

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



The event brought close to 400 people together to celebrate the achievements of women in Defence.

ADM/KELLY PHOTOGRAPHY

Women in Defence Awards 2019 winners announced

Ewen Levick | Canberra

The winners of this year's Women in Defence Awards were announced at a gala dinner in Canberra last night.

Held at the National Arboretum in Canberra, the event brought close to 400 of Defence and industry's leading women and men together to recognise and celebrate the achievements of 195 nominees across seven categories, including the 37 finalists and seven winners.

The Hall of Fame inductee was also announced in Department of Veteran Affairs Secretary Liz Cosson. After a substantial military career in Army that saw her rise to become the organisation's first female Major General, Liz is now heading up the Department of Veteran Affairs, continuing her mentoring work for the next generation of military and APS leaders. She noted in her acceptance speech that when she joined the ADF in 1978 only 23 per cent of Army roles were open to women. Now, 100 per cent of roles are available for all Australians.

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“We have doubled every measure of this awards program in just a year”

The full list of winners is as follows:

- Communications: Amanda Jane Scott of RAAF
- Legal/Contracting: Tarnya Cooper of BAE Systems Australia
- Project Management: Jane Hunter of Boeing Australia
- Engineering: Corina Glavan of the Department of Defence
- Technical Trade: Warrant Officer Class Two Dayle Lovell of RAN
- People and Culture: Tanja Johnston of the Australian National Veterans Arts Museum
- Rising Star: Taylah Griffin of Boeing Australia.

“It is really wonderful to be a room of so many amazing women and their allies to celebrate the very real benefits of diversity in action,” ADM Managing Editor Katherine Ziesing said in her opening remarks. “We have doubled every measure of this awards program in just a year thanks to the support of the Defence community.”

How to retain skilled women

Ewen Levick | Sydney

Rapid Context, a research consulting firm, has released [a report](#) titled ‘Growing the defence industry workforce: Attracting and retaining women with critical skills and trades’.

The report opens with a blunt assessment: “In order to take advantage of Australia’s investment in defence capability, defence industry needs to grow its skilled workforce. While there are a number of initiatives being trialled towards this end, these initiatives fail to grapple with the fact that defence industry has a poor record as an employer of choice for women.”

The statistics back this up: women make up less than one in five employees in defence industry (the national average is one in two); only one in seven managers in the industry, compared to a national average of one in three; one in five



Innovation takes place when different perspectives mix.

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new graduates working in defence industry; and one in every fourteen new apprentices.

The focus on diversity at seminars and conferences in recent years, and high-profile initiatives like ADM's Women in Defence Awards, may suggest the situation is getting better. It is not. Women are leaving the industry at higher rates than men and hold less than 30 per cent of STEM jobs despite comprising 30 per cent of STEM graduates. According to the report, only two per cent of employers have a 'stated policy of recruiting female apprentices.' In the very jobs that defence industry needs most – engineers, managers, technicians, trades – women are severely underrepresented and are becoming even less so.

"It's pretty clear that this is a culture that comes from the leadership"

To be clear, defence industry is putting in effort to attract skilled women. Many readers will have seen advertising campaigns, public commitments and sponsorships. The big issue is not so much attraction, but retention.

"Efforts to retain the female employees that companies have made significant efforts to recruit are often neglected.

The consequence of this inaction is high attrition rates," the report argues, citing data from the [ADM Top 40 2018](#).

"Isolation, hostile male-dominated work environments, ineffective executive feedback, and a lack of effective sponsors are all cited as reasons that women leave STEM."

The report cites other reasons why women leave defence industry; lack of access to child-care or flexible working arrangements, feeling that other organisations better value their skill set, and perceptual barriers such as 'subject to implicit bias'.

"In a meeting where I was questioning processes that had led to poor outcomes, a senior male stood up, and said 'Well what the eff would you know about any of this anyway, missy,'" an interview participant said.

"We generally know which companies are the boys' clubs," another said. "It's pretty clear that this is a culture that comes from the leadership. And once you have earned that reputation it can be pretty hard to change."

It is easy to point out the need for change, but harder to say how it can be done. Whilst some recommendations are long-term, such as a need to examine and potentially change workplace culture, there are two short-term actions all companies in the industry can make to better retain skilled women.

First, create flexible working conditions. Current Australian parental leave laws and widespread company policies preclude men from taking equal paternity leave. This places the burden of expectation on women to take time off to raise kids. Until law and workplace culture changes across Australia, defence industry can offer flexible conditions to women to offset this burden of expectation and retain a greater number of female employees.

Second, set up mentoring arrangements. Defence has successfully used this approach to hire and retain Indigenous employees. The report argues that similar mentoring arrangements change gender norms and workplace culture over the long term if junior women are mentored by senior men, or if junior men are mentored by senior women.

Robots could soon service geosynchronous satellites

Ewen Levick | Sydney

The US Defense Advanced Research Projects Agency (DARPA) has started looking into building robots that can service satellites in geosynchronous orbit (GEO).

“The Agency is now seeking an industry partner to jointly develop a robotic servicing vehicle”

“The objective of the Robotic Servicing of Geosynchronous Satellites (RSGS) program is to create a dexterous robotic operational capability in GEO that can both provide increased resilience for the current US space infrastructure and be the first concrete step toward a transformed space architecture with revolutionary capabilities,” DARPA said in a statement.

“The long-term vision of the RSGS program is to enable persistent robotic servicing capabilities in GEO, beginning with the robotic servicer developed under the RSGS program and

operated by a commercial entity, with the goal of achieving an enduring, reliable, cost-effective GEO satellite servicing presence.”

The Agency is now seeking an industry partner to jointly develop a robotic servicing vehicle in GEO. The joint team will need to manufacture the ‘spacecraft bus’, integrate a government-provided payload, launch the bus, provide ground communications to the entire GEO belt, and operate the vehicle commercially in GEO ‘after DARPA-specified demonstrations on-orbit’.

DARPA also said that it anticipates the industry partner to gain significant financial benefit from commercial and government GEO servicing. Satellites in GEO generally cost \$300 million to build and \$100 million to launch, for an average lifespan of fifteen years.

The news is a step towards [in-orbit satellite refuelling](#), which would extend



DARPA expects the industry partner to gain significant financial benefit from commercial and government GEO servicing. PIXABAY

“The long-term vision of the RSGS program is to enable persistent robotic servicing capabilities”

the lifespan of GEO satellites by providing enough fuel to course-correct and prevent orbital degradation. Other challenges, however, include the need to pump fluid in microgravity into a satellite that was not designed to be refuelled.

Some companies, including Northrop Grumman's Space Logistics business, are developing Mission Extension Vehicles (MEVs) that can attach to satellites and provide orbital corrections. The company intends to make its first life-extension docking later this year, whilst Israeli outfit Effective Space expects to launch two similar systems next year.

Local companies are also looking to take a slice of this market, with Canberra-based EOS working on a laser technology that can 'nudge' satellites or space debris.

Solving the problem of equipment corrosion

Aussie Pumps | Sydney

As they focus on minimizing the life cycle costs of platforms and systems, one of the more promising targets for military managers is equipment corrosion, which represents the largest avoidable cost—\$23 billion a year—to the US Department of Defense.

The problem is an age-old enemy, as moisture is the most significant driver of environmental corrosion. The military relies on huge stocks of bulky, expensive equipment that would be cost-prohibitive to store inside fixed structures.

Fortunately, advances in protective technology are offering significant returns on investment by reducing environmental degradation and leading to reduced costs for maintenance and replacement parts.

One of the most prominent players in the protective systems arena is Shield Technologies Corporation (STC), which offers a range of products for weapon systems, shipboard assets, artillery, ground combat vehicles and both rotary and fixed-wing aircraft called Envelop Protective Covers. Developed with the help



An Envelop cover on a Typhoon gun.

AUSSIE PUMPS

“Advances in protective technology are offering significant returns on investment”

of a US Navy small business innovation grant a decade ago, the products are deployed throughout the US Navy as well as in many parts of the other services.

The US Army recently acquired the covers for its entire stock of howitzers, for example.

“It’s the only 100 per cent waterproof but breathable cover that incorporates a vapour corrosion inhibitor to actively fight corrosion. That’s really what makes us unique,” Mike Dupasquier, STC’s chief operating officer, explained.

“The military has done various studies, and those have shown that Envelop will reduce environmental degradation and corrosion by 95 per cent compared to previous maintenance methods, which vary from covers to plain tarps and other methods. The

Envelop product protects from an array of elements, from moisture to water intrusion, UV, sand, heat, impact and corrosion.”

“The cost of the covers represents pennies to the dollar compared to the repair costs that otherwise would be needed,” Dupasquier added. “The return on investment for the howitzer product was greater than forty to one. This is just the cost of one cover, but doesn’t include the lifespan over the entire life of the system, as presumably the military will have it longer than just one cover.

“If you factor in savings from extending equipment life, you’re talking 250 or 300 to one.”

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [The hangars on the Hunter class frigates are inadequate](#)
2. [China watches as Talisman Sabre gets underway](#)
3. [XTEK wins CDIC grant for armour tech](#)
4. [Rheinmetall and BAE join forces on British Boxers](#)
5. [Boeing and Airbus partner on P-8A sustainment](#)

Beca continues support of Navy seaworthiness assessments

[Beca](#) has been awarded a contract for the continued management of Seaworthiness Materiel Assessments (SwMA) within the RAN’s Fleet Engineering Directorate (FED).

FED and Beca have successfully collaborated to provide SwMA management and development services since 2014. During this time, the company has worked to develop and implement an assurance process that has positively contributed to materiel seaworthiness outcomes for ships and establishments.

This project is key to supporting the compliant conduct of SwMAs in accordance



Beca has been providing seaworthiness services to the RAN since 2012.

GETTY

“Seaworthiness Materiel Assessments are a fundamental building block of the Sea Release Assurance framework”

with the Fleet Practice Instruction for the RAN. The SwMA management cell now controls more than 6,000 bespoke assessments covering 14 classes of ship and two establishments. It also provides an established education and awareness program that helps maintain knowledge levels across the Navy.

“Seaworthiness Materiel Assessments are a fundamental building block of the Sea Release Assurance framework and provide evidence that RAN ships are materially ready for operations,” Mick Richardson, Business Director of Defence Acquisition and Sustainment at Beca, said.

“Their ongoing management is therefore a critical enabler of operations, and we look forward to continuing to work with the Fleet Engineering Directorate to ensure this building block is well maintained.”

Beca’s services will include project management, business administration, quality control, and education and training.

DTC Awards recognise leading companies

SA specialist industrial design and manufacturing company Form Cut has taken out the top prize at the 2019 Defence Teaming Centre (DTC) Annual Dinner & Awards Ceremony for their collaboration with SMEs [REDARC](#) and IntelliParticle to design and develop the new REDARC Thermal Enhancement Kit (RTSEK).

APC Technologies won the Resilience and Adaptive Award for ‘standing stood the test of time through the peaks and troughs of Defence expenditure, whilst Data to Decisions CRC won the Growing or Emerging award and Tony Martin won the Chair’s Award.

The RTSEK enables Army personnel to successfully engage practice targets using remote SMar155 Precision Guided Munitions.



Form Cut CEO Karl Falzon accepting the award from Defence SA's CEO Richard Price.

CREDIT: FORM CUT

"REDARC and Form Cut have previously collaborated commercially," Form Cut CEO and Senior Industrial Designer Karl Falzon said. "When REDARC identified a new product opportunity, they sought to team with us to develop a product that exceeded the expectations of the defence customer in terms of cost, time-frame and innovation."

Form Cut contributed to the design, specification and production of thermal insulation components and the innovative development and application of conductive polymers, as well as assembling the final product. The company also designed and manufactured the finished product packaging, specifically designed to ship fragile items by road and off-road to the testing facility.

Ongoing production is scheduled in the coming months and a new manufacturing facility will include the innovative CNC application of specialist coatings.

The DTC Teaming Award is a significant acknowledgement of the successes of collaboration between local partners. Other winners included APC Technology

"The project provided the perfect opportunity for Form Cut to demonstrate the full scope of its capabilities, problem-solving approach and commercial acumen," Falzon added. "I'd like to thank the teams at REDARC with Mike Hartas and IntelliParticle with Greg Hancock, as well as the Australian Army, Defence SA and the DTC for this recognition."

CONTACT DETAILS

MANAGING EDITOR

Katherine Ziesing
T: 0419 014 308

katherineziesing@yaffa.com.au

ONLINE EDITOR

Ewen Levick
T: 02 9213 8249

ewenlevick@yaffa.com.au

ASSOCIATE PUBLISHER

Kylie Leonard
T: 07 3087 5101

kylieleonard@yaffa.com.au

ART DIRECTOR

Ana Heraud

SUBSCRIPTIONS

Martin Phillpott
Toll Free 1800 807 760

martinphillpott@yaffa.com.au

CONTRIBUTORS

Julian Kerr

T: 0418 635 823

jhrhkerr@bigpond.net.au

Nigel Pittaway

M: 0418596131

cnppittaway@bigpond.com

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Yaffa Media Pty Ltd
17-21 Bellevue St,
Surry Hills NSW 2010
T: 02 9281 2333

www.greatmagazines.com.au

ADM CANBERRA OFFICE

PO Box 4783, Kingston ACT 2604
T: 02 6203 9535

ADM BRISBANE OFFICE

PO Box 9165,
Wynnum Plaza Qld 4178
T: 07 3348 6966

www.australiandefence.com.au

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Forthcoming Events

ADM EVENTS

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

- [ADM STEM and Defence Summit](#) – 14 August 2019
- [ADM Defence Estate and Base Services Summit](#) – 12 September 2019
- [ADM North Australian Defence Summit](#) – 23-24 October 2019

AIDN QLD Annual Gala Dinner 2019

Date 18 July 2019

Location Figs on Sylvan Toowong, Brisbane

Website www.eventbrite.com.au/e/2019-aidn-qld-annual-gala-dinner-tickets-61677344598

Join guests from across the Australian SME community, Defence Primes, Defence Force and industry organisations for an evening of unmissable entertainment, great food and wine. The event will feature keynote and guest speakers from Defence and Industry.

Defence Maritime Environment Working Group

Date 24 July 2019

Location National Gallery of Australia, Parkes, Canberra

Website www.business.gov.au

The Maritime Environment Working Group (MEWG) is a forum for engagement between Defence and the Maritime Industry to consider opportunities for innovation and collaboration early in the capability life cycle. It provides an opportunity to test the strength of capability requirements and proposals, to inform industry regarding future capability programs and challenges and to foster the development of Navy's capability modernisation program.

ADM Essington Lewis Awards

Date 31 July 2019

Location National Convention Centre, Canberra

Website www.defence.gov.au/casg/dplusi

ADM's Essington Lewis Awards will return to the National Convention Centre on Wednesday 31 July 2019 to recognise excellence in Defence projects. The event is limited to the first 1000 attendees wishing to network and interact with Defence and defence industry leaders, celebrate the achievements of their peers and be entertained by our celebrity MCs. This black tie gala event is not to be missed!

Defence + Industry Conference

Date 01 August 2019

Location National Convention Centre, Canberra

Website www.defence.gov.au/casg/dplusi

The Defence + Industry Conference is the premier Defence and industry conference held in the national capital. Consistently attracting in excess of 1100 delegates to hear from Defence and industry leaders discussing collaboration in the acquisition and sustainment space. Thursday 1 August will see the National Convention Centre come alive with informative, thought-provoking presentations from Defence decision makers and industry leaders, along with interactive Q&A sessions and networking opportunities.

Behind Closed Doors

Date 06 August 2019

Location Kedron Wavell Services Club

Website <https://www.eventbrite.com/e/behind-closed-doors-brisbane-tickets-63931133742>

This is a rare chance to look at submissions through the eyes of the evaluators, the realities of bid panels, and how writing winning content is at the heart of tender success. This seminar is particularly relevant to SME suppliers bidding to primes for supply chain contracts. This seminar, brought to you by Aurora Marketing and The Australian Industry & Defence Network Queensland (AIDN QLD), takes you behind the scenes with our tendering experts to learn what evaluators really want from suppliers and their proposals.

DST Scindicate 2019: Partnering for Impact

Date 15-16 August

Location Adelaide, SA

Website Scindicate@dst.defence.gov.au

Once again, industry, universities and research agencies are invited to participate in the two-day activities which will include technology demonstrations, business matchups, workshops, briefings and laboratory tours, as well as opportunities for networking and forging new collaborations. A Next Generation Technologies Fund Showcase will be a special feature of the event.

PGCS 2019

Date 20 – 22 August 2019

Location The Canberra Rex Hotel, Canberra

Website www.pgcsymposium.org.au

Now in its 7th year, PGCS 2019 will focus on ways to build the foundations needed to create project and program success. Creating the organisational capability needed to underpin the consistent delivery of successful projects in the 2020's starts at the top. Leadership and a sustained focus are required to build a culture of excellence that can balance innovation with surveillance and accountability, encourage learning, and manage knowledge effectively.

Hunter Defence Conference 2019

Date 23 August

Location Crown Plaza Hunter Valley

Website www.trybooking.com/book/event?eid=503298

The 2019 10th anniversary Hunter Defence Conference will focus on driving collaboration between Defence Primes, NSW regional SMEs, academia and the Department of Defence. Key presentations at this year's conference will include capability development staff from Army, Navy and Air Force Headquarters, Defence Primes articulating the support requirements they will have over the coming decade from regional SMEs. Former Minister for Defence Christopher Pyne will present a keynote at the dinner.

Australasian Simulation Congress

Date 02 – 05 September 2019

Location Gold Coast Convention and Exhibition Centre, Gold Coast

Website www.simulationcongress.com

The Australasian Simulation Congress provides a focused opportunity for industry development, business growth, training, discussion and distribution of information related to Simulation, Modelling, Training and Decision Support. Simulation Australasia can help you directly engage with industry, policy makers, Government and relevant stakeholders to facilitate you and your organisation achieving the success only a truly international Congress can provide.

Synthetic Environment Working Group (SEWG)

Date 06 September 2019

Location Gold Coast Convention and Exhibition Centre

Website www.defence.gov.au

The Synthetic Environment Working Group (SEWG) 2019 is a one-day Conference/Working Group sponsored by the Department of Defence, ADSTC and managed by the Simulation Governance Directorate.

Army Innovation Day 2019

Date 25 September, 2019

Location Adams Auditorium, ADFA

Website www.army.gov.au

AID19 will be held on 25 September and the purpose is for selected respondents to pitch their proposed innovations to assessors, Capability Managers and Defence Innovation Hub personnel. Respondents may also be able to verify, validate and clarify their Request for Proposal response. Request for Proposal submissions closes on 3 September and on 12 October respondents will be notified of outcomes.

Australian Cyber Conference 2019

Date 07-09 October 2019

Location Melbourne Convention and Exhibition Centre

Website cyberconference.com.au

The Australian Cyber Conference 2019 will provide business leaders with insights and best practices taught by the industry's top experts through keynotes, panel sessions and live demonstrations. Attending the conference will enable you to network with these practitioners to help you better understand and manage current threats, as well as identify and prepare to meet emerging challenges.

Pacific 2019

Date 08-10 October 2019

Location Sydney Convention Centre

Website www.pacificexpo.com.au

As the only comprehensive international exhibition of its kind in the Indo-Asia-Pacific region, PACIFIC 2019 will again provide the essential showcase for commercial maritime and naval defence industries to promote their capabilities to decision-makers from around the world.

2019 Parari Australian Explosive Ordnance Safety Symposium

Date 05-07 November

Location ADFA

Website parari@defence.gov.au

This year's symposium brings together delegates from around the world to discuss the latest innovations and advances in explosives, munitions and weapons safety. International and local experts from industry, academia, military and government will share their research to explore Explosive Ordnance Safety opportunities and challenges as a community.

MilCIS 2019

Date 12-14 November 2019

Location Canberra Convention Centre

Website www.milcis.com.au

In November each year, the Defence Chief Information Officer Group (CIOG) partners with the UNSW Canberra and the Institute of Electronic and Electrical Engineers (IEEE) to present MilCIS. The annual Military Communications and Information Systems (MilCIS) Conference welcomes military and government organisations, academia, and defence industries to contribute to the future direction of military communications and information systems.

SubSTEC 5 Conference

Date 18-21 November

Location Esplanade Hotel, Fremantle

Website www.submarineinstitute.com

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

Corrosion and Prevention 2019

Date 24-27 November

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au

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

2020

Rotortech 2020

Date 16-18 June 2020

Location Royal International Convention Centre, Brisbane

Website www.rotortech.com.au

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

Land Forces 2020

Date 01-03 September 2020

Location Brisbane Convention Centre

Website www.landforces.com.au

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