Asset Strategy Optimization from GE Digital

Part of our Asset Performance Management suite
Industrial companies today are challenged with complex industry dynamics—volatile market conditions, increased competition, changing workforces, and constrained budgets. For any industry, however, it’s a priority to safely drive production at the least risk and lowest cost, while maximizing performance.

With the advent of advanced control systems and increasing instrumentation, enormous amounts of data are being generated by assets every day. In this new environment, your organization needs to know what all that data means and which assets are most critical to meet business objectives.

**Business challenges**

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.

**Intelligent asset strategies**

So how can your organization enable intelligent asset strategies and address these key business challenges head on?
Asset Strategy Optimization

Part of our APM suite, GE Digital’s Asset Strategy Optimization (ASO) solution helps implement, maintain, and optimize intelligent asset strategies.

ASO provides a common methodology to develop and manage asset strategies by using a risk-based approach to conduct rigorous analysis of individual assets and entire systems to anticipate or identify failures and the causes of potential failures. Users can then define strategies for risk mitigation and then deploy these strategies to predictive-analytic, enterprise asset management (EAM), and control systems to ultimately increase asset reliability and availability while reducing maintenance costs and balancing equipment risk.

ASO can help you:

- **Analyze** individual assets and entire systems to identify potential failures, thus reducing unplanned downtime
- **Determine** the best approach to performing maintenance, inspection, or redesign activities while most effectively balancing risks and costs
- **Deploy** different strategies in various work management and control systems for complete integration and improved productivity
- **Develop** optimal strategies based on advanced predictive analytics, health indicators, policies, and reliability analyses

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decisions on when to repair or when to replace, the performance of asset strategies can be optimized over the long term, therefore reducing costs for entire sites or fleets over a defined period of time.

Financial and risk simulation
Active and proposed strategies balancing risk and cost enable continual refinement. With this capability, managers can validate existing plans or consider strategy options to update and implement plans that are more effective in managing risk. Your organization can simulate what the effect on cost and risk will be if various aspects of an asset strategy are changed and can compare results with existing strategies to determine which is optimal and can be activated effectively.

Features of Asset Strategy Optimization

- **Reliability centered maintenance (RCM)**
  ASO supports two robust methodologies for identifying potential failure modes. RCM, built upon the SAE standard JA1011, “Evaluation Criteria for Reliability-Centered Maintenance Processes,” facilitates the development of strategies that will reduce the effects of functional failures from a system perspective, which may have a more significant impact on production and costs than simple mechanical failures.

- **Failure mode and effects analysis (FMEA)**
  FMEA provides a streamlined, asset-based alternative to the more comprehensive RCM approach. Analysts can identify failures and effects for each piece of equipment and then recommend actions to mitigate those failures. Unlike the RCM analysis, which focuses on preventing functional failures at the system level, the FMEA capability facilitates the identification and mitigation of the most critical failure modes defined at the equipment level.

- **Strategy management**
  The strategy management capability provides a common methodology to define actions and their mitigated risks for any asset, providing the ability to evaluate existing plans with basic qualitative risk analysis that is both straightforward and easy to use.

- **Strategy library**
  The strategy library provides professionally designed asset strategy templates that include likely risks and recommended mitigating actions for more than 600 common equipment categories. Mitigating actions may include deployment of advanced predictive analytics (available through the Reliability Management solution) to predict and eliminate equipment failures.

- **Lifecycle cost analysis**
  The lifecycle cost analysis capability can help asset owners understand “whole life” costs by capturing all relevant cost data associated with individual assets, groups of assets, or entire fleets. By making informed decisions on when to repair or when to replace, the performance of asset strategies can be optimized over the long term, therefore reducing costs for entire sites or fleets over a defined period of time.

Customer Story–Joy Global

As the leading supplier of advanced equipment, systems, and direct services for the global mining industry, Joy Global used Asset Strategy Optimization to simplify workloads—creating results that enabled extensive reuse of parts and added future cost savings.
Do you want to learn more about implementing intelligent asset strategies and leveraging your asset data in ways that will increase productivity, mitigate risk, and optimize costs?

Visit our website to learn more about Asset Strategy Optimization.
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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