Naval training and simulation

Individual and team training solutions for collective and joint combat scenarios
Training for mission success

Navies play a critical role in the protection of nations. They ensure the security of the seas, defend trade routes, guard against terrorism, piracy and military adversaries, and provide humanitarian support. These duties must be carried out in an increasingly complex threat environment. From coastal seas to the open oceans, navies must be ready to act decisively at any time.

To succeed in their missions, crews need to act together and in coordination with other forces. Timely detection, tracking and classification of constantly-evolving surface, submarine and airborne threats is vital. Training holds the key to maintaining skills, building knowledge and ensuring operational readiness.

Thales designs and builds advanced training and simulation solutions that help you to enhance the proficiency and professionalism of your people. Our solutions also provide your crews with first-hand experience of emerging technologies, such as Manned-Unmanned Teaming (MUMT) platforms and hypervelocity anti-ship missile systems.

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Our approach

We offer a complete range of mission-oriented training solutions that covers everything from individual specialisation and team coordination to collective scenarios. These help you to:

- Build team expertise on specific systems
- Conduct mission rehearsal at task force level (submarine, ship or air assets)
- Create complex tactical scenarios for multi-crew coordination with multiple assets
- Benefit from an unequalled level of realism

What sets us apart is our ability to provide high-fidelity solutions that simulate real operations in real environments. Our credentials are unique, because we also manufacture and deploy the critical front-line systems that navies depend on. These include multi-mission radars, sonar, Electronic Warfare, Combat Management Systems and communication systems.
Training solutions and products

Our solutions are flexible. We can represent any type of submarine, ship or maritime aircraft and we can integrate any type of combat or communications system in your mission scenario. And thanks to distributed training and open architecture, you can easily build collective training scenarios to meet the precise requirements of your mission. Threats range from basic to advanced. The approach is progressive and adapted to fit the abilities and needs of the trainees.

Surface Training

Acquire, master and practice the skills to conduct successful missions in warships and surface vessels.

- Flight Deck Operations (including helicopter marshalling, catapult and landing signal officer)
- Close-range defence (gunnery)
- Engine control room (propulsion, auxiliaries and damage control)
- Bridge (steering and visual)
- CIC/ops room (Combat Management System, sensors and effectors)

Mine Warfare Training

Get the most out of Thales’ experience in 21st century mine warfare.

- Autonomous and ship-based systems
- High-end sonar detection

Submarine Training

Prepare your crews for any operational scenario in nuclear or diesel-electric submarines.

- Submarine control simulators (steering and diving)
- Operations control room (combat system, sensors and effectors)
- Manoeuvring room (nuclear or diesel-electric)

Maritime Aircraft Training

Realistic crew training in advanced tactical environments covering MPA, AEW, helicopters and fighter/attack aircraft.

- Cockpit (procedural, navigation and tactical training)
- Tactical cabin (combat system, sensors and effectors)
- Specific mission-related capabilities (including winchman and door gunner)

MARTEAM – Collective Training

A total tactical training solution for command teams and crews in multiple environments – surface, subsurface and air.

- Master tactical doctrine through practice
- Command team warfare and tactics training
- Simultaneous multi-force crew training in a common advanced environment
- Driven by A.I. for enhanced mission readiness

Unmanned Vehicle Training

Get the most out of unmanned aircraft, unmanned surface vehicles and unmanned underwater vehicles with high-fidelity training and simulations.

- UAV simulation (launch, operations and recovery)
- USV simulation (launch, operations and recovery)
- UUV simulation (launch, operations and recovery)
Training centres and services

Our training centres provide you with a flexible, turnkey solution that ensures your sailors are trained to the highest standards while minimising CAPEX costs.

Several units can be trained simultaneously in a common advanced environment. Simulations are brought to life with A.I., sensors, effectors, propagation and seabed models. Virtual and constructive assets are combined, accelerating the mastery of tactical doctrine.

Meanwhile, enhanced brief/debrief ensures you get the most out of every training session.

Our centres are backed by fully-managed services, logistics, upgrades, instruction support and planning, so you can operate 24/7 with confidence.

Selected references

Surface
- Deutsche Marine
  Tactical training (TVTM)
- Qatari Emiri Navy
  Tactical training
- Royal Australian Navy
  Tactical training
- United States Navy
  DDG 1000

Submarine
- Marine Nationale, France
  SSN ASW trainer
- Royal Australian Navy
  Collins class
- Royal Navy
  SSN R2T2
- Royal Netherlands Navy
  Guardian
- Royal Canadian Navy
  Victoria class

Submarine
- Marine Nationale, France
  SSN ASW trainer
- Royal Australian Navy
  Collins class
- Royal Navy
  SSN R2T2
- Royal Netherlands Navy
  Guardian
- Royal Canadian Navy
  Victoria class

Maritime aircraft
- Marine Nationale, France
  MPA AT2NG, AEW E2C
- Royal Netherlands Navy
  NH90
- Norway
  SA225
- Royal Air Force
  Sea King SAR
- Singapore
  SAR

Services and equipment
- Marine Nationale: maintenance and update of 40 simulators (including bridge, catapult and firefighting)
- Royal Navy: maintenance and upgrades
- Worldwide: sonar, Electronic Warfare (EW), communications, cybersecurity, radar and Combat Management System (CMS) simulators from Thales equipment
Innovation that adds value

Our cutting-edge digital technologies provide you with an unequalled level of realism during training sessions. And when training is complete, our debriefing tools provide objective and rapid crew assessments.

HuMans:
Evidence-based training for an individualised programme for each trainee. Cameras and sensors monitor trainee performance, behaviour and workload/stress levels in real time during simulated missions. The result is personalised and more effective training thanks to a deep focus on the real needs of each trainee.

A.I.-enhanced constructive environment:
Our Computer-Generated Forces (CGF) system orchestrates the behaviour of simulated entities at sea, in the air and on the ground. The system is driven by artificial intelligence (A.I.) to generate rich, high-threat and adaptive tactical environments for complex joint scenarios.

LVC - Live, Virtual, Constructive simulation:
Live training with real equipment linked to simulators and our powerful computer-generated forces will expand your mission scope. Multiple entities can be integrated in joint scenarios, so you can test new combinations of forces and ensure trainees focus on realistic tactical situations. Helicopters, small aircraft, UAVs and USVs can be integrated in your tactical training.

Cybersecurity and cyber training:
All our training systems are Cybersecured by design to provide the highest standards of cyber protection. We can also prepare and train your teams to take the right technical and tactical decisions with simulated cyberattack scenarios that may occur during warfare.

Naval digital stack:
A cloud-based solution that simplifies the management and coordination of collective training sessions. Configuration management (updates and software evolution) is simplified and centralised. Server hosting ensures easy deployment and reduces training costs. Security is guaranteed according to the customer’s policy.