



Leaner maintenance processes for wind turbines Windpulse: the mobile service app with a back-office solution for wind energy



windpulse

The maintenance requirement for wind turbines is on the rise. New technologies are intended to be used to make it easier for operators to continue ensuring failure-free operation. Lufthansa Industry Solution's product suite Windpulse makes documentation easier, maintenance processes leaner, and process quality better.

Product suite Windpulse

The best possible solution for service processes, consisting of

- MMobile service app
- Back-office Web app (browser based)
- IoT platform (cloud)

The advantages for your business

- Optimizing your own processes
- Reducing costs throughout the entire value-added chain
- Shorter service lead time
- Efficient use of resources
- Information platform to aid decision-making
- Sustainability and quality management
- Availability of documentation
- Secure processes and proofs



Access to all maintenance documents with a mobile device

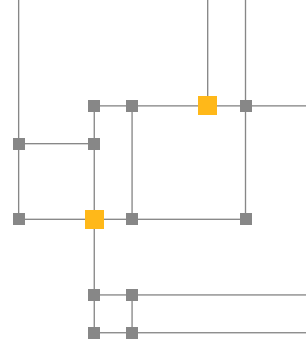
New technologies can make the work of maintenance engineers a great deal easier. Windpulse bundles all the documents necessary for maintenance – including data sheets, reports, and operating instructions – so that service teams can be provided electronically with the latest information on their maintenance assignment and what is more, can process and document their assignment directly on a mobile smartphone or tablet.

The mobile solution from Lufthansa Industry Solutions considerably streamlines the process of providing proof of the inspection. In addition, the documents are stored on the cloud platform, so that plant managers, operators, and others involved in the process can access the necessary information at any time simply by pushing a button. This also enhances their reaction speed when problems occur.

Remedy problems faster with new transparency

Apart from the mobile solution, the product suite Windpulse also features a back-office solution. The information recorded on mobile devices is incorporated into the back-office solution, so that the office employees can see the results of the service team on site at the wind turbine. This transparency also helps provide information to maintenance engineers when problems occur at short notice. Thus problems can be remedied more quickly on site. The suite also makes it easier to prepare work assignments because the office staff can bundle all the data necessary for a maintenance assignment and make it available to the service teams with an app.

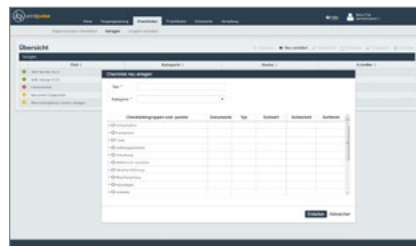
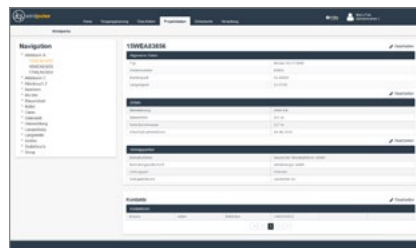
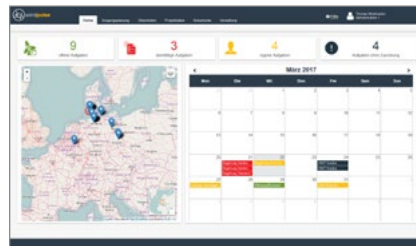
Including the Lufthansa Industry Solutions product suite Windpulse in a new maintenance concept also helps plant managers streamline their processes. Apart from a more efficient workflow and savings, this also enhances process security. As in aviation, this is particularly important for the complex maintenance processes in the wind energy sector in order to ensure failure-free operation.



Features of the mobile service app

- **BYOD – Bring Your Own Device**
Suited for mobile devices (currently iOS).
- **Individual configurability**
Central configuration of the mobile devices for the individual employee.
- **Utilization in offline mode**
Assignment data can also be processed offline and subsequently synchronized.
- **Individual user and device identification**
The authorization to access assignment and master data can be individually set for each employee or user group.
- **Assignment data**
From the office or on the go – before the employee drives to an assignment, he already has all the important data on his mobile device.
- **Property data**
Data on the wind farm/wind turbine/components/devices, etc. (details of the location, precise fixing of the location, grid access point, required aids), can be viewed at any time.
- **Checklists**
Checklists can be filed for every assignment, which define the steps in the required procedure.

- **Photos, media, and other documents**
Photos can be shared between the mobile service app and the back-office solution, as well as between the ERP/CRM system
- **Individual customer and assignment reports**
With the back-office checklist designer, customer and assignment reports can be individually made up and filled in later with the mobile device on site. After the items on the checklist have been finished and fully documented, the assignment can be closed and sent to the customer by e-mail or made available to another IT system (for example for billing).



Features of the back-office solution

- **Project data**
The project data can be loaded from wind ERP systems into the back-office solution by way of a standard interface. Initial recording and updating is also possible right in the back-office solution.
- **Checklists and reports**
The checklist designer and report editor enable checklists, assignment and customer reports to be made up for each individual customer. What is more, the contents and layout of checklists and reports can be adjusted dynamically. Data from the checklists and reports are stored in the individual customer database in the cloud and can be used for further evaluations.
- **Photos, media, and other documents**
Photos, media and documents can be shared between the back-office solution and the mobile service app, as well as between external systems. The office employee can allocate the attachments necessary for the assignment in advance.
- **Schedule monitoring and planning unfinished business**
Workflow-based features assign the respective tasks to the right employee at the right time, or divide them up among the affiliated business partners. This provides for efficient support, from the receipt of the order up to the commercial completion of the business.
- **User and role management**
The role management of the authorization determines which users are allowed to access which data. Users can be flexibly allotted a role in groups (manager, distribution, dispatcher, engineer, etc.).