



Australian Government

SDIP 2 - Continuous naval shipbuilding and sustainment

Annex B2

Defence acknowledges the Traditional Custodians of Country throughout Australia. Defence recognises their continuing connection to traditional lands and waters and would like to pay respect to their Elders both past and present.

Defence would also like to pay respect to the Aboriginal and Torres Strait Islander peoples who have contributed to the defence of Australia in times of peace and war.

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Overview of Annex B

This Annex contains the Detailed Sovereign Defence Industrial Priorities (Detailed SDIPs) for SDIP 2, in accordance with Chapter 3.

The SDIPs are:

SDIP 1. Maintenance, repair, overhaul and upgrade (MRO&U) of Australian Defence Force aircraft

SDIP 2. Continuous naval shipbuilding and sustainment

SDIP 3. Sustainment and enhancement of the combined-arms land system

SDIP 4. Domestic manufacture of guided weapons, explosive ordnance and munitions

SDIP 5. Development and integration of autonomous systems

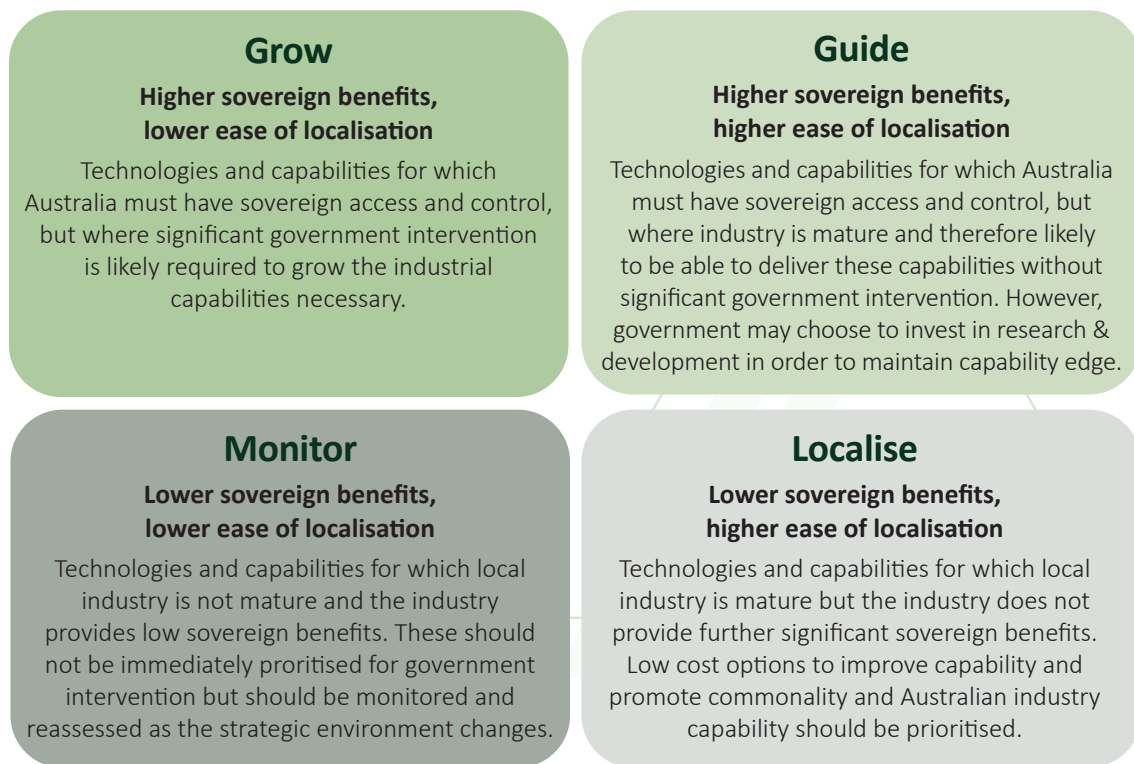
SDIP 6. Integration and enhancement of battlespace awareness and management systems

SDIP 7. Test and evaluation, certification and systems assurance

There are many areas where defence industry is already providing a service or capability to Defence; for example, the provision of enabling information and communication technology support including data centres, cyber and health services. Defence will continue to work with industry to ensure we have the level of industrial capability required in Australia to deliver defence outcomes.

Defence will refine the information in these Annexes through consultation with industry, and in line with the biennially-updated National Defence Strategy. Defence will work with industry to identify shortfalls, critical paths and areas for growth, using the approach described in Chapter 3 (Figure 4). The aim is to consistently and continuously guide and grow the defence industrial base, aligned to Defence's needs.

Figure 1 - Approach to industrial prioritisation



Capability and Delivery Managers

The Vice Chief of the Defence Force is responsible for defining and communicating the capabilities Defence requires of Capability Managers. Capability Managers and Delivery Managers are responsible for the growth and health of the industrial capabilities required to deliver and sustain the directed defence capabilities.

Industrial capability lifecycle

The information provided for each Detailed SDIP contains Defence's requirements against the industrial capability lifecycle.

The industrial capability lifecycle consists of:



- ▶ **Innovation, Science & Technology** – innovative technology solutions that have been identified as meeting a defence capability need and providing an asymmetric advantage for Defence to develop, explore and mature to pull through to capability. These would be candidates for consideration under the Advanced Strategic Capabilities Accelerator (ASCA).
- ▶ **Design & Development** – areas that require further maturation and development beyond the prototype phase to meet a defence capability need.
- ▶ **Integration & Adaptation** – mature industry solutions or systems that need to be integrated with other defence systems and/or adapted to meet a defence capability need.
- ▶ **Manufacture & Assembly** – industry solutions, systems or components that Defence has determined must be manufactured and/or assembled in Australia, to ensure sovereignty and/or supply chain security and resilience.
- ▶ **Sustainment & Support** – industrial capabilities and services that Defence has determined must be delivered by industry in Australia to sustain and support defence capability.

SDIP 2 - Continuous naval shipbuilding and sustainment

Capability and Delivery Manager

The Capability Manager for the continuous naval shipbuilding and sustainment SDIP is the Deputy Secretary Naval Shipbuilding and Sustainment. The Delivery Manager is the Deputy Secretary Naval Shipbuilding and Sustainment.

Background

The Defence Strategic Review confirmed the importance of naval shipbuilding as a sovereign industrial capability and recommended that the Australian Government reaffirm its commitment to continuous naval shipbuilding. It also noted that Australia must have the industrial capability and capacity to maintain, sustain and upgrade our naval vessels and capabilities, including nuclear-powered submarines. Creating and sustaining this industrial capability, including the underpinning workforce, is a critical component of self-reliance in National Defence. In building naval vessels in Australia, we will need to develop the critical understanding of the platforms required to support sustainment, maintenance and upgrade activities.

In the maritime context, if we are to support the growth of strategic partnerships and alliances such as AUKUS, reinforcing and strengthening Australia's sovereign military and industrial capabilities is critical.

Strengthened resilience — the ability to withstand, endure and recover from disruption — is a key desired outcome of this new focus, the ultimate outcome of which is an enhanced sovereign defence industrial base and innovation ecosystem with capacity to scale.

The ability to undertake maintenance and any associated repairs is critical to enabling naval platforms to achieve availability goals over their life of type. Persistent defects can be resolved through design and innovation of new systems and regimes of management. This drives demand for an enduring design capability, underpinned by robust testing and certification that enables seaworthy operation of the Australian Defence Force (ADF) ships and submarines.

Also important is the ability to innovate to enhance performance and reduce costs, by developing new systems and inserting emerging technologies into naval platforms. Advanced materials and coatings, new and novel sensors, application of artificial intelligence and digitisation, and augmentation of the fleet with autonomous systems can create asymmetric advantage for our Navy.

Prioritisation approach

As part of its reaffirmed commitment to continuous naval shipbuilding, the Australian Government will release an updated Naval Shipbuilding and Sustainment Enterprise Strategy and a supporting Naval Shipbuilding and Sustainment Plan in 2024.

The updated Enterprise Strategy and Plan will be developed in conjunction with the policy set out in the Defence Industry Development Strategy as well as the National Defence Strategy and the Surface Fleet Review, ensuring alignment of Defence-led industry objectives. They will send a clear demand signal to industry stakeholders and their workforce by setting out the Australian Government's funded ambition to establish a sovereign onshore shipbuilding and sustainment capability for both surface and sub-surface vessels.

As these artefacts are delivered, the list of Detailed SDIPs will be adapted in line with further decisions by the Australian Government on the nuclear-powered submarine capability and ongoing detailed analysis of supply chain risks and vulnerabilities.

Surface Ships

Epoch 1 outcomes

Within the maritime domain, the focus for Epoch 1 is to safely achieve availability targets while maximising the speed with which upgraded and new platforms are brought into service. In order to achieve this, long-term partnerships have been established with industry to develop and build sovereign industrial capability in the critical areas of combat management systems and combat systems engineering and integration.

These partnerships will provide a sustainable combat systems industry capable of evolutionary upgrades and responsiveness to emerging threats. A platform sovereign design capability is also being built through current build programs to ensure the right skills and experience are in place to update and modify ship designs to enhance operational capability.

Immediate priorities include strengthening maintenance activities in Australia, resolving known challenges in the supply chain and providing industry with the scope to develop or adapt technologies to provide the ADF with a capability edge.

Epoch 2 outcomes

Table 2 identifies where Australian defence industry, often in collaboration with our global defence prime partners, can grow their capacity and capability in areas such as:

- ▶ Developing innovation through their own research and development efforts, in partnership with Defence Science and Technology Group, or under the umbrella of ASCA missions.
- ▶ Designing solutions that deliver for the ADF's unique operational requirements and help achieve greater commonality of key equipment across the fleet.
- ▶ Integrating new capabilities into existing platforms.
- ▶ Manufacturing parts that will contribute to the ease of sustainment via commonality and high quality solutions.

Detailed Sovereign Defence Industrial Priorities

The Detailed SDIPs are focused on shipborne sea systems. As analysis iterates and matures, Defence will also consider prioritising the shore-based infrastructure and capabilities that generate naval power. These shore-based systems include:

- ▶ Training systems and facilities.
- ▶ Bombardment and underwater ranges.
- ▶ Above-water and undersea targets.
- ▶ Supporting services.

Table 1 - Detailed SDIPs for SDIP2 Surface ships – Epoch 1 (2023-25)

Description	Innovation, Science & Technology	Design & Development	Integration & Adaptation	Manufacture & Assembly	Sustainment & Support
Uncrewed vehicles	✓	✓	✓		
Heating, ventilation, air conditioning, refrigeration & chilled water systems		✓		✓	
Hull structure - general			✓		
Propulsion engines & motors					✓
Maritime pumps, compressors, valves, tanks & pipes				✓	
Ships boats			✓		
Preservations & coverings		✓		✓	✓
Advanced test & evaluation ranges		✓			✓
Power generator systems					✓
Transformers					✓
Electrical & fibre cabling					
Switchboards, distribution & lighting panels					✓
Lighting systems				✓	
Water plant systems					
Gear systems					✓
Chargers, inverters & converters					✓
Surveillance systems (radar & sonar)					
Combat management systems		✓	✓		

Table 2 - Detailed SDIPs for SDIP2 Surface ships – Epoch 2 (2026-30)

Description	Innovation, Science & Technology	Design & Development	Integration & Adaptation	Manufacture & Assembly	Sustainment & Support
Uncrewed vehicles	✓	✓	✓	✓	✓
Heating, ventilation, air conditioning, refrigeration & chilled water systems	✓	✓	✓	✓	
Hull structure - general	✓	✓	✓	✓	
Propulsion engines & motors			✓		
Maritime pumps, compressors, valves, tanks & pipes		✓		✓	
Ships boats		✓			✓
Preservations & coverings					
Advanced test & evaluation ranges		✓	✓		✓
Power generator systems			✓		
Transformers		✓			
Electrical & fibre cabling			✓		
Switchboards, distribution & lighting panels			✓		
Lighting systems			✓		
Water plant systems		✓		✓	
Gear systems			✓		
Chargers, inverters & converters		✓			
Surveillance systems (radar & sonar)	✓	✓	✓	✓	
Combat management systems	✓	✓	✓	✓	

✓ - Continuation from Epoch 1
 ✓ - New in Epoch 2

Conventional submarines

Background

Australia's current conventional submarine capability is 6 Collins Class submarines. These submarines were built in Australia from the late 1980's through to the early 2000's. They are now well through their service life; however, a life of type extension (LOTE) of one full 10-year operating cycle is intended for the fleet in order to promote continuity of Australia's submarine capability until delivery of Australia's Virginia Class submarines. Australia's Collins Class submarines are home ported at HMAS Stirling in Western Australia and supported by a well-established sovereign defence industrial base.

Prioritisation approach

We will prioritise Australia's conventional submarines by continuing to invest in effective Collins Class sustainment, selected Collins Class capability enhancements, and Collins Class LOTE. We will maintain strategic performance-based commercial arrangements with key strategic partners, to foster appropriate sovereign defence industry confidence as we apply our sustainment, upgrade and LOTE investments. We will continue to value eminent independent critical peer review and advice to assist the efficacy of our governance, management and decision making in relation to the Collins Class.

Epoch 1 outcomes

Additional capacity is needed by mid-2026 and beyond in support of Collins Class LOTE project implementation, which will commence in Epoch 1 and extend into Epoch 2. This may include the electrical and mechanical fitters and supervisors needed to support the replacement of diesel, propulsion and power conversion systems.

The current intent is to maintain Collins Class industry capacity to maximise sovereign submarine industrial capacity for nuclear-powered submarines. This posture acknowledges that simply maintaining Collins Class-related sovereign industrial capacity may not be sufficient to deliver the required availability or capability outcomes. Should this risk increase, Defence will consider growing additional conventional submarine industrial capacity.

Epoch 2 outcomes

In the longer-term, the bulk of sovereign conventional submarine industrial capacity would be expected to become available for nuclear-powered submarine purposes as the Collins Class submarines are withdrawn from service.

The Detailed SDIPs for Australia's conventional submarine capability, set out in Table 5, reflect the intention to support the continued availability of a regionally superior submarine capability and to grow nuclear-powered submarine industrial capability out of the conventional submarine industrial base.

Table 3 - Conventional Submarines

Description	Additional information
Configuration management	<p>Management of the functional, allocated and product baselines for both the submarines themselves, and the associated sovereign support system sufficient to:</p> <ul style="list-style-type: none"> • Control these baselines. • Maintain these baselines (through upkeep). • Change these baselines (through update and upgrade). <p>Update means to the functional baseline by advancing the allocated/product baselines. Upgrade means to advance the functional baseline.</p>
Engineering	<p>Sufficient know how and know why to manage the technical capability and integrity of the submarines by:</p> <ul style="list-style-type: none"> • Assessing technical risks associated with deviations from approved baselines, both individually and in aggregate. • Assessing the technical worth and integrity of proposed changes to approved baselines.
Program and project management	<p>Sufficient know how and know why to deliver safe and technically sound conventional submarine sustainment outcomes to acceptable schedule and cost, and with manageable risk.</p> <p>Sufficient know how and know why to foster problem identification, remediation, and continuous improvement in delivery of the sovereign conventional submarine capability.</p>
Supply support	<p>Sufficient know how and know why to optimise supply chain performance in support of overall submarine availability, capability, affordability and value for money outcomes.</p> <p>Sufficient know how and leverage to shape and influence sovereign submarine supply chain outcomes to meet sovereign industry objectives, cognisant of submarine performance objectives and value for money considerations.</p>
Submarine safety and stewardship	<p>Sufficient know how and know why to enable hazards associated with having a sovereign submarine capability to be mitigated as far as reasonably practical through:</p> <ul style="list-style-type: none"> • Maintenance of submarine safety case, Seaworthiness, and SUBSAFE certification arguments. • Maintenance of technical integrity of the SUBSAFE boundary and other safety critical systems. • Establishment and maintenance of safe systems of work for all working on the submarine capability.

**Table 4 - Detailed SDIPs for SDIP2
Conventional Submarines (Collins LOTE) – Epoch 1 (2023-25)**

Description	Innovation, Science & Technology	Design & Development	Integration & Adaptation	Manufacture & Assembly	Sustainment & Support
Power generator systems					✓
Chargers, inverters & converters			✓		
Propulsion engines & motors					✓
Hull structure - general					✓

**Table 5 - Detailed SDIPs for SDIP2
Conventional Submarines (Collins LOTE) – Epoch 2 (by 2026-30)**

Description	Innovation, Science & Technology	Design & Development	Integration & Adaptation	Manufacture & Assembly	Sustainment & Support
Power generator systems			✓		✓
Chargers, inverters & converters		✓	✓		✓
Propulsion engines & motors			✓		✓
Hull structure - general					✓

✓ - Continuation from Epoch 1
 ✓ - New in Epoch 2

Nuclear-powered submarines

Background

Our enduring nuclear-powered submarine (NPS) capability is planned to be delivered in accordance with the AUKUS Pillar I Optimal Pathway. This will include the construction and delivery of SSN-AUKUS and acquisition and sustainment of Virginia Class Submarines.

Through the Optimal Pathway:

- ▶ Australia will acquire a conventionally-armed NPS capability as soon as the early 2030s.
- ▶ All 3 nations' industrial capacity will be elevated, enabling production and sustainment of advanced and interoperable NPS for decades to come.
- ▶ Our individual and collective undersea presence in the Indo-Pacific and contribution to global security and stability in the region will be expanded.

Expansion of existing industrial capability and capacity, including a generation of new participants in the submarine industrial base, will be essential to maintaining an enduring Australian submarine capability, and to support our AUKUS partners' rotational presence.

We are building the NPS industrial base on our proven sovereign defence industry foundation currently supporting our conventional submarine capability. Conventional and NPS submarine programs are working closely together, to ensure any submarine industrial base investment enables current capability and timely growth of an NPS industrial base, as necessary.

Additionally, we will use historic and contemporary Australian, UK and US analysis to validate our understanding of our national and trilateral submarine industrial bases. This will help us identify both the industrial capability that needs to be geographically available to NPS operating from Australia, and the Australian contribution to the global AUKUS industrial base.

As part of this process, we will also identify unique industrial capabilities that are required but not otherwise certain to be developed in Australia, to ensure the Australian Government investment targets relevant, viable and enduring capability uplift.

Prioritisation approach

We will work with our key Sovereign Submarine Partners to foster appropriate sovereign defence industry confidence and co-design strategies for investment in our submarine industrial base.

We are enabling appropriate exchange of information between AUKUS partners, which will enable the further development of sovereign defence industrial capability, while ensuring we remain responsible stewards of this information and related technologies.

We are growing our education and skilling capacity with the support of our AUKUS partners, and working closely with our education and skilling sector to deliver the industrial workforce uplift required.

We are seizing opportunities to create and develop early avenues for Australian industry participation in the trilateral supply chain, to enhance the industrial base resilience of all 3 nations.

We are continuously fostering AUKUS partner confidence in our sovereign submarine industrial base, through advocacy for Australian industrial capability with demonstrated examples of performance in relevant capabilities, where possible.

Epoch 1 and 2 outcomes

Table 6 sets out our priorities during Epoch 1 and Epoch 2. Continued analysis will identify parts of the value chain that could be delivered by Australian suppliers in order to achieve our NPS capability targets.

This analysis recognises that Australia thrives on access to the world's best technologies, manufacturers and ideas. The intent is to pursue sovereign solutions only where it does not compromise the speed of capability to the ADF, and where it makes sense in terms of delivering future operational resilience, security or a capability edge.

**Table 6 - Detailed SDIPs for SDIP2
Nuclear-Powered Submarines – Epoch 1 (2023-25) and Epoch 2 (2026-30)**

Description	Additional information
Conventional submarine industrial base	Increased capability and capacity to safeguard support to conventional submarine capability, and cater for emerging NPS needs across NPS Optimal Pathway phases. This includes, but is not limited to, qualifying suppliers and products for trilateral NPS supply chains, to support Optimal Pathway Phases 1 and 2.
NPS-specific industrial base	Growth and maintenance of a specialist industrial capability and capacity for NPS rotational-force, sustainment and build. This includes a wide range of requirements from hull steel to nuclear education and skilling expertise.
Nuclear civil construction industrial base	Growth and maintenance of the necessary skillsets and expertise across the civil design and construction industry that will design, deliver and maintain supporting infrastructure across the NPS enterprise, to the standard required by all relevant regulations. This will require input from trilateral partner nations as part of the design and delivery process for the earliest facilities.
Trilateral submarine industrial base	Growth of Australian industrial base capability and capacity, by seeking and taking opportunities to enhance trilateral submarine industrial base resilience. This includes, but is not limited to, identifying required industrial capabilities beyond short to medium-term support for conventional submarine and NPS capability, and qualifying suppliers and products for trilateral NPS purposes.
NPS safety and stewardship	Growth and maintenance of industry support to manage risks associated with NPS so far as reasonably practical. This includes, but is not limited to industry participation in the support system that directly enables nuclear and radiological safety, and the expertise to gain and maintain necessary nuclear-related licences.
NPS security	Growth and maintenance of industry support with sufficient acumen and competence to establish and maintain appropriate high-level security arrangements for sensitive and classified resources, with appropriate assurance of those arrangements and compliance with International Atomic Energy Agency nuclear safeguard obligations.