variable Message Format (VMF) Gateway module.

"TMC will also incorporate aspects of data fusion and track correlation"

The VMF Gateway leverages work Systematic has undertaken in conjunction with the Australian Army's Land Network Integration Centre (LNIC) and enables users to seamlessly convert VMF data to and from Multilateral Interoperability Program (MIP), NATO Friendly Force Information (NFFI), Over-The-Horizon Gold (OTH-Gold), and Link 16 formats. TMC will be rolled out at relevant deployed

headquarters across the Army, operating at brigade level and above.

The Deployable Joint Force Headquarters is the first element to field TMC. The capability is designed to operate on a range of platforms, including the Canberra class LHDs that form the backbone of the ADF's amphibious capability.

SitaWare Headquarters successfully supported Exercise Talisman Sabre 2019 and is scheduled to provide the C2 component in a number of upcoming trials and exercises.

PEOPLE ON THE MOVE

NIOA has announced the appointment of David Feeney as a Strategic Adviser. Based in Melbourne, David will provide the company advice on a range of matters including governance, strategic policy as well with a focus on supporting major programs such as dual tenancy at Benalla, in regional Victoria.



Dillan Wilson is heading to Melbourne to work with Penske Power Systems.

ASC

ASC pairs with Penske to train sub diesel engineers

ASC has teamed with engine and power system distributor Penske Power Systems to prepare the next generation of submarine diesel engineers.

ASC has placed graduate mechanical engineer, Dillan Wilson, with Penske Power Systems' Melbourne operation for three months, to become an expert at operating and maintaining the MTU Series 4000 engines.

Dillan's work with Penske Power Systems forms part of the ASC Graduate Engineer program; a two year rotating program of experience throughout ASC's submarine platform sustainment, maintenance and upgrade responsibilities, in SA and WA.

Each year 12 graduate engineers are selected in WA and SA, based on a competitive recruitment process. Those graduates complete placements over two years, gaining experience in every aspects of ASC's submarine operations.

"Dillan is part of ASC's high performance engineering workforce and we are delighted to be able to offer him this exciting opportunity. ASC is in demand with inter-

national partners across several submarine programs and offers its engineers the most varied, challenging and stimulating engineering work in submarines in Australia," ASC CEO Stuart Whiley said.

ASC is expected to carry out a number of life-extension upgrades to Collins class submarines in coming years, incorporating potentially new diesel-generator sets.

"It's exciting to be at Penske Power Systems in Melbourne and to work with their experts"

Whiley said the placement with Penske Power Systems was part of ASC's long term planning for the Collins Class.

"ASC and our partners plan years in advance, so that the Collins Class remains available to the Royal Australian Navy at or above international benchmarks," Whiley said.

"Penske Power Systems is pleased to be able to partner with ASC to provide Dillan with comprehensive experience both with the MTU Series 4000 product and in working alongside senior staff in our national engineering team," Hamish Christie-Johnston, managing director of Penske Power Systems, said.

"It's exciting to be at Penske Power Systems in Melbourne and to work with their experts. It will extend my knowledge and I will then come back to ASC better prepared for the future," Wilson said.

RUAG Australia marks decades of AP-3C Orion support

As the retirement of the RAAF's Lockheed AP-3C Orion in 2023 looms, RUAG Australia is marking its contribution to the aircraft's 21 years of long service life and reliable performance.

Over the past 17 years, the RUAG Australia team has [delivered MRO capabilities](#) as the aircraft continues to be required throughout the Asia-Pacific region. The expertise gained with supporting the AP-3C over its service life cycle has positioned the company to support other ageing platforms that may be in need of ongoing upgrades, maintenance and repairs.

Since 2002, RUAG Australia's MRO facilities in Bayswater, Airport West, and Amberley have been an integral part in supporting the platform. Wheels, brakes and landing gear components have been maintained at Bayswater; the Environmental Control System, Engine Driven Compressor, Air Turbine Starter, and electrical components have been maintained at Airport West; and fuel pump



RUAG Australia has supported RAAF's AP-3C Orions since 2002.

DEFENCE

and hydraulic components at Amberley. RUAG Australia also supported AP-3C maintenance at a repair site in Richmond, NSW, before relocating its capabilities to Bayswater in 2015.

Overall, the need for repairs has begun to ramp up as the system approaches the end of its service life. Over the last four years, the team at RUAG Australia has applied 286 repairs at Bayswater, 242 repairs at Amberley, and 270 repairs at Airport West.

The teams at the various sites have also been able to create solutions to issues that would otherwise have reduced fleet availability and increased costs. The Advanced Technology & engineering services team has contributed to several deviations and design certificates in support of the AP-3C Orion. This work has provided significant cost reductions, as well as a crucial reduction in lead times, by devising technology focused on component recovery rather than new part procurement.

The processing team has provided machining, NDT, plating, and painting services to support component repairs, and the manufacturing team has manufactured 41 parts for specific repairs as well as oversize bushes required for the repair of main and nose landing gears.

"We now look ahead in providing MRO support to the next generation of Defence aircraft in the same professional way," Terry Miles, General Manager RUAG Australia, said.

"The need for repairs has begun to ramp up"

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PUBLISHED BY

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Barrett will supply Canadian soldiers with VHF radio equipment.

BARRETT

Barrett wins Canadian radio contract

Barrett Communications have recently been awarded a multi-year contract to supply the Canadian National Defence Department (DND) with Very High Frequency (VHF) radio communications equipment.

This new contract follows on from the earlier contract awarded to Barrett in 2016.

The Barrett PRC-2080+ VHF radio systems are designed for multi-role military applications providing rugged reliable field proven communications. The PRC-2080+ system is offered in hand portable, manpack, vehicle, base and rebroadcast system configurations, giving flexibility for its deployment in the field.

"We have many exciting developments and contracts coming from the Americas right now," Andrew Burt, Barrett Communications CEO said. "We are pleased to have secured this contract demonstrating the confidence the Canadian DND has in Barrett communications equipment."

Barrett has previously [won a contract](#) with the Tanzania Wildlife Management Authority (TAWA) with HF radio communications for their national parks and conservation areas. The multiphase project was funded by USAID and included the Barrett 2050 HF base stations and Barrett 2090 HF portable manpacks.

The company has also delivered the full range of Barrett PRC-2080+ VHF systems to a Middle Eastern military.

Forthcoming Events

ADM EVENTS

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

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

NSW Defence Innovation Network's Regional Road Show

Date: Various

Location: Various

Website: <https://defenceinnovationnetwork.com/din-regional-road-show-2019-20/>

NSW Defence Innovation Network and AIDN will be undertaking a series of small business focused regional forums across NSW. Register to attend and hear about the programs, grants, opportunities and services the NSW Defence Innovation Network (DIN) provides to the small business community across NSW. We encourage small businesses to engage with us and participate in opportunities across our networks, including DIN's seven partner universities, as well as with other state and federal agencies.

Veterans' Film Festival

Date 09 November 2019

Location Australian War Memorial and National Sound and Film Archive

Website www.veteransfilmfestival.com

Putting the spotlight on stories about veterans, their families and the influence of warfare on our society; the festival presents a curated program of carefully selected feature and short films from Australia and around the globe. This year's program includes mainstream films, international films, retrospectives and opportunities to meet with filmmakers and content creators via 3 Q&A sessions. All films submitted to the official competition will be eligible to compete for the coveted Red Poppy Awards.

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.

Defence Ready Seminar – Defence Business Development 101

Date: 18 November 2019

Location: University of Newcastle

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

A one-day seminar that provides valuable information to help aspiring businesses prepare for their entry to the Defence market by engaging a thoughtful strategy, identifying tenders, following a logical response process, and making the best use of trade shows. There will also be the opportunity to meet with experienced regional Industry network leads for a tailored one-on-one consultation following the seminar from either Hunternet or AIDN NSW.

SubSTEC 5 Conference

Date 18-21 November

Location Esplanade Hotel, Fremantle

Website www.submarineinstitute.com

The 5th Submarine Science, Technology and Engineering Conference (SubSTEC 5) will be held at the Esplanade Hotel, Fremantle, WA 18th-21st November 2019. The theme of the Conference will be: 'Innovation and Investment in the Sub-Sea Environment'. SubSTEC5 will be held with the support of the Institute of Marine Engineering, Science and Technology (IMarEST).

Defence Seaworthiness Symposium

Date 21-22 November

Location ADFA, Canberra

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

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

World Engineers Convention

Date 22 November 2019

Location Melbourne Convention and Exhibition Centre

Website www.wec2019.org.au

World Engineers Convention (WEC) 2019 is the peak international convention for engineers worldwide. Students will have the opportunity to meet and interact with engineering leaders who have helped influence and change the face of engineering.

Corrosion and Prevention 2019

Date 24-27 November

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au

Corrosion and Prevention 2019 will bring together leading researchers and industry practitioners who combat corrosion daily. Diverse technical streams will showcase the latest developments in corrosion, ranging from fundamental corrosion science to hands-on application.

Space Systems Breakfast Seminar

Date: 28 November 2019

Location: Lot Fourteen, Adelaide

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

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

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

Date: 26 – 29 November 2019

Location: Nagoya, Japan

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

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

2020

AIDN National Defence Industry Gala Dinner 2020

Date 19 February 2020

Location QT Hotel Ballroom

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

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

Certificate IV in Responding to Organisational Complexity | Adelaide

Date 19-21 February, 2020

Location to be confirmed

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

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

Certificate IV in Responding to Organisational Complexity | Canberra

Date 24-26 March, 2020

Location to be confirmed

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

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

Asia-Pacific Security Innovation Summit

Date 16-17 April, 2020

Location Queenstown, NZ

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

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

AusCERT 2020

Date: 02-05 June 2020

Location: The Star, Gold Coast

Website: <https://www.auscert.org.au/giveaway/>

The AusCERT Conference is the oldest information security conference in Australia. Each year, we attract in the vicinity of 800 participants and approximately 50 sponsors. AusCERT is hosting more than 50 speakers at AusCERT2020, as well as an array of tutorials, workshops, networking events & much more.

Rotortech 2020

Date 16-18 June 2020

Location Royal International Convention Centre, Brisbane

Website www.rotortech.com.au

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

43rd COSPAR Scientific Assembly

Date 15 – 22 August 2020

Location International Convention Centre Sydney

Website www.cospar2020.org

The Australian space research community enthusiastically extends the invitation to you, to meet with us for COSPAR 2020, and in so doing to forge the friendships and opportunities that will connect space research for global impact. The 2020 Assembly will combine the latest in space research findings with activities designed to enrich the global space research community – including helping equip our future leaders, and workshoping with space industry – and inspire the next generation of scientists and engineers.

Land Forces 2020

Date 01-03 September 2020

Location Brisbane Convention Centre

Website www.landforces.com.au

The biennial LAND FORCES exposition is an international industry event to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific. The Land Forces 2020 team is now setting about ensuring the event will achieve its goals of providing an effective platform for the exchange of ideas on key land forces issues and of taking Australian industry to the world

2021

Avalon 2021

Date 23 – 28 February 2021

Location Avalon Airport

Website

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.