



Machine & Equipment Health from GE Digital

Part of our Asset Performance Management suite



Business challenges

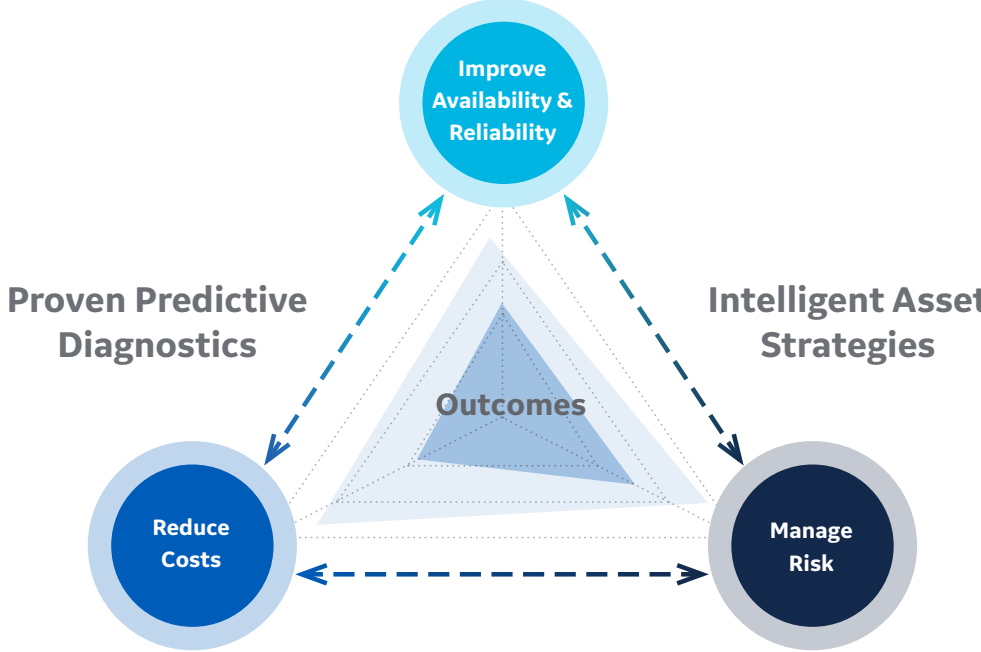
Modern industrial equipment generates gigabytes to terabytes of data every day. When organized, visualized, and analyzed properly, this big data can expose hidden

anomalies and enable pre-emptive action, leading to optimized performance. But without visibility into the data, you can be vulnerable to blind spots and risk.

Intelligent asset strategies

Asset Performance Management (APM) from GE Digital is an integrated suite of four software and service offerings powered by Predix, the operating system for the Industrial Internet. APM enables [intelligent asset strategies](#) to collect and manage all your data and information to make the best decisions that help maximize overall asset and operational performance, and to continuously improve and learn, automatically.

APM helps asset-centric organizations drive safer and more reliable operations while ensuring optimal performance at a lower sustainable cost by *balancing cost, availability and reliability, and risk.*



So how do you get started?



Machine & Equipment Health

GE Digital's Machine & Equipment Health (M&EH) is the foundation of all other APM solution offerings: Reliability Management, Compliance & Integrity Management, and Asset Strategy Optimization.

The first step of your APM journey starts with M&EH. It provides the foundational element for all APM solution offerings by standardizing the collection, integration, modeling, and analysis of disparate data to a single unified view. M&EH manages data across a variety of assets and systems, creating a comprehensive and

validated data repository and unified view of operations at the asset, plant, and enterprise levels. By solving the challenge of data disparity and latency associated with the management of industrial assets, M&EH provides a real-time view of asset health and status.

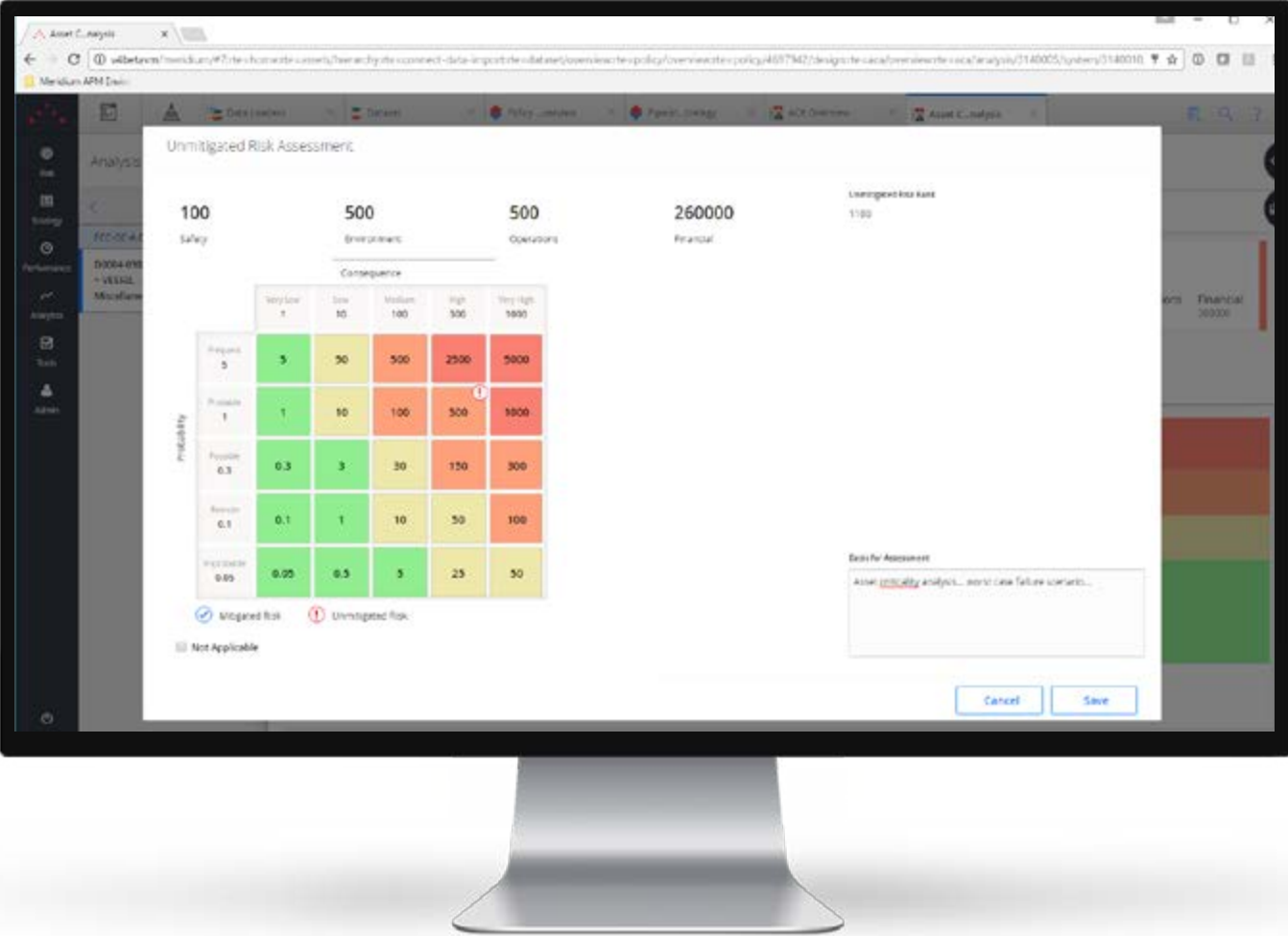
M&EH accelerates time-to-value for a comprehensive, real-time control-to-cloud solution offering. New capabilities provide the ability to automate the ingestion and integration of disparate data sources through machine intelligence.

M&EH collects and correlates data to enable analytics that can detect and diagnose asset performance issues, including determining root cause and detecting anomalies. The software can quickly visualize data in charts, graphs, or geospatially through user-specific dashboards, and it can track KPIs, search data, and apply ad-hoc trending or analysis.

M&EH can help you:

- > **Gain a real-time contextual view** of asset health, status, and issues—anytime and anywhere (edge, cloud, and hybrid)
- > **Bring together data** from operational technology (OT) and information technology (IT) systems, alarms, and events to give a contextualized view of asset performance
- > **Detect and diagnose asset performance issues** to help prevent unplanned downtime and increase asset utilization
- > **Get increased visibility for better decisions through user-specific dashboards** and unified data views that provide operational insights to drive real business outcomes

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Features of Machine & Equipment Health

> **Connectivity**

This capability allows for the secure collection, intermediate storage, backhaul, and administration of time-series and enterprise data from external sources to edge/on-premises and cloud-based APM applications—one time during setup or continuously.

> **Data management**

Data management includes structuring and contextualizing data to the life cycle asset model, providing a unified view of asset data and enabling APM applications and analytics to consume APM data through governed and consistent APIs. Data management leverages AI and machine learning to automate the ingestion, modeling, and mapping of disparate data sources into a canonical, asset-oriented model.

> **EAM integration**

EAM Integration brings the valuable information already being gathered by business systems into GE Digital's APM for meaningful analysis to drive business decisions and help build an intelligent asset strategy in line with corporate objectives.

> **Condition monitoring**

Condition monitoring determines and reports the current health of the asset in its operating context and provides anomaly detection by calculating metrics and driving rules-based exceptions. Condition monitoring supports both continuous surveillance via data monitoring as well as discrete or periodic surveillance via rounds and calibration management.

> **Data analysis and visualization**

Data analysis and visualization provides capabilities to query and present asset data. Users can perform additional analyses by using underlying time-series data and other data types to validate a detected anomaly and determine root cause. This capability enables creation of dashboards by using preconfigured KPI templates and widgets.

> **Criticality analysis**

Criticality analysis provides a standard process and tool for assessing and managing the risk levels of systems and associated assets, allowing for prioritization based on a risk ranking so resources can be managed effectively and utilized on the most important assets and systems.

> **Event management**

Event management triggers impact assessments and investigations and provides contextual visualization of events, notifications, and automated response workflows.

> **Recommendation management**

Recommendation management enables users to centrally manage all recommendations that have been derived from a variety of analyses and inspection types, including reliability analytics, reliability centered maintenance, failure mode and effects analysis, and root cause analysis, among others.

> **Reliability benchmarking**

Asset Answers provides instant benchmarking of a company's physical asset performance against global industry peers and internally, asset-to-asset and site-to-site. The tools and KPIs empower users to clean, filter, and interpret performance data to systematically diagnose and isolate underperforming assets. Monthly data refreshes mean that organizations always can compare against current market performance, ensuring practitioners and managers alike have the equipment insights they need to maintain their competitive advantage.

Customer Story—Whitegate





The 445-MW Whitegate plant is located 25 miles east of Cork, Ireland and provides power to 10% of the country. With GE Digital's APM, Whitegate now has a single, consolidated view of the entire plant. It's turning data into useful information and operating more reliably and efficiently.

[WATCH THE VIDEO](#)



GE Digital's Asset Performance Management

Machine & Equipment Health (M&EH) is the first of four APM solutions:

 Reliability Management Achieve less unplanned downtime by predicting equipment issues before they occur. <ul style="list-style-type: none">• Predictive diagnostics• Case and collaboration management• Root cause analysis• Reliability analysis	 Compliance & Integrity Management Ensure asset integrity and compliance by monitoring changing risk conditions. <ul style="list-style-type: none">• Hazard analysis• Safety lifecycle management• Risk based inspection• Inspection management• Thickness monitoring• Management of change	 Asset Strategy Optimization Optimize across availability, reliability, risk, and costs through intelligent asset strategies. <ul style="list-style-type: none">• Reliability centered maintenance• Failure mode and effects analysis• Strategy management• Strategy library• Lifecycle cost analysis• Financial and risk simulation
 Machine & Equipment Health Anytime, anywhere, unified view of your assets' current state and health. <ul style="list-style-type: none">• Connectivity• Data management• EAM integration• Condition monitoring• Data analysis and visualization• Criticality analysis• Event management• Recommendation management• Reliability benchmarking		

APM offers multiple benefits, including:

- > Improves reliability, availability, and productivity
- > Optimizes maintenance costs
- > Mitigates risk
- > Maintains technical expertise (tribal and organizational knowledge)
- > Delivers continuous improvement

[Learn more about our complete APM offering](#)

How do you get started with Asset Performance Management?

Visit our website to learn more about Machine & Equipment Health, the foundation of GE Digital's APM.

VISIT OUR WEBSITE





About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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