PLOCAN consorcio

Plataforma Oceánica de Canarias

Ciencia y Tecnología para la Sostenibilidad del Océano Profundo

leanwind

This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No. 614020.

EU FP7 LEANWIND Project

Logistic Efficiencies And Naval architecture for Wind Installations with Novel Developments

Objective

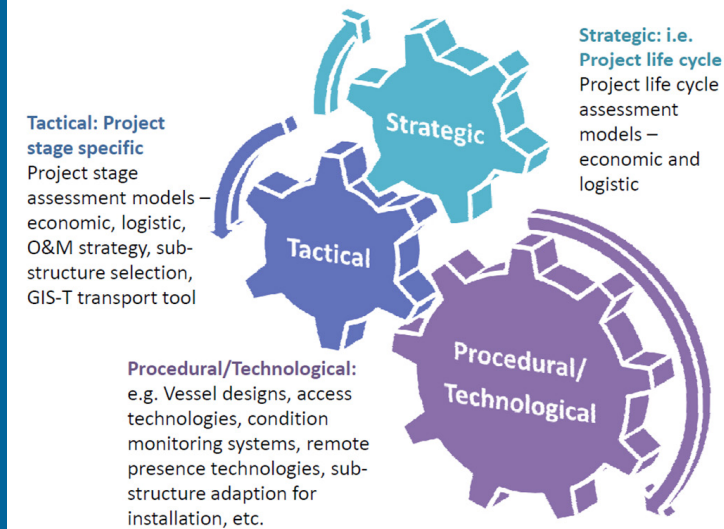
Provide cost reductions across the offshore wind farm lifecycle and supply chain through the application of lean principles and the development of state of the art technologies and tools.

Project Description

LEANWIND will address industry challenges in the short to medium term providing cost reductions across the supply chain. It will focus on delivering innovative and cost-effective deployment, installation, operations and maintenance (O&M) and decommissioning of large offshore wind farms and the associated transport, logistics and equipment needs. The project targets areas identified in industry and policy reports as requiring cost reductions to achieve 2020 European renewable energy targets.

LEANWIND represents the first attempt to apply lean principles to the offshore wind energy industry. Efficiencies will be found at each critical project stage from deployment and installation logistics to O&M strategies. To optimise processes across the life cycle, innovations will be addressed at three levels:

- procedural/technological;
- tactical/operational;
- and the overall strategic planning perspective.



Strategic: i.e. Project life cycle
Project life cycle assessment models – economic and logistic

Tactical: Project stage specific
Project stage assessment models – economic, logistic, O&M strategy, sub-structure selection, GIS-T transport tool

Procedural/Technological:
e.g. Vessel designs, access technologies, condition monitoring systems, remote presence technologies, sub-structure adaption for installation, etc.

www.plocan.eu

Overview

- LEANWIND is coordinated by University College Cork"
- Consortium includes 31 partners from 11 countries
- Duration: December 2013-November 2017

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Key Outcomes

The project is broken into 7 technical work packages whose primary outputs will include:

Construction, Deployment & Decommissioning

- Improvements to design & installation of support structures

Novel Vessels & Equipment

- Innovative solutions for current vessels & designs of new types of vessels for both installation and O&M phases

Operation & Maintenance strategies

- Optimisation of O&M procedures, especially for far-shore, deep water and other more exposed locations

Integrated Logistics

- Optimisation of full supply chain logistics including on-shore transport links

System Integration

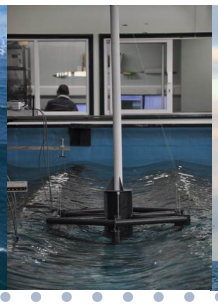
- Assessment of H&S issues & personnel training requirements for extreme site locations & emerging technologies and methods

Testing and validation of tools and technologies

- Simulation
- Testing using offshore trials
- Case-study validation

Economic and Market Assessment

- Assessing the cost-saving benefits of project technical innovations & system optimisation
- Assessing market impacts of proposed innovations


Project Partners

Industry Participation

LEANWIND hopes to forge strong links with industry through the large industry partner base, an Industry Advisory Group voluntarily assessing the work plan and project outcomes as well as outreach activities to showcase results, gather feedback and ensure the industry relevance of the project work.