Monitoring & Diagnostics

Comprehensive issue detection, diagnosis, and resolution software.

Asset-intensive infrastructures face many challenges that are a result of aging equipment, aging workforces, tightened budgets, and increased regulatory and market complexity. Operators and engineers must keep their plants running at peak performance but are often asked to do so with limited visibility into equipment performance, asset conditions, and system dependencies.

This lack of visibility can lead to inefficient plant operations and high maintenance costs, equipment failures, and unplanned shutdowns. Plant managers and operators often become aware of a problem only after a failure occurs, resulting in costly, crisis-mode issue diagnosis and resolution.

Detect. Diagnose. Resolve.

Atonix Digital™ Monitoring & Diagnostics a secure, intelligent, cloud-based data analytics product purpose-built to address the challenges of today’s complex and dynamic plant management environments. Built on Atonix Digital’s ASSET360 Asset Performance Management (APM) Platform, Monitoring & Diagnostics combines decades of industry domain expertise with machine learning, advanced pattern recognition (APR), and problem remediation tools to an asset’s operating data and work processes. The application of this technology allows you to identify asset performance anomalies in near real-time, prevent costly equipment and operational failures, and improve equipment performance.

Monitoring & Diagnostics runs thousands of models and scenarios across a diverse set of assets in real-time to predict changes in infrastructure performance. Our modeling and machine learning algorithms provide operators and engineers with an up-to-the-minute view of infrastructure health and effectiveness.

Monitoring & Diagnostics streamlines the detection and mitigation of emerging problems using industry-leading issue detection, collaboration, and resolution workflows. These workflows alert users to changes in infrastructure performance by identifying anomalies in assets, systems and processes across multiple sites. Organizations that use Monitoring & Diagnostics benefit from improved vigilance, mediation, and escalation, and can better resolve issues at scale.

Designed to deploy in just a few weeks, Monitoring & Diagnostics can help prevent costly crises by focusing your attention on data that is actionable. Monitoring & Diagnostics customers often achieve a significant return on investment within months.

Key Benefits

- **PREVENT UNPLANNED SHUTDOWNS:** Gain valuable insight into performance, process, and condition anomalies in near-real-time to detect, mitigate, and prevent equipment problems well before they impact plant operations.

- **IMPROVE OPERATIONAL EFFICIENCY:** Identify and quantify performance deviations when they first emerge. Gain infrastructure-wide awareness into equipment and process health, increasing your ability to improve equipment and fleet-level operations.

- **PRIORITIZE MAINTENANCE BY CONDITION:** Assess and quantify your maintenance activities by economic impact. Apply condition-based techniques to bolster your current scheduled maintenance and long-term maintenance planning programs.

- **SIMPLIFY ISSUE RESOLUTION:** Identify, assess, and resolve critical issues in priority order to keep your plant running at peak efficiency.

- **MAINTAIN OPERATIONAL KNOWLEDGE:** Make full use of existing historical and operational knowledge. Information is stored for future reference to inform better decision-making.
To date, Atonix Digital Monitoring & Diagnostics has been deployed at 100’s of facilities, identified nearly 18,000 issues, and has accounted for over $150 million in risk-weighted avoided costs to our customers.

Key Features

DETECT

- ADVANCED CALCULATIONS & STANDARD MODEL TEMPLATES: Predict equipment and process issues with greater accuracy by using predefined model inputs, historical trend data, and alert thresholds. Benefit from built-in calculations and templates accrued from over 20 years of delivering performance and reliability monitoring solutions.

- PROVEN ANOMALY DETECTION: Leverage machine learning and APR techniques – including neural networks and linear regression – to monitor, predict, and flag subtle changes in operation, while assessing associated costs, risks, and benefits. The flexible, scalable Monitoring & Diagnostics architecture offers complete coverage across equipment and processes.

DIAGNOSE

- ROBUST DIAGNOSTICS ENVIRONMENT: Customizable visual displays and reports expedite root-cause discovery and problem resolution. Pre-built context trends, designed by plant engineers, bring diagnostic information to your fingertips to streamline problem exploration and resolution.

- POWERFUL DATA EXPLORATION: Say goodbye to arduous, spreadsheet-based analyses. Trend, filter, visualize, and compare large data sets in a matter of seconds. Dynamically pin data for fast and accurate comparisons, such as for pre- and post-outage analysis. Better diagnose and understand asset performance deviations by leveraging the highly-customizable reporting and exploration environment.

RESOLVE

- HOLISTIC MANAGEMENT OF ISSUES & ALERTS: Leverage embedded workflows to capture, prioritize, and manage issue resolution activities. The intuitive interface and email integration promote cross-team collaboration, making it easy to monitor all activities across equipment, processes, locations and time. Access and share content easily, to inform future issue diagnoses and resolution planning.

- RISK & IMPACT CALCULATOR: Calculate probability-weighted financial impacts to drive action and quantify the value to your organization. Isolate and track impacts on production, efficiency, maintenance, and other parameters to set priorities against a holistic view of performance and risk.

To learn more about Atonix Digital™ and our Monitoring & Diagnostics product, visit: atonix.com

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