Use data to anticipate issues
Lumada Asset Performance Management (APM)

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Success in asset-intensive utilities is dependent on the reliability of critical assets.

Many utilities today struggle with assets that are near or even past their expected life, and significant resources are put into trying to prolong the equipment lifespan. Many maintenance programs are still done with a time- or usage-based approach, and this means that visibility into real-time conditions that could impact the risk of failure may not be considered. When the asset's condition is not taken into consideration as part of asset maintenance and management, unnecessary maintenance may be performed.

Unnecessary maintenance is an additional cost that could have been avoided. Based on data from Shell Group, 68% of time-based maintenance provides no added value and/or does not lead to any corrective action. Additionally, every time you perform maintenance, you may generate additional and unintended equipment failures as a consequence of the maintenance performed.

A catastrophic transformer failure can cost anywhere between three and 10 times the cost of the equipment itself – in some cases, the failure and related substation damage can cost as much as $25M USD.

And this is just the financial cost; there is also an increased risk of work crew safety, regulatory fines, environmental risk and a company's reputation to consider when thousands of customers can be affected by a single outage.

The good news is, there is a better way: an asset health approach to maintenance.

Today, many utilities approach asset health with an ad hoc mix of information from multiple sources, like time- and usage-based inspection data, alarms from remote sensors, and industrial enterprise systems.

Often, this data is trapped in functional silos across the business and utilities rely heavily on human experts to manually review this data to identify trends and address the highest risks of failure across the asset portfolio. As more of these experts retire, utilities will need to preserve this expertise.

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Lumada APM combines decades of subject matter expertise in transformer manufacturing and maintenance, with historical and real-time data analysis. By integrating operational technology with its information technology, organizations have the ability to consolidate the wealth of data on system loads, markets, inspections and equipment sensors into meaningful insights on the health of their critical assets.

Lumada APM doesn't just alert you when assets are about to fail; it also helps anticipate issues before they turn into problems.

Using this improved level of insight, utilities can take immediate action to prioritize their response and resources. Organizations can optimize their maintenance spend to get the most from their assets and budget, build business cases for repair/replace decisions and codify the expertise of staff in order to make it accessible for new employees and even maintenance outsource partners.

Some of the expected benefits of deploying an asset health strategy to critical infrastructure include:

• Fewer catastrophic equipment failures
• Optimize operational costs
• Extend asset life and optimizing asset replacement
• Reduce unplanned outages
• Lower planned outage costs
• Increased safety
• Enhanced regulatory compliance and reporting

In practice, Lumada APM will lead to enhanced knowledge where the most valuable assets are mapped and categorized according to their current states and expected lifetime. The result is a reduced risk of critical asset failure by combining many types of asset data to form predictive and actionable intelligence around the health of critical assets.

Aging equipment is a long-term challenge for many electric utilities, maintaining and extending the life of new infrastructure is a challenge for others. Utilities with either of these issues will require focused and consistent efforts — along with innovative technology — to meet both current and future challenges.

Fortunately, technology now exists with Lumada APM. This solution offers an end-to-end asset health management system that manages the vast amounts of information utilities have on their assets. Lumada APM provides a view of assets in one place with predictive asset health management with actionable data, not alerts.

This is supported by decades of experience from manufacturing and subject matter experts. Lumada APM will demonstrate a return on investment through reduced operating and maintenance costs and reduced capital expenditures, maximizing its value throughout the enterprise.

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