

WHITEPAPER

The Business Case for Asset Master Data Quality in Asset Intensive Organizations



PROMETHEUS GROUP



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Introduction

Accurate, complete asset master data is essential for the safe, efficient, effective maintenance and operation of production facilities in asset intensive industries such as oil & gas, chemicals, utilities, and manufacturing.

As organizations contemplate the deployment of advanced automation systems such as IoT, Industry 4.0, and SAP S/4HANA, they find that accurate asset information is essential for realizing the benefits of these advanced systems.

The core master data elements that are critical to achieving these productivity improvements are:

- 1 Equipment Masters: accurate, unambiguous descriptions of all maintainable production equipment with characteristics specified by ISO 14224 or an equivalent standards body.
- 2 Maintenance Bills of Material: summary lists of MRO spare parts required for all anticipated maintenance activities on this production equipment.
- 3 Material Masters: accurate descriptions of the MRO spare parts defined in the bills of material with characteristics specified by UNSPSC or equivalent standards body.

Additional master data elements that are beneficial for top quartile performance of maintenance and MRO supply chain systems include Maintenance Locations, Maintenance Plans, and Task Lists.

The benefits from accurate master data are measurable! They are:

Maintenance Productivity

Industry surveys of asset intensive organizations have found that, on average, **maintenance workers are spending less than 40% of their workdays performing productive maintenance work**. The block of time that is typically larger than this ‘wrench time’ is the time spent searching for parts and information to perform their work.

Prometheus has found that ensuring the accuracy of the core asset master data will improve the likelihood that maintenance workers go to their assigned tasks with an understanding of the work to be performed and the tools and materials required to complete the assignment. **This can improve an organization’s effective ‘wrench time’ by 5-15%.**

With these ‘found’ maintenance man-hours, organizations can reduce their deferred maintenance backlogs and perform additional proactive maintenance activities such as inspections and preventive maintenance tasks.

MRO Supply Chain

Cleansing and standardization of MRO material descriptions can provide a variety of cost savings and productivity improvements to an asset intensive organization.

With cleansed, standardized, and enriched MRO material descriptions, an organization can identify and rationalize duplicate materials. Quite often Prometheus customers have identified identical materials in multiple storage locations with different descriptions. When one storage location is depleted, the organization is forced to perform expedited procurements, not realizing that the material is already available in the facility.

When the organization combines material data clean-up with the creation of accurate equipment masters and bills of material, it is quite simple to search for materials that are not included on any bill of material. In many cases, these materials are obsolete inventory which can be eliminated, along with the corresponding inventory carrying costs.

Accurate bills of material also facilitate improved MRO materials forecasting. MRO materials required for all planned maintenance and predictable ad-hoc maintenance can be purchased at optimum prices through negotiated procurement contracts. This capability can greatly reduce the amount of expedited and free-text MRO materials procurements. In organizations with multiple similar production facilities, MRO spares procurement can be accomplished across facilities, resulting in additional optimization.

Accurate bills of material can also contribute to improved maintenance productivity by ensuring that maintenance activities are not undertaken without all required MRO spare parts in the hands of the maintenance worker.

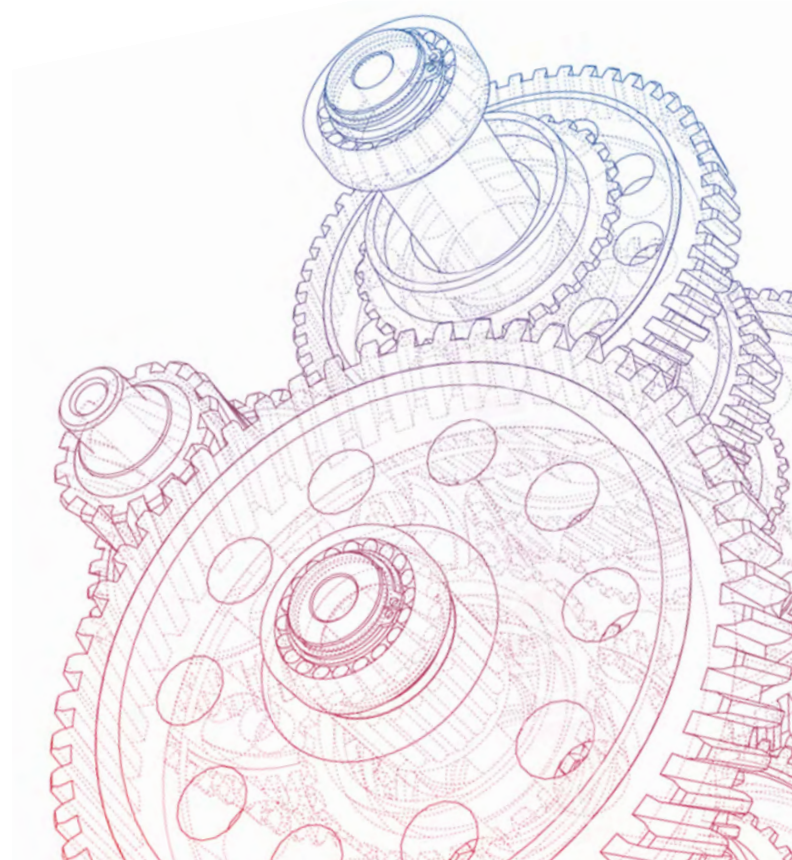
Prometheus frequently finds that cleansing, standardization, and enrichment of an organization's MRO materials descriptions can result in **2-5% reduction of MRO supply chain costs through the identification and rationalization of duplicate materials.**

With the addition of accurate, complete equipment masters and bills of material, Prometheus customers have realized **one-time reductions of MRO spares and related inventory holding costs of 5-30%.** Corresponding improvements through increased negotiated MRO spares procurements and reduction of expedited procurements typically results in **additional annual savings of 10-30% in MRO procurement costs.**

Asset Availability

The reduction in lost maintenance time while awaiting parts logically results in a reduced mean-time-to-repair (MTTR). Likewise, improved MRO materials planning can drastically reduce unplanned downtime and extended shutdown/turnaround. Many Prometheus customers agree that **this improved asset availability can result in an overall increase in corporate EBITDA of 0.5-1%.**

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The Business Impact



IMPROVED MAINTENANCE PRODUCTIVITY

- Increased maintenance wrench-time.
- Added cycles for deferred maintenance.
- Reduced costs per work order due to shortening of completion time.
- Expedited closure of work orders due to accurate equipment data.



INCREASED OPERATIONAL EFFICIENCY

- Increased asset availability.
- Reduced mean-time-to-repair.
- Reduced complexity and integration of data sources.



REDUCED MRO SUPPLY CHAIN COSTS

- Minimized need for expedited procurement.
- Improved prediction of spare parts needs.
- Enhanced identification of obsolete inventory.



DECREASED EH&S RISKS

- Accurate, complete information enables informed decisions, reduced risks for maintenance staff and operators.



REDUCED UNPLANNED DOWNTIME

- Reduced equipment corrective maintenance/break-fix orders.



ACHIEVEMENT OF OPERATIONAL EXCELLENCE

- Enables achievement of top quartile performance through advanced maintenance techniques such as reliability-centered maintenance, risk-based inspection, and performance analytics.



WORKING CAPITAL

- Enables real-time tracking of commitments, costs, spend, and completed work.
- Improves obsolescence management; repair vs. replacement decisions.
- Allows better allocation of funds to support work execution, materials, and projects.



IMPROVED AUDITABILITY

- Ensured regulatory compliance.
- Improved financial accountability.
- Reduced product liability risks from quality.

Learn more about how Prometheus Group can help your organization today.

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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.