



YNY TECHNOLOGY

GODIGITAL ASSET MANAGEMENT CM+

(GODIGITAL ASSET MANAGEMENT CONDITION MONITORING+)

What is Condition Monitoring?

Condition Monitoring (CM) continuously monitors assets such as motors and pumps to detect early signs of deterioration or failure. CM uses various sensors such as vibration, temperature, and pressure sensors and techniques to collect data on the condition of assets and provides real-time information on their performance. This enables maintenance teams to take corrective action before a breakdown occurs. Here are some ways in which CM helps in asset monitoring:



Early Fault Detection

CM enables early fault detection using sensors and techniques such as vibration, thermography, and oil analysis. For example, vibration analysis can identify excessive vibration in rotating equipment, thermography can detect abnormal temperature patterns, and oil analysis can reveal contaminants or abnormal wear in machinery. It helps identify asset deterioration and faults, allowing proactive measures to be taken before major failures occur. This minimizes downtime and reduces repair costs.



Data-driven Decision Making

CM generates valuable data on asset condition, performance, and reliability. Advanced analytics and machine learning enable organizations to extract actionable insights from this data for data-driven decision-making. These insights support asset management strategies, including optimizing maintenance schedules, prioritizing critical assets, allocating resources efficiently, and making informed decisions regarding asset replacement or upgrades.



Predictive Maintenance

CM enables organizations to adopt predictive maintenance by continuously monitoring asset conditions, analyzing data, and predicting remaining useful life. It helps identify optimal maintenance timing, extends asset lifespan, and improves cost savings and availability.



Trend Analysis and Performance Optimization

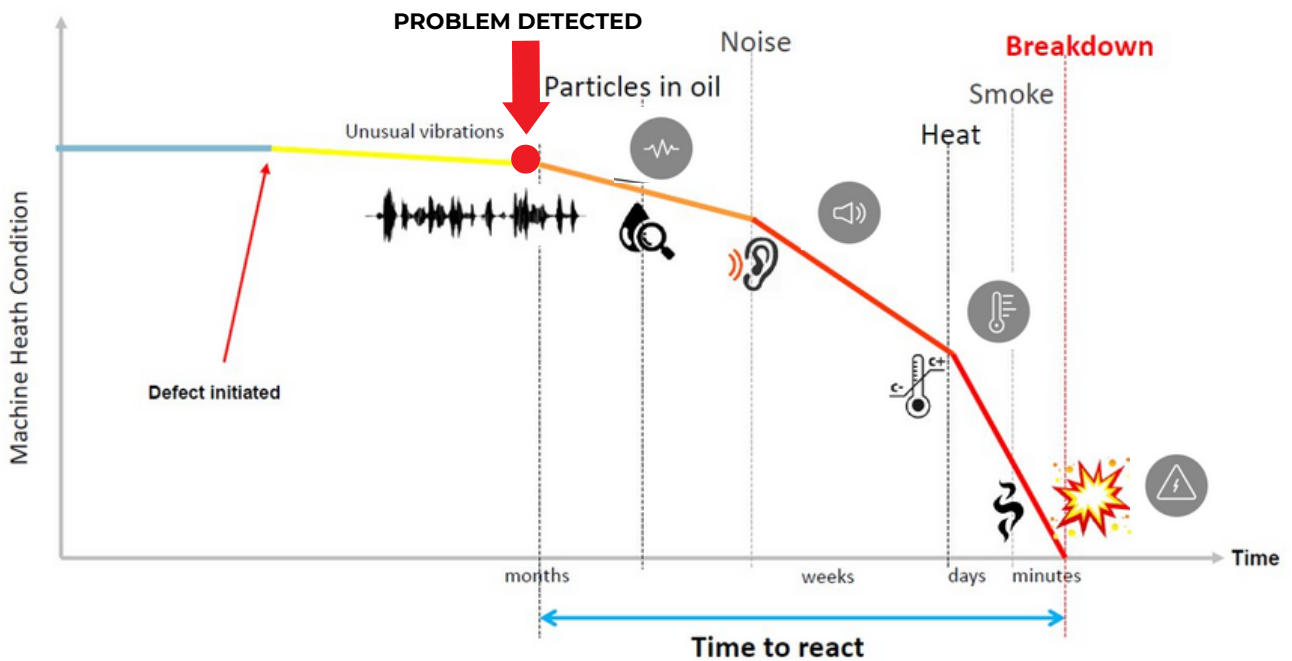
By analyzing historical condition monitoring data, organizations can identify trends and patterns in asset behaviours. This analysis helps understand the root causes of asset failures, optimize maintenance strategies, and make informed decisions about asset performance and reliability improvements. It also helps identify opportunities for equipment upgrades, process optimizations, or modifications to enhance overall asset performance.



Real-Time Monitoring

CM offers real-time asset performance information, enabling remote monitoring and prompt response to deviations or abnormalities. It facilitates quick decision-making, reduces response time to critical issues, and minimizes the risk of unexpected failures. Real-time monitoring also provides valuable insights into asset behaviors, aiding in optimizing performance and efficiency under various operating conditions.

Escalating Failures: The Price of Ignored Condition Monitoring



Scenario A

In Scenario A, a pump's condition monitoring failed to address unusual vibrations, leading to a cascade of escalating problems. The initial detection of these vibrations should have triggered immediate action, as they often indicate misalignment, imbalanced parts, or worn-out bearings. However, the lack of timely intervention allowed the root cause to persist and worsen over time, potentially causing additional complications.

As a result of the unaddressed vibrations, the pump started experiencing oil leakage after a few weeks. This leakage may have been caused by deteriorating seals or gaskets within the pump. Operating the pump with oil leakage further exacerbated the situation, compromising its lubrication and cooling systems. Inadequate lubrication

can lead to increased friction, heat generation, and accelerated wear and tear of internal components.

The neglected issues eventually led to noticeable noises, a clear warning sign of mechanical stress such as the rubbing or scraping of components. These noises indicated further deterioration and the urgent need for attention.

Subsequently, the pump's temperature significantly increased due to prolonged friction and inadequate cooling caused by the compromised lubrication system. The rise in temperature pointed to severe stress and inefficiencies within the pump, potentially causing thermal damage to critical components.

The observation of smoke emanating from the pump indicated a critical failure stage. The combination of high temperatures and potential oil leakage posed a risk of oil igniting or components overheating to the point of combustion. The visible smoke clearly indicated that immediate shutdown and attention were necessary to prevent further damage or safety hazards.

Ultimately, due to the prolonged neglect and failure to address the initial warning signs, the pump experienced a complete breakdown. The accumulation of issues, starting from unusual vibrations to oil leakage, noise generation, excessive temperature rise, and eventual breakdown, emphasizes the importance of timely condition monitoring and proactive maintenance.

This scenario underscores the significance of recognizing early warning signs and effectively implementing condition monitoring practices. Regular inspections, data analysis, and prompt intervention based on monitoring results are essential for identifying and resolving issues before they escalate. By adopting such practices, organizations can minimize downtime, reduce maintenance costs, and ensure the reliability and longevity of critical assets.

Introducing GoDigital Asset Management CM+: Revolutionizing Asset Monitoring and Optimization

GoDigital Asset Management CM+ is a state-of-the-art solution that revolutionizes the way organizations monitor and optimize their critical assets. With its advanced features and capabilities, GoDigital Asset Management CM+ ensures continuous monitoring of vital components like motors and pumps, enabling organizations to maximize asset performance and reliability.

At the heart of GoDigital Asset Management CM+ lies a sophisticated network of strategically placed sensors. These sensors, including vibration, temperature, and current monitoring capabilities, seamlessly integrate with assets, providing real-time data for comprehensive analysis. By collecting and analyzing this data, GoDigital Asset Management CM+ offers organizations a detailed understanding of asset behaviors and performance.

Utilizing advanced analytics and machine learning algorithms, GoDigital Asset Management CM+ swiftly identifies anomalies or deviations from normal operating patterns. Our solution detects early warning signs of potential faults by comparing current asset conditions with historical data and established benchmarks. This proactive approach empowers maintenance teams to address root causes promptly, preventing major breakdowns and minimizing downtime.



One of the key benefits of GoDigital Asset Management CM+ is its ability to optimize maintenance strategies. By accurately pinpointing potential faults, organizations can allocate resources precisely where they are needed, eliminating unnecessary and costly blanket maintenance practices. This results in improved operational efficiency and reduced maintenance costs. Moreover, GoDigital Asset Management CM+ enhances workplace safety by proactively identifying and resolving potential faults, and mitigating the risks associated with asset failures.

GoDigital Asset Management CM+ empowers organizations to unlock unparalleled performance and operational excellence. By ensuring continuous data collection, advanced analytics, and machine learning capabilities, our solution enables data-driven decision-making and proactive measures. Organizations can make informed choices to optimize asset performance, minimize downtime, and reduce costs.

In summary, GoDigital Asset Management CM+ offers a comprehensive and advanced asset monitoring and optimization solution. Our solution transforms asset management practices with real-time data collection and analysis, proactive fault detection, and optimized maintenance strategies. Embracing GoDigital Asset Management CM+ empowers organizations to unlock operational excellence, ensuring their critical assets' longevity, reliability, and efficiency.



An Integrated Solution for Improved Performance and Maintenance Efficiency

GoDigital Asset Management CM+ provides valuable insights into the equipment's condition to optimize the assets such as:

01 Dashboarding, device management, & configuration

The dashboarding feature provides a centralized view of the system's condition, allowing users to track key metrics and identify anomalies easily. Device management and configuration capabilities enable efficient management of the monitoring devices, ensuring optimal performance.

02 Historical Trending & Notification

Historical trending allows users to analyze the data over time, identifying patterns and trends to help predict potential issues. Notifications inform users about critical events or system condition changes, ensuring timely action.

03 Web Browser Access

With web browser access, users can conveniently access the monitoring system from anywhere, enabling remote monitoring and management.

04 Machine Learning Application

Incorporates machine learning applications, leveraging advanced algorithms to detect patterns and anomalies in the data, enhancing the accuracy of condition assessment.

05 Automated reports

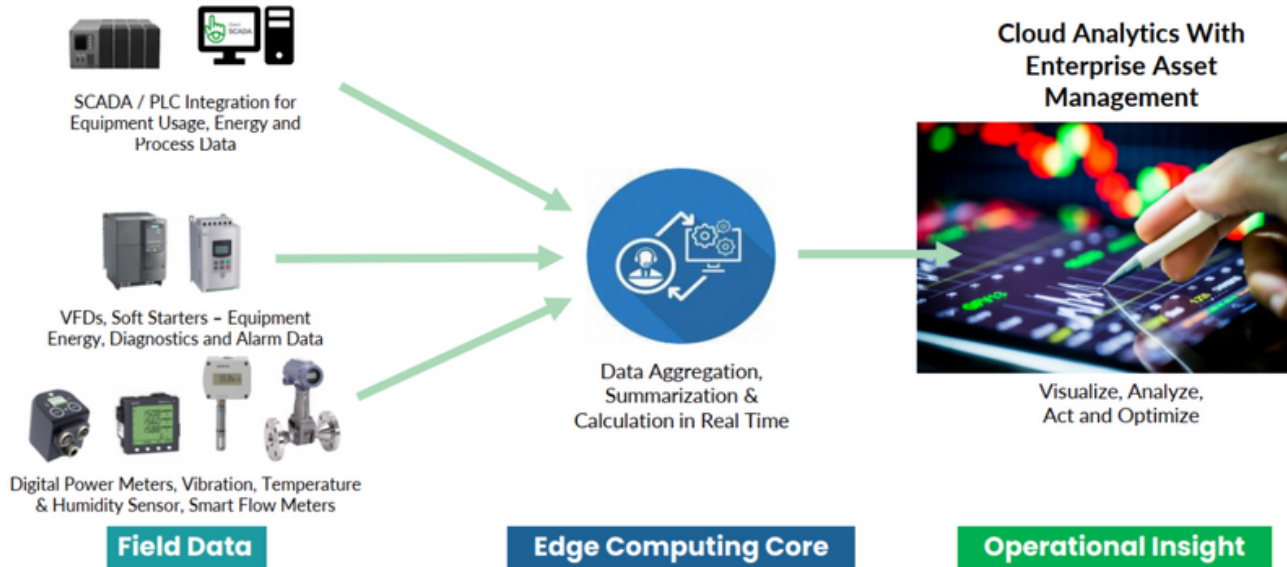
Automated reports generated at hourly, daily, weekly, and monthly intervals provide comprehensive insights into the system's performance and condition over time. These reports facilitate informed decision-making and proactive maintenance planning.

06 Integration with EAM

Seamless integration with Enterprise Asset Management (EAM) systems, enabling the issuance of maintenance work orders based on the condition assessment. This integration streamlines the maintenance process, ensuring necessary actions are taken promptly to prevent potential failures.

Architecture for GoDigital Asset Management CM+

Logical Architecture



Field Data

Data collected from various sources in the operational environment encompasses information on equipment usage, energy consumption, process variables, diagnostics, alarms, and other relevant parameters.

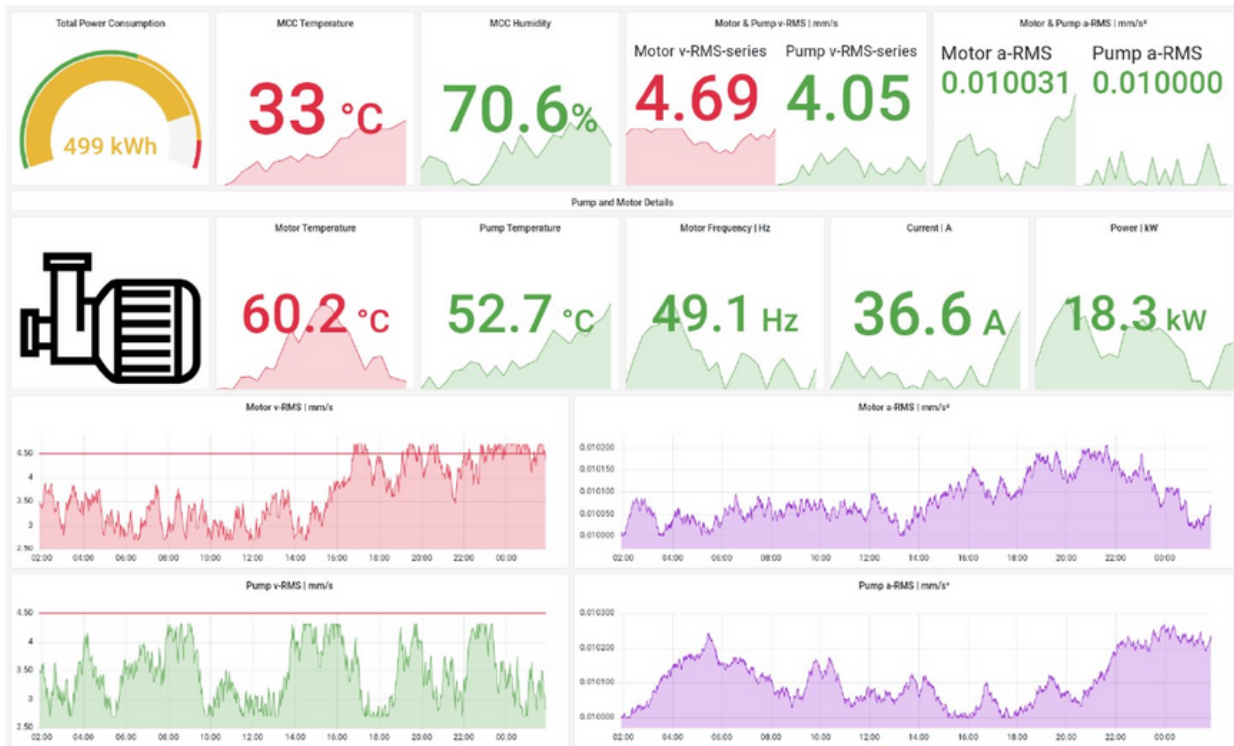
Edge Computing Core

Responsible for processing field data at the edge of the network. It performs real-time data aggregation, summarization, and calculations, filtering and pre-processing data for relevant information. It may also apply analytics or machine learning techniques to identify patterns or anomalies. Edge computing enables local processing, reducing latency and improving efficiency and reliability.

Operational Insight

Refers to the valuable information derived from processed field data. The data is transmitted to a cloud-based analytics platform for further analysis and visualization. The platform integrates with other systems, such as Enterprise Asset Management (EAM), to help organizations manage and plan maintenance activities for their assets.

Conclusion



GoDigital Asset Management CM+ solution revolutionizes the way operators monitor critical components such as motors and pumps. By employing continuous monitoring, real-time data analysis, and early warning alerts, our comprehensive approach enables operators to optimize asset performance, minimize downtime, and reduce maintenance costs.

With remote monitoring capabilities, operators gain instant visibility into the health and performance of their assets. This real-time view empowers operators to make well-informed decisions and take proactive actions to prevent failures and prioritize employee safety. Leveraging advanced analytics and machine learning algorithms, our solution ensures the accuracy and reliability of the monitoring process.

GoDigital Asset Management CM+ Key Features



Continuous monitoring of various parameters and signals



Real-time detection and diagnosis of faults



Online diagnostics and remote monitoring capabilities



Early warning alerts to take proactive actions before failures occur



Reduction of maintenance costs and downtime



Increased safety for employees



CONTACT US

We're here to help

Connect with our solution expert to learn more about our offerings

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