



PRESS RELEASE

The European project ININTERESTING aims to accelerate wind energy technology development and to extend the lifetime of wind turbine components by developing innovative virtual and hybrid testing methods for prototype validation of pitch bearing and gearbox components

ININTERESTING, coordinated by the Technological Research Centre IKERLAN, has a budget of €4.75M and it is financed by the European Union's H2020 Research and Innovation Program. The project kick-off meeting took place last 15th and 16th of January 2020 at KU Leuven facilities (Belgium).

The project

The full name of the project is "Innovative Future-Proof Testing Methods for Reliable Critical Components in Wind Turbines". This project pursues the development of innovative virtual and hybrid testing methods for prototype validation of pitch bearing and gearbox components, which are the components that will be developed within the selected case studies.

The goal of ININTERESTING is to develop a disruptive methodology to demonstrate the reliability of larger wind turbine critical components without the need of building larger test-benches in the future by overcoming size-dependent issues during design process and testing.

In comparison with current testing methodologies based on large-scale component validation, a key objective of ININTERESTING is to reduce considerable environmental and economic impact and to improve social acceptance of the newly developed ININTERESTING solutions and testing methods.

Project justification

Post-2020 Renewable Energy Directive includes a binding renewable energy target for the EU for 2030 of 32% with an upwards revision clause by 2023. To achieve the target, it is necessary to act both on new wind turbines and on already installed ones.

- **New wind turbines:** the current market trend is to develop bigger and more powerful wind turbines with a longer lifetime.
- **Already installed wind turbines:** a considerable proportion of the installed EU wind fleet (mainly onshore) will come to the end of its lifetime between 2020 and 2030.

The current product development process (PDP) relies on a validation method that combines physical and virtual testing. While more advanced virtual modelling techniques are becoming available, it is still necessary to perform large-scale (full-size) physical tests to demonstrate reliability of new and larger wind turbine components. The full-size physical tests are the final step and the most expensive and time-consuming part of the PDP. To deal with bigger wind turbines, such critical tests require increasingly larger and more expensive test benches.

Therefore, it is essential to provide European companies with the most advanced testing methodologies and to design tools to help them find innovative solutions and bring them



faster to commercialization. **ININTERESTING** proposes a breakthrough hybrid methodology and disruptive design tools to demonstrate reliability and lifetime extension of large wind turbine components, eliminating the need of larger test-benches in the future. This paradigm shift aims to strengthen the European leadership in renewables, achieving increased power capacity and accelerating time to market.

The **ININTERESTING** methodology will help to save time and money during the PDP by integrating virtual testing and hybrid testing. It is expected that it will reduce considerable environmental and economic impact, and it will also improve social acceptance.

8 partners from 3 European countries

The **ININTERESTING** project is formed by a consortium that brings together eight partners from three European countries distributed as follows:

- Three R&D centres, **IKERLAN (project coordinator, Spain)**, **VTT (Finland)**, **VITO (Belgium)** and one university, **KU Leuven (Belgium)** that will bring their specific developments from TRL2 to TRL4;
- In terms of industrial involvement, two manufacturers of wind turbine components (end-users of the technology designed): **LAULAGUN (Spain)**, with extensive experience in the manufacture of large bearings for both onshore and off-shore wind turbines, and **MOVENTAS (Finland)**, leading company in the wind sector that develops and manufactures wind turbine gearboxes and related technologies;
- One global player in the field of Computer-Aided Engineering simulation and testing solutions, **Siemens Industry Software (Belgium)**;
- One non-profit private industry-driven organization that integrates wide variety of stakeholders in the value chain of the energy sector, **Basque Energy Cluster (Spain)**.