Transnational Access to Ocean Observatories

Marine technology companies have the rare opportunity to "road test" new and existing product prototypes at a range of strategically placed ocean observatories, at no cost. Research organisations are also being offered the opportunity to access the observatories to conduct scientific studies.

The first call for proposals will be going out in mid-June 2014 and will close before the end of July. These opportunities come from the Fixed-point Open Ocean Observatory (FixO³) network project, co-ordinated by the UK’s National Oceanography Centre.

Potential applicants should check the FixO³ website for the full announcement and further details.

As part of the FixO³ project’s remit, small and medium-sized enterprises (SMEs) and institutions working on marine technology or wanting to conduct scientific research have the opportunity to apply for access to one or more observatories and receive full scientific and technological support.

The FixO³ project started in September 2013 with a European Commission (EC)-funded grant of EUR7 million. It is a four-year project with 29 European partners from academia, research institutions and SMEs. The project aims to integrate all infrastructures on the European fixed-point open ocean observatories and to enable continuity in observations for research into such things as climate change, biodiversity, ecosystems, carbon issues and ocean acidification. It also aims to improve access for the wider community to these key installations and the data collected, which is the reason behind the call for proposals.

**Transnational access**

Through the FixO³ project’s ‘Transnational Access (TNA)’ work package, which is about supporting external scientific users with coordinated, free-of-charge transnational access, there will be 14 ocean observatories in the open ocean and one shallow water test site in the Western Mediterranean Sea available for access by successful applicants.

Observatory locations range from the polar regions of the Antarctic and Arctic, to the Atlantic Ocean and Mediterranean Sea with a choice of seafloor, mid-water and surface infrastructures with varying scientific focus due to each location’s characteristics.

These observatories were selected as they offer the broadest scientific and technological capabilities for multidisciplinary observations such as atmosphere-ocean interactions at the sea surface and processes in the water column and ocean floor. Gliders are also available for some of the sites. The observatories address a wide range of disciplines such as biology, biogeochemistry, chemistry, physics and geology.

Each of these open ocean observatories is in a key region which has been identified by the European Multidisciplinary Seafloor and Water Column Observatory as a critical area for environmental monitoring.

**Call for proposals**
Applicants are encouraged to start working on their proposals as soon as possible as they need to contact the observatory manager of the preferred FixO³ location for a pre-feasibility evaluation of their project and a letter of support prior to submitting the proposal. Applicants also need to write a short research proposal explaining the reasons why they would like to use one of the TNA observatories.

The proposals will be evaluated by a panel of experts, based on scientific merit, technical quality and the novelty of the proposed activities. The selection process will start as soon as the FixO³ TNA Office closes the first call in July and successful applications will be decided by the end of the year.

User groups, particularly those working in countries where no similar research infrastructure exists or with no prior experience of accessing similar infrastructure, are encouraged to apply and will have extensive support during proposal preparation and subsequently if funded.

**Benefits of applying**

‘Transnational Access’ is free-of-charge to successful applicants and allows access to one or more observatories. It also includes technological, scientific, infrastructural and logistical support from members of the project, access to ancillary data and FixO³ observatory experts will be able to provide an endorsement for successfully tested products. In some cases, a contribution by the FixO³ project of up to a maximum of EUR4,000 may be granted to cover expenses such as travel, subsistence and equipment freight costs.

TNA provides an invaluable resource to SMEs looking to further develop and exploit new products in the emerging Blue Growth economy, such as anti-biofouling technologies, high definition subsea cameras, sound recorders, subsea long range lasers and CO₂ sensors. These are among a range of equipment which can be trialled for commercialisation on FixO³ infrastructures.

As new products must overcome a certification barrier before accessing the global deep ocean technology market, trialling on FixO³ infrastructures allow products from European SMEs to meet the required test benchmarks for certification, which is a major step in the commercialisation process to access global markets.

FixO³ will be offering only one more opportunity for TNA, with a second call for proposals going out in the summer of 2016.

**Importance of FixO³ project**

The open ocean observatories are important for learning more about these critical research areas and ocean environments. By monitoring these areas closely, much can be learned about the natural cycles of the ocean and the air, and the plants and animals which live there.

Data is collected and disseminated in many ways – some observatories have real-time data linked to satellites and most observatories have sensors to record data at specific time intervals. Other observatories have regular service cruises once or twice a year organised by the operators of the observatories to record and redeploy moorings and to collect the data.

Human impacts such as chemical run-off from the land, ozone depletion, sewage, habitat destruction, thermal pollution from industry, noise pollution from shipping and the introduction of alien species from ships’ ballasts can all be properly measured and therefore be better managed.

FixO³ enables the integration of the information collected by allowing industry to use this standardised data rather than industry producing it separately and replicating the same studies. It provides critical infrastructures for marine research which can enable scientific and technological breakthroughs and advances, with TNA being a positive and concrete step in this direction.

The TNA is a unique opportunity for scientists and engineers to access high-quality, interlinked instrumented infrastructures operating in open ocean observatories in order to carry out research and/or to test equipment. It is an incredibly valuable source of support for research and development in this burgeoning market and any company that may be able to make use of this is encouraged to submit a proposal before the July deadline.

For more information go to: [http://www.fixo3.eu](http://www.fixo3.eu); email the FixO³ TNA office at fixo3.tna@plocan.eu or email the FixO³ Project Manager at [luisa.cristini@noc.ac.uk](mailto:luisa.cristini@noc.ac.uk).

*Figure 1: Map of the observatory FRAM at the N Atlantic-Arctic transition. The observatory infrastructure builds on the existing long term ecosystem observatory HAUSGARTEN and the cross-Fram-Strait oceanographic array.*

*Figure 2: The observatory ANTARES operated by CNRS-IFREMER-CPPM, courtesy of Dominique Lefevre.*

*Figure 3: OBSEA-3 the observatory OBSEA operated by UPC – Universidade Politecninca de Catalunya, courtesy of Joaquin Del Río.*

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