



ROMEO

PROJECT

ROMEO

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REDUCING COSTS TO FOSTER COMPETITIVENESS IN OFFSHORE WIND ENERGY

ROMEO (*Reliable O&M decision tools and strategies for high LCoE reduction on Offshore wind*), is seeking to reduce offshore O&M costs through the development of advanced monitoring systems and strategies, aiming to move from corrective and calendar based maintenance to a condition based maintenance, through analysing the real behaviour of the main components of wind turbines (WTGs).



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 745625.

12

PARTNERS (KEY PLAYERS FROM THE OFFSHORE WIND INDUSTRY)

6

COUNTRIES

3

USES CASES IN OFF SHORE WIND FARMS

€16 M

OF TOTAL BUDGET



IN ONE CLICK

Coordinator	Programme	Period
IBERDROLA	HORIZON 2020	2017-2022
Sector	Web	
RENEWABLE ENERGIES	ROMEO Project website	

01

The Challenge

The **main objective** of ROMEO project is **to reduce O&M costs** through the development and demonstration of an O&M information management and analytics platform, capable of improving decision making processes by offshore wind farm (WF) operators whilst allowing a transition from corrective maintenance to condition-based maintenance strategies. At the same time, **renewable energy technology will be improved**, thus contributing to meet the European Union's climate objectives and foster the energy transition (cleaner, safer and more efficient energy).

02

Solutions

A flexible and interoperable Cloud and Internet of Things (IoT) platform will provide an **advanced analytics ecosystem** for failure diagnosis and prognosis models to better understand the real time behaviour of the main components of WTGs under operational conditions; maximizing their life span and minimizing O&M costs. Additionally, **the project will develop third-generation condition monitoring systems** for some WTG components and low-cost structural condition monitoring systems.

03

Impacts

The innovations developed within the R&D work packages **will be tested** in three use cases managed by the wind farm operators of the following projects: Teeside (United Kingdom), Wikingen (Germany) and East Anglia 1 (United Kingdom). This way, the **benefits achieved will be demonstrated**, and the future replication of the project in other wind farms will be ensured.