

3. Meeting end-user needs and supporting marine development:

**Fostering links to industry to enhance European competitiveness through new and existing ocean businesses.**

**Title:** Eurofleets: Fostering Links to Industry in the Advancement of Equipment Innovations for Deep Sea Operations from Research Vessels

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Eurofleets is a key research infrastructure, essential for collecting in-situ marine data sets from global oceans, regional seas and coastal waters. Research vessels carry and operate shipborne observation equipment and facilitate deployment and handling of a large range of observing and sampling instruments. The infrastructure is also evolving, with fixed ocean seafloor observation and mobile surface and subsea autonomous technologies presenting challenges to the existing fleet to deploy and maintain. Meeting the complex end user needs of European scientists across disciplines and geographic locations is an expensive and complex exercise requiring coordination at national and international levels, and the use of common standards and approaches.

To meet the expected challenges, Eurofleets+ (An alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities) project is undertaking Joint Research Activities (JRA) with key industry partners. Specifically, the objective of JRA 3.2 led by CSIC, with the Marine Institute and industry partners Hampidjan, MacArtney AS and SEAONICS is the study and conceptual development of equipment for deep sea operations from research vessels co-designed by research and industry partners

Improving interoperability of Large Exchangeable Instrumentation (LEXI) is a primary aim of Eurofleets+, especially in terms of improvement and standardisation of tools/rigging for more efficient operations.

The collaborative approach aims to develop a new deep-sea winch design, a multipurpose crane/handling system for deep water operations by exploring the use of Knuckle-jib cranes for deployment of heavy equipment and a dual mode handling system design for the deployment and recovery of research tools seabed through moon-pools or/and over the side.