

Predictive Maintenance



Preventive and predictive maintenance with VBASE



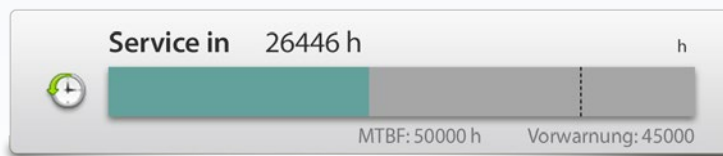
Maintenance with VBASE: Predictive instead of reactive

Extend your machines lifetime and reduce downtimes with predictive maintenance.

Reactive maintenance is expensive, because it leads to unplanned machine downtimes, increased attrition and shorter machine lifetime. And we can find this method way to often in the field.

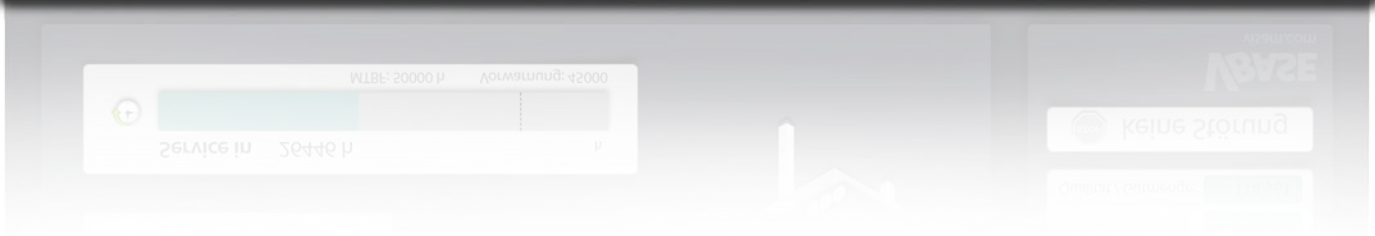
„Repair your equipment before they fail unplannable by a defect.“

With VBASE we integrate measures for predictive maintenance directly in your machine or system. In particular MES function blocks we encapsulate functions that constantly monitor the status and the number of state changes of individual units and entire plants. We constantly calculate the time until the next maintenance on the basis of specified MTBF parameters.



With predictive maintenance it is possible to increase the lifetime of machinery and equipment and reduce their downtimes.

In addition to this basic functionality we can include further individual parameters into this calculation. For example, a power factor can be taken into account for machines which are not permanently operated with the same power. If additional sensor signals from condition monitoring (e.g. vibration and temperature monitoring) are available that represent the current „state of health“ of individual system components, these signals can also be included in the prediction. With the consistent and comprehensive combination of all data from predictive maintenance and condition monitoring we can achieve a smart maintenance system.





Reliable handling of the maintenance data

VBASE provides freely definable pre-signals for each monitored aggregate. These pre-signals report, with an adjustable lead time, that a defined preventative measure must be taken. The pre-signals can be reported and recorded in various ways:

- Permanent display on the machines
- Transfer to higher-level systems and display at ShopFloor level
- Status notifications by email, text message, etc.
- Automatic entries in database-based maintenance books, protocols, etc.

All messages are logged and can be written into a digital „maintenance book“ (database). The performed maintenance is recorded and also logged. All maintenance data are permanently available for analyzes, reporting and future optimization approaches.

Monitoring the whole machinery.

A machine-specific summary of the maintenance information can help easily keeping track. In a central shopfloor display for several machines, a general status indicator can show the maintenance information for each individual machine.

Benefits of Predictive Maintenance with VBASE:

- ✓ Extend the lifetime of machines and technical installations
- ✓ Scheduling of maintenance events
- ✓ Compatibility with a wide range of sensors and systems
- ✓ Integration of other automation functions (e.g. OEE, Smart Meter, MES etc.)
- ✓ Connection to higher-level IT
- ✓ Retrofit for older production equipment
- ✓ Status messages and access via mobile devices



In einer Shopfloor-Ansicht können die Betriebs- und Servicedaten von mehreren Maschinen angezeigt werden.

The „maintenance book“ for each machine shows the details of the next maintenances. For example, which aggregate needs necessary actions at a expected time.

Beside the predictive maintenance information, VBASE can integrate and display more key values parallel to the maintenance data. For example, permanent overall productivity (OEE) or smart meter information to optimize the usage of energy and other resources.

Mobile access to your service data with Web-Remote.

Each VBASE system has an integrated web interface based on HTML5. This means that all machine, production and service data can be easily displayed on any mobile device (smartphone, tablet, etc.), and can also be operated after approval. Thus, the data can be made available on a worldwide basis, in real time.

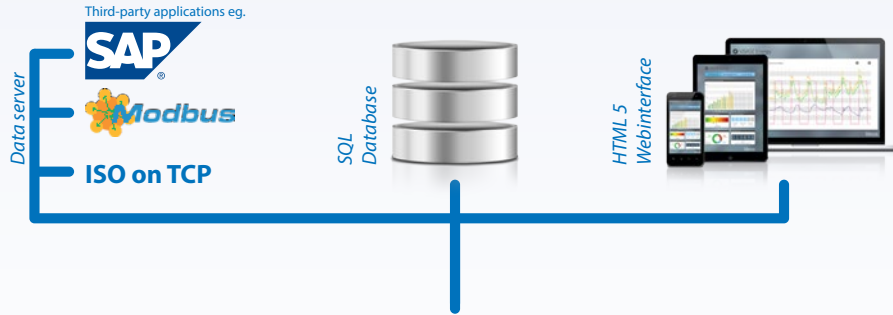




Integration of additional functions

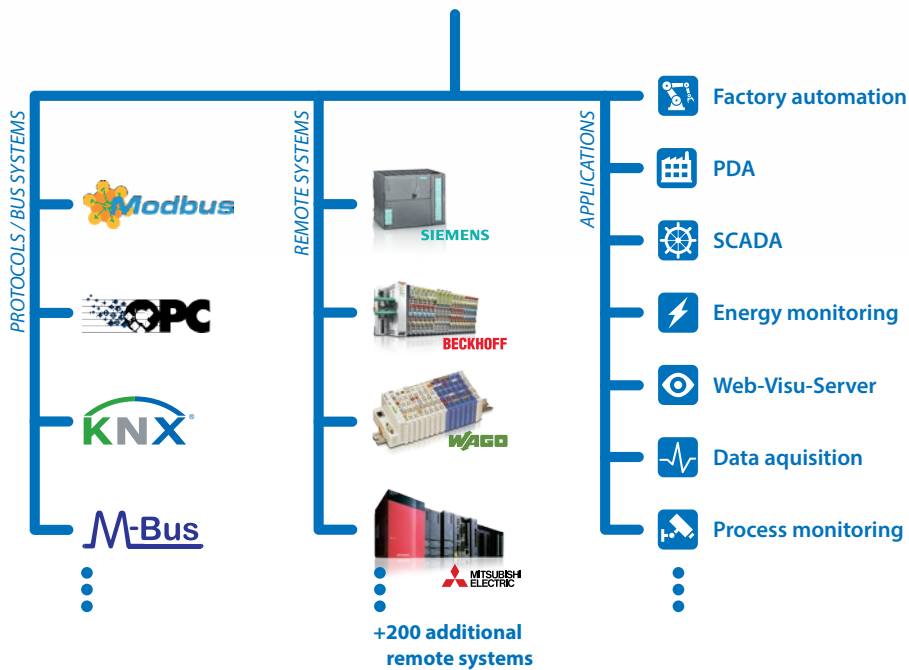
Predictive Maintenance is only one aspect of Industry 4.0 and SmartFactory that VBASE covers. Further functions such as efficiency monitoring (OEE), smart metering, operating data acquisition, MES and more can be individually integrated and combined.

Many functions are available in VBASE as function blocks and can be quickly and easily integrated and parameterized. VBASE can be adapted to any industry and includes a variety of drivers for systems from different manufacturers. Thus, Industry 4.0 can also be retrofitted for older production plants.



VBASE

VISAM Automation Base



More informationen: www.vbase.net

