

ADM

AUSTRALIAN DEFENCE MAGAZINE

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DEFENCE WEEK PREMIUM EDITION



An Australian Light Armoured Vehicle is seen driving to the Wide Bay Training Area, Queensland.

DEFENCE

ARMY RELEASES VEHICLE UPGRADE ROADMAP

The Land Combat and Protected Vehicles and Technology Upgrades Plan recently released by the Commonwealth offers a future technology roadmap at an industrial capability level.

JULIAN KERR | SYDNEY

Published on 13 August, the plan does not focus on any single industry organisation or any specific future or ongoing Defence tender process.

Rather, it outlines the underlying critical industrial capabilities and enablers necessary for Australian industry to upgrade, update and modify land combat and protected vehicles, including on-board technologies.

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"This will be essential if current and future ADF fleets are to take advantage of the technological evolutions enhancing survivability, situational awareness, lethality and mobility," the plan states.

Australia seeks to have access to or control over certain elements of each of four vital industrial capabilities, and to support or influence related defence industry investment.

These capabilities comprise (in no particular order of priority or importance) protection technologies; integration, networking and communications; vehicle and systems upgrades; and sustainment.

**"THIS WILL BE ESSENTIAL IF
CURRENT AND FUTURE ADF FLEETS
ARE TO TAKE ADVANTAGE OF THE
TECHNOLOGICAL EVOLUTIONS
ENHANCING SURVIVABILITY"**

Within the 2021-2022 timeframe, Defence will improve how it communicates requirements to industry through a wide range of fora including briefings to State government and industry groups, the Land Environment Working Group (LEWG), Land Forces conference, project industry briefings, and specific project-related Australian industry workshops, the plan states.

Further, by the end of 2021 capability-based Land Force Support Models will be developed in collaboration between the Capability Manager (Chief of Army) and CASG in order to optimise proactive investments from both Defence and industry, and streamline activity.

"These support models are designed at Gate 0 and evolved throughout the Capability Life Cycle. Army will continue to work with CASG, Joint Logistics Command and industry to refine these models ahead of finalising capability support arrangements."

Within the initial three to five years of the plan, the design and development of sensors, autonomous and robotic systems, high-density power supplies, efficient vehicle transmissions, and alternative vehicle track materials was expected to become increasingly common.

Later technology evolutions for industry focus were forecast to include satellite communications on the move, high assurance cryptographic equipment, adaptive networking wideband waveform, and semi-automated context-based distributed information management systems.

Further anticipated areas for industry interest included composite and smart armour solutions for evolving ballistic and blast threats; combined arms teams simulation; and third/fourth generation active protection systems.



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HANWHA TO BUILD SELF-PROPELLED HOWITZERS IN GEELONG

The government has just announced that Hanwha Defence Australia (HDA) has been chosen to build 30 self-propelled howitzers for the ADF under a sole source smart buyer decision.

The Request for Tender will be released to preferred supplier HDA to build and maintain 30 self-propelled howitzers and 15 armoured ammunition resupply vehicles, and their supporting systems.

Minister for Defence Linda Reynolds said it marks a key step in progressing the project.

“Through this project, this Government is delivering the capability Army needs while creating local jobs in and around Geelong that will grow our highly skilled workforce,” Minister Reynolds said.

“This comes at an important time as Victoria deals with its latest outbreak of COVID-19.

“The acquisition of this capability will provide the ADF with the mobility, lethality and protection required to support Joint Force operations in the land domain.

“The self-propelled howitzers will be built in the Geelong region, with ongoing deep maintenance conducted in the same Australian facility to support the systems throughout their service life.”

“THE ACQUISITION OF THIS CAPABILITY WILL PROVIDE THE ADF WITH THE MOBILITY, LETHALITY AND PROTECTION REQUIRED”

The Request for Tender will progress this first phase of the Protected Mobile Fires capability.

“This project builds on our efforts to strengthen Australia’s Defence industry capability, and represents a program of continuous investment well into



A K9 self-propelled howitzer.

HANWHA

the next decade in the Geelong region,” Minister for Defence Industry, Melissa Price said.

“This project is expected to create up to 350 jobs to build and maintain the new vehicles. It will also provide significant opportunities in other areas such as transport and warehousing, as well as component manufacture and repair.

Senator for Victoria, Sarah Henderson said opportunities in the local Geelong area extend through the supply chain.

“These opportunities will include future mid-life upgrades, harnessing emerging technologies to enhance the protection, firepower and mobility of Australia’s protected mobile fires capability,” Senator Henderson said.

“The announcement of this next important stage of the Howitzer Defence Project is wonderful news for the people of Geelong and our city’s manufacturing sector.”

Land 8116 Phase 2, announced in the 2020 Force Structure Plan, is anticipated to commence in the late 2020s, delivering additional Protected Mobile Fires capability, and Land 8116 Phase 3 is anticipated to commence in the mid-2030s, delivering a mid-life upgrade that will provide an opportunity to incorporate emerging technologies.

HOBART CLASS SET FOR AEGIS UPGRADE

The Hobart Class destroyers are set to undergo an Aegis combat system upgrade, although the government has said work will not start until 2024.

The Hobart Class will also have an Australian developed interface installed to integrate the Aegis combat system with the rest of the ship’s systems.

“We recognise that advanced long range and hypersonic missiles and directed energy weapons require the ADF to continuously build robust air and missile defence capability options,” Minister for Defence Linda Reynolds said. “The Aegis combat system is the brain of Navy’s integrated air and missile defence capability.

“In the face of compressed timelines and to protect Australian forces, Defence requires the agility to sense, decide and take action against contemporary and future threats.

“DEFENCE REQUIRES THE AGILITY TO SENSE, DECIDE AND TAKE ACTION AGAINST CONTEMPORARY AND FUTURE THREATS”

“Recently at RIMPAC 2020, HMAS *Hobart* successfully conducted coordinated surface to air missile firing demonstrations using the current version of the Aegis combat system, demonstrating interoperability with the US and our ability to field air missile defence capabilities.”

The upgraded version of the Aegis combat system for the Hobart Class Destroyers will also be installed in the new Hunter Class frigates. The ships have already undergone some Aegis upgrades this year but the new program will see further integration work conducted with Australian specific requirements.

As part of the Government’s enterprise approach, the Australian Interface will be



Installation of the new Aegis combat system and Australian Interface in Navy's destroyers and frigates is planned to commence in 2024. DEFENCE

designed and developed by Saab Australia, leveraging their combat management system experience gained across the rest of Navy's surface fleet. The Australian Interface will also be common across both the Hobart and Hunter classes.

"By installing the latest Aegis combat system and developing the Australian Interface here in Australia, we are guaranteeing the development of a long term Australian combat management system capability," Minister Reynolds said. "This is not only a strategic Defence investment that will enhance the skills and grow a sustainable Australian combat system workforce that is over 200 strong over the next decade, but guarantees we have sovereign control of this key technology for our Navy fleet."

Defence will commence industry and state engagement to inform Government consideration in 2021 on the shipyard location to deliver these upgrades.

As stated, work in Australia to install the new Aegis combat system and Australian Interface in Navy's destroyers and frigates is planned to commence in 2024.

CCTV INSTALLED ON LHD LANDING CRAFT

CCTV has been installed on the first LHD Landing Craft (LLC).

The installation was a success for the Amphibious Combat and Sealift Systems Enterprise and was the result of cooperation between the Navantia Australia team, the Amphibious Combat and Sealift Systems Program Office (ACSSPO), and Naval Ship Management Australia, the asset class prime contractor for the Landing Helicopter Dock (LHD) program.



The new system is based on Power Over Ethernet rugged COTS cameras.

SUPPLIED

Navy personnel are also reportedly pleased with the new capability.

The first LLC was fitted with the cameras and passed the 'Set To Work' conducted by Navantia Australia engineers and Sofraco at the end of January.

The Navantia Australia team consisted of engineers from the Melbourne Design and Engineering Centre, supported by the LHD Field Engineering team in Sydney.

"I'm really impressed with how it's turned out. To get that level of capability more or less out of the box is excellent," Navantia Australia's Combat Systems Lead Aidan Crees said. "The camera feeds look really good and provide Navy with a fantastic capability of early hazard detection and visual monitoring of the engine room spaces."

The new system is based on Power Over Ethernet (POE) rugged COTS cameras and provides operators with a high resolution and simple interface to monitor hazards in the engine and jet rooms.

The term 'Set to Work' is used whenever a system is newly installed and being turned on for the first time or being started up after it has been down for maintenance. Set to Work is a test and activation process to check that the system is functioning correctly, checking for leaks or software bugs.

The remaining LLCs have since also had the CCTV capability installed and fitted in conjunction with the new Bulkhead Upgrade, also designed by Navantia Australia.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Submarines and manned-unmanned teaming](#)
2. [Benchmarking the French Army's model modernisation program](#)
3. [The Whiskey Project buy two ANZ businesses](#)
4. [Loyal Wingman breaks cover](#)
5. [Investment package announced for Australian defence industry](#)



Naval Group's workforce is expanding as sub construction approaches.

NAVAL GROUP

NAVAL GROUP TO OPEN NEW OFFICE IN PORT ADELAIDE

Naval Group Australia will open a new \$25 million office in Port Adelaide as it gears up for the move to the Attack class submarine construction yard.

The announcement came as Naval Group Australia welcomed its 250th employee as part of its ramp up of staff.

Naval Group Australia CEO John Davis said that the new facility would be opened in the coming months and represented a further step in the journey to Attack class submarine construction.

"With our workforce rapidly expanding we need an additional base as we prepare for the move to the submarine construction yard at Osborne," Davis said.

"Port Adelaide – with its strong heritage of waterfront industry and proximity to both Osborne and our Keswick office – is the perfect place for this new base.

"With more than 250 people now employed by Naval Group Australia, our local workforce is growing and we are seeing the benefits of this exciting program to the local community.

"We are looking forward to being part of the proud Port Adelaide community as our program rapidly ramps up ahead of the move to the submarine construction yard."

Naval Group Australia has embarked on what it calls an 'aggressive recruiting campaign' with the workforce expected to increase to over 1,700 direct jobs in 2028.

The new office space will be able to host up to 350 employees and provide access to local amenities including a creche, gym, cafes, shopping centre and other local businesses.

UNSW CANBERRA TO EXTEND COLLABORATION WITH CLEARBOX SYSTEMS

UNSW Canberra and Canberra based SME Clearbox Systems have been successful in securing additional Commonwealth funding to continue their collaborative research program.

The next phase of research will see experts from UNSW Canberra Space work alongside Clearbox Systems to study and identify opportunities for passive radio frequency (RF) signal monitoring to support capabilities in Space Domain Awareness (SDA).

“THIS COLLABORATION FURTHERS PROGRESS IN A PRIORITY AREA FOR THE AUSTRALIAN SPACE RESEARCH COMMUNITY”

The key activities undertaken will be focused on assembling prototype passive RF sensing hardware from commercial-off-the-shelf (COTS) components and analysing its performance.

The team will also advise on concepts and techniques for storage of passive RF sensing data in a way that would be compatible with the broad Space Situational Awareness (SSA) community.

UNSW Canberra Space researcher, Associate Professor Andrew Lambert said that it is expected that there will be at least a 20-fold increase in the number of active Low Earth Orbit (LEO) satellites in the next five years, and a similar increase in the total mass in low earth orbit.

“It is wise to develop a variety of capabilities to monitor their health and interaction. We are pleased to continue our collaborations with Defence related industry through the UNSW Defence Research Institute,” Prof Lambert said. “This collaboration furthers progress in a priority area for the Australian space research community.

“We are glad to be working with Clearbox Systems on this project which is focused on delivering real world solutions by addressing user needs and opportunities.”

Jeremy Hallett, Executive Director of Clearbox Systems, said the company is excited to be working again with UNSW Canberra Space, and sees this project as further establishing Australia, and Canberra, as a world leader in SDA.

“We have numerous programs underway with UNSW Canberra. They are an indispensable academic partner as we drive commercialisation of our Space Domain Awareness technologies,” Hallett said.



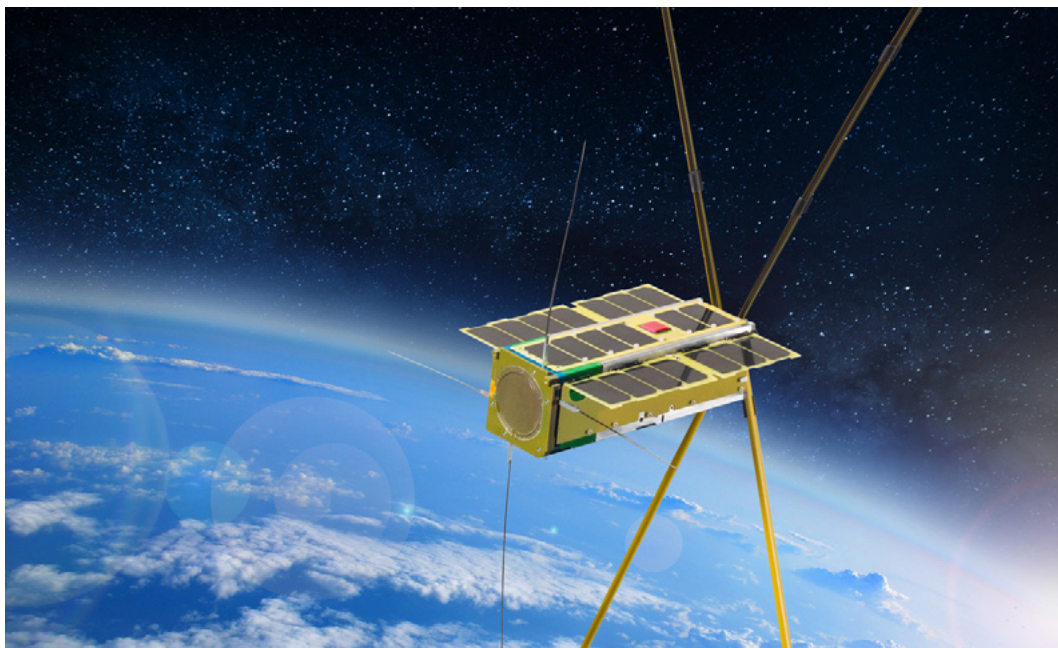
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There may be a 20-fold increase in the number of active Low Earth Orbit satellites in the next five years.

UNSW

The funding was awarded as part of the Innovation Connections grant program.

The UNSW Defence Research Institute facilitated the engagement with Clearbox Systems and UNSW Canberra Space.

VADM (ret'd) Paul Maddison, Director of the UNSW Defence Research Institute, said this project highlights the role that research plays in developing innovative capabilities for Australian industry and the wider Defence sector.

"Our relationship with Clearbox Systems continues to grow from strength to strength. Supporting UNSW researchers and Australian industry partners in delivering capability to meet global challenges is fundamental to our mission at the Defence Research Institute," Maddison said.

DYNETICS FLIES SECOND X-61A GREMLINS AIR VEHICLE

Dynetics, a wholly owned subsidiary of Leidos, successfully tested a second X-61A Gremlins Air Vehicle (GAV), as well as the Gremlins airborne recovery system, last month at Dugway Proving Ground in Utah for the Defense Advanced Research Projects Agency (DARPA).

The series of tests focused on risk reduction, as well as system and subsystem performance verification, in preparation for an airborne recovery test later this year. The overarching goal of the Gremlins Program, managed by DARPA's Tactical Technology Office, is to demonstrate aerial launch and recovery of multiple low-cost reusable unmanned aerial systems (UAS).



An X-61A Gremlins Air Vehicle.

DYNETICS

Dynetics is working with Leidos Australia on Land 129 Phase 3.

The test series involved all segments of the Gremlins Demonstration System, including GAVs, the launch and recovery system, the airborne operator control station and the Gremlins command, control and communications system.

The test flight was originally scheduled for earlier this spring, but was delayed due to the global pandemic.


“We have taken a major step forward towards accomplishing airborne recovery, and we are ever so close to achieving it,” Tim Keeter, program manager for the Dynetics Gremlins team, said. “Our second GAV flown to date performed very well, which increases our confidence in the X-61A. And for the first time, we rendezvoused and flew in close formation with the recovery C-130 multiple times using the Gremlins Autonomous Docking System (GADS).”

“Multiple captive tests were also conducted for the first time, with actively-controlled GAVs attached to the stabilised towed docking device. This demonstrated the ability of the recovery system to safely reel in and stow GAVs once they have docked. The data collected from these tests will provide the necessary information to perform final tuning of GADS.”

The second X-61A flew for a total flight time of two hours and 12 minutes. It flew in formation with the C-130 from as close as 125 feet back and 125 feet below the C-130 position. At the end of the test, the GAV was recovered on the ground using the parachute system.

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GAME-CHANGING CAPABILITY
FOR AUTONOMOUS, DISTRIBUTED
AIRBORNE OPERATIONS”**

“Our team was excited to fly the GAV for a second time following the delays caused by the global pandemic,” Brandon Hiller, Dynetics X-61A chief engineer, said. “While we successfully tested both the GAV and recovery system, we decided during the mission to stop short of docking.

“We now have additional data, which will help us tune the system and further validate our models. These

results are encouraging and present higher confidence to achieve airborne recovery in our next flight.”

“We’re excited to continue our progress with the Gremlins program,” Keeter said. “This is what we’ve been working towards for the past four years, and we are eager to advance the Gremlins system’s capabilities for DARPA and the warfighter even further. Rapid and reliable airborne recovery is a game-changing capability for autonomous, distributed airborne operations.”

EX RIMPAC COMES TO AN END

**Four RAN warships and more than 700 Defence personnel
have completed Exercise Rim of the Pacific 2020 (RIMPAC),
the world’s largest multinational maritime exercise.**

An at-sea-only event in light of COVID-19 concerns, this year’s exercise culminated in a mid-intensity high-end warfighting activity, which followed two weeks of gunnery, missile, anti-submarine and air-defence exercises.

Commander of the Australian contingent, Captain Phillipa Hay, said RIMPAC had tested and proven the Navy’s capabilities and improved its interoperability with partner nations to build security and stability in the region.

“RIMPAC was smaller this year due to the ongoing global challenge of COVID-19; however, it was no less demanding of our ships and sailors than previous years,” CAPT Hay said.

“The exercise provided the Navy with a unique training opportunity that strengthened our international maritime partnerships and relationships, and also enhanced the readiness of our Navy for a wide range of operations.

“It has been absolute privilege to be part of RIMPAC this year and see our ADF team performing marvellously, I’m very proud of everyone’s efforts and achievements.”





A live Harpoon missile firing from an Australian warship.

DEFENCE

During the exercise, the RAN achieved a number of milestones including: the most sophisticated class of warship the RAN has ever operated, the Hobart-class Guided Missile Destroyer, HMAS *Hobart*, took part for the first time; HMA Ships *Hobart*, *Stuart* and *Arunta* successfully conducted live missile firings at sea and in company with ships from the US, Japan, Canada, the Philippines and France; and RAN MH-60R Seahawk helicopters successfully fired Hellfire missiles.

The Task Group will continue on the regional deployment participating in a number of annual exercises in South East Asia before returning to Australia.

JOB TRANSITION PROGRAM LAUNCHED FOR WOMEN IN DEFENCE INDUSTRY

Mentoring Women, in partnership with the NSW Government, is launching the ADF and Veterans Job Program, a course designed to assist female ADF personnel and veterans navigate their transition into the civilian workforce.

The job ready transition program due to commence its new workshop in the beginning of September. The program is designed to mentor 15 servicewomen over a nine-week period in areas such as confidence, professional styling, skill identification, designing a CV, navigating the job market and succeeding in interviews.

Amanda Rose, founder of Mentoring Women and founding director of Western Sydney Women is passionate about championing women in the workforce and has previously keynoted for the RAN and the RAAF.

“Once a woman is equipped with confidence, connected to resources and provided with support, nothing can stop her from achieving greatness,” Rose said.



The program aims to assist female veterans.

DEFENCE

The program is designed to bolster the women with the skills and confidence they will need to showcase the extensive range of abilities and attributes they have acquired from their time in service; highlighting them as extremely employable and an asset to any workplace.

The NSW Government supports this with setting a personal target of aiming to employ 1000 veterans by 2023. To assist with meeting this target they continue to fund programs such as the Job Ready Transition Program.

Minister for Women Bronnie Taylor said the exciting initiative would empower the group of servicewomen to take the next step in their careers.

"This is a fantastic way of opening up new opportunities for these women by connecting them with incredible mentors who will ensure they have the skills, support, and confidence to thrive in their next steps."

Alongside Amanda Rose, ex servicewoman and International Consultant on Gender, Peace and Security, Jennifer Wittwer is a mentor during the program.

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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 | Online
- [Northern Australia Defence Summit](#) – 28 October 2020 | Online
- [ADM Space Summit](#) – 2 December 2020, Hyatt Hotel | Canberra
- [ADM Congress](#) – 3 February 2021, Hyatt Hotel | Canberra
- [ADM Defence Estate](#) – 23 February 2021, Hotel Realm | Canberra

6TH INTERNATIONAL HLS & CYBER CONFERENCE & EXHIBITION

DATE 14-15 September 2020
LOCATION Online
WEBSITE hls-cyber.b2b-wizard.com/expo

The HLS&CYBER event, the international homeland security and cyber event in Israel, returns for the sixth time, and this time, in a virtual format. The event, which will be held on September 14-15, 2020, will include a professional conference, as well as a virtual exhibition of about 100 Israeli companies in the field of homeland and cyber security and an online B2B conference arena.

AUSCERT 2020

DATE: 15-18 September
LOCATION: The Star, Gold Coast
WEBSITE: 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.

DEFENCE SEAWORTHINESS SYMPOSIUM

DATE 17 September 2020
LOCATION Online
WEBSITE kapara.rdbk.com.au/landers/fabfb4.html

The Office of the Defence Seaworthiness Regulator (ODSwR) is hosting the second annual Defence Seaworthiness Symposium on 17 September 2020. This year, we are delivering a predominantly virtual event with limited ability to attend in-person at the Australian Defence Force Academy, Canberra.

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

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.

4TH ANNUAL SYSTEMS MODELLING CONFERENCE 2020

DATE 27 October 2020
LOCATION Online
WEBSITE unsw.adfa.edu.au/conferences/SMC-2020

The Capability Systems Centre runs 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 virtual conference on October 27th will feature showcases on the use of systems thinking and systems modelling in a wide range of areas. The event provides a platform for researchers and practitioners to communicate about scientific and practical aspects of real-world problems, receive feedback, and share learning lessons.

10TH BIENNIAL SIA CONFERENCE 2020

DATE: 17-18 November 2020
LOCATION Hotel Realm, Canberra and online
WEBSITE 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 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 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 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.

ROTORTECH 2021

DATE 15-17 June 2021
LOCATION Royal International Convention Centre, Brisbane
WEBSITE rotortech.com.au

The new dates for Rotortech will be Tuesday 15 June to Thursday 17 June 2021. The venue, the Royal International Convention Centre in Brisbane, is unchanged. Rotortech is the region's premier helicopter and unmanned flight systems showcase and forum, featuring more than 100 participating companies and key speakers from industry and government. We believe that deferring Rotortech to its new June 2021 dates will achieve this goal by moving the event to a time where the COVID situation will have improved and the current uncertainties will have passed.

PROJECT AND PROGRAM MANAGEMENT SYMPOSIUM

DATE 10 – 12 August 2021 (rescheduled dates)
LOCATION Canberra Rex Hotel
WEBSITE 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 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

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 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.

ICCPM ROUNDTABLE WORKSHOPS

DATE Various
LOCATION Various
WEBSITE iccpm.com/2020-rs

ICCPM, with Series Partner QUTeX, is pleased to confirm the upcoming Workshops for the 2020 International Roundtable Series Harnessing Emergence in Complex Projects: Risk, Uncertainty and Opportunity. The International Roundtable Series is an exciting Thought Leadership initiative where senior practitioners and leading academics come together and discuss the Series Theme to produce new insights and practical steps to improve complex project success. Registrations for in-person workshops are strictly limited to comply with COVID-19 venue safety guidelines. Please refer to each event page for more details.