PLOCAN: NATIONAL FACILITY FOR UNDERWATER VEHICLES, INSTRUMENTS AND MACHINES (VIMAS)

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The Oceanic Platform of the Canary Islands (PLOCAN) is a multi-purpose service facility composed by a set of large infrastructures to support research, technology and innovation in the marine and maritime sector in the North-East Central-Atlantic Ocean. PLOCAN's mission is to promote long-term observations and sustainability of the ocean. It aims to make contributions to these goals through multidisciplinary approaches, clustered expertise and cost-effective combined services, including observatories, test beds, a base for underwater vehicles, an innovation hub, and training as common element. Built by a consortium between regional and national Spanish governments, the target users are not confined within Spain's borders being international partnerships crucial to its success. The end-users should likely be groups, from both public and private sectors, and it is intended to attract international research programs and networks, academia and government. The consortium will share the cost (€50 million) for the next decade, so putting it on a sound financial footing from the start. The project was approved in 2007 as a node of the Spanish Network of Large Scientific and Technological Infrastructure (ICTS) and further supported by the Ingenio 2010 Program(1) . The project is at this moment in time at the tendering stage for building and fixing infrastructures, which are scheduled for 2011. PLOCAN's operational phase is planned to start in 2012, although scientific and research activities are already taking place.

PLOCAN infrastructures are based on a set of experimental facilities and laboratories on land; an offshore platform located at the edge of the continental shelf; and deep observation sites, some of them connected via cable. So, PLOCAN provides a suite of equipment and instrumentation for studying the diversity of waters around the site. The provision of the ocean platform is unique. It is designed to enable occupation and operation in a safe and stable ocean location, with direct access to the deeper ocean, through the provision of remotely operated vehicles, machinery and underwater work instruments, of many kinds, to observe, produce, use or install service resources at depths that up to now, were only possible for the hydrocarbon exploration and extraction industries, or from temporary floating platforms.

Combined with observatories, test beds, an innovation hub and training programs, PLOCAN offers a base for the support and development of new technology for underwater vehicles. The concept is to maintain a core of vehicles, instruments and machines (VIMAS) as a national center, and to offer services and facilities that optimize (by improving efficiency and reliability, and simplifying to reduce costs), all the operations of these ocean devices. It is hoped that this provision will attract a wide range of underwater vehicles as a working showcase of the latest technologies, as well as providing services such as testing, maintenance, transportation, development and perhaps supply. The fundamental strategy is to promote national and international collaboration to share the use of large vehicles in the area (ROV, AUVs, etc), while focusing research and development on small, light-weight, low-cost autonomous underwater vehicles such as gliders.

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