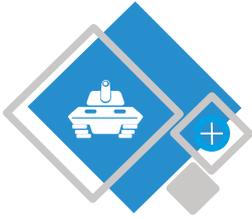




Australian Government  
Department of Defence



# SOVEREIGN INDUSTRIAL CAPABILITY PRIORITY IMPLEMENTATION PLAN

Land combat and protected vehicles and  
technology upgrades

August 2020





# LAND COMBAT AND PROTECTED VEHICLES AND TECHNOLOGY UPGRADES

## *Minister's foreword*

The Morrison Government is investing \$270 billion in the most significant build-up of our military capability in decades. This is presenting unprecedented opportunities for our defence industry. Our investments are reliant on a strong and agile partnership between Government and Australian industry. This Plan gives industry the insight and knowledge they need to take up these opportunities.

Technological evolution and innovation in land combat and protected vehicle capability is integral to Australia's warfighting edge. This Implementation Plan – the third of ten – is a continuation of the Government's commitment to develop a robust, resilient and internationally-competitive Australian defence industry.

I encourage Australian small businesses in particular to get involved. Home-grown partnerships and innovation are key to delivering critical ADF capabilities. To be successful, we need involvement from all aspects of the industry value chain, no matter how big or small.

## A plan for a strong, sustainable and secure industrial capability

This Implementation Plan details the critical industrial capabilities that underpin the "Land combat and protected vehicles and technology upgrades" priority. It is supported by the companion Department of Defence Industry Plan, which provides more detail on the industrial base and Government actions listed in this Implementation Plan. The Industry Plan can be found at <https://www.defence.gov.au/SPI/Industry/CapabilityPlan/ImplementationPlans.asp>

The "Land combat and protected vehicles and technology upgrades" priority includes the following:

- Combat vehicles – vehicles operated in sustained close combat and designed to generate warfighting advantage through lethality and protection systems.
- Protected vehicles – vehicles designed to enable the safe movement of personnel and/or equipment through a conflict environment, however, not designed for sustained close combat.
- Technology upgrades – an improvement to the quality or usefulness of a system or platform, or a change that incorporates a new function or component. An upgrade is generally connected with design changes to improve the systems' capability or performance.



**The Hon Melissa Price MP**  
Minister for Defence Industry





Within this environment, four industrial capabilities are identified as critical. Australia seeks to have access to or control over certain elements of each, and to support or influence related defence industry investment. Developing these critical industrial capabilities will ensure the availability and operational effectiveness of land combat and protected vehicle platforms when and where they are needed by the ADF. These critical industrial capabilities are not ordered by priority or importance.



#### PROTECTION TECHNOLOGIES

Design, development and industrialisation of survivability and signature reduction material technologies and processes.



#### INTEGRATION, NETWORKING AND COMMUNICATIONS

Vehicle and combat system integration, in particular the expertise to develop and implement solutions that enable interoperability of hardware and software, and the secure acquisition, analysis and dissemination of data.



#### VEHICLE AND SYSTEM UPGRADES

The systematic upgrade of vehicle systems at both the system and subsystem level. Configuration management, interoperability and rigorous testing are important considerations prior to undertaking physical changes to the vehicle.



#### SUSTAINMENT

The ability to forecast maintenance requirements, undertake platform, system and subsystem maintenance, and support update and upgrade enabled by data, a highly skilled technical workforce and fit-for-purpose Australian infrastructure.

To ensure Australia retains the identified critical industrial capabilities, Government seeks to build the following enabling capabilities in partnership with industry over the next decade, starting with the Government actions listed in this Plan:

- Autonomous systems capability: investment in the development of indigenous autonomous systems capabilities, inclusive of a highly skilled workforce and intellectual property that enables ongoing and agile evolution of land combat and protected vehicle technologies.
- Establishing processes and governance mechanisms to enable systems integration expertise to grow among the Australian small-to-medium enterprise base.
- Comprehensive and structured data collection and analysis techniques for the assessment and dissemination of user and vehicle performance information, and enabling situational awareness for end users in deployed, networked environments.

## Organisation focus

We met with organisations representing all parts of the value chain and the full suite of critical industrial capabilities, including academia, industry representatives and research institutes.



**51 ORGANISATIONS ENGAGED**

### ORGANISATION FOCUS

**8**

PRIMES

**24**

MANUFACTURE / ASSEMBLY / INTEGRATOR

**4**

RESEARCH & DEVELOPMENT / ACADEMIA

**1**

IMPORTER / AGENT / RESELLER

**9**

DESIGN / PROTOTYPING

**5**

SUPPORT: TRAINING / DESPOSAL / TEST & EVALUATION

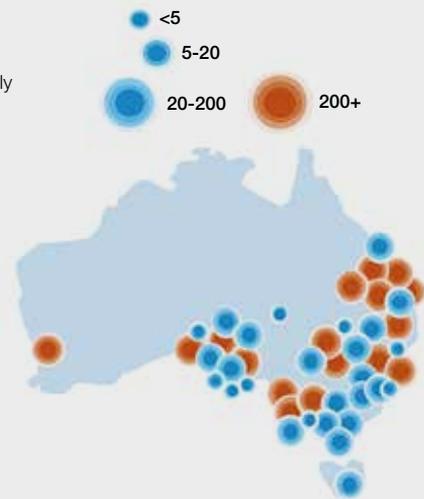
**98%** of those consulted currently supply to Defence, with **28%** supporting land domain only (any product, directly/indirectly)

**56%** of sample are **direct suppliers** of Defence, including grant recipients

**2%** of sample represented by importers, agents, resellers (**low value add**)

**44%** of sample are manufacturing, assembling or integrating (**high value add**)

### NUMBER OF EMPLOYEES, AUSTRALIA



NOTE: Organisations with various locations in Australia have been mapped to their primary location relating to this priority, and in some instances, where the consultation was held

## The segment at a glance

The industrial base supporting the manufacture and sustainment of land combat and protected vehicles in Australia is growing, adaptable and diversified, with many having successfully pivoted from other sectors and also supporting other parts of Defence in support of these platforms. Original equipment manufacturers and small-to-medium enterprises dominate this market, undertaking a range of manufacturing, assembly and integration functions; primarily for protected vehicles. With the high transferability of skills and resources within these businesses, the ADF represents one of many key customers to the sub-sector. Transformation continues within the sector, with key drivers including the cessation of automotive manufacturing in Australia and the increased adoption of digitisation in manufacturing processes.

## Government actions

This Implementation Plan includes the following actions to be taken by Defence to support this priority. Although responsibility has been attributed to a particular branch, group or agency, it is expected that a broader group of Government stakeholders will participate in, or contribute to, an action. Funding of the Government actions will be taken from existing departmental funding.

Topic	Action	Responsible	Timeframe	Key Performance Indicators
Implementation and communication of Defence strategies and policies	<p>Defence will continue to develop and implement internal strategies and policies pertaining to the acquisition and support of land-based capabilities and technologies, including those applicable to land combat and protected vehicles.</p> <p>Resulting from the implementation of these strategies and policies will be a series of decisions and potential changes to Defence priorities, preferences and the solutions being sought from industry (for example, the Land Force Maintenance Directive seeks greater support from industry in the delivery of cross-training the Defence maintenance workforce and the ability to undertake more maintenance in theatre).</p> <p>Defence will continue to improve how it communicates requirements to industry through a wide range of fora including briefings to State Government and Industry groups, the Land Environment Working Group, Land Forces Conference, project industry briefings, and specific project-related Australian industry workshops.</p>	Army/ Capability Acquisition and Sustainment Group	2021-2022	Increase in the quality and frequency of communication of land-based capability strategies and policies.
Development of capability-based support models	<p>The development of capability-based support models, termed the Land Force Support Models, will be developed in collaboration between the Capability Manager and Capability Acquisition and Sustainment Group, in order to optimise proactive investments from both Defence and industry in the land vehicle support system, and streamline activity. These support models are designed at Gate 0 and evolved throughout the Capability Life Cycle. Army will continue to work with Capability Acquisition and Sustainment Group, Joint Logistics Command and industry to refine these models ahead of finalising capability support arrangements.</p> <p>This will provide clarity of Defence's requirements for industry to effectively invest in research and development.</p>	Army/ Capability Acquisition and Sustainment Group	2021	Land Force Support Models are developed. Industry investment in research and development is targeted at Defence's requirements and priority areas as stipulated in the Land Force Support Models.
Enhancing the Australian Industry Capability Program	<p>Defence will enhance the Australian Industry Capability program through contractual and non-contractual mechanisms with a focus on cooperation, communication, contracting and compliance.</p> <p>Defence will establish an independent Australian Industry Capability Audit Program to validate Australian Industry Capability performance against contracted commitments.</p> <p>This program will ensure that our procurement continues to contribute to an advanced, capable ADF, which is supported by an enduring Australian industrial base.</p>	Capability Acquisition and Sustainment Group	Late-2020	Independent Australian Industry Capability Audit Program established. Audits validate Australian Industry Capability performance against contracted commitments and contribute to better oversight and management of Defence procurement projects.

Topic	Action	Responsible	Timeframe	Key Performance Indicators
Engineering development program	<p>Working within the Defence Industry Skills Support initiatives, specifically the Defence Industry Internship Program and School Pathways Program, Defence will explore options of an engineering development stream or program focused on students and graduates with an interest and appropriate qualifications to support a career in the defence sector; focused specifically in the software, robotics, mechanical, systems and electronic engineering fields. This program will seek to identify and incentivise students with these skillsets to pursue careers in the Australian land combat and protected vehicle technologies industry.</p> <p>The program, subject to security requirements and interest from industry partners, would provide participants with rotations across Defence and industry facilities and factories, enabling on-the-job skills development.</p>	Strategic Policy and Intelligence Group	2021	Increase in the number of Defence Industry Internship Program participants in the software, robotics, mechanical, systems and electronic engineering fields.
Standardised architectures	<p>Defence is specifying standards to support enhanced integration and interoperability of systems and platforms to enable industry to make more informed decisions in relation to research and development and other investments.</p> <p>Of note, the Australian General Vehicle Architecture (GVA) was published in December 2017 and the Vehicle Standard Operating Environment (VSOE) is currently being developed. These standards will define integration parameters and governance requirements applicable to land combat and protected vehicles and related technologies.</p> <p>Defence will seek to continue to implement the standards as practicable, and as part of this, pursue a communications approach with industry that supports awareness and understanding.</p>	Army	Early 2021	Vehicle Standard Operating Environment is published. The standards are communicated to industry to promote research and development and investment into standardised architectures.
Development of land vehicle data strategy	<p>To support the ongoing acquisition and sustainment of vehicles, and in particular, the design, development and upgrade of the critical industrial capabilities identified within this Sovereign Industrial Capability Priority, Defence will develop a land vehicle data strategy. The strategy will seek to define data collection, analysis and distribution, as well as data ownership requirements. The intent would be to iteratively incorporate all ADF land vehicles into the strategy with a view to achieve maximum commonality in the data parameters, where this is feasible.</p> <p>The strategy is intended to provide a clear message to the Defence community and to industry with respect to the data Defence seeks to collect, preferences in terms of data format, storage locations, analysis methods and decision making requirements. Ownership of vehicle input and output data will be clearly defined and used to understand usage and performance attributes and impacts of the platform and the user. Provisions for data sharing within the fleet, across the joint force and with international partners will also clearly articulated.</p>	Army/ Capability Acquisition and Sustainment Group	2021	Land vehicle data strategy is published. The strategy is communicated to industry and provides a clear message on Defence's expectations for vehicle data collection, analysis, distribution, storage and ownership.



Please direct any questions on the Sovereign Industrial  
Capability Priority policy or the information contained in  
this Implementation Plan to:

[defence.icp@defence.gov.au](mailto:defence.icp@defence.gov.au)