

FOWRCE SEA

Future offshore wind research center at sea

DURATION: 12 months | LAUNCH: 2020 | Total budget: €212K

CONTEXT

A finer knowledge of the physical and biological environment surrounding the future offshore wind farms is required for wind resource assessment, improved design conditions, understanding of the interactions between marine environment and the offshore wind turbines. In the meantime, there is a need for a proving ground for a wide spectrum of sensors including wind, waves and currents, measurements instruments, marine fauna detection or biofouling growth. **Such an installation would make it possible to carry out multidisciplinary research activities aiming at characterizing the environment and testing some technological components of the future wind farms (dynamic cables, etc.) over a significant period of time. This research platform, unique in France, will constitute a real asset for the development of the French offshore wind industry.**



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TECHNOLOGIES



STAGES OF THE VALUE CHAIN



OBJECTIVES

- To define the needs of the offshore wind sector for a research infrastructure at sea in terms of physical and biological parameters to be collected, qualification of the sensors to be used, technological components to be tested and monitoring methodology to be developed.
- To develop a business model to support such an infrastructure.

EXPECTED RESULTS

- **Technical definition** of a specific research platform at sea for the offshore wind sector
- **Business model** for supporting OPEX and CAPEX of the infrastructure
- **Definition of potential sites** for deployment of the platform

SCIENTIFIC CONTENTS

- **Qualification of needs** in terms of environment, sensors, technological components and research activities
- **Inventory** of existing platforms, gap analysis and functional description of the best candidate solutions
- **Financial engineering study** to evaluate the CAPEX and OPEX of this infrastructure as well as the different sources of financing and available revenues
- **Analysis of the data policy** to be implemented according to the activities carried out and the actors investing in the platform
- **Study of the spatial representativeness** of the observations collected by the platform on the most relevant sites

PARTNERS



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