



**MARINE-EO: Bridging Innovative Downstream Earth
Observation and Copernicus enabled Services for
Integrated maritime environment, surveillance and
security**

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H2020 Pre-Commercial Procurement

Project No 730098

Call Earth Observation- Topic 2

Downstream Services for public authorities



Expected Impact:

- The establishment of buyer groups for Earth observation services;
- Copernicus-enabled national, regional or local applications in support of public authorities;
- Fostering the emergence of similar EO-based actions in smart specialization strategies;
- Establish sustainable supply chains for delivery of downstream EO-based services to public authorities.

Consortium

	Organisation Name	Acronym	Country
Project Coordinator	National Centre for Scientific Research Institute of Informatics and Telecommunications Integrated Systems Lab.	NCSR	GR
Lead Procurer	Direção-Geral de Política do Mar	DGPM	PT
Public Procurer	Guardia Civil	GUCI	ES
Public Procurer	Hellenic Centre for Marine Research	HCMR	GR
Public Procurer	Fundo Regional para a Ciência e Tecnologia	FRCT	PT
Public Procurer	Norwegian Coastal Administration	NCA	NO
Technical Advisor	EU Satellite Center	SAT	ES
Technical Advisor	Norwegian Marine Technology Research Institute	MAR	NO

Background

- Maritime “Awareness” is currently a top priority for Europe.
 - “Awareness” regarding maritime security, border control against irregular immigration and safety of navigation
 - “Awareness” regarding marine environment and climate change
- “Awareness” for sea-basins of traditional interest (Mediterranean and Atlantic) and trending basins (Arctic)
- Improve existing awareness acquisition capabilities based on EO-data

Objectives

1. Develop, test and validate two set of demand-driven EO-based services, bringing incremental or radical innovations in the field of maritime awareness and leveraging on existing Copernicus Services
 - **Copernicus Thematic Area 1 - Marine Environment Monitoring and Climate Change**
 - **Copernicus Thematic Area 2 - Security**
2. Propose a set of “support” / “envelop” services which will better integrate the abovementioned EO and Copernicus-enabled services to the operational logic and code of conduct
3. Strengthen transnational collaboration in maritime awareness sector by facilitating knowledge transfer and optimization of resources for the public authorities which, participate in the buyers group

Copernicus-enabled Services

Thematic Area 1 - Environment - A Service with features which addresses operational needs directly related to the environment and arctic, hence contributing to tackle climate changes challenges

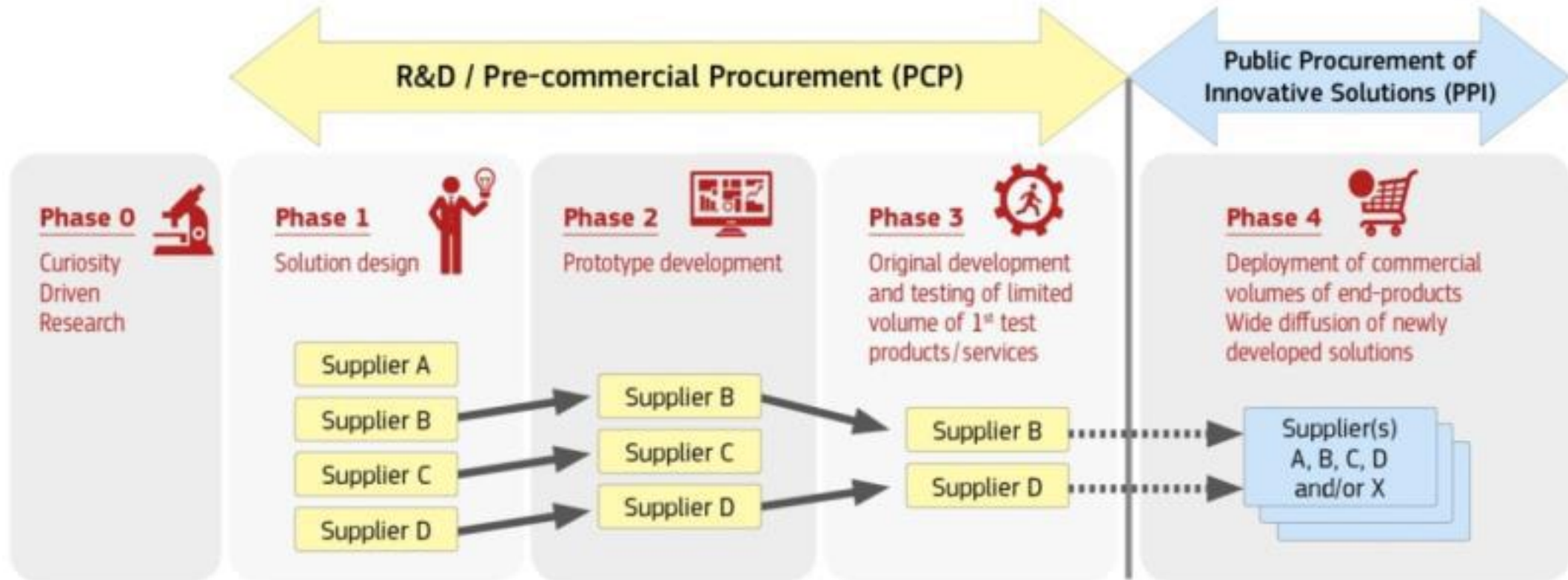
- (i) Pelagic (particularly, tune) fisheries support information,
- (ii) Fish farm monitoring,
- (iii) Phytoplankton and harmful algal blooms (HABs) detection and mapping,
- (iv) Prediction of possible locations of jellyfish blooms
- (v) Regular monitoring of Marine Protected Areas (MPAs)
- (vi) Information about oil spill events in the water and their development in time and space
- (vii) Ocean biotic and abiotic parameters (e.g. wind, wave, sea surface temperature, chlorophyll a, etc.) climatological information and historical statistics
- (viii) Detection of vessels and icebergs in Arctic areas
- (ix) Detection of open channels in the ice in the Arctic

Copernicus-enabled Services

Thematic Area 2 – Security (Border Security Services) - A service with features which addresses operational needs directly related to human activities at sea, hence contributing to its inherent challenges

- (i) Unusual/irregular activity detection around critical infrastructure, vessels approaching
- (ii) Change detection on beaches and coasts for evidence of embarking or disembarking of irregular immigrants,
- (iii) Border permeability mapping service, which utilizes geospatial information.

Proposed concept and methodology : Pre-commercial Procurement

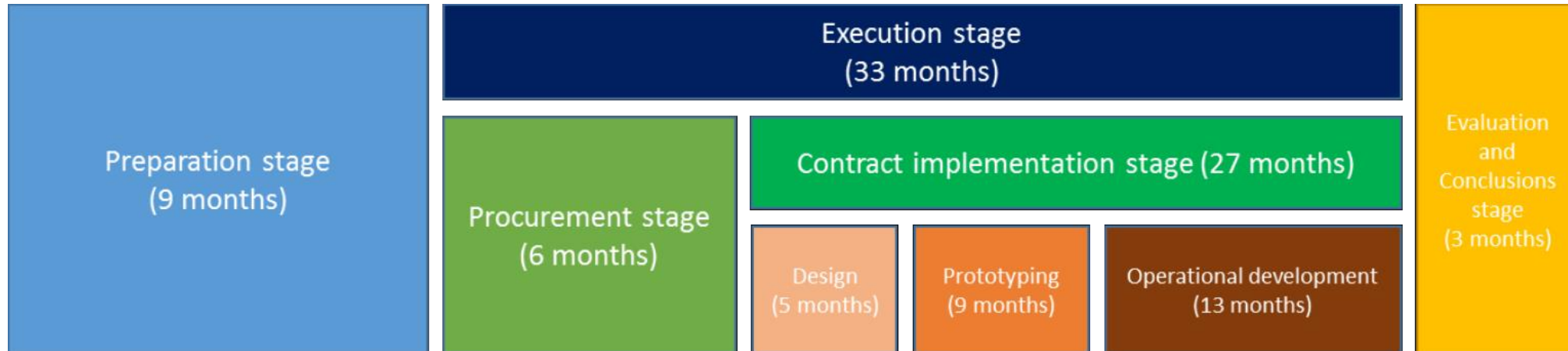


Selection Service features

- Joint decision of the group of buyers - derived from the collection of the requirements from WP2. This way will have convergence between parametric modelling and expert judgement in order to prioritize the service features and keep the best six.
- Open market consultation –discussion on which service features to include in the procurement

MARINE-EO Project

Project stages and duration

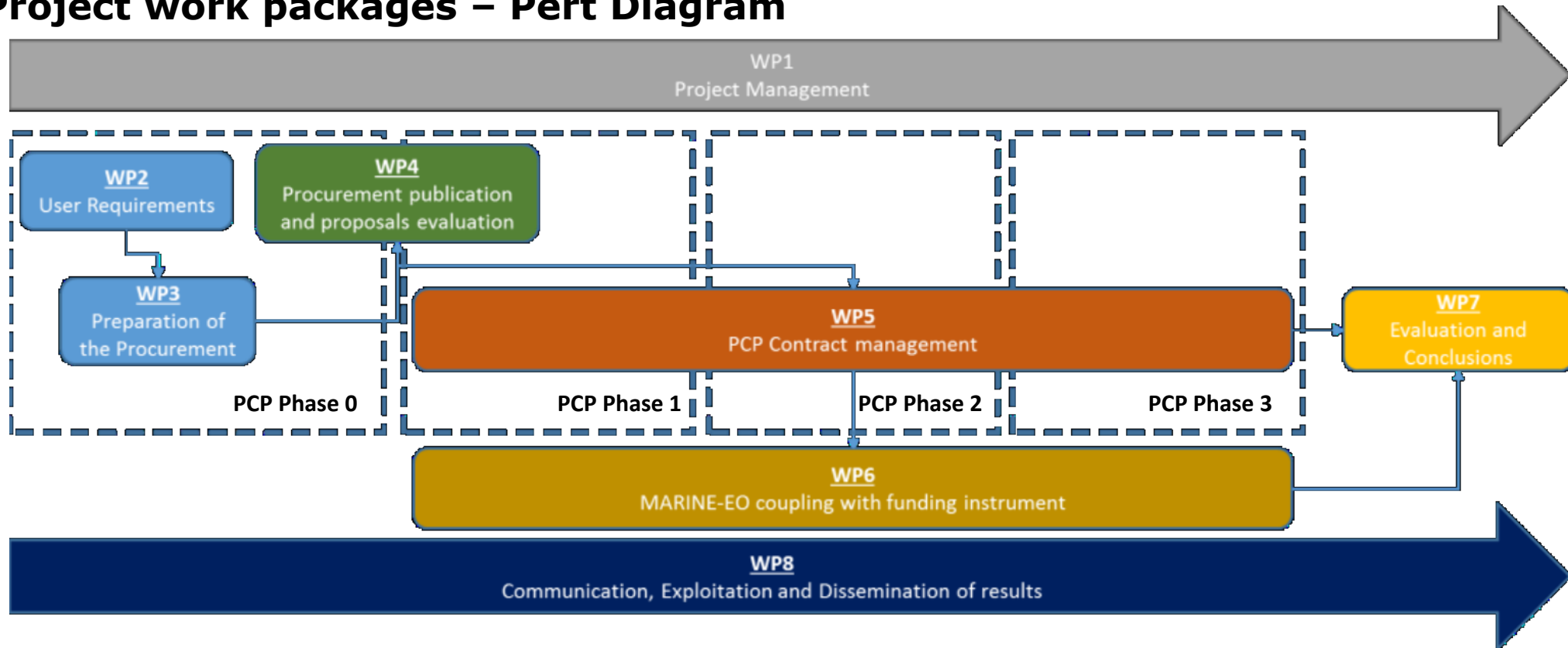


Start: January 2017

Duration: ≈ 47 months

MARINE-EO Project

Project work packages – Pert Diagram



WP1 – Project management

WP2 – User Requirements

WP3 – Preparation of the procurement

WP4 – Procurement publication and proposals evaluation

WP5 – PCP procurement management

WP6 – MARINE-EO coupling with funding instrument

WP7 – Evaluation and conclusions

WP8 – Communication, exploitation and dissemination of results



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