INCREASING AVAILABILITY AND BOOSTING PRODUCTIVITY

#### INDUSTRY 4.0

## **Drive Train 4.0**

Predictive maintenance expands conventional condition monitoring approaches by looking into the "future of the machine", thereby offering new options for increasing efficiency and for reducing the total cost of ownership (TCO).

Schaeffler's "Drive Train 4.0" technology demonstrator links existing technology with new digital services. In this way, we are taking a big step forward in the direction of digitalized production and machine monitoring for the future.



The focus here is on two new digital services:
The calculation of rolling bearings' remaining useful life using the "Lifetime Analyzer" and the "ConditionAnalyzer" for automated diagnosis of machine conditions. This makes it possible to determine maintenance intervals depending on the load.

The use of the concept is not only limited to production systems, but is also interesting for all markets where there are heavy and varying loads. For example, wind turbines and rail vehicles can also benefit from self-monitoring drives.

Schaeffler's digital services are easily accessible and increase system availability.

While maintenance personnel previously had to draw and laboriously analyze information from many separate systems, Schaeffler now is offering a platform for bundling, analyzing, and interpreting these data.

Schaeffler Technologies AG & Co. KG

Georg-Schäfer-Straße 30 97421 Schweinfurt Germany

Phone +49 9721 91-0

E-mail industry4.0@schaeffler.com Internet www.schaeffler.de/en Every care has been taken to ensure the correctness of the information contained in this publication but no liability can be accepted for any errors or omissions. We reserve the right to make technical changes.

© Schaeffler Technologies AG & Co. KG Issued: 2019, March

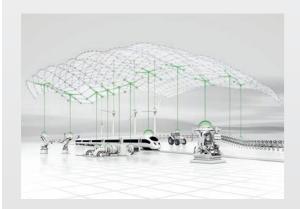
This publication or parts thereof may not be reproduced without our permission.



OPM/US-D/201903.2/Printed i

#### SCHAEFFLER SMART ECOSYSTEM

# Added value through digitalization

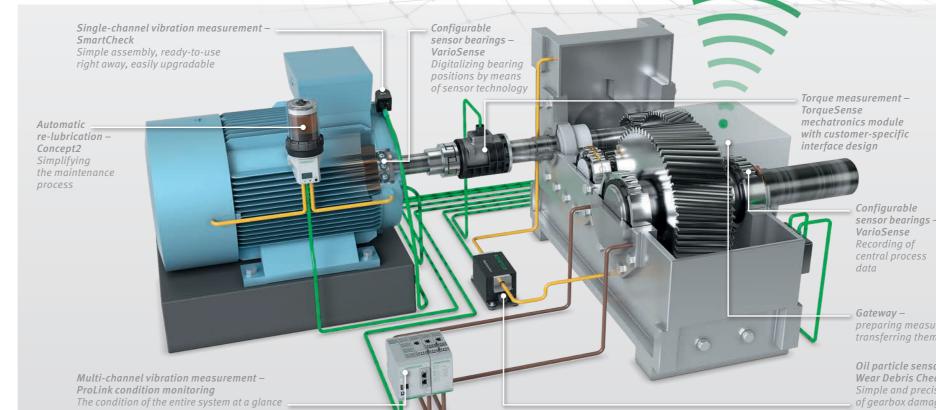


The digital revolution and the linking of components and systems increases the efficiency of machines and equipment.

Schaeffler is shaping the digital transformation with a clear vision and specific solutions.

With Smart EcoSystem, Schaeffler is offering a consistent hardware and software infrastructure – from sensorized components to digital services and business models:

- Obtain important data for process control and machine monitoring – dependable and precise with sensors and mechatronic products from Schaeffler.
- Make use of our unique Schaeffler domain know**how** in the form of **digital services** in order to automatically generate relevant information from the gathered data and receive specific recommendations for action.
- Profit from our digital solutions like **Drive Train 4.0** and use them specifically for controlling processes, maximizing availability, or optimizing product quality.



### **Schaeffler Smart EcoSystem**

High-performance, scalable cloud infrastructure with the very highest data security standards and access to digital services:

- System visualization: System condition at a glance
- LifetimeAnalyzer: Determining the optimum time for maintenance
- ConditionAnalyzer: Calculation and analysis algorithms for diagnosing rolling bearing damage as well as alignment and balance errors
- Online monitoring: Remote analysis by Schaeffler experts

preparing measured data and transferring them to the cloud

Oil particle sensor technology – Wear Debris Check Simple and precise detection of gearbox damage