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Which is I-SEAMORE project's main idea and objectives?

The main idea of I-SEAMORE is to bring together a diversity of systems and assets for the maritime surveillance and operations management, integrating them into a Maritime Operations Centre suite of tools, including unmanned air and sea surface vehicles.

Other objectives are: the enhanced cross border and cross-sectoral cooperation through improved information sharing; to improve integration environment connecting heterogeneous assets and tools; to provide reduced reaction/response times; to facilitate interaction among a wide variety of stakeholders, including citizens and civil society; to contribute to the elaboration of policy recommendations on maritime surveillance systems; to enhance co-creation between end-users.

About the partnership behind this ambitious project...

The consortium leading, I-SEAMORE project is composed by seventeen partners from eleven countries. Some are industrial partners from the IT sector (Eviden, Thales NL, CS Group), others specialised in the provision of high end unmanned vehicles (Exail, Primoco, Hipersfera), earth observation (Terrasigna), innovation (INI-Innovation) and networking and communications (F6S Innovation).

An important part of the consortium is composed by end users, including Portuguese Navy, Romanian and United Kingdom coast guards and the Spanish Customs Agency. And finally, Research and Technology Organisations providing expertise in various areas like INOV, TNO, Vortex and ISIG.



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One of the project goals is to deliver a complete platform capable of managing multiple assets and systems. Will the I-SEAMORE platform offer specific functionalities and facilitate the work of European Maritime Operation Centers?

First of all, the platform will provide end-users with a holistic solution capable of handling several multipurpose tasks. This is accomplished with the provision of a set of functionalities under the umbrella of a **C4I platform** (Command, Control, Communication, Computers and Intelligence), including a dedicated **UxVs' Mission Planner module**, to prepare and plan the missions involving unmanned vehicles. Also, a **Visual Analytics**, together with **Data Fusion** component will provide enhanced object detection capabilities. A **Mission Debrief Module for UxVs** will be complementing the capabilities, facilitating the replay of data captured by multiple sources during long periods. Finally, a **Modelling and Simulation** component will allow end-users to design and assess operational concepts.

What are the possible applications/use cases of the I-SEAMORE platform and the potential benefits they can generate for the maritime industry?

The platform capabilities are mainly focused on the maritime surveillance and the search and rescue support. In this regard, it can support specific use cases, like operations over drugs and goods smuggling, irregular migration, piracy, terrorists' attacks, illegal and unreported fishing, maritime accidents, oil spills and other environmental threats. With regards to the benefits, it is expected to reduce the operation costs for Maritime Border Authorities in surveillance operations.

How do you plan to test and validate the effectiveness of the I-SEAMORE platform?

Besides some testing cycles to ensure interoperability and integration of the components, demonstrators in realistic operational scenarios will be hosted, leveraging on the use cases previously defined.

As the project coordinator, what are the most significant challenges you've encountered so far or you expect to encounter throughout the project implementation, and how do you plan to overcome them?

Besides the usual issues when coordinating this type of innovation projects with a group of heterogeneous organizations participating, I think that the most significant challenge is to translate the expectations and requirements from the end-users into a useful tool that can optimise their maritime operations.



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Once the I-SEAMORE project is completed, how do you envision its impact on maritime surveillance operations and the overall safety and security of European waters?

The use of unmanned assets with longer endurances, as one of the key innovations in I-SEAMORE, together with the use of Copernicus data, will enable longer permanence in the regions of interest, allowing better coverage in terms of surveillance time and area, improving by thrice current monitoring capabilities, while decreasing by more than a half the operations costs.

What are the long-term goals for the sustainability and ongoing effectiveness of the I-SEAMORE ecosystem after the project's completion?

The consortium sees this operational concept spreading over EU Member States Maritime Authorities, probably complemented with additional data sources like: Low Earth Orbit Earth Observation satellite constellations, that may allow daily revisit times within the Atlantic region; in-situ sensors, such as fixed high-sea surveillance buoys, whose data is relayed via the future EU constellation; generated by additional unmanned assets, such as persistent underwater vehicles, high-altitude pseudo satellites, lighter-than-air dirigibles, etc.

All the data will be easily integrated with the plug-and-play approach employed in the I-SEAMORE ecosystem. Moreover, the Standard Operating Procedures (SOPs) developed by I-SEAMORE will support the uptake of the operational concept and the underlying technology by providing a structured methodology for Maritime Authorities to accelerate the uptake of unmanned assets in their operations. As well, the implementation of the security recommendations generated from I-SEAMORE by the Maritime and Border Authorities will improve the security of their current systems and provide higher resilience to physical and cyber threats.

If you had to describe the I-SEAMORE project with one word, what would it be?

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