# Optimization of system reliability through Asset Management platform



*Photos: Emerson Process Management*
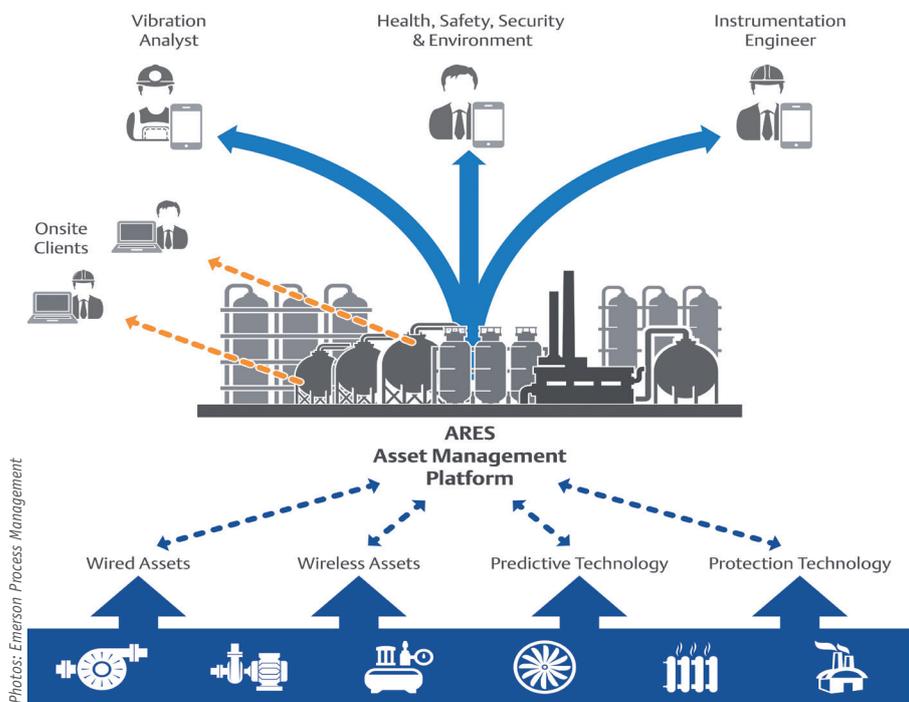
*Overview of available interfaces for the Ares Asset Management platform*

**Over the years, options for measuring or detecting the "health status" of a pump or compressor have changed in a few ways.**

*Marcus Müllenberg ***

In the past, operators had an adequate number of personnel who were responsible for keeping these units in proper working order. They would tour the systems and identify changes to bearing noise, oscillation, discharge pressure, and other characteristics. Problems could often be remedied on-site directly by filling oil reservoirs or using grease guns to grease bearings. Before conducting detailed analyses, technicians would apply a screwdriver or stethoscope, for example, to help identify noises.

If these measures were unsuccessful, management and electricians would be contacted in order to remove and service the faulty system parts. But today there are usually fewer employees available for monitoring critical units, while at the same time it is increasingly important to maintain flawless operation. Key Performance Indicators (KPIs) are tremendously important because "an available system is a safe system". So what specific solutions are now available for monitoring the condition of pumps, motors, and other units? The portable CSI-9420 Machinery Health Analyzer makes it easy to quickly identify and analyze oscillations. Permanently cabled solutions include the CSI-3000 and CSI-6500 series, for example.

Emerson Process Management offers an innovative web-based solution that enables analysis of oscillations and other measurable values by displaying alarms in an app. The WirelessHart CSI-9420 transmitter in accordance with the IEC-62591 standard is distinguished by its straightforward installation of measurement points on the unit and transmission of overall oscillation data as well as the use of Emerson's patented PeakVue (faster display of abnormalities) via WirelessHart. Installation of additional measurement points results in a stable network. Two measurement points, consisting of two oscillation sensors or one oscillation and one temperature sensor, can be installed for each oscillation measuring transducer. The devices can be configured either through WirelessHart using a configuration computer or through the Hart interface on the device itself.

The special explosion-protected power module enables battery life of several years.

**Depiction of an interconnected WirelessHart network.**

Even during installation, costs that are normally incurred for

assembly, laying of cables, and planning are kept very low. Measurement values are accessible through the WirelessHart Gateway by way of Modbus or OPC, for example, thereby providing compatibility with higher-level systems. But what happens when signals are examined more closely in order to obtain detailed information about the actual error? Is any special knowledge required to use the software? Is there a cloud-based solution that makes it easier to examine errors? Is there a user interface for additional measurement data (Big Data)?

**The Ares Asset Management platform provides you with real-time information anywhere in the world**.
Before acquiring control over your assets, you should first be able to properly capture your data. The right management tool makes it possible to collect relevant data and integrate this data into a platform that is straightforward and intuitive to operate. You can reduce several hundred alarms to only those messages that are meaningful and important to you. Emerson's Ares Asset Management platform collects field data from cabled and wireless sensors for oscillation, pressure, temperature, etc. It delivers information about critical situations for the purpose of optimizing system availability. The Ares platform supports modern communication tools in order to display alarms in the traditional way on a computer or notebook

but also on a tablet or smartphone that is outside of your system. Remote access to intelligent alarm indicators in a secure environment means that operating and service personnel can view critical assets at all times.

**Keeping your priorities straight.**
Considering the tremendous amounts of data, there must be an option for prioritizing available as-

sets and the performance of those assets as well as determining the most common causes of potential disturbances. The Ares platform acts as your personal time manager by helping you filter out truly relevant information from the flood of data and then launch appropriate measures. Now you have a way to immediately start using your limited resources in the most optimal way possible.

**The right call at the right time.**
If you are not able to accurately anticipate system failures, your profitability, production margins, and confidence in your maintenance program will suffer. By having a direct view into your system operations, you can make decisions in real time in order to increase availability and avoid unanticipated downtime. The Ares platform draws your attention particularly to situations that require immediate action in order to ensure smooth operations.

**Alert the right people before problems start.**
Without the ability to exchange enough information within your team, you always run the risk that developing problems will go unsolved. Therefore, it is of decisive importance that the right people are kept up-to-date, particularly in critical situations that require rapid responses. The Ares platform delivers alarms through the Asset
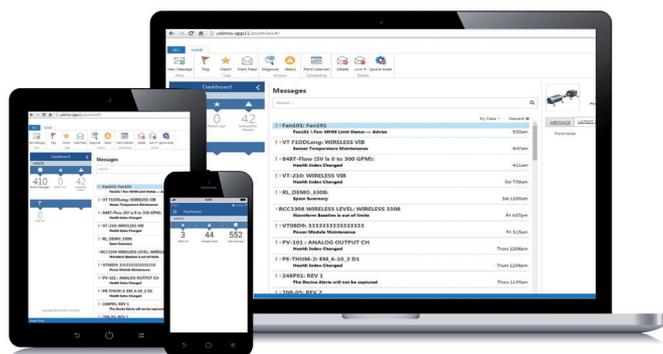
## A comprehensive approach to system status

View mobile app so that your team is given the ability to react quickly when needed and avoid downtime.

**Now you can improve reliability independent of time and location with more efficient asset management.**
Your assets are subject to continuous changes. These changes can affect your production goals. However, the decision-maker who needs to know about such changes in your process may not be onsite. No problem! With the Ares platform all of the necessary information is available from any place with an Internet connection. This makes it possible to analyze developing problems in order to plan and launch the required measures. The Ares platform turns raw data into information that quickly generates the right responses for improving system reliability.

* Marcus Müllenberg, Emerson Process Management GmbH & Co. OHG, Haan

*Asset View gives you detailed information when you need it*



### A comprehensive approach to system status

With the Ares platform you can view your information from the same perspective as your system - as production-relevant, functional elements and not just according to existing components or the technology that is used for monitoring. The Ares platform is based on the new OPC UA technology, which enables straightforward integration of other monitoring programs. This significantly expands the potential of your system because alarms from a wide variety of monitoring technologies are merged into a single platform.