

## SWARM

### *Smart and Networking UnderWater Robots in Cooperation Meshes*

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The oceans will, in the near future, supply a considerable part of human and industrial needs. Due to the harsh nature of this environment, the assignment of divers is dangerous and very limited. There is thus a high need for Unmanned Underwater Vehicles (UUVs). SWARMS, *an industry-led project*, aims to i) solve several problems associated with the autonomy and industrialization of offshore operations and ii) develop an integrated platform, a set of SW/HW components, enabling Autonomous Underwater Vehicles (AUVs) and Remote Operation Vehicles (ROVs) of different manufacturers to combine functionalities (robot features) in a transparent and cooperative way. Such an innovative and replicable approach will render AUVs/ROVs capable of executing simple to complex underwater industrial operations in a cooperative way, improving the autonomy, robustness, cost-effectiveness, and reliability of underwater processes. SWARMS' approach will be tested and validated along the Norwegian coastline, the Black and the Atlantic Ocean. The validation phase will allow us to quantify and measure the benefits of the project results and whether these benefits will outweigh its costs if implemented in the new maritime economy. To this aim, SWARMS comprises a well-balanced consortium of industrial companies, research organizations and universities that will play a leading role in quantifying and validating the achievement of concrete market and technical needs involved in the new generation of UUVs in the industrial offshore market.