

MAKING WAVES IN MARITIME DESIGN, ENGINEERING & CONSULTING



Capability in depth
**DESIGN &
DESIGN INTEGRATION
SERVICES**

A METHODOLOGY-DRIVEN APPROACH TO FULLY INTEGRATED DESIGN SOLUTIONS

Rubicon's multi-disciplinary team of experts brings extensive experience in the design, construction, upgrade, and support of Defence platforms and systems as well as commercial sectors where we support new build programs, capability upgrades, and sustainment initiatives.

Our work is underpinned by a deep understanding of naval and general maritime rules and regulations, including classification society requirements and Defence-specific standards.

From concept development through detailed design to in-service upgrades, Rubicon delivers engineering excellence tailored to the rigorous demands of Defence and commercial maritime environments.

Our team works collaboratively with client stakeholders, regulatory bodies, and other industry partners to ensure compliance, technical integrity, and successful project outcomes.

We apply structured design methodologies, rigorous verification and validation processes, and robust configuration management to deliver engineering solutions that are safe, effective, and supportable.



RUBICON SERVICES SPAN THE FULL LIFECYCLE OF PLATFORM DEVELOPMENT

OUR DESIGN SERVICES INCLUDE:

NAVAL ARCHITECTURE

- Hydrostatics & Stability
- Hydrodynamics
- Weight Estimates
- General Arrangement
- Platform Sizing & Optimisation
- Deadweight Surveys
- Model Test Supervision & Coordination
- Vessel Inclining Experiments
- Load Out, Launching & Docking
- Mooring Systems

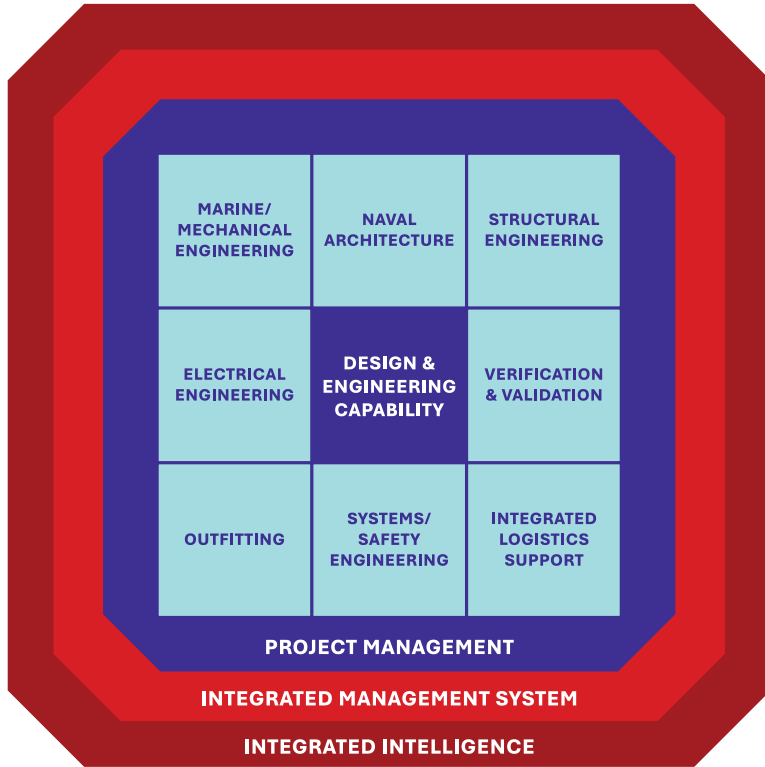
HULL, STRUCTURAL & OUTFIT ENGINEERING

- Global Modelling (performance)
- Modelling Supervision/Interface Management FEA
- Local Detail Structural Analysis
- Strength & Fatigue Assessment
- Ship Outfit & Habitability
- Structural Fire Protection
- Welding & Painting
- Materials
- Lifting Appliances
- Insulation
- Safety Equipment
- Corrosion & Cathodic Protection

MARINE & ELECTRICAL ENGINEERING

- Main Propulsion & Shafting System
- Mechanical Auxiliary Systems
- Hydraulics
- Refrigeration/HVAC
- Fire Fighting Plant/Systems
- Compressed Air Systems (Pneumatics)
- Compressed Gas Systems
- Hyperbaric Systems
- Shock/Noise & Vibration
- Sewage Systems
- Hydraulics Pumps & Valves
- Boilers
- Oily Water Separators
- Fresh Water Generators
- Ship Lifts
- Gearboxes
- Winches
- Control & Monitoring Systems
- Condition Assessments
- Life Extension Studies
- Electrical Engineering
- Electrical Power Generation & Distribution
- Lighting
- Communications Systems Engineering
- Communication Control Equipment
- Control Systems
- Condition Monitoring
- Electrical Installation & Calibration
- Electronic Systems & Equipment
- Navigation Systems
- Combat Systems Engineering

INTEGRATED SOLUTIONS TO COMPLEX MARITIME CHALLENGES



RUBICON CAPABILITIES MATRIX

RUBICON MATRIX METHODOLOGY

Pan-dimensional, systematic approach to optimally integrated engineering solutions.

MULTI-PLATFORM EXCELLENCE

RAN patrol vessels and surface combatants to offshore support vessels, research ships and amphibious craft.

TRUSTED PARTNERS

Proud to serve the Commonwealth of Australia, Defence Primes and others that own, build and maintain maritime assets.

10 YEARS OF EXCELLENCE

as Rubicon, decades as senior industry experts.

100% AUSTRALIAN OWNED

Committed to Australia's sovereign capability.

GET THE RUBICON ADVANTAGE

Contact Rubicon Associates today to discuss how Integrated Intelligence can deliver exceptional outcomes for your next maritime project.

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scan to view our
Capability Document

