Ensure Your Competitive Advantage with evon XAMControl System for Process and Production Control

→ **evon XAMControl –** closing the gap between production and ERP

Nowadays, focussing on customers requires new business models.

More knowledge of the production processes must be gained while simultaneously increasing flexibility.

The advantages of digitalisation must be used for optimisation.

The world of automation needs to be networked.

The level of competitiveness must be raised to a new level.

Focus > 1 week
Data exchange of master, plan, process and production data.

Focus < 1 week
Planning and execution of jobs and quality assurance.

Focus real-time
Standardised interfaces to automation "unbundling".

ERP

MES

SCADA & HMI

PLC

I/O SIGNALS

Field devices, sensors & actuators
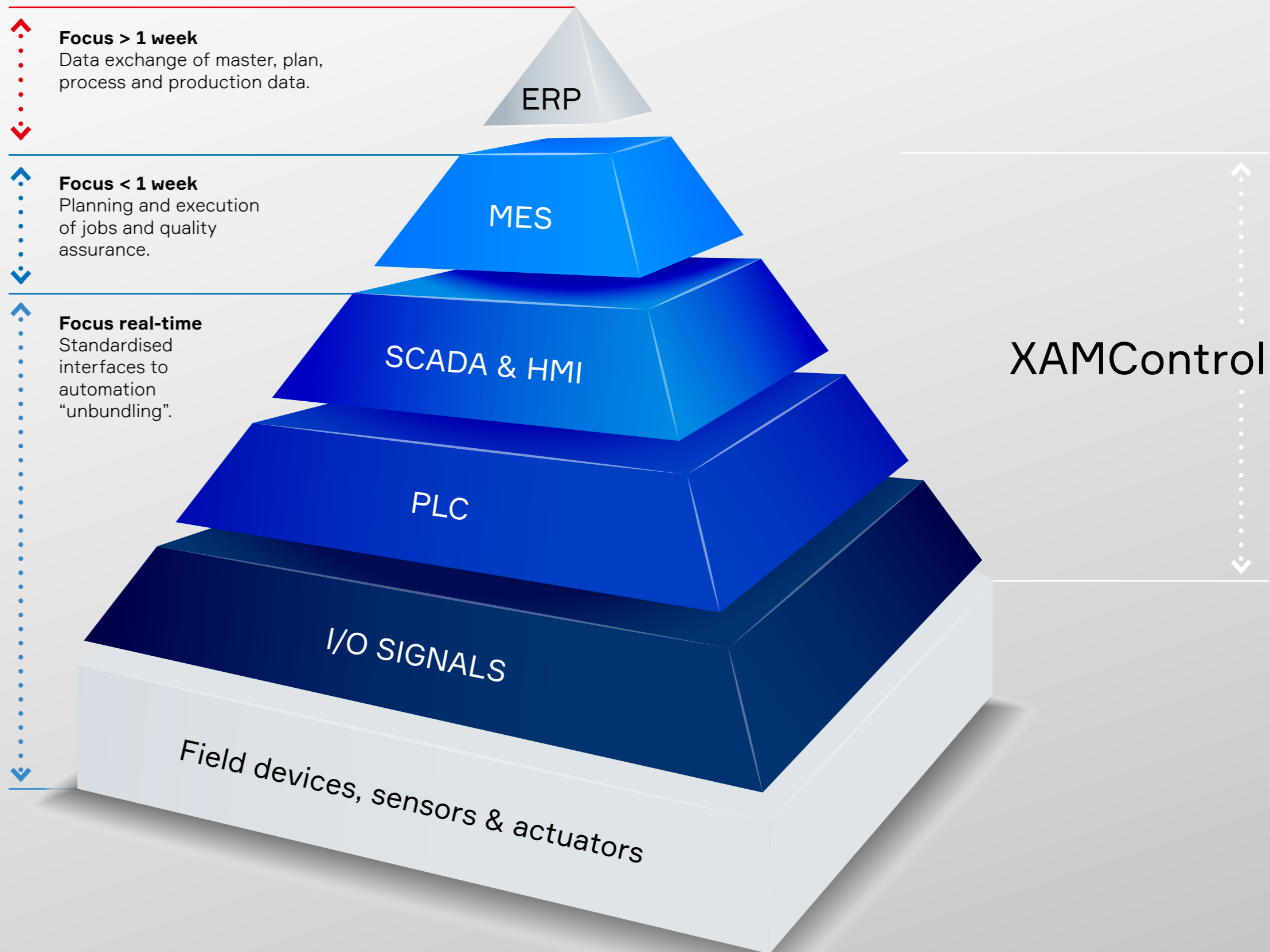
XAMControl

As a MES, evon XAMControl combines the world of management with that of production.
You profit from a reliable basis for decision-making and can act proactively.

Whether the task is mixing (batch), discrete or continuous manufacturing, evon XAMControl will prove useful to you as a production control system.

Mixing plant (foodstuffs, feeding stock, construction material, chemicals, pharmaceutical) – Automotive (assembly lines, test beds, etc.) – Steel industry – Electroplating & semiconductor industry - Process industry

Eliminate complexity for the user, remove interfaces and stop separated data storage. As soon as SCADA and MES are combined homogenously, you will profit from simpler operation, improved extendibility and, of course, also from all other evon XAMControl advantages.
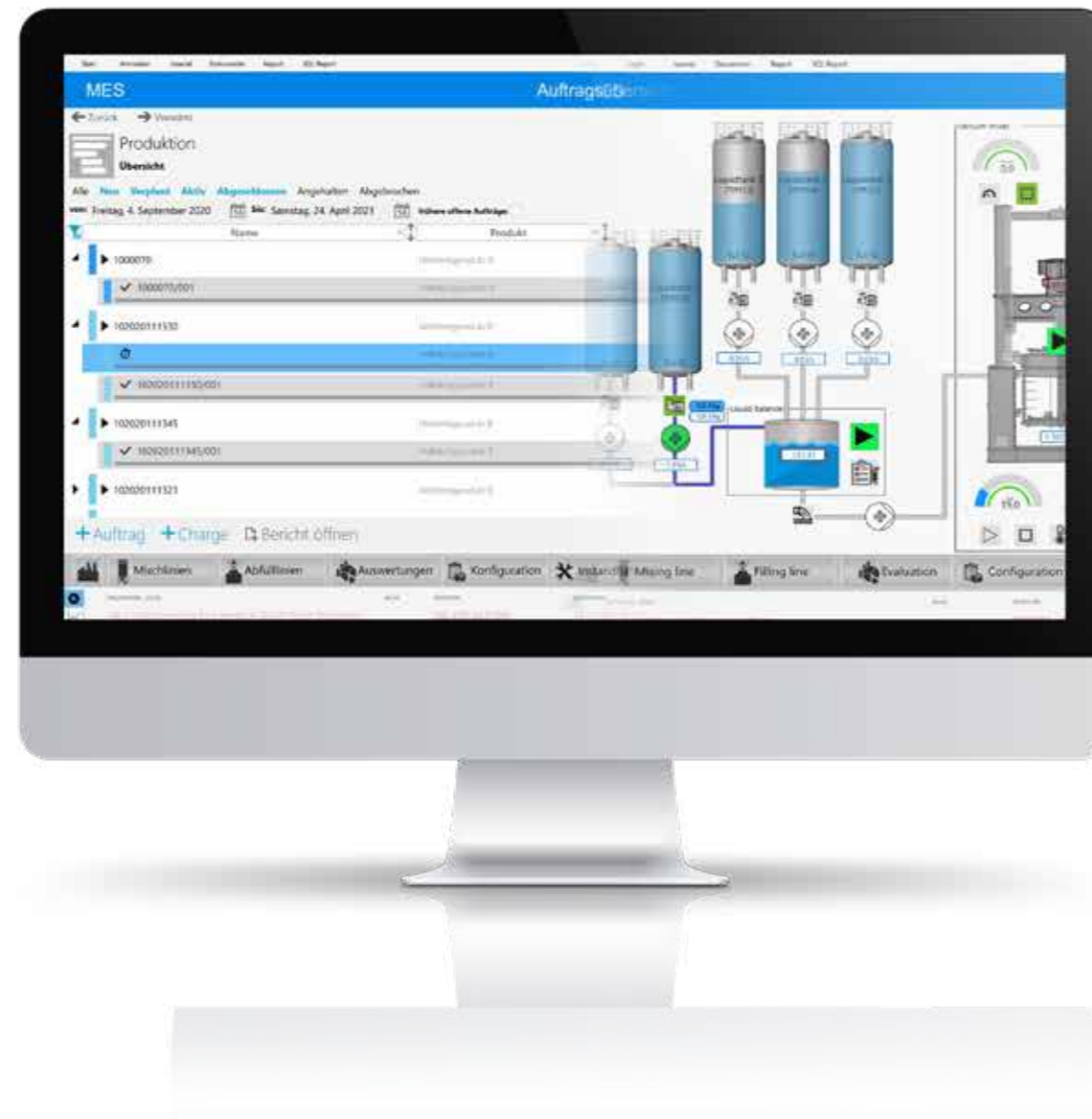
XAMControl advantages

→ **The best of all worlds from ANSI/ISA S88 & ANSI/ISA S95**

→ **Built completely using databases**

→ **Homogenously and seamlessly merged in evon XAMControl**

→ **Redundant (optional)**
 – Hot Standby
 – Simple configuration
 – Upgradeable at any time
 – Secure data consistency

→ **Cluster (optional)**
 – Operation in clusters

→ **Modules**
 – MES server (optionally redundant)
 – MESControl Unit/WorkCell
 – Process editor
 – Material & batch management
 – Quality and laboratory checks
 – Job planning
 – History of manufacturing jobs
 – Tracking and tracing
 – MESControl reporting basic
 – Dashboard / KPIs

Flexible Plant Configuration
All possibilities and restrictions at a glance

Unbundling, or the buzzword "lot size 1", requires a high level of flexibility in your plant's configuration.
evon XAMControl as a production management system offers you the required flexibility and extends it with simple operation and an open architecture.

Material & Lots
A finished product is made from raw materials

Your process models the steps that are necessary in your plant to produce a finished product from the raw materials. evon XAMControl adds everything that a modern and state-of-the-art production plant needs: Bar code/RFID, stock levels, raw materials, quality assurance, release, tracing ...

Production Processes
Arbitrary modelling within the scope of the plant

Any production process can be arbitrarily modelled in evon XAMControl. The only limits are those of your plant. This extremely simple modelling possibility enables processes and workflows to be tested (versioning) and to be adapted with the minimum of effort: Feedback regarding the efficiency of your changes can be found in the evon XAMControl database.

Job Processing
Live, even with ERP if you like

Using flexible plant and processes to execute jobs requires an automated information flow to your ERP. This enables synergies to be recognised and exploited. If your ERP system knows what it being produced where in real-time, you can intervene faster and more efficiently.
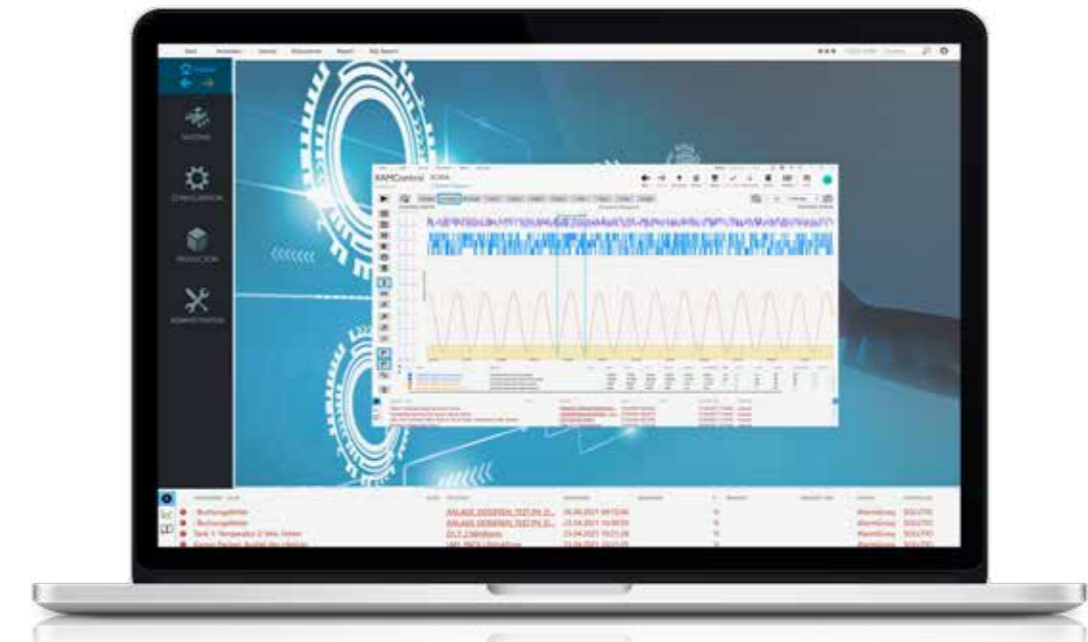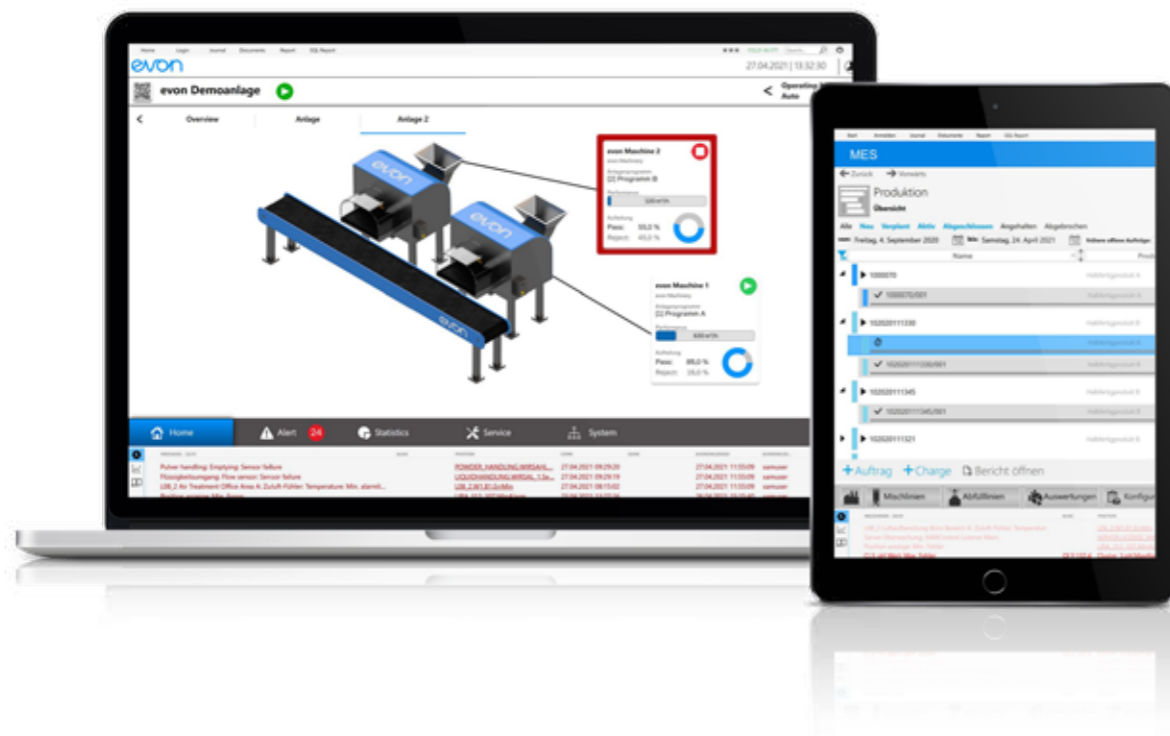
Production Planning
Use available potential

Planning requires knowledge: If all data regarding your production plant (machine states, stock levels, production times, etc) are available, then your planning activities will be simpler, more transparent and more precise. If evon XAMControl provides an adapted planning assistant for the optimisation of your key processes, then this is when you really being to take advantage of all available opportunities.

Live Production
Individually visualised

Visualisation today is more than just a representation of the processes. evon XAMControl enables you to link the elements with live data and to execute changes in real-time: Easily adapted and directly connected to your machine control.

Quality Assurance and Sampling
Documented and released

Quality assurance primarily ensures consistent documentation. To make sure you are on the safe side, a range of quality specifications that must be complied with can be configured in the system for production-accompanying quality assurance. Each test result is assigned a unique identifier and documented with the acquired values. Depending upon the results, the associated product or lot is either released or blocked from the process.

Transparency / Business Intelligence
Strategically & operatively

The seamless traceability with detailed recording of materials and production processes provides the foundation for the strategic and operative business intelligence in evon XAMControl. All data is stored quickly and clearly structured in the database and is available with a mouse-click.

evon XAMControl is the foundation in your production for networking and data acquisition in the spirit of Industry 4.0.

Line Management

A production line combines a range of very different machines, plant and devices. The line management in evon XAMControl not only provides you with an overview, but also enables you to react quickly to changes or to unforeseen events. The system supports you in this with clear analyses and recommendations for gradual optimisation.

Your production team is supported during live operation with real-time information regarding the status of the current lot, current alarms and events. Thanks to the integrated reports and statistics, this data is available for all forms of analysis and help you with the task of optimisation.

Managing Energy and Resources

evon XAMControl fulfils all requirements placed upon an energy management system (EMS) according to the DIN norm ISAC 50001. The core task of an EMS is to provide the data as a basis for the conscious control and continuous optimisation of energy consumption.

evon XAMControl offers you all technical possibilities to acquire, archive and evaluate energy and counter data from a range of different media. This data foundation enables you to make timely decisions and to adapt processes such that energy peaks are not exceeded and hence energy and money can be saved.

Increased Efficiency Thanks to OEE

You can monitor the productivity and effectivity of your machines and plant using the OEE evaluation in evon XAMControl. OEE (Overall Equipment Effectiveness) is an indicator that helps you to determine, monitor and improve the productivity, profitability and overall effectiveness of your production plant (machines, manufacturing cells, conveyor belts, etc.) in the context of the manufacturing process.

OEE takes the most common and important sources of productivity loss in manufacturing into account. The OEE value is comprised of the following three factors: Availability, performance and quality.

Improved Planning

Plan the production times and shift models using the new shift planner in evon XAMControl. It enables you to define and store a range of different shift models and to then use them in your planning. It is also possible to change the work times for individual days and so be able to react flexibly to production.

All times are stored in a dedicated database table and are also stored in a history. This is then available later for evaluations. The shift planner enables you to plan your future production and gives you an overview of past shift times.

evon XAMControl Batch

evon XAMControl contains functions specially developed for plant with batch, or lot-oriented, processes. These include data administration of (raw) materials and articles, a process and recipe editor, and complete traceability of the manufactured products.

Visualisation, Dosing, Mixing, Controlling

evon XAMControl offers simple and intuitive navigation and operator guidance for your plant. All production processes are clearly represented. This enables you to have the most important information about the state of the plant and current product and job information at your fingertips.

During live operation, the system supports you with dynamic pop-ups and highlighting of active plant elements and aggregates (e.g. during dosing and weighing of materials), and shows the desired and actual values in real-time according to the current recipe. To make sure you have an overview, all data is stored in a centralised database and is accessible at any time.

Master Data Administration

To ensure that evon XAMControl is able to control and optimise your production, the system contains a comprehensive material and master article administration. All raw and auxiliary materials, semi-finished and finished products, as well as amounts delivered including all information relevant to production are stored in the system. Naturally, this data can also be extracted automatically from your ERP system.

The combination of your recipes and your production results in you being aware of current material levels. You can simply carry out your inventory online, and you will know before production starts, whether all materials and raw materials are available in stock in sufficient amounts. Of course, individual batches or lots can be allocated to a customer or to a production job.

The evon XAMControl Batch Server

The evon XAMControl Batch Server forms the core of production control. Thanks to its open character, it communicates on the one hand with the ERP system, and on the other, all components belonging to your production are extracted and defined (plant, lines, machines). The communication to the control level is done via standardised phase interfaces according to ANSO/ISA S88 and S95.

This enables evon XAMControl batch server to carry out your production processes taking the ERP demands into account. Commands with setpoints and parameters are sent to the controllers. All necessary control of actuators and sensors (e.g. valves, motors and balances) are programmed in the controllers. After completion of each production step, the actual values are reported back. In order to guarantee precise and efficient dosing, many comprehensive functions for the optimisation and automatic post-processing are integrated.

The evon XAMControl batch server can be optionally installed as a redundant or highly available system. Thanks to the open batch database model, all data can be fed back to external systems (such as ERP) or consolidated in individual reports and evaluations.

Recipe Editor in Real-Time with Offline Simulation

All available machines and manufacturing activities can be modelled in evon XAMControl. Any production process can be arbitrarily modelled in evon XAMControl. The only limits are those of your plant. This extremely simple modelling possibility enables processes and workflows to be tested (versioning) and to be adapted with the minimum of effort. The open database model enables recipes and processes to be imported and used, if required, from external systems (e.g. ERP systems). In addition, recipes can be simulated offline in evon XAMControl in order to transfer changes in targets into production. Of course, this is valid for all products you manufacture (incl. BOM and BOC).

Job Management: Simple and with Maximum Transparency

evon XAMControl ensures the best possible overview of your jobs. The visualisation shows an overview of all production jobs alongside all relevant information such as job number, article, amount, delivery date… all views permit filtering according to time period, plant and status. New jobs can be imported from your ERP system, or manually defined supported by a wizard.

The planning and release of individual jobs considers the limitations of individual production lines or materials and, on request, carries out a source and target check before job start to prevent the mixing of materials.

evon XAMControl Plus

evon XAMControl contains numerous extended functions for batch operation. We are convinced that the openness of the system will enable us to fulfil your requirements.

→ Connection of printer systems (e.g. a printer for labels and tabs)
→ Integration of "list & label" to design your labels and tabs
→ Support for RFID, barcode and QR-code via scanner
→ Integration of handheld and forklift terminals
→ Data exchange with third party systems such as ERP, autonomous transport systems, stock systems, quality management systems
→ Documentation of cleaning or empty notifications

→ Maintenance and service data
→ Recording of operating hours, operating cycles and intervals
→ Fault and alarm notification via SMS and/or email
→ Offline simulation of recipes and process workflows
→ Integrated EMS (energy management system)
→ Simple integration of media supply systems such as electrical systems, heating, water, compressed air …

Fully Informed at All Times

evon XAMControl helps you maintain an overview in real-time of your production processes thanks to a comprehensive set of reports and statistics: From the manufacturing history via batch reports to seamless traceability.
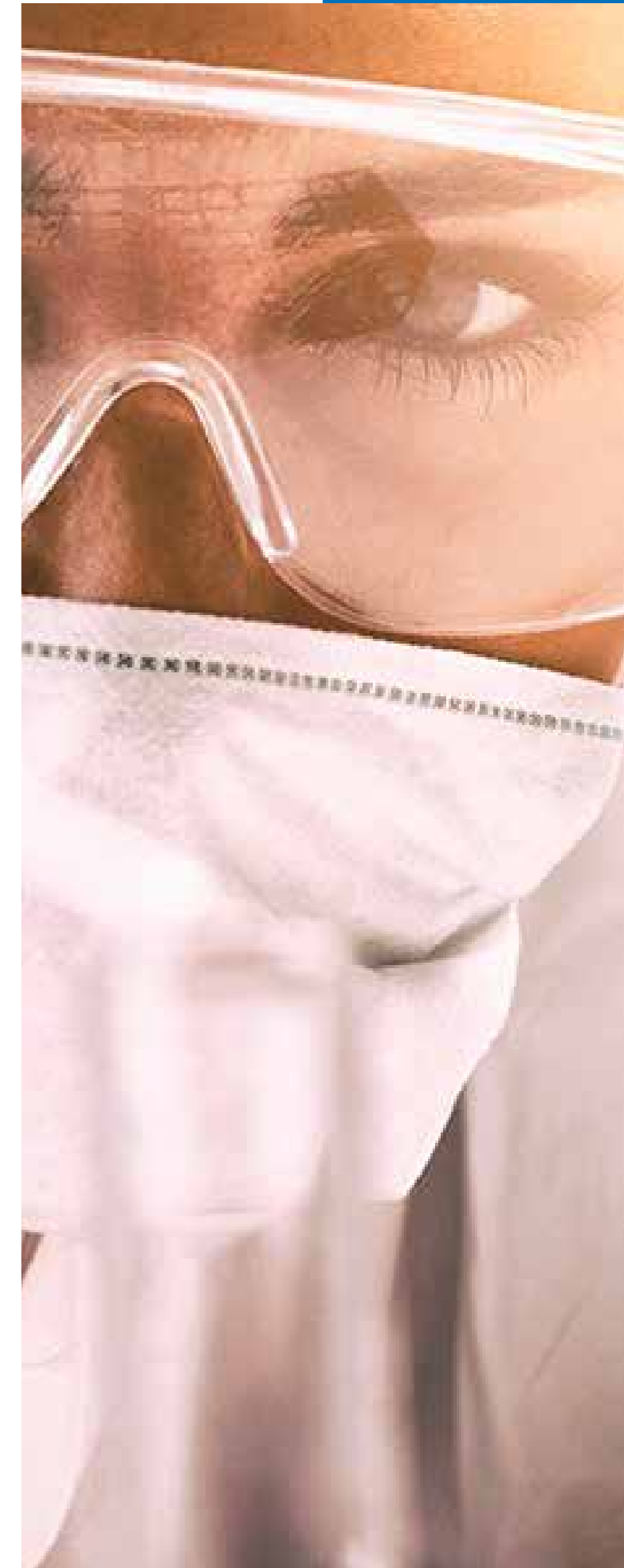
➜ Detailed manufacturing documentation with all jobs and partial jobs

➜ Information regarding each production step: Setpoints, actual values, materials used, times, machines used ...

➜ Detailed overview of all manufacturing steps required for production

➜ Traceability from the end product to the raw materials

➜ Production quantity reports (day, week, month)

➜ Current stock levels for all materials

➜ Machine-related evaluations (e.g. faults, runtimes)

➜ OEE evaluations

➜ Recording of tolerance limits (min, max)

➜ Energy consumption reports

Web Visualisation

The web visualisation (HTML5) provides access from any device to current production KPIs and levels. Authentication is managed by evon XAMControl such that only authorised personnel receive permission to see current production data.

The HTML5 visualisation offers an overview of current levels, planned production jobs and current machine status.

Tips for successful implementation

Efficiency improving IT networking of IT landscapes

IT

Think Globally, Start Manageably

ACT

Include Employees From All Areas

TALK

Focus on Ability of Machine and Plant to Communicate

TEAM