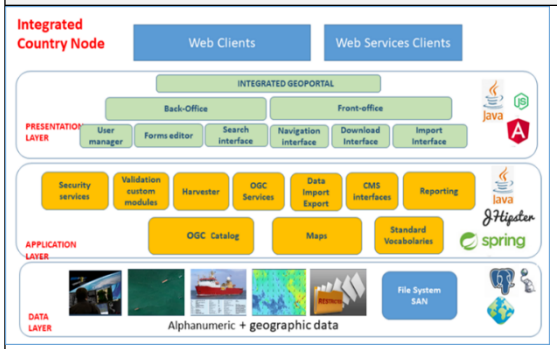
DECISMAR: Development of a Decision Support Toolbox for enhancing the feasibility study of the Upgrade of Maritime Surveillance through the integration of legacy assets with new innovative solutions.

Country	Contract value (€)	% carried out by Epsilon	No of staff provided	Client	Origin of funding	Date (start/end)	Consortium Members
Malta	7,859,740.00		5	European Commission	EC-Defence EDIDP-SME-2019-027	42 months duration	12 Partners

Description of the project



The objective of the DECISMAR project is to develop a decision support toolbox (DSTx), implemented as a cyber-secured and future-proofed integrated IT environment. The DSTx will provide a dynamic and interactive approach for conducting feasibility studies which aim to support the upgrade of maritime surveillance under the scope of both current and future defined High-Level Operational Requirements (HLORs) of the PESCO Project Upgrade of Maritime Surveillance. DECISMAR objectives are:

- To establish and leverage on a multidisciplinary research framework that will entangle multiple actors from the domains of maritime surveillance providers.
- To identify the needs of the authorities that handle and make decisions for expanding the maritime surveillance infrastructure of the Ministry of Defense (MoD).
- To perform pre-feasibility and feasibility studies with respect to the currently available maritime surveillance assets as well as to methodologies and processes currently applied for enhancing maritime surveillance.
- To design and specify technology-enhanced support services compliant with the needs of the maritime surveillance authorities.
- To develop and test mechanisms that collectively can support decisions with respect to new, innovative solutions that can be combined with legacy maritime surveillance systems to enhance them and meet the needs of the goals, the tactics, the missions or the doctrines.
- Develop relevant database and record existing assets and their components.
- Develop an interoperable, unified, multi-layer GIS module.
- Develop a multi-layer scenario-driven Simulator module, capable of running multi assets, multi scenario variations simulations, in either human-to-human, human-to-AI, or AI-to-AI mode.
- Develop a CPR module, capable of delivering cost-effectiveness and risk analysis.
- Develop a Technology Watch module that supports quantitate, qualitative and hybrid technology foresight assessment.
- Develop an intuitive GUI / HCI.
- Develop the Information Fusion / Visualization module.

Services provided

For WP0: Project Management.

For WP1: Pre-feasibility Study.

- Identified DECISMAR DSTx high-level concepts.
- at refining the High-Level Operational Requirements (HLORs), as discussed with the MoDs.

FOR WP2: Feasibility Study.

- Selected a final DECISMAR DSTx high-level concept, its respective scope and associated definitions.
- Assessed the technical and programmatic feasibility of each of the assets by identifying constraints relating to implementation, costs, schedule, and organisation.

For WP3: Design – Preliminary Definition.

- Determined the methodology to be followed and validate the respective scenario and KPIs.
- Designed models of all identified maritime surveillance assets.

For WP4: Design - Detailed Definition (Final Design).

- Defined the architecture of the system, the use cases and the validation scenarios.
- Provided the initial design of the modules and mechanisms, as well as their technical specifications, requirements and constraints.