SiteWatch and Condition-based Monitoring

Applying SiteWatch to Condition-based Monitoring (CbM) programs

Condition-based monitoring (CbM) is a strategy to continuously track the condition of assets using different types of sensors and applies the data to real-time analysis. CbM enables failure detection before a functional failure. Operations personnel can plan repairs or other interventions, such as oils changes, bearing replacements, or general maintenance, prior to full failure

Why use CbM

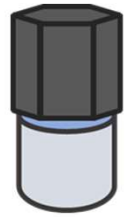
- Ensure assets remain available
- Decrease service loss and improve equipment uptime
- Decrease planned maintenance intervals
- Enhance smart replacement strategies

Components of CbM

Data Acquisition | **Data Collection** | **Data Analysis**

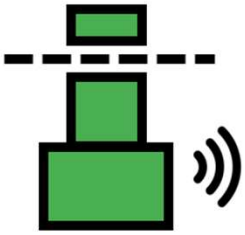
How is Data Acquired and Collected?

Through wireless sensors, self- or battery-powered, data is collected on key parameters: electrical current, vibration, and temperature. Sensor data is transmitted through LoRaWAN to a cloud-connected gateway, then transmitted to online servers and presented on **SiteWatch 360**



Vibration and Temperature

Long-life, replaceable battery, magnetic or post mounting



Energy

Wireless, self-powered CTs clamp to machine or panel wires

LoRaWAN Gateway

Links sensors to cloud-based server using Wi-Fi, wired LAN, or cellular

Dashboard

View data, schedule reports, create alerts, add users

SITEWATCH IOT
SIMPLE | AFFORDABLE | WIRELESS
OPERATIONS & ENERGY MANAGEMENT

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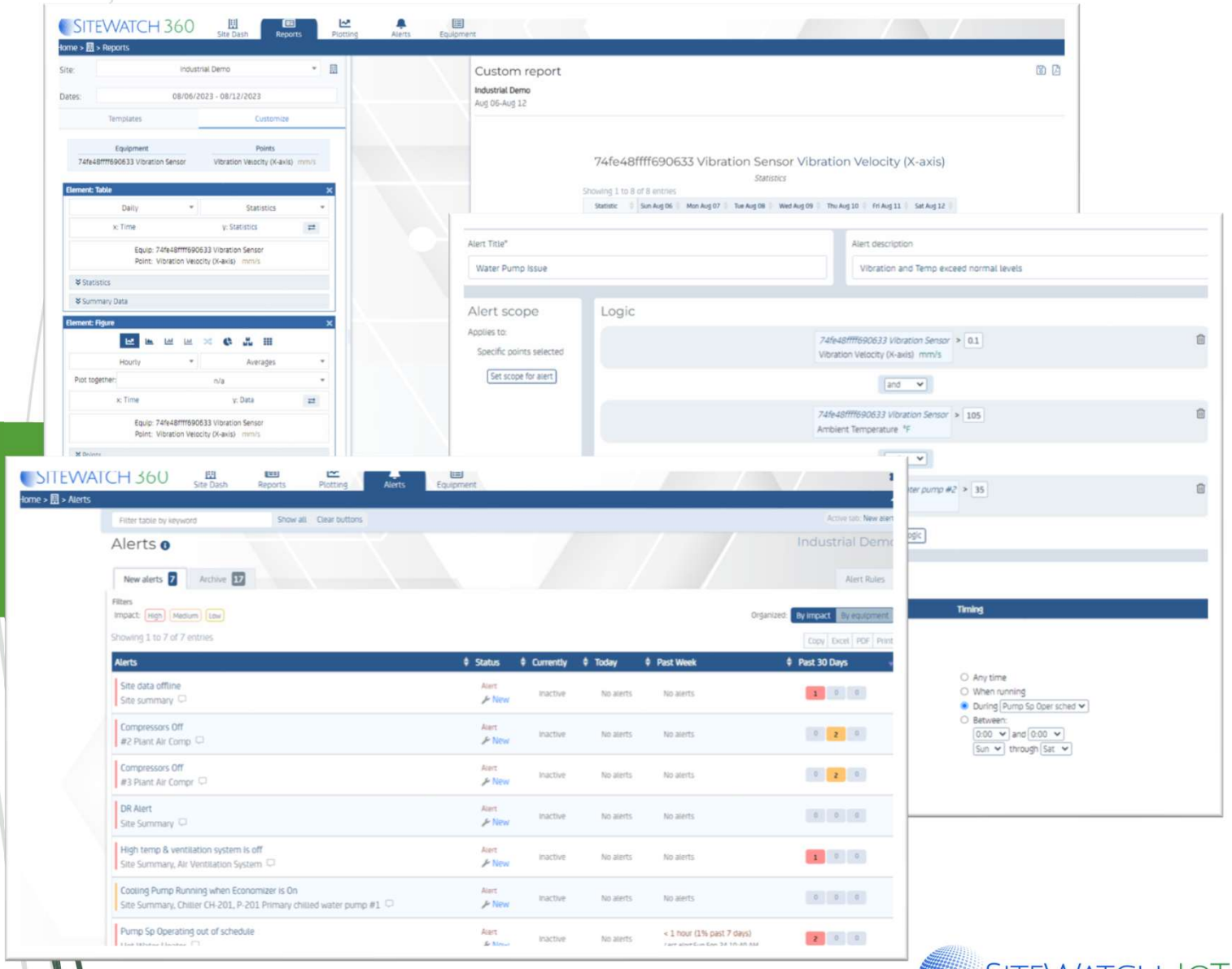
How is Data Analyzed and Applied to CbM

- SiteWatch 360 views into data through time series plots and heatmaps
- Scheduled reporting summarizes energy use, average, minimum, and maximum peaks in vibration readings, and temperature
- Alerts created based on maximums or averages exceeding thresholds, changes in temperature, vibration amplitude, and/or electrical current
    - Set priority levels based on thresholds - slightly more vibration or higher temperatures may not indicate anything while significant changes may indicate a critical condition
- Data applied to machine learning - cycling, run hours, other calculated parameters



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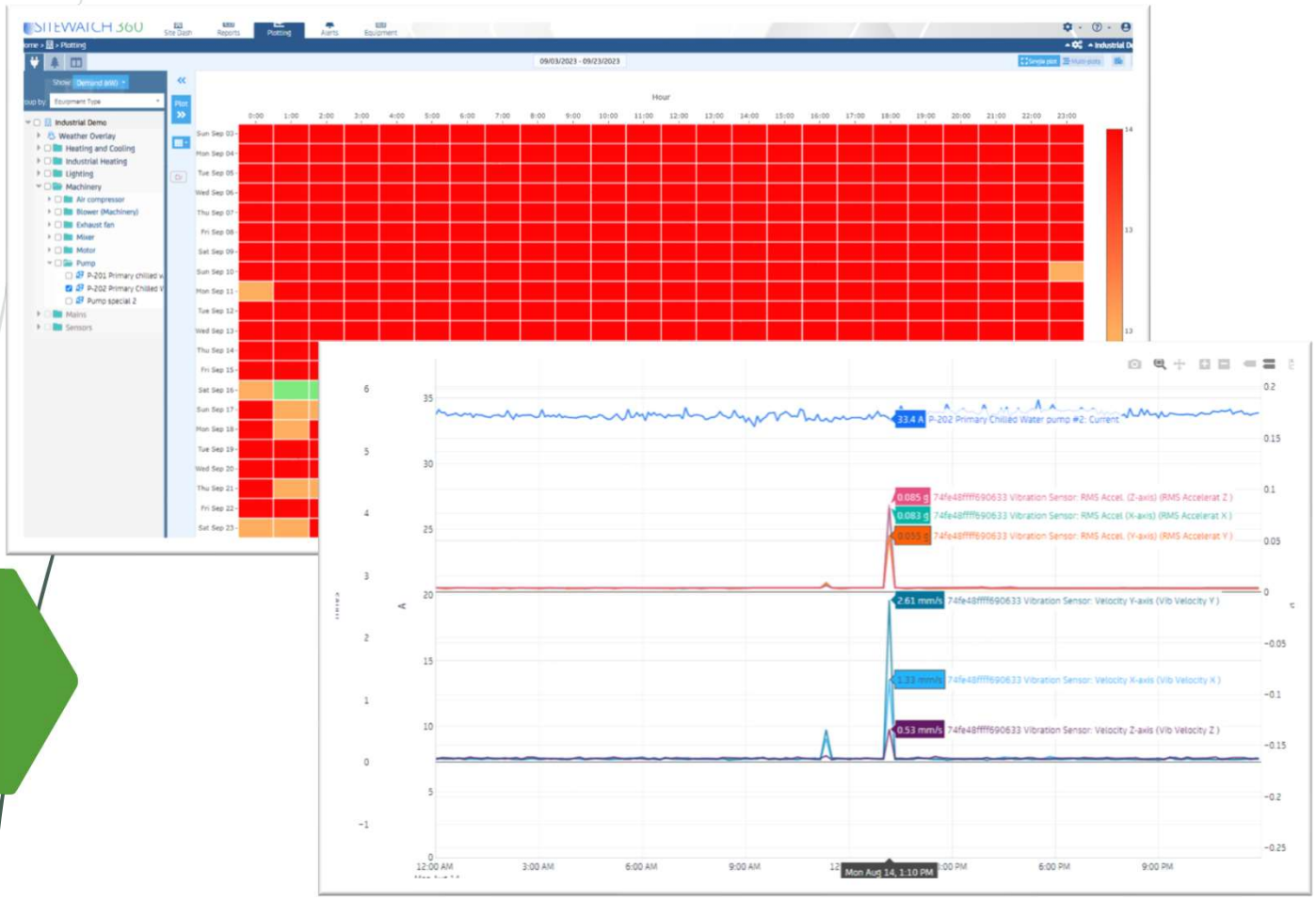
View Real-Time and Historical Data

- Time-series allows overlay of single or multiple parameters
- View multiple sites within an account
    - Compare similar equipment at different locations
    - Multiple tagging options: machine usage type and groups, custom options such as production lines, physical locations, or through system hierarchies
- Heat maps for quick visualizations of measurements over a defined period



Contact us today for a SiteWatch 360 tour and quote!

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