



HIGH END FUNCTIONALITIES FOR SMB

# INNOVATION IN INDUSTRIAL ERP



# TIMELINE BUSINESS SOLUTIONS GROUP

15 COMPANIES, ALONG WITH A RANGE OF PARTNERS WITH SITES IN GERMANY, SWITZERLAND, LUXEMBOURG, POLAND, SLOVAKIA, ROMANIA, BULGARIA, INDIA AND THE NETHERLANDS EMPLOY AROUND 170 STAFF SUPPORTING OVER 1,000 CLIENTS WITH MORE THAN 22,000 INSTALLATIONS.





# THE SME MISSION

TO MAKE HIGH-END TECHNOLOGIES AND FUNCTIONS ACCESSIBLE TO SMES.

With over 30 years of experience in the ERP market, we know exactly what problems and requirements SMEs face. Our goal is to significantly accelerate processes across all departments and to boost their efficiency. In pursuit of this, TimeLine ERP combines a number of disciplines into one interface-free solution for processes that work together perfectly.



ERP-System des Jahres

2021

Sieger in der Kategorie  
Einzelfertigung  
TimeLine Business Solutions Group



ERP-System des Jahres

2020

Sieger in der Kategorie  
Automotive ERP  
TimeLine Business Solutions Group



ERP-System des Jahres

2019

Sieger in der Kategorie  
Beste Technologie  
TimeLine Business Solutions Group



ERP-System des Jahres

2018

Sieger  
in der Kategorie  
Serienfertigung

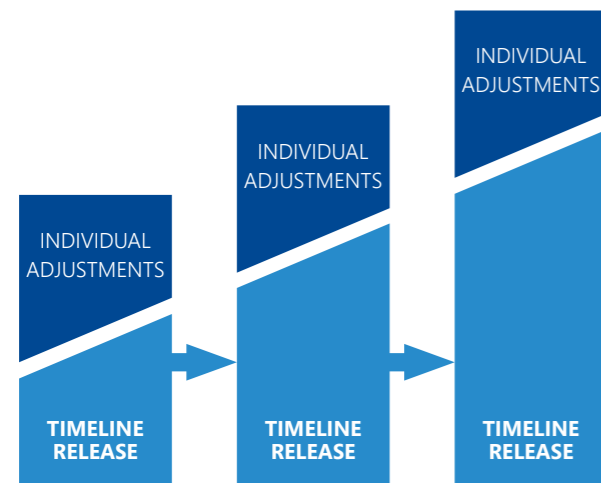


# ALL FLEXIBILITY, ZERO RIGIDITY

TimeLine ERP makes customising effort your key competitive advantage – instead of just another money pit. The unique combination of ERP platform and integrated development system allows functional gaps to be closed with minimal effort. Furthermore, the integrated migration tools ensure that individual adjustments to new versions are converted automatically. A range of modules tailored to your company requirements and size lay the foundation for your own personal TimeLine identity.

## Personal

Regular advisors who accompany you year in and year out, along with a service hotline run by experienced project managers provide you with the personal support you need.



## Modular and flexible

The modular structure of TimeLine ERP gives you the freedom to add functions at any time as your requirements grow.

## Individual

### TIMELINE ERP MAKES INDIVIDUAL ADJUSTMENTS A COMPETITIVE ADVANTAGE

Adjustments to the ERP system are managed much more quickly with the in-house development platform (TimeLine Developer) and integrated migration tools than with comparable systems, and are always possible while maintaining release capability. Individual adjustments are migrated smoothly, whether isolated or as part of version updates. This prevents unnecessary downtimes and makes your individuality the new normal.

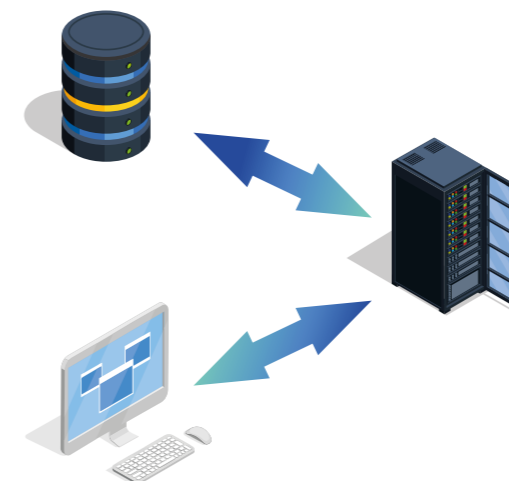
## Independent

### STAY INDEPENDENT AND FLEXIBLE WITH TIMELINE ERP

Whether you are working from home, in the office or on site at client/supplier premises: the triple-layer architecture, with the TimeLine-Server acting as intelligent middleware, ensures that you can work on your TimeLine database securely and with encryption from anywhere – without any need for additional tools such as a VPN tunnel or a terminal server. Furthermore, the TimeLine-Server manages access from the outside, your entities and licences, and server-side services. The result: you are always flexible and location-independent.

### IN THE CLOUD OR ON-PREMISE

With us, data sovereignty starts with the question of location. You can host TimeLine ERP either on-premise or in the cloud. You determine your IT landscape.





# TIMELINE SIMPLY OFFERS MORE

Thanks to its wide array of functions, TimeLine ERP is probably the best integrated ERP solution for SMEs available. In just one system, it offers what was previously only possible using a complicated combination of different tools. This equates to maximum efficiency for your processes.



## ENTERPRISE RESOURCE PLANNING

TimeLine offers fully integrated enterprise resource planning that is tailored to producing companies and covers all requirements.

## PRODUCTION PLANNING AND CONTROL

The PPC system is designed to accommodate the needs of manufacturing companies and integrates functions that are not always found in every ERP system.

## QUALITY MANAGEMENT

TimeLine is one of the few ERP systems that integrates all relevant quality management topics into the ERP system.

## PROJECT MANAGEMENT

Project management in TimeLine allows you to plan, manage and control all project-related processes and information clearly and from one place.

## DATA CAPTURING

Labour time recording (LTR), production data capturing (PDC), machine data capturing (MDC) and quality data capturing (QDC) in one integrated overall system without interfaces.

## CAD INTEGRATION AND PDM

TimeLine offers a solution specially developed for custom and project manufacturers that integrates the CAD environment seamlessly into the ERP system. The PDM system completes the efficient data handling offered.

## CRM AND BI

TimeLine offers a comprehensive CRM system and business toolkit. This enables you to retain a constant overview of business partners, as well as company figures and the associated documents.

## OFFICE FUNCTIONS

Thanks to its integrated document management system, email system and calendar and task management, TimeLine covers all Office tasks in the ERP system.

## ACCOUNTING

TimeLine integrates certified accounting. Furthermore, it provides an EBICS interface along with an export for Lexware and DATEV.

## SPECIALIST INDUSTRY EXTENSIONS

Tailored function packages formed based on the special requirements of the respective industry.



# ENTERPRISE RESOURCE PLANNING

The enterprise resource planning system in TimeLine allows you to control all processes relating to your stock movements in enterprise resource planning. From procurement and reservations to production and delivery, you always have an eye on all stock movements – and at all warehouses. Whether it is articles with serial numbers, bills of materials, raw and operating materials with batch numbers, finished products or commercial goods – the enterprise resource planning system helps you to manage everything with ease.

Coupling with the PPC system also allows dates from production planning to be taken into account in the enterprise resource planning system: for example, when calculating delivery dates for purchasing orders.





# Needs assessment including order and production proposals

## MATERIAL REQUIREMENTS PLANNING (MRP)

The MRP algorithm, which uses inventories, replenishment times, planned scrap and existing purchase orders and requirements to determine production and order proposals is indispensable for efficient material requirements planning.

TimeLine ERP also retains the cause relations across all levels, allowing your material planning department to trace any delay in delivery to effects on underlying production and customer orders.

In the APS algorithm (advanced planning and scheduling), production proposals determined in this way are converted into planned production orders and sorted by priority or the target dates determined by the MRP algorithm (with the most urgent orders at the very top of the list).

# Price quotations

## ONLINE PRICE QUOTATIONS AND DELIVERY DATES

The price quotation forms the basis of every calculation, whether it comes from resale or production. Here, you combine the products for which a quotation is to be requested with possible suppliers. For each supplier, an email with the quotation containing all products is generated automatically and sent out as a PDF. It is also possible to send out a link; the supplier is then directed to a website to provide feedback on prices and delivery dates digitally. The data entered is transferred to Time-Line ERP automatically.



# Metal, energy and other surcharges:

## SURCHARGE MANAGEMENT

Thanks to optimal parametrisation, all metal price agreements can be stored in one module quickly and easily.

### Variable assignment

Whether alloy- or material group-related, client-based or general – direct assignment of the alloy contract minimises the maintenance effort required for your metal surcharge conditions.

### All common calculation variants for metal/energy surcharges

- Quotation basis
- EUR/100 kg
- EUR/pc.

### Variable identification of metal/energy surcharge with document printing

- EUR/100 kg
- EUR/pc.
- Total
- Offset/hidden in base price

### Variable and universal

- Can be used for purchasing and sales
- Agreement can be limited to one period or specified tonnage
- Conversion groups can be defined freely (daily, weekly, monthly, quarterly)

### Problem-free conversion of metal surcharges

TimeLine fully automatically converts customer-specific prices, open orders and call-offs, updates pending order statistics and provides an in-depth conversion log regarding all the changes carried out.

## Goods and warehouse organisation

### MULTI-STOCK WAREHOUSE AND CHAOTIC WAREHOUSE

Maintaining an overview of all raw materials, semi-finished products and finished parts is not always easy. TimeLine ERP helps you to manage multiple internal and external warehouses with or without fixed storage spaces. With each material movement, you can see where the product is stored and how much of it is available there.

TimeLine supports the management of any number of parallel warehouses. This includes warehouses from different sites or plants, consignment warehouses for clients or from suppliers, warehouses belonging to external manufacturers, quarantine warehouses, commission warehouses, etc.

#### Unlimited number of warehouses and warehouse locations:

- Plants, sites
- Quarantine warehouses, consignment warehouse management
- External manufacturers ("extended workbench")
- Consignment and commission warehouses
- Storage and retrieval proposals (FIFO principle)
- Chaotic storage

### CONSIGNMENT WAREHOUSE PROCESSING FOR PURCHASING AND SALES

For goods warehouses maintained by a supplier with a client at his own expense, TimeLine ERP provides processing for consignment warehouses. This processing works both on the sales side, if a client withdraws goods, and on the purchasing side, in the event of material being provided.

### WAREHOUSE EXCHANGE DELIVERY NOTES (SALES) AND AUTOMATIC WITHDRAWAL NOTIFICATION (PURCHASING)

When moving storage between warehouses, warehouse exchange orders or delivery notes can be used. These document the relocation proposal and also enable logistic processing by linking with shipment processing and the logistics functions (shipping orders, labels, etc.) provided by TimeLine.

Within one warehouse, storage places with any kind of structuring (e.g. tree-form or matrix-form for the management of high-bay storage) can be posted. To do so, TimeLine generates storage proposals (e.g. free storage location, single-batch storage) and FIFO proposals during retrieval.

## Container management

### UNIT MANAGEMENT

Enables the management of warehouse units and shipment units. Throughout the commercial process, shipment processing and storage management, containers can be transparently used and managed with their own identification number. In addition, container-specific postings can be configured in TimeLine ERP and performed via HTML scanner.

## Product series and traceability

### BATCH AND SERIAL NUMBERS

Batch and serial numbers are needed to be able to identify individual products or a product series at any time. All that is needed here is a simple code, and then with each stock movement, you can be informed about which batch and serial numbers you have in stock and can choose directly which you now want to install, ship or move.

Best-before dates or end of guarantees (parts with serial numbers) and other properties can be managed for each batch. This is joined by the option to manage DMS documents (e.g. drawings, appliance folders, work products, inspection logs, etc.) using a serial number or a batch

In connection with the life cycle, warehouse log, and proof of use, batch and serial number management remains a gap-free form of management that meets even the highest requirements found in the automotive, medical, aviation and space travel sectors.





# Warehouse assessment

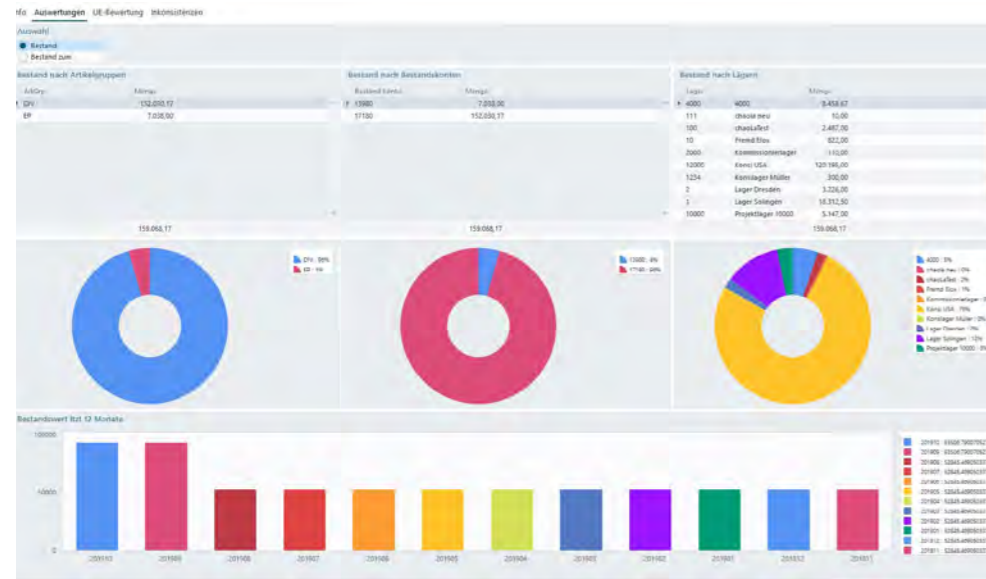
## WAREHOUSE ASSESSMENT ACCORDING TO FIFO

TimeLine supports a FIFO assessment for warehouse inventories and semi-finished parts (circulating quantities). During a run, which can be repeated at any time, withdrawals are linked with acquisitions and assessment prices from the acquisition posting updated in the withdrawal postings. This results in a realistic assessment of all movements and inventories.

During the FIFO run, all production orders are reassessed with FIFO material prices. This involves determining a circulation value depending on the routing operation, which enables an aggregated, solid WIP assessment based on actual production costs.

Assessments can be made for any times from the past. The aggregated values are, among other things, shown in groups according to stock accounts.

Defective incoming goods documents can be corrected retroactively as the FIFO run can be restarted at any time. Aside from the target calculation for the WIP assessment, this also generates a corrected post calculation containing the subsequent price changes to the incoming goods.



Assessments from the FIFO journal





# Mobile data capturing in the warehouse

## WAREHOUSE SCANNER WITH HTML INTERFACE

An HTML interface is available for mobile work with TimeLine ERP. This can be called up using any mobile device and browser. Report back on tasks on the go using a smartphone or tablet or capture warehouse transactions using a mobile handheld scanner.

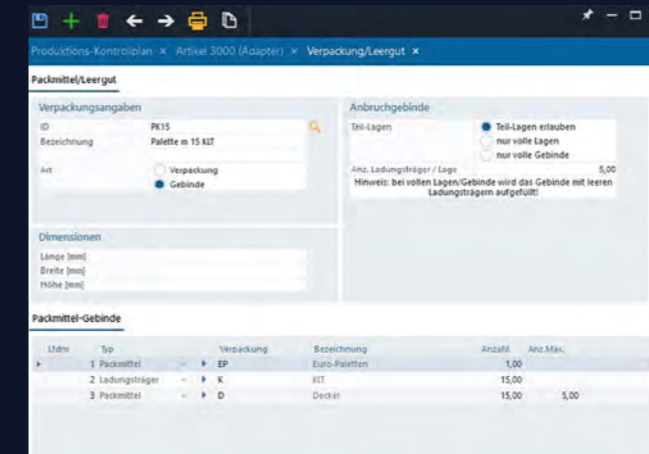
For this purpose, individual transaction types including the individual transaction parameters can be created in TimeLine ERP and assigned to a mobile device. Using the integrated web framework, the transaction types created can then be called up via HTML interface.



# Logistics and shipping

## TIMELINE INTEGRATES ALL RELEVANT LOGISTICS FUNCTIONS DIRECTLY INTO THE ERP SYSTEM

- Delivery note
- Label printing (e.g. VDA goods labels)
- Shipping order
- Delivery note EDI/EDI external delivery note
- Customer-specific packaging provisions/ single- and multi-step packaging
- Interfaces to the web services of UPS, DPD and DHL
- Shipping proposals including logistics process
- Shipping proposals according to FIFO
- Internal shipping orders
- Pick and pack process
- Adjustable HTML scanner solution for the pick process
- Shipping order



Packing material master and container editor in document



VDA goods label



# PRODUCTION AND PLANNING

Planning is the heart of every production enterprise – and the weakness of most ERP systems. Where other systems run out of steam, that's where the variety of functions offered by the TimeLine production module begins.



## Material requirements planning

### ADVANCED PLANNING AND SCHEDULING

With TimeLine ERP, you can ensure optimal material availability and procurement: future material requirements are determined with maximum precision and covered in compliance with volumes and deadlines. This helps you to optimise warehouse inventories, keep an eye on material movement and comply with predefined delivery deadlines – and therefore to stay a step ahead of your competitors.

The APS algorithm is the centralised tool of the material requirements and planning system. The supplier industry predominantly works with delivery call-offs, which sometimes change daily, posing a major problem for planning.

The APS algorithm plans call-off changes overnight up to automatic planning.

### AVAILABLE-TO-PROMISE

Inventory management can be difficult even for experienced companies. Here, Available-to-Promise (ATP) has proven to be a useful tool: it enables companies to maintain a balance between customer satisfaction and profitability.

“Available-to-Promise” is a model that enables a company to store only the minimum quantity of products required so that they can manage their warehouse inventories more effectively. This helps companies to avoid the risks of overstocking products while simultaneously guaranteeing their timely replenishment.

As a fundamental component of effective supply chain management, the “Available-to-Promise” strategy provides sufficient products for sales and forecasts future product quantities based on data-based prognoses.

### APS ALGORITHM

#### Step 1: EDI import

New call-offs are read in by the EDI system

#### Step 2: Delete planned orders

All planned orders not yet carried over to detailed planning are deleted.

#### Step 3: MRP algorithm

Recalculation of all primary and secondary requirements based on new call-offs. Generation of production proposals with target deadlines.

#### Step 4: Generated planned orders

Conversion of production proposals into planned orders. Sorted by priority.

#### Step 5: Redesign

Planned orders with maximum priority are planned top down, starting from the client's desired date. If the period is already too short, planning is carried out bottom up. Planning takes place against final capacity to produce a realistic figure of which orders cannot be manufactured according to deadlines and how severely capacities are exhausted.

If alternative machines have been specified, the system automatically optimises based on the earliest available machine and adjusts the routing plans accordingly.

The APS algorithm plans call-off changes overnight up to automatic planning.

# ELECTRONIC DATA EXCHANGE

Using our integrated EDI module (electronic data interchange) for electronic data exchange, you can fully automatically exchange documents between you and your clients, as well as suppliers. This standardised type of data transfer saves you time and prevents incorrect entries. Purchase orders are captured in the supplier's system instantaneously and do not have to be transferred again manually – both nationally as well as internationally.



## EDI

### EDIT DOCUMENTS

Imported shipments can be viewed, edited and released for further processing using the editor. Here, the editor displays the components of the shipment to you as processed by TimeLine later.

### EDI FILE VIEWER

The integrated EDI file viewer makes EDI messages legible and easier to understand. You can upload an EDI message and have it displayed by the segment with the corresponding values for the data elements. In the same way, you can also view the segment groups and, if available, the explanations for the codes and qualifiers.

| STANDARD SUPPORT  |
|---|
| VDA   |
| Global EDIFACT according to GS1 or VDA                      |
| EDIFACT all directories                                     |
| Flatfile  |
| SAP IDOC  |
| XML   |
| CSV   |
| True ANY-TO-ANY mapping to databases                        |
| Internal standard mappings<br>e.g. EDI -> VDA or VDA -> EDI |

| EDI DOCUMENT TYPES          | VDA STANDARD | GLOBAL EDIFACT STANDARD (GS1/VDA) | EDIFACT MESSAGE TYPE |
|-----------------------------|--------------|-----------------------------------|----------------------|
| Order                       | VDA 4925     |                                   | EDIFACT ORDERS       |
| Order amendment             | VDA 4925     |                                   | EDIFACT ORDCHG       |
| Delivery call-off           | VDA 4905     | VDA 4984                          | EDIFACT DELFOR       |
| Detailed call-off           | VDA 4915     | VDA 4985                          | EDIFACT DELJIT       |
| Delivery note               | VDA 4913     | VDA 4987                          | EDIFACT DESADV       |
| Warehouse report, movements | VDA 4913     | VDA 4990                          | EDIFACT INVRPT       |
| Invoices                    | VDA 4906     | VDA 4938                          | EDIFACT INVOIC       |
| Credit (self-billing)       | VDA 4908     | VDA 4938                          | EDIFACT CREADV       |
| Remittance advice           | VDA 4907     |                                   | EDIFACT REMADV       |
| Incoming goods report       | VDA 4913     |                                   | EDIFACT RECADV       |
| Order confirmation          |              |                                   | EDIFACT ORDRSP       |
| Article master data         |              |                                   | EDIFACT PRICAT       |
| Sales report                |              |                                   | EDIFACT SLSRPT       |
| Shipping advice             | VDA 4933     |                                   | EDIFACT IFTMIN       |



# Scheduling and capacity planning

## AUTOMATIC PLANNING

The planning algorithm pragmatically solves the coordination of production dates as easily as it is set up: all production orders are automatically planned by the planning system against final capacity. For this, you define your machines (or resources), set up a shift schedule and provide each production order with a target deadline that determines its priority – the redesign does the rest. This plans all production orders top down or bottom up against the target deadline. The result is a constantly up-to-date overview of all orders and their final deadlines, along with the utilisation of your machines/resources.

## SHIFT SCHEDULES AND CAPACITIES

You can create and manage any shifts in the system, including consideration of different break times and varying holiday schemata according to federal state. The shifts can be allocated to employees and machines and created using a rolling weekly schedule. For each resource, a percentage-based degree of use can also be specified to enable finite capacity planning to be carried out. Alternatively, this calculation can be made through infinite or bottleneck-based capacities.

## GANTT AND CALENDAR VIEW

The Gantt planning is used to set dates and serves as an ideal aid to determine resources which may experience a bottleneck. You therefore also receive a better overview of your machine, tool and employee utilisation in the company. Right-clicking displays the details on the selected production order and allows you to fix the entire order or individual routing operations so that these dates are not overruled when rearranging planning. In the planning calendar, you can view each individual resource in a daily, weekly or monthly overview.

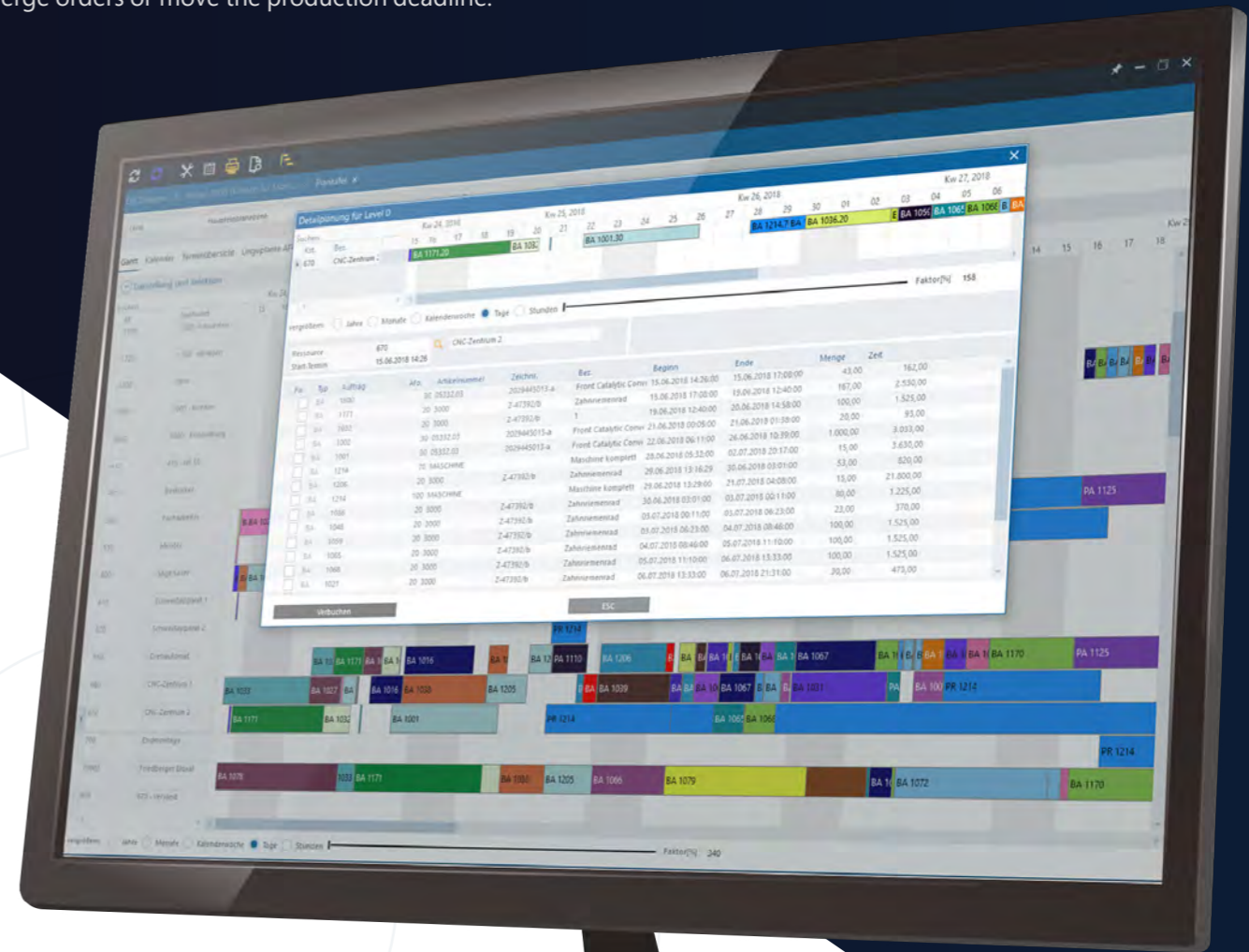
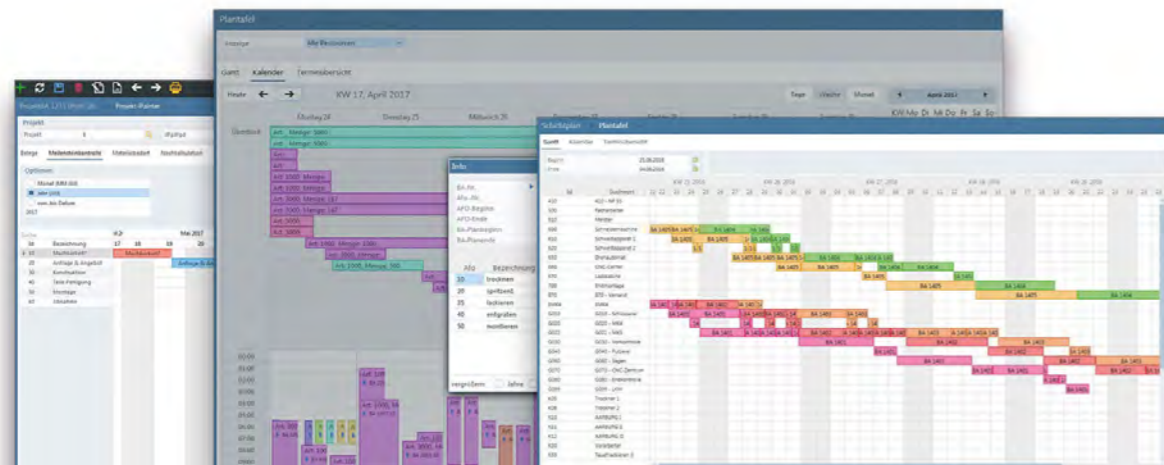
## STAFFPLAN (SP)

Using StaffPlan (SP), you can define your shifts and working hours, along with holiday and sick days. You can then have any kind of shift over a freely defined period generated for several employees directly. Target hours created in this way form the basis for additional labour time recording. The sick days and holidays saved in this way can be printed out directly for payroll accounting. This means that the commonly used Excel lists are now a thing of the past.

# Sequence planning and detailed scheduling

## DETAILED PLANNING

While the automatic planning runs automatically every day e.g. as a server process and provides an overview of utilisation of resources and finish deadlines for production orders, the detailed planning is used for the manual post-optimisation of the planning result, e.g. for set-up sequence optimisation. Ideally, automatic and detailed planning should run in perfect coordination with each other. This involves the planner carrying the next pending planned and production orders from automatic planning over to detailed planning to then move these from one resource to another, to split the production order, merge orders or move the production deadline.



# TOOL MANAGEMENT AND TOOL MANUFACTURING

Retain a constant overview of your own tools or those provided by your business partners. Using the automatic tool life cycle, you can log all times and cycles and maintain an overview of all maintenance cycles.

## TOOLS AS A PRODUCTION RESOURCE

As with your machine, you can save your tools in a specially created master record. The tool is then simply assigned to the corresponding article routing operation.

## STANDBY TIMES AND MAINTENANCE INTERVALS

Each feedback in a routing operation with tool automatically increases the tool's standby time.

## MANAGEMENT OF TOOLS

Separate management for pressure-cast tools, models and model plates, core boxes, jigs, installations, other tools and test equipment.

## MANY OTHER USEFUL FUNCTIONS

Tool blocking (with blocking text), tool amortisation, storage of technical master data for tool, storage of external documents (drawings, photos) for tool, management of tool components and installations, cost and profit info on tool.

## TOOL LIFE CYCLE – AN INDEX CARD FOR YOUR TOOL

This not only contains each piece of feedback entered, but manual entries such as blocking, scrap, overhaul, etc. can also be made.

## TOOL MANUFACTURING

Rapid capturing for tool manufacturing orders (repairs, conversions, etc.) including simple capturing of feedback times from tool manufacturing. Cost-based posting of repair costs in the tool/tool life cycle.

## EXTERNAL TOOL MANUFACTURING

Outbound and inbound delivery notes for outbound and inbound tool delivery.

## AMORTISATION

Tool amortisation accounts for simple and effective management of your amortisations.

## Tool-based combined production

### COMBINED PRODUCTION ORDER

Additional (auxiliary) products are accrued through the use of tools in combined production (including joint or interlinked production). This combined production order offers you a simple way to cleanly map this production process. In the tool master, you can save your tools and associated combined products. In the feedback for a combined production order, the quantities or production times are then optionally posted to the tool's life cycle and once the maintenance interval is reached, this tool is proposed for maintenance. Specifying cavities allows you to specify the distribution key for your article production.





# EXTERNAL MANUFACTURING

Few metal-working companies can do without external processors such as electroplating, curing or surface processors. Above all, the integration of an extended workbench (external manufacturers) in planning, calculation, logistics and feedback pose a challenge in this area. The extended workbench in TimeLine ERP maps all essential processes for external finishing using different document types: External contract, external purchase order, external delivery note (upon outbound delivery of raw goods), feedback from external manufacturing and automatic incoming goods document handover to purchasing are essential milestones in the order flow of external production.

## Extended workbench

### ROUTING PLAN

External manufacturers can already be stored as resources in the routing plan. Nothing else is needed to differentiate an internal from an external routing operation.

### PLANNING

A turnover time can be specified in days for external manufacturers, meaning the external routing operation (ERO) can be planned perfectly with the internal routing operations in the bottom up and top down scheduling.

### CALCULATION

In terms of calculations, the extended workbench is equal to a purchase order: as each external manufacturer can be managed as a supplier and warehouse at the same time, individual supplier-based prices can be stored for each operation and are also used in the calculation.

### LOGISTICS AND STORAGE

The external manufacturer is not just a supplier, but also a warehouse at the same time. The outgoing item is sent to the external service provider via an (external) delivery note, with TimeLine ERP performing a stock reposting from its own warehouse to that of the external manufacturer at the same time.

### FEEDBACK

With the feedback, the warehouse of the external manufacturer is credited. The feedback can simply be issued via a barcode scan of the external delivery note, such that errors are almost impossible in the feedback. As the feedback always references the external delivery note, this also allows for an evaluation of the timeliness of the external manufacturer – this is important for the supplier evaluation.

|  |                  |                           |                       |                 |
|--|------------------|---------------------------|-----------------------|-----------------|
| Merx Stahlhandel GmbH<br>Kölner Ring 200                   |                  | <b>Warenbegleitschein</b> |                       |                 |
| 4000 Köln  |                  |                           |                       |                 |
| Transport  | Umsatz           | Anfangsdatum              | Enddatum              | Rechnungsnummer |
| B  |                  | 109                       | 19.12.2006            | 70002           |
| Bestellnummer  |                  |                           |                       |                 |
| 52/2006  |                  |                           |                       |                 |
| <b>Wir liefern Ihnen zur Bearbeitung folgende Artikel:</b> |                  |                           |                       |                 |
| Pos.   | Artikelnr.       | Bearbeitung               | Menge<br>Liefertermin | Unsere BAHr     |
| 10   | Warenausgang: 10 | Lüfter                    | 55,00<br>52 2006      |                 |
| 20   | Bearbeitung:     | Wärmebehandlung           | 52 2006               | BA1377 AFO40    |

# QUALITY MANAGEMENT

A core requirement for automotive suppliers is the fulfilment of the new IATF standard 16949. The fulfilment of this standard virtually requires the use of a quality management system. Nevertheless, in most cases, ERP and QM systems are separate solutions. TimeLine integrates quality management completely into the ERP system – the benefits of integration start as early as with master data capture: Production data, quality data and technical documents are managed in one single module.



## Quality management system

### PRODUCTION CONTROL PLAN (PCP)

In the TimeLine production control plan (PCP), the routing plan, test schedule, bill of materials and FMEA as well as photos for test instructions and all technical documents are recorded in one module.

Example of index change: During an index change, the PCP is simply copied to the new index. Confusion between old and new routing plans or test schedules not matching the routing plan are excluded in this way. The test schedule index can be traced down to the batch – a standard requirement of the TS 16949 standard of the automotive industry.

### PRODUCTION-SYNCHRONOUS TESTING

A production-synchronous test for serial manufacturers with SPC-managed parts in the automotive sector have been binding for longer than the introduction of the IATF standards. Test rhythms such as test n parts every 1,000 parts or test n parts every 2 hours or test n parts per container are standard here.

This means that the test cycle also begins with the PDC stamping and has to be carried out at predefined intervals for measurements. TimeLine ERP integrates the QM completely right down to the SPC (statistical process control) and therefore generates what is known as a test order with each production order.

### STANDARD QM FUNCTIONS

**TimeLine ERP covers the following key QM functionalities as standard:**

- Test equipment management
- Test equipment capability analysis
- Production control and steering plan
- Test orders/test order monitor
- Quality data capturing (QDC)
- Control card/process capability (cpk)
- Complaints processing (8D report)
- Scrap and block quantity capturing/fault collection cards
- Batch tracing (single- and multi-step)

### SUPPLIER EVALUATION

Aside from predefined parameters, the supplier evaluation in TimeLine ERP also offers individually configurable "hard" and "soft" facts which can be stored for suppliers using the editor.

TimeLine ERP also supports you with the automatic generation of evaluations for adherence to delivery deadlines, adherence to volumes, complaints, quality (PPM), response time 3D/8D and complaints processing, customer support and QM and environmental certificates.



# PROJECTS

Projects accompany the everyday routines of many companies. In order to conclude these with satisfaction and by the agreed deadline, project-related processes and information need to be planned, managed and controlled. Project management in TimeLine pools all important information surrounding a project into one place. A clear interface maps the project holistically.

Despite the high density of information, all key data in the production schedule can be accessed at a glance: This includes information on pending tasks, set milestones, planned costs and statements on the project status, personnel or deadlines.

For example, you can quickly and easily view bills of materials or material requirements for production orders. In addition, project notes can be created documenting telephone calls with clients, emails or even visits.

## A STANDARDISED MODULE FOR PROJECT MANAGEMENT,

### ENGINEERING DESIGN AND PURCHASING.

- Multi-step linking of production orders
- Add to or edit growing bills of materials in the ongoing project
- All process sequences are possible even if the bill of materials position does not have an article number (one-off parts)
- Feedback along with both assembly-related and global pool routing operations

## Project management

### PROJECT EXPLORER

Project management in TimeLine ERP was designed for individual production and engineering as well as new parts launch with series manufacturers.

Here too, the integration of all processes in the ERP system plays a major role, as a project is ultimately the summary of all tasks, documents and objects belonging to a process.

Project management depicts all documents, drawings and documents for a project clearly in a project explorer.

- **Internal documents:** View, new creation and editing of all documents of a project from a mask
- **External documents:** Management of Excel sheets, images, Word files, drawings and other files in the subsequent document management of the project explorer
- **Milestones:** Division of the project into any number of (temporal or technical) milestones with separate budgeting (hours and costs) and scheduling

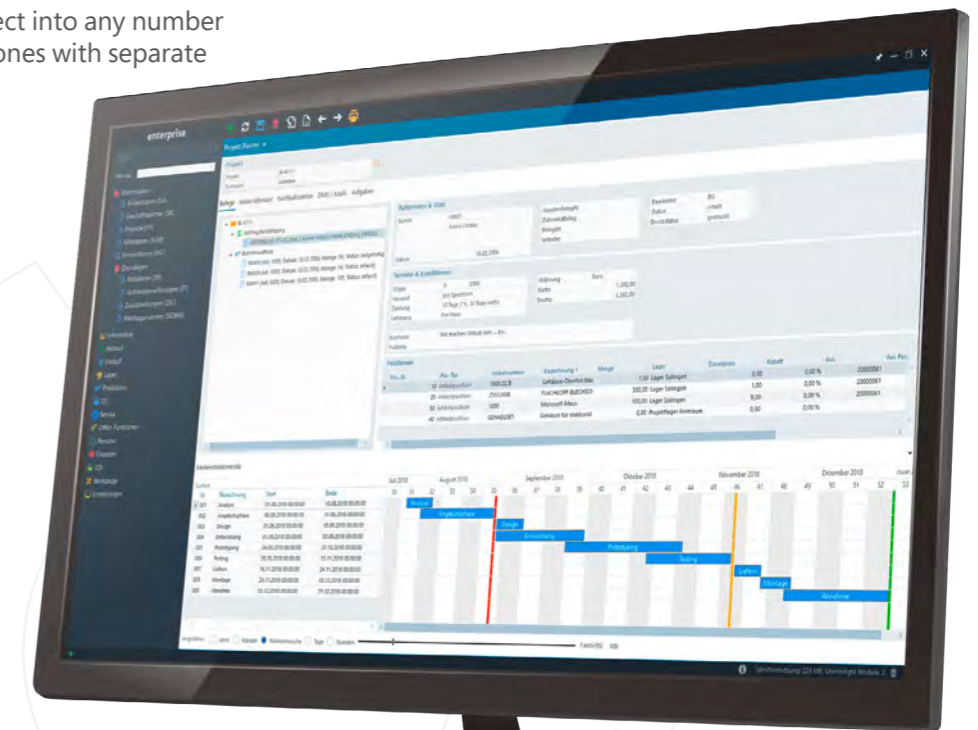
### MILESTONES AND PROJECT PHASES

In the project, you can pool all purchasing, sales and production documents into one coherent process to create an overview of all milestones and project phases with a single click. Milestone control offers you the chance at any time to check whether the project is still within the agreed time-based framework.

### POST CALCULATION

Through the assignment of multiple production orders to the project, time and material consumptions are recorded in the post calculation of the project.

A project-based post calculation of all linked production orders is possible via the project as a result.



# Project manufacturing

## PROJECT PARTS LIST

Project parts lists are single- or multi-step bills of materials which can be created directly using the CAD import function. Project parts lists may contain new parts or existing articles. New parts come with the option to create the article master directly from the project parts list. This involves automatically creating the sub-articles and bill of materials of the selected assembly.

## BILL OF MATERIALS COMPARISON

The bill of materials comparison allows growing bills of material to be mapped. New parts, deleted parts and modified parts are shown between two chosen bills of material with the option to manually adjust the existing bill of materials or overwrite it with the new bill of materials. This involves connecting linked purchase orders and other linked documents to the new bill of materials positions.

## REVISION MANAGEMENT OF BILL OF MATERIALS STRUCTURE CONTINUAL AND AUTOMATIC.

As an in-between between PDM structure and project production order, the project parts list thus enables the revision management of the entire bill of materials structure and is a requirement for the bill of materials update (growing bill of materials). In the process, a temporary bill of materials can be transferred to a project production order to allow production to begin despite engineering design not yet being completed.



## PROJECT PRODUCTION ORDER

Project production orders (PPO) can in turn be created from project parts lists. These are multi-step production orders in themselves. While most ERP systems create multiple production orders for multi-step structures which they interlink, TimeLine ERP enables the summary of any extensive bills of materials into one single production order, which not only drastically reduces the number of production orders to be managed, but also greatly simplifies the downstream processes – e.g. purchase orders – as price quotations, purchase orders, external delivery notes (for external manufacturing) or sub-production orders can be created directly from the production order bill of materials with just a few clicks.

## ASSEMBLY-RELATED RELEASES

The project production order supports an assembly-related release, which enables selective material planning (and ordering) only from the parts released by engineering design. In the case of advanced engineering design, a new version of the project parts list can then be created in the CAD system. As Inventor and other CAD systems do not generate any unique bill of materials positions, this function is handled by TimeLine-PDM.



### WORKING WITHOUT AN ARTICLE NUMBER

For the production order, it is irrelevant whether an assembly or bill of materials position has a TimeLine article number or not. Especially with one-time cutting positions, the assignment of article numbers is a severe hindrance, meaning these can be done away with entirely in TimeLine ERP. Price quotations, purchase orders and even sub-production orders can be produced without the articles being created.

### ASSEMBLY AND POOL ROUTING OPERATIONS

Routing operations can be attached to any assembly node of a production order. These result in a multi-step routing plan which can, e.g. be planned bottom up or top down. This involves mapping the usual PERTT linking via the project parts list.

However, if this is too elaborate, pool routing operations – collective routing operations without assembly assignment – can be managed in the production order, which nevertheless enable pre and post calculation and planning of the production order – without the need for a dedicated routing plan. These pool routing plans can also be copied from templates – a further simplification.

### LASER, BOX AND CUTTING LISTS IN JUST A FEW MOVEMENTS.

**Edit similar parts in different levels at the same time.**

- Management, planning and feedback of all cuttings in one combined production order within the project.
- Parts classification for semi-finished products including formula-based editor for calculation of basic volume unit.
- Automated cutting detection when importing the project parts list via the TimeLine PDM system.



## Variant production

### VARIANT FORMATION THROUGH PDM OR VARIANT GENERATOR

**Variant producers differentiate technologically between two groups:**

- those whose variant is created through constructive intervention in the CAD system and
- those whose variant is created by a “configurator” in the ERP system (without design-based changes having to be made to parts or assemblies).

Through the integrated PDM in connection with the “SmartCopy” function, TimeLine offers the design-based variant generation, as well as the configurator-based variant generation via an integrated variant generator.

### VARIANT THROUGH CAD-PDM INTEGRATION

The Inventor plug-in from TimeLine features a “SmartCopy” function. This allows assemblies and parts to be exchanged or redefined through similarity copies by way of direct intervention of TimeLine-PDM in the assembly references of the target CAD system.

TimeLine hereby selectively exchanges the variant-forming parts in the CAD files for new parts (by changing the assembly references).

### VARIANT THROUGH CONFIGURATION

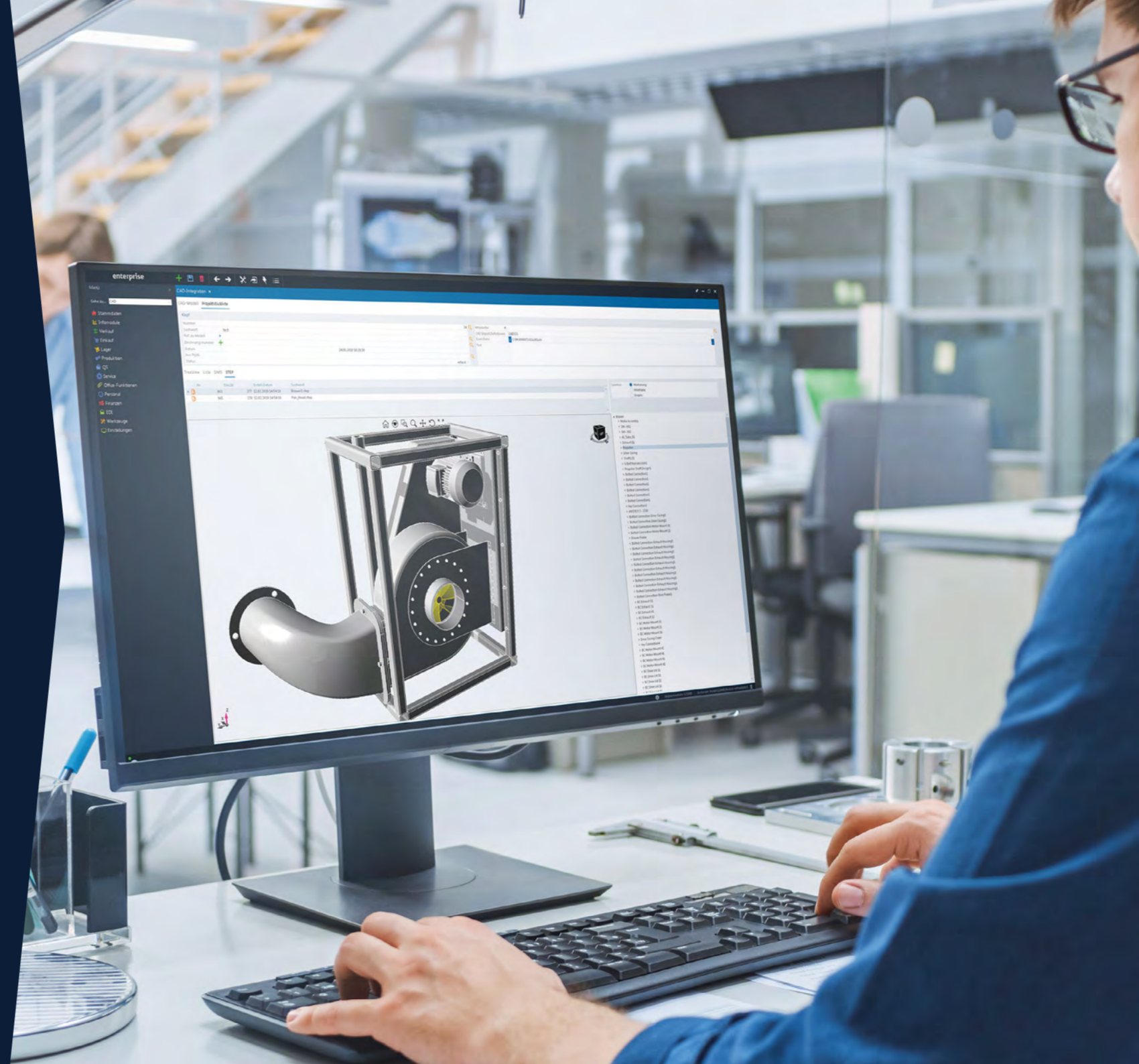
For the users whose variant formation takes place not in the CAD but rather in the ERP system, TimeLine contains a formula- and characteristic-based variant generator that enables product configuration via technical characteristics.

Configuration takes place via a variant template: a multi-step maximum bill of materials of any desired depth which is reconfigured by selecting the characteristics.



# CAD INTEGRATION

One of the biggest obstacles in many system architectures is the transfer of CAD engineering designs over to articles and bills of materials including all technical characteristics that then have to be processed further in the ERP system. With Version 15, TimeLine offers a solution specially developed for custom and project manufacturers that integrates the CAD environment seamlessly into the ERP system and thus combines the two CAD and ERP worlds efficiently into one. The in-depth CAD integration allows design engineers to easily perform the handling of all data and bills of materials in the development environment – all easily via CAD plug-in.





# Bidirectional CAD integration

## TWO WORLDS. ONE SOLUTION.

TimeLine ERP reads out bills of materials and metadata natively from 3D models and synchronises them bidirectionally and automatically between the CAD and ERP system. Engineering design nodes can thus be transferred automatically to TimeLine as articles including the underlying bills of materials and remain synchronous even after creation with regard to technical data and revisions (drawing status/drawing index).

## VERSION AND REVISION MANAGEMENT

The revision status is included in all movement data in the ERP process. If this is changed upon check-in or CAD data import from the existing status in TimeLine ERP, TimeLine automatically creates an article and PDM file revision. This ensures the tamper-proof administration of inventories, spare parts supply and warehouse management.

## PRECISION-FIT IMPORT THROUGH MAPPINGS

When importing PDM files, technical properties are read out and imported to TimeLine. A mapper enables formula-based mappings, which ensure that the current metadata of the 3D models are assigned precisely to the TimeLine article master fields or characteristic tabs. IntelliSense supports the simplified creation of syntax-compliant formulas.

## IMPORT OF SUPPLIER

### AND STANDARD PART CATALOGUES

Thanks to the option of individual mappings, the extensive transfer of supplier articles and standard part data to the ERP system is now a breeze. There is even the option to read entire catalogues in TimeLine. Due to the fact that the data import does not generate articles automatically, there is no risk of you unnecessarily overfilling your database.

## INTEGRATED 3D VISUALISATION

TimeLine supports the native visualisation of 3D neutral formats (step and iges) without needing a CAD viewer or CAD licence.

## INVENTOR PLUG-IN

The plug-in for Autodesk Inventor enables users to work directly with TimeLine from the CAD program. Design engineers can hereby edit all master data from their usual engineering design environment without TimeLine having to be opened.

The plug-in represents the entire structural tree of the project parts list from TimeLine and enables direct operations in TimeLine without having to leave Inventor.



# PRODUCT DATA MANAGEMENT (PDM)

The integrated PDM system in TimeLine allows you to easily and centrally manage all relevant production data in your company wherever it is needed – in the ERP system. With a standard adapter for Autodesk Inventor, Autodesk Vault, SOLIDWORKS and EPLAN, along with the Inventor plug-in, TimeLine offers the optimal solution for integrating the engineering design department into the ERP world.



## Drawing management with integrated PDM

### INTEGRATED PDM SYSTEM

Taking into consideration individual working methods, TimeLine-PDM can be operated in two management modes, which differ in terms of their drawing management. You can decide whether the workflow of the CAD design engineers should be maintained or whether TimeLine should handle physical data management. The benefit for you is a tamper-proof DMS system and more extensive integration of CAD data including all dependencies into the further processes.

### PDM AND DRAWING REVISION MANAGEMENT

The tamper-proof DMS system manages drawing data in a way that tracks revisions using the drawing management. Data can be checked in and out directly via the CAD plug-in, meaning the design engineer does not have to leave his development environment.

The server-based bill of materials and metadata import can also store the drawing files directly in the DMS if desired. This makes the tamper-proof TimeLine-DMS a drawing management system. During check-out, the internal dependencies are detected and all drawing data of the assembly included in the check-out.

During check-in, there is the option to create a DMS revision or drawing revision so that older drawing data can be retained in the history.



# DATA CAPTURING

Labour time recording (LTR), production data capturing (PDC), machine data capturing (MDC) and quality data capturing (QDC) in one integrated overall system without interfaces. Terminals, servers and software come from a single source and are perfectly coordinated with each other.



## PDC and MDC

### PDC TERMINAL

Production data capturing is the backbone of the APS algorithm and any form of manufacturing planning. TimeLine ERP therefore supplies an intuitive terminal interface which is customisable to all individual requirements for the transaction and capture of all production processes. This adds transparency to the data volumes and provides important information for the subsequent production planning and control.

Staff benefit from direct data insight: at specially set-up workplaces, for example directly on location in the production hall, the PDC terminal allows you to retrieve/report current work steps and have plans and instructions displayed

## Labour time recording (LTR)

### LABOUR TIME RECORDING (LTR)

Via labour time recording (LTR), the "come-and-go" times of staff are stamped, managed and evaluated clearly. In so doing, a transparent overview of the attendance, overtime and holiday entitlements of your staff is provided.

In the touch-optimised interface, staff can clock in and out digitally and easily identify business errands. Clocking via barcodes, RFID chips or similar is another function that can be integrated. The clocked times are shown in the LTR evaluation as a journal, daily or monthly overview and thus provided for payroll accounting. Additionally, different time types can be stored, captured and evaluated from Version 15 onwards.

### Essential properties

#### DMS AND PDM ACCESS

Even on the PDC terminal, full PDC access is granted to all DMS documents, drawings and, of course, also the PDM system. Each part can thus also be turned, zoomed and shown as a whole via the native 3D visualisation of STEP/IGES neutral formats on the PDC terminal.

#### QM DATA CAPTURING

Just as quality management is an integral component of the ERP system, the QM data capturing that supports production can take place in the same screen as the production data capturing.

#### MACHINE DATA CAPTURING

PDC and MDC are integrated. The MDC data can also be shown on the PDC terminal via the info buttons.

# ETHERNET UMI (UNIVERSAL MACHINE INTERFACE)

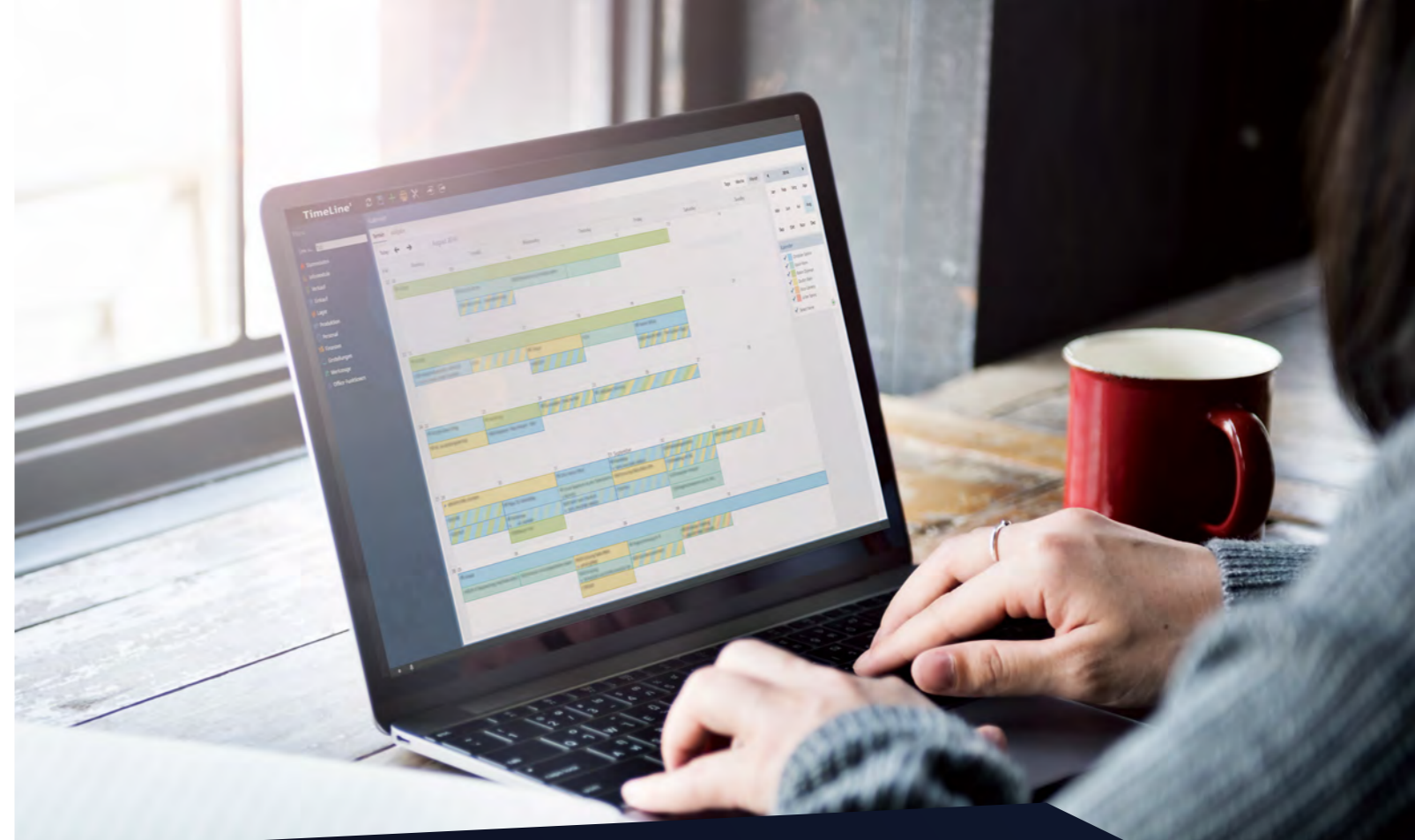
The digital transformation of an existing production plant remains the first key step for efficient and transparent production within the meaning of Industry 4.0. Our UMI offers a simple and cost-effective solution for digitising analogue machines and obtaining information about run-times, disruptions, performance and quantities.

With 10 ports (5V–24V), the UMI offers plenty of digital inputs for evaluating modern machines extensively or capturing cycles, status and disruptions in the case of several machines of a “brown field” plant (mixed environment of new and old machines).

The housing designed as a profile rail module enables assembly directly in the machine’s switch cabinet or in the central network cabinet.

An internal cache protects against data loss with connection failures. In addition, the UMI provides a relay output (e.g. for switching off/stopping the machine) and a traffic light control (4-colour), which can be used for individual adjustments.

The power supply takes place via PoE Class 4 (13 W). The network configuration takes place centrally via the MDC server.



## THE SMART OFFICE IN AN ERP SYSTEM

The combination of a document management system, email system and calendar and task management in the ERP system enables a sustainable revolution in the usability field. Necessary administrative tasks, which usually need to be juggled with multiple different systems, can be managed holistically using TimeLine ERP.



## Tamper-proof document management system

The TimeLine DMS is certified for tamper-proof archiving and offers numerous advantages in almost all processes in the ERP system:

### AUTOMATIC DOCUMENT IMPORT

Via managed directories, documents in certain directories are transferred fully automatically to the DMS.

### EXPLORER INTEGRATION

Any files can easily be dragged and dropped directly into the DMS system using Windows Explorer.

### TAGGING

Transferred documents are automatically tagged and allocated to the respective business partners or projects.

### AVAILABILITY VIA THE WEB

Files in the DMS are available via the web without restriction.

### CROSS-PROCESS DOCUMENT MANAGEMENT

A document explorer maps all document relations for a process graphically and enables all DMS documents for all elements of a process to be viewed in one overview.

| Prüfungsgegenstand   | Empfehlung zur Erteilung / Aufrechterhaltung des Zertifikats   | Die Vorlage weiterer Nachweise ist erforderlich*                                      | Die Durchführung eines Nach-Audits ist erforderlich* | Freigabe durch VOI CERT, Bonn<br>In Zusammenarbeit mit der TÜV Informationstechnologie GmbH, Essen (TUV GROUP NORD) |
|--|--|---|--|---|
| Einhaltung der Revisionsicherheit von digitalen Dokumenten durch Einsatz der Softwarelösung TimeLine ERP, Version 14 | ☑  | Nein  | Nein   |                                  |
| * Sofern ausgefüllt, siehe hierzu Einzelheiten und „Abweichungen/Feststellungen“ in Anlage 2 auf Seite 27ff.         |  |   |  |   |
| Zertifizierter Auditor des VOI CERT, Bonn  | Unternehmen  | Unterschrift  |  |   |
| Dr. Klaus Peter Eipel<br>Leitender Auditor<br>Zertifikatsnummer Z2113003<br>k.p.eipel@voi.de                         | Consultec Dr. Ernst GmbH<br>Oehleckerling 2<br>22419 Hamburg<br>Tel. 040/533 242-0<br>www.consultec.de |  |  |   |

## Documents, emails and calendar

### EMAIL SYSTEM

TimeLine features an integrated email client including server, which accomplishes the dispatch of emails and automatic checking of all registered email accounts via the TimeLine IMAP adapter.

In the process, the TimeLine-Server connects to a pre-set email server (e.g. Exchange) – or directly to the email server of the internet provider.

### Smart functions for daily processes

Automatic import and selective archiving of incoming and outgoing emails including attachments: incoming emails are automatically identified via the email address, imported, tagged and allocated to the business partner in the ERP system. The tedious management of emails and attachments is therefore brought to an end.

### Tagging and linking

Emails can be assigned tags that cause automatic linking of the email with other objects – e.g. a complaint, project or similar.

The automatic tagging (full text search) of all emails also runs – as with the other DMS documents – in the background.

### New options for teams with extensive rights control

Through the new rights control system, which can now be used across different departments and staff on mailboxes or email storage folders, teams can now work together more efficiently.

Departments or project teams benefit from this in the way that shared mailboxes (e.g. sales@) or individually created email folders for processes, business partners or projects can now be released for other users. Proxy rules can also be easily and temporarily set up and managed. The ability to directly move emails from individual business partners to a corresponding folder by defining a rule or to assign emails to specific projects using tags in a folder makes management much easier.

### EXCHANGE WEB SERVICES

TimeLine ERP has supported exchange web services since Version 15. This allows the integrated email client and calendar in TimeLine to use various functions of the Exchange server.

# Automatic document detection

## TIMELINE-TOKENIZER

Incoming purchase orders, incoming invoices or other documents can be transferred directly from the integrated email client. In the process, the attached documents can be analysed with document positions, articles, quantities, prices, discounts or similar and directly converted into TimeLine document positions.

The revised TimeLine-Tokenizer now works with Version 15 much more reliably at detecting/processing documents and additionally expands its scope of functions to include OCR recognition, which is not only able to process structured files (PDF, xlsx, docx, etc.) but also scans.

## Higher detection rate with specific profiles

In order to improve the detection rate of the TimeLine-Tokenizer with repetitive imports, specific profiles can be created for clients or document types. In these profiles, areas are defined in the document which contain article numbers, delivery dates, quantities, prices, etc. In this way, the TimeLine-Tokenizer knows exactly which information is located where and can perform the transfer more quickly and reliably.



Mustermann GmbH  
Musterstraße 1  
12345 Musterstadt  
Deutschland

**Der Alternative Lieferservice**  
Lieferstraße 15  
12345 Lieferort  
Deutschland

**Bestellung 18060018**  
Datum: 05.12.2019  
Ihre Beleg-Nr.:  
Ihr Belegdatum:  
Ansprechpartner:  
Lieferanten-Nr.: 70001  
Unsere Kunden-Nr.:  
Ihre Umsatzsteuer-ID: DE207013321  
Bearbeiter: Clemens Husung  
Telefon:  
Seite: 1 / 1

Projekt 012345

| Pos. | Artikel-Nr. / Bezeichnung  | Liefertermin | Menge ME     | Preis EUR | Rabatt % | Gesamtpreis EUR            |
|------|--|--------------|--------------|-----------|----------|----------------------------|
| 10   | SCH-0060-0140<br>Schraube 60x140 (spitz)<br>Schraube mit den Maßen 60mm x 140mm, spitz.                | 12.12.2019   | 250,00 Stück | 0,13      |          | 32,50                      |
| 20   | SCH-0060-0180<br>Schraube 60x180 (spitz)<br>Schraube mit den Maßen 60mm x 180mm, spitz.                | 12.12.2019   | 100,00 Stück | 0,18      |          | 18,00                      |
| 30   | ME-SCH-2500<br>Metall-Schiene 250 cm<br>Metall-Schiene in 250cm Länge<br>silber eloxiert               | 12.12.2019   | 12,00 Stück  | 36,99     | 25,00    | 332,91                     |
| 40   | STICKER-01<br>Werbe-Sticker "Tirma XYZ"<br>Marketing-Artikel<br>Sticker mit der Aufschrift "Tirma XYZ" | 12.12.2019   | 0,00 Stück   | 0,00      |          | 0,00                       |
| 50   | DIENST<br>Dienstleistung<br>Individuelle Dienstleistung  | 12.12.2019   | 3,00 Stück   | 120,00    |          | 360,00                     |
|      |  |              |              |           |          | Gesamt 743,41 EUR          |
|      |  |              |              |           |          | + Fracht 3,99 EUR          |
|      |  |              |              |           |          | Netto 747,40 EUR           |
|      |  |              |              |           |          | + 19,00 % MwSt. 142,01 EUR |
|      |  |              |              |           |          | <b>Brutto 889,41 EUR</b>   |

Verpackung: DHL ab Werk  
Lieferbedingung: 10 Tage 2 %, 30 Tage netto  
Zahlungsbedingung: Brutto

**Auftragsbestätigung 10006**  
Datum: 24.09.2019  
Ihre Bestellung:  
Ihr Bestelldatum:  
Ansprechpartner:  
Kunden-Nr.: 90000  
Unsere Lieferanten-Nr.:  
Ihre Umsatzsteuer-ID:  
Bearbeiter: Boris Gebauer  
Telefon:  
Seite: 1 / 1

Belegfuß links      Belegfuß mitte      Steuernummer: 111/2222/3333  
USt-Id: DE123456789

The screenshot shows the Beleg-Tokenizer interface with a document analysis window. The document is identified as a purchase order from Mustermann GmbH. The analysis results are displayed in a table:

| Wahrscheinlichkeit | Pos. | Artikel-Nr. | Bezeichnung             | Menge  | Preis EUR | Rabatt % | Zufolgebetrag | Vorbetrag  | Vorbetrag EUR |
|--------------------|------|-------------|-------------------------|--------|-----------|----------|---------------|------------|---------------|
| 99,21%             | 10   | 1000        | Ventilator              | 100,00 | 9,00      | 5,00     | 3,00          | 855,00     | 855,00        |
| 99,21%             | 20   | 2000        | Griffschale             | 200,00 | 10,00     | 6,00     | 0,00          | 1.880,00   | 1.880,00      |
| 99,21%             | 30   | 3000        | Knoten für Montageboden | 300,00 | 11,50     | 0,00     | 0,00          | 3.450,00   | 3.450,00      |
| 99,21%             | 40   | 4000        | Getriebe                | 500,00 | 1.734,46  | 0,00     | 0,00          | 867.230,00 | 867.230,00    |

The screenshot shows the Beleg-Tokenizer interface with a document analysis window. The document is identified as a purchase order from Mustermann GmbH. The analysis results are displayed in a table:

| Wahrscheinlichkeit | Pos. | Artikel-Nr. | Bezeichnung             | Menge  | Preis EUR | Rabatt % | Zufolgebetrag | Vorbetrag  | Vorbetrag EUR |
|--------------------|------|-------------|-------------------------|--------|-----------|----------|---------------|------------|---------------|
| 99,21%             | 10   | 1000        | Ventilator              | 100,00 | 9,00      | 5,00     | 3,00          | 855,00     | 855,00        |
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| 99,21%             | 30   | 3000        | Knoten für Montageboden | 300,00 | 11,50     | 0,00     | 0,00          | 3.450,00   | 3.450,00      |
| 99,21%             | 40   | 4000        | Getriebe                | 500,00 | 1.734,46  | 0,00     | 0,00          | 867.230,00 | 867.230,00    |



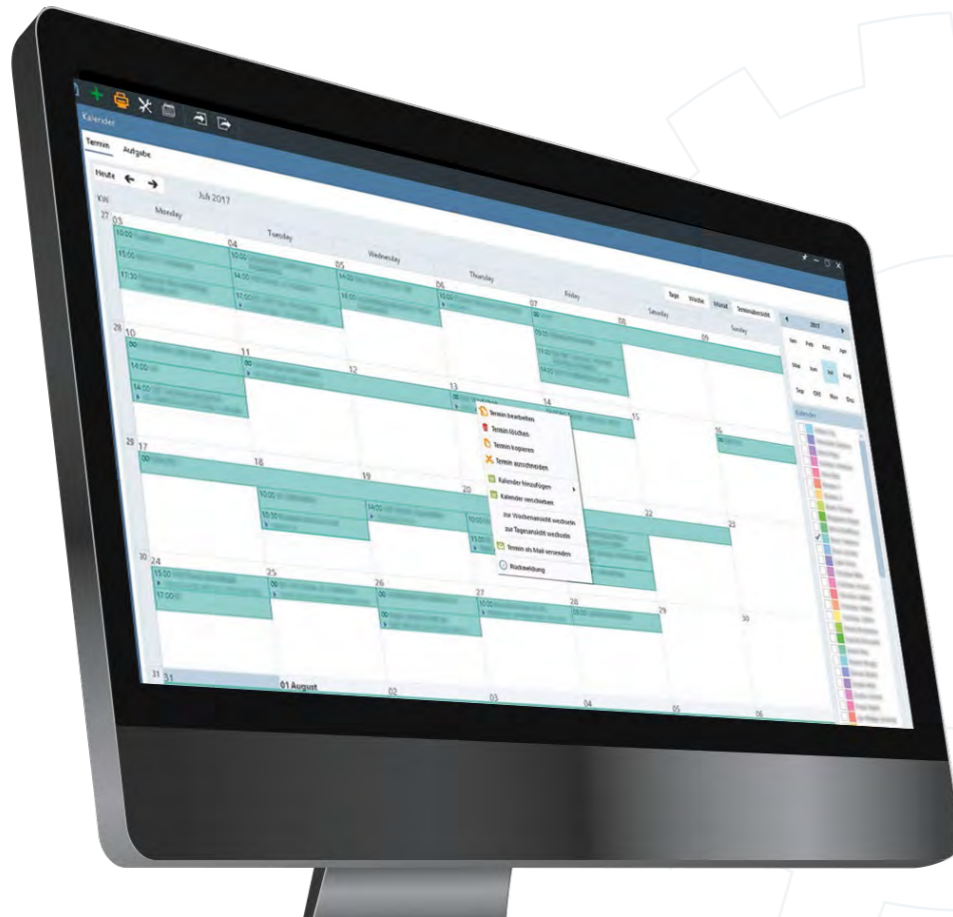
## Task and calendar management

The calendar is an additional tool that does not reveal its full potential until its integration in project management, task management and reminder system of the CRM system.

As with the email system, a bidirectional synchronisation is achieved with all calendar applications and smartphone apps via a standard interface (CalDAV).

The automatic generation of reminders, maintenance appointments of plants or the invoicing of services/appointments from the calendar by transfer to an outgoing invoice is possible directly from the calendar.

For the planning of project steps, tasks can be dragged directly from the project to the calendar – these are transferred to the smartphones of the staff via CalDAV – and are used to help the field service or installation and service teams with planning their service tasks.

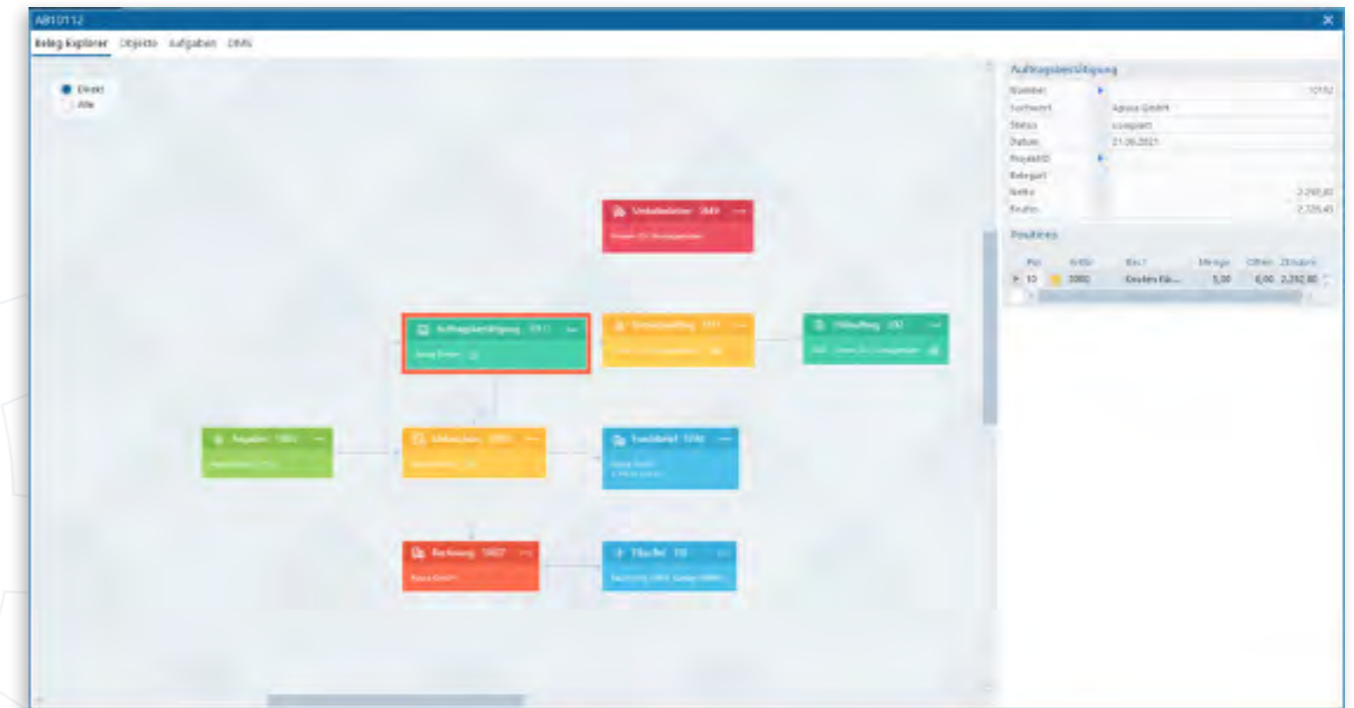


## Document explorer

The document explorer as a graphic overview for the overall process chain is one of the

most popular features of the current TimeLine ERP generation.

In TimeLine Version 15, the document explorer has therefore also been further optimised and assigned new functions. Along with the object directory, which lists all process-related objects in table form, more than anything, the coherent depiction of all DMS documents for the overall process chain and the process-based task management are absolute highlights in the new document explorer in TimeLine ERP. A single click allows all stored documents of the process chain to be shown holistically regardless of linked document.



# Sales and customer relationship management

**Continuous:** From the quotation and the calculation to the offer and deadline reminder – all processes are interlinked:

- Quotation capturing and tracking
- Transfer of quotation to calculation, feedback of calculation values to the quotation
- Generation of offer, optionally from the quotation or the calculation
- Automatic reminder for your offers
- Quick telephone information in the event of further queries

**All client data in one system – everything at a glance:** Any number of addresses and contact partners with the client, storage of all contact data such as telephone number, fax number, email address, etc. with the contact partner.

**Activities under control:** Management of contact notes, workflow-supported automatic reminder, opportunity management, structure of distribution lists for series emails, letters, etc.

## Email and document management:

- Email dispatch at a click from the customer master and documents
- Email archive/automatic email import (IMAP and SMTP)
- Series mails and email campaign management
- Integrated rich text editor with photos, tables, etc. for the integrated creation of offers from the system (without going through MS Word)

## Calendar and task management:

- Calendar management with CalDAV server (bidirectional synchronisation of dates with Outlook, smartphones, etc.)
- Task management (e.g. including for APQP/project management)

## Integrate your telephone system:

- Call detection with direct redirection to the centralised customer information system
- Direct dial at a click

**Centralised customer information system:** Correspondence, incoming and outgoing emails, contact notes and reminder dates, internal documents, DMS documents, addresses and prices, history and statistics, open items, back orders and turnover.

**Archiving:** Print tasks are optionally redirected to a PDF archive, in order to archive e.g. invoices and other documents.

## TAPI INTERFACE

In order to maintain continuous communication, TimeLine ERP enables the connection of telephone systems via TAPI interface. In the bidirectional exchange, this means calls can directly be initiated from contact partners in TimeLine ERP and incoming calls automatically monitored with quick info for meeting minutes and reminders.

# Business Intelligence

## BALANCED SCORECARD AND BOSS INFO

The balanced scorecard shows you all relevant figures at a glance. You decide yourself what you wish to see: The structure of the module is not preset, but is configured by you.

No programming knowledge is usually required for this.

- Free definition of company figures via selection from standard figures, SQL macro or freely programmable hook function
- Display as grid, value, bar chart, pie chart, dial
- Target/actual comparison (red/green deviation)
- Flexible periods (day, week, month, year, financial year) for all values
- Comparison of related values (e.g. turnover in certain article groups in a grid)
- SQL macro designer



## INCOMING ORDER, PENDING ORDERS AND TURNOVER

Important figures alongside general turnover are, of course, the incoming order, pending orders and the gross margin or gross profit.

The incoming order describes which order confirmations, starting from the document or material planning date, were received during the period in question.

The pending orders then calculate the difference between the input and turnover to show, according to the order confirmation, deliveries or services still pending. And the gross profit is then the turnover minus the goods and material deployment.

## PIVOT EVALUATIONS

Pivot evaluations were popularised by Microsoft Excel. In the process, values are already provided in an aggregated, i.e. summarised form in a table. This allows you to reduce very large data volumes from individual data to clear and relevant core variables. Data grouped in this way can then easily be broken down based on other variables by right clicking.





## TimeLine Business Solutions Group

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