We take care of it.

a-eberle

TrafoFleet™

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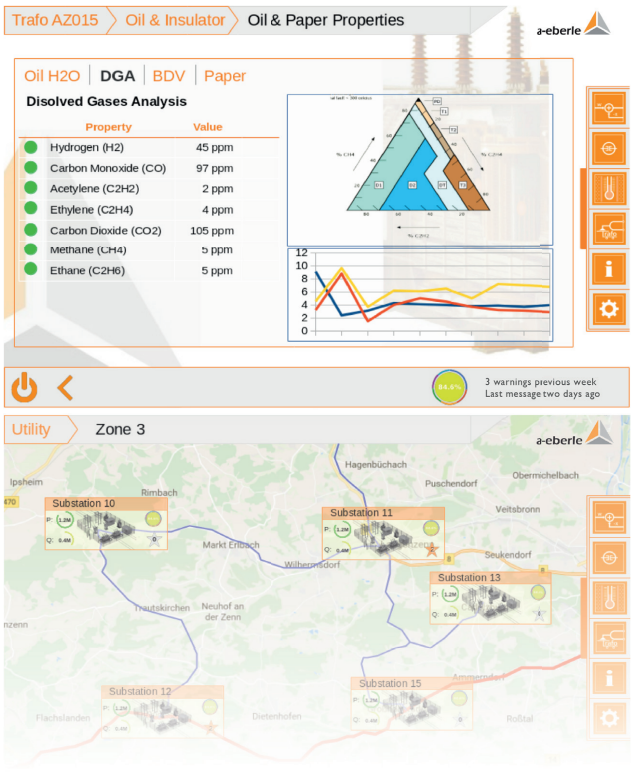
An overall look at the transformer fleet health

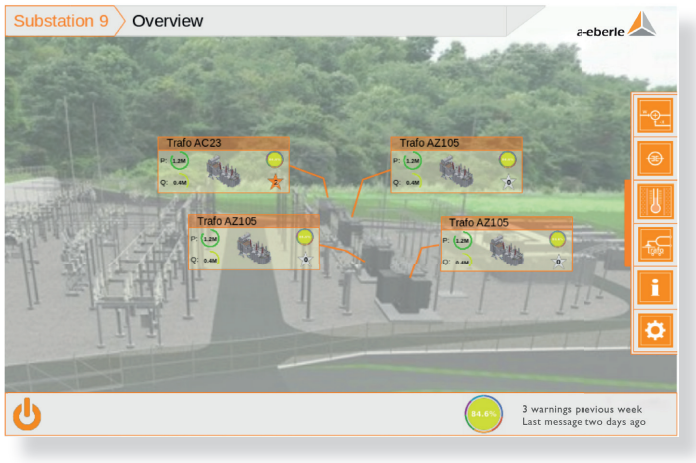


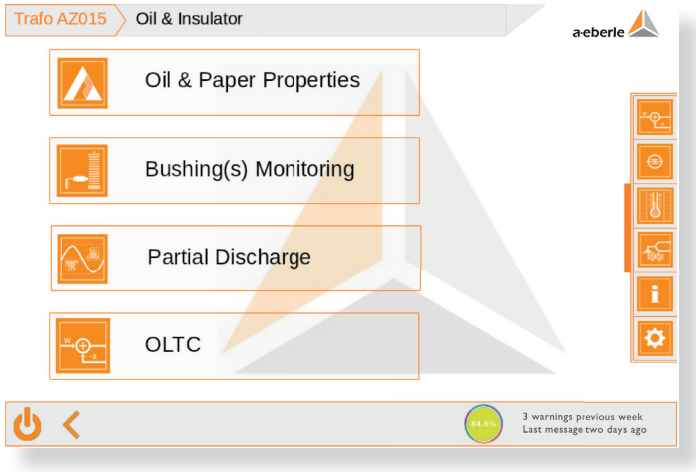
In an area of significant growth for the European and North American electrical infrastructure more than € 3 billion could be saved on maintenance costs and postponed investments, within the first 10 years of introducing condition based maintenance programs, as outlined in IEC 55000.

The market growth happening specifically in areas like transformer monitors via sensors, dissolved gas analysis (DGA) monitors, bushing monitoring and partial discharge systems requires transformer and fleet monitoring software backed by appropriate geospatial analytics software solutions.

TrafoFleet™ is A. Eberles response to the challenge of each transformer being unique due to its own history, ageing stage and loading patterns. **TrafoFleet™** is the **TraCoMo™**-familys datadbase oriented visualization software; scalable from one transformer to a substation or an entire transformer fleet.

Safe transformers by acurate monitoring of key parameters





Transformer typical failure causes:

- 30 % core and coils
- 25 % bushings
- 10 % history
- 25 % tap changer
- 10 % cooling system

A health index is calculated for each transformer

The intelligent maintenance tool **TrafoFleet™** logs processes and displays data pertaining to all transformer components (core, tank, coils, tap changer and bushings). Complete historical data is stored in an SQL-database allowing for gradual detection of changes and timely announciation.

This web based state-of-the-art tool is deployable on scalable hardware to conserve costs. With its browser agnostic approach it remotely provides (ISMS-secure) all transformer or fleet information that is available via the installed sensors or laboratory test data.

Typical data handled based on available on-line sensors or off-line laboratory tests are:

- **Oil and winding temperatures**
- **Dissolved gas analysis**
  Periodic oil sampling, on-line composite and multi-gas monitoring and analysis
- **Oil physical tests**
  Water content in oil, dielectric strength (BDV), power factor, interfacial tension (IFT), neutralization number (acidity), furans, corrosive sulphur, inhibitors
- **Electrical parameters**
  Winding dissipation factor, leakage reactance deviation, winding resistance deviation, power factor, capacitance, leakage current
- **Physical assessment**
  Acoustic signature, motor torque, tap position tracking, infrared scanning
- **Manufacturing data**
  Manufacturer score, transformer type, fabrication year

A. Eberle GmbH & Co. KG
Frankenstraße 160
D-90461 Nürnberg
Tel +49(0)911 628108-0
Fax +49(0)911 628108-99
info@a-eberle.de
www.a-eberle.de