



Engagement

OCTAPUS

Countries	Project value (€)	% by EPSILON	€ by EPSILON	Engagement	Funding by	Date	Partners
FR, DE, GR, IT, CY, UK, NL, ES, NO, MT	7.999.480	10,78%	86.250	HORIZON	EU	04.04.2018	ADS, ALSEAMAR, DFKI, CYX, GENPORT, BALANCE, AVIONTEK, CMP, COMEX, CERTH, DANAOS, NTUA, TWI, DELTARES, LEITAT, TUC, CMR, OS, ITML, EPS, SUNLIGHT, HMOD

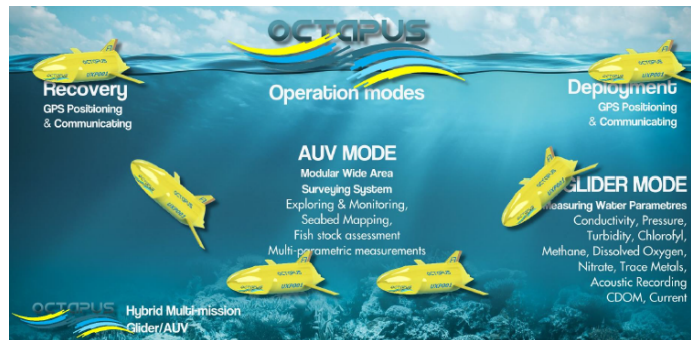
Description

The mission of the OCTAPUS is the design, development and deployment of an autonomous Underwater Hybrid System exhibiting the operational capabilities of an Autonomous Underwater Glider (AUG) and an Autonomous Underwater Vehicle (AUV) specialized for deep-sea surveys.



The OCTAPUS project aims to catalyze AUV innovations by engaging European marine industry stakeholders with ICT and aerospace research and business players into a collaborative technology development journey under a co-creation framework. OCTAPUS invests on open innovation as tool for achieving drastic cost-reductions of at least 50% in sea surveying and for the enhancement of the AUV's value proposition with additional capacity and operational intelligence. The project responds to AUV market and policy challenges through a multi-layered strategy for cost-attractive AUV solutions.

OCTAPUS attacks major inefficiencies experienced in existing AUVs, enhances AUV functionalities, redefines the way underwater environmental information is acquired, provides robust and secure data transmission, supports months of autonomous survey operation and ultimately will contribute to an increase in our knowledge regarding the world's oceans. In this respect, it heavily promotes European marine industry and Europe's competitiveness.



Outcome

OCTAPUS proposes an easy-to-handle, easy-to-deploy, low cost, innovative underwater system combining the best of Glider and AUV technologies: a hybrid vehicle that use standard propulsion systems and glider systems combined in one single deep-water platform. The vehicle will be specially designed, considering the affordability and energy-efficiency aspects in an attempt to overcome the traditionally expensive, tedious, bulky, vessel-dependent practices of traditional deep-sea expeditions.

The system will be equipped with multiple sensors that will support operations in complex underwater environments, in a cost-efficient way, with significantly enhanced capabilities compared to existing conventional deep-sea AUV systems. The OCTAPUS system will be able to operate in deep-sea environments at a fraction of the current costs featuring:

- Autonomous deployment of the Hybrid Underwater Vehicle using a dedicated Launch and Recovery System, eliminating the cost of a manned support vessel
- Hybrid glider-AUV propulsion system
- Fully autonomous mapping and inspection of the sea floor
- Enhanced operational time using a hybrid innovative long-range energy supply
- Optimized Autonomous Navigational modules