



# Naval Training Solutions

CAE



CAE's technology leadership, proven capabilities, experience and key partnerships place us in a unique position to be a training systems integrator for navies around the world. We deliver integrated naval training solutions that are flexible, modular and scalable. In addition, we deliver comprehensive training and in-service support to help ensure the efficient operation of naval systems and crew readiness.

# Training Systems Integration Solutions

CAE's training systems integration (TSI) approach addresses the full-spectrum of the training continuum, from academic and simulation-based training to a full integrated live-virtual-constructive (iLVC) environment for training and mission rehearsal. Our TSI approach is all based on exhaustive training needs analysis to ensure greater efficiency and lower costs while meeting training and readiness requirements.

With our worldwide network of industry partners, CAE delivers turnkey training solutions that include complete training programs, courseware, computerbased and classroom-based training, part-task and team training systems, training centres, facility management and operation, in-service support, and an integrated learning management system with brief and debrief features.

As a TSI provider, CAE has all the requisite skills and experience to provide immersive mission and operational training, including training systems that can be networked for distributed mission operations and training.

**CAE's training systems integration approach is based on exhaustive training needs analysis.**

## **Key features of CAE's training solutions include:**

- › Optimized mix of classroom and simulator training
- › Complete mission rehearsal capability for any scenario
- › Optimum use of resources based on system re-configurability
- › Reduced in-uniform staffing to conduct training
- › Distributed systems to minimize training travel
- › Solutions for all combat and propulsion systems regardless of the original equipment manufacturer (OEM)



Who provides solutions to fully support training and mission rehearsal with the objective of operational readiness?

**We do.**

CAE provides solutions to enable complete mission rehearsal for a variety of mission scenarios. These include naval warfare as well as humanitarian and disaster relief missions.

# Maximizing Operational Readiness

## Training and Mission Rehearsal

CAE's high-fidelity simulations and realistic synthetic environments enable training and mission rehearsal to be conducted in the actual operating area with the expected threat, communications and environmental factors replicated in the mission scenarios. Mission rehearsal can be conducted using a single vessel or multiple vessels and assets. Communications and tactical data exchange channels are established exactly as they would be for the live units to support a fully representative command and control scenario.

### Naval Warfare Scenarios:

- › Anti- Surface Warfare (ASuW)
- › Anti-Air Warfare (AAW)
- › Anti-Submarine Warfare (ASW)
- › Amphibious Warfare (AMphW)
- › Anti-mine Warfare (AMW)
- › Non-Warfare Missions



Mission scenarios can be developed for a full range of warfare and peace-time operations. They can be designed to generate increasingly complex situations and are an ideal way to support new ship team workups, post refit workups, or operational mission rehearsal.

Naval forces are increasingly involved in a range of non-warfare scenarios which require command and control between multiple assets, frequently from various nations.

### Non-Warfare Scenarios:

- › Humanitarian and disaster relief
- › Personnel evacuation
- › Embargo and interdiction
- › Drug and illegal activity enforcement

**CAE offers realistic, immersive naval training solutions in support of command and control training and mission rehearsal.**

## Naval Operations Training

CAE provides a full spectrum of training, from individual specialist and team training to whole ship collective training. The ability to train in a range of ship evolutions enables individuals as well as teams to be at the highest levels of operational readiness. Individual training ensures that each sailor is qualified and familiar with the ship specific systems they are required to operate or maintain. Team training ensures that there is no weak link in the chain and provides familiarity with ship systems before joining a ship or as part of refresher training.

### Team training includes collective training for the entire ship, including:

- › Bridge Team
- › Combat Information Centre / Operations Room
- › Machinery Control
- › Damage Control / Section Base Teams

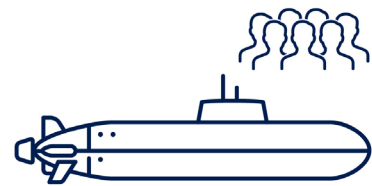
CAE's integrated training solutions also enable the collective training and mission rehearsal of multiple vessels or platforms including air, surface and subsurface assets.



Individual Training



Team Training



Whole Boat Training

### CAE provides training solutions for a range of ship evolutions, including:

- › Replenishment at sea
- › Launch and recovery of boats
- › Flight deck operations
- › Damage control
- › UAV / USV launch, recovery and operations
- › Ship familiarization





## Maintenance Training

As ship systems become more complex and manning is reduced, the need for effective and easy to use maintenance training becomes more critical, including preventative as well as corrective maintenance routines. CAE maintenance training solutions can be tailored to support any equipment specific maintenance or for general fault-finding techniques. CAE maintenance training solutions are used by leading OEMs and armed forces to ensure maximum equipment availability and performance.

### Maintenance training solutions can be provided for:

- > Weapons and sensors
- > Communication systems
- > Main machinery
- > Propulsion plants and control systems
- > Auxiliary equipment
- > Embarked air assets
- > Embarked UAV / USV assets



**Where will you find the most complete training solutions at the highest standard?**

**Right here.**

Who is an experienced training service provider helping naval forces make optimal and efficient use of their training enterprise?

**We are.**

CAE's services are delivered by experienced professionals, many of whom are experienced naval personnel with in-depth knowledge and expertise specific to naval operations.

# Services We Offer

As a training systems integrator, CAE offers a comprehensive portfolio of training services to reduce the demand on naval personnel, and help optimize and extend the lifespan of your training system.

## Some of the training services we offer:

- › In-service support
- › Sustainment logistics
- › Instructor provisioning
- › Training centre and facility management
- › Obsolescence management and technology insertion

## Consulting services we offer:

- › Human factors
- › Program/project management
- › Capability engineering
- › Analysis, design and experimentation
- › Systems engineering and integration, including third party systems integration

CAE has been providing systems engineering to navies in support of operational systems for over 35 years.



Trust CAE as your training partner to help prepare for your operational missions.

# Naval Program Highlights

We have the experience and expertise to serve as your training systems integrator in the development of world-class naval training and mission rehearsal solutions.

# Our Success Stories

## United Arab Emirates Naval Doctrine and Combat Training Centre (NDCTC)

CAE was contracted as the training systems integrator to create a comprehensive Naval Doctrine and Combat Training Centre for the United Arab Emirates Navy. CAE will deliver a range of integrated ship simulation-based training suites, as well as maritime aircraft sensor stations enabling individual, team, whole-ship and collective/joint mission training, and training centre operations.



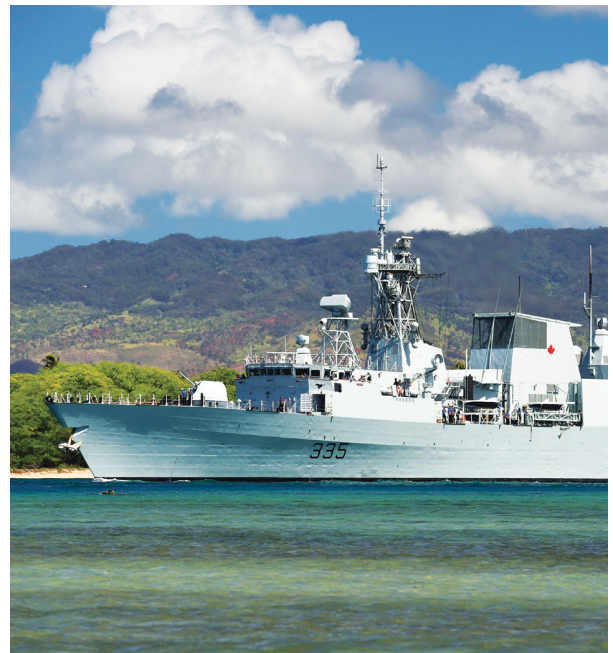
## Swedish Naval Warfare Training System

The Naval Warfare Training System (NWTs) is a comprehensive, simulation-based system that includes simulation software, hardware, wargaming consoles, and instructor operator stations that is used to train and educate Swedish Navy sailors and officers in naval tactics, procedures and doctrine. The system is in operation at the Swedish Naval Warfare Centre in Karlskrona, Blekinge, Sweden.



## Halifax Class Modernization Program in Canada

Under subcontract to Lockheed Martin Canada, CAE is providing operational support such as electronic warfare; human factors; human systems integration; and systems engineering support for the Halifax Class Modernization program in Canada. CAE is also providing systems engineering, software development, hardware engineering, networking, testing and in-service support.



## Action Speed Tactical Trainer (ASTT) for the Indian Navy

CAE's ASTT is a comprehensive simulation-based system designed to conduct immersive, realistic naval operations training. The Indian Navy is using this training system to train naval personnel on various tactics, techniques and procedures. The training system is a multi-threat, flexible simulation environment used to train for tactical anti-submarine warfare, anti-air warfare (including anti-missile defense), surface warfare, mine warfare, amphibious warfare, communication, electronic warfare (EW) and data communication.

# About CAE Defense & Security

CAE's Defense & Security business unit focuses on helping prepare our customers to develop and maintain the highest levels of mission readiness. We are a world-class training systems integrator offering a comprehensive portfolio of training centres, training services and simulation products across the air, land, naval and public safety market segments. We serve our global defense and security customers through regional operations in Canada; the United States/Latin America; Europe/Africa; and Asia-Pacific/ Middle East, all of which leverage the full breadth of CAE's capabilities, technologies and solutions.

For more information visit our website  
[cae.com](https://cae.com)

