

# ADM

AUSTRALIAN DEFENCE MAGAZINE

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## DEFENCE WEEK PREMIUM EDITION



Scott Morrison and the Minister for Defence Industry Melissa Price speak to the media during a visit to RAAF Base Tindal in February. DEFENCE

## PM UNVEILS UPDATED DEFENCE STRATEGY AND FORCE STRUCTURE REVIEW

Prime Minister Scott Morrison has unveiled the government's updated Defence Strategy and Force Structure Review for the next 10 years.

EWEN LEVICK | SYDNEY

“The Government has directed Defence to implement a new strategic policy framework that signals Australia's ability – and willingness – to project military power and deter actions against us,” PM Morrison says in his foreword. “Under this new framework, Defence's strategic objectives are to deploy military power to shape Australia's strategic environment, deter actions against our interests and, when required, respond with credible military force.”

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The 2020 Defence Strategy Update and Force Structure Plan pledges \$270 billion over the decade for military capabilities, including \$15 billion for cyber war, \$55 billion for land forces, \$75 billion for naval forces and \$65 billion for air. A further \$7 billion is earmarked for space capabilities.

Interestingly, the strategy does away with the two per cent GDP target for the Defence budget even as spending is forecast to reach that benchmark next year, for a total of \$575 billion over the decade.

“The Defence Budget has been decoupled from GDP forecasts to avoid the need for adjusting Defence’s plans in response to future fluctuations in GDP,” the report says.

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**“WE ARE EXPANDING OUR PLANS  
TO ACQUIRE LONG-RANGE MARITIME  
AND LAND STRIKE CAPABILITIES”**

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The Strategic Update maintains that the 2016 White Paper remains relevant, but certain trends have accelerated in ways ‘that were not anticipated.’ It refocuses the ADF on Australia’s region and does away with the previous assumption of a 10-year ‘strategic warning time’ for a major conventional attack against Australia.

“Australia’s immediate region is also the area in which we should be most capable of military cooperation with the US,” the report says. “Should circumstances require it, this is also the region in which Australia needs to be capable of leading military operations.”

The strategy includes the purchase of an unspecified number of Lockheed Martin AGM-158C long-range anti-ship missiles (LRASMs) for a cost of \$800 million. The missiles will be mounted on Super Hornet aircraft, with training to begin from next year.

“We are expanding our plans to acquire long-range maritime and land strike capabilities, and to invest in more highly integrated sensors and weapons,” PM Morrison said.

LRASMs use gross target cueing data to find and destroy pre-defined targets, meaning they remain effective in operational environments characterised by advanced electronic warfare and reduced or eliminated access to satellites – environments the ADF expects to face in conflict with a powerful adversary.

The shadow of that powerful adversary loomed over PM Morrison’s speech.

“There is a new dynamic of strategic competition, and the largely benign security environment Australia has enjoyed – roughly from the fall of the Berlin Wall to the Global Financial Crisis – is gone,” PM Morrison said.

The report highlights the increasing likelihood of a war between the US and China.

The updated strategy also includes funding for hypersonic missile research. BAE Systems Australia is already involved in US hypersonic programs, leveraging world-leading guidance and control technologies developed through previous collaborations.



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**L3HARRIS**

"[We] must be able to hold potential adversaries' forces and infrastructure at risk from a greater distance, and therefore influence their calculus of costs involved in threatening Australian interests," the report says. "We must improve our ability to deliver these effects without seeking to match the capability of major powers."

**ADM Comment:** The update will no doubt be welcomed by strategists, particularly PM Morrison's commitment to increase the ADF's ability to compete in the grey zone, or below the level of traditional armed conflict. This is an arena in which China excels.

It is also a potent investment in more near-term capabilities for the ADF, as ASPI's Peter Jennings observed in comments to the ABC, rather than relying on large ships and submarines that will be delivered post-2030. It quickly increases Australia's options should circumstances require the use of force.

However, the updated strategy should not come at the expense of investments in other arms of Australian power. The government is concerned with preventing China from expanding its reach into the South Pacific, particularly through the construction of military bases in small island states. The report says Defence will 'invest in relationships across the Pacific' to counter this, yet the government has voluntarily weakened Australia's influence in those same states: it is unwilling to listen to a chorus of Pacific complaints over Australia's contribution to climate change, and increases in defence spending are massively outpacing investments in regional aid and diplomacy.

The report does flag the need for inter-agency cooperation: "Defence must be better prepared to respond to these activities, including by working more closely with other elements of Australia's national power."

Yet if those elements are underfunded relative to the military, Defence will find it more difficult to harness their strengths as a Whole of Government response.

If China offers a sinking island state a financial lifeline in exchange for allowing PLAN submarines to dock, what is Australia's counteroffer? \$800 million worth of LRASMs can't solve that problem. Defence is not the only government department able to mitigate the geopolitical risks facing Australia: not every problem is a nail and not every solution is a hammer.

More coverage on these documents will be available in coming days and weeks as the ADM team sift through the details.

## PEOPLE ON THE MOVE

The inaugural CEO of Saudi Arabian Military Industries (SAMI), Dr Andreas Schwer, has been appointed Chairman of the Melbourne-based industrial-scale additive manufacturing company Titomic. The news comes just days after Titomic announced the appointments of Dag W.R. Stromme, a former Managing Director of Morgan Stanley; and Humphrey Nolan, an experienced leader in the global industrial and distribution industries.

Engineers Australia has announced the appointment of Jane MacMaster to the newly-created role of Chief Engineer. CEO Dr Bronwyn Evans said the Chief Engineer will lead Engineers Australia's engagement and policy discussion with industry, government, academia and other key stakeholders. MacMaster has a wealth of engineering experience gained in Australia and internationally, including senior systems and design engineer roles for BAE Systems Australia, for various aerospace and defence programs including a supersonic ship self-defence system project for NATO.

# AIRBUS CONFIRMS SPECIAL FORCES HELICOPTER BID UNDER LAND 2097

Two contenders have officially broken cover on the Special Forces helicopter requirement under Land 2097 Phase 4; Airbus Australia Pacific (Airbus AP) and Babcock Australia.

KATHERINE ZIESING | CANBERRA

ADM has previously reported on Babcock's offering of the Bell 429. Airbus confirmed that they will be offering their H145M platform with the support of a number of Australian suppliers to support their Australian Industry Capability (AIC) approach.

"The H145M is a proven mature helicopter and its got about five million hours of heritage that has been slowly developed over the years," Andrew Mathewson, MD Airbus AP said to ADM. "The reason I mention that, of course, is that we know that the customer is after an off-the-shelf capability and we can offer that. This is an aircraft that's been used by hundreds of customers around the world.

"The M version specifically though is a military version. It's being used by the German Special Forces. We in Airbus provide aircraft from Europe. The engineering that supports this capability is through the engineering that comes out of Donauwörth in Germany and one of the very happy end users of the H145M is the German Special Forces.

"There are a number of other nations that have bought the military version but they're probably the benchmark because and Germany's achieving a very impressive 99 per cent mission availability with the aircraft.



Airbus confirmed that they will be offering their H145M platform.

AIRBUS



"It's a really natural fit into the special operations community here because of its size and capacity."

The Program Office has made it very clear that they want something commercial off-the-shelf (COTS) which can be supported through the civil aviation environment. Airbus AP is looking to leverage the existing civil network in the region to support the military variant in Australia.

"The H145 and the H145M is the latest version on the BK117 family of aircraft and this stems all the way back to the old BO105," explained Laurie Alexander, Senior Sales Manager Military Helicopters, Strategy Sales and Marketing Airbus AP to ADM. "So it's really been developed over quite a few decades, this platform.

"We've got about 1,600 that have been delivered worldwide and I think there's about 1,400 of that family still flying around the world. For instance, in North America we've got over 700 of those aircraft, most of which are in service with the US Army. We've got 470 of those on order.

**"WE DON'T HIDE FROM THE FACT  
THAT BOTH THE TAIWAN AND  
TIGER WERE SLOW TO MEET  
THEIR OPERATIONAL OBJECTIVES"**

"In the Southeast Asian region, specifically on the H145, because it's a newish version of the aircraft – it came out in 2015 – we've only got a relatively small amount of those aircraft flying around the region. We've got a couple in NZ and we've got one being operated in Queensland in Mackay, for offshore pilot transfer work, along with three operating in PNG.

"But globally this aircraft has quite a strong footprint and that's quite good for the number of airframes in operation. It also means that the supply, the support solution for the helicopter is mature, and as Andrew alluded to, this aircraft is being used by the German special forces is achieving very good metrics, and it's got very good performance for the platform itself.

"But the key on it there is that it's also testing and proving the support system, so we can show in offering this platform it's not only a high performance aircraft to meet the requirements of the special forces, it's going to rock up, it's going to do the job. There's a high degree of certainty in the support of the aircraft moving forward."

Matthewson is also open about the issues the company has faced on both the Taiwan and Tiger fleets over the years and how it could affect the competition.

"We don't hide from the fact that both the Taiwan and Tiger were slow to meet their operational objectives in terms of being introduced into service," Matthewson said. "The difference with this aircraft type is it's extensively used and it will leverage the civil pool of parts. So unlike most military aircraft where Defence buys the spares and then they own the spares and then the spares have to go back to wherever that component will be repaired.

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"These spares will be in existence for support to all aircraft around the world, and what that means is that you don't suffer the same challenge in terms of supply chain. The supply chain is assured because it's providing the same components to a number of customers around the world and you don't end up also having the difficulty of having to track specific serial numbers, they're dynamic components, as you do with other aircraft types.

"Defence is slowly moving into this way of supporting its aircraft. And there are a number of other platforms already that have a shared pool of spare components."

## AIC

Airbus AP is also on board with the AIC emphasis coming from government. Their team includes Safran Helicopter Engines for engine support, QinetiQ Australia for verification and validation work and mission trainers, Toll Helicopters, Rafael, Thales Australia, Sigma Bravo for mission planning and a company called Helicopter Logistics from WA. Further companies will be announced at a later point, ADM understands.

"We want to partner with Helicopter Logistics as a loyalty partner so that when these aircraft, if we're successful, are operating in the west in support of special operations, we'll have a footprint on the ground to provide that direct support, so that Defence doesn't have to have a separate logistics arrangement in place because industry will be able to cover that off," Matthewson explained to ADM.

"We've worked really hard to develop a really comprehensive team of companies that will contribute to this. We want to offer our customer the greatest agility in how they utilise and adapt this aircraft to their future use. In this instance, we're using a teaming agreement to complement the Airbus AP offering.



1,600 of the helicopters have been delivered worldwide.

AIRBUS

“Now, of course, we’ll always be there to make sure that the aircraft is safe and air-worthy and provide that support but we do think there’s great opportunities to transfer technology to Australia around this sort of capability so that we create the sovereign industrial capability that government is seeking to create here. We’ve been working with a university as well to develop new innovative ways of developing capability and we want to open up to our partners, through the global supply office construct, opportunities to export that technology from Australia to overseas.”

## OTHER CONTENDERS

At this point, Leonardo’s Augusta Westland would not comment on the program except to say that ‘it is a program of interest for them’. Sources close to the program have informed *ADM* that the team would have trouble meeting the AIC requirements and are expected not to bid when bids go in the box on July 10.

*ADM* also understands that the local Bell network support company in Hawker Pacific is also offering the Bell 429 with training support from CAE. However, once again the company would not comment on the record about the details of their offering.

Interestingly, the company did release the fact that its Bankstown Maintenance Repair and Overhaul (MRO) facility has expanded its CASA 145 approval with the addition of Bell 429 Helicopters last month.

As an authorised Bell Customer Service Facility (CSF) for 15 years, Hawker Pacific Bankstown has supported multiple Bell aircraft (505, 407, 412 and 429) under its previous CASA Part 30 approval with line and base maintenance over the years, including modifications, avionics upgrades, CR&O and complete refurbishments. In addition, the company supports various fixed wing aircraft such as Beechcraft and Dassault Falcon Jets.

VP Regional Operations Pacific, Ian D’Arcy, says the Bell 429 certification complements Hawker Pacific’s other enhanced service capabilities. These include the company’s Part 145-approved and AS9100 Rev D Brisbane-based manufacturing and machining facility, as well as its rotary blade repairs facility, RBI Hawker, which is due to commence Australian operations later this year.

“The addition of Bell 429 Helicopters to the Bankstown Part 145 approval will certainly support this facility for future enhanced commercial and military capabilities,” D’Arcy said.

**“WE WANT TO OFFER OUR CUSTOMER THE GREATEST AGILITY IN HOW THEY UTILISE AND ADAPT THIS AIRCRAFT”**

## MOST READ ONLINE AT [WWW.AUSTRALIANDEFENCE.COM.AU](http://WWW.AUSTRALIANDEFENCE.COM.AU)



1. [Boeing to replicate AIC model for Apache bid](#)
2. [The future of Phalanx in the RAN](#)
3. [Defence signs new munitions contracts with Thales and NIOA](#)
4. [Lockheed Martin completes Aegis upgrades on destroyers](#)
5. [Aurecon to remediate PFAS at HMAS Albatross](#)

# NIOA AND THALES SHARE BENALLA (AND MAYBE MULWALA)

**The \$1.1 billion 10-year Strategic Domestic Munitions Manufacturing (SDMM) contract with Thales Australia for the continued management and operation of Australia's munition factories in Benalla (Victoria) and Mulwala (NSW) announced this week has some surprises.**

**KATHERINE ZIESING | CANBERRA**

Thales has invested more than \$20 million in research and development and \$25 million in capital infrastructure over the last 10 years at the Benalla and Mulwala facilities and will invest further to develop new and world leading products for the ADF, according to the company.

They employ approximately 650 highly skilled staff between its two Australian Government owned facilities in Benalla and Mulwala. It exports products to 17 countries globally.

In 2019, Thales spent \$113 million with its Australian suppliers for munitions and small arms, supporting 414 direct jobs in the supply chain. This contract will enable Thales to secure more than \$450 million in export and non-ADF orders over the coming 10 years.

"Mulwala and its sister facility in Benalla are the home of munitions manufacturing in Australia, generating vital job opportunities in regional NSW and Victoria," Minister for Defence Senator Linda Reynolds said.



This latest series of agreements relies on a sole source arrangement for Mulwala but sees Benalla opened up with the addition of NIOA.

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"This new agreement not only reinforces the 20-year strong partnership between Defence and Thales Australia, but also provides job certainty for more than 650 highly-skilled workers at these factories. The Government's effort to ensure job security, especially in regional areas, is vital for the recovery of the Australian economy."

Alongside this announcement was the news that Thales would be getting a neighbour at the Benalla facility with NIOA Munitions signing a 10-year tenancy contract at the facility as well.

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**"BOTH THALES AND NIOA WILL  
BRING A COMPETITIVE TENSION  
TO THE SITES GOING FORWARD"**

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"NIOA is already pursuing export opportunities from the new tenancy at Benalla and is well placed to manufacture munitions for use by the ADF in the future," Minister Reynolds said.

"This contract will establish NIOA as a tenant alongside Thales Australia, where together they will provide opportunities for domestic manufacturing while enhancing supplies of key munitions for Defence."

NIOA's new footprint at the Commonwealth Government-owned facility in north-eastern Victoria will commence from July 1, with the focus being on the production of medium and large calibre munitions for the ADF while bringing another 100 jobs to the region.

Revitalisation of the Benalla facility and adjacent landholdings is part of a \$130 million capital investment in domestic munitions and explosives manufacturing by NIOA over the next five years. NIOA's investment includes a \$60 million artillery shell forging plant in Maryborough, Queensland with joint-venture partner Rheinmetall Waffe Munitions.

"This is also central to strengthening the nation's self-sufficiency in defence manufacturing to deliver the requirements of the ADF warfighter while maximising the use of the government factory at Benalla well into the future," Rob Nioa, NIOA founder and MD said.

"Sovereignty is not just about defence industry work in Australia. Sovereignty is about that work and the control of that work resting within our country. Australia's national interests are always best served when such important projects for our national security are done in a way in which the programs are controlled within this country.

"The ownership, the intellectual property, the company's headquarters, the jobs, the investments, the taxes, the profits and the control remain within Australia."

While the initial focus at Benalla is to upgrade the infrastructure capability, NIOA has plans, subject to, government approval to produce 155mm Assegai Projectiles, 30mm ammunition for the Boxer vehicle, hand grenades, aircraft bombs and artillery fuses.

The deal, directly between the Commonwealth and NIOA, will see NIOA take over almost half of the Benalla facility. As previously reported by ADM, NIOA has purchased a 300 acre site right door to Benalla for further possible opportunities.

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NIOA also confirmed to ADM that they will source their energetics from Mulwala and expects that there will be an exchange of goods and services between the two companies.

**ADM Comment:** There have been a few failed efforts over the years to compete the facilities at Mulwala and Benalla. This latest series of agreements relies on a sole source arrangement for Mulwala for another decade essentially but sees Benalla truly opened up in a competitive sense with the addition of NIOA.

For the better part of two decades, Thales has made investments at both the government owned contractor operated (GOCO) sites that it acquired when the government sold off ADI. But there have still been questions about the value for money equation that have not balanced with Australian Industry Capability or Defence Sovereign Industry Capability Priorities. It depends on your viewpoint.

The recent report from Thales about their AIC impact last month does make for impressive reading. As Thales Australia MD Chris Jenkins pointed out in his ADM Congress speech in February this year looking at ADM's own Top 40 data, Thales' turnover has increased while their workforce has remained relatively steady over a decade. This was due to the company working with so many SMEs in their supply chain, he explained.

Both Thales and NIOA will bring a competitive tension to the sites going forward. This can only be a good thing as the ADF focuses on what it truly means to focus on a sovereign supply chain that also demonstrates value for money to taxpayers.

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## PACIFIC PARTNERS – AN ALLIANCE THAT WILL NEVER QUIT

**As the world enters its third decade of the 21st century, I believe nation-to-nation ties are more important now than ever. The bond shared between Australia and the US is unbreakable, transcending formal military alliances.**

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**MAJOR MATTHEW ALAN HOUSE, US ARMY | OPINION**

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This relationship builds upon generations of enhanced rapport, interconnectedness, and strength. Standing shoulder to shoulder, Australia and the US have a perennial alliance dedicated to the principles of individual freedom.

This bond between our two great nations was forged in battle during WWI. This seminal engagement was not at Gallipoli, where Australian soldiers (diggers) instilled the nexus of Australia's national identity in the personification of the Anzac spirit.

Nor was this fight the Second Battle of the Marne, where the American Third Infantry Division's soldiers (doughboys), earned their special designation as the "Rock of the Marne" attributed to the Division's actions there. The action that built the foundation for the enduring military partnership between Australia and the US was at the Battle of Hamel.

While Hamel is probably one of the lesser known engagements during the Great War, it marked the genesis of Australians and Americans standing together in times of conflict. 102 years ago, on July 4, 1918—coincidentally America's 142nd birthday—on the outskirts of the small commune of Le Hamel in northern France, several American infantry companies fell under the command of Australia's most revered military leader, General John Monash.

Ultimately, the Battle of Hamel lasted about 90 minutes as General Monash's men vanquished the Germans. But this short clash came with a heavy toll with over 1,400 Australians and Americans killed or wounded—approximately 15 casualties per minute during the assault. Two diggers and one doughboy were awarded their nation's highest military honour—the Victoria Cross and the Medal of Honor, respectively—for acts of gallantry, bravery, and valour.

This victory cemented the present-day alliance and established its first achievements. The Battle of Hamel was the first-time diggers and doughboys fought side by side in the trenches under the constant debilitating and lethal effects of mustard gas and artillery explosions.

It also marked the first time in the history of the US Army that American troops fought under the command of a foreign officer. This cornerstone in our relationship, born during a bloody conflagration, established the deep connection that is shared between our two militaries that holds true to this day.

Australian and American comrades-in-arms fought bravely on the peninsula of Korea, in the jungles of Vietnam, in the deserts of Iraq, and on the formidable and varied terrain of Afghanistan.

Today, as the global strategic and economic centre of gravity shifts to the Indo-Pacific region, our two nations continue to strengthen our commitment to one another. We engage in complex, combined-warfighter training together nearly every year in the biennial military exercises Talisman Sabre and Hamel (yes, that Hamel).



Australian, American and allied ships sail during Exercise Talisman Sabre 2019.

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We value and trust the Australian military implicitly, and are honoured to have some of your senior leaders serving as members of our staffs at US Indo-Pacific Command, US Army Pacific Command, Operation Resolute Support in Afghanistan, and Operation Inherent Resolve.

Exchange and liaison military officers and non-commissioned officers from both countries also serve in a multitude of tactical to strategic units throughout Australia and the US—a testament to the level of mutual trust and confidence each nation has in the other’s talented and professional warfighters.

**“OUR RELATIONSHIP IS THE  
DEFINITION OF EQUAL AND HIGHLY  
CAPABLE PARTNERS THAT INEXORABLY  
COMBINE TO BE THE PREEMINENT  
FIGHTING FORCE IN THE ASIA-PACIFIC”**

The depth and breadth of our relationship is further underscored in bilateral security cooperation activities, which are second to none on the face of the globe. From collaborative research and development activities, to shared science and technology undertakings, our militaries are on the cutting edge of far-reaching advancements in electronic warfare, hypersonics, and autonomous systems/artificial intelligence, to name a few.

And from subject matter expert exchanges, to co-development materiel opportunities, we are trailblazing innovations and initiatives aimed at closing the “tyranny of distance” between our sovereign borders. By all accounts, our relationship is the definition of equal and highly capable partners that inexorably combine to be the preeminent fighting force in the Asia-Pacific.

It is an indomitable alliance that will endure and persevere into perpetuity. Pacific Partners means the united fortitude of our militaries, together, is unshakable and remains a model not just for the greater Pacific region, but for the entire world. No matter the challenge, Australia and the US can depend on each other, just as the diggers and doughboys did 102 years ago.

*About the author: Major Matthew Alan House, US Army, is currently posted at the US Embassy in Canberra in the Office of Defence Cooperation. He previously served in Germany, Iraq, Japan, Vietnam, and across the US.*



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# LOCAL KNOWLEDGE IN SIMULATORS UPGRADE

**The four F-35A Full Mission Simulators (FMSims) currently operational at RAAF Base Williamtown have been successfully upgraded by local experts to support the continued build-up of pilot training at No. 3 Squadron and No. 2 Operational Conversion Unit.**

ALISHA WELCH | DEFENCE

**L**ed by Defence's F-35A industry partner Lockheed Martin Australia (LMA), the software in the FMSims was upgraded to align with the latest Operational Flight Program (OFP) installed in the aircraft.

Training Systems Manager at the Air Combat Systems Program Office (ACSPO), Harley Doughty, said this was an important step because it was critical the training devices and aircraft operating systems remain aligned.

"Before the COVID-19 pandemic, the F-35 Joint Program Office (JPO) in the US was planning to send an installation team to all sites around the world with fielded FMSims to complete the upgrade," Doughty said. "The upgrade team would have comprised at least three US personnel, including a test pilot. The capability of local simulator technicians from LMA has been growing since 2018, when the F-35A precinct opened at Williamtown and the first FMSims pair was installed and declared ready for training in early 2019."



The software in the FMSims was upgraded to align with the latest Operational Flight Program.

DEFENCE

Doughty said the capabilities of the local team enabled the successful completion of the software installation without the physical presence of the American team, with reach-back support provided by the US, over a two-week period in May.

"All four F-35A FMSims have now been returned to operational service," Doughty said. "With the freeze on international travel, had a local support option not been available, our FMSims would have been out of alignment with the software configuration of the aircraft. This would have been further compounded when subsequent OFP software upgrades were released."

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**"ALL FOUR F-35A FMSIMS  
HAVE NOW BEEN RETURNED  
TO OPERATIONAL SERVICE"**

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He said the successful local upgrade was a precedent for future upgrades and could potentially save Australia hundreds of thousands of dollars in travel and support costs over the life of the program.

Officer Commanding ACSPO, Group Captain Al Wherrett, said Defence had developed a strategy to ensure a safe and effective transition of F-35A training from the US to Australia.

"The F-35 Program has been conducting F-35 training in the US for more than six years," GPCPT Wherrett said. "Australia has leveraged the knowledge from the US experience to establish and grow the sovereign Australian F-35A training system over the past two-to-three years. Simulation plays a key role in F-35A training and Defence is working closely with the F-35 JPO, LM and LMA to ensure training and courseware delivery meets our capability and schedule requirements."

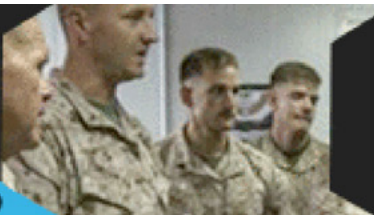
LMA's Australian F-35 In-Country Lead, Andy Doyle, said LMA had been growing Australian industry expertise in F-35A training support roles at Williamtown since 2018, including pilot and maintenance instructors, courseware developers, simulator technicians and information systems support.


"The software upgrade to the simulators provided a great opportunity for our team to apply their knowledge and skills, and has ensured that the FMSims continue to match the F-35A aircraft software and provide maximum training benefit to the RAAF," Doyle said.

Ten F-35A FMSims will eventually be installed – six at Williamtown and four at RAAF Base Tindal – supporting sovereign F-35A pilot training for the life of the capability.

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# BGIS WINS BASE SERVICES AWARD

**BGIS has been named the Estate & Infrastructure Base Services Contractor of the Year at the 2019 Department of Defence Base Services Contractor Awards.**

The annual award recognises the contractor that has demonstrated a ‘true partnered approach to service delivery, and key behaviour principles such as respect, trust, accountability, integrity, fairness and commitment.’

“BGIS has consistently found ways to reduce costs and drive improved value for the Department of Defence,” Steve Grzeskowiak, Deputy Secretary of Estate and Infrastructure, said. Grzeskowiak announced the winners in an online award presentation.

“The team are constantly implementing initiatives that deliver real benefits in the long term, such as lighting upgrades at the Garden Island naval base, or engaging industry experts in asset auditing to improve accuracy of estate data, which helps significantly when planning for future works,” he added.

BGIS provides of facility management, trade and operational support services at 150 Defence sites across NSW.

“Our partnership with the Department of Defence extends back over 20 years, and is built upon a foundation of continuous improvement,” Brad Robbins, BGIS’ Managing Director – Operations, Defence and FMO, said. “On this contract, we have a dedicated team of more than 260 staff who have worked hard over the years to build a



BGIS provides facility management, trade and operational support services at 150 Defence sites in NSW.

SUPPLIED

**"THE TEAM ARE CONSTANTLY IMPLEMENTING INITIATIVES THAT DELIVER REAL BENEFITS"**

strong relationship with Defence, and this award is an endorsement of the team's consistent service excellence and vision to deliver best practice."

Indigenous engagement is a key priority for the Department of Defence, and the Base Services Contractor of the Year award also recognises BGIS for this: the organisation has engaged an Aboriginal business to provide workers for its cleaning services contract with Defence at a 43 per cent Indigenous employment rate.

## NSW COMPANY MOVES A STEP CLOSER TO IN-ORBIT SATELLITE INSPECTION SERVICE

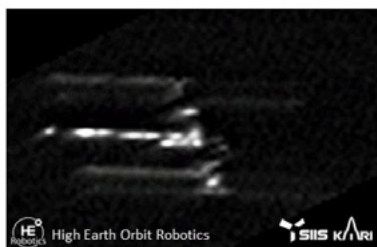
**High Earth Orbit Robotics (HEO Robotics) has released a proof-of-concept verification image of the International Space Station (ISS), using precision timed orbital predictions to control a camera on an Earth Observation satellite.**

The image was taken just days before SpaceX's Crewed Dragon docked with the ISS. This is only the second time an Earth Observation satellite has been used to image another spacecraft. On this occasion, HEO Robotics used the Korean Aerospace Research Institute (KARI)-owned Kompsat-3 satellite through their commercial partner, SI Imaging Services (SIIS).

HEO Robotics' software provided millisecond accuracy to take the image, to compensate for the ten km/s relative closing velocity between the Kompsat-3 and the ISS.

Side by side image of real image (left) vs computer simulation (right)

Our image is "squashed" due to the relative speed of the ISS to our satellite



Real image: credit HEO Robotics, KARI, SI Imaging



Computer simulation: credit HEO Robotics, NASA

This is only the second time an Earth Observation satellite has been used to image another spacecraft.

HEO ROBOTICS



The image was taken from a distance of over 300 km.

HEO Robotics is now working towards higher resolution verification images and qualifying additional Earth Observation satellites to expand its space-based spacecraft imaging capabilities.

**“THIS IS ONLY THE SECOND TIME AN EARTH OBSERVATION SATELLITE HAS BEEN USED TO IMAGE ANOTHER SPACECRAFT”**

The image is part of HEO Robotics' invitation-only customer pilot program, which collects performance analytics from multiple orbital images of customer-operated satellites. The resulting insights will help customers confirm satellite identity, perform external checks of damage, and verify orientation of deployables, spin-state and position, insights that are often either slower to achieve by ground-based systems within the timeframes that HEO Robotics will be able

to achieve, or for many orbital types, completely impossible.

HEO Robotics is working towards a 2021 release of a fully operational service, in time to provide solutions for the tens of thousands of satellites planned for launch over the next several years.

The news comes as the government and Defence aim to improve Australia's space domain awareness capabilities. Last week, for the first time, Defence's Wide Area Surveillance System Program Office (WASSPO) hosted a webinar for the regular industry briefing program.

With a focus on the Space Domain Awareness (SDA) program, the presenters from CASG and RAAF went through the range programs they have on the books and the path forward for the domain. More coverage is available here.

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# FORTHCOMING EVENTS

## ADM EVENTS

More detail on ADM Events can be found on our [dedicated website](#).

- [ADM Women in Defence Awards](#) – 23 October 2020 | National Arboretum
- [Defence in the North](#) – 28 October 2020 | Darwin Convention Centre
- [ADM Space Summit](#) – 2 December 2020, Hyatt Hotel | Canberra
- [ADM Congress](#) – 3 February 2021, Hyatt Hotel | Canberra

## 2020 INTERNATIONAL ROUNDTABLE WORKSHOP – BRISBANE

**DATE** 27 August 2020  
**LOCATION** QUT Brisbane, Gardens Point Campus, Brisbane City  
**WEBSITE** <https://iccpm.com/events/2020-rts-brisbane/>

The International Centre for Complex Project Management (ICCPM) invites project leaders to participate in the 2020 International Roundtable Series. Workshops will be held in key Australian locations and internationally.

## AUSCERT 2020

**DATE:** 15-18 September  
**LOCATION:** The Star, Gold Coast  
**WEBSITE:** [www.auscert.org.au/giveaway](http://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.

## 2020 VERNON PARKER ORATION AND DINNER

**DATE** 13 October 2020  
**LOCATION** Hotel Realm, Canberra  
**WEBSITE** [navalinstitute.com.au/2020-vernon-parker-oration-and-dinner](http://navalinstitute.com.au/2020-vernon-parker-oration-and-dinner)

Sir Peter Cosgrove has kindly agreed to deliver the 2020 Vernon Parker Oration on 17 June. Sir Peter was Governor-General from 2014-2019 and former Chief of the Defence Force. In January 2020 Sir Peter accepted the voluntary role as chairman of the Business Council of Australia's Community Rebuilding Initiative in response to the 2019/20 bushfires.

## **2020 ANI GOLDRICK SEMINAR – REMOTE AND AUTONOMOUS SYSTEMS AT SEA**

**DATE** 13 and 14 October 2020  
**LOCATION** Adams Auditorium, Australian Defence Force Academy  
**WEBSITE** [navalinstitute.com.au/latest-ani-events-and-archive/](https://navalinstitute.com.au/latest-ani-events-and-archive/)

The 2020 ANI Goldrick Seminar will discuss a wide range of issues around Remote and Autonomous Systems at Sea. It will comprise six sessions over 1.5 days covering an overview of Remote and Autonomous Systems at Sea (RAS); RAS in the Littoral Domain; RAS in the Maritime Air Domain; RAS in the Undersea Domain; Measuring Effective, and Legal and Ethical Considerations.

## **ROTORTECH 2020**

**DATE** 14-16 October 2020  
**LOCATION** Royal International Convention Centre, Brisbane  
**WEBSITE** [www.rotortech.com.au](https://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.

## **10TH BIENNIAL SIA CONFERENCE 2020**

**DATE:** 17-18 November 2020  
**LOCATION** Hotel Realm, Canberra  
**WEBSITE** <https://www.submarineinstitute.com/sia-conferences>

The 10th Biennial SIA Conference will be held 17-18 November 2020 at the Hotel Realm, Canberra. This year's theme is 'Submarine Build and Sustainment Programs: The Strategic Nature of Reliable, Sovereign Supply Chains'. The Call for Presentations is available on the website.

## 2021

**43RD COSPAR SCIENTIFIC ASSEMBLY**

**DATE** 28 Jan-4 Feb 2021  
**LOCATION** International Convention Centre Sydney  
**WEBSITE** [www.cospar2020.org](http://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 workshopping with space industry – and inspire the next generation of scientists and engineers.

**LOCATE21**

**DATE** 30 March – 1 April 2021 (rescheduled dates)  
**LOCATION** Brisbane Convention and Exhibition Centre  
**WEBSITE** <https://www.locateconference.com/2021/>

Due to COVID-19, Locate20 has been rescheduled for Locate21 happening in Brisbane March 30 – 1 April 2021. The event will focus on how geospatial technologies are intersecting with business, Government and defence to address national challenges. It's Australia's premier spatial conference with the inclusion of over 50 inspiring thought-leaders including speakers from government, academia, the defence force, technology, mining, natural resources and more. We believe this conference is of interest to defence personnel.

**LAND FORCES 2021**

**DATE** June 1-3 2021  
**LOCATION** Brisbane Convention Centre  
**WEBSITE** [www.landforces.com.au](http://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.



## PROJECT AND PROGRAM MANAGEMENT SYMPOSIUM

**DATE** 10 – 12 August 2021 (rescheduled dates)  
**LOCATION** Canberra Rex Hotel  
**WEBSITE** <https://www.pgcsymposium.org.au>

Foresight is more valuable than hindsight! PGCS 2020 is designed to help project and program managers, and their sponsors and senior managers, develop the skills and understanding needed to deliver projects success in the next decade. Creating the organisational capability needed to underpin the consistent delivery of successful projects in the 2020's starts at the top. Now in its 8th year, PGCS 2020 will focus on ways to build the foundations needed to create project and program success

## AVALON 2021

**DATE** 23-28 November 2021  
**LOCATION** Avalon Airport

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.

## 2022

## PACIFIC 2020 BECOMES INDO PACIFIC 2022

**DATE** May 2022  
**LOCATION** Sydney Convention Centre  
**WEBSITE** [www.pacificexpo.com.au](http://www.pacificexpo.com.au)

Reflecting the increasing importance of the Indo Pacific region to the entire world, the PACIFIC International Maritime Exposition will become the INDO PACIFIC International Maritime Exposition from 2022. Initially, there will be a new timing. Instead of the previously planned PACIFIC dates in August 2021, INDO PACIFIC will now, in the wake of COVID 19, initially be held during May 2022.

## VARIOUS DATES

## NSW DEFENCE INNOVATION NETWORK'S REGIONAL ROAD SHOW

**DATE:** Various**LOCATION:** Various**WEBSITE:** [defenceinnovationnetwork.com/din-regional-road-show-2019-20](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.

## ICCPM ONLINE WORKSHOPS

**DATE** Various**LOCATION** Online**WEBSITE** [www.iccpm.com/online-workshop-webinars](https://www.iccpm.com/online-workshop-webinars)

Designed to support project teams who are experiencing new challenges due to COVID-19 concerns – Learn how to mitigate new risk levels, effectively deploy virtual teams, manage messy problems and more. ICCPM Online Workshops and Webinars provide you with an easily accessible and engaging option to continue your training from anywhere in the world. These options provide you and your team with a conducive learning environment to support your complex project success.