MANAGING WIND PARKS IS A CHALLENGE **DUE TO THE COMPLEXITY OF THE SYSTEM.**

Availability and accessibility of data supports the decision-making process of service providers and asset owners. The converter as one of the main components of the electrical drivetrain is equipped with sensors for control purposes as well as detailed status information. Woodward's OneAccess is our Condition Monitoring Solution that enables full data access and uses artificial intelligence to put information in a context and enables operational decision making – databased.

OneAccess integrates easily into your existing IT infrastructure as tooling and data will be accessed simply via browser. This information makes your turbine operations more transparent and your decision-making more reliable – saving you money.

Insights, combined with a cloud based online tooling to analyze a converter as well as the possibility to compare specific information with other installations or a full park supports your service processes. The sensor data from the converter is recorded and assessed in near real-time. Analysis of this data can indicate the overall health status of the turbine and provide an early warning of impending faults – down to the component level. In addition Woodward OneAccess enables you to draw conclusions regarding the overall system status as the converter is a central component of your turbine. This knowledge can optimize the support and logistics of the operator.

Artificial Intelligence-based data evaluation allows recognizing and eliminating minimal variance in the behavior of the complete converter system before a failure might occur. This approach offers seamless availability of a converter's relevant information and online data analytics. The number of turbines to be monitored may vary from a few to several thousand – the cloud based system is cost-efficient as it scales

easily according to your needs. In order to meet your demand, Woodward reassessed the role of a Condition Monitoring Solution (CMS) and studied the system landscape of leading OEMs and wind park operators. The goal was to roll out an additional system without installation and software administration in an already existing environment. As each additional system binds resources and attention in the company, OneAccess acts mainly in the background. Input and control by users are limited to a minimum and only necessary if the system itself recommends an interaction based on an alarm.

In case of being triggered by the system, the cloud based online tooling includes pre-configured screens simply accessible via your browser, supporting deeper analytics of possible root causes of faults. At the same time, OneAccess supports you with Artificial Intelligence-based evaluations and provides assistance by putting information in a context to enable interpretation. The provided tools for analyzing the system are based on and inspired by the knowledge and many years of Woodward's proven field service teams. It follows the problem solving approaches Woodward has successfully implemented over the years, allowing you to eliminate the disturbance rapidly and increase your first-fix-rate.

Woodward OneAccess is ready for future enhancements to enable full-fledged Predictive Maintenance even beyond today's metrics for recognizing deviations. If you are interested in getting further detailed information do not hesitate to contact Woodward via email OneAccess@woodward.com.

→ Do you need more information:
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Woodward Kempen GmbH develops and builds electronic frequency converters for wind turbines and provides the corresponding service for operation and maintenance. Woodward has equipped more than 18.500 turbines with Concycle® converter systems worldwide. The frequency convertors "convert" generated power to be grid-compliant and are therefore one of the most important electronic high performance parts of a wind turbine.

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