

# FACT SHEET

# SOVEREIGN INDUSTRIAL CAPABILITY PRIORITIES

## What are Sovereign Industrial Capability Priorities?

Sovereign Industrial Capability Priorities are capabilities that are critical to Defence and must be developed or supported by Australian industry. This means Australia must have access to, or control over the skills, technology, intellectual property, financial resources and infrastructure that underpin the Priorities. The Priorities represent a subset of the industrial capabilities that Defence relies on to deliver its core objectives requirements and will be managed closely across defence and industry planning.

Sovereign Industrial Capability Priorities are those

- ⇨ operationally critical to the Defence mission;
- ⇨ priorities within the Integrated Investment Program over the next three to five years; or
- ⇨ in need of dedicated monitoring, management, and support due to their industrial complexity, Government priority, or requirements across multiple capability programs.

Defence's **Sovereign Industrial Capability Priorities** are (in no particular order):

- ⇨ Combat clothing survivability and signature reduction technologies
- ⇨ Munitions and small arms research, design, development and manufacture
- ⇨ Land combat and protected vehicles and technology upgrades

- ⇨ Aerospace platform deeper maintenance and structural integrity
- ⇨ Collins class submarine maintenance and technology upgrade
- ⇨ Continuous shipbuilding program (including rolling submarine acquisition)
- ⇨ Enhanced active phased array and passive radar capability
- ⇨ Advanced signal processing capability
- ⇨ Surveillance and intelligence
- ⇨ Test, evaluation, certification and systems assurance
- ⇨ Robotics, autonomous systems, and artificial intelligence
- ⇨ Precision guided munitions, hypersonic weapons, and integrated air and missile defence systems
- ⇨ Space
- ⇨ Information warfare and cyber capabilities

The Sovereign Industrial Capability Priorities identify a number of elements of the Australian defence industrial base at a capability rather than company or technology level. This encourages innovation in existing technologies and provides flexibility in supporting current critical capabilities.

### Combat clothing survivability and signature reduction technologies

- ⇨ Australian industry must possess the ability to provide significant operational advantages through signature reducing characteristics and enhanced blast protection incorporated into the soldier combat ensemble.

- ↔ Australian industry must be positioned to refine, enhance and upgrade stealth and survivability technologies to provide a level of force protection that gives our soldiers a warfighting edge.
- ↔ Only the specific technologies relevant to signature reduction and ballistic protection are considered part of this Sovereign Industrial Capability Priority. As such, general combat clothing is not an element of this Priority.

#### **Munitions and small arms research, design, development and manufacture**

- ↔ Kinetic weapons and payloads will continue to underpin the Australian Defence Force's military capabilities over the next decade. They will continue to be delivered primarily by industry through a number of major acquisition and sustainment projects.
- ↔ Australian industry must be able to manufacture propellants, munitions, ammunition and small arms that provide our soldiers with a warfighting advantage.

#### **Land combat and protected vehicles and technology upgrades**

- ↔ Australian industry, including members of vehicle supply chains, must have the capability and capacity to design, develop, manufacture and integrate new systems and equipment for next generation capabilities.
- ↔ Australian industry must also have the ability to update and upgrade systems and equipment to enable the Australian Defence Force's land combat vehicles to meet current and future challenges.
- ↔ Broad Australian industry involvement in the delivery of the new Combat Reconnaissance Vehicle program, for example, will ensure Australia develops the sovereign capability to maintain a lethal, relevant and effective capability into the future.

#### **Aerospace platform deeper maintenance and structural integrity**

- ↔ Complex or specialised maintenance of the Australian Defence Force's rotary and fixed wing aircraft, such as our F-35A Joint Strike Fighter and large remotely-piloted aerial vehicles, conducted in Australia in the required timeframes is critical to deterrence and the effective conduct of operations.
- ↔ Australian industry must possess the industrial skills and technology for the conduct of deeper level maintenance of our rotary and fixed wing aircraft and large remotely piloted aerial vehicles to enable Defence to reduce strategic and operational risk.

#### **Collins class submarine maintenance and technology upgrade**

- ↔ Australian industry must have an ability to enhance, sustain, repair, operate and upgrade our submarine capability.
- ↔ Particular importance is placed on the sonar subsystem, tactical and weapons control system, signature management and endurance. Endurance includes batteries for energy storage and propulsion systems.

#### **Continuous shipbuilding program (including rolling submarine acquisition)**

- ↔ Australian industry must have the technical, managerial, heavy engineering and advanced manufacturing capabilities required to build an innovative, cost competitive, sustainable and continuous program that delivers Australia's future submarines, major surface combatants and minor war vessels.
- ↔ Australian industry will need to be integrated into global supply chains, have modern, productive and secure shipyards, and employ a highly skilled workforce both for shipbuilding and sustainment.

- ⇨ Establishing 21st century shipyards for design, construction and optimal production efficiency of our future submarines, frigates and minor war vessels is critical to achieve the capability, reform and efficiency dividends required.

### **Enhanced active phased array and passive radar capability**

- ⇨ Phased array radar capability is only one element of a broader system, but it is a critical one where Australia has a world leading capability and advantage.
- ⇨ The ability to detect adversary forces – actively or passively – seeking to operate with similar discretion will be critical to offensive and defensive operations in all environments.
- ⇨ Australian industry must possess the ability to design, develop, manufacture, maintain and upgrade passive and active electronically-scanned array radar systems.

### **Advanced signal processing capability**

- ⇨ Australian industry must understand, design, develop and use technology applications to maintain an advanced signal processing capability in the area of cyber and information security, radar, sonar and acoustic technologies, electronic warfare, operational support (including threat recognition, targeting and planning), and signature management.

### **Surveillance and intelligence**

- ⇨ Australian industry must possess an ability to design, develop, maintain and upgrade persistent surveillance capability so that large amounts of data can be collected, analysed and disseminated across the joint force.

- ⇨ This includes developing and upgrading sensors and software, over-the-horizon radar systems and space situational awareness systems to enhance data collection, analysis or dissemination.
- ⇨ It also includes the integration of intelligence and information systems into Command and Control (C2), Communications, Computers and Intelligence (C4I) networks, high-end integration across platforms, trusted autonomous systems, and weapon systems that provide Defence with improved situational awareness.

### **Test, evaluation, certification and systems assurance**

- ⇨ Australian industry must have a suitably skilled workforce and the equipment needed to ensure the safety, accessibility and usability of Defence platforms and systems, both for peacetime and operations.
- ⇨ These capabilities must support Australia's unique requirements, and allow indigenous design, development and implementation of modifications and upgrades.
- ⇨ Particular focus is placed on future test and evaluation capabilities, including non-destructive testing methods and cyber worthiness certification.

### **Robotics, autonomous systems, and artificial intelligence**

- ⇨ Australian industry must have the ability to design and deliver robotic and autonomous systems that enhance Defence's operational and training capabilities through improving efficiency, reducing the physical and cognitive load to the operator, increasing mass and achieving decision making superiority while decreasing risk to personnel.

- ↔ These systems will be underpinned by advanced robotics, sensing and artificial intelligence – encompassing algorithms, machine-learning and deep-learning – to enhance bulk data analysis to facilitate decision making processes and enable autonomous systems.

### **Precision guided munitions, hypersonic weapons, and integrated air and missile defence systems**

- ↔ Australian industry must have the ability to manufacture, maintain and test selected precision guided munitions, including air- and ship-launched missiles, surface-to-surface missiles, and guided bombs.
- ↔ These munitions must ensure accuracy through radio signals, laser guidance, and/or inertial navigation systems.
- ↔ Australian industry also must have the ability, in collaboration with strategic partners, to design, research and develop hypersonic weapons that challenge detection and defence systems due to their speed, manoeuvrability, and flight paths, and to maintain integrated air and missile defence systems that protect our deployed forces and, if necessary, Australia from high-speed and long-range strike weapons.

### **Space**

- ↔ Australian industry must support Defence by developing and contributing niche technologies and capabilities to assist other Defence capabilities, and contribute to the capability needs of our international partners.

### **Information warfare and cyber capability**

- ↔ The proliferation of digital capabilities globally has raised operations within the information and cyber domain to a strategic-level risk for Defence.

- ↔ A strong sovereign industrial capability is essential in providing Defence with capabilities needed to operate in and through the information and cyber environment, in the electromagnetic spectrum, and for target-audience analysis.
- ↔ Defence must have the ability to defend against or recover from an attack in a degraded electronic and digital environment across its entire sphere of activities and this extends to defence industry systems and networks.

## **How were the Sovereign Industrial Capability Priorities developed?**

Defence used the Sovereign Industrial Capability Assessment Framework to provide a repeatable methodology to identify Sovereign Industrial Capability Priorities.

The Framework applied strategy, capability and resource lenses to what the Australian Defence Force needs to be able to do to defend the nation and dependence on Australian defence industry to achieve it.

The Framework incorporated assessment of strategic guidance, levels of discretion in achieving Defence's mission, and the relationship with Australian defence industry. Decision making within the Framework and on the Priorities was extensively consulted across Defence, Government and industry.

The Priorities will be reviewed periodically and new ones considered based on strategic, technology and Australian industry capability developments.

## How will the Sovereign Industrial Capability Priorities be implemented?

Management and support for Sovereign Industrial Capability Priorities starts at the very beginning of defence planning, continuing throughout the Force Design process and Capability Life Cycle, including the Australian Industry Capability Program, into grants and initiatives to support industry directly. The Australian Industry Capability Program will remain the critical lever for Australian industry involvement in supporting the Sovereign Industrial Capability Priorities and Defence's broader capability needs.

Options and means to assure each Sovereign Industrial Capability Priority differ according to the size, scale and nature of the industrial base. These decisions are made within the wider context of Australia's defence capability needs, funding priorities and options to deliver the optimum level of sovereignty.

Identifying these Priorities is not about winners or losers within defence industry or mandating companies in procurements or providing automatic contracts. Nor is it about seeking to focus industry investment only in these areas as there will be considerable opportunities for Australian defence industry to support Defence across the major programs identified in the *2020 Force Structure Plan*. Identifying these Priorities is about ensuring Australian industry has the resilience and capabilities in areas critical to delivering the Defence mission.

Defence develops Implementation and Industry Plans for each Sovereign Industrial Capability Priority that outlines the critical industrial capabilities that underpin each Priority, and details Government Actions to support the industrial base in these sectors. These plans include workforce and skilling considerations, and where appropriate, a forecast of technological developments in the field that may impact on future defence capabilities.

A Sovereign Industrial Capability Priorities Working Group was established to guide implementation, monitoring and evaluation of the Priorities. The Working Group, contains representation from Defence capability managers, delivery groups, the Defence Science and Technology Group, and the Defence Innovation Hub, as well as a representative from the Department of Industry, Science, Energy and Resources.

## Sovereign Industrial Capability Priority Grants Program

The Sovereign Industrial Capability Priority Grants Program supports the development, maintenance or enhancement of the capability of Australian small to medium enterprises that contribute to one or more of the Sovereign Industrial Capability Priorities.

Grant assessments and Defence's investment decisions will be based on clear alignment with Defence requirements. Grants of up to \$1 million will be available for capital expenditure or non-recurring engineering costs, subject to a 50:50 matched funding requirement.

## More information

For more information about the Defence Industrial Capability Plan, Sovereign Industrial Capability Priorities, and defence industry policy initiatives, visit: <https://www1.defence.gov.au/business-industry/capability-plans>

Further information on the Sovereign Industrial Capability Priority Grants, eligibility and grants processes, visit:

<https://business.gov.au/grants-and-programs/sovereign-industrial-capability-priority-grants>