



# Defence and Security, Australia

## Capability and Experience Overview

Our Defence and Security team in Australia was established in 2005, offering professional engineering and vessel design services.

Our staff have considerable experience in providing analysis and evaluation services to the Defence industry.

We are able deliver flexible yet robust solutions to client's requirements by providing access to subject matter experts' knowledge and experience in their respective disciplines.

## Engineering Consultancy

We have attained accreditation as a technical support agency under the Navy Technical Regulatory Framework. This accreditation enables us to provide technical support to Defence's maritime projects as part of a technical support network. As well as support delivery across the Capability Lifecycle.

We are a member of the Defence Support Services Panel and support the CASG Major Service Providers. Our engineering capacity and competency has been verified and provides confidence in the credibility and capability that we have to offer. Fostering a relationship with customers based on service excellence, trust, mutual understanding, and accountability is central to our culture and business success.

## Marine Engineering

Throughout the entire warship and systems lifecycles, we offer unbiased expertise in all aspects of marine and electrical engineering, including platform management systems, marine propulsion machinery, ship and hull machinery, systems and equipment.

We maintain technical expertise through research, technical investigation, and operational feedback received from supporting in-service ships and submarines to ensure client expectations are achieved in terms of performance, cost, schedule and risk.

## Naval Architecture

We provide a whole warship and submarine design and support service which covers all facets of naval architecture skills and knowledge. Our naval architects undertake a complete range of technical work supporting naval vessels, from concept design and feasibility studies through whole platform design, development and procurement, to in-service support and disposal.

Our team of experienced, highly motivated professional naval architects are supported by the latest analytical tools. This includes a complete numerical modelling capability with finite element analysis and CFD packages.

## Systems Engineering

The maritime Defence environment is complex and we provide structure through applied systems engineering. We understand that no two systems have the same set of objectives and that the systems engineering approach must be tailored to a particular need.



In addition to those skills, we provide capability in the areas of:

- Project management
- Concept Design Development
- Hydrodynamic Analysis
- Engineering Drawing, 3D Modelling, 2D Drafting
- Structural Design & Analysis
- Stability Assessment
- Life Extension & Disposal Studies
- Cost Estimating
- Technical Investigation Services
- Discrete Event Simulation
- Decision Support Modelling

Our pragmatic approach ensures the client's objectives and priorities are understood and satisfied through logical decision-making, enabled by proven processes and tools, to achieve an affordable and effective system.

## Modelling and Simulation

Our Discrete Event Simulation (DES) is used to inform decision making and investigate system dynamics. This technique, combined with the knowledge and experience of our expert team, provides essential advice in support of defensible decisions. DES is a form of simulation that considers a system as a discrete collection of events, with each event having some defined effect on the rest of the system.

Our modelling capability is critical in program planning. Recent examples include:

- Quantification of workforce demand by location, discipline and seniority
- Dynamic program build schedules
- Exploration of alternative policies, strategies and remedial actions
- Immediate impact evaluation of program delays, and cross-industry competition for resources
- Understanding of consolidated resource demand across build and sustainment program.

## Safety and Risk Management

The safe operation of a system is best designed-in from the outset. Naval authorities responsible for the safe operation of existing vessels need to know about all potential safety issues and find adequate, yet cost-effective remedies to mitigate those risks.

We have established a strong reputation within Defence and industry with pragmatic, tailored solutions for new-build platforms and in-service ships.

This credibility is underpinned by a detailed understanding of the regulatory environment demonstrated by our permanent team of dedicated and professionally qualified safety specialists.

## Recent Experiences

Recent projects our team have supported include;

- CASG Professionalisation Training
- SEA 1000 Support
- SEA 1180 Support
- SEA 3030 Support
- SEA 5000 Support
- DDG SPO Support
- LHD Support
- Young Endeavour Support

### Contact

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