PROXIA

Value. Experience. MES.



"EXPERIENCE THAT CREATES ADDED VALUE!"

Your MES partner for sustainable manufacturing solutions.

Detailed Planning | Production Data | Machine Data | Monitoring
Key Figures | Quality Management | Transport Logistics
Maintenance | Personnel Resources | Knowledge Management
Employee Timekeeping System | Process Data

PROXIA – Your MES Partner:

Constant – Reliable – Competent – Innovative

PROXIA Software AG is an international software company that develops and integrates MES solutions for manufacturing and production companies. For more than 30 years, the group of companies has been involved in process optimisation in the industry. Professional project management, competent employees, innovative software products and a high level of industry expertise are the foundation of our company's success.

- **ONE MES partner – everything from a single source** for future-proofing without interfaces – consistent – reliable – compact – proactive
- **In-house software development –** made in Germany – with the latest technologies for innovation security
- **Modular, highly integrative software modules** for a coherent overall MES complete solution that grows with your requirements
- **Over 30 years of MES and industry experience** for maximum investment security
- **Strategic MES expertise and power** in project implementation for rapid go-live and short ROI
- **Innovative, modern MES solutions** with highest performance, intuitive user ergonomics and modern design

The core product range of PROXIA MES software includes production planning, data acquisition, online monitoring and the analysis, evaluation and controlling of key production figures. The range of services includes development, sales, implementation, support, training and MES consulting. With PROXIA MES software products Detailed Planning, Machine Data Acquisition (MDE), Production Data Acquisition (BDE), Employee Timekeeping System (PZE), Quality Management (CAQ), Maintenance & Repair (TPM), Online Monitoring, Process Data Management, Knowledge Management and Key Figure Recording, complete process structures can be digitally mapped and merged with the ERP/PPS level – an elementary step on the way to the Smart Factory and Industry 4.0.

The vertical and horizontal integration of the MES solutions into the existing system landscape creates a completely new, production-related MES ecosystem with data consistency from the business processes to the shop floor level.

Our principles are in line with our corporate goals and are a matter of course for every single employee in their daily working life, both in their dealings with customers and with each other. Our software supports our customers in their transformation towards digital and transparent production. With targeted consulting and analysis, we identify potential together with our customers and offer strong, industry-specific solutions in the MES sector. We do not sell, we establish partnerships.

The employees of PROXIA Software AG are characterised by the fact that the benefit for the customer is always at the focus of their actions. State-of-the-art software developments, coupled with a high level of user-friendliness, guarantee an almost linear increase in added value and safeguard the level of productivity achieved!

PROXIA – More than just MES software

Your MES project implementer

By choosing PROXIA MES, a manufacturing company lays the foundation for sustainable optimisation of its production processes, always with a focus on improving key production figures: higher availability, increased resource performance and better product quality. Collaborating with PROXIA is more than just acquiring MES software. It signifies entering into a partnership with one of the leading providers in the MES environment. As an MES solution partner, PROXIA offers a high level of strategic competence and power in project realisation. Through MES process consulting, we provide companies with strong practical and goal-oriented support using the latest lean production methods, SMED concepts and setup time optimisation models.

As a technology trendsetter, PROXIA offers transformable, in-house MES products with modern design, ergonomic user guidance and modular conception for a future-proof, coherent overall MES solution that grows with your company's requirements. Individual MES software products with a high degree of standardisation ensure short implementation times with rapid integration into production and a short amortisation period for MES investment.



30 YEARS OF MES EXPERIENCE



200 SUCCESSFUL MES PROJECTS



12,000 NETWORKED MACHINES AND WORKSTATIONS



MULTIPLE **AWARD-WINNING**



Customised MES software products with a high degree of standardisation and modular structure for a future-proof, coherent overall MES solution that grows with company requirements



In-house software product development, made in Germany, using state-of-the-art technologies for MES software with maximum performance, intuitive user guidance and modern design



Smooth and short implementation time thanks to our team of MES specialists with high level of industry expertise for rapid productive use and a short amortisation period for your MES investment

Focus: MES in the context of Industry 4.0

New times with global competition and high cost and deadline pressure also present new challenges for production companies. The requirements with regard to process and production optimisation are very complex and the starting point and objectives of individual companies differ greatly:

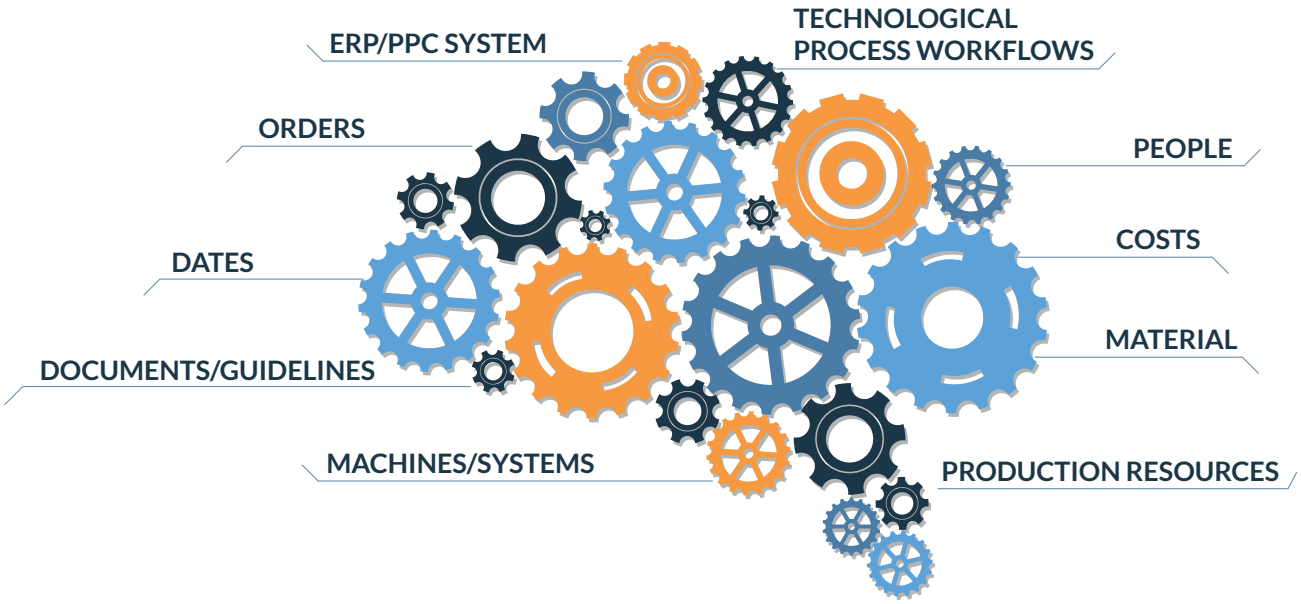
A company may be at the threshold of transitioning from a craft-based operation to an industrial enterprise, facing challenges such as the growing shortage of skilled workers or increasing product customisation leading to smaller batch sizes. The rigid, vertical process integration – often depicted in a pyramid structure – has become obsolete, as today's environment demands far more agility across all levels, from ERP and production planning down to the shop floor. In line with the Industry 4.0 philosophy, a paradigm shift is taking place toward integrated networking of machines, systems, people and the corresponding process levels within a company – an evolution that PROXIA actively supports with its MES solutions.

Modern MES for the Smart Factory: PROXIA

Managing complex processes "smartly" while combining them with high adaptability requires IT systems that can be flexibly configured to accommodate changes in products and production environments. As an MES solution provider, PROXIA brings the necessary expertise to the table – thanks to years of experience in production optimisation, standardised software products and strong implementation and project execution capabilities. This enables PROXIA to successfully carry out Industry 4.0 projects and address the challenges of IoT, Big Data and Smart Data.

With PROXIA MES, industrial companies operate more leanly, on schedule, efficiently, flexibly and with greater customer focus – achieving greater market success and long-term competitiveness. Implementing PROXIA MES enhances production planning, provides increased transparency and structured workflows and delivers KPIs, analyses and reports. It is industry-independent and can be flexibly adapted to individual production processes – paving the way to lean production, smart factories and Industry 4.0.

The PROXIA "IT production memory" for the Smart Factory



ONE system for multiple target groups!

It's not just the production department that benefits from MES – the entire company gains from it. Different users or user groups have highly diverse requirements when it comes to information processing, presentation and system operation. As a professional MES solution provider, PROXIA addresses these differences individually, meeting the needs of executive leadership and management, IT, controlling, quality management, production planning and scheduling, all the way to shop floor workers. PROXIA MES not only serves as a link between management and the shop floor, but also functions as a control tool that delivers increased transparency, efficiency and quality far beyond the production level.

By standardising subprocesses within production, PROXIA creates a cohesive MES package that combines ergonomics, performance and functionality tailored to various user groups. Production-oriented, dynamic control loops – essential for a modern Smart Factory in line with the Industry 4.0 philosophy – complement an ERP system to form a comprehensive production system.



BENEFITS FOR MANAGING DIRECTORS/CONTROLLERS

- Monitoring of efficiency and productivity
- Optimisation of capital utilisation by activating unused resources
- Performance comparisons (benchmarks) and key performance indicator analyses (KPI/OEE)



BENEFITS FOR PRODUCTION-/ MANUFACTURING MANAGER

- Optimisation of machine and system efficiency in line with continuous improvement (CIP)
- Early detection and correction of negative developments in production
- Less waste through greater transparency (lean production)



BENEFITS FOR QUALITY AND MAINTENANCE MANAGERS

- Simplified monitoring and documentation of product quality
- Control over improvement measures (CIP)
- Reduction of rejects
- Improved planning of maintenance intervals



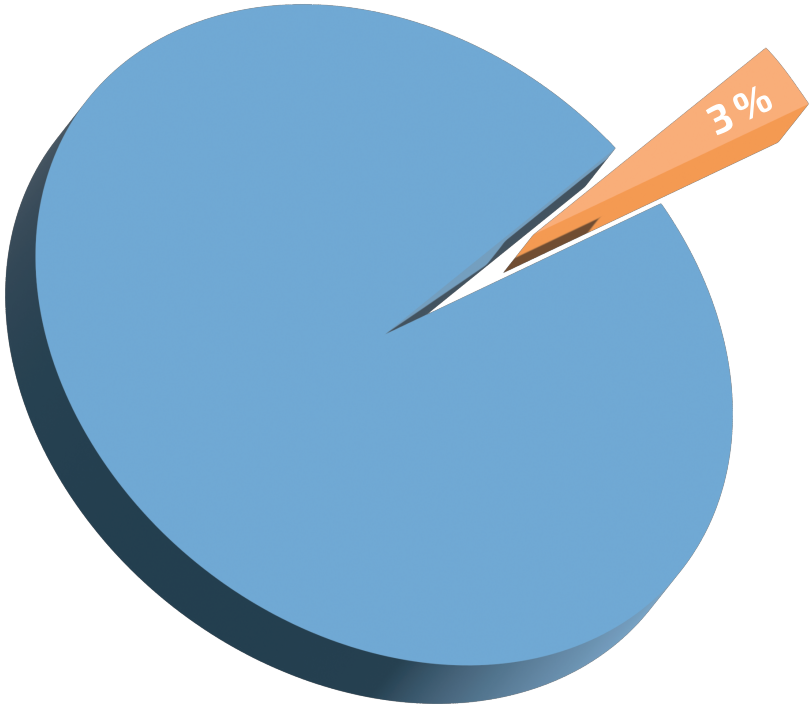
BENEFITS FOR MACHINE/ SYSTEM OPERATORS

- Adherence to scheduled completion times and faster response in the case of disruptions
- Reduced workload through paperless production
- Improved documentation and information on operational data and process workflows

Customer satisfaction in focus

97% of our customers would choose us again

Putting our customers at the centre and staying in dialogue with them helps us understand their needs. That's why we regularly ask how satisfied they are with our products, services and customer support. In the most recent survey conducted in May 2024, nearly 90 contacts from production and manufacturing were interviewed – the impressive result: 97% of our customers are not only satisfied with our MES software, but would choose us again at any time. This remarkable figure confirms that we are on the right path – thanks to our consistent focus on quality, innovation and customer service.





97 %

are satisfied

Performance that convinces

Our MES solutions not only offer flexibly configurable and expandable systems we also see ourselves as a long-term partner to our customers. From the initial implementation to ongoing support, we place the highest value on providing personal assistance and tailored solutions that meet all of our customers' requirements.

This is reflected in the high level of satisfaction: speed, reliability, flexibility and expertise are just some of the qualities that have been positively highlighted.

We stand by our customers

A key factor in our high customer satisfaction is the collaborative partnership. Our customers value the close and trusting communication with our experts and our willingness to address individual needs. We continuously work on additional features that are of interest to our customers. The result: a long-term partnership built on trust and success.

Why customers choose us

I **High flexibility:** Our software integrates seamlessly into existing systems, connects to a wide range of machines and can be customised individually

II **Future-proofing:** We focus on continuous development to always offer our customers the best available technologies.

III **First-class support:** Our dedicated hotline team is always ready to assist with advice and practical help.

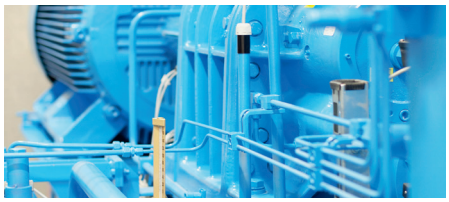
Here for you: Because your satisfaction is our motivation



PROXIA MES – Industry Solution

PROXIA MES – Solution expertise in the various industry details

PROXIA is an independent MES solution provider offering a wide range of integrated, comprehensive and detailed solutions for the optimisation of various processes in production companies. The industry-specific solutions are based on standard software products developed in-house that can be transformed. The primary focus of implementation is on business management aspects and the optimisation of technical processes.



MECHANICAL AND PLANT ENGINEERING:

- Comparative key figures analysis
- Bidirectional communication with the shop floor
- Personnel planning



CONTRACT MANUFACTURING:

- Demand-oriented software structure
- High process standardisation
- Conservation of resources



AUTOMOTIVE:

- Seamless process documentation
- Precise drill-down functions
- Cross-departmental planning



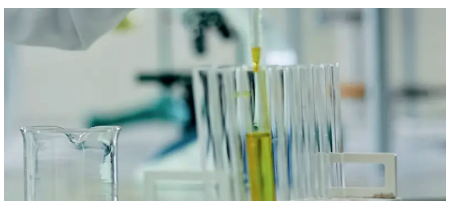
TOOL/MOLD CONSTRUCTION

- Detailed component documentation
- Fine resource planning
- Dynamic order generation



PLASTICS INDUSTRY:

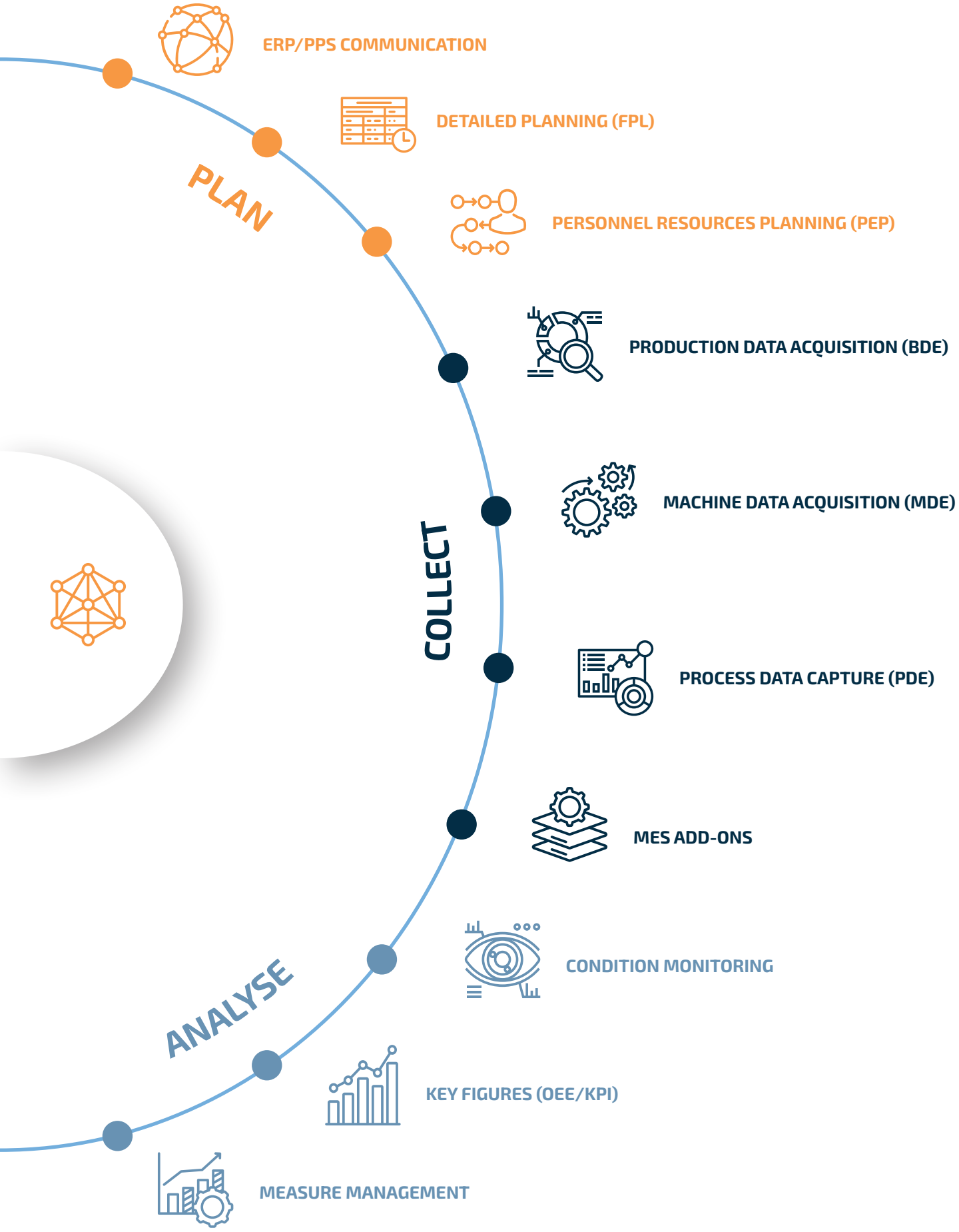
- Automated data acquisition
- Integration of statistical quality systems
- Securing the material flow



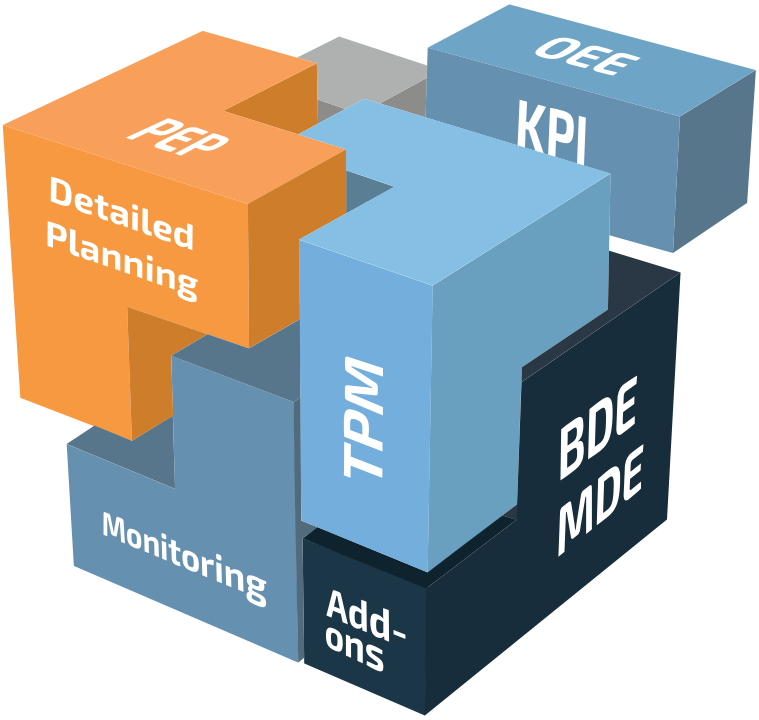
CHEMICAL INDUSTRY:

- Measure Management
- Process key figures monitoring
- Automated process data acquisition

PROXIA MES – Product Portfolio



PROXIA – Manager



THE STANDARD APPLICATION RACK FOR ALL MES MODULES

PROXIA MES is based on a standardised system platform, the PROXIA Manager. This application platform integrates all PROXIA modules, establishing a foundation for standardised data management. PROXIA Manager serves as the "application rack" into which the PROXIA MES modules are seamlessly "inserted" as required. The application platform offers a broad portfolio of standard functions that are used in all PROXIA modules. This ensures a consistent, uniform and modern software operating concept that benefits the user. PROXIA Manager leverages a centralised database structure to access all relevant data and information. All assignments, configurations and settings can be organised via the PROXIA Manager. Changes to the MES Manager itself or the integration of additional applications can be carried out live during operation of the MES software.

PROXIA Manager –

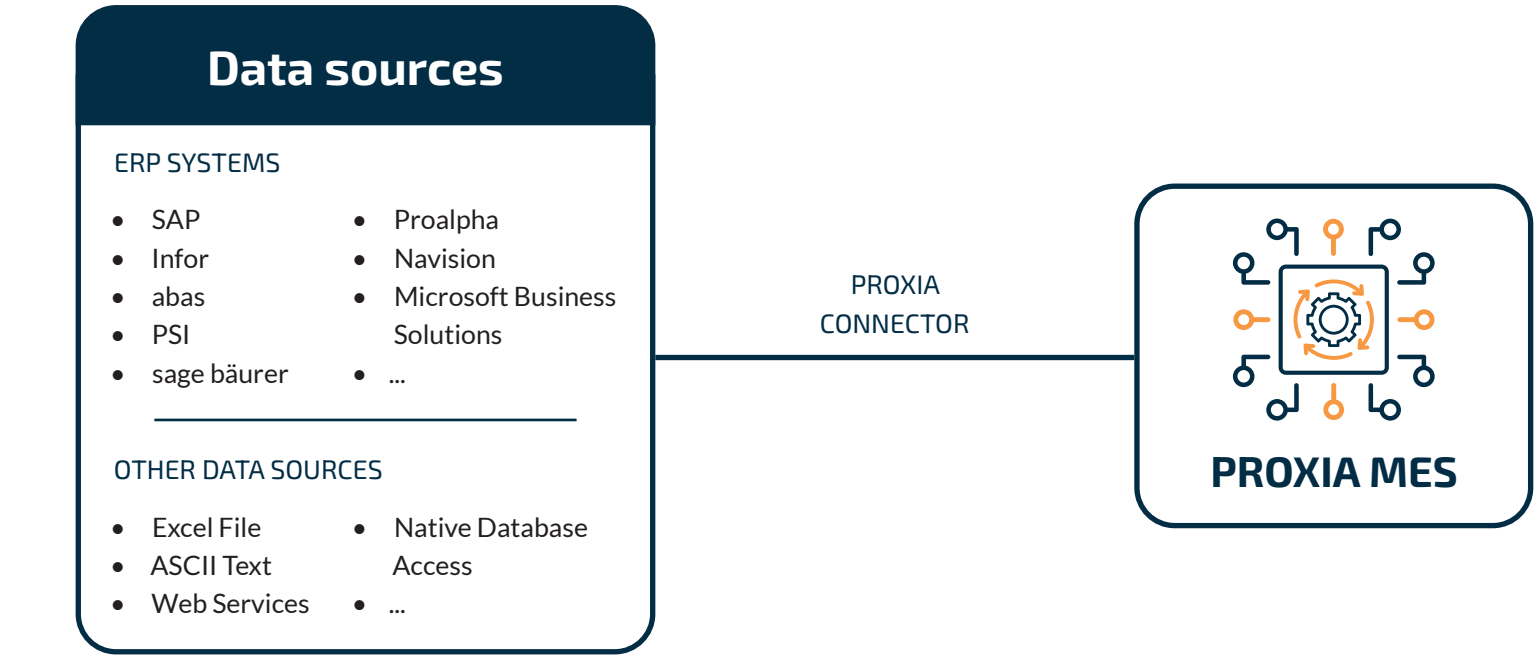
ROBUST IT FOUNDATION, HIGH FLEXIBILITY AND FULL UPDATABILITY

PROXIA Manager has been designed to adapt precisely to the requirements of your manufacturing and production processes without deviating from standard protocols. This ensures that your PROXIA MES can be updated as needed, maintaining data consistency even in the event of changes to your company's requirements. Additional information sources can be added at any time and are immediately available to the integrated PROXIA modules. PROXIA Manager was developed using state-of-the-art software development tools and is subject to continuous further development. This results in a foundation for a future-proof, high-performance MES company solution that can adapt to evolving needs.

Highlights & Benefits

- Standardised software platform
- A central application for all
- MES applications
- Modern, updatable base structure for long-term business concepts
- Uniform, simple operation and function calls

ERP/PPS Communication



ERP/PPS and PROXIA MES –

USING SYNERGIES FOR MORE EFFICIENCY

To achieve optimal flexibility in production, it is essential to establish a software system landscape that facilitates seamless communication and collaboration between business and production levels. This enables both systems to utilise synergies, enhancing operational efficiency and decision-making capabilities. Therefore, the ERP and MES systems must be synchronised in defined process units. Intelligent software connections ensure a seamless and bidirectional flow of information between ERP and MES.

PROXIA Connector –

WORKING WITHOUT MEDIA DISRUPTIONS

The PROXIA Realtime-Connector facilitates seamless cross-system data communication between the ERP system and PROXIA MES. Additionally, the PROXIA Connector facilitates bidirectional communication with other IT systems involved in the process. The company can access the same information at all process levels for evaluations, analyses, or visualisations. This feature resolves issues related to different transaction data statuses and interface problems.

Perfect Interaction with SAP

PROXIA MES IS THE IDEAL COMPLEMENT TO AN EXISTING SAP SYSTEM LANDSCAPE

The integration of PROXIA MES into mySAP ERP establishes a seamless system landscape, ensuring seamless collaboration between business and production levels. PROXIA MES can be connected to the open integration technology SAP NetWeaver Exchange Infrastructure (also SAP XI 3.0) as well as to the SAP NetWeaver Portal. The integration of ERP business processes is facilitated by the SAP XI 3.0 connection, enabling the exchange of data and information between SAP and PROXIA MES. The S4HANA environment is fully equipped with the latest technologies, ensuring seamless connectivity.

Detailed Planning



PROXIA Control Room –

THE TOOL THAT CREATES TRANSPARENCY

In practice, machine assignments or the sequence and priority of orders are often based on experience. This approach is viable up to a certain order volume. However, when the number of production orders or the complexity increases due to factors such as material stocks, set-up optimisations, order networks (multi-level planning), or production resources/tools, a subjective approach is no longer sufficient. In such cases, the planner requires the support of a mathematical control station to ensure accurate and efficient decision-making.

The orders are transferred via the interface to the ERP/PPS systems. There, they are compared with the actual capacities based on the resources, shift models and personnel deployment planning. Detailed Planning facilitates automatic, algorithm-supported machine allocation and throughput scheduling. The planner can use drag-and-drop to manually influence sequences, change priorities, or define additional conditions. This flexibility allows for precise adaptation to the unique needs of each situation. To align with reality, finite planning is executed in planning mode. In simulation mode, infinite planning can also be carried out to determine where and how many overloads may need to be reduced.

During the development of the PROXIA Control Station, particular attention was paid to a clear display/operation and high performance. This approach enables the prompt resolution of daily inquiries on an as-needed basis.

- What effect does the prioritisation of one order (“chief order”) have on other orders?
- In order to meet the deadlines of one or more delayed orders, will increasing capacity or outsourcing be necessary?
- What effect does the sales department’s notification of a deadline or project have on existing orders?
- It is essential to determine the optimal setup parameters, such as material, color and diameter, while considering their impact on the overall timeline.

Highlights & Benefits

- Planning and simulating production scenarios
- Reducing throughput times, deploying inventory based on demand
- Planning with limited capacities and multi-resources
- Prioritisation of production orders
- Order network planning
- Material availability planning and grouping of operations
- Gantt, form- and table functions for enhanced clarity

Personnel Resources Planning

PROXIA – Personnel Resources Planning

WHEN THE SHIFT MODEL REACHES ITS LIMITS

Initially, capacity is determined by the resource and the assigned shift model. This capacity is incorporated into detailed scheduling plans in a proactive manner. This definition of available capacity also forms the basis for OEE calculation. However, this technical capacity offering may not be the optimal choice in all situations. The term "availability" is understood differently across companies. The definition of planned utilisation time is a key factor in this analysis. For instance, a machine that requires personnel for operation will not offer any capacity if the required personnel is not available.

This is where PROXIA's Personnel Resources Planning (PEP) comes into play. Personnel Recources Planning provides the ability to include personnel availability in a detailed capacity analysis, in addition to the resource-shift relationship. When assigning personnel to shifts, factors such as qualifications (skills), certifications, absences, as well as a role and permissions system are taken into account.

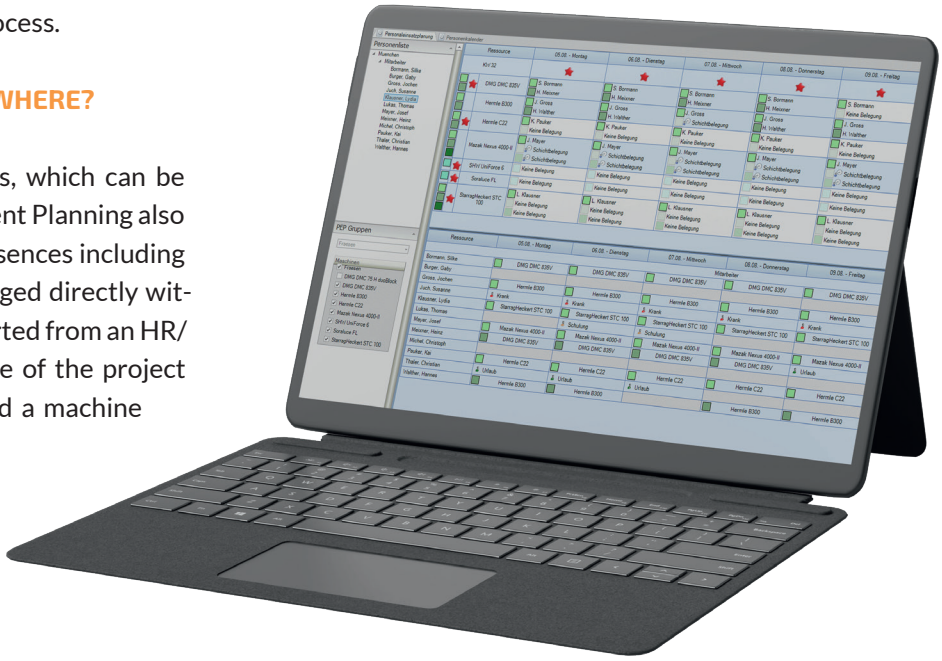
PROXIA PEP provides a realistic view of available capacity in the production environment, enabling efficient planning of finite resources within detailed plans. This approach ensures that personnel-related capacity fluctuations are seamlessly integrated into the planning process.

WHO WORKS WHEN – AND ABOVE ALL, WHERE?

In addition to personnel/shift assignments, which can be made via drag & drop, Personnel Deployment Planning also takes employee absences into account. Absences including vacation, illness and training, can be managed directly within Personnel Resources Planning or imported from an HR/time and attendance system. The outcome of the project is twofold: a personnel resources plan and a machine occupancy plan.

Highlights & Benefits

- Definition of shift capacity, assignment via drag & drop for a better overview
- Personnel and shift deployment plan with assignment of employees to workstations
- Avoid staff shortages
- Different workstation modes (exclusive operation, auxiliary staff, performance pool)
- Consideration of staff absences
- Can be integrated into existing HR and PZE structures
- Full integration into PROXIA detailed planning



Production Data Acquisition

PROXIA BDE FOR WEAK POINT ANALYSIS

PROXIA Production Data Acquisition (BDE) is designed to capture the actual situation in production or assembly directly at the point of origin. By recording the value creation process from start to finish, we can identify weak points using early warning, monitoring and reporting capabilities. This allows us to quickly initiate appropriate measures.

The booking history is structured into statuses/states that are freely configurable, such as setup, production, malfunction and downtime. The recorded states are posted to various accounts (workstation, personnel, activity). These parameters can be used to activate or deactivate specific accounts, particularly for personnel and operations, enabling, for example, personnel-independent data captioning.

PROXIA BDE supports a wide range of order types, including production orders, overhead cost orders, assembly orders, actual/target bookings and more. Individuals and groups are both eligible for registration. In this context, functions such as multi-machine operation or operation without assigned personnel are also supported.

The job queue for individual reporting stations can originate from various sources, such as an ERP system or a planning system. A key goal in the development of PROXIA BDE was to provide an intuitive, self-explanatory interface that allows even users with minimal PC experience to operate the system easily.

FEEDBACK FOR DETAILED PLANNING SYSTEMS

How can I effectively plan for the future when I am unable to accurately predict the present moment?

It is essential for companies to have a monitoring system in place to ensure that their production plans are being executed in accordance with the chosen strategy. This will allow them to ensure that the strategy aligns with the company's needs and the product mix. Production Data Acquisition provides all the information relevant to determining production progress for detailed planning systems. PROXIA Detailed Planning allows for seamless, real-time interaction, eliminating the need for interface integration.

PROXIA BDE HARDWARE PLATFORM

PROXIA BDE Production Data Acquisition is designed to allow the use of different hardware options depending on the individual IT standards or specifications within a company. The BDE Production Data Acquisition is a Microsoft Windows application that can run on standard PCs, industrial PCs, or mobile devices with Windows operating systems, smartphones and more. For order registration or personnel identification, commonly used solutions such as barcode, QR code, or transponder are supported.

EXPANSION INTO A COMPREHENSIVE INFORMATION SYSTEM

In addition to facilitating status booking, BDE Production Data Acquisition can also serve as an information system. It can provide NC programmes, tool lists, drawings, or inspection instructions related to specific orders. Internal communication options, such as email notifications, can also be used to request support (e.g., maintenance or logistics).



Highlights & Benefits

- Intuitive operating concept
- Freely configurable status buttons with full flexibility and update capability
- Modularly expandable with functionalities such as batch recording
- Integrated BDE early warning system for rapid response to bottlenecks
- Connection of production-supporting hardware (e.g. scanners, RFID, measuring equipment, etc.)
- Improvement of product quality through real-time monitoring of production parameters

Machine Data Acquisition

PROXIA MDE – THE 24/7 "MACHINE ECG"

Machine Data Acquisition (MDE) is the electronic "fingerprint" of a machine or system. Depending on the setup, a machine status can be reported manually or fully automatically via MDE directly from the machine itself. While the machine operator continues to manage the machine as usual, MDE Machine Data Acquisition runs automatically in the background. This eliminates input errors and prevents forgotten manual feedback.

The PROXIA Data Acquisition system's modular design allows for seamless integration of both reporting types (BDE and/or MDE), enhancing operational efficiency. For instance, when acquiring modern machines, it is possible to gradually transition from BDE operation to MDE operation.

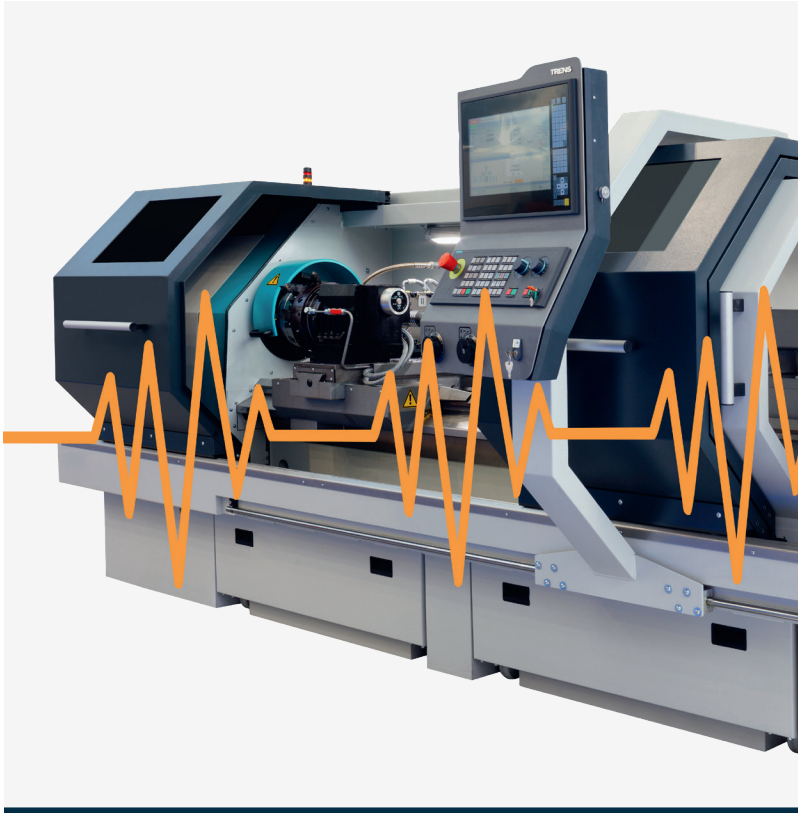
Automatic Data Acquisition via MDE is an effective solution that can significantly reduce the workload for operating personnel, especially in systems such as rotary tables, pallet stations, clamping tower systems, manufacturing cells and multi-machine operation. In addition to recording status recording, automatic part counting and automatic order switching provide a convenient solution and contribute valuable data for OEE calculation.

AUTOMATIC ALERTING IN CASE OF MALFUNCTIONS

In the context of Industry 4.0, active, bidirectional communication between machines/systems and operators is paramount. This communication enables the rapid detection of faults or bottlenecks, thereby minimising production downtime. PROXIA MDE facilitates the implementation of various alerting scenarios. These alerts can be disseminated through the company's internal IT structures, such as email, or via external services like SMS or RSS feeds.

STANDARDISED MACHINE COMMUNICATION WITH OPC-UA

The OPC-UA (Open Platform Communications – Unified Architecture) communication standard facilitates the retrieval of information regarding the status of a system/machine and all types of process data from various controllers. This secure communication standard allows for the utilisation of existing infrastructure, such as an available OPC-UA server, ensuring a seamless integration of new technology with existing systems. Additionally, older controllers that do not have their own OPC-UA server can also be integrated using smart gateway solutions. No programming of the machine interface is required on the MES side. All information, including the configuration of a signal matrix, is set up directly within the MES system.



Highlights & Benefits

- Minimal reporting effort thanks to fully automatic data acquisition
- Processing of high data volumes or complex production structures, e.g. multi-pallet machines, pallet stations or production cells
- BDE/MDE mixed operation thanks to modular design
- Support for international standards, e.g. OPC-UA or MTConnect
- Various alarm mechanisms via e-mail, SMS or RSS feed

Process Data Capture

THE INTELLIGENT TOOL FOR MAINTENANCE AND PROCESS MONITORING

The procedure of visualising process data in maintenance is a key step in stabilising processes. This refers to data that documents the actual parameters under which a process has been executed. Typically, this data is used by the control systems of the equipment to regulate the process. This information, such as temperatures, pressures, or speeds, typically remains within the control systems and is not utilised for other tasks. Accessing this "data pool" presents additional opportunities to enhance value creation. For example, continuous visualisation of key process parameters enables swift identification of deviations from target processes.

The information obtained is a valuable asset for production employees and provides additional support in maintenance for troubleshooting and optimising production equipment.

STANDARDISED VISUALISATION OF PROCESS DATA FROM VARIOUS SOURCES

Many modern systems offer the capability to provide process data for maintenance. However, nearly all manufacturers deliver their own visualisation solutions. This makes it virtually impossible to achieve a clear and standardised display of telemetry data from different systems.

The visualisation layer of the PROXIA Process Data module is capable of graphically displaying any type of process data, such as pressures, flow rates, or vibration patterns. This system allows all departments within the company to access customised visualisations tailored to their specific needs. Consequently, the systems' telemetry data can be both collected and provided in a demand-oriented manner.

In cases where measured values deviate from the specifications, push notification concepts such as SMS, email, RSS, or the automated generation of maintenance notifications are available. This approach helps to minimise unplanned downtime and allows planned downtime to be shifted to less critical time slots. In the event of quality deviations, the root causes can be investigated in a targeted manner.

Highlights & Benefits

- Use the process data recorded by the MES for your maintenance!
- Online monitoring of telemetry data, also on mobile devices
- Automatic generation of maintenance messages
- Identify causes of faults and initiate appropriate measures
- Creation of a data basis for automated decision-making processes
- Process data as an "enabler" for maintenance 4.0
- Improving product quality through real-time monitoring of production parameters



Key Figures

PROXIA KEY FIGURES – REAL-TIME ANALYSIS OF KPIS AND OEE

Key Performance Indicators, or KPIs for short, are operational key figures that reflect the performance and profitability of a company. These factors serve as key performance indicators, providing insights into the company's operational effectiveness and success. The timeliness of the OEE key performance indicator plays an important role here: if the KPIs show you that plan data can no longer be met within the specified period, you can intervene in the process to correct it accordingly. Comparing running processes with the OEE key figures of existing processes is also an essential part of a continuous improvement process (CIP). All processes within the company can be evaluated, monitored and, if necessary, corrected using KPIs (e.g., OEE key figures). PROXIA Key Figures offers all the advantages of a modern software solution to meet these requirements.

PROXIA KPI MONITORING – PRECISELY DETERMINE PRODUCTIVITY AND OEE

PROXIA KPI Monitoring provides detailed analyses of all relevant process variables for OEE analysis. The system integrates automated feedback from equipment and machinery (MDE) with manual feedback (BDE), then processes this data in the calculation engine.

It supports configurations such as links, rules and dependencies, along with the ability to individually customise the report layout. Employing drill-down functions enables you to swiftly identify the "root cause" of a problem in your process or across the company.

PROXIA Key Figures incorporates standardised calculation formulas and evaluations based on the VDMA standard sheet DIN 66412 for KPI indicators.



Condition Monitoring



PRODUCTION UNDER CONTROL – LIVE AND MOBILE

The expansion of information networking is a key component in the development of the Smart Factory. The Monitor.web module is a comprehensive system that allows real-time monitoring of production. It does so by analysing and visualising operational, machine and process data using innovative web technologies. A key benefit of this option is its complete independence from the device being used. The device on which production data is viewed is now irrelevant, whether it be a notebook, tablet PC, or smartphone. An intranet connection is sufficient to access the Monitor.web module, which provides a comprehensive view of production activities. Monitor.web is a versatile tool that allows users to configure and optimise various views for specific application areas and individual requirements. For large volumes of data, the list or tile view is ideal.

The hall view is an effective tool for identifying faults in machines and systems. A combination of different views can also be selected. From each view, additional information can be accessed via a drill-down function. This includes details about personnel working at the system or the operations currently in progress. All detailed views can be customised to suit each user's specific needs.

Condition Monitoring

PROXIA Online Monitor

THE "SMART" WINDOW INTO PRODUCTION

The PROXIA Online Monitor provides responsible personnel with immediate insight into the current status of their manufacturing and production. Real-time data, including run times, secondary times, part quantities and scrap rates is displayed. PROXIA Online Monitor is therefore an ideal tool for shop floor supervisors focusing on their specific area, as well as for planners or production managers who require a more global perspective. Notifications about events can be sent via SMS, email, or RSS feed as needed.

PROXIA Timeline

THE MODERN FORM OF MES MONITORING

The analysis tool "Timeline" is available in both the Online Monitor and in the web application Monitor.web. This analysis tool graphically represents the entire production process. All recorded production data converges here: order data, personnel data, machine data and process data are linked into a unified information base. This graphical representation of the overall process forms the foundation for a modern Continuous Improvement Process (CIP) and helps to enhance production efficiency.

PROXIA Mobile Monitoring

PERFECTLY INFORMED ANYWHERE

PROXIA Mobile Monitoring provides the capability to stay informed about productivity, disruptions and order progress even outside the company. Early detection of negative productivity influences helps prevent costly delays in the production and assembly process. Mobile Monitoring is a web application developed according to the latest standards and functions on all modern devices.



Highlights & Benefits

- Early detection of negative productivity influences
- Multi-level escalation management
- Real-time visualisation of the current situation
- Web-based monitoring – accurately informed anytime and anywhere

Analytics

PROXIA MOBILE DESCRIPTIVE ANALYTICS

The analysis tool for large amounts of data. The various KPIs are visualised in the web application “KPI.web”. This feature allows users to access key performance indicators (KPIs) such as overall system effectiveness, degree of utilisation, output rate, rework rate and availability for freely definable periods, all from a mobile device. All key figures are displayed on the time axis. This makes it possible to quickly identify trends and attribute significant changes in key figures to specific events. Process disruptions, non-productive times, set-up times and productive times can be visualised for individual machines, machine groups or entire sites. A drill-down function is available for convenient and targeted navigation through the hierarchical data.

Whether it’s simply visualising the Overall Equipment Effectiveness (OEE) of a single machine or requiring a detailed view of the utilisation rate of an entire plant: the Descriptive Analytics function block within KPI.web enables data compilations at various levels of detail. This makes the tool the ideal “companion” for managers across all leadership levels within the company. The ability to make accurate, data-driven decisions is essential for sustainable, positive business development.



Processing the ever-increasing volumes of production data in such a way that relevant information is condensed to a meaningful level is one of the fundamental prerequisites for future corporate management processes.



By using preparing services and continuously maintaining data in various aggregations, information can be made available without significant delays.

Highlights & Benefits

- Fast and targeted data analysis based on standardised key figures
- Processing of large data volumes and presentation in a compact format
- Web-based analysis tool – access analysis from anywhere
- Interactive OEE analysis for individual machines or complete production segments
- Project-specific integration of company-specific KPIs
- Report generator with integrated PDF export, directly from mobile devices

Measures Management

PROXIA MEASURES MANAGEMENT

The PROXIA Measures Management equips employees responsible for continuous improvement (CIP) with a comprehensive toolset. This web application enables the documentation of actions as part of process improvement, the monitoring of changes and the evaluation of results. Once an action is entered into the system, changes in key performance indicators, shifts in production scrap, changes in scrap reasons, or changes in order throughput times can be analysed in relation to the action.

The tool provides a visual representation of the changes over time, enabling a more comprehensive evaluation of the effectiveness and resilience of an action. Additionally, the detailed KPIs are displayed as average values, both for the period before and after the action. This allows for the determination of the degree of change in the form of a specific indicator. The ability to evaluate the implemented actions is the foundation of every continuous improvement process (CIP).

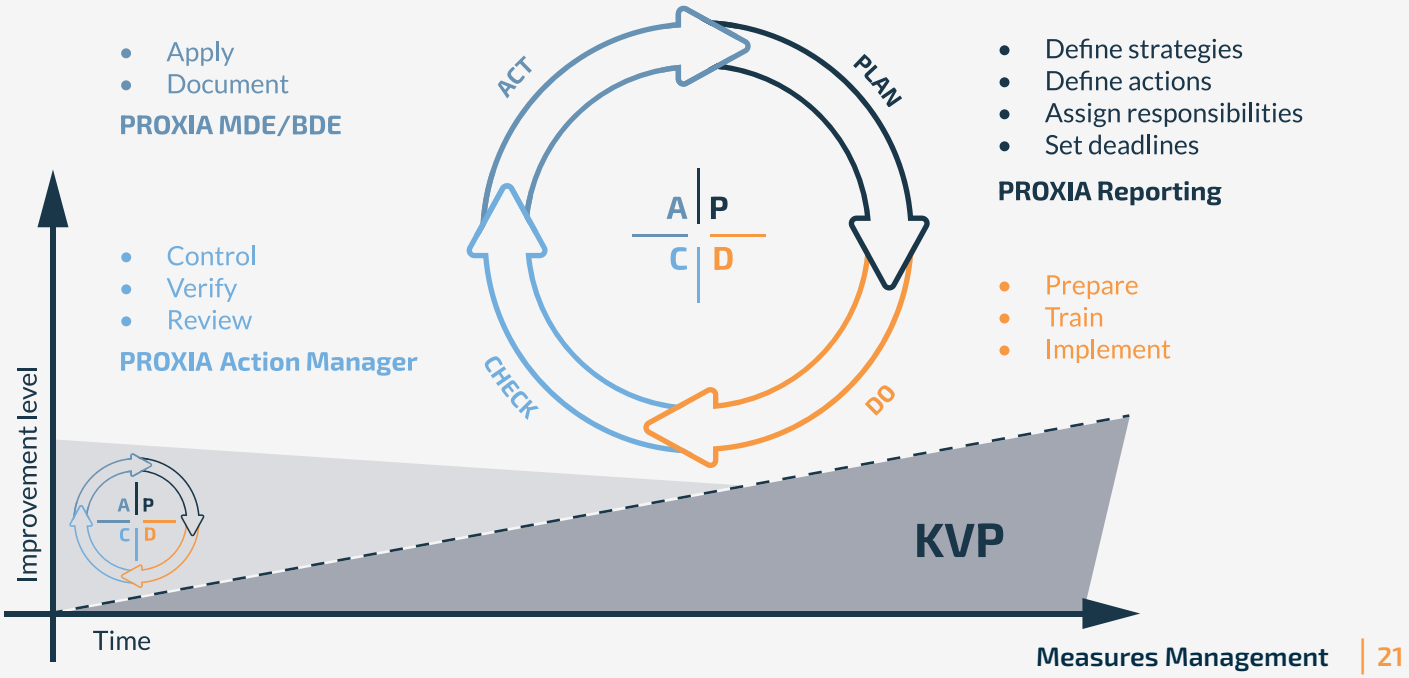


In the PROXIA Measure Manager, all facts describing the action are consolidated. With a single click, the status of an individual action can be checked.

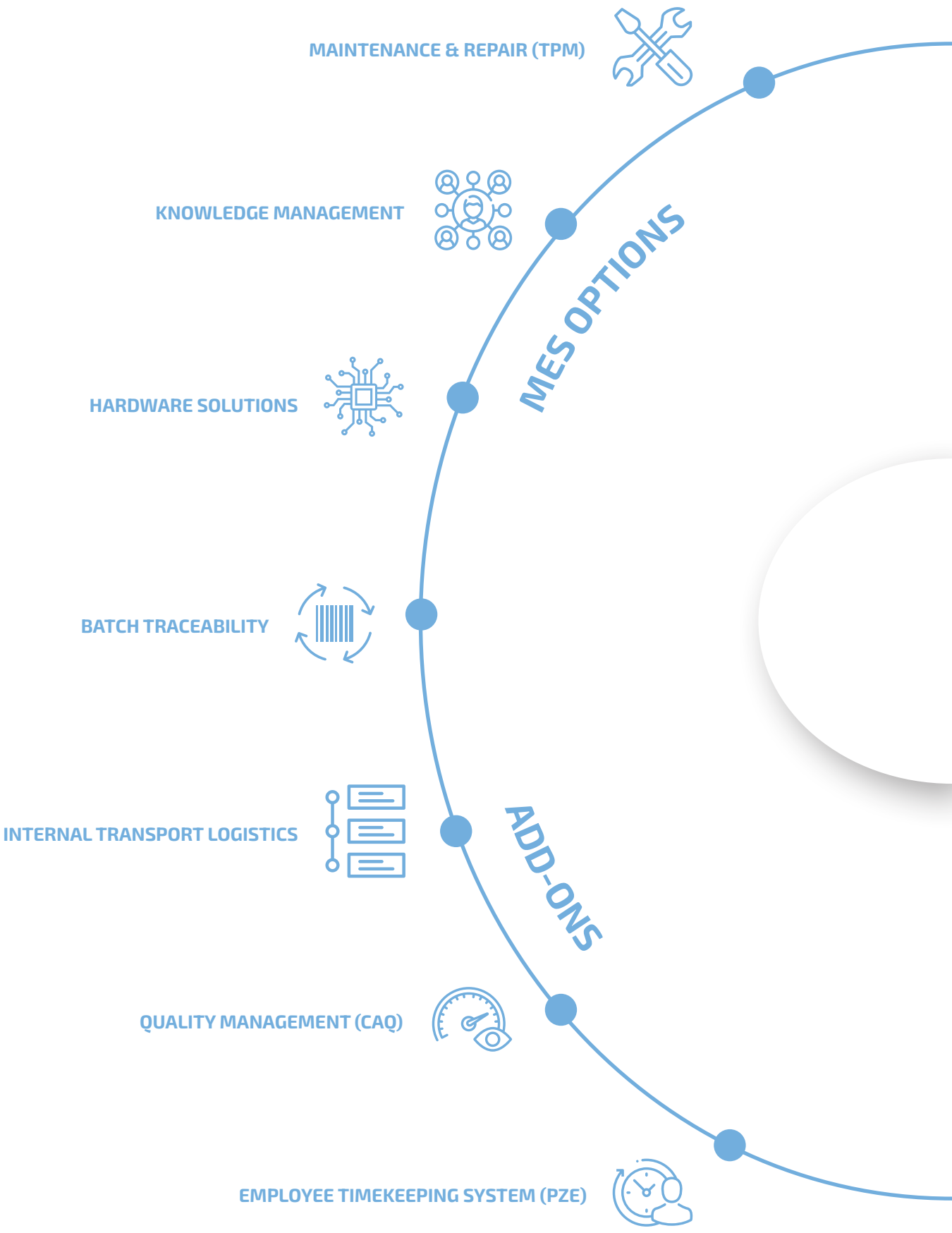
Highlights & Benefits

- Digital documentation of actions implemented and to be implemented
- Graphical analysis of action-related changes
- Action analysis from the machine level to the entire production site
- Identification of goal conflicts in implemented actions

The foundation for continuous improvement: The PROXIA Measure Manager enables quick, easy and straightforward evaluation of changes in classic KPIs such as OEE, availability, performance, scrap rate, setup efficiency, rework ratio, or technical utilisation rate.



PROXIA MES – Extensions & Options



Maintenance & Repair

PROXIA TPM PLANNING

Maintenance activities are scheduled via a graphical user interface. Tasks can be allocated to specific employees or organised in to-do lists based on qualifications. Both production-related downtimes and employee qualifications can be taken into account. This allows the maintenance planner to make optimal use of the available resources. Concurrently, the maintenance planner has online access to information regarding completed tasks and the current status of the production equipment.

PROXIA TPM ANALYSIS

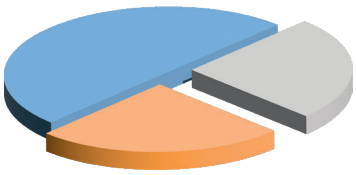
Maintenance operations today face a number of challenges, including the need to reduce maintenance costs, minimise downtime and ensure complete documentation of maintenance activities. The Maintenance & Repair module (TPM) is the ideal solution for this issue. Fast and easy access to information for maintenance personnel on-site, along with a structured overview of all planned maintenance, inspection and repair activities for the planning level, form the basis for quick and targeted decision-making in maintenance operations. Key performance indicators such as MTTR (mean time to repair) and MTBF (mean time between failures) serve as the foundation for a continuous improvement process (CIP) within maintenance.

PROXIA TPM MAINTENANCE ACTIVITY RECORDING

The scheduled tasks are available for online viewing on employees' devices. This approach enhances operational flexibility and reduces equipment downtime. Maintenance staff can fully document their completed activities. In addition to the working hours of maintenance personnel, used spare parts and consumables are also recorded. Depending on the level of detail in the documentation, all types of documents can be attached. For instance, inspection reports or photographic documentation can be included as part of the maintenance history.

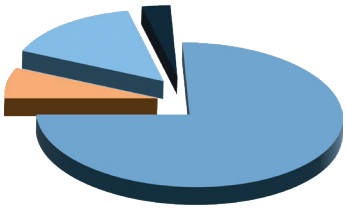
Maintenance tasks performed by machine operators and system supervisors can be made available directly at the machines and documented without gaps. Interface-free communication between digital maintenance and Production Data Acquisition (BDE) forms the foundation for a Digital Factory.

Cost Allocation by Qualification



Fitter
Electrician
Hydraulics Technician

Distribution of Total Costs



Package Prices
Material Costs
Overhead Costs
Personnel Costs



Highlights & Benefits

- All maintenance activities plannable in advance and visible at a glance
- Intuitive, user-friendly operation thanks to Modern UI
- Mobile, platform-independent recording of maintenance activities
- Digital documentation of all maintenance and repair actions
- Proof of overhead costs in repair operations
- Cost forecast for maintenance expenses – from cost centre down to component level

Internal Transport Logistics

PROXIA INTERNAL TRANSPORT LOGISTICS: OPTIMISING MATERIAL MOVEMENTS

Searching for semi-finished products within production or waiting for a suitable means of transport is often a significant “time-waster” in the production process. With the PROXIA Internal Transport Logistics module, location-based inventories of semi-finished products are maintained and corresponding storage locations are documented. Additionally, materials can be reassigned to other storage locations, machines, or manual workstations.

Transport orders are generated directly from the production process, enabling agile control of intralogistics resources.

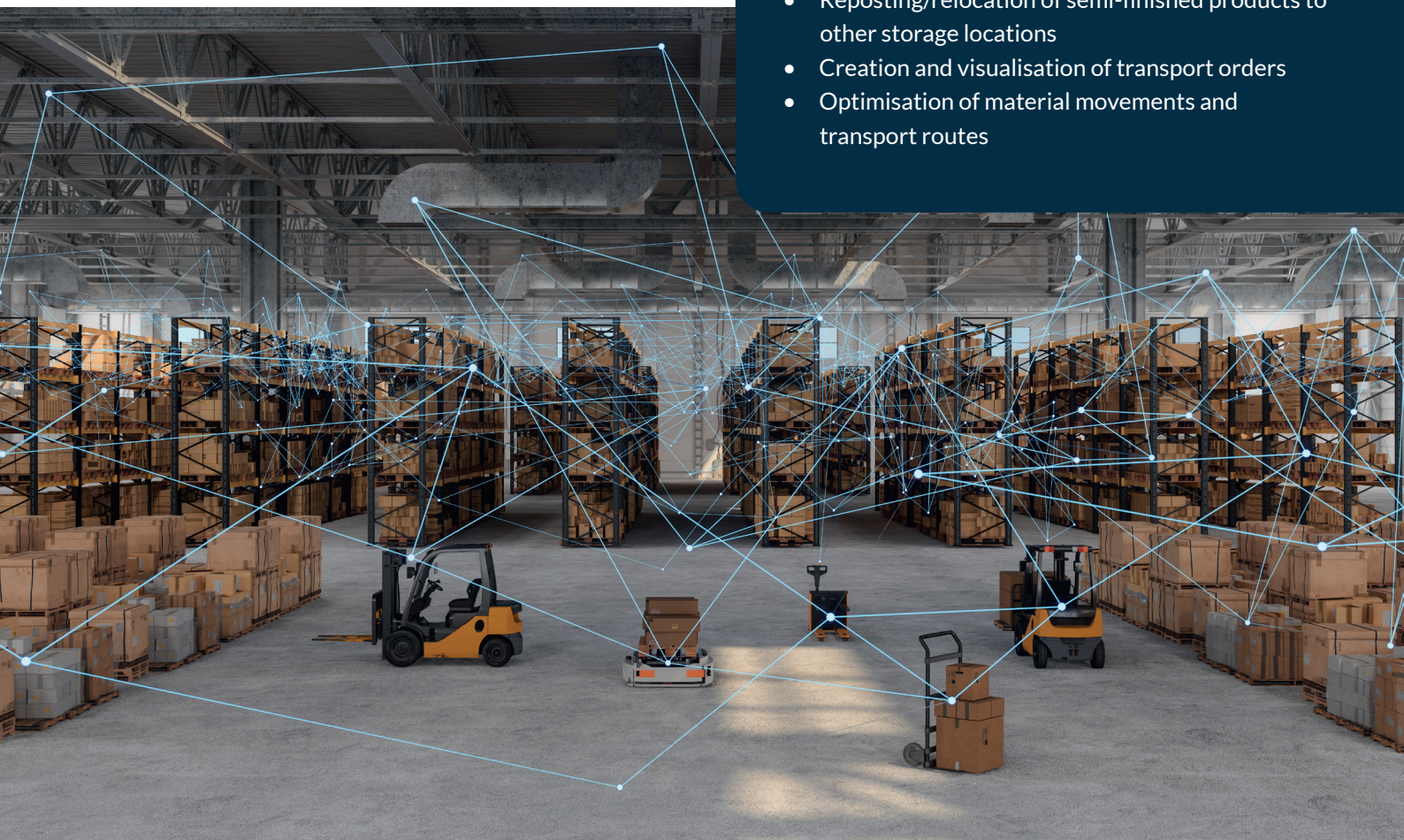
Pick-up stations or destinations can be specified automatically by the system using configurable pull or push processes. This reduces the administrative effort for employees to a minimum.

The logistics employee is shown the essential information within the transport controls: From which source? Where to? When? By which mode of transportation?



Highlights & Benefits

- Inventory management and documentation of storage locations for semi-finished products
- Reposting/relocation of semi-finished products to other storage locations
- Creation and visualisation of transport orders
- Optimisation of material movements and transport routes



Quality Management



PROXIA CAQ Data Acquisition

SECURE DATA CAPTION PROCESS FOR QUALITY MANAGEMENT

Ensuring the economic success of a manufacturing company is contingent upon the delivery of high-quality, error-free products. It is imperative for companies seeking to enhance value creation in production to prioritise the analysis, documentation and archiving of quality-relevant data using a Quality Management tool (CAQ). The PROXIA CAQ Data Acquisition module enables quality and measurement data to be recorded directly at the workstation. This allows operator self-inspection to be fully integrated into the process—all within the familiar input interface.

PROXIA CAQ Management

SIMPLE INSPECTION PLAN MANAGEMENT FOR AN AUTONOMOUS CAQ PROCESS

An integrated inspection plan management feature allows for the creation and administration of part-specific inspection plans. These plans allow for the definition of quantitative and qualitative characteristics. It is possible to attach drawings and assign measuring equipment. A CAQ watchdog can be integrated into the ERP interfaces as needed. Upon the transfer of new orders to the MES, it automatically generates inspection orders. These orders form the basis for documenting quality data in production. PROXIA CAQ Data Acquisition is seamlessly integrated into CAQ Management. This results in a complete solution that, on one hand, provides quality managers with the necessary data and information and on the other hand, equips production employees with a tool for capturing the required quality data comprehensively and digitally.

Highlights & Benefits

- In-process operator self-inspection
- Integration into machine data acquisition through inspection cycle monitoring
- QA reports, control charts, statistics and detailed data
- Unified operating concept through full integration into BDE Production Data Acquisition
- Integration into the PROXIA alerting concept
- Autonomous inspection plan management for operation without an external CAQ system
- Optional integration with external CAQ systems (e.g., SAP QM)
- Automatic generation of inspection orders
- Connection of digital measuring instruments

Employee Timekeeping System



Highlights & Benefits

- Time recording directly at the workstation
- Data basis for incentive pay/bonus system
- Display of information from the HR system

EMPLOYEE TIMEKEEPING SYSTEM (ETKS) – IT INSTEAD OF A CALCULATOR: THE GOOD OLD TIME CLOCK IS A THING OF THE PAST!

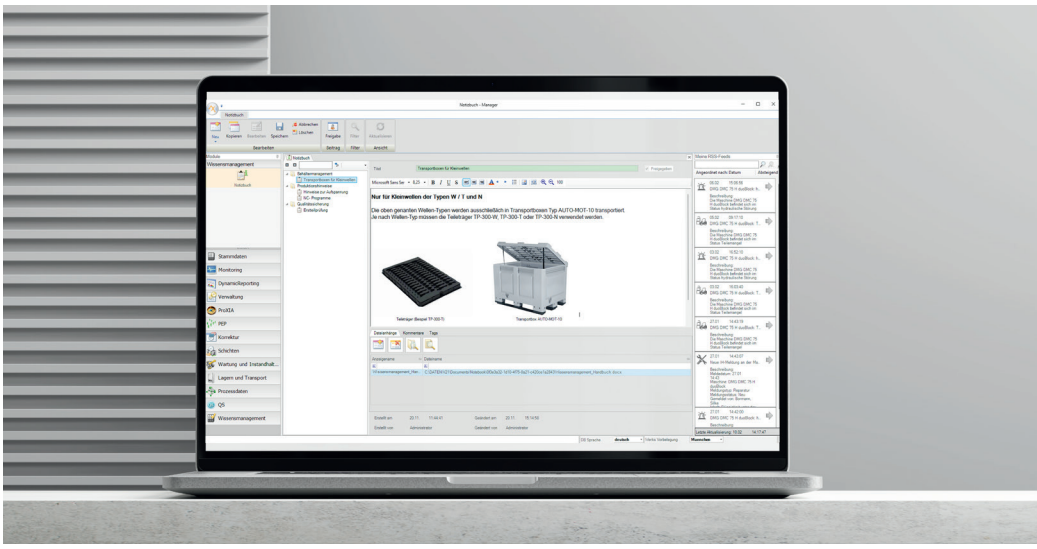
The primary function of ETKS is to accurately record working hours and seamlessly transfer them to payroll processing. The Employee Timekeeping System records employees' "clock-in and clock-out" movements via BDE terminals or ETKS entry terminals. It immediately verifies authorisation as well as the chronological order of the bookings. These entries are transferred to the HR system, where they are allocated to the respective time accounts. Employees can check information such as hours worked, time balances, remaining vacation and more at any time via the booking terminals. Corresponding evaluations provide authorised personnel with a detailed overview of attendance, hours worked and employee availability. The Employee Timekeeping System is fully integrated into the PROXIA BDE system.



Knowledge Management

Preserving acquired knowledge within production independently of individual personnel and making it accessible to all authorised persons presents a major challenge for many companies.

In this regard, the MES solution from PROXIA provides a streamlined, intelligent process that encompasses the following domains of knowledge management.



COLLECT KNOWLEDGE

Recording employee knowledge directly at the workstation. It does not matter whether the employee works in an office environment, on an assembly line, or at a machine performing their daily tasks.

PROVIDE KNOWLEDGE

The greatest challenge for many companies is to distribute knowledge based on actual needs. Instead of distributing knowledge and information using a scattergun approach, the system extracts only the information relevant to the task at hand and makes it available to the employees.

PRESERVE KNOWLEDGE

Managing the collected knowledge and organising it in relation to products is the core task of PROXIA Knowledge Management. Whether it's manufacturing specifications, work instructions, or tips from colleagues, all pertinent information is stored with the respective article revisions and can be adjusted or expanded as needed. This information is safeguarded by the PROXIA user rights management system. The entries that represent the company's knowledge are organised into topic-specific groups. This structure, in conjunction with the capacity to tag content with custom keywords, facilitates the retrieval of specific knowledge. Any type of document can be attached to the entries.

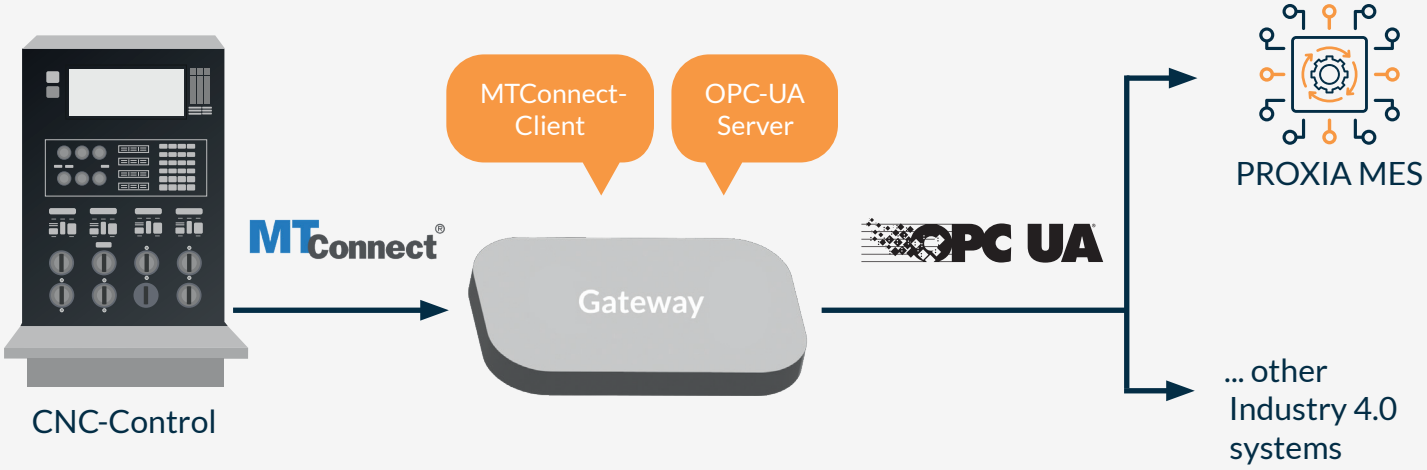
Highlights & Benefits

- Easy assignment of information to products
- Knowledge database that grows within the process
- Optional approval management for recorded knowledge (four-eyes principle)
- Direct recording of information at the workstation possible
- Simplified search through individual tagging



PROXIA – Gateway

OPC-UA & MTConnect



LEVERAGE WHAT YOU HAVE – TO GET WHAT YOU NEED!

Especially in the case of a heterogeneous machine park consisting of different models with various control systems and production years, capturing machine data is not always straightforward. Contrary to what the Industry 4.0 discussion might suggest, vertical and horizontal integration of machines and systems in practice can still require considerable effort. Although OPC-UA has already been established as a unified and standardised communication architecture in the context of Industry 4.0, it will still take time before it is fully supported by all machines, systems and controllers.

PROXIA GATEWAY – THE PERFECT FOUNDATION FOR INDUSTRY 4.0!

We developed the PROXIA Gateway in response to the need for interoperability between Industry 4.0 systems, which utilise OPC-UA for communication and older machinery and systems that often rely on disparate technologies. This component is capable of transforming various communication types and protocols into OPC-UA. For instance, the Gateway has the capability of making MTConnect data accessible to any OPC-UA client. The data source continues to be MTConnect, but users will enjoy the benefits of OPC-UA. This allows for, for instance, the compensation of network outages through the use of HA technology (Historical Access) or the enhancement of data transmission security using the integrated features of OPC-UA. Standardising communication via OPC-UA at the shop floor level is another important step toward Industry 4.0 and the goal of the Smart Factory for PROXIA users.

Highlights & Benefits

- Combination of standardised data model (MTConnect) and secure data transmission (OPC-UA)
- Use of machine data for availability and performance analyses, as well as visualisations and evaluations
- Enable vertical and horizontal networking even with a heterogeneous machine park
- Elevate existing technologies to a new level and make them Industry 4.0-ready
- The Gateway as a central data provider for your Industry 4.0 environment

PROXIA Services

More than just MES software for production

Achieving perfect production doesn't happen overnight. We are not focused on simply selling MES software. Our goal is to provide our customers with comprehensive support and guidance on all MES-related topics – and to establish a long-term partnership with you as your MES solution partner. Our services consist of various modular components that are logically structured and ultimately form a coherent whole: your optimal MES – perfectly integrated into an existing infrastructure with the potential for continuous expansion.

Support during decision-making (MES Consulting), through the implementation process (MES Concept, Implementation and Modification/Optimisation) and ongoing support after implementation (training, support and seminars) are all part of the PROXIA service portfolio. Step by step, we optimise not only during MES implementation but also well before and long after. Individually or as a complete package, PROXIA MES solutions truly unlock the potential of your production – for increased productivity and competitiveness, on the path to the Smart Factory and Industry 4.0.

COMPETENT MES CONSULTANTS – EVERYTHING FROM A SINGLE SOURCE

From start to finish of the PROXIA MES project, experienced PROXIA consultants and trainers are at your side. A single point of contact in whom you can place your trust, who keeps the entire MES project in view and manages it with a clear focus on objectives.

FULLY UNLOCK PRODUCTION POTENTIAL

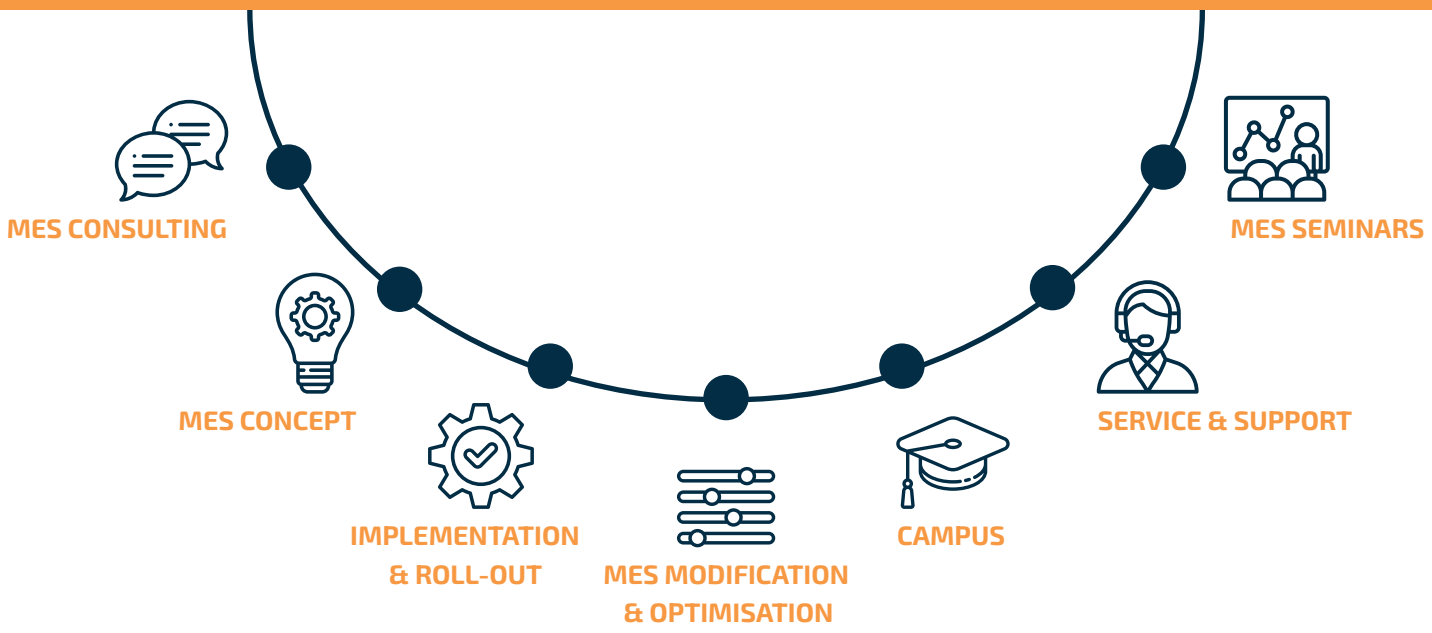
Together with you, we use the PROXIA OEE method to identify potential process improvements in your production. We provide you with recommendations for action and you then decide on the next steps.

THE COMPLETE MES SOLUTION FOR YOUR SUCCESS

The PROXIA MES complete solution guarantees the success of your MES project. From start to finish – from concept to post-implementation support – a seamless, well-designed chain of software and services modules ensures a rapid ROI on your software investment.

COST-EFFICIENT & FUTURE-PROOF MES SOLUTION

More than just MES software: Goal-oriented concepts, rapid implementation, seamless communication and hands-on training. Our services deliver a future-proof MES system.



PROXIA MES – Highlights & Benefits

PROXIA – The MES Project realisers

By choosing PROXIA MES, a manufacturing company lays the foundation for a sustainable improvement of its production processes, always with a focus on enhancing the OEE indicator: higher availability, increased performance of resources and improved product quality.

Working with PROXIA is more than just acquiring MES software; it marks the beginning of a partnership with one of the leading providers in the MES environment. As an MES solution partner, PROXIA offers strong strategic expertise and powerful project implementation capabilities. With our MES Process Consulting, we support companies in a highly practical and goal-oriented way using state-of-the-art lean production methods, SMED concepts and setup time optimisation models.

As a technology trendsetter, PROXIA offers transformable, in-house developed MES products featuring modern design, ergonomic user interfaces and a modular structure – providing a future-proof, cohesive MES complete solution that grows with a company's requirements. Customised MES software products with a high degree of standardisation ensure short implementation times, quick deployment and a rapid return on MES investment.

On Course to the Smart Factory with PROXIA MES

Outstanding MES software product features and modern PROXIA technology innovations support manufacturing companies on their path to perfect production, the Smart Factory and Industry 4.0.

Highlights & Benefits

- PROXIA Fine Planning with live data integration from the shop floor
- PROXIA MDE/BDE with modern signal acquisition and networking methods (digital I/O modules, OPC-UA, MTConnect, among others)
- PROXIA early warning system for faster production response in case of disruptions
- Needs-based PROXIA Software interface concepts for improved clarity
- PROXIA dynamic reporting for dynamic online evaluations
- PROXIA KPI.web for accessing key performance indicators regardless of location
- PROXIA MES Monitoring for real-time measures management
- PROXIA hybrid data processing technology

SAVINGS POTENTIAL
through the use of PROXIA MES:

-55%	Savings potential
-67%	Paperwork
-36%	Data Entry Time
-32%	Work in Progress (WIP)
-22%	Setup Time
-22%	Errors and Scrap

References & Customers (Excerpt)

MERKLE BEWEGT · ALBERTS · BLEFA. DRAFT DESERVES QUALITY · ebnat

ebi bilstein · HEGGEMANN 360° · HERBERT PARTNER FOR TIRE TECHNOLOGY & SERVICE WORLDWIDE · HF GROUP

KIESELMANN FLUID PROCESS GROUP · KRENHOF · LEHMANN METALLTECHNIK GmbH · MARK

MEBA sawing solutions. · OBERAIGNER Powertrain · OSTLANGENBERG Fertigungstechnik GmbH · saarschmiede Freiformschmiede

Swiss Steel Group · TILLMANN PROFIL METALL IN BESTFORM · YPSOTEC PRECISION SOLUTIONS · Zirkonzahn

ebnat

Both the project costs and the planned acquisition costs were right on target; the total costs paid off after a short period of time.

MERKLE BEWEGT

My advice to all entrepreneurs looking for a forward-thinking solution: Don't look for excuses—just get started and make the most of your time.

MEBA sawing solutions.

In the morning, even before my first coffee, I can see at a glance: Where do we currently stand, how are the systems running. This gives me an immediate overview without having to be on-site at the machines.

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