

WHITEPAPER

Maintenance Analytics: The Most Powerful Change Agent



PROMETHEUS GROUP



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Before deciding about a case, a judge will review all the facts and evidence to ensure the decision appropriately reflects the law and the actions that have transpired. The types of evidence provided to the judge have changed with the increase in new technologies and methodologies. Previously unavailable technology — such as DNA testing, fingerprint analysis, and GPS tracking — has made evidence more concrete, accurate, and useful. A judge can review these reports to better understand the events of the case and make a more informed decision.

Technology has helped many industries make better and more informed decisions. Like in our judicial example, maintenance organizations are experiencing a technological revolution because of concepts and technologies like IIoT, Industry 4.0, and smart factories. These technological advancements increase the availability and accuracy of data and asset information. This in turn can be utilized to make informed decisions and develop a decision-making process that includes enhanced capabilities for knowledge discovery.

The sheer volume of data poses a new challenge for companies.

More data is not always a good thing. Companies are being swamped with large volumes of data without the proper processes or systems in place to manage and make sense of it.

Maintenance decisions are becoming more complex because of the vast amount of information. The benefits

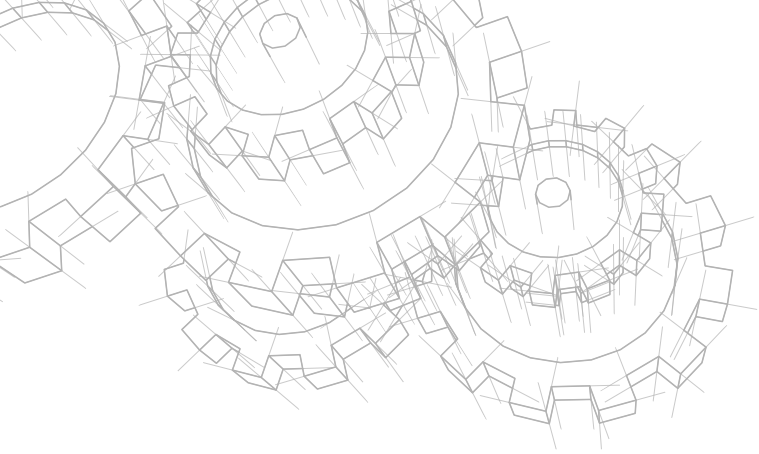
of better access to your asset data are only realized when you can easily understand and utilize that data as part of your decision-making process.

Maintenance teams need to assess two main areas to exploit asset data and enable decision-makers to take appropriate actions: what they can know and what they need to know. Maintenance teams should focus on what they need to know, rather than what they can know. This helps prevent teams from being overwhelmed by the data.

Focus on What You Need to Know

Assets are complex. They often have multiple parts, all of which can experience their own range of failure modes. Maintenance teams need to be able to quickly and accurately determine why the asset failed and the steps needed to restore its function. The integration of asset data and maintenance analytics software is necessary to get a full understanding of your asset health, determine the probability of failures, and find routes to prevent failures.

Decision-making depends on the data, specifically on failure and reliability data. 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. Knowledge of root causes enables teams to make better decisions on how to prevent or repair future failures.



Why Do We Need Maintenance Analytics Software?

The mass influx of data makes maintenance analytics software necessary for organizations to manage, understand, and utilize data to better their processes and decision-making. Maintenance analytics should be aiming to answer the following questions to make decisions easier and more educated:

- What has happened?
- Why did it happen?
- What will happen in the future?
- What needs to be done?

Continuous improvement of your processes requires deep insight into your assets, asset health, and the processes themselves. Software like Prometheus Reporting & Analytics assists in the filtering and organization of asset data to ensure maintenance teams can focus in on the KPIs they need to know to make the most educated decisions.

How Do Analytics Improve Processes?

Tracking your assets health means you can get a clear picture of where you stand and what areas you need to improve. Prometheus Reporting & Analytics is a single, consolidated data warehouse that makes the onslaught of data easier to understand and manage. The solution provides actionable data out-of-the-box to drive improvements in maintenance and decision-making capabilities. It extends the reporting capability of your ERP, EAM, or CMMS by consolidating maintenance data and history into a single live reporting solution. This data centralization enables visibility at all levels, including corporate, region, site, department, equipment, resource, task, and more. KPIs can be used to drive continuous improvement.

Data centralization enables visibility at all levels.

Analytics software gives you visibility into current practices and helps to unify your various departments towards a common goal. It gives each party the information they need to best manage their respective piece while also keeping everyone on the same page.

The right maintenance analytics solution gives your maintenance teams the ability to immediately start focusing on problem areas, establishing business priorities, and making informed decisions about their overall maintenance strategy.

Getting the Most from Reports

Promote Information Sharing

The first noticeable benefit of an analytics tool is often related to ease of information sharing. Data is organized and analyzed in reports that can be downloaded, shared, and reviewed to promote collaboration and teamwork.

When people, teams, and departments have the same information to keep them on the same page, they can make more educated decisions for their maintenance initiatives.

Identify Problem Areas

The overall goal of most maintenance initiatives is to identify problem areas, finding ways to mitigate them, and preventing them from reoccurring. When you can't trust your data, it is impossible to identify, fix, and prevent these problem areas.

A reporting and analytics solution designed for asset management makes it easy for maintenance teams to understand their data. Just as vital, it makes it easy for maintenance teams to trust their data by providing reports that can be assessed and drilled into to check data quality and cleanliness.

For example, a maintenance team may want to determine how many work orders are more than two years old. Using Prometheus Reporting & Analytics, they can utilize the Work Order Aging report. Once they have this number, they can determine why this work has been

left behind. Has the work been completed and the work order was never closed? Does the work keep getting bumped? Information like this is invaluable in ensuring that data has integrity and can be used for correcting and preventing problems as well as future decision-making.

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 solution like Prometheus Reporting & Analytics, it is almost impossible to fudge data. Everything is recorded and available for analysis.

When maintenance teams are forced to see what is really occurring, based on data and analytics, they can make more informed decisions about which actions to take to improve. Reports send a message that they can confidently listen to and act upon. Prometheus Reporting & Analytics makes it easy to drill down to the source of the data on every report and increase this data transparency.

Improve Business Intelligence

Analytics has 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 data trends, allowing you to see if your maintenance organization is moving in the right direction or what is preventing you from improvement.

Analytics drives maintenance teams towards educated decision-making.

Prometheus Reporting & Analytics offers reports such as Percentage of Emergency Work Orders, Top 10 Bad Actors, and Count of Most Common Cause Codes that capture information about your asset health, workforce utilization, and costs.

Reports like these drive maintenance teams towards more educated decisions on how to improve maintenance processes and business intelligence.



Conclusion

W. Edwards Deming once said, “Without data you’re just another person with an opinion.” Data, and the ability to analyze, understand, and utilize that data, is the driving force behind all major decisions. If you can make your point, and back it up with evidence, you can make change.

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.