ASSET MANAGE-MENT

A Framework for Maximized Value

Implementing a structured asset management approach helps companies proactively manage asset health and maximize value for the entire organization.

All companies strive to optimize their assets, whether that means maximizing the productivity of electric utility infrastructure, the organization of vehicle fleets or the capacity of an airport. To accomplish this, they need visibility into asset health and analytics, ideally in the form of asset performance data. But obtaining the necessary data is easier said than done.

Data quality continues to be an issue, and even when high-quality data is available, it might not provide the information companies need to answer specific asset management questions. Implementing a structured, repeatable asset management program in which data-driven decision-making is valued is an effective way to address these challenges.

A structured asset management approach establishes clear organizational objectives, aligns those objectives with operations across the organization, and carefully documents the entire process. By leveraging an established asset management framework, companies can define a desired future state, proactively manage assets in order to achieve that state, and continue to improve once the target state has been reached. »

THE RISKS OF BEING REACTIVE

Asset management is about much more than simply managing assets. It's about setting up a system that integrates people, processes and technology so organizations can effectively control and govern assets. When done right, organizations can realize value by managing risk and opportunity to achieve the desired balance of cost, risk and performance.

Most companies already perform some form of asset management, but it might not be as proactive as it could be. For example, if a company notices an increased failure rate on a particular asset class, it may decide to increase investment and inspections for that asset. While looking backward to make decisions about asset health often resolves the immediate issue, it doesn't necessarily prevent future problems, let alone advance larger strategic objectives.

"When your asset management approach is built around responding to problems, it's hard to have a holistic perspective," says Mark Knight, principal consultant for power at 1898 & Co., a business, technology and security solutions consultancy, part of Burns & McDonnell. "You're typically in a hurry to get the equipment back online, so there isn't time to look at the bigger picture. Decisions are made in silos, and although they probably make sense from an operational perspective, they may not support organizational goals."

While asset management covers a broad spectrum of activities, what's usually missing is a way to coordinate those activities around the company's long-term strategy.

"I like to ask clients, 'Are you managing your assets, or are they managing you?'" says Jason De Stigter, business lead for capital asset planning at 1898 & Co. "Many companies simply address asset health issues as they arise, rather than proactively managing their assets to maximize value for the organization."

This is where the asset management framework comes in.

ADOPTING A STRUCTURED APPROACH

Since 1994, the U.K.-based Institute of Asset Management (IAM) has led a global effort to formalize the field of asset management. Early concepts of asset management have been refined and classified into six primary areas of activity:

- Strategy and planning
- Asset management decision-making
- Life cycle delivery
- Asset information
- Organization and people
- Risk and review

Today, this framework can be used to guide, organize and oversee strategic, tactical and operational asset management activities. Specifically, it can improve decision-making, reduce total cost of ownership, mitigate risk and provide reassurance that organizational objectives will be achieved consistently throughout the asset life cycle.

"The asset management framework isn't a one-size-fits-all solution," Knight says. "Instead, it provides guidelines that help companies incorporate their existing asset management activities into a strategic framework in order to make smarter, more cost-effective and risk-aware decisions."

For instance, it's not uncommon for companies to spend millions of dollars on asset management tools only to discover the data or data models don't provide the information they need to make better decisions.

"The asset management framework helps companies avoid this fate," De Stigter says. "Because the framework focuses on strategy first, companies start by defining the decisions they need to make to drive value for the organization. Then they identify the gaps in their existing data, data models or data quality — before investing in new tools to fill those gaps." »

Strategic Asset Management in Action

A structured approach to asset management provides benefits in many industries.

One *Fortune* 500 food and consumer products manufacturer provides an interesting example. In the past, the company managed its capital expenditure needs for hundreds of sites around the globe through spreadsheets, emails, and nonstandardized data and workflows. Recently, company leaders sought a more efficient solution.

"Their initial goal was to easily enrich existing processes and data to support better decision-making," says Bryan Claxton, senior product manager for software solutions at 1898 & Co. "But the ultimate goal was to obtain accurate, standardized and current asset conditions in order to prioritize expenditure of a nine-figure budget."

AssetLens, a proprietary cloud-based software developed by 1898 & Co., is delivering the capabilities this confidential client sought. First, a multidisciplinary implementation team configured AssetLens to integrate asset data from across the organization. Then the data was enriched with key health and priority metrics to inform capital expenditure decisions. As a mobile-first system, AssetLens now allows employees to enter, edit and review asset data from the factory floor.

"Because this client approached asset management strategically, its employees worldwide can now visualize existing asset data, access insights in the form of asset health and priorities, and make more informed decisions on effective capital budget allocation," Claxton says.

MOVING TOWARD PRESCRIPTIVE ANALYTICS

Identifying the tools and processes needed to optimize a company's asset management program can be challenging, particularly when the ultimate goal is to begin incorporating predictive technologies.

As organizations become more mature in terms of managing information, they start to mine it for insight into how to make improvements. The first step is performing descriptive analytics. This most basic form of analytics answers the question, "What has happened?" The next step is predictive analytics, which answers another question: "What could happen in the future based on previous trends and patterns?"

The ultimate goal is prescriptive analytics, which looks at possible outcomes and results of actions that are likely to maximize key business metrics. It uses simulation and optimization to ask, "What should my business do?"

Throughout this process, many companies will benefit from guidance on the asset management framework, as well as direction around defining and achieving a desired future state, managing risks and augmenting tools. Companies also benefit from the experience of engineers who understand how their assets are constructed, maintained and operated. Finally, a strong technology practice can deliver repeatable solutions across an organization, thereby making asset data accessible to all stakeholders.

"Pulling all of these elements together allows us to better advise clients on how to determine value and, thus, how to manage their assets to derive optimal total value," Knight says. "As companies integrate assets into the value chain, they overcome frequently held views that assets are an overhead cost or somehow ancillary to the enterprise, and recognize assets as a core contributor to organizational value."

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>
> Mark Knight

Anticipating to Avoid Problems in the Power Industry

Many industries can benefit from predictive technologies, but the need is especially acute for electric utilities. Such utilities have a public responsibility to provide highly reliable power, not only to business and residential districts but to critical facilities like hospitals and prisons. Delivering this level of reliability requires constant vigilance in the form of monitoring asset health, anticipating repairs and upgrading infrastructure.

Unfortunately, although utilities collect large amounts of data, they struggle to access the information they need to make essential maintenance and capital planning decisions. Data typically resides in dozens of disparate systems, making it difficult to form a detailed understanding of a single asset, let alone draw meaningful conclusions across an entire system.

"Utilities can overcome this challenge by moving toward information modeling," says Chrissy Carr, client strategy director for networks, integration and automation at Burns & McDonnell. "With an accurate, up-to-date model, a telecom or substation director can simply click on an asset to obtain information such as an FCC license number, maintenance history or manufacturer's drawings."

The next step is to install sensors that monitor and report equipment status in real time, so utilities can recognize problems sooner. For instance, monitoring partial discharge and dissolved gas on transformers allows utilities to identify and repair failing equipment before it quits working entirely. This approach increases the utility's overall reliability by preventing blackouts. It also could reduce power usage by allowing utilities to keep equipment running effectively at all times.

"Implementing information modeling and predictive technologies helps utilities increase reliability and budget effectively for maintenance and capital expenses," Carr says. "Organizations must identify what data is needed, implement sensors to collect that data and, if necessary, procure the algorithms to perform predictive analytics."

DISCOVER A DEEPER EXPLANATION OF THE MANY BENEFITS ASSOCIATED WITH IMPLEMENTING A STRATEGIC ASSET MANAGEMENT FRAMEWORK.

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