



## **SWARMS Early Trials Management for The SWARMS ECSEL-H2020 Project**

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The work presented on this paper is aimed to explain how the Early Trials of the Project SWARMS were managed in order to complete the first field demonstrations on real environment. SWARMS aims to reduce the operational cost in the use of maritime robots and vehicles, in order to increase the safety of tasks and reduce professional divers risks. This will be achieved enabling the AUVs/ROVs to work in a cooperative mesh. The challenge is to design and develop an integrated platform (a set of Software/Hardware components), incorporated into the current generation of underwater vehicles in order to improve autonomy, cooperation, robustness, cost-effectiveness, and reliability of the offshore operations. The first demonstration of the project has been performed at PLOCAN (The Oceanic Platform of the Canary Islands) where these technologies were validated on its first stage.

The Early Trials have represented the first in situ deployment and test of the novel technologies developed during the initial 14 months of the Project. Going into the sea supposed a huge challenge also in terms of management. The 32 partners of SWARMS had very different requirements (logistics, technical needs, software/computation needs, etc.), and a limited time frame to test and prove their individual developments. In order to fulfill the project objectives, all these tests were divided in 7 missions that were aimed to cover this early demonstration requirements. From PLOCAN, a management protocol was designed in order to cover all the partners needs and make an efficient resource assignment from the beginning. These results will be extended to other two demonstrations of the project that foreseen to be held in Romania (2017) and Norway (2018).