

iFADO Good practice:

A Pre-Commercial Procurement on Earth Observation Services



The Marine-EO project teams up a group of five maritime authorities (the Buyers Group) and four prestigious scientific and technical organizations with significant experience in Earth Observation and maritime matters.

These institutions face a common challenge which is to develop, test and validate a bundle of COPERNICUS-based services, bringing incremental or radical innovations in the field of maritime awareness.



At the end of the PCP process, both thematic areas – Marine Environment Monitoring and Security – are expected to contribute to the Common Information

Sharing System and other relevant frameworks related to maritime awareness.

The Pre-Commercial Procurement approach

Pre-Commercial Procurement (PCP) challenges the industry from the demand side to develop innovative solutions for public sector needs and provides a first customer reference which enables companies to create competitive advantage in the market. PCP enables public procurers to compare alternative potential solution approaches and filter out the best possible solutions the market can deliver in order to address the public need. In PCP, public procurers buy R&D from several competing suppliers in parallel to compare alternative solution approaches and identify the best value for money solutions that the market can deliver to address their needs. R&D is split into phases (solution design, prototyping, original development and validation/testing of a limited set of first products) with the number of competing R&D providers being reduced after each R&D phase.

The Space based solution

The Marine-EO PCP seeks to establish EO-based services, covering sea-basins of the Mediterranean, Atlantic, and Arctic, by adapting Copernicus data and information regarding the Marine Environment, to meet the demand of the procurers in the thematic areas of Marine Environment Monitoring and Security.

Overall, the Marine-EO concept, through the use of a PCP schema, is to develop innovative, beyond the state-of-the-art, downstream applications which will meet the demand of maritime authorities and stakeholders, while leveraging on the existing Copernicus Services and other products from the Copernicus portfolio.

The innovative services are divided into two thematic areas:

- Thematic Area 1 – Copernicus Marine Environment Monitoring and Climate Change: The SATOCEAN service provides information about ocean parameters variability in time and space, best probable fishing areas, fish farm locations, and water quality. It also incorporates sea ice extent for safe navigation and maritime operations in the Arctic.
- Thematic Area 2 – Copernicus Security: The SATSURVEILLANCE service contributes to the development of EUROSUR regulation, by providing services in response to Europe's security

challenges in the domains of Border Security.

Benefits to citizens

Overall, the project will contribute to European society by meeting the objectives defined in the Commission communication on Space Industrial policy while simultaneously increasing the visibility of the two EU space flagships: EGNSS and Earth Observation. Marine-EO will ensure that Europe's investment in space infrastructure is exploited to the benefit of citizens and supported by European space science. Furthermore, the Marine-EO project will promote the development of innovative products and services based on remote sensing, geo-positioning or other types of satellite-enabled data as well as geo-information already generated by services such as Copernicus. It will also enable public authorities to pursue a shared and comprehensive approach to maritime security risk analysis and to make informed decisions in operationally relevant timelines by supplying them increasingly with diverse imagery, intelligence products, and services. Another benefit is related to reducing mission costs and improving capability, cost and efficiency of GEOINT (geospatial-intelligence) production. It is also expected to seek opportunities for high bandwidth services to

disadvantageous locations to deliver EO-based products and GEOINT.

Benefits to companies

Marine-EO will contribute to the development and improvement of the competitiveness and growth of companies through public procurement driven innovation, addressing the needs of European and global procurement markets. The implementation of the PCP will establish commercial relations between companies related to Earth Observation and European public authorities concerned with marine monitoring and maritime surveillance. The new tools created within the project will create a dynamic environment for a growing digital marketplace aiming to bridge the gap between public authorities, and the companies interested in exploiting this type of data.

It is expected that the solutions tested under operational conditions generate new Intellectual Property Rights (IPR) that can be exploited by third parties (other companies) leveraging the impact and use of these innovative algorithms and pushing forward the downstream services of Copernicus and market uptake.

Outlook to the future

The buyer's group, after a successful implementation of the PCP, will apply a dedicated plan to ensure large-scale deployment of innovative solutions. This process will link to the use of European Structural and Investment Funds. Several "High-Level Scenarios" which will primarily form the EU cooperation umbrella in the EO services for maritime surveillance, will be prepared for the post Marine-EO period. The continuation of Marine-EO activities through Public Procurement of Innovative Solutions (PPIs), the reinforcement of EU cooperation and feedback the EC services about future initiatives, will be addressed.

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