AUSTRALIAN MARITIME INNOVATION CENTRE

PROPOSED OPERATIONAL MODEL

# Almost $100 billion has been committed over coming decades to build Australia’s future submarines, frigates, offshore patrol vessels and Pacific patrol boats in a continuous build program.

These naval shipbuilding programs offer the opportunity to foster Australian capability in maritime design, engineering, science, research, materials technology, systems integration and shipbuilding. Previous experience from major acquisitions, such as the Collins-class submarines, Air Warfare Destroyer, Landing Helicopter Dock and ANZAC-class frigate programs, demonstrate that:

* It can take two years or more to develop potential supply chain partners to readiness.
* Australia’s research capabilities, whilst highly regarded, are disparate and uncoordinated, making it difficult to identify and access relevant expertise.
* Accumulated knowledge (know-how and know-why) is not readily transferred between programs and is also lost over time.

The operational model for the Australian Maritime Innovation Centre (AMIC) defined here provides a pathway for collaboration between Defence, Navy and the Defence Science and Technology (DST) Group, Australian research providers and industry, thereby reducing search and transaction costs for Australia’s maritime acquisitions. AMIC will help facilitate understanding and interpretation of requirements, link industry and research, and encourage Australian businesses to collaborate together. Likewise, AMIC will act as a repository of knowledge across naval programs and time.

Establishing AMIC will develop Australia’s maritime sovereign industrial capability, and therefore aid delivery of the future naval shipbuilding programs.

## Purpose and Objectives

AMIC will coordinate Defence’s research and development (R&D) requirements with Australia’s maritime scientific, research and engineering capabilities and with the defence industry.

AMIC is intended to:

* nurture Australian capability in maritime design, engineering, science, research, materials technology, systems integration and shipbuilding in support of naval shipbuilding
* develop the next generation engineering workforce
* receive and manage relevant intellectual property (IP) on behalf of Defence, and make it available under appropriate controls.
* ensure Australia has the capability to refresh the technology of its naval fleet in the years ahead.

## Sovereign Industry Capability

AMIC will provide a component of the national network required to support a sovereign industrial capability by housing and maintaining the know-how and the know-why critical to the acquisition and sustainment of the future submarine and surface ship fleets.

## Governance

It is proposed AMIC will be governed by a board comprising an Independent Chair and directors from DST Group, Navy Engineering, the Capability Acquisition and Sustainment Group (CASG), research and industry. A dedicated Chief Executive Officer and staff will manage operations such as project agreements, IP frameworks, reporting arrangements and project coordination.

Governance, program management and research coordination arrangements will ensure Defence and Navy have tactical, strategic and security oversight, so that all activities will take place within an appropriate security framework.

An IP framework specifically designed for the Defence environment will be put in place to manage research projects involving industry, research organisations and end customers. This will allow full reach-through rights for Defence, and will provide a mechanism for development of necessary industry capabilities by providing full industrial rights to practice without compromise to Defence’s competitive selection process.

AMIC, with its focus on accessing and coordinating R&D, would complement the Centre for Defence Industry Capability, whose primary focus is to help develop, and foster innovation within Australia’s defence industry.

## Finance

Arrangements to fund AMIC will be determined by Defence, in consultation with key partners.

The Victorian Government has agreed to provide support to establish and host AMIC.

## AMIC structure and relationships

Alternative text for Workflow diagram and image displayed on page 1 of the PDF titled: Australian Maritime Innovation Centre – Proposed Operational Model

### Defence Maritime Programs

* DST Group, responsible for Technical direction (and direct R&D contracts with universities, industry and other)
* Navy Engineering, responsible for Direct Scope, regulation, standards
* CASG, responsible for Commercial direction

FLOWS TO

AMIC (Australian Maritime Innovation Centre)  
Roles:

* Independent Chair
* Chief Executive Officer
* Navy Director
* Industry Director
* Research Director
* DST Group Director
* CASG Director

Prime Contractors – through Defence contracts, work with AMIC and workflows into the Prime ecosystem

### Prime ecosystem

* Existing Prime supply chain
* New Australian Prime supply chain
* Emerging supplies for new opportunities
* Professional services

Contributors and partners   
FLOWS to AMIC (Australian Maritime Innovation Centre)

Contributors and partners include:

* Universities
* DMTC
* Industry
* Other Australian centres
* DSI
* AiG, AIDN, ICN and other industry associates

# Naval Shipbuilding Plan

* $90 – 100 Billion
* 12 Future Submarines
* 21 Pacific Patrol Boats
* 12 Offshore Patrol Vessels
* 9 Future Frigates

# AMIC capabilities and expertise

* Hull and hydrodynamics
* Mechanical systems
* Naval architecture
* Human-machine interface
* Acoustics and vibration
* High end and specialist STEM training
* Safety engineering and systems
* Shock analysis
* Power systems, engines, battery technology
* Intellectual property control
* Capacity planning and economics
* Platform engineering
* Advancedmanufacturing and materials
* Digitisation support to suppliers
* Whole-of-lifeinnovation
* Continuous shipbuilding programmatics

# Partners and supporters

## National

* CSIRO
* Australian Industry Group
* Bureau of Meteorology
* Australian Industry & Defence Network

## New South Wales

* University of New South Wales
* University of Wollongong

## Queensland

* Queensland University of Technology

## SA

* Flinders University
* The University of Adelaide
* The University of South Australia

## Tasmania

* Australian Maritime College

## Victoria

* Monash University
* University of Melbourne
* Deakin University
* La Trobe University
* Swinburne University of Technology
* RMIT University
* Victoria University
* Defence Science Institute
* Victorian Government

## Western Australia

* Curtin University
* University of Western Australia