Aiming for the top 10 in 10 years

A

ustralia is on track to reach the government’s ambition of leaping into the top 10 of global defence exporters and it could do that well inside a decade.

New Defence Minister Christopher Pyne said in the first six months of 2018, defence export permits worth $1 billion were approved. And in the June quarter, applications for permits for export of defence equipment rose 25 per cent on the same period in 2017.

“Primes around the world, SMEs around the world are establishing here in Australia because there are huge opportunities here,” he said. “They are looking to export and
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that is why defence industry is growing. Manufacturing is in its longest period of growth since 2004. This isn’t a coincidence – it’s because of the government’s policies.

“That will flow into exports which we are already seeing this year. I think we will reach our goal of being a top 10 defence exporter well inside the 10-year frame we have given ourselves.”

Launching the new defence exports policy in January, the government announced its ambitious plan to push Australia into the top 10 of global defence exporters. That will require a very significant increase from the current annual level of $1.5-2.5 billion over the next decade.

Australia ranks 20th in a list of the 25 largest military equipment exporters for the period 2012-16, according to the Stockholm International Peace Research Institute. The US heads the list, followed by Russia, China, France, Germany and the UK. Australia sits behind South Africa, Belarus, Norway and Turkey.

On SIPRI’s figures, to reach 10th place – a position now held by Israel – Australia would need to lift its share of global arms exports from the current 0.3 per cent to more than 2.3 per cent.

Speaking outside LAND FORCES 2018 with Chief of Army Lieutenant General Rick Burr, Mr Pyne said he first attended LAND FORCES two years ago and it is now 50 per cent bigger. Twenty-six countries are represented and 15 regional army chiefs are attending.

“What we are seeing in the last two years is a dramatic change, an improvement, a growth in people’s interest in defence and defence industry in the capabilities we have here in Australia that we can export around the world,” he told reporters.

Asked if the Army was big enough to meet the challenges of a changing and uncertain world, LTGEN Burr said that was why the service was exploring opportunities with new technology.

“The opportunity for robotics and autonomous systems, manned and unmanned teaming, the technology that is emerging gives us enormous opportunities to scale and do broader capabilities with the same number of people,” he said.

“We are absolutely engaged with technology and industry to think about how we can use that in new and creative ways. Let’s focus on exploring that tech – that’s where the future is.”

LTGEN Burr said there was no doubt the ethical and legal challenges from artificial intelligence (AI) and various robotic systems were being considered around the world and would be discussed at this conference.

“That is why people need to be at the centre of all this technology and people remain central to the Army’s competitive advantage,” he said.

**EOS moves fast and strikes hard with R150 remote weapons system**

A ustralian technology company Electro Optic Systems has officially launched its new remote weapons station the R150 at LAND FORCES 2018.

The company was also named as the supplier of remote weapon stations for the Army’s Boxer Combat Reconnaissance Vehicles (CRVs).

Minister for Defence Christopher Pyne made the announcement at Electro Optic Systems’ stand in the LAND FORCES 2018 conference in Adelaide on Tuesday.

The R150 is an upgrade of Electro Optic Systems’ existing R400. It was developed as part of a Commonwealth Priority Industry Capability Innovation Proposal and recently concluded its testing program that included being fitted onto the Army’s Bushmaster Protected Mobility Vehicle and Hawkei Light Protected Vehicle.

It is expected to enter production...
before the end of calendar 2018.

Electro Optic Systems group chief executive Ben Greene said the R150 was half the weight of any 12.7mm machine gun system in the world today with better accuracy.

Those characteristics would “change the whole mobility spectrum” for potential clients.

“I’m very pleased that we have a product that falls right into the DNA of our company, which is lethality and mobility,” Greene said.

“We move fast and we strike hard.”

The company said there was already a significant amount of international interest on the R150.

Minister Pyne said Electro Optic Systems was an Australian export success story.

“It’s always a great pleasure when I get to do an opening or a launch of a company that doesn’t have Australia at the end of the title,” Mr Pyne said.

“EOS is not EOS Australia. It is EOS because it is an Australian company led by an Australian team and with Australian shareholders providing capability to our Australian Defence Force.”

Pyne said the R150 showed the company was “still at the cutting edge of new technologies”.

Meanwhile, the Minister said Electro Optic Systems had won the right to supply the remote weapons system for the Army Boxer CRV.

“I’m absolutely delighted that a home-grown company like EOS will be able to add to the Australian industry content of the Boxer, of the combat reconnaissance vehicle project. That’s been a couple of years in the making,” Pyne said.

“On two fronts EOS has a lot to celebrate today so congratulations to EOS, congratulations to the Department of Defence for working so well with industry.

“Let’s hope we have many more of these good success stories to announce over the coming months and years.”

Greene was also full-throated in his praise of Mr Pyne’s previous work as Minister for Defence Industry.

“Minister Pyne is very well known to all of us as an outstanding Minister for Defence Industry,” Greene said.

“You really changed the outlook for Australian defence industry.”

Lockheed Martin partners with Deakin Uni on exoskeleton

Lockheed Martin and Deakin University have partnered to extend the capability of Lockheed Martin’s Fortis unpowered exoskeleton.

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The technology supporting the exoskeleton may look simple but developing technologies that are a help and not a hindrance is a deceptively difficult engineering task,” Heading added.

“No two people are the same, so the exoskeleton needs to be designed to adjust and fit any sized person and accommodate different anthropometry.

“I think everyone has seen the ambitions to get to the Iron Man suit at some stage, this is a journey, and this is where we’re starting out. Deakin is doing some research tasks, supporting us on the exoskeleton.”

Using motion capture obtained from sensors on the arms and shoulders of exoskeleton operators and analysed by signal processing techniques, Deakin’s Institute for Intelligent Systems Research and Innovation (IISRI) used biomechanics to test the ergonomic effects of using power tools on the human body.

“From a research perspective, we have used human biomechanics software and the concept of integrated design and rapid prototyping, virtual prototyping, and virtual testing,” Professor Saeid Nahavandi, Pro Vice-Chancellor (Defence Technologies) at Deakin University said.

MINDEF announces Defence Innovation Hub priorities

Minister for Defence Christopher Pyne has announced the Government’s 2018-19 investment priorities for the Defence Innovation Hub.

Minister Pyne said the Government would invest $1.6 billion in defence industry and innovation over the next decade, including $640 million to support the development of innovative technologies through the Defence Innovation Hub.

“The Government’s approach to innovation in Defence is driven by its Defence Strategy, ensuring innovation investment is linked to our capability priorities,” he said.

“The Defence Innovation Hub has made significant progress since its launch in December 2016, receiving over 510 proposals and signing 59 innovation contracts with a combined value of more than $77.9 million,” he added. “Around 85 per cent of the proposals align to the top three investment priorities I first announced at the 2016 LAND FORCES conference.

“Transparency and clarity on innovation investment priorities provides greater certainty to industry, and allows industry and research organisations to plan their research and development investments.”

Investment priorities are reviewed on an annual basis, and the Defence Innovation Hub is seeking proposals aligned with the six capability streams identified in the 2016 Defence Integrated Investment Program: intelligence, surveillance, reconnaissance, electronic warfare, space and cyber; key enablers; land combat, amphibious warfare and special operations; air and sea lift; maritime and anti-submarine warfare; and strike and air combat.

Within these six capability streams, the top three priorities for investment in the 2018-19 financial year in priority order are: Intelligence, Surveillance, Reconnaissance, Electronic Warfare, Space and Cyber; Key Enablers; and Land Combat, Amphibious Warfare and Special Operations.

The latest priorities are a continuation from the previous financial year which focused on ISREW enabling Joint Decision Support, Cyber and Joint Integration Effects and the addition of Social Media Exploitation, Automated Dynamic Use of Spectrum Monitoring and Switching, Proximity Electronic Support/Electronic Attack (including development of EW Open Architectures) and Artificial Intelligence.

Sims allowing high level collective training

Defence has energetically embraced simulation, with pilots of helicopters and jets, tank crews and many others training on ultra-realistic simulations.

But how about linking up all those simulators dotted around the countryside and adding the ability to link in real flying aircraft and for system operators to add simulated enemy or friendly aircraft.

“You have a live, a virtual and a constructive environment and that’s where the future is going.

continued on page 11
Drone literate

The Army is proceeding with its rollout of low-cost drones in an innovative experiment to assess just what use different units could make of this fast-moving technology.

From a somewhat late start, the Army is wholeheartedly embracing unmanned aerial systems (UAS) with the state-of-the-art Black Hornet and Wasp issued to frontline infantry units and special forces.

But what use could soldiers in a warehouse, a training unit or Military Police find for UAS?

They could soon find out as units receive Chinese-made DJI Phantom 4 unmanned aerial vehicles (UAVs) in order to conduct their own tests and experiments. A total of 350 will be distributed across the Army.

“This technology will better enable Army to gather airborne imagery of training to assist with improving training methods, conduct site surveys for the placement of camps and other temporary facilities, assess damage to buildings, as well as assist with environmental protection in the field,” said COL Gabby Follet, acting commander of the 17th Combat Service Support Brigade.

The DJI Phantom 4 is a high end commercial UAV which sells for around $2,000 each, not cheap but a bargain procurement by military standards.

The Army first operated its own UAVs in Afghanistan in 2011. That was the US AAI RQ-7 Shadow which flew 10,000 hours in support of Australian and coalition operations.

Shadow has proved a reliable and versatile UAS but it’s now past its prime. In that time payload capability has improved enormously.

LAND 129 Phase 3 aims to deliver a replacement for Shadow from 2022-23. There is an abundance of UAS able to meet the requirements and the Army is spoiled for choice.

There are some 16 candidate systems, both fixed and rotary-wing.

To narrow its choices, the Army is conducting its own trial program in search of suitable UAS to operate from new warships.

Although more complex and with less endurance than a fixed-wing UAS such as Shadow, S-100 can carry a large payload and needs neither a catapult to launch or runway to land.

The Army is keeping a watchful eye on other emerging capabilities.

One is loitering munitions – UAS systems equipped with day/night cameras and a datalink to conduct surveillance missions, as well as an explosive warhead to attack targets of opportunity.

Another is the resupply UAV. That capability was demonstrated in Afghanistan with a pair of US Marine Corps operated Kaman K-MAX unmanned helicopters delivering more than 2,000 tonnes of cargo to remote bases.

The next use of such UAVs could be to evacuate battle casualties.

Then there’s the use of a UAV as what’s termed a pseudo-satellite, replacing capabilities provided by orbiting satellites which could be knocked out early in a conflict.

Flying high over a battlefield, the UAS could provide absent navigation, surveillance, data and communications services.

One such UAV is already undergoing trials. That’s the Airbus Zephyr which holds the world UAV endurance record, staying aloft for more than 336 hours in 2010.

Airbus has chosen Wyndham, Western Australia, for further trials of Zephyr this year.

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And that’s where you are going to save all the dollars on training,” said Jim Walker, Asia-Pacific Vice-President and Managing Director for Rockwell Collins.

Rockwell Collins is now rolling out its JTAC simulators at eight Defence locations and is working with Thales to integrate the Tiger Armed Reconnaissance Helicopter (ARH) into a joint training environment. JTACs – Joint Terminal Attack Controllers – are soldiers especially trained to call in artillery or air strikes on particular targets.

These may not always be Australian fires. Australia has adopted the US memorandum of agreement on JTAC competencies which requires that they be trained to a very high standard in order to use US capabilities.

Mr Walker said the JTAC sim was home grown Australian technology which drew on the best of US technology.

“The Saudis are very interested. We have just won a contract with them for the JTAC, similar to LAND 17, and they are very interested in the simulator. We have been talking with the Japanese, the Koreans and the Singaporeans.”

“In a digital and integrated world, things happen so quickly. You have to make sure you are putting the cross hairs on the right spot. You don’t want a blue on blue.”

Thales showed off a simulated collective training activity based on an amphibious landing at Shoalwater Bay.

“What this is demonstrating is the ability, particularly Thales and Rockwell in this case to work collaboratively with their bespoke softwares and terrain products,” said Thales’ Greg Hooper.

“We can actually bring in all key platforms of armoured fighting vehicles, helicopters, landing craft for amphibious landings, as well as working with virtual battlespace so the first shooter, the infantry, can also be incorporated into the collective training activity.

Mr Hooper said this all allowed Defence to conduct fairly high level collective training in a simulated environment before actually deploying to the field. He said parts of this were in service. ARH sims were in use in Darwin And Oakey. ASLAV simulators were in service across four sites.

“They are all capable being networked,” he said.

### Army air defence makes the grade

Saab Australia’s Mode 5 IFF upgrade to the Australian Army’s Short Range Air Defence (SHORAD) has received US certification, which means Army’s RBS 70 missile system can be safely deployed on operations with US and coalition forces.

The Mode 5 upgrade provides a more secure way of identifying Australian, US and coalition combat units to avoid the chance of ‘blue-on-blue’ fratricide incidents, Saab says.

“IFF Mode 5 ensures Australian ground-based air defence crews can participate in allied missions operating in shared airspaces confidently,” says Trevor Bate, project manager, Saab Australia.

“Mode 5 is critical for knowing who is a friend and who isn’t in complex operational environments.”

The three key components of the Australian Army’s SHORAD system supplied by Saab are being upgraded, the RBS 70 missile launcher, Giraffe AMB radar, and the Tactical Command and Control System (TaCCS).

TaCCS was developed in Australia by Saab to analyse tracks from the radar, allocate threats to one or more RBS 70s and provide queueing of the RBS 70 to the track, while the Giraffe AMB radar provides 3D surveillance and C3 functionality with early warning against multiple air threats, including incoming rocket, artillery and mortar rounds.

Certification activities involved co-operation between the AIR 90 Project Office, the Combat Systems Project Office, Saab Australia and Saab Dynamics AB.

It was the first time Mode 5 IFF work has been undertaken in Australia, and the first time a Short Range Air Defence system has been certified outside of the US.

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**Leidos wins**

**LAND 2110 Phase 3 CBRND**

Leidos Australia has signed a contract with the Commonwealth for the provision of chemical, biological, radiological,
nuclear defence (CBRND) for Project LAND 2110 Phase 1B.

The contract, valued at $243.5 million, is for the acquisition and initial support phase over five years, and will see Leidos deliver critical CBRND capability to Defence.

The company says the primary objective of the joint CBRND capability is to provide force protection to deployed ADF personnel against extant and emerging CBRN threats including environmental hazards. Additional objectives of the ADF’s CBRND capabilities are to enhance support to other government agencies in domestic CBRN incidents, and to assist integration in a coordinated whole of government effort.

The project will deliver and sustain capabilities in Detection, Identification and Monitoring, Warning and Reporting, Physical Protection, Hazard Management and Medical Support.

“Leidos has a long heritage of delivering complex logistics and CBRND capability globally, and we are delighted to be chosen to deliver this critical capability to the ADF,” Leidos Australia Chief Executive Christine Zeitz said.

Minister for Defence Christopher Pyne said global events in this year alone have demonstrated that chemical, biological, radiological and nuclear threats are contemporary hazards throughout the world.

“Leidos Australia will be a key capability partner of the ADF for the delivery and support of cutting edge technology to protect our soldiers on the battlefield as they encounter these evolving threats,” he said.

“The contracts will supply approximately 70,000 equipment items to support Defence’s capability to detect and protect itself from toxic industrial chemicals and weaponised chemical, biological, radiological and nuclear agents. This investment will provide an integrated and layered chemical, biological, radiological and nuclear defence capability which replaces ageing equipment reaching the end of its service life.”

Deliveries of rapidly-deployable DSB Dry Support Bridges to the Australian Army are nearly complete.

Deliveries of rapidly-deployable DSB Dry Support Bridges to the Australian Army are nearly complete.

Further, under LAND 155 WFEL is also supplying Army with new double-storey, link-reinforced MGB Medium Girder Bridge systems.

“Both bridge types now provide the ADF with rapidly-deployable temporary infrastructures which can be used both in combat situations and in the event of natural disasters,” WFEL says.

“The capability allows the ADF to quickly cross complex physical terrain including rivers, ravines and man-made gaps as efficiently as possible under a wide variety of operational scenarios.”

To date, WFEL has supplied almost 200 DSB and over 500 MGB bridging systems to armed forces around the world.

“We are extremely proud to have supplied our Australian customer with a world-leading set of bridging systems and we look forward to developing further our ongoing relationship,” WFEL Managing Director Ian Anderton said during a visit to his company’s facilities by Capability Acquisition and Sustainment Group officials in June.

Start-up targets target market

Brisbane-based start-up GAARD Tech Targets has launched a new range of fixed and mobile targets designed to improve training for ground and air gunnery.

The company, run by former Army tank troop leader Steen Bisgaard and former RAAF member Stefan Rossetto, is offering 2D and 3D fixed and mobile full-sized vehicle targets complete with realistic thermal and electromagnetic signatures. The thermal signatures are produced by the company’s patented active thermal cells, while the electronic warfare elements can emulate 4G, 3G, GSM, Wi-Fi, Bluetooth, VHF, UHF, and passive radar signatures to provide high-fidelity targets for live
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The Australian Army expects to issue a request for information (RFI) on its Land Simulation (LS) Core 2.0 project before the end of 2018.

The timeline for the minor project that aims to strengthen Army’s simulation capability was included in a presentation from Army director general platforms Colonel Spencer Norris and Army acting director land simulation Lieutenant Colonel Jason Mildon’s at LAND FORCES 2018 in Adelaide on Tuesday.

“At this point in time we are working the business case through the approval process,” LTCOL Jason Mildon said.

“We are looking to do the industry open day in October.

“We are looking to release the RFI to industry by the end of this year,”

LTCOL Mildon said the trial periods were expected to occur in the second or third quarters of 2019, before getting ready for a “Gate Two submission in Q4 2019 or potential Q1 of 2020”.

“What we would like to do is by at least March 2020 have the LS Core 2.0 projects set and implemented.”

LS Core 2.0 looks to connect the Army’s digital terminal control systems (DTCS) trainers to its Land Simulation Network (LSN). This was expected to offer advantages to the Army’s training program.

LTCOL Norris said there was an “increased appetite out there” for simulation.

“That’s driving a lot of the simulation stuff that we are currently doing,” LTCOL Norris said.

“2018 and 2019 from here is really where the rubber is going to hit the road for simulation I think within Army.”

Further, LTCOL Norris said the recapitalisation of the Army in the period ahead represented a great opportunity within the simulation area beyond just training.

“Training has really been our focus and it will continue to be a very strong part of interaction with simulation,” LTCOL Norris said.

“We are also trying to broaden that out to support the operations, so decision making in an operational environment but also informing capability development as well, so through modelling, experimentation and that sort of thing.”

LTCOL Mildon added: “Army is the sleeping dragon of simulation within Defence.”

“We are very lucky because unlike our Air Force and Navy brethren who have been fairly platform-centric, Army has been people-centric up until now.”

“We have a whole bunch of new kit under this modernisation period that will be coming down range to support us. With this new kit comes the opportunity for new simulation systems.”

Meanwhile, LTCOL Mildon said augmented reality, which blends the real-world environment with computer-generated information, was still some time away based on the development of the technology by the United States military.

He said it was about two years before the US would have a single-lane augmented reality range that they would be comfortable to put soldiers down, with another two or three years of development after that required.

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**New TAE facility to support F-35, Abrams engine maintenance**

TAE Aerospace has announced it has purchased a site at Bundamba near Ipswich in Queensland which will become its primary engine maintenance, repair, and upgrade (MRO&U) facility for the F-35A Lightning II’s P&W F135 and other engines in Australia and the region.

The company says the former hardware warehouse will become a state-of-the-art aerospace facility, purpose-designed to optimise program outcomes for its Defence customer and give the company further room to grow.

“Buying an existing building rather than starting with a block of land has saved us six months of development time, and with the building already designed and finished to a high standard it stood out as the best
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option for us and our customer,” TAE Aerospace CEO Andrew Sanderson said.

“We have just signed an agreement with a local builder now we are ready to start transforming this building into the most advanced military engine MRO&U facility in the Southern Hemisphere.”

The building is planned to be ready to start accepting F135s by mid-2019, and will be expanded to provide space to accommodate the company’s F404 (classic Hornet), F414 (Super Hornet and Growler) and AGT1500 (M1A1 Abrams) engine programs.

“We have conducted time and motion studies and designed the footprint to optimise everything from production throughput, to the flow of goods and movement of parts, to the technology requirements,” Mr Sanderson added.

“We have operated from the RAAF base since 2000 and achieved great outcomes there, but we have outgrown it now and having our workforce spread over multiple buildings is not ideal for productivity.

“As well as being together in one building, the Bundamba location is great for us. We are close to Ipswich where many of our people live, it brings us closer to the Brisbane CBD as well as the port for deliveries, and there is good access to public transport.”

Minister for Defence, Christopher Pyne said the new facility is a testament to the strength of Australia’s defence industry and the contribution Australia makes to the global F-35 program.

“TAE Aerospace’s new facility will support MRO&U activities for not only Australian F135 engines but also engines from around the Asia Pacific region and the world,” he said.

“TAE Aerospace is 100 per cent Australian-owned with 237 employees at several sites across Australia. The addition of the F135 engine MRO&U activities will add a minimum of 15 aerospace technician jobs to its workforce and up to 85 additional jobs as part of the future F-35 Global Support Solution.”

Elbit selected for cyber training range

Elbit Systems of Australia has been chosen to deliver a Cyber Training range for the Department of Defence under
a three-year contract to boost Australia’s cyber security capability. Announcing the award at LAND FORCES 2018 on September 4, Minister for Defence Christopher Pyne said that Elbit Systems of Australia will provide an interim cyber range, network design and build, cyber range training, and teaching materials.

“The Australian Government is committed to strengthening its cyber capabilities to protect Defence and other critical Government systems from malicious cyber intrusion and disruption,” he said. “The Cyber Training range will be used by Defence personnel for training on cyber-terrain and associated systems that our cyber workforce is responsible to defend.”

Forty-nine cyber warfare specialists who have graduated from the ADF inaugural Accelerated Defensive Cyber Training program will use the new cyber training range to develop and maintain their skills. The Cyber Training range is an integral aspect of the program which is designed to meet the ADF’s immediate requirement to secure its networks and mission systems that are fundamental to current operations in a world where the threat to such systems continues to increase.

The Accelerated Defensive Cyber Training program was created by Defence to meet the 2016 Defence White Paper’s directive for more trained personnel and enhanced capability in the cyber domain well ahead of its planned implementation period.

New GM for Logistic Engineering Services

Logistic Engineering Services (LES) has announced the appointment of Warren Smith to the position of General Manager, effective October 1. Smith will succeed founding general manager Phil Jarratt in the role, as the company seeks to expand its footprint to other Australian industries and locations.

“I am immensely proud of what has been achieved by LES over the last 19 years, and Warren’s appointment as GM will ensure the future of LES for years to come,” Jarratt, who will maintain a director’s role with LES, said.

LES is a consulting and professional service provider specialising in the development and delivery of integrated logistics support services and training. The company offers a network of experienced project managers, engineers, logistic analysts, programmers, trainers and technical personnel.

Smith joined LES in 2015 as Business Development Manager, and previously was operations manager at Elbit Systems of Australia, and the land program/operations manager at Nova Systems.
The veteran-owned systems engineering company

As the ADF acquires new capabilities, it requires the means to store and transport all the associated stores, spares and support equipment, an under-appreciated but essential enabling requirement.

Canberra company Eclips Engineering has come up with a range of innovative solutions for ADF requirements, based on its expertise at doing clever stuff with shipping containers.

Eclips managing director Shaun Moore said his company’s JMILS (Joint Modular Intermodal Logistics System) was set to be the logistics workhorse of defence forces, and it’s not just the ADF that is interested.

“We are currently in discussions with the UK MoD who say they have a real need now, and we’re able to say, ‘this is ready to go now,’” he told ADBR recently.

JMILS stemmed from a requirement for Project LAND 121 Phase 3B – the project to replace the Army’s fleet of Mack heavy trucks and Unimog medium trucks with a fleet of 2,500 new medium and heavy vehicles, 3,858 modules, and 1,753 trailers.

That deal was won by Rheinmetall MAN Military Vehicles Australia, for which Eclips designed and delivered 2,157 ISO1C flat racks, a steel platform on which vehicles and other stores can be fixed for easy transport on another vehicle.

Eclips delivered all 2,157 units on budget and ahead of schedule. “We finished that project and are very proud. It’s probably the best in the world because of Defence’s rigorous design processes,” Moore said.

The flat rack is just the first element of JMILS. The system also includes what’s called a container rollout platform (CROP), slightly smaller than a flat rack, which is transportable inside a standard ISO shipping container.

With the aid of a forklift, CROP can simply be rolled out for easy access to other elements of the system, such as a joint modular intermodal container (JMIC) or stackable plastic case (SPC). JMIC is a US concept for which Eclips has the Australian licence. SPCs are made in Melbourne and are designed to fit snugly inside a JMIC case.

One of the company’s fundamental objectives is to come up with storage systems which means no-one, whether soldier or civilian, will ever need to enter the confines of a shipping container to stack or retrieve stores.

Taking the JMILS concept further, Eclips was contracted through the former Rapid Prototyping, Development and Evaluation (RPDE) program to develop a system to store and transport 155mm gun projectiles and charge bags inside a JMIC container.

“We developed a system that sits inside that box to host the ammunition and the charge bags,” Moore said.

Originally called Sea Box International, the company changed its name in 2017 and is wholly Australian-owned by its three Australian partners.

“We are a veteran-owned systems engineering company,” Moore said. “We actually had a partnership with Sea Box Inc where we would market each other’s products,” he added.

But “the perception of being perceived as an American company outweighed the benefits of the association.”

Eclips recently unveiled its deployable Container Roll Out Solar System (CROSS), with the Australian Renewable Energy Agency (ARENA) providing $289,725 for design, manufacture and testing. This system is a series of solar panels mounted on the company’s ECLIPS’s Container Roll-Out Warehousing System (CROWS), stored and transported inside a 20 or 40-foot shipping container. Seven CROWS, each with five solar panels go inside a 20-foot container.

These can be quickly deployed to produce instant power – more than 15 kilowatts per 20-foot container, and more than 30 kilowatts per 40-foot container. In fact, Moore said, in their demonstration in Canberra earlier this year it took longer to remove the container from the transport truck than it did to deploy the panels.

This system has obvious applications for deployed forces and remote bases, reducing the requirement for diesel fuel and noisy generators. But it also has substantial civil application for emergency services and disaster relief, or even to earn revenue for a local council with some unused open space.

As with Defence requirements for large modular facilities, demand for facilities for the resources sector has diminished as it transitions from the development to the production phase. But with the government modernising much of the defence force equipment, Moore sees considerable opportunities within Australia.

There’s the next phase of Project LAND 121 to provide sustainment and facilities for the new vehicle fleet, and for LAND 400 to acquire the new combat reconnaissance and infantry fighting vehicles.

“We don’t think they have anywhere near what they need, and for every new capability that comes in, they have a logistics problem of how they move their stuff,” Moore said.”

Max Blenkin
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