

WHITEPAPER

# Building a Proactive Enterprise Maintenance Strategy

## How High-Quality Data Can Transform Processes



# Data is the lifeblood of today’s enterprises.

This is a commonly heard phrase, but its importance simply cannot be overstated when we consider how today’s digital ecosystems operate. The astronomical scale by which data generation has already grown and is expected to grow even more by 2025 (up to 180 zettabytes) puts this importance into perspective. However, only a very small amount of this data is retained – accounting for just 2% of globally collected data being saved and retained in 2021<sup>1</sup>. While this highlights the sheer amount of generated information that goes to waste, it also raises a greater question: how much of the retained data – small as it is – contains insights that

enterprises can leverage effectively?

As operational needs continue to evolve and become more complex, unexpected disruptions can be catastrophic to businesses. Optimized data can empower maintenance management systems to operate in a proactive, even predictive, capacity rather than a reactive one – ensuring that users can take direct control of their enterprise needs. Incorporating the right data collection and analysis processes will help to mitigate the risk of losing valuable insights that can be leveraged to streamline overall enterprise operations.

## Quality vs. Quantity: Why Data Optimization Matters

Modern enterprises depend on data that comes in both structured and unstructured formats. Of the two, the latter is potentially full of unusable information and other inconsistencies that can make it challenging to get critical and comprehensive insights. By utilizing data maintenance and analysis tools, this information can be organized and cleaned so that any pertinent insights can be used effectively. When this enhanced data is put to use, it can bring a marked number of benefits to the respective company including:



Agile and dynamic decision making



Greater ROI and IT infrastructure building



Improved brand value and reputation



Greater IT operational value flexibility

Data quality management falls under the scope of broader data integrity initiatives, which also include data governance and security. However, if the quality of data is compromised, it will severely affect all other aspects of an enterprise’s data integrity strategy.

<sup>1</sup> Volume of data/information created, captured, copied and consumed worldwide from 2010 to 2025: <https://www.statista.com/statistics/871513/worldwide-data-created/>



## The Cloud as an Opportunity: Enterprise Awareness of this Shift

Traditional maintenance strategies have relied heavily on being restricted to mostly on-premises systems. This limited the scope for expansive data streams that are useful for analysis and decision-making. As more leaders realize the value of data in bettering the decision-making process and streamlining maintenance tasks, the shift to cloud has opened the floodgates for even more data tracking into the future.

Enterprises now are hungrier than ever before to

leverage actionable data to meet the scalability requirements of their maintenance programs. With the overall dip in cloud storage costs, this shift from on-premise to cloud-based management has become a no brainer for most organizations. It is with this backdrop that the importance of identifying quality data and combining it with an agile maintenance management system will be the defining factor in sustainable growth and efficiency for businesses.

## Establishing and Improving Data Quality for Today's Enterprises

Poor data quality is one of the greatest challenges faced by today's digital-first enterprises. The daunting prospect of analyzing, curating, and leveraging useful insights from the sheer mass of daily-generated data is a difficult task. This is made doubly demanding as the dynamic nature of threats and requirements reveal themselves while working across sprawling enterprise ecosystems.

Reports show that organizations lose almost \$12.9 million annually solely due to actions based on low quality data<sup>2</sup>.



**Data quality is directly linked to the quality of decision making. Good quality data provides better leads, better understanding of customers and better customer relationships. Data quality is a competitive advantage that D&A leaders need to improve upon continuously.**

- Melody Chain, Senior Director Analyst at Gartner



<sup>2</sup> How to Improve your Data Quality: <https://www.gartner.com/smarterwithgartner/how-to-improve-your-data-quality>



Different enterprises have various methods of measuring data quality. However, there are a foundational set of traits that enterprises must take into consideration when evaluating the caliber of the data to effectively separate the “good” from the “bad”. The core questions that enterprises should be asking when it comes to data quality must include the following parameters:

1

**How accurate is the information being presented?**

The most critical trait of all, enterprises must be willing to verify the accuracy of the data being gathered by comparing it to real-world applications when possible.

2

**How complete or comprehensive is the data?**

Gaps in data can make it unusable for required applications. Enterprises must be aware that the gathered information has all the necessary components needed it for it to be leveraged effectively.

3

**How reliable is the data?**

Authenticity is critical because mismatches between sources can lead to severe disruption. It is vital that all data is verified to ensure that it can be trusted and not contradictory to other sources.

4

**How relevant is this information?**

Good data is only good if it is relevant to the application needs. Not all data is important, which is why enterprises must be review of the relevance of the data being leveraged for each specific task.

5

**How timely is this information?**

Data becomes obsolete when it is out-of-date. Enterprises need to be dynamic and agile with their operations. Keeping insights up-to-date and in real-time will ensure that its usability is more viable.



## Empowering Maintenance Management Strategies with Actionable Insights: An Enterprise Imperative

As multiple enterprises continue to embed data optimization into every facet of their operations, one system is set to benefit the most from accurate and timely data, regardless of industry. This is maintenance management – a core component of any enterprise and one where real-time, optimized data could mean the difference between success and failure.

However, this is not without its challenges as there have been several hurdles facing data quality management, especially in recent years. As the scope of data quality efforts has moved beyond relational databases and more into big data and

cloud computing systems – the sheer amount of unstructured or semi-structured insights has become seemingly insurmountable. Managing these figures requires taking the reins of both cloud and existing on-premise systems. Additionally, several data privacy and protection laws such as the GDPR are now also expanding data quality mandates by giving customers the right to access any personal data that companies have collected on them. Because of this, these enterprises must be able to ensure that this data is correct and consistent so that their records can meet compliance<sup>3</sup>.

**An effective maintenance management strategy that uses data-driven insights operates in two vectors:**



Analyze and sanitize data to improve its quality and application



Use optimized data to enhance maintenance processes via automation, reporting, UIs, etc.

To maintain a predictive approach to maintenance operations, data management and sanitation must become core practices. With the right maintenance management technology, including automated solutions specifically designed to analyze large volumes of cluttered data, these cultivated insights can then be fed into more advanced maintenance management solutions. These CMMS products include automated schedulers, automated reporting features and other innovative technologies. For example, sensor data from a generator can be collected and analyzed by an automated system that will compare it to previous optimal output charts. This will ensure that any anomalies in power generation are detected and that data is then flagged for technicians to remediate on a timely basis.

The nature of good quality data also ensures that maintenance management systems can achieve a more predictive posture, rather than a reactive one. By benchmarking efficiency with good quality data, it can be fed into systems to spot all inconsistencies that might hamper processes before they happen. A massive impact can be caused by anything as large as the shapes and diameters of piping to something as small as the mismatch of customer names on a spreadsheet.

<sup>3</sup> General Data Protection Act (GDPR): <https://www.gov.uk/data-protection#:~:text=The%20Data%20Protection%20Act%202018%20is%20the%20UK's%20implementation%20of,used%20fairly%2C%20lawfully%20and%20transparently>



**Quality data drives quality maintenance management.**

The benefits that asset managers will see in their operations following the strategic implementation of good data include, but are not limited to:

- ✓ **Improved** asset efficiency and management
- ✓ **Accurate** dashboards that convey reliable and timely information
- ✓ **Automated** report generation that maintains accuracy and data insights
- ✓ **Timely** and scheduled goal and task-oriented maintenance
- ✓ **Improved** risk identification and mitigation

**How Technology Partners Can Help**

Ensuring overall data integrity requires enterprises that are willing to adapt and leverage support from specialists in their field. The right technology partners provide the solutions and expertise to not only maintain quality data management, but to also leverage it in innovative ways.

Effective maintenance management systems will be the cornerstone for any future-forward enterprise. Having a technology partner who understands the data quality needs of organizations can make the data enhancement process a truly successful one. With both analysis and

implementation as core aspects of the larger whole, it is a partner like TMA Systems that ultimately will allow businesses to maximize their gains from the data they have available to them. This is achieved through our robust CMMS solutions like WebTMA, which leverages platform APIs and universal interfaces to provide comprehensive enterprise integrations and data visibility across all platforms. The continued innovation of these same solutions further ensures a sustainable and holistic CMMS that can support a wide range of business requirements.



## The TMA Systems Approach

For over 30 years, TMA Systems has provided ground-breaking, diverse and industry agnostic capabilities that make our products the tried-and-tested solutions that enterprises trust. Operating across a wide number of industries including education, healthcare, corporations, public sector, manufacturing, food and beverage, distribution, and transportation – we aim to push organizations ahead of the curve with highly advanced and easily configurable products and services. This includes a choice selection of agile solutions that provide cloud hosting, mobility, automation, AI, UI and analysis capabilities that will enable you to maximize the potential of all your data.

Helping businesses to manage their facilities in the most efficient way possible is our mission. Our end-to-end technical support (98.6% CSAT rating) paired with our reliable solutions have allowed us to achieve this goal time and time again. TMA Systems is the partner of choice for several leading global enterprises.

We are here to help you transform your organization and optimize your facility management operations which will ensure that good data is put to good use. Let us help you achieve your operations goals by leveraging your real-time insights to make the most informed decisions possible.

# Reliable. Innovative. Trusted.

**Empowering facilities management teams with powerful asset maintenance and management solutions**

TMA Systems provides facilities and asset management solutions that can be easily configured to your needs (CMMS, EAM or IWMS). For more than 30 years, TMA has provided reliable, innovative, and trusted software solutions that help facility executives deliver value by reducing downtime, increasing maintenance productivity, improving equipment reliability, and saving money.

WebTMA, our flagship solution, provides all the functionality you need to manage and maintain your capital assets while optimizing maintenance team productivity.

**Want to know how TMA Systems can help your enterprise leverage state-of-the-art CMMS technology?**

Contact us at

✉ [sales@tmasystems.com](mailto:sales@tmasystems.com)

