SYMPHONY AZIMA AI

PEAK INDUSTRIAL PERFORMANCE

APM Data 360

As manufacturing companies ramp their adoption of Smart Manufacturing (or Factory 4.0), many continue to struggle with defining what exactly the "IT/OT convergence" means for them. At its core, the concept is getting operational people and platforms to work with information technology personnel and systems to create greater efficiencies and overall reliability. For most manufacturing companies, sensor data, usually consisting of temperature, vibration, current, pressure, etc., and application data (such as SAP, IBM Maximo, Honeywell, etc.) when combined with operational platforms, provides managers with up-to-date information on asset behavior, conditions and manufacturing processes.

The Challenges

Having that immediate, data-based feedback is only half the equation of Smart Manufacturing value. The other half of the equation presents a formidable challenge. That is, where to store and what to do with the mountains of generated data. Specifically, how to secure it, how to process it, and what and how to analyze all of it in a way that provides immediate insights.

The first issue is aggregating the IoT data sets in a single place, where they can be easily analyzed and correlated with other relevant data sets using big data processing capabilities. This pooling place is otherwise known as a "data lake." A data lake is a storage repository that holds a vast amount of raw data in its native format. The data structure and requirements are not defined until the data is needed. In comparison, a data warehouse only stores data that has been modeled or structured, meaning that it has to be processed and organized before warehouse loading.

The second issue is applying analytics across the data lake. Solving this issue requires understanding what data sets to focus on and tools to use to process and combine them to identify discernible patterns and glean actionable insights. In an industrial "IoT-enabled" enterprise, the data lake isn't merely a repository that supports more efficient traditional business intelligence (BI), it's the heart of a digitally-transformed enterprise's ability to increase operational intelligence (OI). Having a data lake based on years of comprehensive asset, vibration, and fault analyses, empowers manufacturers to make near-real-time optimizations and can provide significant competitive advantages.

Introducing APM Data 360

APM Data 360™ by Symphony AzimaAI is an asset benchmarking data lake for rotating machines. Based on 25+ years of asset performance, vibration, fault, and repair data, our solution includes analytics tools to help you quickly and easily spot trends and patterns. APM Data 360 offers the flexibility to add your data streams to the data lake as well as let you use other analytic tools or code your own for custom views.

How Does It Work?

Derived from decades of data collected from:

81,000
unique assets

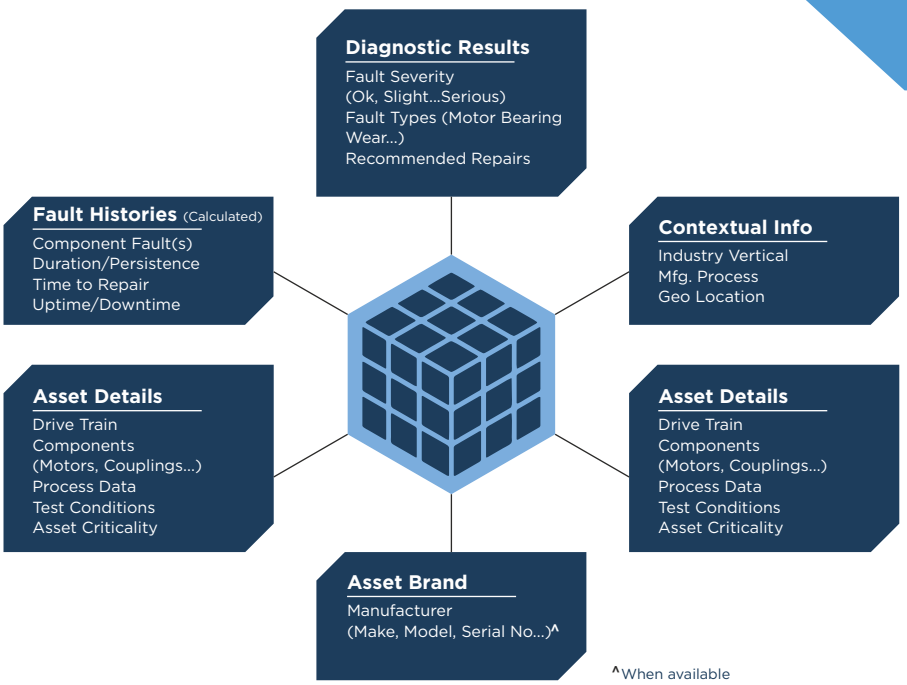
148,500
components such as motors, coupling, pumps, etc.

2,256,300
machine tests

127,632
component-specific faults

67 trillion
individual vibration data points

APM Data 360 provides an extensive and rich data lake that, in turn, supports precise analysis and benchmarking. Combined with deep machine learning algorithms, it goes one step further by providing solid predictions and recommended actions.



^When available

Solution benefits include:

Reliability Growth helps you make better strategic decisions by indicating whether data measurements are random or follow a trend. Best of all, reduce costs by improving fault rates and improving maintenance practices

Contextual Comparative Equipment Analysis based on application, operating modes, make, sub-components, fault types, seasonal trends, and geo-location, it enables you to identify failure frequency and severity for various kinds of similar equipment or processes. And, it allows you to estimate the total cost of ownership, OEE impact, and maintenance

Reliability Benchmarking helps you compare your asset performance against industry peers. Specifically, you can gather insights from comparisons against manufacturers' claims, improve engineering design, and leverage intelligence for better transaction and warranty pricing.

Why Choose APM Data 360?

Today there are few solutions today that can provide a rich data lake in conjunction with a deep machine learning to create innovative predictive models – whether you are building a new plant, upgrading your current assets, or looking to compare how your assets are performance versus others. With APM Data 360, you get automatic metric calculations and comparisons without sacrificing the flexibility to incorporate your data into the lake or use your own analytics toolsets.

APM Data 360 bridges real-world inputs to real-world outputs leveraging the speed and power of the digital world to integrate more information, adapt to it and evolve operations for better business outcomes. Manufacturers can tackle challenges that previously were either too complex, too costly, and time-consuming or lacked adequate information to determine a root cause and validate. By adding artificial intelligence, machine learning, and deep learning, APM Data 360 can not only help you more quickly and accurately identify patterns and trends from historical data, but it can learn and adapt as new data comes in. Analytics can merge previously disparate data from various sources so that assembly lines can get smarter.

About Symphony AzimaAI

Symphony AzimaAI is the emerging leader of artificial intelligence-based monitoring, analysis, and prediction solutions that optimize the health and operational performance of industrial assets and processes. Our cloud-based platform integrates a wide variety of data streams with proven analysis models and deep machine learning to illuminate anomalies and recommend pre-emptive actions.

Headquartered in Boston, Massachusetts, Symphony AzimaAI serves a wide-range of industries from process to discrete manufacturing to defense.

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