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ESA Maritime Security Workshop

NATO Maritime GEOMETOC
Centre of Excellence

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COE MODEL

From national expertise to Allied capability

A NATO-accredited entity, nationally or multinationally sponsored, that provides specialized expertise to the Alliance.

FOUR PILLARS · ONE TRANSFORMATION CYCLE



CONCEPT DEVELOPMENT & EXPERIMENTATION

Develop + experiment



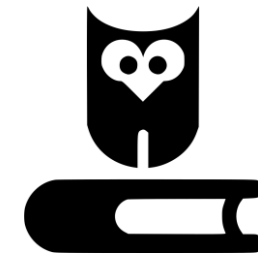
DOCTRINE DEVELOPMENT & STANDARDS

Standardize



EDUCATION, TRAINING, EXERCISE & EVALUATION

Build readiness



ANALYSIS & LESSONS LEARNED

Learn + improve

THE RESULT National expertise becomes shared Allied capability.

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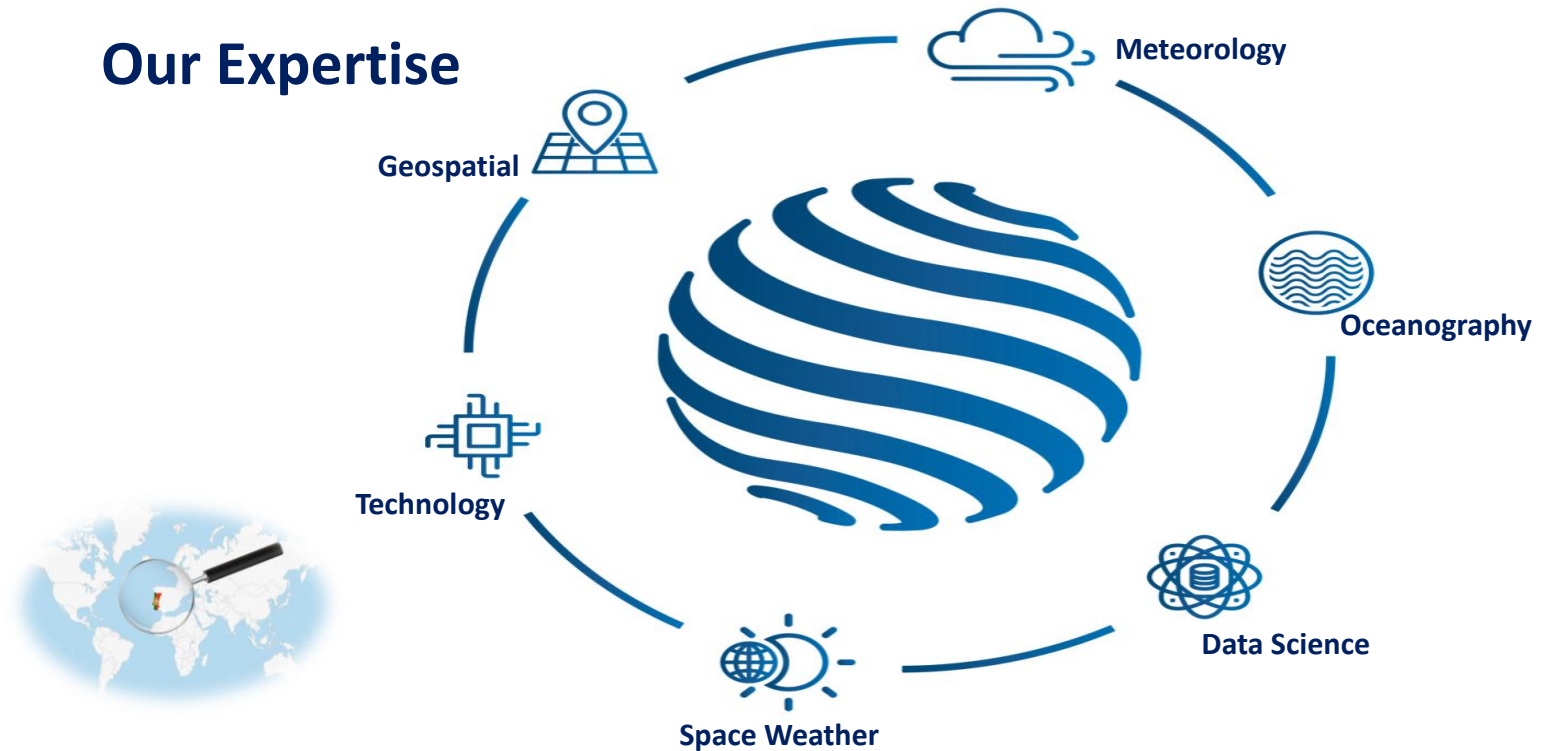
Environmental insight changes operational choices

Our purpose is to help NATO understand the maritime environment and make better decisions.

FROM CONDITIONS TO ACTION

- 01 ENVIRONMENT**
Observe
- 02 PLATFORM**
Assess
- 03 MISSION**
Decide

Our Expertise



ENVIRONMENTAL AWARENESS → OPERATIONAL EFFECTIVENESS

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COLLABORATION IN ACTION

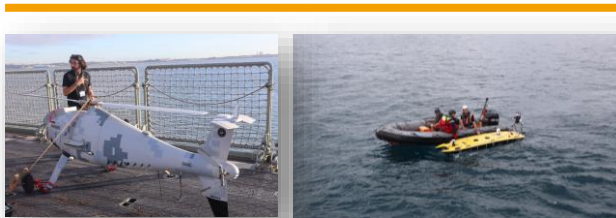


Collaboration turns problems into usable capability

The COE connects operational users, scientific knowledge and technology around a common need.

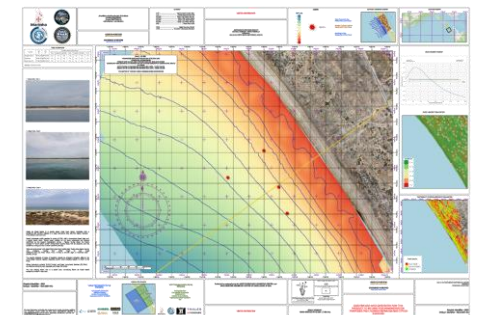
REPMUS

Rapid Environmental Assessment for maritime unmanned systems.



DYNAMIC MESSENGER

An enhanced Recognized Environmental Picture for operational users.



CONNECT CONTRIBUTIONS → TEST → LEARN → SCALE

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Turns data into action

Information has value only when different organizations can find it, understand it, exchange it and use it.



TECHNOLOGY & INTEROPERABILITY IN PRACTICE



DISCOVER → EXCHANGE → TEST → EXPERIMENT → OPERATE → STANDARDIZE

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Connect space data, systems and people

Turn environmental information into better decisions and operational advantage.

SPACE CAPABILITIES

SATELLITE
COMMUNICATIONS

POSITIONING &
NAVIGATION

EARTH OBSERVATION

SPACE WEATHER

CONNECT EXPERTISE

Academia + industry



UNIVERSIDADE DE
COIMBRA



UNIVERSIDADE DE LISBOA
CENTRE FOR MARINE TECHNOLOGY AND OCEAN ENGINEERING



INTEGRATE IN 4D

4D AI-supported

Environmental
information
across space + time

Connects knowledge,
technology and operations.

IMPROVE DECISIONS

- 1 SONAR PERFORMANCE
- 2 MINE DRIFT
- 3 CRITICAL UNDERSEA INFRASTRUCTURE
- 4 SPACE WEATHER & MARITIME AWARENESS

The COE's value lies not only in expertise, but in the collaboration and capability it creates.

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**NATO MARITIME
GEOMETOC
COE**

Thank you

**TRANSFORMING MARITIME
ENVIRONMENTAL KNOWLEDGE**



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