

PRESS RELEASE

A new digital assistant that optimises wind farm management

- *The Tekniker technology centre and Tamoin have jointly developed software to diagnose wind turbine generator failures and breakdowns*
- *The solution, available in the form of a mobile app and web, gathers information from maintenance reports and suggests an optimum sequence of troubleshooting tasks to be performed by engineers*
- *Compared to other market applications, this new tool uses prior operational experiences as a basis to further develop and improve recommendations over time*

[Eibar, 12 March 2024] – Solving breakdowns is one of the operations performed most frequently by technical staff and companies that provide maintenance services for industrial, energy or renewable facilities. A higher degree of digitisation of these operations can help to achieve maximum levels of optimisation so that work can be carried out more efficiently and cost-effectively.

The Tekniker technology centre, a member of the Basque Research and Technology Alliance (BRTA), an organisation that has extensive experience in several areas related to automating industrial maintenance tasks, has assisted the department of Wind Power Maintenance Engineering of the international firm Tamoin in designing and developing a new AI-based software to automatically diagnose breakdowns and offer technical staff complete guidance through a mobile app to tackle failures quickly.

The solution that can be used without an Internet connection, on a computer, in multiple languages and for different wind power generation technologies, uses maintenance reports to gather all the necessary information. It also provides a WTG status diagnosis, proposes the most optimum sequence of tasks to be performed to solve the problem that has been

detected and records the steps taken so that better recommendations can be made to improve success rates.

Egoitz Konde, a Tekniker researcher, underscores that “due to having a fully structured traceability of the information supplied by engineers, it will be possible in the future to shorten and optimise maintenance cycles, improve on-site efficiency and reduce WTG downtime”.

Evolution based on experience

Compared to other applications currently available in the market, this new software jointly developed by Tamoin and Tekniker has made it possible to draft diagnostic guidelines that evolve over time and are based on operational experiences so that technicians can take the spares required to repair the wind turbine generator and address each individual breakdown situation efficiently.

The main goal of Tamoin, a company specialised in integral solutions for the Energy, Oil and Gas, Renewable and Industrial sectors, is to generate the knowledge required for operation and maintenance services (O&M) carried out on wind turbine generators to progress towards a maintenance model focused on asset condition parameters that can be extrapolated to plants where renewables are produced.

This explains why the firm has drawn on Tekniker’s expertise to evaluate how industrial maintenance can be managed in a cost-efficient manner and to ascertain how data management and analytics can be used to monitor and predict wear and detect, diagnose and anticipate episodes of malfunctioning in mechatronic systems.

All the above forms part of an extensive technological offer that includes mathematical simulations, a selection of commercial and ad-hoc sensors, the development of CBM (Condition Based Maintenance) monitoring systems, the modelling of condition status for components, the utilisation of machine learning and data mining technologies to extract knowledge from data and the use of Big Data technologies and IoT platforms.

Concerning Tekniker

Tekniker is a technology centre specialised in Advanced Manufacturing, Surface & Product Engineering, and ICT for manufacturing. Its mission is geared towards fostering growth and

wellbeing through R&D&I actions aimed at society and enhancing competitiveness in the business fabric in a sustainable manner. Tekniker is a member of the Basque Research and Technology Alliance (BRTA).

Further information:

GUK ▶ Unai Macias

unai@guk.es | Tel. 690 212 067