



testXpert Analytics

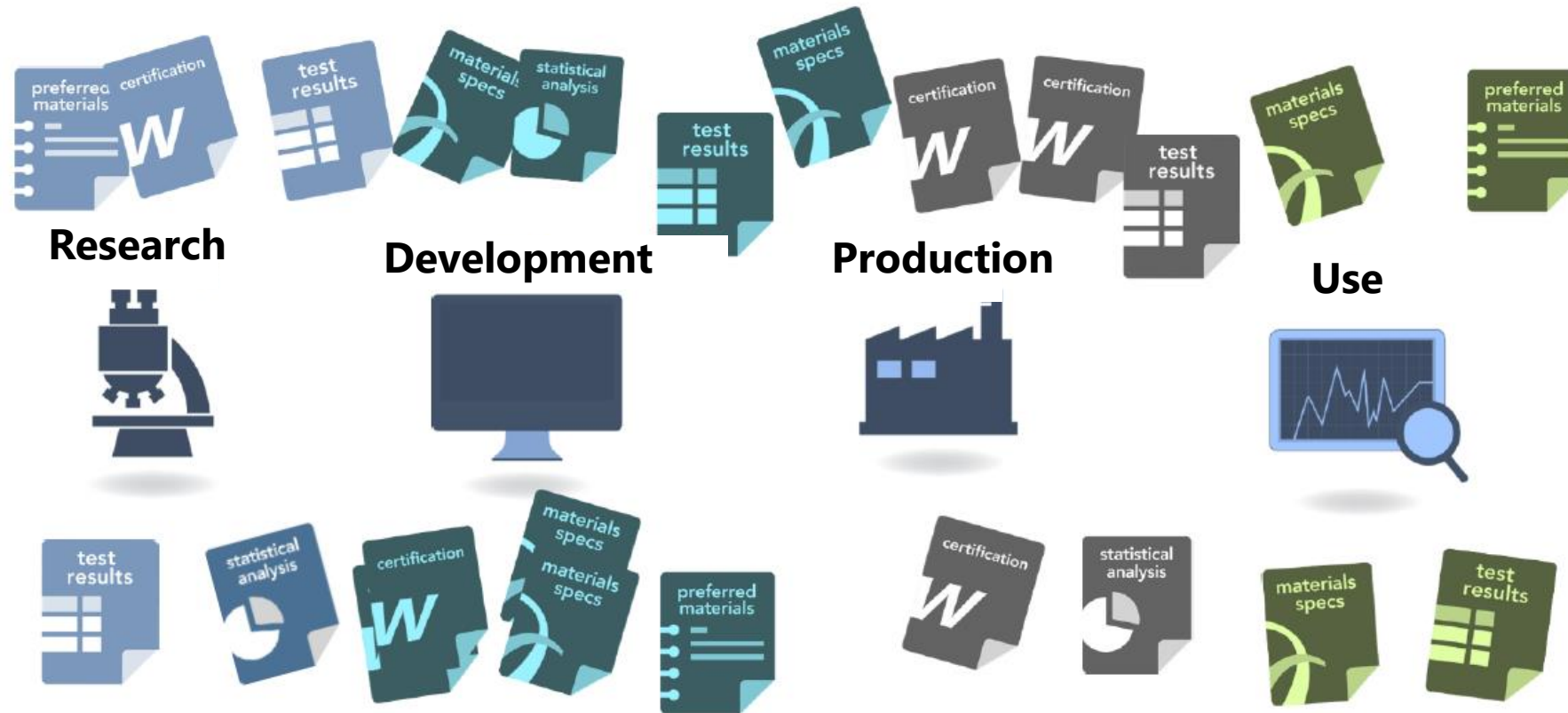
**Benefit from the data analysis
of the future**

testXpo 2023

Isabell Mang, Valentin Herter, Daniel Kreutzer

- 1. ● What is testXpert Analytics?**
- 2. Test Data Management**
- 3. Trend Analysis**
- 4. Fatigue Data Evaluation**
- 5. Condition Monitoring**
- 6. Further Information**

In many companies, test data are not stored digitally at all or only partially.



ZwickRoell Digital Products

Testing Software

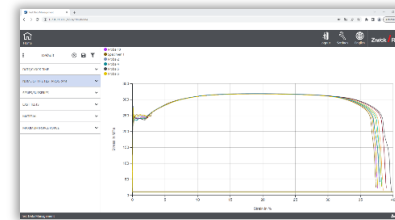


testXpert®

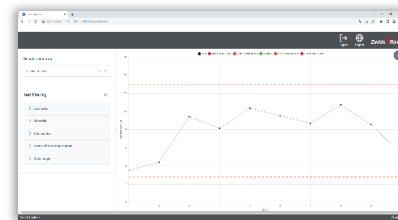
testXpert Analytics



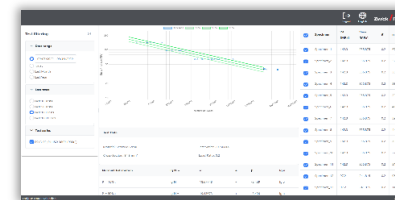
Condition Monitoring



Test Data Management

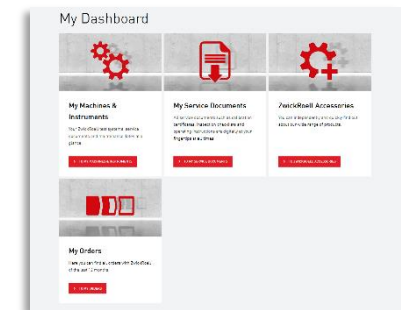


Trend Analysis

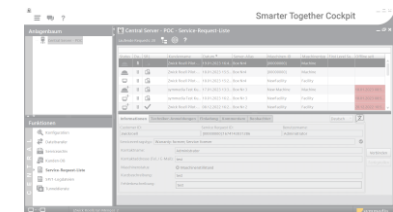


Fatigue Data Evaluation

Digital Services



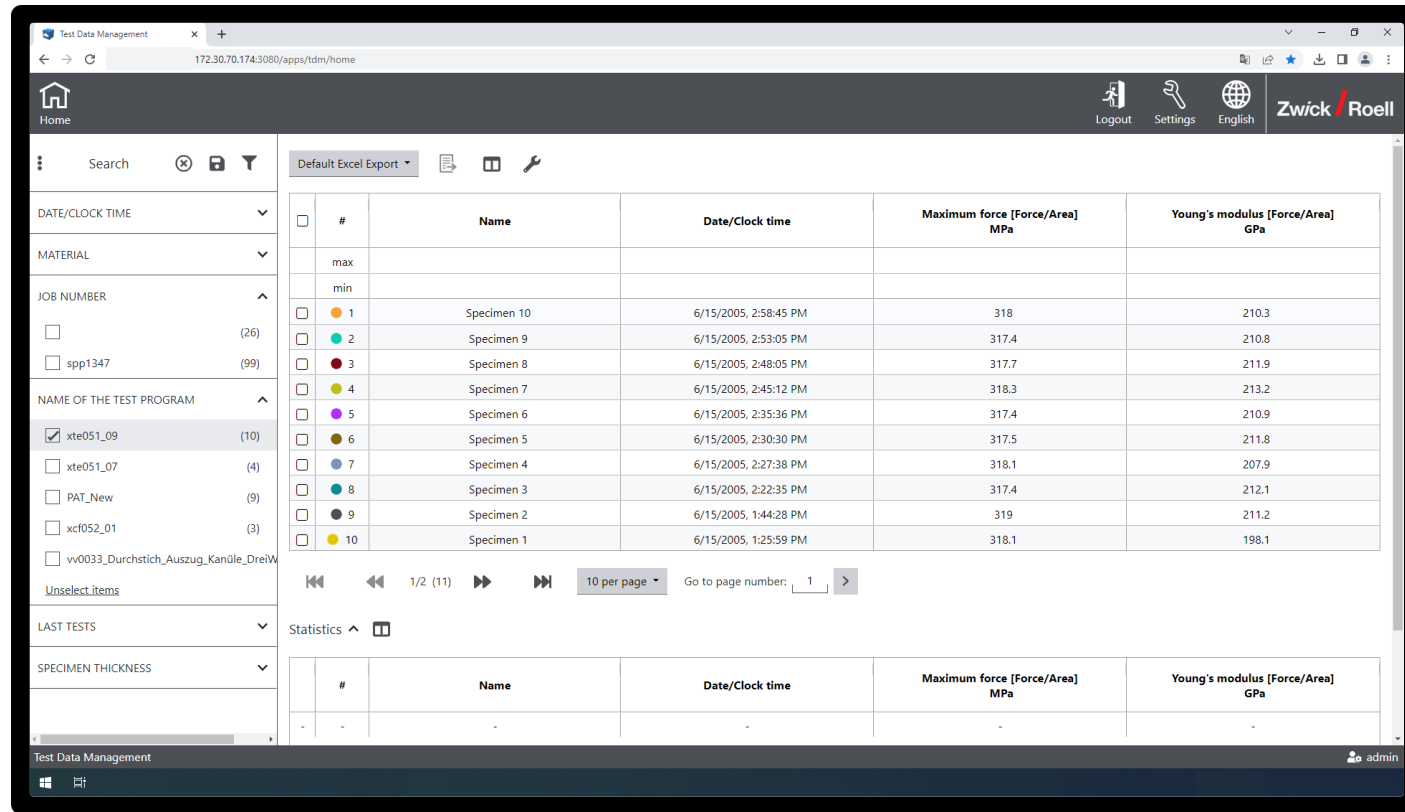
Customer Portal



Remote Service

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Test Data Management provides comprehensive, cross-series analysis.



The screenshot displays the Test Data Management web application interface. The main content area features a table with the following columns: #, Name, Date/Clock time, Maximum force [Force/Area] MPa, and Young's modulus [Force/Area] GPa. The table lists 10 specimens, with their respective test results. A sidebar on the left contains filters for DATE/CLOCK TIME, MATERIAL, JOB NUMBER, NAME OF THE TEST PROGRAM, LAST TESTS, and SPECIMEN THICKNESS. The interface also includes a search bar, a 'Default Excel Export' button, and a 'Zwick / Roell' logo in the top right corner.

#	Name	Date/Clock time	Maximum force [Force/Area] MPa	Young's modulus [Force/Area] GPa
max				
min				
1	Specimen 10	6/15/2005, 2:58:45 PM	318	210.3
2	Specimen 9	6/15/2005, 2:53:05 PM	317.4	210.8
3	Specimen 8	6/15/2005, 2:48:05 PM	317.7	211.9
4	Specimen 7	6/15/2005, 2:45:12 PM	318.3	213.2
5	Specimen 6	6/15/2005, 2:35:36 PM	317.4	210.9
6	Specimen 5	6/15/2005, 2:30:30 PM	317.5	211.8
7	Specimen 4	6/15/2005, 2:27:38 PM	318.1	207.9
8	Specimen 3	6/15/2005, 2:22:35 PM	317.4	212.1
9	Specimen 2	6/15/2005, 1:44:28 PM	319	211.2
10	Specimen 1	6/15/2005, 1:25:59 PM	318.1	198.1

- Easy and secure access to all test data and results for long-term transparency and quick quality control.

Test Data Management creates the basis for intelligent analyses of the future.

Flexible application

- Easy and secure access to all test data and results for long term transparency.

Time saving

- Efficiently generate customized test reports for internal and external quality control.

Reduced workload

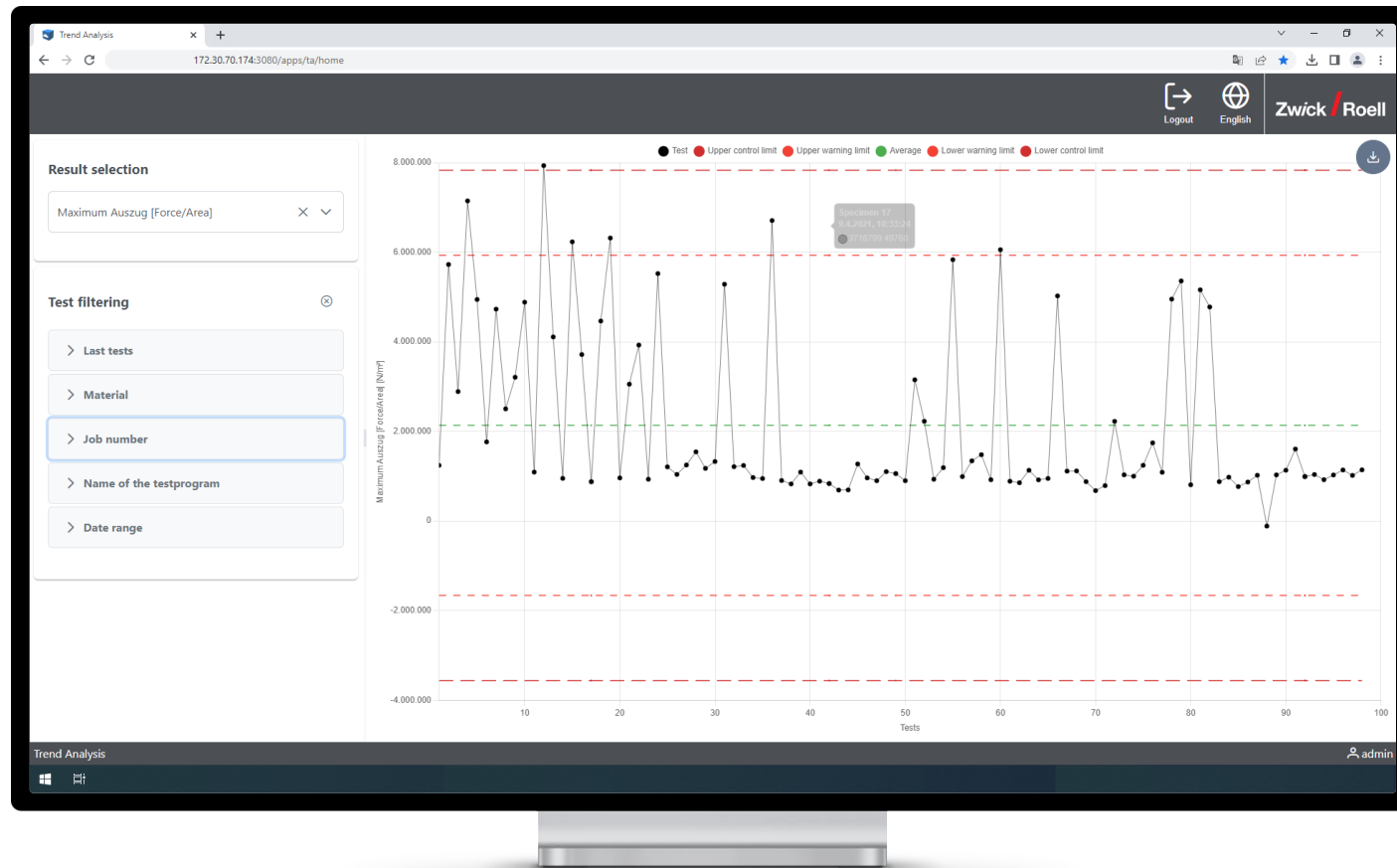
- Quickly perform quality control and analyze quality deviations at a glance.

Future-proof data storage.

- All test and machine data of ZwickRoell machines and devices are stored in a secure and central database (local or network).

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With the trend analysis, long-term analyses of individual characteristic values can be created.



- Quick display and evaluation of quality consistency for early detection of deviations and acceleration of product release.

Quick visualization of long-term analyses to support cost-effective production and minimize rejects.

Time saving

- Accelerate your product releases through a clear visual presentation of individually selected product characteristics.

Easy production control

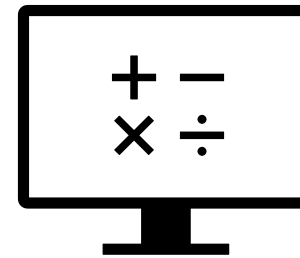
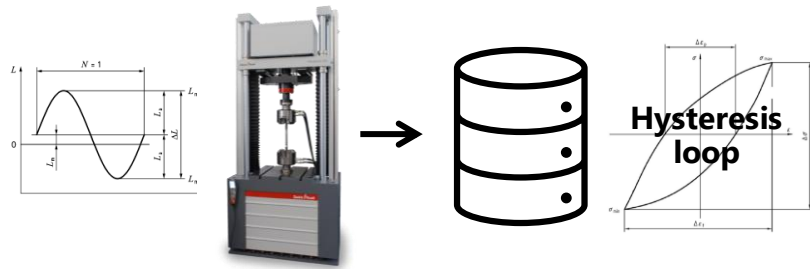
- Quick SPC like presentation of the quality consistency of your products over time to detect deviations at an early stage.

Cost saving

- With standardized quality control charts, you optimize your inspection efforts in incoming goods.

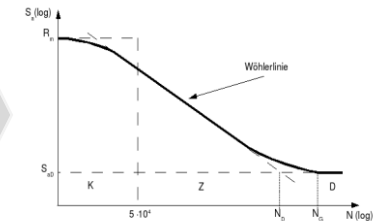
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In some cases, the result of a fatigue test itself is not sufficient. You may need to calculate a statistic.



01

02



Perform numerous fatigue tests

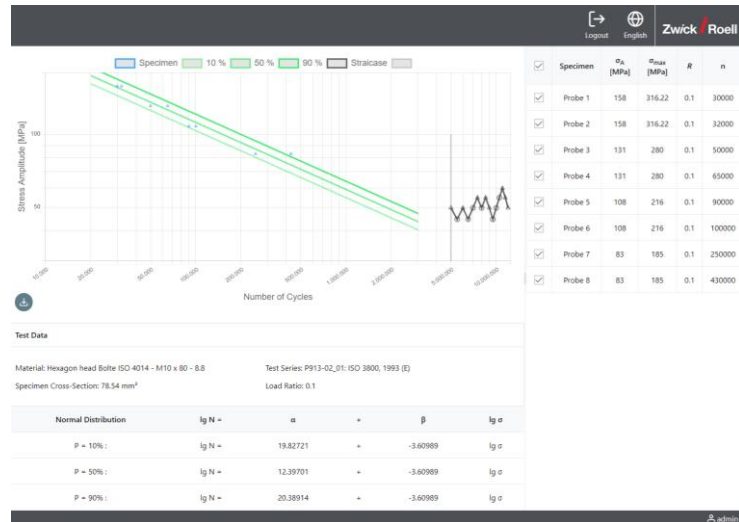
- Obtain sufficient data for the statistical analysis

Evaluation of test data

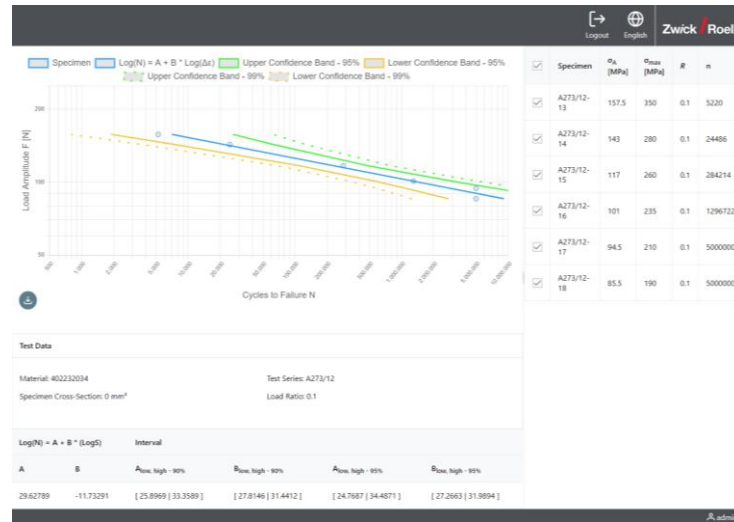
- Create calculation template yourself
- Assign evaluation externally
- Prepare data manually for a separate, non-integrated evaluation tool

→ testXpert Analytics

Fatigue Data Evaluation is a software add-on for S-N curves with seamless access to the test data.



ISO 3800
fasteners



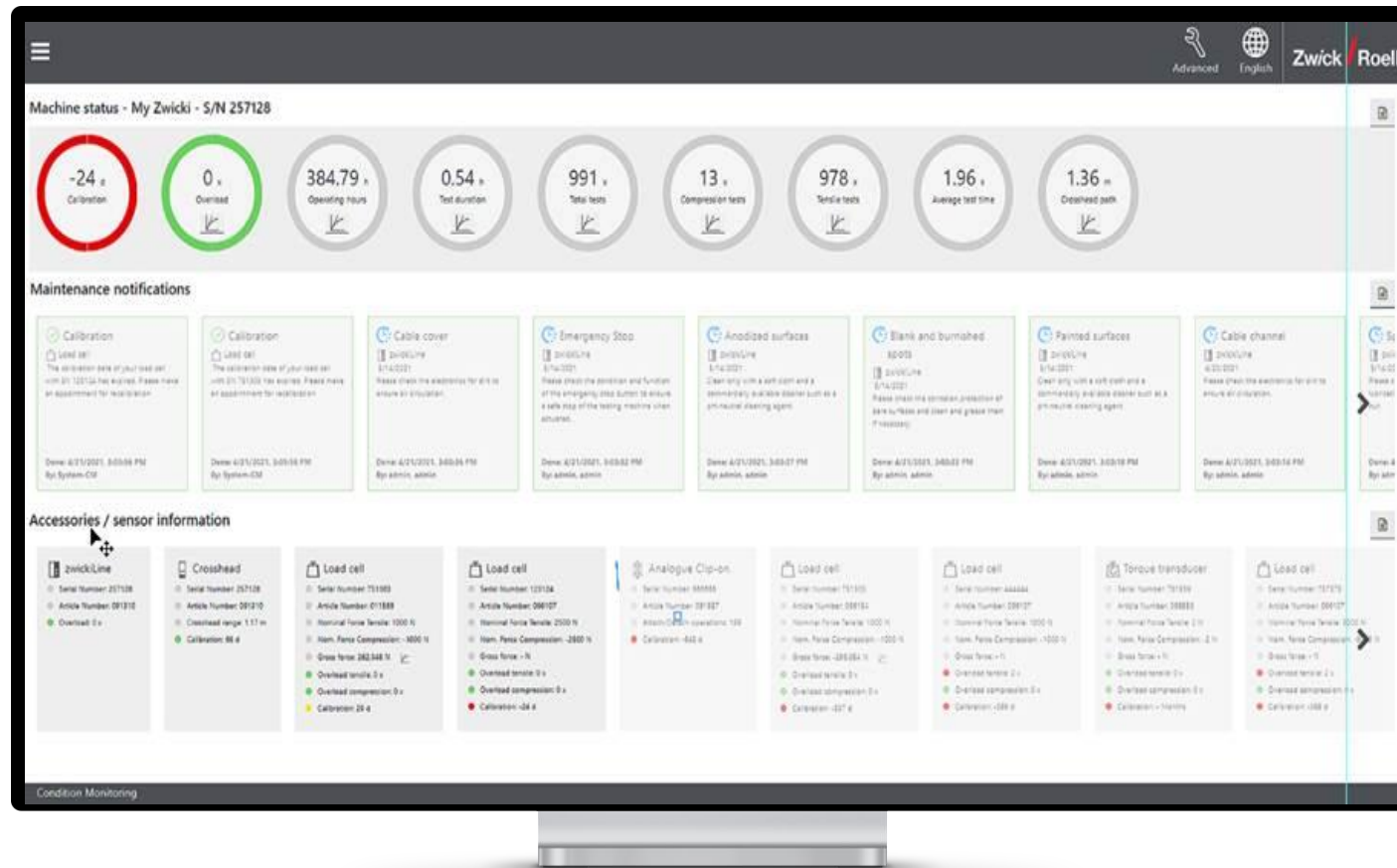
ASTM E739
e.g. composites, implants, ...

- The data is **transferred seamlessly** from testXpert.
- **Filtering** for test series to be evaluated.
- The **specimens** are visible parallel to the curve and can be **selected flexibly**.
- **Export** of the S-N curve as PNG

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Condition Monitoring

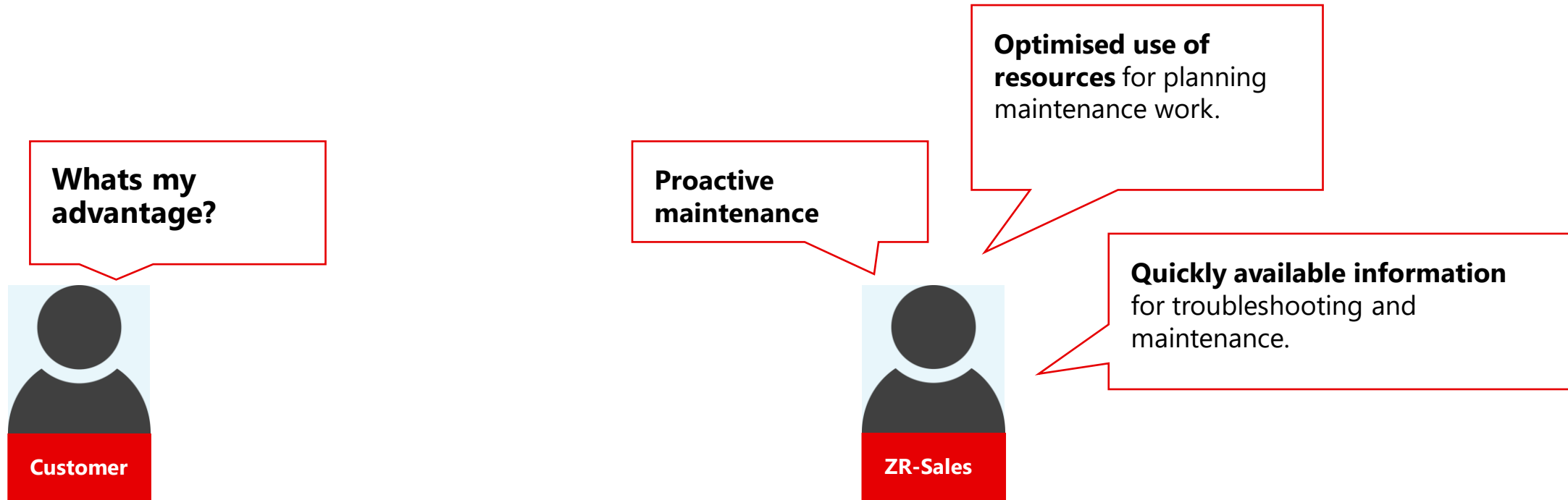
Thanks to condition monitoring, you can ensure that your plants and machines always run optimally. This means lower costs and longer operating times.



- Simple condition monitoring of machines and plants from all over the world.
- Immediate access to important information and to planned maintenance and servicing.

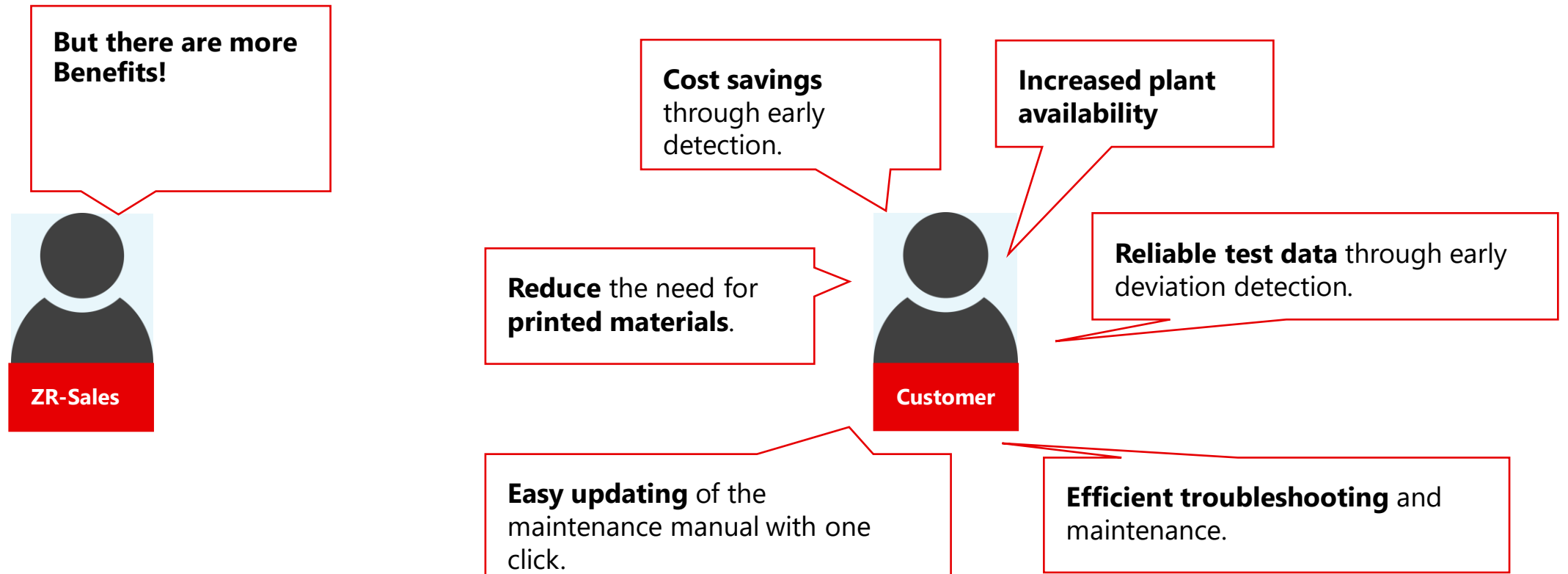
Condition monitoring - Advantages

Condition monitoring shows the current condition of the testing machine, sensors and accessories. The integrated maintenance manual makes maintenance plannable and comprehensible.



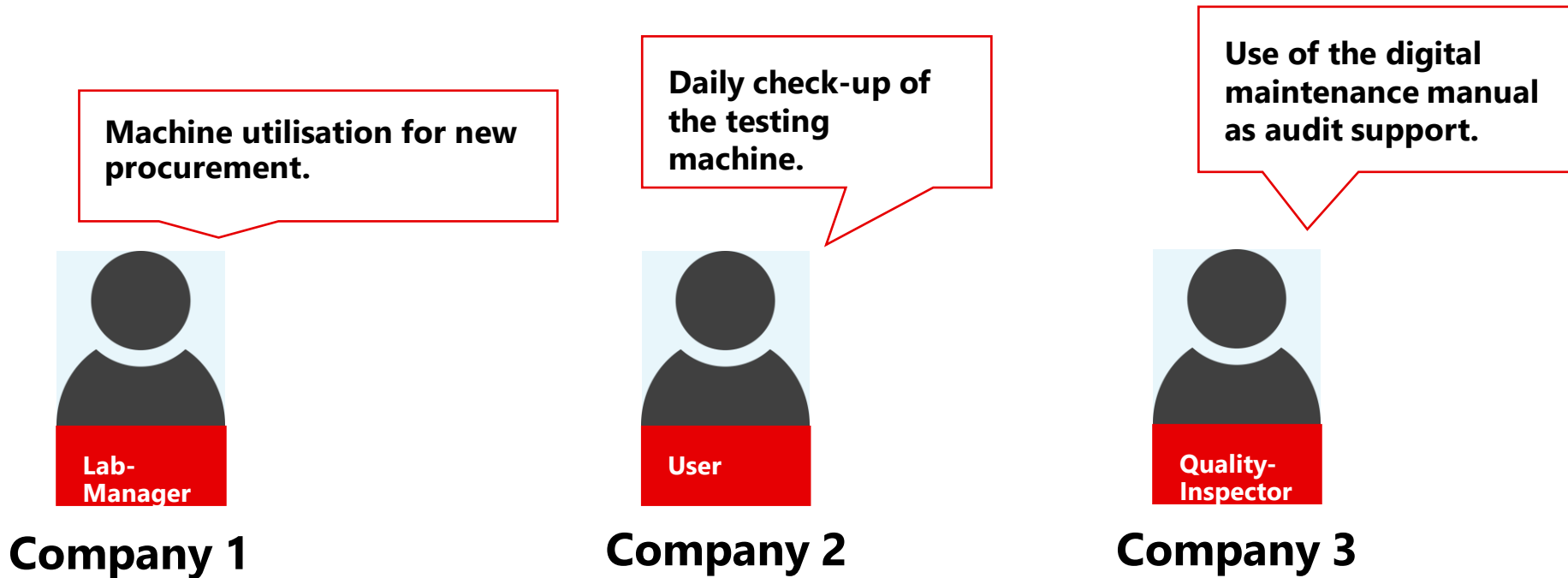
Condition monitoring - Benefits

The use of condition monitoring leads to an improvement in the overall efficiency of the testing machine.



Condition monitoring - Examples

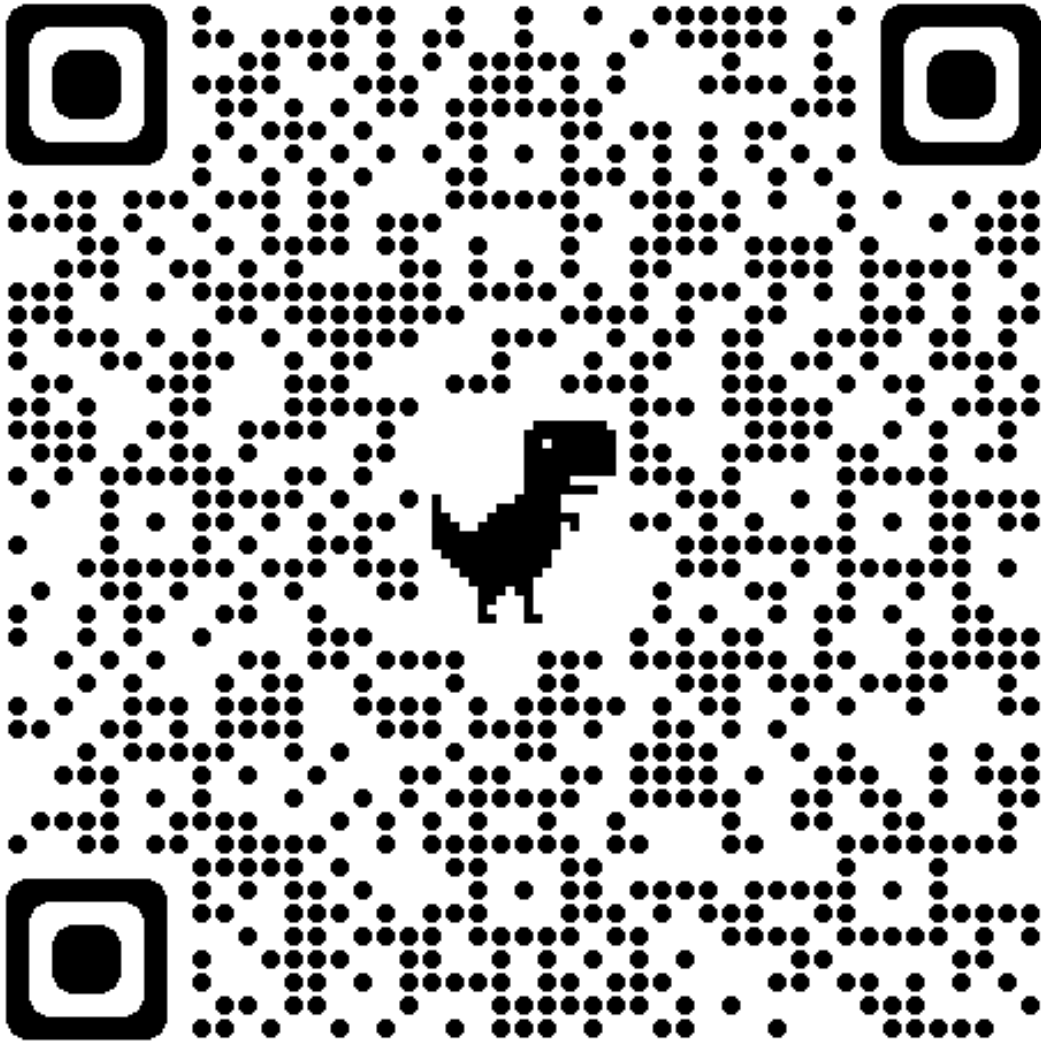
Various customers have recognised the value of condition monitoring and use it to make their daily work easier.



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More information on our main page

- **Condition Monitoring**
- **Fatigue Data Evaluation**
- **Test Data Management**
- **Trend Analysis**



Zwick / Roell