



FIELD SERVICES

Predictive & preventative maintenance for wind turbine drivetrains.

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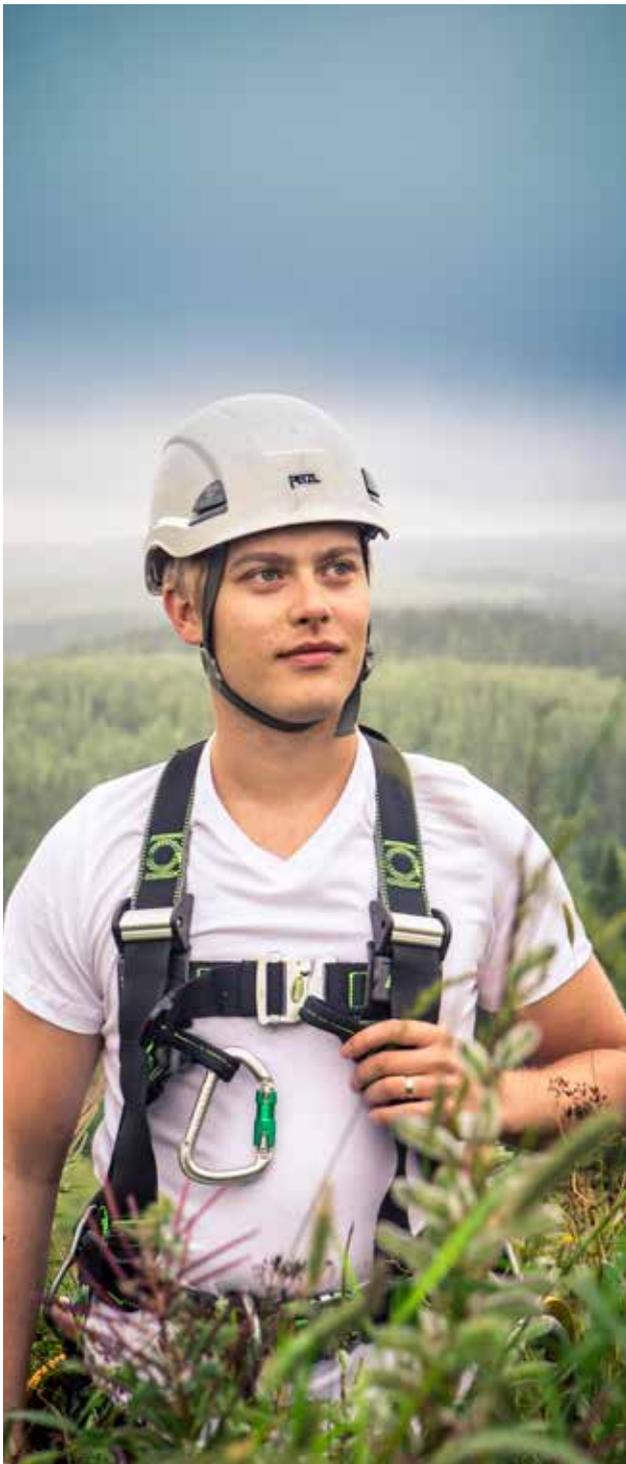
SPARE PARTS

REPAIR, OVERHAUL
& UPGRADE

REPLACEMENT
GEARBOXES



Prevention Is Better Than Cure



We offer services tailored to customer specific requirements for improved wind turbine performance. Moventas trained engineers and fitters are available to travel where ever, when ever to provide on site repair and replacement of key components using only Moventas manufactured original components or components approved by the wind turbine OEM.

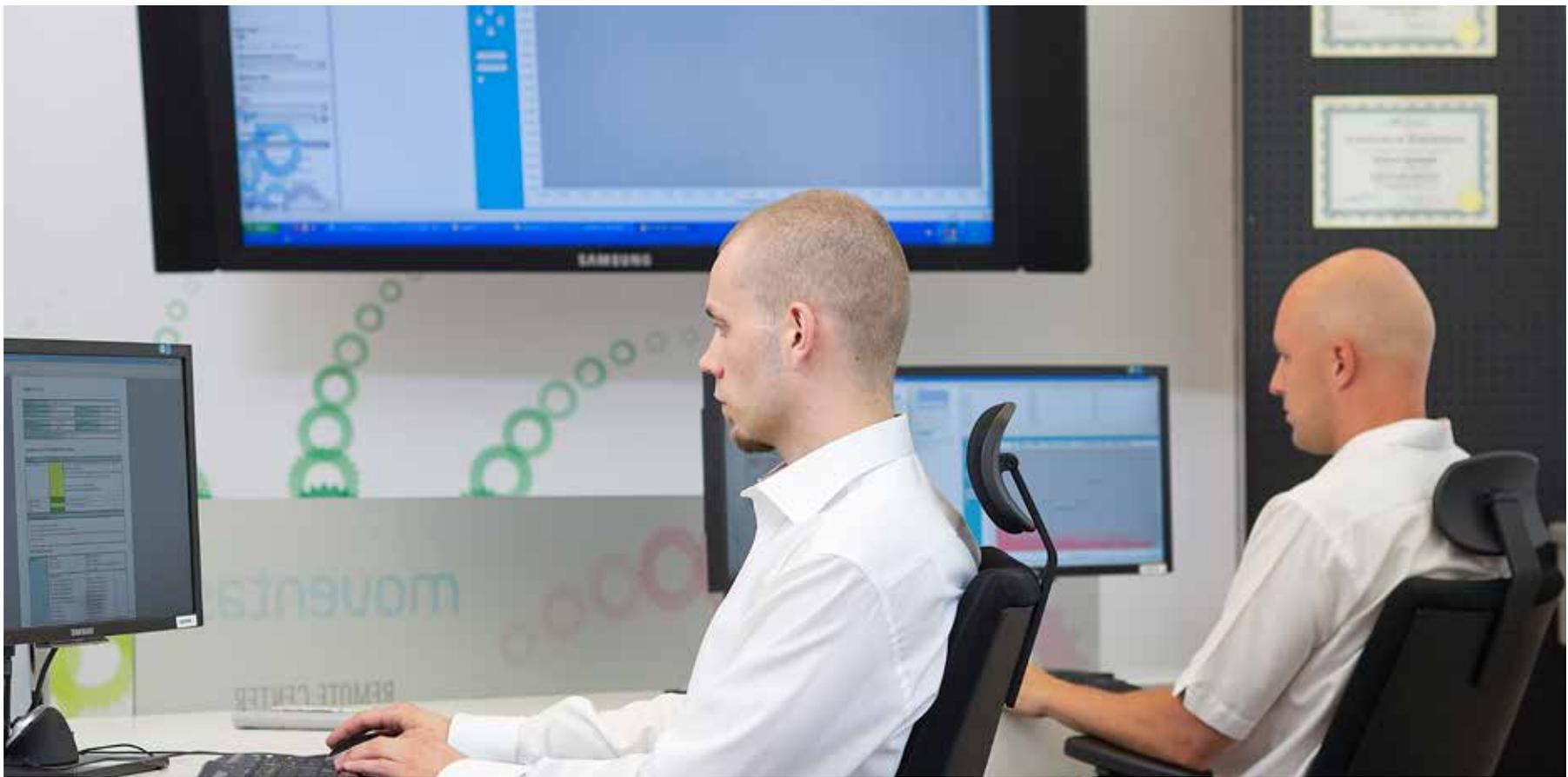
Up-tower Repair & Replacement of Key Components

Moventas expert field service offering is best in class. The extensive range of predictive & preventative maintenance regimes and up-tower repair & replacement services ensure the optimal mechanical and operating condition of the turbine drivetrain and the minimum of down-time.

Predictive & Preventative Maintenance

Regular drivetrain inspection composed of the following modules is the basis for prevention.

1. General visual inspection of drivetrain components and environment.
2. Vibration measurements of drivetrain key components; main bearings, gearbox and generator.
3. Endoscope inspection of gearbox internal components, gears and bearings.
4. Oil level, sample and analysis by laboratory.
5. General operating parameters; oil pressure, temperature, bearing temperatures and other data from the turbine operating system.
6. Analysis of all of the above by Moventas experts, detailed report on findings to the customer, recommendation of corrective actions to the customer.



Moventas CMaS

The CMaS condition management system from Moventas is the most powerful tool in the Predictive and Preventative Maintenance toolbox. CMaS is truly predictive. CMaS never sleeps and is on guard in the nacelle, monitoring the drivetrain 24 hours a day every day. Key parameters are continuously monitored and reported.

CMaS identifies faults at a stage when they are minor. In some cases many months before they become serious or are able to be detected by other means. This predictive

capability allows forward planning of intervention in the nacelle with the necessary corrective action thus preventing major or critical failure in the drive-train. Intervention and service in the nacelle is a major benefit to the turbine owner, as it

- **Reduces costs**
- **Reduces downtime**
- **Increases profitability**



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GEARED FOR
NEW ENERGY

Moventas is one of the world's leading gear manufacturers. Moventas offers power transmission solutions to, for example, wind energy, pulp and paper as well as the mining industry, and comprehensive services for the overhaul, maintenance and remote management of power transmission machinery. Globally operating Moventas is part of the global engineering group Clyde Blowers.

www.moventas.com

All the people in the pictures of this brochure are authentic Moventas employees.

