

WHITEPAPER

Why Analytics are Vital to Your Maintenance Strategy



PROMETHEUS GROUP



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Most maintenance strategies are focused on reducing downtime, optimizing output, managing costs, and maximizing resources. Achieving any of these goals requires tracking and analyzing different variables to help drive decision-making.

Unless an organization can identify where inefficiencies lie, it will be very difficult to understand how to improve current processes.

Identifying these inefficiencies can prove quite difficult. Most companies have thousands or even millions of data points to sift through. Finding the inefficiency is the first step, but it isn't enough. The information must be made known to the appropriate party to ensure it will be acted on.

Most companies have figured out how to gather data, but many still struggle with what to do with it. Data needs to be made actionable to advance the maintenance strategy,

Analytics: How We Got Here

The latest Worldwide Semiannual Big Data and Analytics Spending Guide from research firm International Data Corporation (IDC) forecasts worldwide revenues for big data and business analytics (BDA) solutions to reach US\$260 billion in 2022.

More organizations are making investments in analytics. This trend seems likely to continue. A report from

research firm International Data Corporation (IDC) predicts spending on business analytics and big data initiatives to reach \$260 billion in 2022.¹

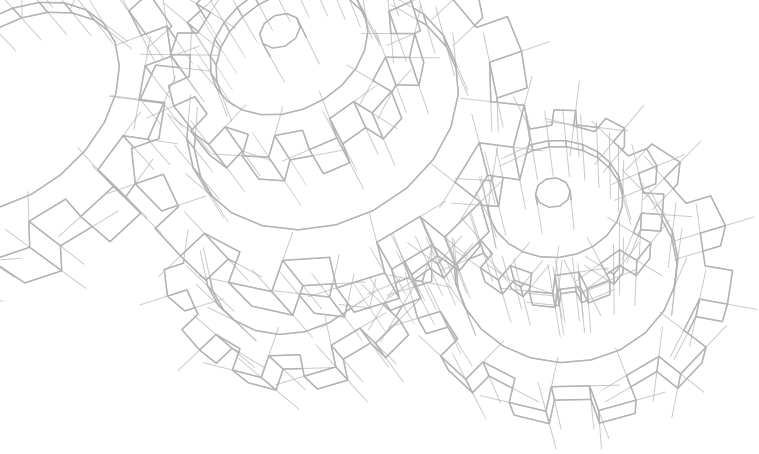
However, this spending is not equal. Some companies are on the leading edge of analytics, while others are either trying to catch up or simply falling behind.

A joint report from Forbes Insights and Cisco highlights this gap. The research surveyed C-suite executives at 207 large enterprises in North America and Europe and identified companies that can be considered analytics leaders. These leaders represent only 16 percent of the total sample, but they are reaping disproportionate rewards. According to the report, a whopping 97 percent of them are reporting revenue growth because of their analytics efforts.²

Analytics can play a major role in asset performance management and the overall business strategy of the company by analyzing past trends and gauging the efficiency of current processes.

However, truly impactful analytics be focused on a micro-level – analyzing all aspects of the business, including all the departments that lie within the organization. Because each department has its own set of goals and strategies, it is important for a company to have an analytics solution that understands each department and can identify where the efficiencies and opportunities exist.

¹ IDC, Worldwide Big Data and Analytics Spending Guide ² Forbes Insights/Cisco: Advanced Analytics: The Key to Becoming a Data-Driven Enterprise



Maintenance Strategy and How Analytics Fits In

As mentioned above, analytics need to be part of all business processes and not just the overall processes. Every department can find value in thorough and appropriate analytics. This is especially true of the maintenance organization.

It is essential for organizations to invest in a targeted analytics solution that understands the nature of the business and each department within. Without a proper maintenance report suite that identifies meaningful data, an analytics solution is just a computation of data points lacking any real insight.

Maintenance teams need to assess two main areas to exploit asset data and enable maintenance decision-makers to take appropriate actions. These areas can be defined as “what they CAN know” and “what they NEED to know.” Maintenance teams should focus on what they need to know. This will prevent them being overwhelmed by the data while enabling them to make the best decisions and take the most appropriate actions.



Focus on What You Need to Know

Assets are complex. They often have multiple parts, any one of which can experience numerous failure modes. Maintenance teams must quickly and accurately determine why the asset failed and what is needed to bring it back online. The integration of asset data and maintenance analytics software is necessary to get a full understanding of your asset health, determine the probability of a failure, and find routes to prevent failures.

Decision-making depends on data, specifically on failure and reliability data. This means that data collection and analysis is fundamental for decision-making. Processes need to support the accurate, timely, and completeness of data collection. Better data and analysis, as well as a better understanding of your Key Performance Indicators (KPIs), makes it easier to find the root cause of failure, and in turn, make appropriate decisions to prevent or repair a failure.

Maintenance analytics are relatively simple under a reactive model. An asset fails in some way, a crew is dispatched, and the asset is brought back online. All the costs associated with that work are captured, updated, and stored. However, maintenance analytics become more complicated as an organization evolves from reactive to using a preventive or predictive model. Failure modes must be accurately analyzed. Very often, copious amounts of data dealing with temperature, oil analysis, and vibration must be stored and subjected to analysis so insights can be drawn and put to work. The complexity rises, but progressive maintenance organizations recognize that the valuable and actionable insights gained are worthwhile.

Doing this effectively is a big challenge, which is why Prometheus Group built Prometheus Reporting & Analytics. The solution gives you the power to not only able to gather the data and make it actionable according to maintenance KPIs and organizational goals, but also enables that data to flow between any and all systems, including your ERP, CMMS, or EAM, and even your organization’s data historian.



Analytics are Vital to Your Maintenance Strategy

Promote Information Sharing

The first and most obvious benefit of a good analytics tool for asset performance management is how easy it makes it to share information. Data is organized and analyzed in maintenance reports that can be downloaded, shared, and reviewed to promote collaboration and teamwork.

Identify Problem Areas

Identifying problem areas, remedying them, and preventing them from reoccurring is the goal of most maintenance initiatives. When you can’t trust your data, it is impossible to identify, fix and prevent problem areas.

Advance Data Transparency

Data transparency is crucial to ensuring that what people are reporting is honest and not an unintentional fabrication from what they perceive to be true. When people are tasked with self reporting on their performance, they often will see themselves or their work in a favourable light. With accurate data and a maintenance analytics tool like Prometheus Reporting & Analytics, it is almost impossible to fudge data. Everything is recorded and available for analysis.

Improve Business Intelligence

Knowledge and analytics have the power to improve business intelligence. When you have promoted information sharing, identified problem areas, and advanced data transparency, you can see and act upon the opportunities for process improvements. Prometheus Reporting & Analytics gives you the control to look at trending data. This gives you the ability to see if your maintenance organization is moving in the right direction and helps to identify the steps needed to improve.



Looking Forward: Analytics and AI

Analytics are becoming increasingly important for businesses and will continue to be a point of emphasis as analytics and AI become more closely linked. Adaptive algorithms that use machine learning analyze data and provide actionable insights much faster than any human can manage.



The ability to incorporating machine learning into analytics will serve maintenance organizations well as it will allow for even deeper learning along with previously unidentifiable observations and relationships that can drive even more efficient processes.

Prometheus Reporting & Analytics delivers intuitive, role-based, scalable business intelligence across your organization. Reporting & Analytics extracts real-time asset data from any system or database and enables fully interactive data visualization that can be broken down in user-based layouts across individual sites or at the enterprise level. Prometheus Group works closely with our customers to ensure we understand their reporting and analytics needs, leading to successful implementation and rollout. In addition, we support many reports out of the box and we have a library of maintenance KPIs sourced from industry best practices.

For more information on features and functionality, please visit our website and view the Reporting & Analytics section.

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About Prometheus Group

Prometheus Group is a leading global provider of comprehensive and intuitive enterprise asset management software solutions that work within ERP systems and span the full work management life cycle for both maintenance and operations. Developed jointly with end users, Prometheus software enhances the customer experience for planning, scheduling, and executing work for both routine maintenance and shutdowns and turnarounds, all while protecting the workforce with safety solutions and electronic permit to work. Our straight-forward functionality, graphical visualization, and simple processes enable customers to increase productivity, reduce costs, and improve reporting. For more information, please visit www.prometheusgroup.com.