



## ENGINEERING TECHNOLOGY DEPARTMENT

### MISSION IN BRIEF

To increase the ability of NATO to detect threats at sea by extracting useful information from a variety of data sources using automated techniques and advanced algorithms.

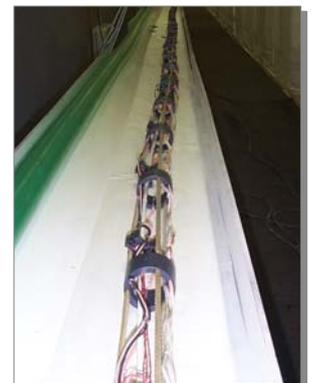
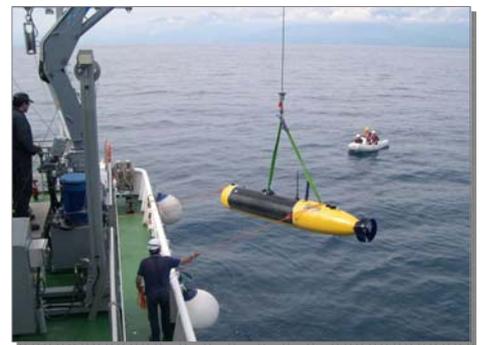
### OVERVIEW

CMRE's Engineering Technology Department (ETD) offers a full spectrum of specialized services, including research, development, testing and evaluation of ocean and maritime concepts and technologies. The department also has a wide range of specialized resources for work at-sea. These resources are used to support the scientists at the Centre and to conduct work for our growing list of customers. NATO nation navies, NATO government organizations, energy companies, universities, and others can take advantage of the Centre's unique facilities and expertise in marine and oceanographic engineering.

**Staff.** A team of 40 engineers and technicians offers full services, including design, modelling, fabrication, calibration and testing. The team also offers extraordinary at-sea expertise with over 50 years' experience supporting scientific missions onboard the Centre's two ships: NRV *Alliance* and CRV *Leonardo*.

**Facilities.** ETD offers world-class facilities for acoustic calibration, oceanographic sensor calibration, optic instrument calibration, and hosing and de-hosing of towed arrays. Other facilities include a pressure chamber, tensile test bench, mooring facility, molding facility, chemical and sediment laboratory, electronics laboratory and dive locker.

**Equipment.** ETD acquires, modifies, and maintains a fleet of unmanned vehicles, including Ocean Explorer AUVs with sidescan sonar, REMUS 100 AUVs, a MUSCLE AUV with HF sonar, Slocum gliders (shallow and deep), and Folaga hybrid AUV-gliders. The fleet also includes ROVs and unmanned surface vehicles. In addition to unmanned vehicles, ETD has a variety of acoustic instruments (e.g., towed arrays, vertical arrays, transducers, source arrays, echo repeaters, hydrophones, multibeam systems) and oceanographic instruments (e.g., ADCPs, CTDs, wave sensors, thermistor & CTD chains, meteo stations, acoustic release systems, current meters, drifters).



### CONTACT

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*Top: Launching the MUSCLE AUV from the NRV Alliance Middle: The array hosing facility. Bottom: The Folaga hybrid AUV-glider.*