



>TimeLine®. The All-In-One-ERP-System For Small And Medium Sized Industrial Companies//

## >Functional Overview//

TimeLine-ERP covers all business processes for the administration of small and medium sized industrial companies. This includes not only production related modules like production planning, production data capture and logistics but also the areas of CRM, calculation, purchasing, tool-management and more.

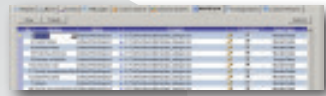


Furthermore TimeLine includes functionality for quality management and control which becomes increasingly important for companies not only in the automotive sector.

As a whole, TimeLine-ERP is probably one of the most functional All-In-One-ERP-System for small and medium sized companies.

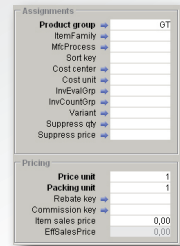
Historically, TimeLine-ERP has been created in close cooperation with our customers and still continues to be improved with a strong focus on user requirements.

User-friendliness, fast accessibility of data, intuitive ergonomics and transparent menu structures are some of the most distinctive attributes of TimeLine-ERP.



Best-Of-Breed user interfaces include:

- ➔ Direct access to crosslinked data and modules in all screens
- ➔ Consistent keyboard operability
- ➔ Seamless integration into Microsoft-Office-Products (Word, Excel, Access, Outlook,...)
- ➔ Accelerated full-text search options in all modules
- ➔ ...and more!



## >Sales Documents And Pricing//

### Easy and intuitive

- ✓ Documents can be altered at all times, items can be renumbered, inserted or moved

### Wide variety of document types to choose from

- ✓ Purchase and sales contracts, order calls and orders, partial and collective deliveries, sample deliveries (free-of-charge), credit notes, pro-forma invoices, etc.

### Flexible Pricing

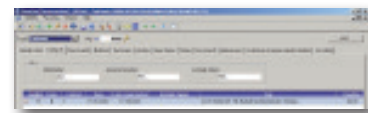
- ✓ Customer/supplier related prices, list prices in different currencies, quantity related prices, variable additional price components and surcharges (i.e. setup-cost surcharge, minimum quantity surcharges, etc.) on a percentage-, per piece or per kg-basis, flexible rebate system

### Price Alterations

- ✓ Automated price alterations with round option; option for subsequent price and weight alterations in existing orders

### Accounts of proceeds

- ✓ Invoiced turnover can optionally be split variably onto different accounts (i.e. foundry, machining, external manufacturing, etc.)



# >Customer Relationship Management (CRM)//

## Integrated CRM-cycle

- ✓ Order calculation, quotations, call and contact management, follow-up - all business processes are fully integrated

## Customer and prospect management

- ✓ Multiple addresses, multiple contacts per customer; extensive management of communications data (fax and phone numbers, mail addresses, etc.) per contact

## Activity management

- ✓ Management of calls and contacts, workflow support for follow-ups of calls and quotations, prospect management

## Integrated communications

- ✓ Integrated mail client and mail archive: send your mails directly from TimeLine-ERP
- ✓ Integrated PDF generation of all sales and purchase documents for direct email transmission or archiving purposes
- ✓ Mail archive per customer, supplier and prospect
- ✓ Serial emails, email campaigns

## Integration into MSOffice

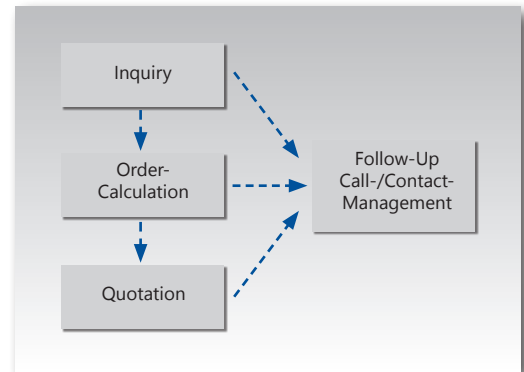
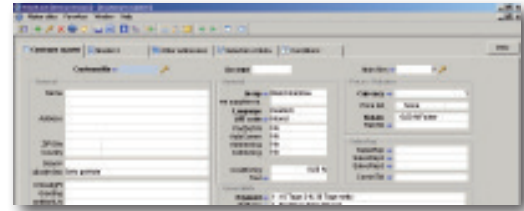
- ✓ Generation of quotations and other documents into MSWord-documents via customizable templates
- ✓ Excel export option for all reports
- ✓ Access TimeLine data from Access or any other ODBC database, OLAP or reporting tool. TimeLine's open repository database is freely accessible for any user with sufficient rights.

## Computer-aided telephony (CAT, TAPI)

- ✓ Incoming calls: TimeLine pops up the customer info screen automatically on any identified incoming phone call
- ✓ Outgoing calls: Call your business contacts by simply clicking on the phone number in the customer-info

## Customer Information Module - comprehensive information at a glance

- ✓ Correspondence, outgoing email, contacts, notes, followups, internal and external documents, addresses, pricing, historical data and statistics, accounts receivable, orderbacklog, turnover and more...



## >Document Management (DMS)//

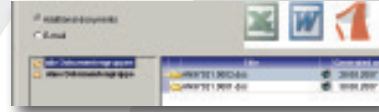
**Assign any file to almost any object in the ERPsystem:**

### Supported file formats

- ✓ Excel, Word, Access, photos (tif, jpg, etc.), drawings - any file type that is supported by the software installed on your system can be linked to an object in the ERP-system.

### Supported objects in TimeLine

- ✓ Customer, supplier, prospect, item, tool/mould, sales and purchase documents (quotation, inquiry, order confirmation, ...), production documents, etc.



## >Supply-Chain-Management/ Purchasing//

### Flexible disposition with variable purchase order types

- ✓ Purchase contract
- ✓ Purchase order
- ✓ Purchase order call
- ✓ Material requirement requests for production accessories, auxiliary material and spares

### Automated purchase procedures

- ✓ Workflow based compliance check of delivery dates
- ✓ Dunning procedures for unreturned price inquiries, unconfirmed purchase orders and delivery arrears.

### Integration of various demand types in a single supply-chain management system

- ✓ Material requirement request
- ✓ Direct demands from customer or production orders
- ✓ Demands for external contract manufacturing
- ✓ Automated purchase proposals (MRP-run)
- ✓ Longterm product range demand planning

### Efficient Ergonomics

- ✓ Direct crosslinks to master data modules from order processing and other forms
- ✓ Easy cancellation or modification of orders and transactions at any time
- ✓ Any business transaction can be processed from within a single form without the necessity to branch into other modules

### Flexible Price-Management

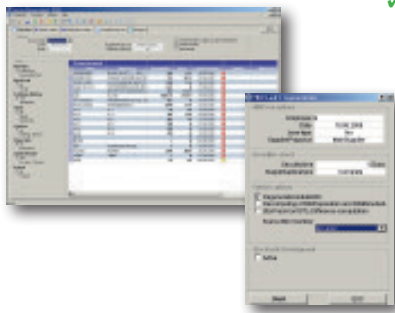
- ✓ Procurement directory
- ✓ Supplier related prices, quantity and rebate scales, variable additional price components and surcharges (i.e. setup cost surcharge, minimum quantity surcharges, etc.) on a percentage, per piece or per kg basis, flexible rebate system
- ✓ Automated price adjustment procedures



# >Materials Management//

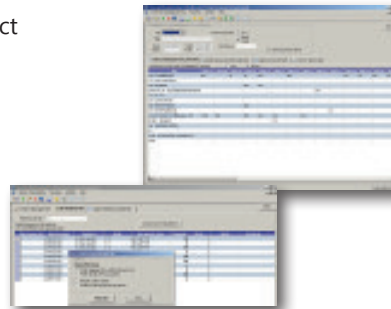
## Multi-warehouse management, management of storage locations

- ✓ Management of multiple warehouses (i.e. works, locations, etc.)
- ✓ Management of multiple storage locations
- ✓ Rejected parts storage
- ✓ Storage management for external contract manufacturers
- ✓ Storage management for consignment warehouses



## Material requirements planning

- ✓ Batchsize optimized purchase and production proposals with consideration of deficiency probability and item and supplier related lead times
- ✓ Optimization of supplier-proposals according to fastest supplier, most favourable price or main supplier
- ✓ Automatic contract recognition and assignment



## Batch-management/ serial-number management

- ✓ Batch-management accross multiwarehouses and multistorage-locations
- ✓ Batch retracement (back to the supplier)
- ✓ FIFO proposals on preparation of consignments



## Inventory

- ✓ Permanent inventory, yearly inventory
- ✓ Optional blocking of warehouse transactions while inventory is in progress
- ✓ Evaluation of stocks and half-finished products, automated devaluation of stocks

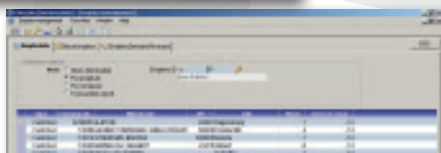
## Inventory-management with handheld-PDAs/ scanners



# >Logistics//

## Empties Management (pallets, lattice-boxes, etc.)

- ✓ Flexible empties management with automated stock bookings on creation of delivery notes
- ✓ Customer-specific packing instructions (typical for the automotive industry)
- ✓ Multi-stage-packing materials (pallets with plastic boxes, etc.)
- ✓ Empties requirements planning



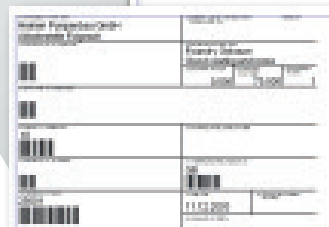
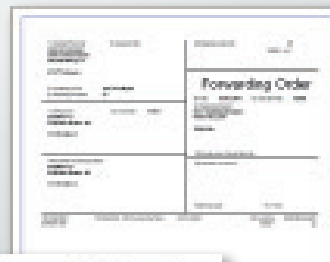
| Material   | Plant | Quantity | Unit | Value | Cost |
|------------|-------|----------|------|-------|------|
| 15.000.000 | 1500  | 1000     | EA   | 1000  | 1000 |
| 17.000.000 | 1500  | 1000     | EA   | 1000  | 1000 |
| 18.000.000 | 1500  | 1000     | EA   | 1000  | 1000 |
| 19.000.000 | 1500  | 1000     | EA   | 1000  | 1000 |

## Commissioning

- ✓ Commissioning proposals (with FIFO option for batches) based on order priorities and delivery dates
- ✓ Automated delivery note generation from commissioning proposals
- ✓ One-step generation of delivery note, empties bookings, electronic transport declaration and logistics documents
- ✓ Creation of package labels, consignment notes and related documents

## EDI Modules

- ✓ EDI/DC - modules for Ansi X12, Odette, VDA and Edifact formats
- ✓ All common message types are preconfigured without necessity for customization (format mappings have to be individually created using the format converter)



## Available message types

- ✓ Inbound delivery forecast, order call, fine order call (delfor, deljit, VDA4905, VDA4915)
- ✓ Outbound delivery note (delnote, VDA 4913)
- ✓ Outbound invoice (invoic, VDA 4906)
- ✓ Inbound credit advice (creadv, VDA 4909)
- ✓ Pick-up sheet (DELJITPUS)
- ✓ Etc.

## Customs-documents

Creation of EUR.1, ATR and export declarations (certain documents may vary for non-EU countries and may need customization)

# >Production Orders And Planned Production Orders//

**The Production Order is the central document within the production module of TimeLine-ERP. Its main elements are routing plan and parts list.**

## Creation of Production orders

- ✓ Production orders can be created manually, via transfer from a customer order or via release of a production proposal.

| Produced | Released | Blocked | Schp. | Creation | LegTime  | ActTime | RemainingTime | Program |
|----------|----------|---------|-------|----------|----------|---------|---------------|---------|
| 0        | 0        | 0       | 0     | 122      | 0,00     | 0,00    | 0,00          |         |
| 0        | 0        | 0       | 0     |          | 715,00   | 0,00    | 715,00        |         |
| 0        | 0        | 0       | 0     |          | 266,00   | 0,00    | 266,00        |         |
| 0        | 0        | 0       | 0     |          | 485,00   | 0,00    | 485,00        |         |
| 5        | 0        | 0       | 0     |          | 0,00     | 0,00    | 0,00          |         |
|          |          | 0       |       | 122      | 1.467,00 | 0,00    | 1.467,00      |         |

**Planned production orders: more freedom to plan**

- ✓ Planned production orders allow the reservation of capacity and material without actually releasing a production order for production. At this stage alterations like split, deferral, re-schedule and merge are possible without significant restrictions.

**Release for production**

- ✓ Planned production orders can be converted to released production orders at the push of a button.

**Production documents**

- ✓ Easy and efficient printing of routing plans, production orders, parts lists. Report design is free and can be done using PowerBuilder, Crystal Reports or any other ODBC-enabled reporting tool.

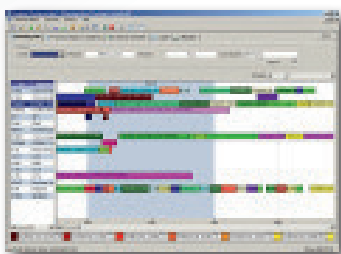
**Circulation of items in production**

- ✓ Items in production are managed like stocks. Each production data feedback carries forward the production quantities within the routing-plan. A distinction is drawn between good parts, blocked parts and rejects.

| Operating sheet                  |                          | ItemNr: 100                |
|----------------------------------|--------------------------|----------------------------|
| From ProdOrd Nbr: 895            |                          | Description: Cylinder Head |
| Kunde Nr.: 0                     | Date: 10.08.2009         |                            |
|                                  | DeliveryDate: 10.08.2009 |                            |
|                                  | ehouse nbr: 10001        |                            |
|                                  | Qty: 150,00              |                            |
| RoutingNbr: 5                    |                          |                            |
| CallType: 000                    |                          |                            |
| OperType: Cores about            |                          |                            |
| Longtext:                        |                          |                            |
| Piece: <input type="text"/>      |                          |                            |
| checked by: <input type="text"/> |                          |                            |
| Resources                        |                          |                            |
| ID                               | SeqNbr                   | Description                |
| K10                              | 1                        | Core 10 Ltr                |
|                                  |                          | Qty: 1                     |

# >Planning and Scheduling//

TimeLine features four graphical planning boards which integrate fully into the materials management and sales modules. Thus, TimeLine represents one of the most comprehensive planning tools for foundries in the market. TimeLine offers unparalleled ease of use, effectiveness and precision of production planning:

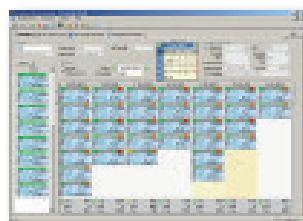


Planning board II offers efficient automated computation of delivery dates for open customer orders based on finite capacity, parallel resource usage (mould & machine) and material availability. Short term capacity adjustments, change of order priorities, resource breakdowns and consideration of recent production data feedback will keep planning up-to-date and in sync with factory floor reality.

It is strongly recommended to use Planning board II in combination with TimeLine-production data acquisition modules to keep information up-to-date on realtime basis.

**Reliable delivery date ascertainment**

- ✓ Finite capacity planning considers current capacity load and material availability when computing new delivery dates
- ✓ Production data automatically feeds back into planning
- ✓ „Update“ function allows to recalculate all completion dates based on fresh data



Planning board III allows for quick and efficient fine planning of the order sequence on individual machines and production resources. Planning is as easy as dropping an order onto a machine at the desired production date. PB3 has been designed for quick implementation and maximum ease-of-use.

**Fully integrated**

- ✓ Transfer customer orders directly into the inbox of the planning board
- ✓ Drag & drop customer orders directly onto the machine at the desired date
- ✓ Automated feedback of planned dates to the sales department

**Quickly implemented**

- ✓ Define resources,
- ✓ Create routing plans for your items,
- ✓ Enter your customer orders, ...
- ...and start to plan!

**Powerful, comprehensive and efficient planning tools**

- ✓ Split, merge, defer, move (backward/forward), set order priorities, adjust capacity, assign to external contractor, swap resources/ machines, simulate on a separate planning level - there is virtually no limit as to what you can do in the planning modules.
- ✓ Forward and backward planning, lead time and manual scheduling
- ✓ Machine order sequence planning via drag & drop
- ✓ Comparison before-after, pending delays, delivery date diagram, capacity load diagram

# >Contract Manufacturing, External Manufacturing//

## Integrated workflow within purchasing and production

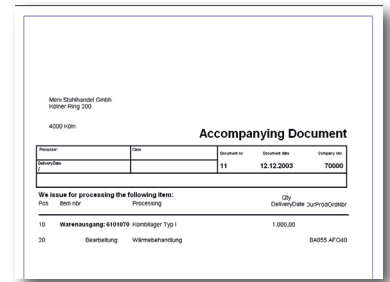
- ✓ Comprehensive business flow from inquiry to dunning and invoicing of contract manufacturers
- ✓ Define external operations simply by specifying an external resource in the routing item
- ✓ Create external routing bills directly from the production order module or combine several items from different production orders onto a single external routing bill
- ✓ Quick and efficient feedback process for goods returning from external manufacturing

## Securing deliveries and schedules

- ✓ Automated creation of production previews allows more precise planning on the side of your contract manufacturers
- ✓ Planning modules will automatically compute dispatch and return dates for external routing bills
- ✓ Automated dunning system for delayed returns from external manufacturing

## Pricing effectively managed

- ✓ Supplier and item related prices and quantity scales for every external operation
- ✓ Separate management for setup costs or other surcharges (freight, etc.)
- ✓ Prices on per piece, per kg or per hour basis



Return flow of processed parts

| Ext/Routing Bill | Pos.       | POCS          | Item | Mtr. Qty. | Description              | Qty/Transferred | Transfer | Reject | Blocked | Process Charge | Ext/Routing Bill completed |
|------------------|------------|---------------|------|-----------|--------------------------|-----------------|----------|--------|---------|----------------|----------------------------|
| WB10             | 10BA948 40 | 100           |      |           | Zylinderkopf (Druckguss) | 12,00           | 4,00     | 0      | 0       | 0              |                            |
| WB11             | 10BA955 40 | 6101970790000 |      |           | Kombilagertyp 1          | 1.000,00        | 400,00   | 0      | 0       | 0              |                            |
| WB15             | 5BA174 20  | 100           |      |           | Zylinderkopf             | 500,00          | 0,00     | 0      | 0       | 0              |                            |
|                  | 20BA955 40 | 6101970790000 |      |           | Kombilagertyp 1          | 3,00            | 0,00     | 0      | 0       | 0              |                            |

| PCNbr. | Pos.          | Date                          | Matchcode | Item          | Item description | OpTypeDes |
|--------|---------------|-------------------------------|-----------|---------------|------------------|-----------|
| 892    | 48 10 06 2009 | Production Order for Cylinder | 100       | Cylinder Head | Heat Treatment   |           |
| 894    | 48 10 06 2009 | Prod Order Cylinder           | 100       | Cylinder Head | Heat Treatment   |           |
| 893    | 48 09 06 2009 |                               | 100       | Cylinder Head | Heat Treatment   |           |
| 890    | 48 11 03 2009 |                               | 400       | Cylinder Head | Heat Treatment   |           |
| 876    | 48 08 03 2006 |                               | 100       | Cylinder Head | Heat Treatment   |           |
| 875    | 48 04 03 2004 |                               | 100       | Cylinder Head | Heat Treatment   |           |
| 874    | 48 04 03 2004 |                               | 100       | Oilpan        | Heat Treatment   |           |
| 873    | 48 03 03 2004 |                               | 400       | Pump Body     | Heat Treatment   |           |
| 872    | 48 03 03 2004 |                               | 100       | Cylinder Head | Heat Treatment   |           |
| 871    | 48 03 03 2004 |                               | 100       | Cylinder Head | Heat Treatment   |           |

# >Project Management For Engineering Companies//

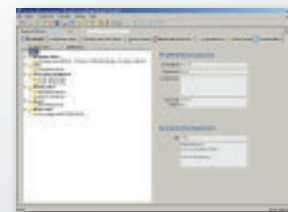
## Information at a glance: TimeLine projectexplorer:

### Internal documents

- ✓ All documents are shown in a tree view structure

### Milestones

- ✓ Budgets, deadlines, estimated hours of production: everything you need to manage the lifecycle of a project



### External documents

- ✓ Assign all kinds of files and documents to your project

### Invoice processing

- ✓ Advance payment invoices, closing invoice/ account settlement





## >Rework, Quarantine Storage And Rejects//

### Rejects and rework

- ✓ Rejects and rework can be separately booked alongside with approved parts/quantities

### Statistics on cause of defects

Management of cause of defects and statistics on defective parts

### Rework orders

- ✓ Rework production orders allow for comprehensive management and data capture of costs for rework operations; additional textfields in feedback bookings allow for statements and comments on rework.

## >Production And Machine Data Capture//

### Intelligent terminals - flexible software

- ✓ TimeLine-PDC is based on industrial PC technology with IP65-Standard or standard commercial PC hardware
- ✓ Online bookings for maximum up-todateness of data



### Flexibility of configuration

- ✓ User-configurable booking types: Using the Booking configuration editor you can define which data shall be captured during PDC bookings.
- ✓ Any custom booking type can be assigned to any function key on the terminal screen.

### Pre-configured booking types for a wide variety of business cases

- ✓ Clocking on/off
- ✓ Come, go
- ✓ Order complete booking
- ✓ Info
- ✓ Material consumption booking
- ✓ Rework
- ✓ Project feedback (no production order required; you can book directly onto the project)
- ✓ Overhead cost booking
- ✓ Collective booking
- ✓ Service booking
- ✓ Breakdown/disturbance/interruption
- ✓ Change of order
- ✓ Quantity report

### Integrated machine data capture

- ✓ Direct interface for quantity data capture and production operations turnout
- ✓ Resource monitor shows number of casting/production cycles, remaining production time, disturbances and downtime

| Order | Resource       | By order | By employee |
|-------|----------------|----------|-------------|
| 01    | Alina Margreus |          |             |
| 02    | Boris Oelbauer |          |             |
| 03    | Boris Oelbauer |          |             |
| 04    | Flitz-Fink     |          |             |
|       |                |          | BA000 10    |

| Order | Resource       | By order | By employee |
|-------|----------------|----------|-------------|
| 01    | Alina Margreus |          |             |
| 02    | Boris Oelbauer |          |             |
| 03    | Boris Oelbauer |          |             |
| 04    | Flitz-Fink     |          |             |
|       |                |          | BA000 10    |

# >Tool And Mould Management, Tool Shop Management//

## Consistent management of tools and tool components

### Tools as a production resource

- ✓ Tools can be assigned to production operations just like machines or personnel.

### Tool types

- ✓ Separate management for die-casts, moulds, models, core boxes, lores, gauges and other tools

### Internal tool shops

- ✓ Accelerated tool shop order generation for repairs, conversion and retrofitting.; automated recording of tool shop costs

### Amortization

- ✓ Amortization accounts to log tool-related revenues during the tool lifecycle

## Durability, maintenance and lifecycle management

- ✓ With every production operation, counters for durability and maintenance are automatically updated

### Additional features

- ✓ Blocking/release and suspension, tool amortization, management of technical data for moulds, assignment of external documents like drawings, fotos, etc.; management of tool components, tool-related costs and revenues, maintenance history

### External tool shops

- ✓ Inbound and outbound delivery notes for transportation and relocation of tools and moulds.; cost recording of external tool shop costs

| Technical data    |             |
|-------------------|-------------|
| Alloy             |             |
| MouldMachine      | Formanlage  |
| MouldSand         |             |
| Flask format      | rectangle   |
| FlaskHeight       | 600,00 mm   |
| Kastenlänge       | 1.000,00 mm |
| FlaskWidth        | 1.000,00 mm |
| FlaskVol          | 600,000 Ltr |
| - CoreVol         | 18,000 Ltr  |
| - Sum CastgVol    | 0,00 Ltr    |
| - CoreVol         | 123,00 Ltr  |
| = SandVol         | 459,000 Ltr |
| EmployeeMouldg    | 1           |
| CoolgTime         | Hrs         |
| CyclesHour        | 50          |
| FlaskQuota        | 1 [1/m]     |
| CirculationWeight | 165,60 kg   |
| SmeltingWeight    | 165,60 kg   |
| Sand-Iron-Factor  | 0,00        |
| Lagenvolumen      | cbm         |
| Gewicht           | kg          |

# >Unparalleled Flexibility Of Customization For Individual Business Processes//

## Reporting

- ✓ Create your own reports using any OLAP or ODBC tool. Standard reports are delivered in source code for easy modification.

## Screens

- ✓ Screen editor to disable, relabel or add fields

## Database

Fast, reliable and maintenance-free SQL-database with 100 % ODBC/OleDB-compliance

## Business objects framework

- ✓ TimeLine ERP is based on a comprehensive and powerful framework of business-objects that can be individually modified using OO technology

## TimeLine ERP can be customized without losing release-capability!

## >System Checklists//

### Other additional modules

#### CRM and materials management modules:

- ✓ Order calls (automotive), CRM, MS-Word interface, random storage management, batch management, electronic data interchange (EDI), financial accounting interface, document management, inventory, empties management, multi-warehouse management, open items management, item classification, serial number management, dispatch and transport logistics, sales agents management, sales forecast, customs documents management

### Production modules

- ✓ External manufacturing, project management, production planning and scheduling, tool management

### Quality management modules

- ✓ Supplier rating/ assessment, control plan management, gauge management, claims management

### System modules

- ✓ Foreign language interface, MIS-toolkit, TimeLine-to-TimeLinelink, archiving interface (ELO, Easy)

### Data capture modules

- Mobile data capture (PDA), production data capture, machine data capture

### User rights management

- ✓ Flexible definition of access rights and restrictions based on screen, tab or modules; separate access rights for visualization of purchase and sales prices, etc.

### Menus

- ✓ Menu Editor for custom configuration of menus, user defined menus, custom menu items/ modules

### Utilities and tools

- ✓ Search and elimination of duplicate customers, items, etc., SQL-makro editor, import and export of data, subsequent modification of primary keys for items, customers, etc.

### Application-Server

- ✓ Application server for batch processes and night operations like recomputation of planning data, MRP-run, generation of workflows, follow-ups, etc.

### Multi client/ multi works

- ✓ Management of several companies, locations or works in either one database or separate databases; intercompany clearing (Version 11)

### Multi-language reporting

- ✓ All sales and purchase documents are multilingual

## >Interfaces and operating systems//

### Operating systems (server)

- ✓ Linux, MS-Windows

### Integration to MS-Office

- ✓ Word, Excel, Access, Outlook

### EDI - Formats

- ✓ UN-EDIFACT, ANSI X12, Odette, VDA

### Features

- ✓ Integrated format converter; direct storage of EDI-data inside the ERP-database

### System interfaces

- ✓ MAPI, TAPI
- ✓ ODBC, SQL

### Archiving interfaces

- ✓ ELO, Easy-Archive

### Document types

- ✓ Order call, fine order call, delivery note, invoice, credit advice

### Terminal-Server

- ✓ Citrix and Windows Terminalserver enabled

### Financial accounting interfaces

- ✓ Interfaces to virtually any financial accounting system can be customized with an effort of approximately 5 programming days

### Interfaces for quality management systems

- ✓ Böhme & Weihs, BABTEC



## TimeLine<sup>®</sup> Business Systems

40 years of history - more than 400  
customers - one goal: to become the  
market-leading ERP system for foundries  
and die-casting companies

