ARC BRIEF

JANUARY 27, 2016

# Production Asset Reliability Provides Information Driven Asset Reliability

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## Keywords

Analytics, Asset Performance Management, Operational Excellence, Operational Risk, Production Asset Reliability

What is the value of a one percent improvement in production worth to your organization? Would you allocate the resources to achieve this improvement if the return on your investment is achievable in 12 to 18 months? Improvements and returns such as these are attainable by adding context to asset data to create insightful and actionable information.

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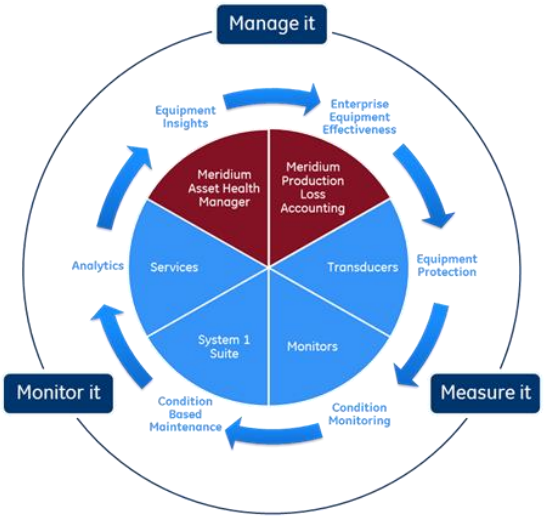
Asset management strategies have emerged as essential to creating competitive advantage with reliability as the key to additional manufacturing throughput without creating additional capacity. By extracting maximum value from plant assets through the application of an asset management system, the savings resulting from increased throughput and reduced maintenance costs can increase profitability. By connecting devices, information, and people, leading edge solutions such as Production Asset Reliability (PAR) developed by market leaders in their respective fields, GE and Meridium, provide a holistic view of asset heath to better manage plant operations, asset management strategy, and operational risk.

## PAR Manages Operational Risk

Industrial organizations are constantly challenged to increase workplace and process safety, improve asset performance, and gain visibility into operational risks before an accident or incident occurs. Yet asset-intensive industries continue to suffer from unplanned downtime, failure to meet planned production rates, and too many safety accidents and environmental incidents. For corporate officers, catastrophic events can have life-

altering consequences as social tolerance for such occurrences diminishes. In an unprecedented September 2015 decision, the former CEO and President of the Peanut Corporation of America was sentenced to 28 years in prison for crimes stemming from a 2009 salmonella outbreak traced to his peanut roasting company. Another executive was sentenced to 20 years and the Quality Assurance Manager received a five year sentence. All were convicted on various charges related to knowingly selling tainted products. According the Centers for Disease Control, the outbreak sickened 714 people in 46 states and potentially contributed to nine deaths.




**PAR Enables Predictive Condition-based Maintenance**

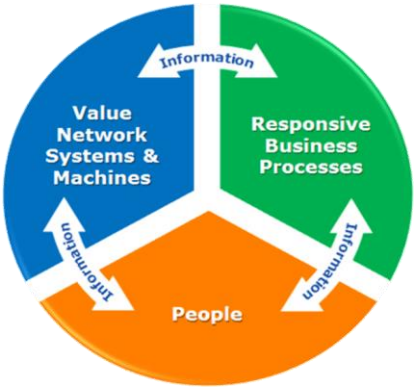
Operational risk can never be fully eliminated, but without proactively managing and mitigating it, manufacturers will continue to struggle to improve profitability due to continued unplanned downtime, lost productivity, collateral brand damage, and loss of shareholder value. These trends challenge the C-suite to make plants safer and more reliable. In addition, the practice of making decisions based on the opinions of in-house experts, tribal knowledge, and rules-of-thumb can be risky. An asset performance management (APM) strategy can increase visibility into plant performance and enable greater control over assets, processes, and people. An APM strategy should establish a clear line of sight from the plant floor to the boardroom. It requires a modern approach built on data collection and analysis with tools such as Production Asset Reliability that increase visibility into assets, processes, and people to achieve the ultimate goal of safe, secure, and well-controlled operations.

## PAR Reveals Hidden Value

Modern plants generate mountains of data from a variety of sources. The challenge is sifting through the data to reveal the hidden threats as well as opportunities. PAR combines the power of GE's condition monitoring and diagnostics platform, System 1 and Meridium's strategy and asset perfor-

mance suite to transform operational, monitoring, and maintenance data into a holistic view of asset health. PAR utilizes comparative analytics to raise the visibility of production asset condition and provide near real-time views of operational data. The common data, information, and insights available with PAR permit new opportunities to optimize asset availability and operational performance to be revealed.

PAR's value is in providing consistent context to asset and performance data and delivering information that is both insightful and actionable to all levels of the enterprise. When all levels of the enterprise have access to the same information, in the right context, they collaborate more effectively. Long- and short-term decisions regarding maintenance activities, planning, investment, and resource management are more reliable because they are information-driven.




**ARC Information Driven Manufacturing Model**

PAR enables proactive maintenance based on asset condition monitoring and reliability centered maintenance in manner that allows the value of asset condition monitoring to be quantified. Close integration with the enterprise asset management systems (EAM) facilitates work order management. PAR utilizes Production Loss Analysis (PLA) to reveal opportunities for improvement by reconciling production targets in a standardized manner to support metrics such as mechanical availability, operation availability, and on-stream factor. PLA's powerful analysis and reporting capabilities visualize production losses and their impact enabling bad actors to be identified and eliminated, and gaps to be closed. PLA also promotes alignment of operations and maintenance activities by accounting for all losses as well as the financial impact of those losses.

## The Journey to Operational Excellence

Operational Excellence (OpX) is a business goal based on continuous improvement intended to deliver measurable performance improvement by working more effectively and reducing cost. In the current business climate, a sound APM strategy that includes optimizing the maintenance spend, reducing unplanned downtime, improving asset reliability, and reducing operational risk is a required element for success.

Unlike common KPIs and metrics, OpX is unmeasurable in any direct fashion. However, its impact is clearly visible in performance metrics related to safety, the environment, compliance, quality, productivity, yield and cost. PAR can make a significant contribution to OpX by connecting assets, information, and people in a manner that empowers people at all levels of the enterprise to make information-driven decisions about assets. By connecting informational and operational technologies, the PAR solution harnesses the potential of data to optimize plant performance and enable the practice proactive maintenance.

## Conclusion

The industrial space is becoming much more dynamic. Manufacturers need to recognize (or even better, anticipate) rapidly changing situations in order to take appropriate measures in time to make a difference. By leveraging multiple data sources in a single system, PAR enables better management of not only processes but data too. Enterprises that embrace information driven decisions are in a better position to leverage next-gen solutions such as PAR to make smarter business decisions faster.

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