Predix Asset Performance Management

Enabling optimal asset reliability, availability, and performance

How can you make your operation safer and more reliable while helping to ensure optimal performance at a lower sustainable cost?

You need to predict and prevent failures in a timely manner. But to do that, you need to better manage your data across the enterprise.

You've invested in assets, processes, and systems on a massive scale to meet your business objectives

while managing your risk around safety, financial, and environmental events. These hundreds—perhaps thousands—of assets produce enormous amounts of data that can either keep you informed to help you make smarter decisions—or leave you vulnerable to blind spots and risk.

You need the ability to:

- Collect, analyze, and visualize the data that is crucial to your assets' health—all in one place

- Prioritize your work by determining which assets are most critical to the overall health of your operation

- Understand the true status of each asset

- Predict equipment and process issues with greater accuracy before they occur

- Ensure mechanical integrity of your assets and regulatory compliance

- Learn from continuous, real-time analysis and visibility to understand the options for mitigating potential problems while balancing associated costs, risks, and benefits

- Define and manage asset strategies with a risk-based approach for improved planning and efficiency

You need to continuously collect and manage all your data and information for each asset in order to make the best business decisions that help maximize operational performance.
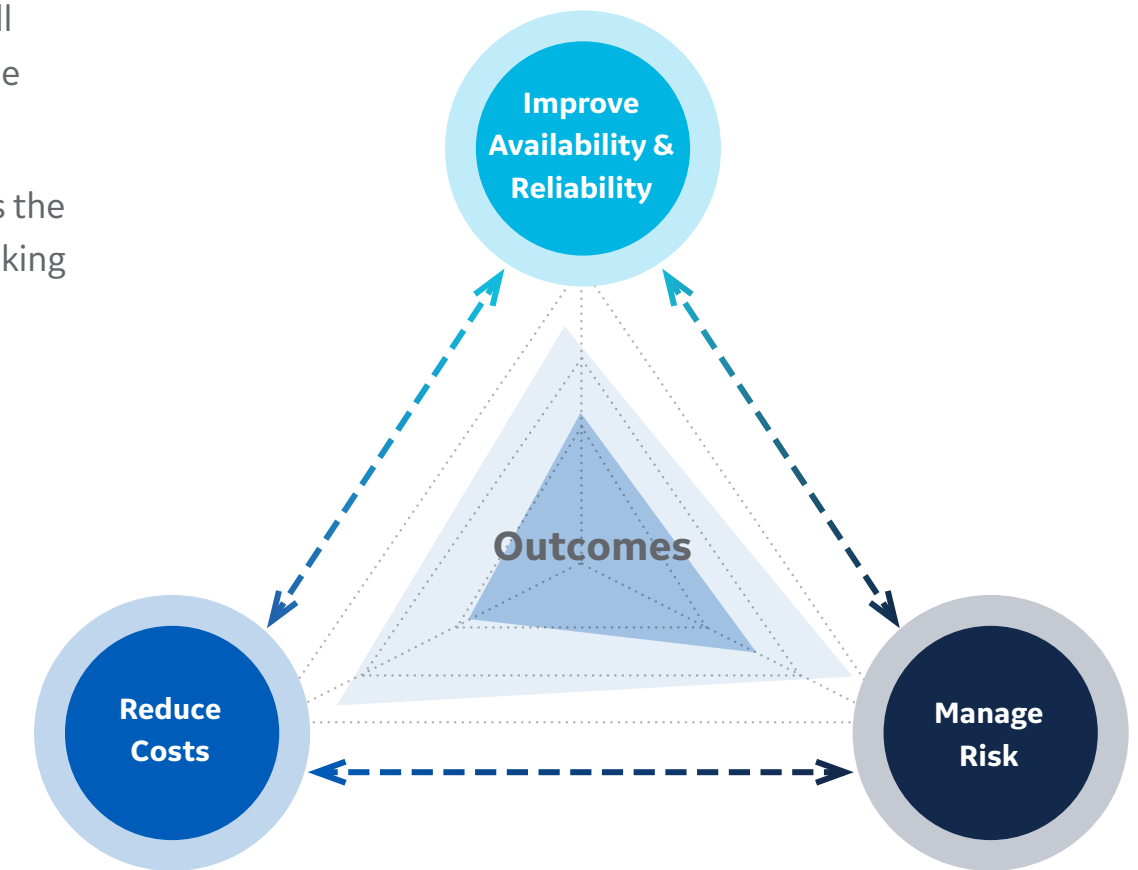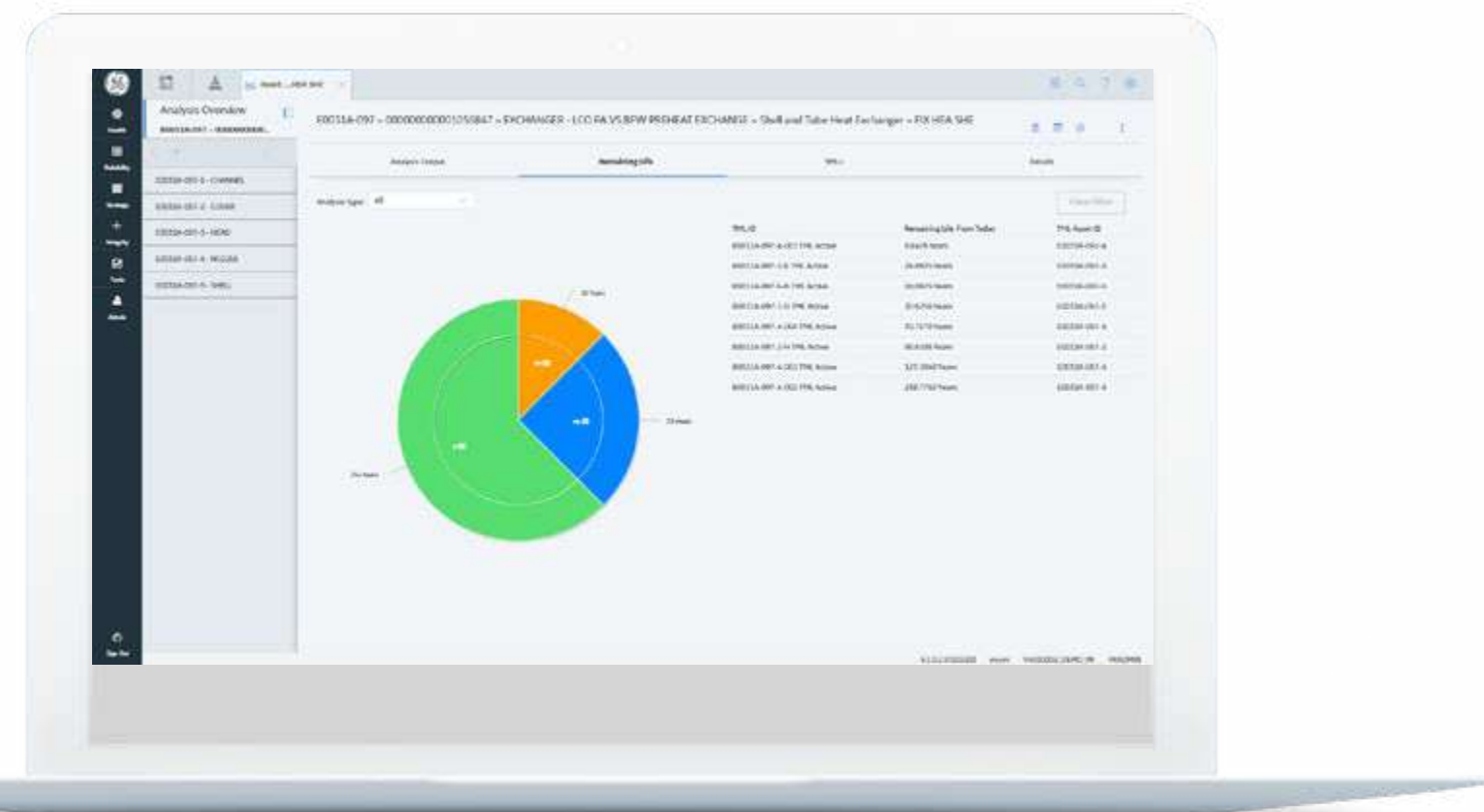
Predix Asset Performance Management

Predix Asset Performance Management (Predix APM) is a suite of software and service solutions designed to help optimize the performance of your assets. Predix APM increases asset reliability and availability while optimizing maintenance costs, mitigating operational risks, and reducing total cost of ownership (TCO).

The suite connects disparate data sources and uses advanced analytics to turn data into actionable insights while fostering collaboration and knowledge-management across the organization. Predix APM works across all equipment, all OEMs, and all industries, across the plant, and across the fleet.

Built on Predix Platform, Predix APM gives organizations the flexibility to develop new analytics and applications, making it versatile to meet changing needs.
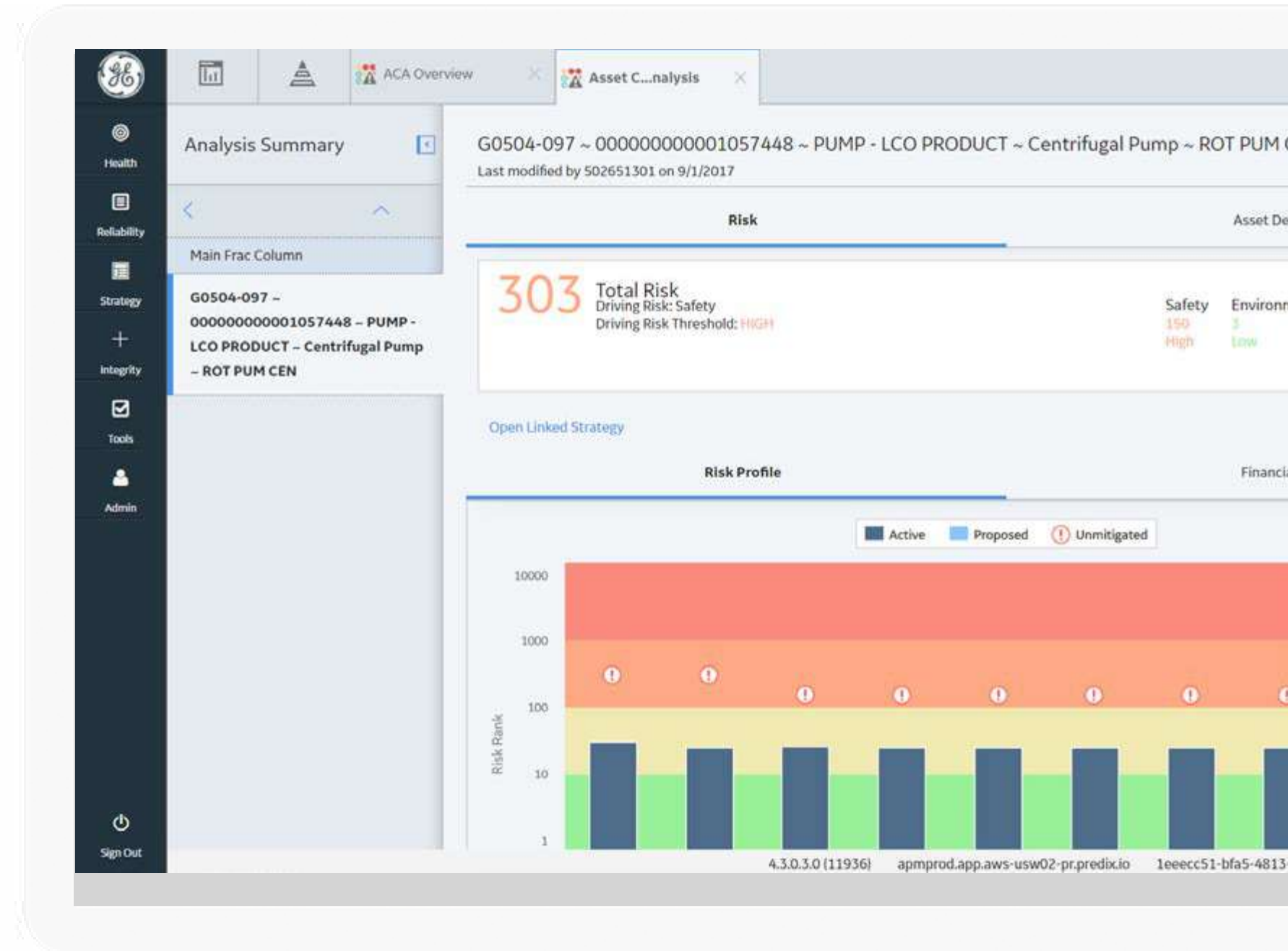
Predix Asset Performance Management can help answer these critical questions for all your assets
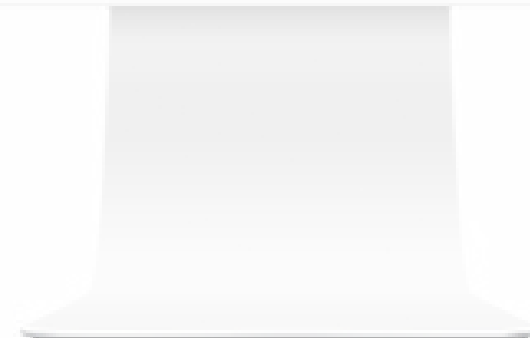
- How critical is this asset?

- What is the history of this asset, and what is its current health?

- In what ways could this asset fail, how could I mitigate failure, and what would it cost?

- What would be the consequence of this asset's failure on my business?

- What action should be taken now, and what should be our overall strategy to optimize business objectives?

Predix APM should be viewed as a continual, evolving process. Operational conditions and demands will change over time, equipment will age and be replaced, upgrades and improvements will be implemented, and pressure to reduce costs will always be present. Predix APM enables dynamic performance management and a continuous loop of improvement.

WATCH A SHORT VIDEO

READ A BLOG

Benefits of Predix Asset Performance Management:

- **Reduces unplanned downtime and increases availability and reliability** by helping to ensure that critical assets and systems are monitored and protected from emerging threats.

- **Reduces costly emergency repairs** by detecting problems early, turning unplanned downtime into planned downtime.

- **Reduces often unnecessary routine preventive maintenance**—which also introduces risk and decreases availability—and helps you move to more efficient and proactive condition-based and risk-based maintenance.

- **Reduces inventory costs** by determining spare parts requirements based on failure rates, logistical constraints, and downtime and consequence costs.

- **Protects the health and safety of employees and the environment** by reducing asset-related incidents.

- **Improves workforce productivity** by prioritizing maintenance based on criticality and cost.

- **Maintains technical expertise** (tribal and organizational knowledge).

- **Delivers continuous improvement**

- **Lowers total cost of ownership** delivered via a software-as-a-service (SaaS) model that provides flexibility and access to business insights where it matters—with edge, cloud, and hybrid configurations.

- **Provides the ability to operationalize your own in-house analytics** by using Predix APM's capabilities.

- **Provides a standard way to connect machines, data, and people** to deliver faster time-to-market; a well-designed, consistent interface for a superior user experience; dynamic scalability to meet growth needs; and extendibility to grow functionality as business needs evolve.

Real customer results:

3-40%
EH&S incident reduction

2-6%
Increased availability

10-40%
Reduction in reactive maintenance

5-10%
Inventory cost reduction

5-25%
Gain in employee productivity

5-25%
Reduction in IT total cost of ownership

Predix Asset Performance Management includes the following solutions:

Predix Asset Performance Management | Cloud

APM Health

Anytime, anywhere, unified view of your assets' current state and health.

- Health manager
- Rounds
- Calibration management

APM Reliability

Predicting equipment issues before they occur.

- Reliability analysis
- Digital twin blueprints
- Predictive diagnostics
- Root cause analysis

APM Strategy

Optimize across availability, reliability, risk, and costs through asset strategies.

- RCM / FMEA
- Strategy library
- Strategy manager
- Lifecycle cost analysis

APM Integrity

Reduce cost and risk for enterprise fixed equipment inspection programs.

- Risk based inspection
- Inspection management
- Thickness monitoring
- Hazard analysis
- Management of change

Predix Essentials

IT/OT Connectivity & Integration
- EAM systems
- HMI/SCADA, Historian, MES systems
- Asset controllers & sensors

Edge-to-Cloud Computing
- Industrial data fabric
- Analytics & machine learning
- End-to-end security

Monitoring, Analysis & Event Management
- Dashboards, interactive data analysis
- Criticality, alerts, cases, recommendations
- HMI visualizations & alarms

APM Health

APM Health, a Predix APM solution, manages data across a variety of assets and systems, creating a comprehensive and validated data repository and unified view related to expected performance at the asset, plant, and enterprise levels. By solving the challenge of data disparity and latency associated with the management of industrial assets, APM Health provides a real-time view of asset health and condition status, delivers early warning of potential failures, and highlights elevated risk areas.
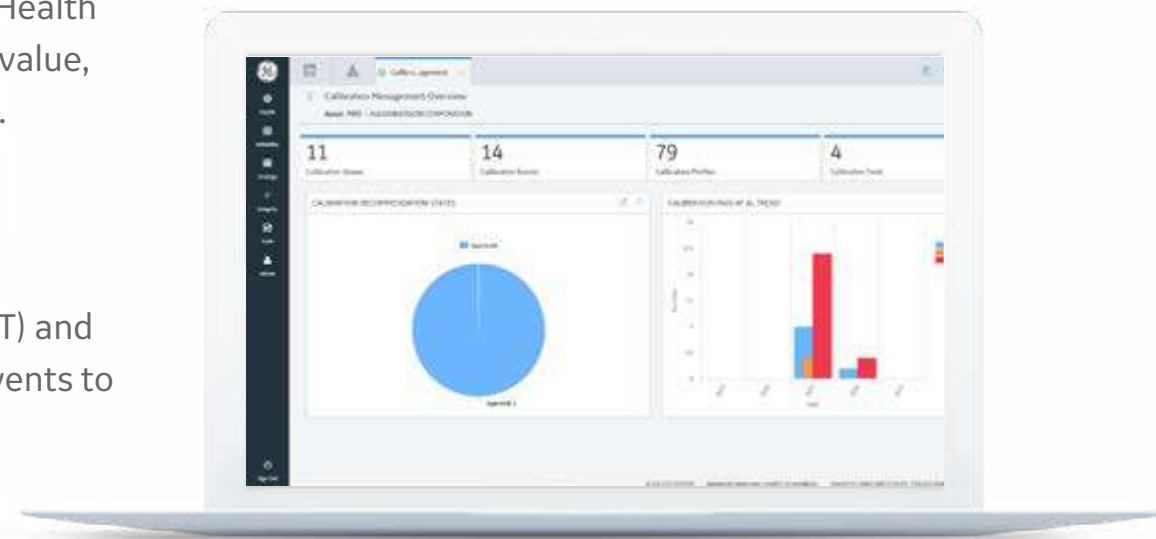
Beyond gaining a real-time view of asset health, status, and issues—anytime, anywhere (edge, cloud, hybrid), APM Health enables industrial organizations to accelerate time-to-value, automate data integration, and activate data analytics.

APM Health allows you to:

- 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

- Gain increased visibility for better decision making through user-specific dashboards and unified data views that provide operational insights to drive business outcomes

Features of APM Health

- Health manager
- Rounds
- Calibration management

LEARN MORE

APM Reliability

With APM Reliability, a Predix APM solution, asset-intensive organizations can leverage advanced predictive diagnostics to analyze data and detect and diagnose asset issues before they occur. This allows companies to schedule downtime and control costs on their own terms.
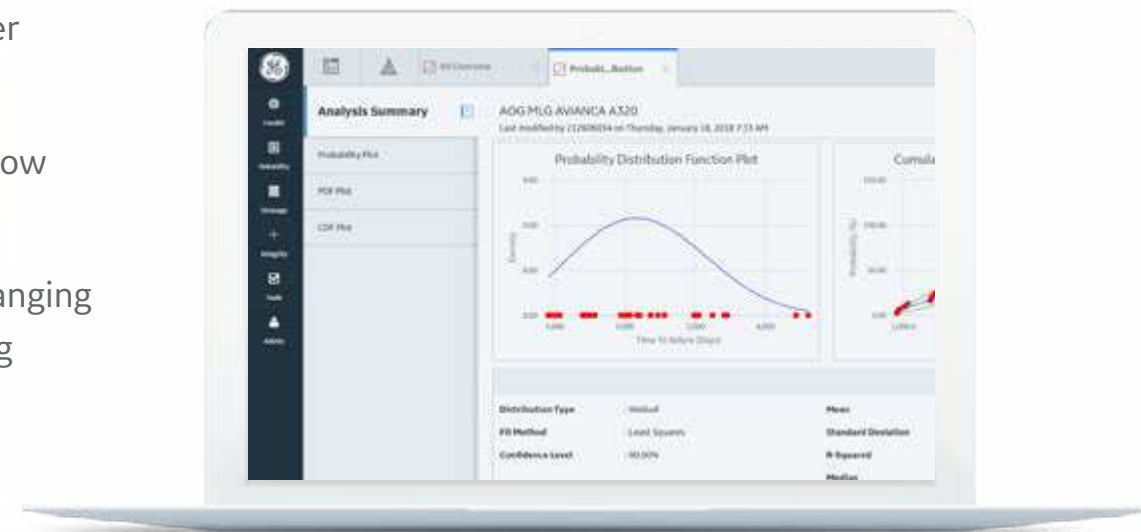
APM Reliability is designed to work across all assets (fixed, rotating, and non-rotating), all equipment types and manufacturers (GE and non-GE), and all industries—across the plant and across the enterprise.
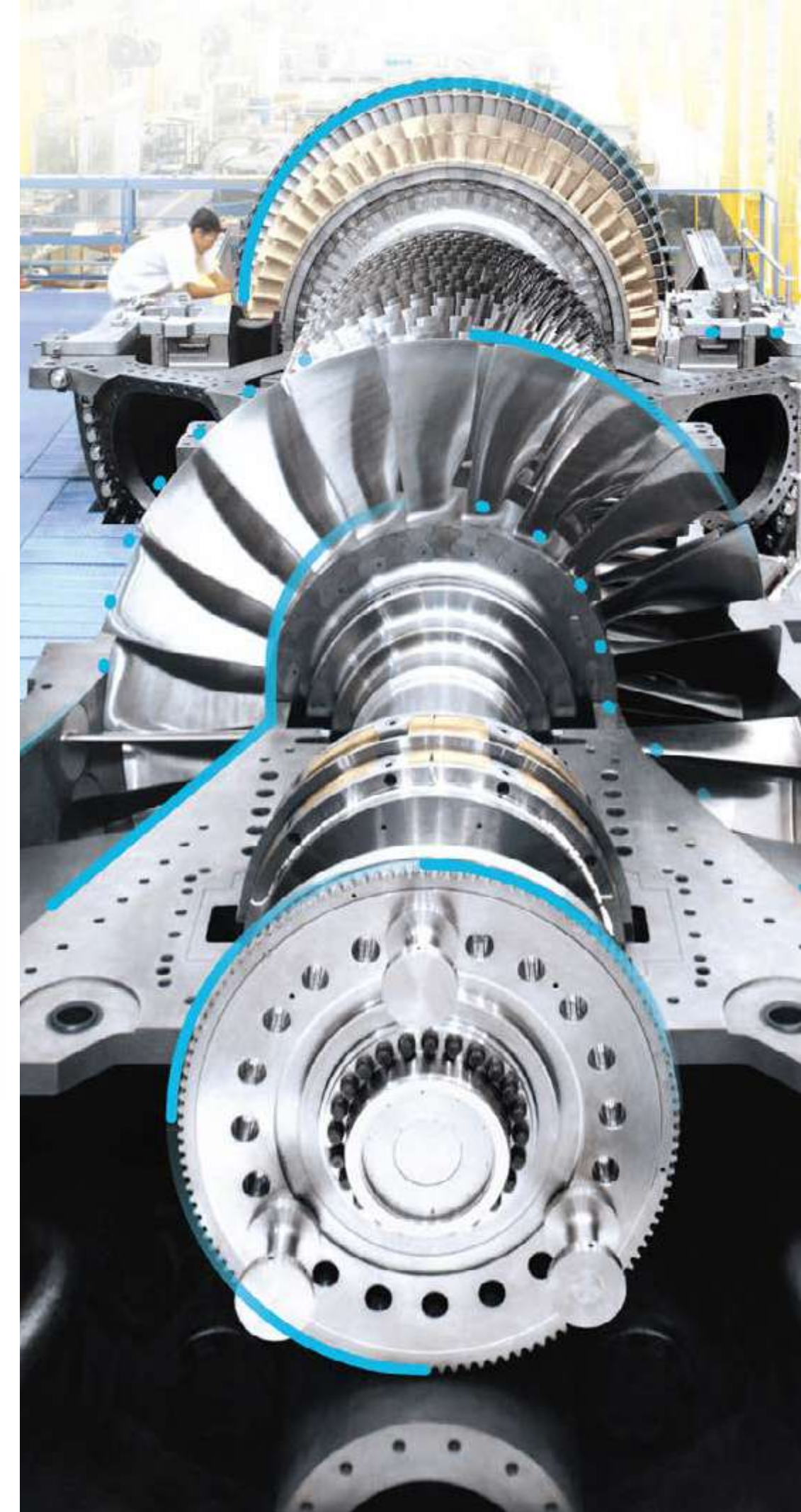
APM Reliability allows you to:

- Collaborate across functional teams to make better operational and maintenance decisions

- Measure the effectiveness of asset strategies to know when corrections are warranted

- Develop and retain best practices from an ever-changing workforce to continuously improve decision making

APM Reliability includes:

- Digital twin blueprints

- Root cause analysis

- Reliability analysis

LEARN MORE

APM Integrity

APM Integrity, a Predix APM solution, equips organizations to enable a closed loop mechanical integrity program across the enterprise. This comprehensive inspection solution helps operators reduce risk, lower inspection costs, and ensure regulatory compliance relative to their fixed assets. Leveraging an integrated set of tools, APM Integrity enables users to calculate risk and the remaining useful life of assets to generate, implement, and execute optimized inspection strategies while streamlining auditability and compliance governance.
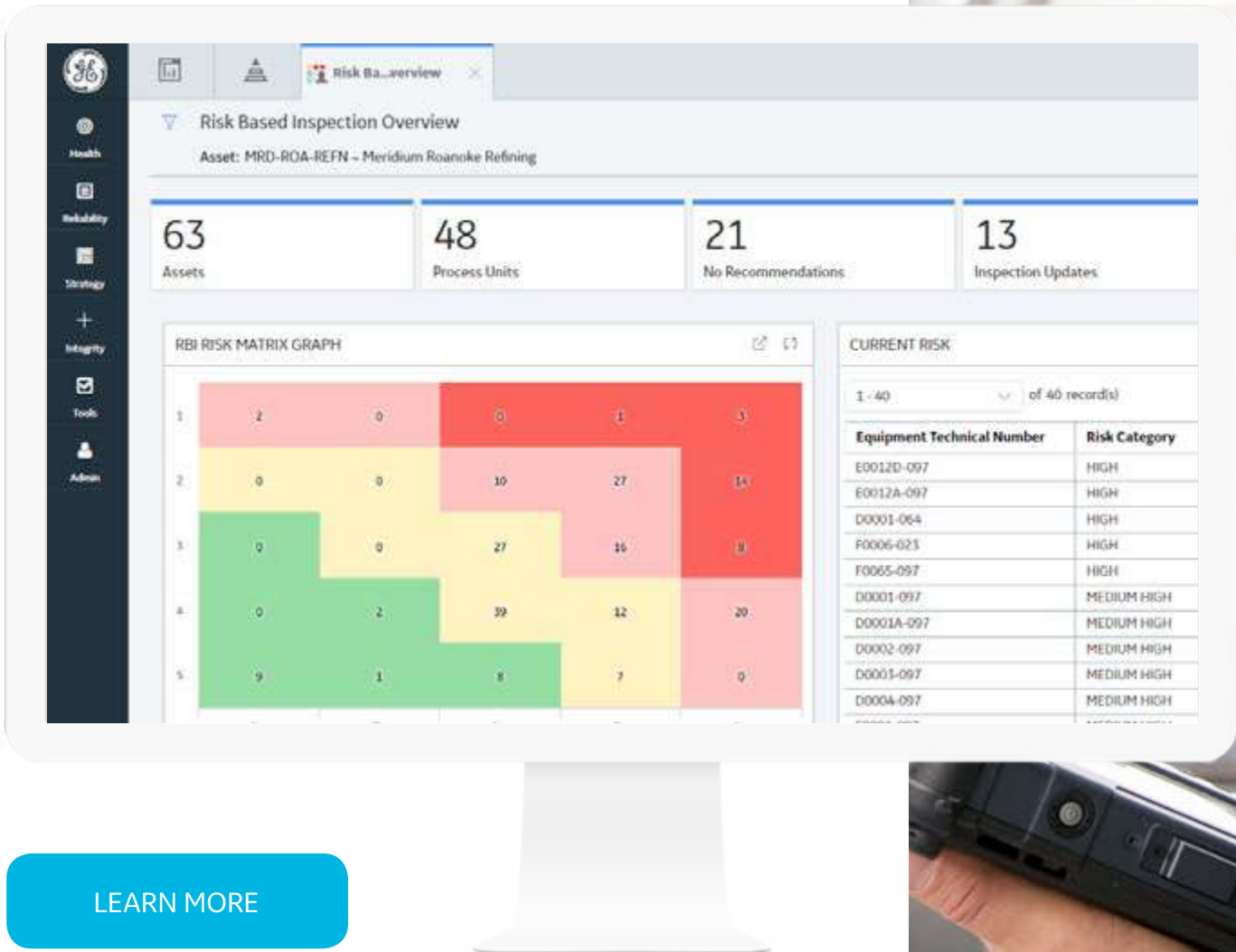
With APM Integrity, asset-intensive organizations can lower environmental, health, and safety (EH&S) incident probability, increase availability, reduce reactive maintenance, and improve productivity.

APM Integrity allows you to:

- Fully integrate compliance and integrity initiatives across an enterprise with corporate asset hierarchy and EAM system integration—resulting in higher asset availability and lower catastrophic incident probability

- Develop and optimize inspection strategies through risk based inspection (RBI) methodologies (API RP 580, 581) and enable compliance with OSHA 1910.119 process safety management requirements and ISA/IEC safety standards

- Automatically re-analyze integrity and safety risk based on real-time data field information and intelligent actions executed on pre-defined conditions

APM Integrity includes:

- Risk-based inspection
- Inspection management
- Thickness monitoring
- Hazard analysis
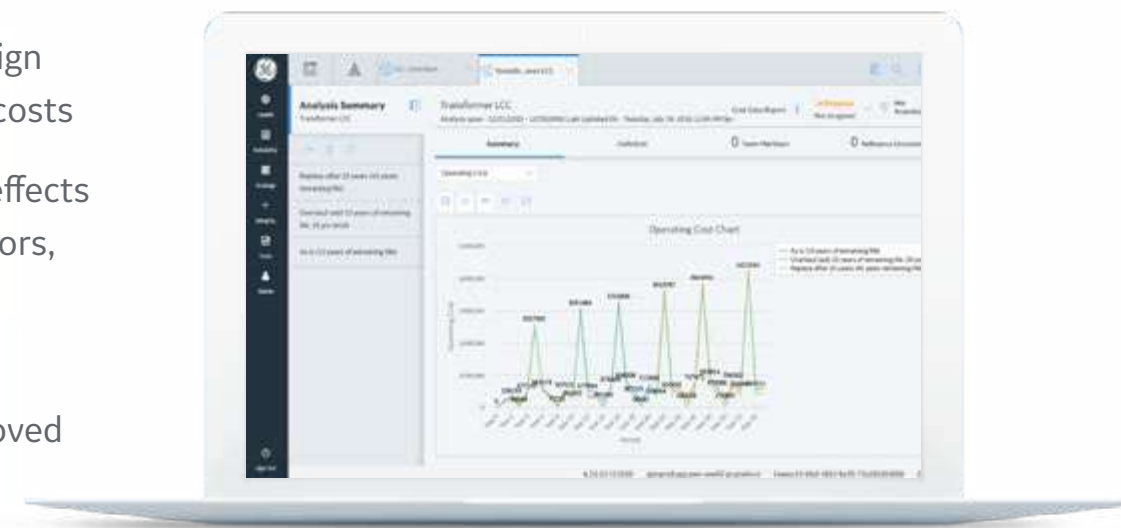- Management of change

LEARN MORE

APM Strategy

APM Strategy, a Predix APM solution, provides a common methodology to develop and manage asset strategies by using a risk-based approach to conduct analysis of individual assets, a group of assets, or an asset system. By balancing risk, production goals, and resource investment, APM Strategy allows asset-intensive organizations to focus costs on the most critical assets—reducing maintenance and inventory costs, increasing availability and reliability, and moving away from reactive maintenance practices to a proactive approach.

APM Integrity includes:

- Criticality analysis

- Reliability-centered maintenance

- Failure mode and effects analysis

- Strategy manager

- Lifecycle cost analysis

APM Strategy allows you to:

- Identify potential failures of individual assets and entire systems, thus reducing unplanned downtime

- Perform optimal maintenance, inspection, or redesign activities while most effectively balancing risk and costs

- Implement strategies based on failure modes and effects analysis (FMEA), predictive analytics, health indicators, policies, and reliability analyses

- Create strategies in various work management and control systems for complete integration and improved productivity

LEARN MORE

Creating a more efficient and reliable power plant—Whitegate, County Cork, Ireland

By using Predix APM, the Whitegate power plant in Ireland has a single, consolidated view of the entire plant and identifies early warnings of anomalies 24/7, reducing costs and improving efficiency.

LEARN MORE

Leading operational efficiencies with Predix Asset Performance Management: RasGas, Qatar

E Digital is working with RasGas, a liquid natural gas (LNG) producer based in Qatar, on an unprecedented collaboration using GE's Predix Platform and Predix APM. RasGas represents 40% of Qatar's economic output, so analyzing the company data is no small feat, but the results will help extend the life and efficiency of its machines. Predix APM helps RasGas get a holistic view of assets, analyze data, share it across systems, and identify areas for improvement.

LEARN MORE

Get started with Predix Asset Performance Management today

GE Digital leverages decades of experience, cutting-edge data science and analytics technology, and the scale of $1 trillion in managed assets to offer a full suite of Predix APM solutions powered by Predix Platform. Predix APM balances traditionally competing priorities—reducing costs, improving availability and reliability, and managing risk—to help maximize asset performance and productivity.

Are you ready to make your operation safer and more reliable while helping to ensure optimal performance at a lower sustainable cost?

Learn more about
Predix APM

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.

Contact Information

Americas: 1-855-YOUR1GE (1-855-968-7143)

gedigital@ge.com

www.ge.com/digital