



DEFENCE WEEK

PREMIUM EDITION



The global fleet of F-35s struggles with availability issues.

LOCKHEED MARTIN

F-35 price drops but availability remains an issue

Ewen Levick | Sydney

News arrived just before the opening day of the Farnborough Air Show this week that Lockheed Martin and the Pentagon had informally agreed a price for the next batch of US F-35s.

According to Reuters, the next 141 fighter jets will cost the Pentagon US\$13 billion, at a rate of US\$89 million per aircraft. The price represents a six per cent drop on the previous price of US\$94.3 million for the F-35A.

The [report](#) indicated that a formal contract is forthcoming in the next few weeks.

The discount represents a step towards Lockheed's stated goal of lowering the costs of the world's most expensive defence program down to US\$80 million per aircraft by 2020.

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Lockheed Martin has taken a number of measures to accelerate the reduction. It chose Raytheon to replace Northrop Grumman from 2023 as the supplier of the distributed aperture system (DAS), which allows the pilot to see all around the aircraft using video feeds displayed in the helmet. The Raytheon deal is expected to save US\$3 billion over the life of the program.

Lockheed Martin has also sped up the production process as it climbs the learning curve more than 200 aircraft into the program. A Government Accountability Office (GAO) report found that the number of labour hours required to make one F-35A has dropped from 108,355 in 2012 to 41,541 in 2017.

The company has also upgraded its Autonomic Logistics Information System as part of efforts to reduce sustainment costs by 38 per cent, a goal set by the Pentagon. In addition, Matthew Bromberg, president of engine manufacturer Pratt and Whitney, has said he wants to see the engine's operating cost [reduced](#) from US\$7,000 per flight hour down to US\$3,500.

The program, of course, remains enormous. The F-35 is expected to cost over US\$1 trillion over the course of its lifetime – almost the entire annual GDP of Australia – and reportedly provides at least a quarter of Lockheed's total revenue.

Yet even as costs lower, the program is still grappling with availability issues stemming from a shortage of spare parts.

Another GAO report found that the US military's capabilities to repair F-35 parts are "six years behind schedule, which has resulted in average part repair times of 172 days—twice the program's objective."

Parts shortages meant that overall, American F-35s were unable to fly 22 per cent of the time between January and August last year.

According to Rep [Mike Turner](#), Chairman of the House Armed Services

"The US military's capabilities to repair F-35 parts are six years behind schedule, which has resulted in average part repair times of 172 days"



It takes an average of almost six months to repair an F-35 in the US.

LOCKHEED MARTIN

Subcommittee on Tactical Air and Land Forces, “the higher-than-desired operations and support costs, compounded with the parts and depot issues, are already beginning to manifest with the Service’s hesitation to increase procurement rates beyond current levels”.

Whilst some squadrons are operating at somewhere just north of 50 per cent availability, newer aircraft are averaging between [60 and 70 per cent](#).

The effect of the latest discount, as well as availability issues, on Australia’s fleet remains to be seen. Marand [recently delivered](#) its 50th Vertical Tail to the program with significant assistance from BAE’s Edinburgh Parks facility, which is operating at peak production. Five more Australian aircraft are expected to be delivered to by the end of this year, which is also when the first two planes are [expected to arrive](#) in-country.

Nevertheless, the pattern of evidence suggest Australian squadrons might find their jets grounded by the same problems plaguing the US fleet.

Dissecting the NATO summit and defence spending

Jacky Westermann | Canberra

America’s allies will be sighing with relief now that President Trump is heading back to Washington. First, fellow NATO members had to cope with the usual outbursts over two days in Brussels (and the UK even longer throughout the subsequent state visit), which even led to an emergency meeting.

The US threat [‘to go its own way’](#) if allies didn’t increase their defence spending by early next year caused alarm, as expected. Over the weekend, Trump



NATO members will be happy to see Trump back in Washington.

NATO VIA TWITTER

managed to lash out again, stating that the EU was America's 'foe'. The next day, European allies had to watch Trump buddying up to President Vladimir Putin in Helsinki.

The [Communiqué](#) agreed at the NATO summit featured unprecedented criticism of the Russian government. It also reiterated support to Ukraine, repeating the refusal to acknowledge the Kremlin's illegal annexation of Crimea, which was feared to be an easy bargain for Trump in the one-on-one meeting in Helsinki.

In the end, despite the questionable statements following the meeting, one relief was that Trump stuck to what the allies had agreed on in the Communiqué; staying put to US (and NATO) policy on Crimea.

Although the summit led to a Communiqué acknowledging new and old threat environments, Trump's preferred topic dominated the reporting and meetings: defence spending.

The decade-old issue is one that past administrations also grappled with. However, Trump put the debate front and centre, unlike his predecessors, by actually threatening consequences. It seems the allies are now looking a bit closer at the issue.

However, another debate has become louder of late: whether burden-sharing should be determined by defence spending levels, or whether other factors should be considered when valuing contributions to NATO.

The Center for Strategic and International Studies recently published a report exploring alternative metrics to the two per cent threshold:

- Troop contribution: While some allies might be spending two per cent of GDP, their contribution to missions and operations is poor. Greece spent 2.36 per cent last year but contributes poorly to the Afghanistan mission and has zero soldiers present in NATO's enhanced forward presence or the

“Changing the discourse from input to output would be a solid first step, as it would allow a combination of different values to be used in assessing burden-sharing”



Alliance members have been urged to step up their contributions.

NATO

global coalition against ISIS.

- Security assistance as share of GDP: Investments made outside defence budgets can still contribute directly to peace and security. Germany, Netherlands and Norway invest a significant GDP share into peacekeeping, training missions, rule of law strengthening or crisis management.
- Distribution of defence expenditure by categories: It doesn't matter how much is spent if the output doesn't contribute to readying capabilities. Portugal spends 78 per cent of its entire defence budget on personnel, and the two biggest spenders within the more than 2 per cent group are the US at 42 per cent, and Greece at roughly 72 per cent.
- Trade with sanctioned competitors: Members are sacrificing trade benefits for the alliance's interest. Sanctions against Russia, for example, have cost millions for the Netherlands, Turkey and Germany.
- Average refugee intake: Showing willingness to managing growing refugee and migration numbers demonstrates willingness to create stability and security for the allies. Turkey and Germany are shouldering a disproportionately large burden.
- Pre-crisis mobility: Discrepancies between spending and end strength can be assessed on the day-to-day readiness. Italy and Germany have lower defence expenditure than Greece but a very high mobility. Diplomatic hurdles to military mobility across borders were also a topic in the summit Communiqué.

All these factors have advantages and shortcomings. Changing the discourse from input to output would be a solid first step, as it would allow a combination of different values to be used in assessing the burden-sharing of members. The '[Four Thirties](#)' initiative, agreed in June, now official with the summit's Communiqué, for example is a step closer to more output-orientation: 30 mechanised battalions, 30 air squadrons and 30 combat vessels will be ready within 30 days or less.

Note: Jacky Westermann is a researcher and editor for the International Program at ASPI.

TOP COMMENTS

[BAE Systems Australia wins Future Frigates under Sea 5000](#)

What type of ASuW missiles will the Hunter-class have and where will they be located? Will they be VLS-launched or other means? – **JS Li**

Models of the Hunter class show 2x4 Mk141 topside canister launchers for Harpoon above the mission bay but this would surely just have to be a representation for display purposes. Truth is it's anybody's guess at the moment, all the infographics on the Hunter class simply say it will be fitted with 'advanced' anti-ship missiles. We have expressed interest in LRASM – but no topside, VLS or submarine launched SSM versions are in production yet nor do we know for certain if they ever will be. We're also developing the air launched 'joint strike missile' with Norway for our F-35As, which is based on the surface-to-surface 'naval strike missile' recently selected for the USN Littoral Combat Ships and FFG(X) future frigate. The new high supersonic XSSM-3A/B based on Japan's new air launched XASM-3 could also be an option. – **Joel Robertson**

Dutch choose Reaper as GA announces Galileo compatibility

Katherine Ziesing | Canberra

“GA believes having multiple satellite options is important to customers who will want to be able to switch from one constellation to another”

General Atomics has been selected to provide Predator B/MQ-9 Reaper medium altitude long-endurance (MALE) UAS to the Dutch military following news that the platform will be capable of using GPS and Europe’s Galileo satnav system.

“We are extremely pleased to have the opportunity to meet the UAS requirements of the Royal Netherlands Air Force,” Linden Blue, CEO of GA, said. “We are committed to providing a NATO-interoperable solution that enhances the ISR capabilities of the Netherlands and the alliance.”

The news follows a number of successes for GA. The Spanish Air Force is scheduled to take delivery of MQ-9 systems in 2019, and the UK chose the MQ-9B Protector [earlier this year](#).

The existing MQ-9 fleet has logged over two million operational flight hours with the several US agencies and military services, the RAF, Italian and French Air Forces, and NASA.

Earlier this week, GA announced that the MQ-9B will be able to utilize both GPS and the European Galileo satellite constellation for its navigation systems.

Galileo is the global navigation satellite system created by the EU through the European Space Agency.

The baseline MQ-9B was originally designed to include a triplex navigation



An MQ-9 Reaper equipped with an extended range modification sits on the ramp at Kandahar Airfield, Afghanistan. USAF/SGT ROBERT CLOY

system based on GPS navigation. However, GA believes having multiple satellite options is important to customers who will want to be able to switch from one constellation to another in the event connectivity is ever lost or denied.

“Many of our US and international partners have plans to produce multi-constellation navigation receivers,” David Alexander, president of Aircraft Systems GA, said. “The multi-constellation receivers will add to the operational flexibility of the MQ-9B and will benefit our international and domestic customers, especially those based in Europe.”

The baseline MQ-9B aircraft is known as SkyGuardian and the maritime surveillance variant is called SeaGuardian in UK service.

The MQ-9B is the certifiable version of GA’s MQ-9 Reaper UAS, which is currently in service with the USAF. The Reaper is one of two competitors for Australia’s [Air 7003 program](#), which will provide the RAAF with an armed MALE UAS as well as ground control stations.

The other competitor is IAI’s [Heron TP](#), which was recently leased by the German government.

ADM Comment: The increasing number of nations going down the armed unmanned UAS route is a reflection of a few trends: increased trust in the technology, an acknowledgement that ‘dull, dirty and dangerous’ is best done at a distance where possible and the costs behind the manning element of unmanned platforms.

As Australia decides which path to tread in terms of armed UAS capability, the manned and unmanned teaming (MUM-T) concept is being explored on a number of fronts in the ADF. Air Force with the P-8A/Triton mix, Army with its MUM-T Innovation Day program for both ground and air vehicles, and Navy looking beyond the anti-mine capability that they are comfortable with.

How further technology advancements such as blockchain encryption and AI play a part in this space is yet to be seen. But the groundwork for how the military uses and thinks about unmanned platforms is becoming normalised with each passing year.

“The multi-constellation receivers will add to the operational flexibility of the MQ-9B”

PEOPLE ON THE MOVE

NIOA’s expanding Defence and Law Enforcement program has opened employment opportunities for multiple new staff. Matthew Gibson will become principal engineering manager in NIOA’s Canberra facility. Matthew brings a wealth of knowledge, experience and a solid reputation to the role as one of Defence’s most senior and experienced explosive ordnance engineers. Garry Warrender will become Benalla Facility Manager, Sam Gook will become the technical coordinator in Brisbane, and Sam Ogden has joined as a graduate engineer.



Indigenous lead for Garden Island refurb

“The Garden Island Bayinguwa Delivery Team will be responsible for managing the demolition of two deteriorated wharves and constructing a single new wharf”

Minister for Defence Marise Payne and Minister for Indigenous Affairs Nigel Scullion have launched an Indigenous joint-venture to deliver the \$213 million Bayinguwa critical wharf works project at Garden Island, the RAN’s Sydney base.

The Bayinguwa Delivery Team is a joint venture between Pacific Services Group (PSG) Holdings and Lendlease. PSG Holdings, an Indigenous owned SME, managed the design of the works.

“This project was announced by the Prime Minister in his 2018 Closing the Gap speech. ‘Bayinguwa’ is the Aboriginal name for Garden Island,” Minister Payne said.

“The engagement of the Bayinguwa Delivery Team is first-and-foremost about delivering high quality works for Garden Island. The team will be responsible for managing the demolition of two deteriorated wharves and constructing a single new wharf in their place.

“These works are essential to ensure the RAN can safely berth and maintain its ships at Garden Island, which is the major home-port on the east coast of Australia.”

“The Indigenous Procurement Policy (IPP) has supercharged the Indigenous business sector, driving rapid growth in the demand for Indigenous goods and services across a diverse variety of industries,” Minister Scullion said.

“The IPP has resulted in more than 1000 Indigenous business across the country winning contracts worth over \$1.084 billion since the IPP’s commencement in July 2015, up from just 30 Indigenous businesses winning \$6.2 million in 2012-13.

“All contracts under the IPP are delivered on a value for money basis, meaning the Commonwealth does not pay more for the goods and services it would



Minister for Defence Marise Payne and Minister for Indigenous Affairs Nigel Scullion made the announcement alongside representatives from the build team.

MARISE PAYNE VIA TWITTER

otherwise be procuring.

"The average Indigenous workforce of IPP firms is 50 per cent, compared to non-Indigenous businesses which have an average Indigenous workforce of 0.7 per cent, meaning if we get more Indigenous Australians into business we get more Indigenous Australians into work."

The total project value is \$213 million and construction is due to commence in September 2018 for completion in February 2022.

It is anticipated that the project will generate up to 150 jobs at the peak of construction with opportunities available for local industry and Indigenous involvement.

Innovation Hub signs four new contracts

The Defence Innovation Hub has awarded four contracts in the latest tranche.

The contracts, worth \$3.07 million, were announced by Minister for Defence Industry Christopher Pyne.

"The Hub is committed to working with Australian industry to foster innovation at various levels of technological maturity, transitioning from concept exploration through to a mature, useable capability for the ADF," Minister Pyne said.

The latest tranche of investment includes a \$1.23 million contract with Saber Astronautics to further explore its innovation following a successful phase one contract with the Hub. This is the first Hub project to progress to the next phase of development since its launch in December 2016.

Clinical Universe won a \$949,000 contract to explore a healthcare software capability to capture digital output from multiple 'point of care' devices and transfer it in standardised formats to relevant e-health systems. The proposed innovation could enable situational awareness of medical incidents, trends and patterns across geography and time.

Synthesis Technologies won a \$519,000 contract to explore a high resolution mapping technology that could provide 3D situational awareness and mapping to Defence on a global scale, including in deep-water oceans. The proposed innovation could provide real-time visualisation streamed to Defence desktops,



The government has committed \$640 million to exploring innovative ideas through the Hub.

THINKSTOCK

mobile devices, and virtual and augmented reality platforms.

Finally, SYPAQ Systems took out a \$371,000 contract to explore a handheld imaging device capable of blending different types of imagery together in real time. The proposed innovation could be mounted on unmanned aerial systems and assist the ADF with the detection of improvised explosive devices.

Minister Pyne said the portfolio of Defence Innovation Hub [projects](#) was already addressing a wide spectrum of Defence gaps and opportunities to ensure that Defence remains resilient to emerging threats.

"The government is committed to advancing defence capability through a \$1.6 billion investment in defence industry and innovation over the decade to 2025–26, including around \$640 million to support the development of innovative technologies through the Defence Innovation Hub," Pyne said.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [BAE Systems Australia wins Future Frigates under Sea 5000](#)
2. [Sea 5000 – Behind the BAE Systems win](#)
3. [AIDN Victoria exits national body](#)
4. [How to speed up clearances – AGSVA discussion paper](#)
5. [Defence Budget 2018 at a glance](#)

UMS releases new V-200B at Farnborough

UMS Skeldar has confirmed that its global focus on maritime applications is to be spearheaded by the Skeldar V-200B.

The announcement came after the [news](#) that the company will make Australia its base for Asia-Pacific operations.

UMS is gunning to provide RAN with a maritime UAS under Sea 129 Phase 5 Stage 1.

The new version of the heavy-fuel engine rotary UAV includes extended endurance, engine management system and payload capabilities. The modifications to the mid-range Vertical Take-Off and Landing (VTOL) rotary UAV was announced at the Farnborough Airshow.

The Skeldar V-200B completed its trials earlier this year.

"It is no secret that more players are attempting to enter the maritime market for rotary UAVs," David Willems, head of Business Development at UMS Skeldar, said. "Recent navy contracts have stipulated the role and specification, and this has confirmed our strategy of development is absolutely the right move at the right time.

"We are able to fly longer, over five hours, at maximum payload capacity through



The Skeldar V-200B completed its trials earlier this year.

SUAS NEWS VIA TWITTER

weight savings from design modifications and our 2-stroke engine configuration shortens time between overhauls.”

The V-200B’s Hirth engine, with heavy fuel licensed technology from Australian company Orbital, was the first medium maritime UAV able to operate on Jet A-1, JP-5 and JP-8 fuels.

“The major difference between the V-200 engine and those of our competitors is that our engine is more tolerant of the JP-5 quality and that is a big advantage,” Willems said.

UMS has also partnered with Sentient Vision Systems ViDAR (Visual Detection and Ranging), a maritime search system that autonomously detects objects on the ocean surface.

Development of the V-200B was informed by Spanish and Indonesian military deployments.

“The new version of the heavy-fuel engine rotary UAV includes extended endurance, engine management system and payload capabilities”

RADA takes out prize in the ‘Game of Drones’

RADA Electronic Industries, together with its partners Ascent Vision and Sierra Nevada Corporation, won a US\$200,000 prize at the SOFWERX ThunderDrone Rapid Prototyping Event III demonstration with its X-MADIS mobile drone defeat system.

The SOFWERX RPE demonstration events, also called [Game of Drones](#), began in June 2017. More than 450 technological capabilities aimed to tackle sea, land, and air-based UAS, tactical swarms, payloads (kinetic/non-kinetic/sensors), and their associated data science applications.

ThunderDrone RPE III was the culmination of the events, and provided a venue for systems of various technologies to be tested in a true field environment.

The exercise was formally evaluated by a government assessment team, with



RADA's X-MADIS counter-UAS system.

RADAIDS VIA TWITTER

the award presented at Nellis Air Force Base in Nevada.

RADA's multi-mission hemispheric radar (MHR) is the primary detection and tracking sensor of X-MADIS (the expeditionary mobile aerial defence integrated system), tailored for counter-unmanned aerial system missions.

It can detect, locate, identify, track, exploit and defeat an enemy UAS on the move or while in a stationary position.

"We are very proud to be part of the industry team achieving this success for X-MADIS," Dov Sella, RADA's CEO, said. "The system is a derivative of a system deployed successfully with a DOD customer. Therefore, it demonstrates that our technology is highly scalable, flexible and truly adaptable for multi-mission environments."

SOFWERX is a partnership between the Doolittle Institute and US Special Operations Command. It was created to investigate new technology in an effort to put advanced capabilities into service.

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Forthcoming Events

ADM EVENTS

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

- [ADM Women in Defence Awards](#) – 27 July 2018
- [ADM STEM in Defence Summit](#) – 21 August 2018
- [ADM Defence Estate & Base Services Summit](#) – 19 September 2018
- [ADM Defence in Northern Australia Summit](#) – 10-11 October 2018

Defence + Industry Conference and Gala Awards 2018

Date 1-2 August 2018

Location Canberra

Website CASG

The annual CASG and Defence Industry gathering in Canberra to discuss policy and programs with a range of speakers discussing the way forward. A Gala Awards night will take place on the evening preceding the event, where *ADM*'s Essington Lewis Awards will be presented, recognising excellence in collaboration. **Registrations close on July 22.**

BMT's Submarine Design and Engineering course

Location Adelaide

Date 6-10 August

Website trainingcourses@bmttdt.com.au

This course is ideal for anyone currently working or considering working with submarines; offering a comprehensive design and operational appreciation of conventional submarine technologies. This course is accredited by the Royal Institution of Naval Architects. Since its inception in 2009, this Australian course has earned a reputation for providing delegates with practical and current knowledge, and is an important collaboration between BMT and other submarine experts from around the world. The network of presenters provides significant professional development and networking opportunities for those working in the submarine industry.

Project and program management symposium

Date 14-15 August

Location Rex Hotel, Canberra

Website www.pgcsymposium.org.au

The annual Project and Program Management Symposium provides a forum that brings together project management people to share knowledge and improve the governance and controls skill sets available to deliver successful project outcomes for the nation. A highlight of the symposium is its access to thought

leaders from the USA and Europe. Each year, selected speakers from overseas are brought to the symposium to share knowledge and provide an international perspective on project and portfolio management.

Scindicate 2018

Date 29-30 August

Location Scindicate Labs, Fisherman's Bend, Melbourne

Website <https://scindicate2018.eventbrite.com.au>

SCINDICATE is the new brand name for the previous annual external engagement event called Partnerships Week. SCINDICATE delegates will experience technology demonstrations, workshops, briefings and laboratory tours, as well as opportunities for networking and forging new collaborations. Delegates can choose to attend on either day, and the program will include key elements repeated across both days.

Williams Foundation Seminar: The Imperative for an Independent Deterrent

Date 23 August 2018

Location National Convention Centre

Website <http://www.williamsfoundation.org.au/events>

With the retirement of the long-range F-111, Australia's future air strike capability now rests in the capabilities of the F/A-18F Super Hornet and F-35A, both equipped with appropriate long-range strike weapons and supported by a capable air-to-air refueling force. An independent strike capability expands the range of options to achieve Australia's strategic ends; signals a serious intent and commitment about Australia's national security; and has the capacity to influence strategic outcomes short of resorting to armed conflict.

Hunter Valley Defence Conference 2018

Date 30-31 August 2018

Location Crowne Plaza Hunter Valley

Website HunterNet

The 2018 Defence Conference will focus on driving collaboration and engagement between Defence Primes, the region's SME's, academia and Defence. A highlight of the conference will be the spectacular low flying aerial show from Matt Hall Racing, followed by a gala dinner.

Land Forces 2018

Date 4-6 September 2018

Location Adelaide

Website www.landforces.com.au

Presented in collaboration with the Australian Army, LAND FORCES 2018 is an international industry exposition to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific.

ANI Goldrick Seminar

Date 17 Sep, 2018

Location ADFA, Canberra

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

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

18th Australian Space Research Conference

Date 24 Sep – 26 Sep, 2018

Location Mantra on View Hotel, Gold Coast

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

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

Veterans Film Festival

Date 1 November – 3 November

Location Palace Electric Theatre, ADFA, Canberra

Website www.veteransfilmfestival.com

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

SIA Biennial Conference

Date 7-8 November 2018

Location Rex Hotel, Canberra

Website www.submarineinstitute.com/sia-conferences

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

MILCIS 2018

Date 13-15 November 2018

Location National Conference Centre, Canberra

Website www.milcis.com.au

In November each year, the Defence Chief Information Officer Group (CIOG) partners with the UNSW Canberra and the Institute of Electronic and Electrical Engineers (IEEE) to present MilCIS.

TEAM DEFENCE AUSTRALIA EVENTS

- **AUSA 2018** – 8-10 October 2018, Washington DC, US
- **Indo Defence 2018** – 7-10 November 2018, Jakarta, Indonesia
- **Euronaval 2018** – 23-26 October 2018, Paris, France

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