

# windEXT

## Advanced maintenance, lifetime extension and repowering of wind farms supported by advanced digital tools

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### Project Overview

Launched in January 2020, **WindEXT** is an ambitious European funded project. The goal of the project is to develop specialized training that will allow reducing the LCOE by reducing the OPEX, increase the quality of O&M services while extending the lifetime of the assets and the working conditions of the maintenance personnel. The duration of the project will be three years, so it will end up in December 2022.

This project will reinforce the creation of new companies in the classical maintenance activities, but also in new business areas as for instance: life extension, through the integration of new digital tools and advanced maintenance, recycling and reuse of components.

The main objectives are:

- Providing a better understanding of the use of simulators and digital approaches for maintenance and lifetime extension as well their validation in real conditions.
- Teaching on diagnostic procedures to evaluate the situation of the different components.
- Teaching on the methods to evaluate the factors affecting the loss of availability.
- Selection of the best procedures to dismantle a wind farm regarding the final use of the WTG components.
- Teaching on the most appropriate methods for logistics, recycling and/or re-use of machinery, blades and main components.
- To design and develop e-learning platforms that will host the educational resources.
- Consolidation of Independent Services Providers

The **WindEXT** project receives funding under the [ERASMUS + programme](#) of the European Union.

## Project meeting

### KickOff Meeting, Madrid, 15 January 2020

The meeting focused on the presentation of the project and the partners, the project management, communication and dissemination activities as well as a first discussion on the intended output of the project. Due to the fact, that the consortium consists out of 11 partners, the meeting was also used to get a common understanding about the goals of the project. The meeting was held in Madrid at the office of the project leader Asociacion Empresarial Eolica.



## The project partners

### **Asociacion Empresarial Eolica (AEE), Spain, project leader**

The Spanish Wind Energy Association (AEE) is a non-profit organisation, founded in 2002 that promotes the use of wind energy in Spain, Europe and worldwide. It has more than 165 partners representing 80% of the sector in Spain, including to: promoters, manufacturers of components and wind generator, national and regional associations, organizations related to the sector, consultants, attorneys and financial institutions, between others.

### **8.2 Consulting AG, Germany**

8.2 Consulting AG is one of the leading independent renewable energy experts in Europe. They provide a wide range of technical consulting services and inspections for on- and offshore wind, grid integration and biogas projects. From the initial tender process to quality assurance towards periodic inspections, their services cover the entire project life cycle. If turbines reaching the end of design life they support their clients with lifetime extension assessments.

### **Renewable Skills & Consultant GmbH, Germany**

Renewable Skills & Consultant GmbH (RSC) is the pioneer of wind energy training with more than 19 years of experience on the market. The RSC network of licensed training providers is the only truly global training network in the field of wind energy training with more than 30 partners on 5 continents. The RSC standard is the world's leading qualification standard for wind turbine technicians and is considered as the benchmark for training excellence in the industry.

### **DP2i, SARL, France**

DP2i is a consultancy firm specialised in risk management and process improvement. Our expertise includes Operational Safety, Environment, Sustainable Development, Transport and Logistics Risk, Risks in Industrial Projects, Site Risks, Psychosocial Risks, Risks and Opportunities.

## **INESC TEC – Instituto de engenharia de sistemas e computadores, tecnologia e ciencia, Portugal**

INESC TEC is a private non-profit institution having as associates the University of Porto, INESC and the Polytechnic Institute of Porto. The activity is conducted by 715 researchers, from which 273 hold a PhD degree. Under INESC TEC, 13 Centres are active in research, technology transfer, intellectual property and software licenses management, knowledge valorisation and launching of spin-off companies. Its main areas are Telecommunications and Multi-media, Power Systems, Manufacturing Systems, Industrial Management, Information and Computer Graphics Systems, Optoelectronics and Electronic Systems, Robotics and Intelligent Systems, Artificial Intelligence, Real Time Systems, Computer Science, Critical Software Systems and Innovation, Biomedical.

## **TESICNOR, S.A., Spain**

Tesicnor is a company with global services in Safety and Prevention. It is a company with more than 80 workers in employ, placed in two headquarters based in Noain (Navarre) and Alcalá de Henares (Madrid). They offer technical consulting services, training in Health & Safety and environmental risks, mainly, to the renewable energy sector (70%) and in the industrial sector (20%).

## **Delft University of Technology, Netherlands**

Delft University of Technology is the oldest and largest university of technology in the Netherlands. With over 19000 students and 2500 scientists (including 400 full professors), it is an establishment of national importance and of significant international standing. The Department of Aerodynamics, Wind Energy and Flight Performance and Propulsion (AWEPP) is one of four departments in the Faculty of Aerospace Engineering. The Wind Energy section has a focus on large, multimegawatt offshore wind turbines and offshore wind farms, though urban wind power is also addressed.

## **Universidad de Castilla - La Mancha, Spain**

The University of Castilla - La Mancha (UCLM) is a young and modern university, with a high teaching and research potential, hosting nearly 26,000 students, 2,500 lecturers and researchers and 1,200 administrative staff members. UCLM integrates 36 academic departments offering 45 degree qualifications, with two distinctive features: it is multi-disciplinary and its activities are wide-ranging, embracing the spectrum from basic research to technological development. Moreover, UCLM is very attractive for the industry, being able to find opportunities to optimise their R&D options with their wide research catalogue.

## **University of Cyprus, Cyprus**

The University of Cyprus (UCY) is participating in the project through the Software Engineering and Internet Technologies (SEIT) Lab, an integral part of the Department of Computer Science. SEIT focuses its research activities on two important areas of Information Technology, namely Software Engineering and Internet Technologies. In the second area, it concentrates on the development of ICT-enabled Creativity and Enhanced Learning Environments, platforms and tools for implementing Health monitoring and support services, Smart and Personalised services for Elders and Assistive Technologies for people with disabilities.

## Universidad Tecnológica, Uruguay

UTEC is the first public Technological University in Uruguay aiming at the development of advanced human capital, applied research, technological development and innovation to strengthen the development of the different regions of the country.

## SGS Tecnos SA, Spain

SGS TECNOS is a leader in certification and regulation. It's also a renowned training company with long experience in vocational training in the energy sector. They work to achieve an improvement in the energy performance of its clients and partners. SGS TECNOS belongs to SGS Group, a multinational company with presence in more than 100 countries and more than 90.000 employees worldwide.

## Dissimination and Exploitation of project results

On the project website [www.windext.com](http://www.windext.com), all results will be published. There will be also published 6 newsletters during the project. If you are interested in this newsletters, you can register in our database at [info@windext.com](mailto:info@windext.com) to get newsletters automatically.

Finally the project has its own Twitter channel. Follow [@Wind\\_EXT](https://twitter.com/Wind_EXT) and you will be informed about the current project status.

## Project Consortium

A consortium of European key players in the Wind Industry (entrepreneurial associations and maintenance companies), Universities and training centres come together, to create the reference training course **WindEXT**. The presence of UTEC/CEFOMER from Uruguay is considered fundamental to adapt the contents to another sociological/legal scenario as the LATAM countries.

### Project Leader:

Asociación Empresarial Eólica (AEE)



### Project Partners

