Army

Land Environment Working Group 2024

Army's engagement with Industry

LEWG 2024 Unclassified Deep Dive Sessions

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Logistics Plans Army

Title

Advance Manufacturing – Working Together to Solve the IP & Data Challenge

Theme

Logistics Branch will be releasing a Primer to enable a meaningful discussion as part of the Land Forces 2024 program of events. The Primer will propose how Army is considering Advance Manufacturing and the various potential ways to access the necessary IP and data.

The Australian Army is seeking to engage with defence Industry on the topic of intellectual property and data management for the purposes of enabling advanced manufacturing.

Advanced manufacturing includes the use of new, emerging and contemporary computer-aided technologies, processes and materials to design, produce and finish items. Potential benefits include enhanced supply chain resilience, improved material availability in deployed environments and the ability to rapidly innovate.

Army aims to collaboratively develop solutions to the intellectual property and data management challenges associated with advanced manufacturing. Overcoming these barriers will be vital to the Australian Army making best use of this technology and realising the benefits it offers.

Dismounted Combat Program

Title

Dismounted Combat Program

Theme:

Question 1: The Dismounted Combat Program is pursuing Acceleration Innovation Initiatives to address critical vulnerabilities and capability gaps. The ADF will seek Minimum Prototype Quantities of capability to ADF dismounted combatants for test and evaluation (or immediate operational deployment). *"How can Industry and the Commonwealth better utilise processes and relationships to enable spiral development and Combat Ready Prototyping methodology?"*

Question 2: Dismounted Combatants conducting Distributed Littoral Operations will require enhanced operational endurance in an austere, complex environment. *"How can industry assist Army in increasing dismounted combatants' operational endurance whilst conducting Distributed Littoral Operations?"*

Question 3: The Dismounted Combat Program Acceleration Innovation Initiatives will facilitate the delivery of small volumes of lower technical readiness level products. *"How does Army work with Australian industry to increase technical readiness levels of these products whilst ensuring the viability of small to medium businesses where in some cases full-scale production may not proceed?"*

Land Combat Vehicle Program

Title

Increasing Australian industry support for Armoured Fighting Vehicles

Theme

Part of the role of cavalry is to remain undetected while observing and reporting on enemy activities. This requires cavalry force elements to maintain silent watch.

Currently, there is a need for cavalry vehicles to enhance duration on task before requiring the vehicles to be started to charge the batteries. A portable power storage, or silent power generation, solution is required to increase the silent watch capabilities of cavalry.

Small uncrewed aerial systems (sUAS) continue to post an omnipotent threat to Armoured Fighting Vehicles. How can we actively and passively defeat sUAS through layered approaches?

Battlefield Aviation Program

Title

Future Battlefield Aviation.

Theme

Question 1: The rationalisation of Army Aviation into primary two industry hubs on provides an opportunity for improved collaboration between Defence, Industry, local government, vocational training organisations, academia, and local business. Noting the work underway to reduce barriers between these entities, what other structures, systems, and forums would aide in growing, sustaining and retaining Army Aviation expertise in these regions.

Question 2: Automation is a key way to maximise output from a limited workforce. Where are the automation opportunities, both large and small, that Army Aviation could leverage to improve the capability, particularly in the areas of maintenance and sustainment?

Question 3: As aviation capabilities become increasingly advanced, the ability to exercise the full suite of capabilities becomes more challenging due to security, regulatory and physical limitations. What development opportunities (training and simulation) could improve collective training in Army Aviation to ensure readiness on day one of conflict?

Special Operations Modernisation

Title

Special Operations Program Plenary

Theme

The SO Program will brief attendees on the status of the Program at the OFFICIAL: Sensitive level.

A panel comprising senior Capability Manager and CASG staff will convene to field Industry questions and discuss shared opportunities to realise SO capability.

Land Intelligence, Surveillance, Reconnaissance and Electronic Warfare

Title

Land Intelligence Surveillance, Reconnaissance and Electronic Warfare focus Areas 2024-2030

Theme

Electronic Warfare

This session describes Army's intent for a longer-term Land Electronic Warfare (EW) Capability pathway, and seeks industry insight into how commercial partnerships and innovation opportunities could lead to sovereign capability realisation. The session will inform Army's understanding of industry opportunities and the development of the Land EW Capability pathway.

Focus: Land Electronic Warfare units need to modernise against an increasingly capable threat. Land EW must seek to extend its ability to sense and effect targets beyond the immediate/ close area, and consider a greater range of Land EW options to deliver sense and effect. Land EW must also adapt its training to replicate the target sets they are most likely to focus on when tactically deployed.

Question 1: Extended Range of Land EW capability is an increasing requirement across EW C2, ES and EA. How does Land EW best work with Australian Industry to achieve Extended Range for EW effects?

Question 2: How can Land EW units conduct realistic training within the likely policy and security restraints imposed on EW equipment?

Question 3: How can Army best leverage AUKUS Pillar II to realise Sovereign EW capabilities as well as integration into the wider FVEY EW community?

Question 4**:** What does Industry need from Army to enable greater Australia integration/ involvement into Land EW capability?

Land Targeting Enterprise

Land has identified the need to establish its own Targeting Enterprise to support the Integrated Force. The delivery of this Enterprise is on an accelerated timeline, and required a range of human, procedural and technical enhancements to achieve multi-domain and coalition integration. Industry interaction and involvement is critical to realise the Land Targeting Enterprise.

Question 1: Which Industry/Commonwealth relationship is best suited to support and achieve an accelerated, high-profile and potentially high-cost ICT infrastructure and application capability requirement?

Question 2: What can Industry provide in the support to FIC integration of the Land Targeting Enterprise both within Land and Joint?

Question 3: What can Industry provide to support streamlined dialogue and sharing of knowledge within the Land Targeting Enterprise and broader Defence Targeting System?

Land Combat Support Program

Option One

Title: Force Protection: Counter-small Uncrewed Aerial Systems	
Theme	**Sub-Statements**
Counter-small Uncrewed Aerial System: How can the ADF infrastructure protect ADF force elements and critical infrastructure from Category 1 & 2 UAS, both domestic and deployed, through a systems-of-systems approach?	Policy: How can we leverage new low-cost and emerging technologies to achieve counter-small uncrewed aerial systems effects at scale while complying with Australia's domestic policy and governance framework?
	Integration: How could the Land Force integrate existing in-service or soon-to-be-introduced systems to achieve integrated or complementary counter-small uncrewed aerial systems effects?
	Training: How could a comprehensive electronic training package on counter-small uncrewed aerial systems be implemented across the workforce to increase awareness and education of the ADF?
	Automation/Autonomisation: How can technology be leveraged to automate or autonomise counter-small uncrewed aerial systems effects and information distribution?
	Workforce: How can counter-small uncrewed aerial systems effects be achieved at critical infrastructure in an enduring fashion with minimal workforce liabilities?

Option Two

Title: Force Protection: CBRND, CEH, Counter-Mobility	
Theme	**Sub-Statements**
Counter-Mobility: How can the Future Integrated Force achieve counter-mobility and terrain shaping effects against an adversary in the Indo-Pacific littoral environment in support of Australia's National Defence Strategy of Denial?	Treaties: How can we leverage new low-cost and emerging technologies to achieve counter-mobility effects at scale while complying with Australia's obligations under international treaties and other agreements?
	Integration: How could the Land Force integrate existing in-service or soon-to-be-introduced systems (e.g., sea mines) to achieve integrated or complementary counter-mobility effects?
	Long Range Fires: How could counter-mobility effects be employed to maximise effectiveness of Army's Long Range Fires & Littoral Manoeuvre capabilities?
	Supply Chains: How could Industry enable assured supply chains to achieve counter-mobility effects during crisis/conflict?
	Automation/Autonomisation: How can technology be leveraged to automate or autonomise counter-mobility planning and reconnaissance functions?
	Workforce: How can counter-mobility effects be achieved with minimal workforce liabilities?
CBRN Defence: How can the ADF support protracted Future Integrated Force operations in a CBRN environment and support Whole of Government integration for domestic CBRN response?	Supply Chains: How can Australian Defence Industry enable CBRN Defence supply chain resilience on escalation from competition to conflict?
	CBRN Health: How can Australian Defence Industry enable the provision of CBRN Health Support, inclusive of Strategic Aeromedical Evacuation from CBRN environments and provision of medical countermeasures?

	Knowledge: How can Australian Defence Industry support an Australian centre of excellence for CBRN Defence?
	R&D: How can Australian Defence Industry support the Operating in a CBRN Environment (OCE) STaR Shot and Australian Strategic Capability Accelerator (ASCA) to innovate new ways to protect ADF personnel from emerging CBRN threats?
	Littoral: How can the ADF CBRND System support the deployed force in littoral operations?
	Endurance: How can the ADF CBRND System support protracted operations in CBRN environments?
	Platforms: How can the ADF CBRND System support the operation of large platforms (aircraft and ships) in CBRN environments?
CEH Problem Statement: How can the Amphibious capable Combined Arms Land Force ensure mobility, freedom of movement and agile force protection in an Explosive Hazard environment	Industry: How can industry support sovereign open architecture systems that support multiple force protection capabilities at the required speed and levels of assurance across the full spectrum of operations?
	Innovation with Assurance: How can industry support Army in reducing the sustainment burden of electronic Force Protection systems, inclusive of mission and support systems? (Assess that this one is very likely to have linkages with and C-sUAS systems that employ ctr RF actions)

Option Three

Title: Close Fires, Long Range Fires, and land-based Air & Missile Defence	
Theme	**Sub-Statements**
Reducing Programmatic Friction while Accelerating: The speed at which land-based Fires is modernising is placing increased pressure to get things right the first time, at pace.	(O) Governance: What industry/CoA programmatic governance models or relationships can be investigated to support acceleration of a high-cost, high-profile capability it is being realised?
	(O) Risk v Progress: What can industry suggest to monitor the progress of the CoA capability acquisition to provide early warning of issues or opportunities to accelerate even faster?
	(O) Knowledge: How can Australian Defence Industry support knowledge management for capability development and tactical employment?

Robotic and Autonomous Systems Implementation & Coordination Office (RICO)

Title
Accelerating Army's Emerging Technology

Theme
The 2024 National Defence Strategy (NDS) has illustrates the burgeoning importance of innovation, science, and technology to rapidly develop and introduce advanced military capabilities into service.

Through the NDS, six priority innovation, science, and technology areas have been identified: hypersonics, directed energy, trusted autonomy, quantum technology, information warfare and long-range fires.

Central to our successful adoption of these technologies is the deep collaboration with academia, industry and our allies, setting the conditions to trial novel capabilities, learn quickly from failure and share lessons. Australia's sovereign industrial base is vital to attain higher levels of military preparedness and self-reliance, accelerating innovation, science, and technology capability delivery. Collaboration through action is our core purpose.

To achieve this, the Chief of Army has directed Army to exploit advanced technologies and emerging capabilities with Army units through a series of key exercises. Army's operational capability priorities are:

A. Increasing the range and lethality of small teams by an order of magnitude, centred on a Cavalry Troop.
B. Protecting the force from small UAS threats.
C. Decreasing small team demand and increasing throughput capacity on combat service support units to double tactical logistics capacity.

Within the guidance of the NDS and the Chief Directive, Army's priority technology areas to achieve operational capability are:

- Automated Target Recognition (ATR).
- Individual and collective (swarm) autonomy.

- Quantum sensing, particularly for asset detection across the battlespace.
- C-UAS technologies, including combat management systems to mass small team effects against multiple threats.
- Battlefield electrification, particularly to reduce the supply chain burden through power and energy novel solutions.
- Launched effects.

To support this deep dive, a set of challenge statements will be generated and provided to attendees one month prior to the Land Environment Working Group. Attendees will have an opportunity to collaborate and discuss their responses and ideas at the session with Army.

Land Mobility and Support Program

Title:

Land Mobility and Support Program Brief

Theme:

- JP8140
  - What solutions, taking into account capacity, does industry have to develop and deliver rapid scalable water distribution in a littoral, deployed environment?
  - How can industry assist with hard, black and grey waste disposal in a deployed environment to reduce logistic burden?

- L2061 :
  - What can industry provide to help bridge the gap for medical casualty evacuation between the foreshore and anchored littoral vessels?

- LM&SP Logistics
  - How can industry assist in survivability (dispersal) of logistics capabilities in a highly targetable, littoral environment where surveillance is pervasive?

- LM&SP Vehicles
  - How can industry help to address supply chain issues with spares and parts for Army capabilities? – Please note this area aligns with the LDSS Challenge question of how to access Industry IP to enable parts production locally (i.e. through additive, adaptive, printing manufacture).
  - How can Defence assist industry to optimise supply chain resilience?
  - How can Defence support SMES and build diversity in production and supply in Australia?

Littoral Manoeuvre

Title

Littoral Manoeuvre Program Update

Theme

The Program Sponsor will provide an update on the progress of program.

It will include a strong focus on the NDS/IIP intent and ensuring the provision to industry of useful insights on the program.

Land Command, Control, Communications, and Computing

Option One

Title

Land C4 Program Update

Theme

This session seeks to provide industry with insights into the delivery of future Land C4 capabilities through LAND4140 – Land C4 Modernisation, including the proposed delivery model. This will be an opportunity for Industry to ask questions and make comments.

Option Two

Title

Capability Obsolescence

Theme

Land C4 has identified obsolescence risks around a number of legacy capabilities. This session seeks industry insights into how Land C4 can manage these risks ahead of the introduction of the future delivery model being established under LAND4140 – Land C4 Modernisation.

Question 1: What are the considerations for Defence to acquire Commercial off the Shelf / Military off the Shelf capabilities quickly to achieve Minimum Viable Capability?

Question 2: Does Australian industry have the real developmental capacity to deliver Artificial Intelligence capability to meet Army's maturing need?

Question 3: What are the implications for the Land C4 Program in pursuing sovereign industry capability? What does "sovereign industry" mean to industry?