BOOM MAINTENANCE MANAGER

Industry

The software solution for modern maintenance management

Andreas Schaller
CEO

Whenever plants and machines require unplanned maintenance, there are costs involved - for example, when plants no longer produce and components suddenly break down.

Our software solutions in the core areas of maintenance and service management prevent this and thus make maintenance an important value-adding factor.

MAINTENANCE AS A COMPETITIVE FACTOR

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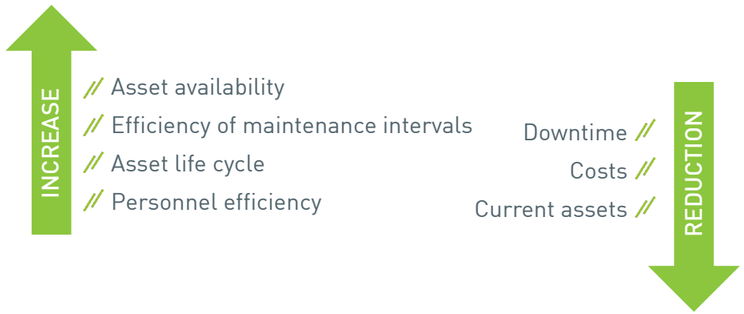
BOOM MAINTENANCE MANAGER

BOOM MAINTENANCE MANAGER (BMM) is the maintenance management system for consistent mapping, standardization and optimization of all maintenance and upkeep processes for systems and infrastructure. For more than 20 years, **BMM** has been supporting manufacturers, operators and service organizations throughout the entire maintenance process - regardless of the size of the company and the preferred maintenance strategy.

The customer decides which process steps are mapped in **BMM**. The software can be flexibly adapted to company-specific requirements and operating conditions, thus supporting your business today - and more importantly: tomorrow.

The **BMM** creates a clear structure of the maintenance management. This enables intelligent and resource-optimized maintenance, which is the essence for high availability at lower costs — over the entire life cycle of the asset.



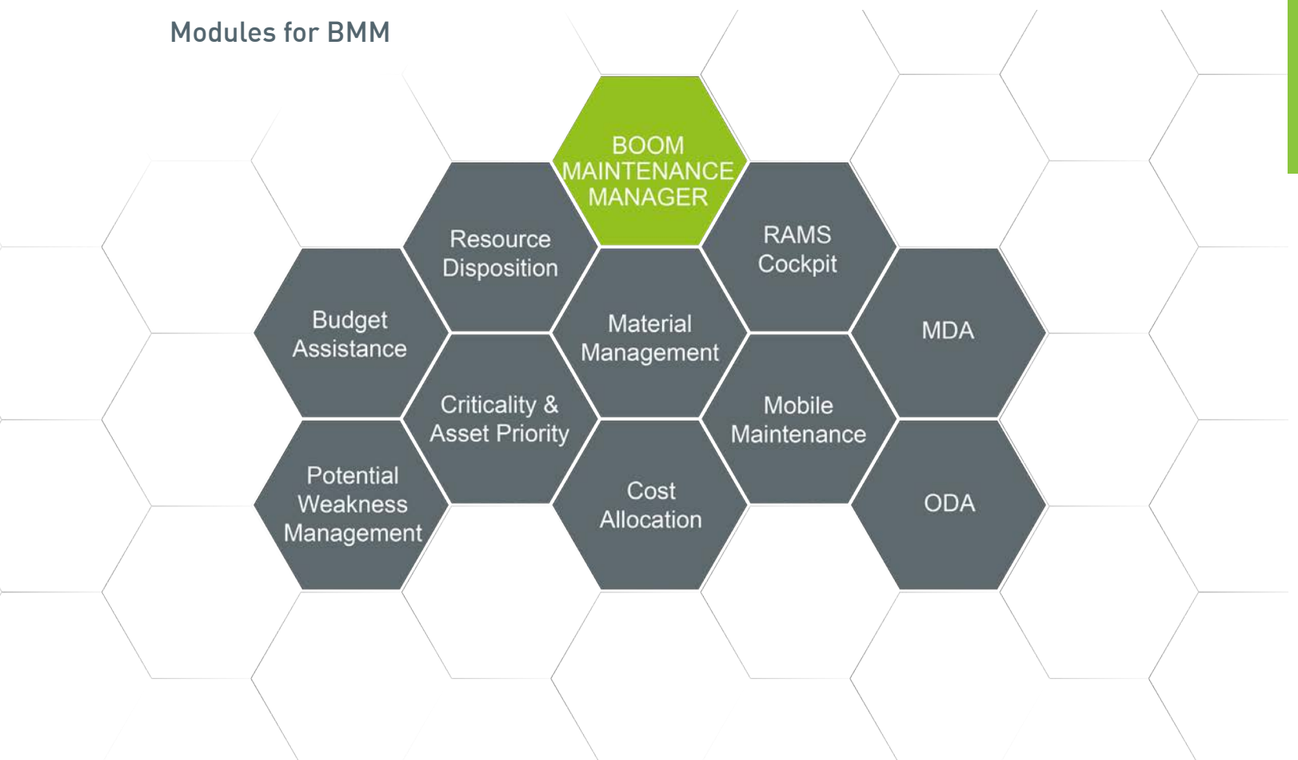
In its basic form, the **BMM** fulfills every fundamental requirement that any maintenance management system must offer:

- Simple and user-friendly operation
- Support of different maintenance strategies
- Management of all assets and components
- Feedback of expenses in cost and financial accounting
- Material disposition and demand monitoring
- Compliance with legal requirements and verification obligations
- Management of work plans and work processes with lead times, documents and checklists for technical feedback

The optional extension modules of the **BMM** module portfolio provide additional functionalities with which the company's maintenance process can be completely mapped.

Individual adaptations of the maintenance management system according to customer requirements are also possible thanks to the **BORA** technology used and the **TOTAL CUSTOMIZING** principle.

Modules for BMM



SYSTEM INTEGRATION

The **BOOM MAINTENANCE MANAGER** can either be used as a stand-alone solution or as a supplement to existing systems. Due to years of experience in interface development, BOOM Software can integrate almost all existing systems and thus offer the convenience of a total solution.

Harmony between ERP systems and BMM

- Consistent process mapping from the technical to the commercial level

Focus of BMM Data sovereignty over all technical and logistical asset aspects and technical maintenance processes

Focus of ERP Data sovereignty over all commercial aspects and inventory management and purchasing

Highlights of the BMM Industry

- Supports predictive, corrective, and condition-based up to predictive maintenance
- Easy navigation between objects and their associated orders, indications and documentation
- Warranty monitoring for optimal use of warranty claims
- Pre-defined categories of objects and components make **BMM** ready for immediate use
- Standard interfaces:
  BMD, InforLN, SAP MM, SAP CO, SAP SD and Navision

USE CASE

The availability of production plants is one of the key parameters in industrial maintenance. Every system failure results in a (partial) production stop and must be remedied as quickly as possible. With continuous monitoring of the assets using software support, infirmities can be detected at an early stage.

The **BOOM MAINTENANCE MANAGER (BMM) Industry** is a standard product, which was developed especially for the maintenance in industrial companies and was adapted to these needs. The continuous mapping of the maintenance process creates transparency and thus optimizes the maintenance area in the company.

BMM Industry not only supports preventive maintenance, but also indicates upcoming difficulties at an early stage - thanks to automated machine and operating data acquisition, processing and analysis. If there is a deviation between the actual and target status, this is detected by the software solution in real time and communicated to the user. By means of risk matrices, operation-critical equipment is visualized and thus a comprehensible decision can be made when prioritizing measures.

The **BMM** offers the decisive advantage for modern and risk-oriented maintenance. This is because the fast response time is primarily the reason why the production plants remain in an operational condition and their service life is also significantly extended.

ADVANTAGES FOR USERS

Manufacturers

// Cost optimization
// IT support for industry services

Operator

// Increase of asset availability
// Reduction of direct maintenance costs (personnel, material, ...)
// Reduction of indirect maintenance costs (breakdown, waste, ...)

Service organizations

// Efficient order and resource management
// Mapping of the entire fault indication process

PREDICTIVE MAINTENANCE

Probably one of the most important buzzwords in connection with Industry 4.0 is predictive maintenance. The aim of predictive maintenance is to enable proactive maintenance of assets through the use of machine and process data, thus avoiding downtimes and at the same time raising quality standards. Those who want to establish predictive maintenance effectively on a long-term basis in their company need a comprehensive asset management system that records, stores and analyzes all relevant machine and process data.

With BOOM towards predictive maintenance

This is exactly where the **BOOM MAINTENANCE MANAGER** begins. As a central information management system, the **BMM** creates the basis for predictive maintenance. Combined with the machine and operational data acquisition modules — but also high-quality master data — the **BMM** provides all the important information concerning the asset that is required for a predictive maintenance strategy.

In order to be able to operate predictive maintenance in the long term, it also needs process-related support for strategic and tactical control loops. We achieve this with the extension modules Criticality & Asset Priority and Potential Weakness Analysis.

Advantages of predictive maintenance with BOOM

// Condition monitoring of assets in operation
// Prediction of maintenance and other maintenance events (e.g. malfunctions)
// Technical / organizational potential weakness analysis in the system
// Cost savings compared to routine maintenance
// Better resource planning of spare parts and personnel
// Increased asset availability and asset safety
// Longer service life of the assets

DIGITAL TWIN

Predictive maintenance requires knowing the production plant down to the last component and that in real time. Not only measurement data form the decisive basis here, but also the machine master data play an essential role.

Linking sources of information

One way to know a machine in such detail is to create a digital twin by establishing a causal link between the data domains and the information categories. The underlying model not only represents an image of the production plant, but also modifies the behavior of the real object through simulations, forecasts, or recommended actions. In this way, predictive maintenance is possible, so that conclusions can be drawn about the use and condition over time, or the expected future state of the object can be determined.

BOOM Software offers

- Continuous data acquisition
- Linking of measurements, conditions and maintenance events
- Strategic tools for analysis
- Interfaces to other systems
- Complete CIP cycle in the maintenance information system
- Look at models from different domains and contexts

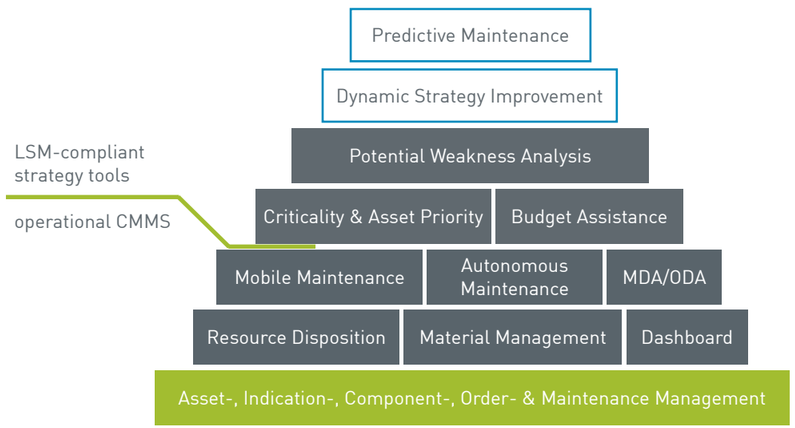
LSM

BMM is the first software solution to put the innovative concept of **LEAN SMART MAINTENANCE (LSM)** into practice. Developed by the University of Leoben, **LSM** actively contributes to the value creation of companies. From a cost-generating secondary process, maintenance thus develops into a competitive advantage for the company.

With **BMM** and **LSM**, customers receive an intelligent, transparent and practical system that is used from the strategic to the operational level.

LEAN SMART MAINTENANCE offers:

// Intelligent optimization of the maintenance strategy
// Automated creation of an analytical maintenance budget
// Maintenance that contributes to value creation
// Accompanied system introduction tailored to the maintenance maturity level



LSM explained with modules

Criticality & Asset Priority

The module Criticality & Asset Priority is used to evaluate and prioritize assets. It provides the company with more stability through risk-oriented and targeted maintenance. The module also ensures the long-term success of maintenance by enabling the asset priority portfolio to be controlled over the strategic period.

Potential Weakness Analysis

With the module Potential Weakness Analysis, the maintenance department is enabled to search and find weak points. The maintenance engineer detects the root causes of faults and understands why a particular fault has occurred. Appropriate measures eliminate the weak point and thus improve the availability of the asset.

Budget Assistance

Budget Assistance enables maintenance to actively shape the budget. The risk- and data-driven approach makes it possible to better justify investment decisions and ensure resource-efficient maintenance. With Budget Assistance, maintenance can take key milestones into account during the budget planning process.

> The essential and decisive basic requirement for successful LSM is a clean, process- and digitally-supported maintenance environment. This precondition should be achieved before a company dedicates itself to the topic of **LSM**.
>
> Ing. Christian Zwetti
> Head of Product & Consulting | TPM-Coach at Boom Software AG

THE FUTURE OF ASSET MAINTENANCE

The World Competence Center for Chassis Technology of Siemens Mobility Austria GmbH in Graz is a one-stop store for chassis within Siemens Mobility GmbH. Around 3,500 boogies are produced there every year under state-of-the-art manufacturing conditions. In this process, the **BMM** provides support as a central tool in maintenance management.

Complexity demands digitalization

The plant and facilities of Siemens Mobility GmbH in Graz comprise 9,500 assets. Among them are 1,000 small machines and 90 key plants. Approximately 2,000 maintenance jobs are performed on the assets per month. The technical system is highly complex and requires powerful maintenance software due to the high availability requirements.

LEAN SMART MAINTENANCE with BMM

The Siemens Mobility Austria GmbH in Graz is considered a flagship plant for the **LEAN SMART MAINTENANCE** philosophy developed by the University of Leoben. Due to the high demands on reliability, availability, maintainability and safety of all components in the system, the identification, evaluation and elimination of risks are among the most important tasks.

The **CRITICALITY & ASSET PRIORITY** module achieves this goal. On the one hand, gut feeling decisions are reduced and, on the other hand, the decisions made are supported with well-founded arguments. In addition, it promotes transparency by providing comprehensible and well-documented information on the basis of the evaluation for the departments.

Project facts

Customer
Siemens Mobility Austria GmbH
Eggenberger Straße 31
AT-8020 Graz
www.mobility.siemens.com

Functions implemented
// Process organization
// Strategy dynamization
// Key figures and controlling
// Spare parts management
// Knowledge management

Winner of Maintenance Award Austria 2021

Integration of the BMM into the system landscape

> A solid order management and the continuous development of strategic elements makes the **BMM** a success factor for Siemens Mobility Austria GmbH. With the **BMM**, we create the foundation for **LEAN SMART MAINTENANCE**.
>
> Philipp Hochstrasser
> Siemens Mobility Austria GmbH

FROM DELIVERY OF MATERIALS THROUGH MAINTENANCE TO DIGITAL SERVICES

Primetals Technologies provides metals producers with cutting-edge, custom-tailored plant equipment and services. In order to provide the full range of services during the entire plant life cycle, Primetals Technologies is becoming a leader in digital services with its 23 service workshops close to their customers and rolling out new digital transformed processes.

For the customer TERNIUM CSA / Brazil, Primetals Technologies is delivering on a 15-year service contract for mechanical and E&A maintenance. Aside from setting up maintenance facilities, Primetals Technologies also trained 600 maintenance employees.

Maximum service life of asset

Today offline maintenance for continuous casting machinery guarantees to improve the reliability of more than 100 critical components and enhance the product quality with fewer product downgrades. Higher product yield due to tighter tolerances of production equipment is key to ensure more uptime, higher productivity and reduced overall maintenance costs due to longer component lifetime and more efficient intervals between repairs.

Adding value through digitalization

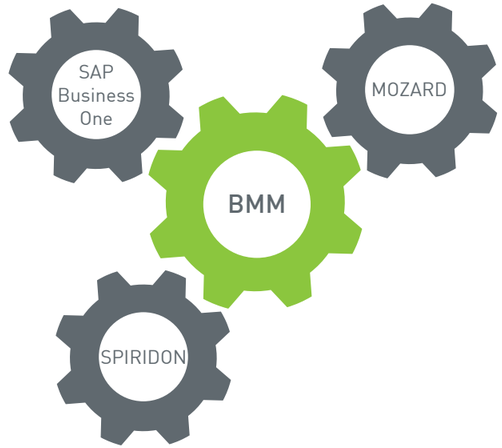
With the need to get more and more digital and automate processes to direct the resources to the activities that add the most value, BOOM and Primetals Technologies developed the solution “Maintenance & Asset Technologies” in short MAT. MAT allows Primetals Technologies to generate and compile know-how to work smarter instead of working physically harder.

Project facts

Customer
Primetals Technologies Austria GmbH
Turmstrasse 44
AT-4031 Linz
www.primetals.com

Functions implemented
// Spare parts management
// Mapping of customer assets
// Capacity planning
// Production-related maintenance
// Troubleshooting
// Planning algorithms
// Order reporting
// Quality data analysis
// Knowledge management

Integration of the BMM into the system landscape



> Primetals Technologies partnered with BOOM to develop MAT and enable Primetals customers and own workshops to transform maintenance management processes into a competitive advantage.
>
> Michael Weinzinger
> Product Manager at Primetals Technologies Austria

MAINTENANCE MANAGEMENT CLEAR AND SIMPLE

Lohmann-koester produces self-adhesive and mechanical sealing systems for baby diapers and incontinence products. The company, as a worldwide leading manufacturer of these products, has over 40 years of experience. The introduction of **BMM** at the Altendorf site provides Lohmann-koester with a modern and innovative maintenance management system for efficient production.

Ensuring availability

Maintenance management faces the challenge of ensuring availability of 750 facilities and optimally coordinating up to 6,000 maintenance tasks per year. 36 maintenance employees at Lohmann-koester are tasked with maintaining production as each facility is individually supervised.

One system for all maintenance tasks

The **BMM** is the central tool in which not only the master data of all extruders or coating machines are mapped, but also all maintenance and repairs are managed. The transparent documentation of the life cycle file is completed with feedback that provides information about performed measures. Faults, and associated planning changes, can be traced at any time. Time- and cost-effective maintenance planning is the focus of activities. The goal of maintenance is to be as future-oriented and value-adding as possible.

Project facts

Customer
Lohmann-koester GmbH & Co. KG
Industriestraße 2
DE-96146 Altendorf
www.lohmann-koester.com

Functions implemented
- Asset documentation
- Component structure and exchange part tracking
- (Fault-)Indication management
- Maintenance management
- Time and cost effective maintenance planning

> **BMM** enriches our work at all maintenance levels and supports us in performing tasks efficiently and transparently. Several expansion projects are currently being planned, which will implement further functional modules in preparation for **LEAN SMART MAINTENANCE**. Material management and mobile maintenance are on our agenda.
>
> Jan Neumann
> Maintenance Manager at Lohmann-koester GmbH & Co. KG

LIFECYCLE MANAGEMENT AUF BASIS DES BOOM MAINTENANCE MANAGERS

STREICHER Anlagenbau GmbH & Co. KG plans and realizes complex, technical plants for the sectors gas technology, tank construction, refinery technology, biogas injection as well as supply technology. The range of services extends from engineering and concept development to manufacturing, assembly and maintenance of the plants.

Documentation and traceability

The **BMM** links planned and operational activities. The required work is made available to the employees with the appropriate qualifications, along with all work instructions and checklists. By processing the work steps in the form of checklists and documentation for each plant and employee, the complete plant history can be called up at any time and the work and qualifications of the employees can be fully verified.

Certification

With the support of **BMM**, STREICHER Anlagenbau GmbH & Co. KG could successfully pass the certification for the planning, organization, preparation, execution and control of maintenance measures on biogas, gas pressure control and measuring plants by the German Technical and Scientific Association for Gas and Water (DVGW).

Project facts

Customer
STREICHER Anlagenbau GmbH & Co. KG
Magdeburger Chaussee 21
DE-39245 Gommern
www.streicher.de

Functions implemented
- Master data management
- Component management
- Service acceptance
- Capacity planning
- Maintenance proposals
- Checklist-based maintenance

> The requirements of our customers and the DVGW for the planning, organization, preparation, execution and control of maintenance measures on gas plants are optimally fulfilled with the support of the **BMM**. The **BMM** adapts perfectly to our processes and supports us consistently in life cycle management.
>
> Ria Menster
> Head of Technology and Sales at STREICHER Anlagenbau GmbH & Co. KG

FIRST IN TOTAL CUSTOMIZING

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