

# **myGEM**

Make your business **run** like clockwork.



ADVANCED MANAGEMENT OF IMPLEMENTATION PROCESSES, DEVELOPMENT AND PRODUCTION.

## myGEM BENEFITS





Robust features provide time savings and high productivity.



Special features tailor-made eg. production management and production planning.



Simple operation and easy adoption.



Mini applications for tablets and web applications meet your exact requirements.



Own economic modules, can be connected simultaneously with another solution.



Own team for implementation, support and future development.

## **myGEM**



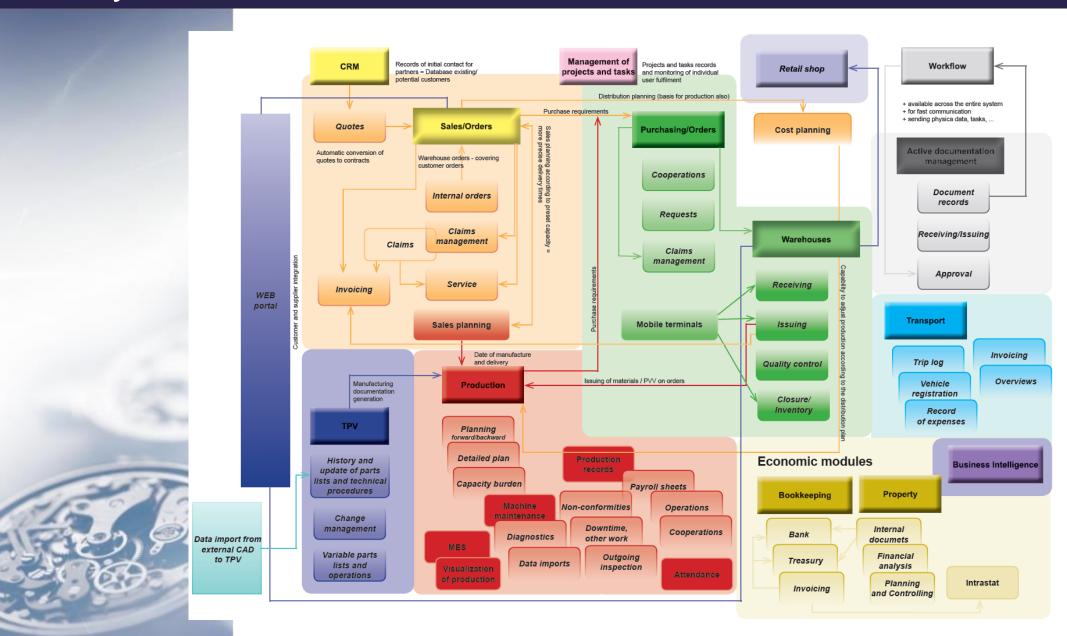
Ideas





- Analysis
- Consultation and training
- ERP myGEM

## myGEM DIAGRAM



### LIST OF MODULES

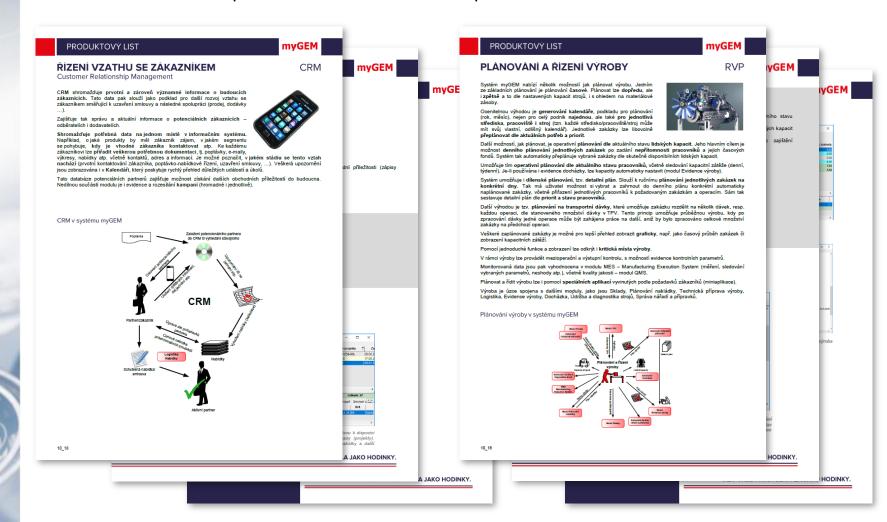


- Bookkeeping (UCT)
- Property (MAJ)
- Invoicing
- Planning and controlling (PaC)
- Company status (SF)
- Report generator InfoMaker (GS)
- Customer Relationship Management (CRM)
- Projects and tasks management (RPU)
- Logistics Sales (LPR)
- Shop (PRO)
- Sales planning (OPL)
- Service (SE)
- Complaints from customers (REP)
- Loading (NA)
- Planning loading (PNL)
- Logistics Purchasing (LNA)
- Management of tools and fixtures (NA)
- Complaints to suppliers (REA)
- Intrastat (INT)
- Warehouses (SKL)
- Mobile terminals (MOB)
- Technical preparation of the production (TPV)

- Revision service for TPV (ZTP)
- Active documentation management (ASD)
- Production planning and management (RVP)
- Workshop planning (PL)
- Records of the production (RVE)
- Records of the output control and disagreements (EVK)
- Downtime and other work (PP)
- Logout of operations (OP)
- Attendance system (DS)
- Maintenance and diagnostics of machines (US)
- Workflow (WF)
- Parameterisable communication module (PKM)
- Quality management (QM)
- Transport (DPR)
- Packing and Dispatch
- Suppliers integration (ID)
- E-shop (ES)
- Electronic communication (EDI)
- Displaying of documents (ZD)
- Production process monitoring (MVP)
- Manufacturing Execution System MES
- **-** ...

### PRODUCT SHEETS

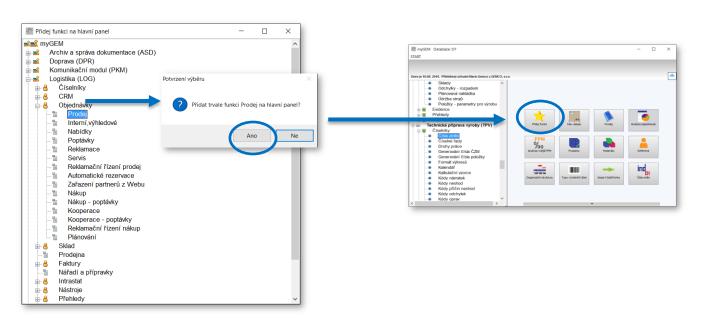
A detailed description of the modules is in the product sheets.



### WORKSPACE



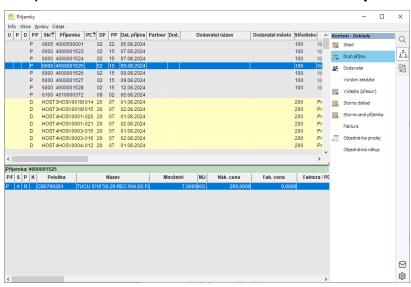
- myGEM offers **intuitive** mouse **control** and full keyboard controls
- for simple work in windows the **desktop workspace** is ready
- IS allows you to log in only once, namely with direct access to all modules for which the user has rights
- user-configurable appearance and access to functions
- using the Add function button can easily add selected and frequently used functions directly into the window after starting



### WORKSPACE

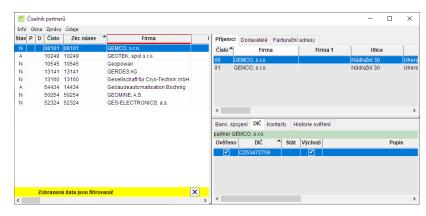


All important information available from one point of the process



 By clicking on the selected type of document, the corresponding record will be displayed with directly found linked data.

Composite windows for a quick overview of all related information



### HOW TO IMPLEMENT



Implementation typically consists of several steps and a specific timetable is drawn up for a particular project.





Typical steps and milestones of implementing ERP solutions:



**Diagnostics** (local surveys, data samples, real document patterns, ideological suggestions of requirements)

- Understand well the company environment and identification of areas requiring improvement:
  - assembling a customer team
  - Team Leader and responsible solvers for each area
  - detailed gathering of information about processes, practices, press releases, specific requirements, other systems required for integration

### HOW TO IMPLEMENT





- Solution proposal (workshops, discussions with key users and the whole team)
  - Developing of defined requirements as assignments for consultants and programmers according to customer requirements and expectations.
    - parameterization
    - special adjustments (integration, new features, adjustments, ...)
    - database conversions

Determining the conditions for changes mainly in the main process (standard, quick change, ...).



- Preparation of the software solution (analytical, programming and control work)
  - Include specific requirements in the software:
    - finishing the special requirements according to the proposal of the solution
    - testing and checking
    - analysis of the database

## **myGEM**



- **Implementation and training** (detailed implementation plan, training)
  - Ensure mastering the tool for the main process, including specific requirements:
    - experienced consultants will explain the complex system by individual parts and the course of the entire order
    - training of management, administrator, users ... effectively leads to understanding and mastering the tool for managing the main process and economic modules
    - together with you set up and control the level of the database
    - trial operation of the entire system
    - releasing the system into routine operation



#### **Operation and maintenance**

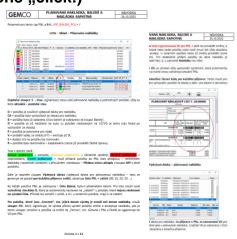
- Ensure the stable operation and system development :
  - determining the way of participation of the supplier due to the client's requirements
- Ensuring the stable operation helpdesk:
  - hot-line
  - mode 7x24, or other
  - system development (update, upgrade)

Client support in dealing with marginal situations. Compliance with the legislation of the state (country) where the information system is operated.

Monitor client needs and processes changes so that software tool (parameterization, ...) improves processes efficiency.

### **EXAMPLES OF SPECIAL ADJUSTMENTS**

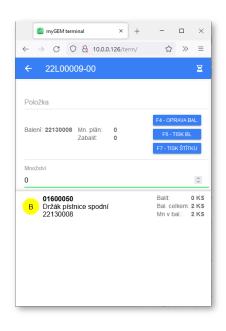
- Product Configurator rapid creation of virtual product according to the specific customer needs
- Loading and packaging solutions
- COC sheets (Certificate Of Conformity)
- Vehicle registration certificate automated creation from myGEM data, online export to a central database
- Dispensing dose and mobile terminals, barcodes and QR codes
- Distribution of documentation to the machine
- Type technological procedures parameterized for different types of production
- Exceptions a tool for configuration management in production
- Collecting data from production equipment
- Links to web selling products, spare parts
- Applications for mobile phones the company status, tasks monitoring, sales
- Bulk functions combining multiple functions to optimize a process (one "click!)
- Integration with external programs ENOVIA PLM, SolidWorks, ...
- Special methods of production planning
- . .

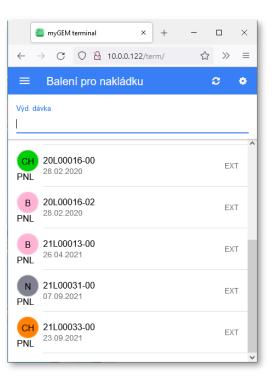


### WEB APPLICATIONS



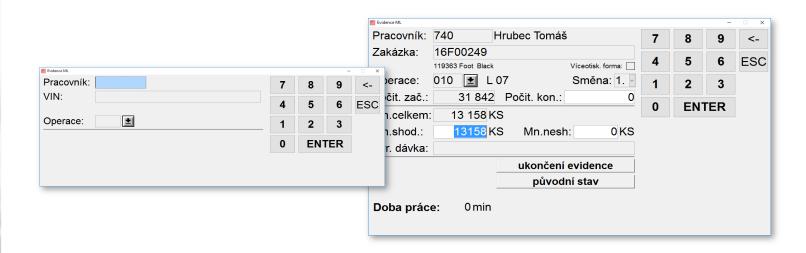
- Above the myGEM system it is possible to operate **online Web applications** that communicate via the service online with the database server. We also provide development of these applications.
- Applications are standardly ported to mobile devices (Android, iOS).





### MINI APPLICATIONS

We are able to prepare so-called "mini applications" for special process requirements. These applications are specially compiled modules for specific customer.



### EXAMPLES OF OTHER MODULES



- Quality management modules
- Paperless production
- Automated warehouse Kardex Remstar
- Sprinter
- Online process analysis
- Manufacturing Execution System MES
- Accountancy
- EET
- EDI
- PKM



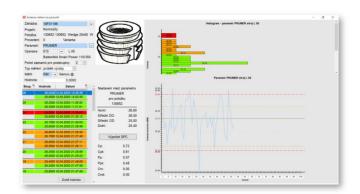
### QUALITY MANAGEMENT MODULES

- The system works **online** with standard myGEM data and is supplemented by robust modules of selected Core Tools.
- Includes:
  - FMEA process/product
  - Control plans
  - Module for measuring process values and SPC evaluation (P<sub>PK</sub>, C<sub>PK</sub> ...)
  - Nonconformance management and 8D report, Complaints procedure
  - Project and task management
  - KPI (Key Performance Indicators)
  - Layered process audits LPA
  - **.**..

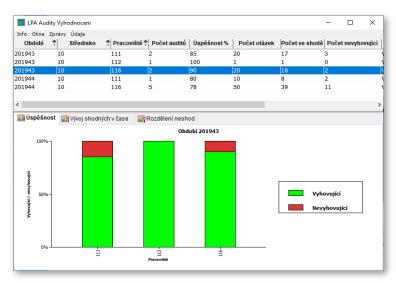


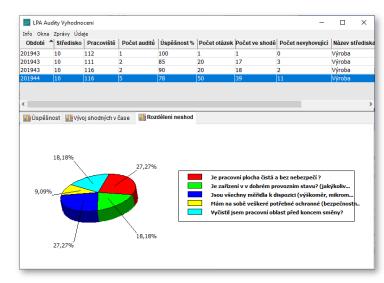
- To support quality, it is integrated into standard modules, e.g.
  - Comprehensive change service over design and production data
  - Detailed traceability to products and their variants and designs
  - Demonstration of Flow process
  - Process analysis in terms of added value and losses
  - Project and task management

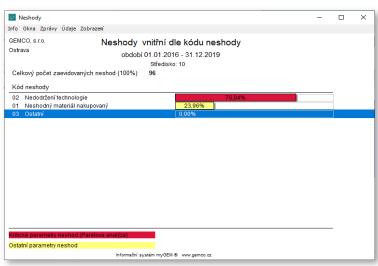




## **myGEM**



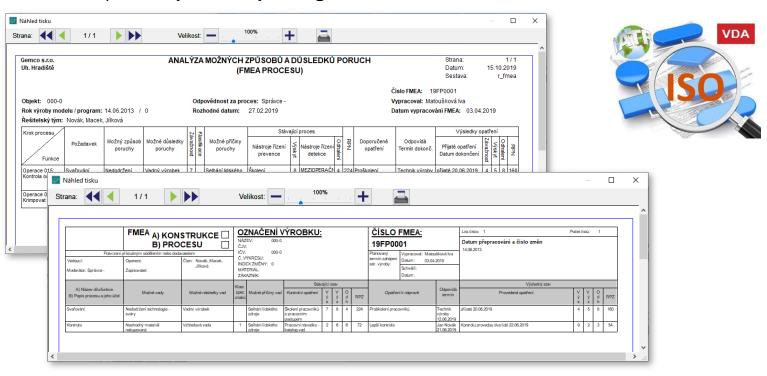




### QUALITY MANAGEMENT MODULES

#### Benefits:

- The necessary evidence from the process is quickly available for a specific project, order or product
- Easy orientation and fast data availability
- Seamless data validity, data is true and error-free
- Labor savings, data is created directly in the process only once
- Prepared reports for proving



### PAPERLESS PRODUCTION



- This is the effective use of mobile devices such as tablets in production and the sharp reduction in paper documentation.

  Documents and myGEM functions for each **role** are available on the device, for example: **production manager, foreman, labourer, inspector, warehouse worker, expedition worker,** simple applications are built up according to the role.
- The big advantage is that valid **documents** are **available online** and important **records**, such as release of the operation, release of the exit control, start or end of work, are **recorded on-line**.
- Using this principle leads to time savings and better adaptation to changes. Applications are developed in the easiest way for users, to make them virtually instantly used.
- Progressive approaches are used for solution, such as QR codes, special signing devices, all of these help to minimize paper documentation.

#### Safe = Product documentation in one place

- In common practice happens that documents are created in more systems. It can be mentioned as an example PLM for the grafic editors CATIA, SolidWORKS. To make production work with the right data, we have developed simple communication between the various external editors and the TPV module. Each component has assigned, apart from the BOM (Bill Of Materials) or the technological procedure, also other important documents and data. As an example, we include CAD, NC data, assembly instructions, inspection, measurement protocols, proof of functional test.
- The product "goes" through the entire process of implementation and always has the current data available according to which production takes place. This principle makes it possible to produce highly personalized products at a low price.
- All product documentation is in electronic form and is available anywhere and is fully changed (valid status, history, content changes).

### PAPERLESS PRODUCTION



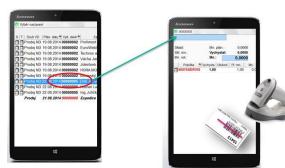
Realized issues in any way will be automatically displayed as standard in the Warehouse – Issue slips.



Issue of expedition – example

Taking the barcode of the dispensing batch on the expedition or picking from the list of prepared batches we prepare the expedition of orders by individual

recipients.



### AUTOMATED WAREHOUSE KARDEX REMSTAR



- The myGEM information system is connected online to the Kardex Remstar automated storage system.
- It is a top innovation in storage area, warehouses optimization, processes of preparing for dispatch, cost cutting and high labour productivity.





• Source of images: www.kardex.com/cs

### **SPRINTER**



- SPRINTER allows you to analyse online data from your processes and dramatically improve productivity.
- Examples of savings:
  - **30% reduction** in delivery time
  - **100% control** of inventory
  - a substantial increase in the use of workers





- "What is **really important** is usually not seen at first glance; it remains hidden." Sometimes this approach is called the "**Iceberg theory**".
- To look "beneath the surface" and **uncovered a range of problems**, we need information about the "real" behaviour of the processes.
  - Results of analyses of specific cases are **surprising!**



### **SPRINTER**



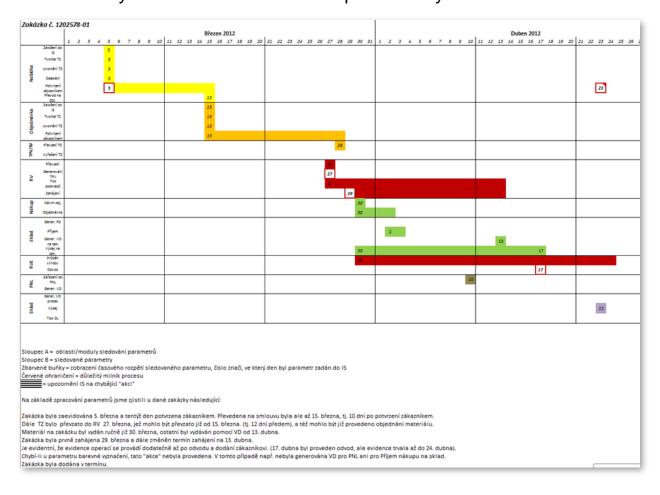
- That which threatens out timing it is usually very simple. There is a lack of materials for production, for example.
  - Do we really have these activities under control?
  - Why not order and deliver materials on time, who and what is holding-up the whole process?
- For these and many other questions we have prepared a **series of on-line tools and views** that quickly provide data to significantly improve productivity in your organization.



### ONLINE PROCESS ANALYSIS



Example of a specific order analysis and resources consumption survey.



• Finding time losses during the fulfilling the order

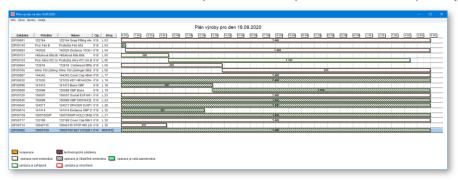
### MANUFACTURING EXECUTION SYSTEM MES

- The in-depth modules of the information system serve as the basis for the compilation of executive process control and especially production. These are mainly **TPV modules**, production management and planning, maintenance, process monitoring, change service, distribution of machine documentation. In these cases, we often address specific customer requirements, which are processed in the form of, for example, special functions or mini applications.
- The customer has fully covered all important requirements and **complex processes are** handled by a specially developed tool. This creates a "simple" tool for relatively complex processes. Part of the solution is the online reading of values, e.g. from assembly machines, lines, injection molding machines (NOK, OK, cycle times,...).
- Examples of MES are applications in the following areas:
  - Production of final products with configurator consumer goods
  - Engineering
  - Prototype production for the automotive industry
  - Serial tools
  - Plastic production
  - Production of plastics, including assembly of subassemblies
  - Production for the army

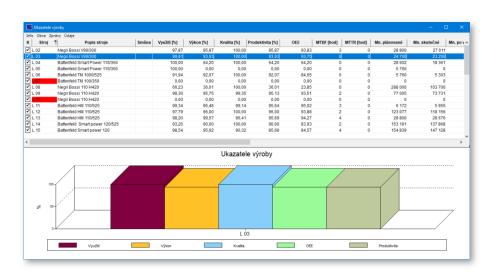


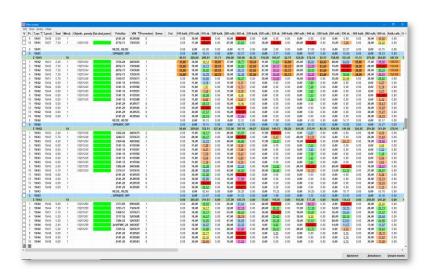


This solution increases production performance, quality and significantly saves workers.









### ACCOUNTING

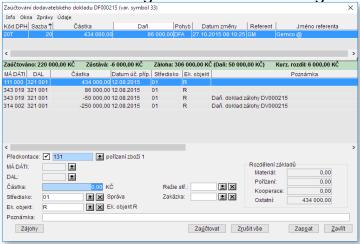


- Standard features for management accounting agenda. Parametric construction enables its use in any types of organizations of various sizes and activities:
  - Invoicing
  - Treasury
  - Financial planning
    - comparing the plan and reality monthly, cumulatively, ...
  - Property
    - automatic control of set points, accounting in multiple currencies
  - Banking operations
  - Intrastat
    - electronic output for IDES, printouts of receipts and dispatches
  - Financial analysis
  - Planning and controlling
- It is developed and tested with accountancy experts and regularly audited independently.

### **EXAMPLE**

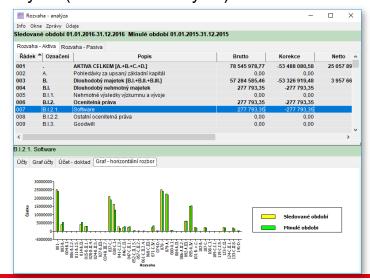


Billing the commitment with disintegration into controlling.



Náklady Info Okna Zprávy Údaje Rozpočítat na DV000115 Doklad: Středisko: 01 O Středisko 20.10.2015 Ek. objekt: R Datum: ○ Smlouvu Účet: 314000 Poskytnuté provozní zálohy O Zakázku Ek objekt OWBS Kritérium pro rozpočítání: Rovným dílem Poznámka: <u>Z</u>apsat Částka pro rozpočítání: 22 314,00 KČ Ek. objekt ^ 0.00 Ek. objekt 20 7 438 00 Ek. objekt 21 21 0,00 Ek. objekt 22 0.00 Ek. objekt 23 23 7 438,00 24 Ek. objekt 24 0,00 Ek. objekt 25 0,00 27 Ek. objekt 27 0,00 Ek. objekt 28 0.00 29 Ek. objekt 29 0,00 Ek. objekt 30 0.00 31 Ek. objekt 31

Balance sheet analysis (horizontal analysis)



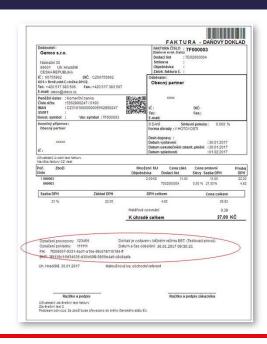
### **OTHERS**

- International accounting standards International Accounting Stadards IFRS methodology
- Consolidation The pre-processed outputs for the consolidation of the group companies, applicable to a particular model of consolidation.

### EET



- EET (Electronic Sales Records) is integrated for the cash register, store, and invoicing. Gradually, additional individual modes are added.
- There is no extra work for the user who sends the EET, everything is in the background. There is also a detailed overview of the sent payments.



### EDI



- **EDI** = **Electronic exchange** of structured standard messages between two applications of two independent entities, the messages have the same form and "speak" the same "language"
  - **EDI application** creates a document, automatically processes, receives and sends (invoices, certificates, stocks, orders, ...)
  - The system supports the so-called "In-house" objects according to international standards
  - Fully replaces paper documents

### **PKM**

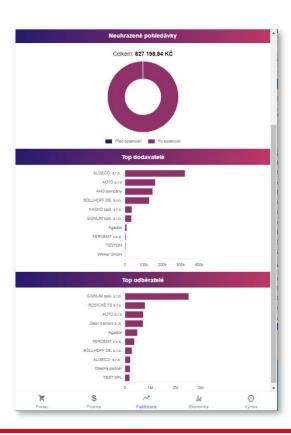
PKM = Programmable communication module used for bidirectional communication with external programs, for specialized integration can be used standard means such as XML, CbC, etc.



### KEY METHODS – EXAMPLES



- Powerful analytical and reporting tools that allow you to **use the data** not only for the analysis of events that have already occurred, but also **predictions of the future development of the company.**
- Provides monitoring e.g.:
  - sales turnover
  - purchase turnover
  - stock value
  - production
  - economic centres
  - financial flows, ...
- For executive managers.



### EXAMPLE OF USING IS MYGEM IN PRACTICE



It is a demonstration of "our view" on detail solution which we see in the processes, because

- realisation process (from sale to delivery) in each company is somehow specific;
- there are different ways to manage simple manufacture, manufacture of subassemblies (pre-assembled units), finished products or providing cooperation;
- in the following text we will show you some **basic modules**, to understand our view on the examples.

### CRM

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

- Support of **marketing** activities, it is the basic tool for managing customer relationship.
- Monitoring of own and competing products.
  - Initial evidence of potential partners
  - Interconnection of systems, it follows that all data of a specific customer are monitored from project to task management, production technology, cost management, and evaluation
  - Tracking parner status
  - Success evaluation
  - Monitoring the development of market segments
  - Monitoring the development of individual client projects
  - Campaign management
  - Fast quote creation
  - Diary reminders
  - A comprehensive overview in one application

### **EXAMPLES**



We are dealing with a potential customer

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We have won, we start fulfillment

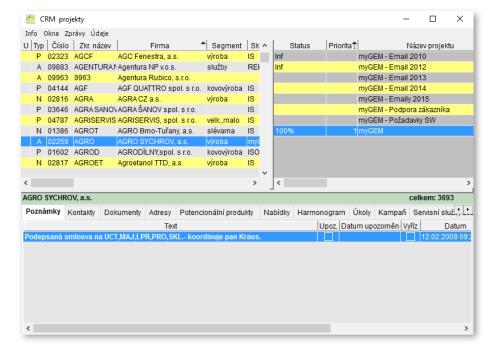
We order material

We produce

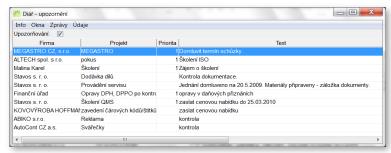
We deliver

We evaluate

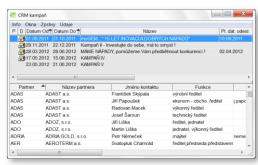
 Each customer has tracked specific project types that are continuously monitored including tracking of past and future activities.



 Quick overview of individual customers – Main window of CRM projects (Who I deal with)



Automatically popping Window Diary – Alert



List of inserted CRM campaigns

### **TEST OF FINAL**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

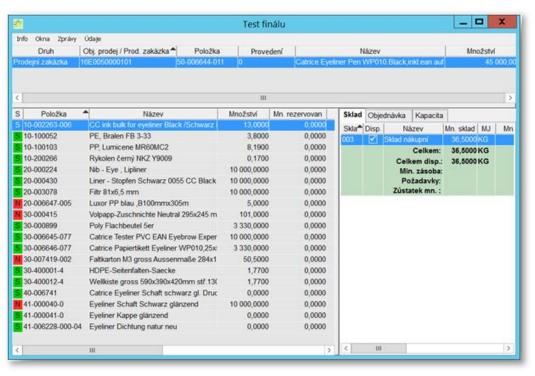
We order material

We produce

We deliver

We evaluate

 We quickly check the availability of the material (or semi-finished products) and the delivery date.

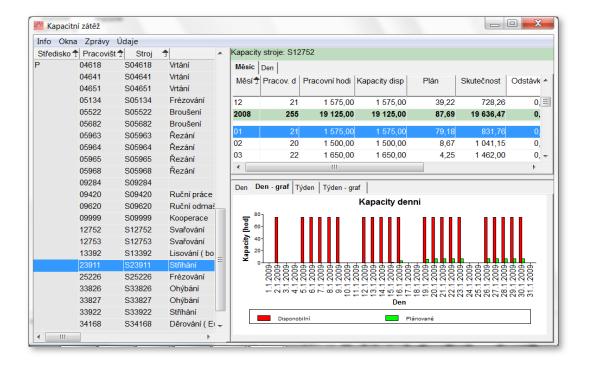


# RVP CAPACITY BURDEN





We check the capacity burdens of individual workplaces and machines for a specific month, week or day.



### TECHNICAL PREPARATION OF PRODUCTION

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

- We check **description of controlled conditions** for a product for the successful realisation of production and the **necessary changes**.
- Creating and updating parts lists, technology, control procedures and other documentation (instructions, drawings, measurement procedures ...) for each item.
- **Comprehensive revision service** with a close link to production (contracts).
- Monitoring performance, change index, change number.

# **myGEM**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

- Variant parts lists, work instruction
- **Controls, measurement** instructions
- Automatic creation of change archive for all documentation
- Item history
- Easily create TPV using copy
- Means for creating calculations
- Price calculation using calculation formulas
- LNA links making materials requirements
- Comprehensive change management
- Supports the **design and development** of your own product and process
- Encourage teamwork and project management

## TECHNICAL PREPARATION OF PRODUCTION

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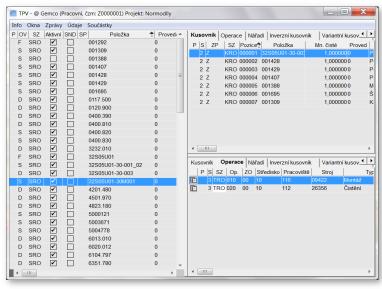
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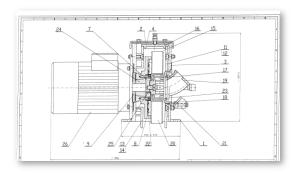
We deliver

We evaluate

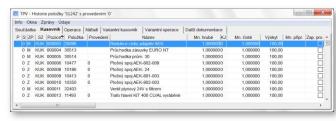
TPP is closely linked to document management and integrates documents from all sub-systems. The item creates a "vault" of valid documentation that is used for production. The product thus carries complete information for the production process.



Bills of Materials items, operations



Enclosed documentation



Item history

#### TPV EXAMPLE



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We have won, we start fulfillment

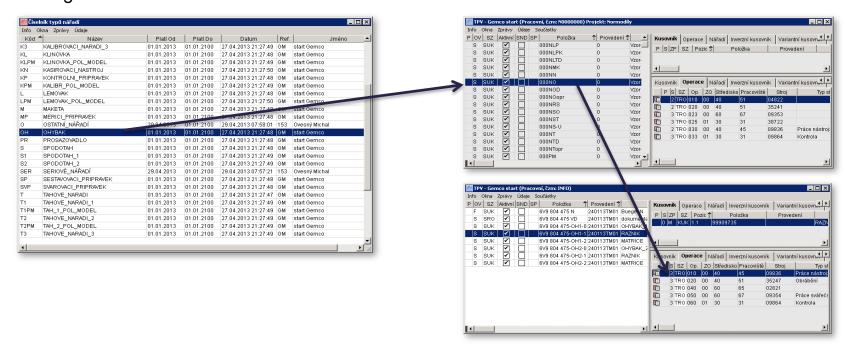
We order material

We produce

We deliver

We evaluate

- Type-based technological processes modified to meet specific needs are developed to speed up the pre-production stages.
- In the following there is an example of a template for an automatic generation of the process that runs as a batch task at the "background".



# EXAMPLES OF FVV, PVV

We are dealing with a potential customer

We are checking options

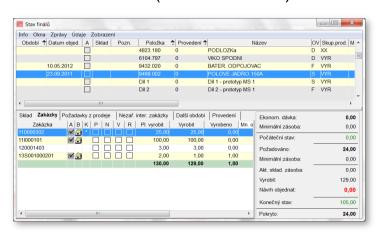
We have won, we start fulfillment

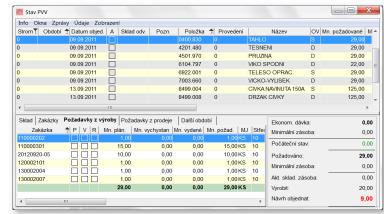
We order material

We produce

We deliver

- If we produce a more complex product, it is appropriate to produce some parts ahead in order to be done the assembly without any problems.
- Automatic creation of orders for finished (FVV) and semi-finished (PVV) production based on requirements from sales (Sales orders), production requirements (Contracts) and warehouse state (minimum stock).





### LOGISTICS SALE





- We have won, we issued the order from the customer.
- Managing and monitoring of sales activities (contracts, invoices, business case evaluation), including business analysis.
  - Creation of quotes and orders
  - Evidence of cancellation (including EDI)
  - Supplies overview
  - Generate orders in one step
  - Solution overviews, internal orders
  - Reservation upon order
  - Price levels
  - Evidence of complaints and service contracts (R/S)
    - Analysis of the causes and culprits of defects
    - Real status solution
    - Claims eveluation
    - Traceability

### LOGISTICS SALE

We are dealing with a potential customer

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We have won, we start fulfillment

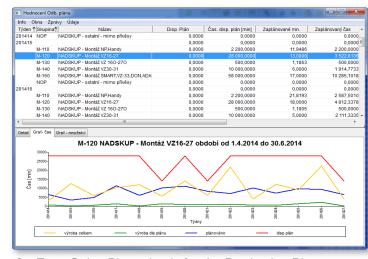
We order material

We produce

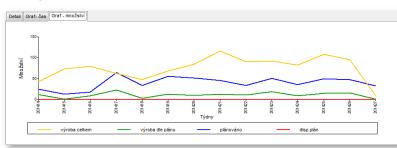
We deliver

We evaluate

- Sometimes sales is planning the assembly, sales planning sales submodul which, based on the entered estimated capacity, automatically generates dates for assembly and delivery.
- Planning method also takes account of time savings.



Entry Sales Plan = basis for the Production Plan



 Graphical display of performance Entry Sales Plan (according to the time and amount)

# **EXAMPLES OF ANALYSIS**



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

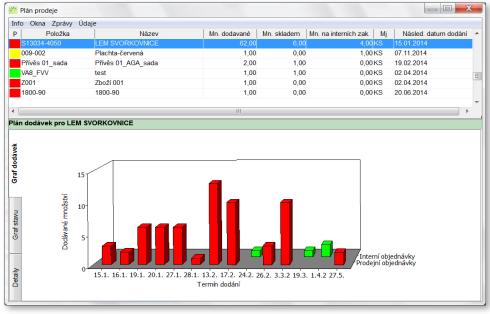
We order material

We produce

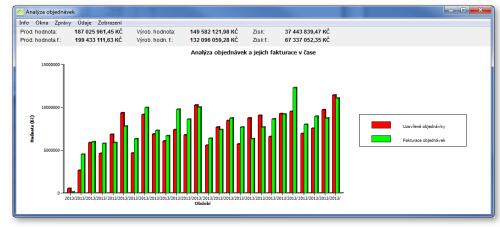
We deliver

We evaluate

There are important additional information for our decisions.







Analysis of orders

#### PROJECTS AND TASKS MANAGEMENT

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

- **Project management and task** = records, **tracking performance** and the current status of assignments, including their assessment. Project management and tasks provides, among others, the following functions:
  - Interconnection projects, including CRM division into phases Schedules (Plans)
  - Assignment of tasks by the responsible solvers
  - Watching "capacity" in the planning calendar
  - Methodology for tasks assessment (term consumption of time, extra work ...)
  - Colour-coded status and performance of the whole stage schedule (selected by the user)
  - The percentage fulfillment of individual tasks and the whole stage schedule
  - Action Plan in the form of "dynamic" solutions to the given problem.
  - Creating a plan for a specific period and workers

# **myGEM**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

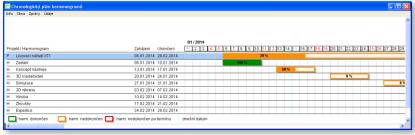
We deliver

We evaluate

If we manage the order as a project, we can use the tools for "project and task management", which is integrated.



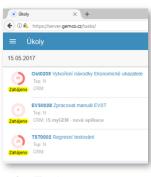
Viewing of time evaluation of the project and its phases



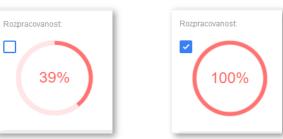
Chronological project view and its phases

Tasks are also used on the mobile phone.





• Task management window



Editing of task processing

## ORDER ISSUING

We are dealing with a potential customer

We are checking options

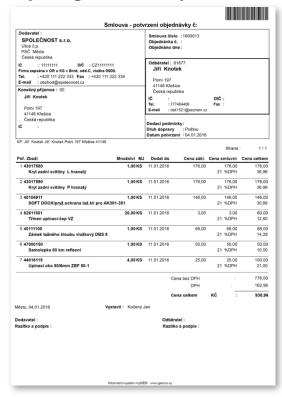
We have won, we start fulfillment

We order material

We produce

We deliver





# PURCHASE, WAREHOUSES





- The module **monitors the material** from the formation of the requirement to implement specific production orders = **important process** for every business.
- Using barcodes for receiving and dispensing the stock, including the monitoring of storage places.
- Claims management of purchased items with relation to claims from customers.
- Automatic creation of orders according to current production requirements.

## PURCHASE, WAREHOUSES

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

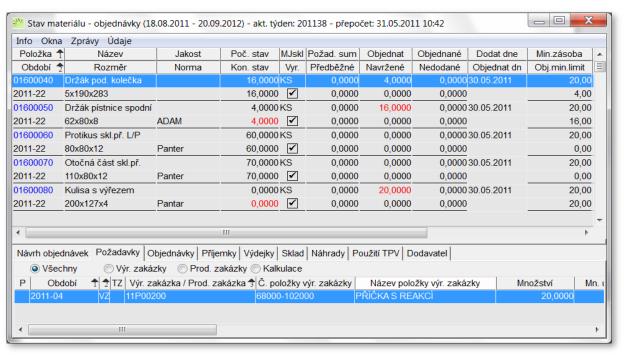
- Managing data on purchased items (batch, storage space, inspections, ...)
- Monitoring of material invoices and cost
- Monitoring and evaluation of the quality of supplies and suppliers
- Monitoring inventory and manufacturing requirements
- Income and output from the store using mobile terminals
- Planned expeditures
- Analysis of stock movements
- Simulating the impact of changes in the production plan to supply
- Claims management of purchased items
- Integration of suppliers WEB portal for their management
- Possibilities of stock consignment

## EXAMPLE OF DRAFT ORDERS





Purchase features – automatic draft order (material, cooperation) is used to ensure "continuity" of production and optimum stock availability.



#### COOPERATION EXAMPLE ORDERS

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

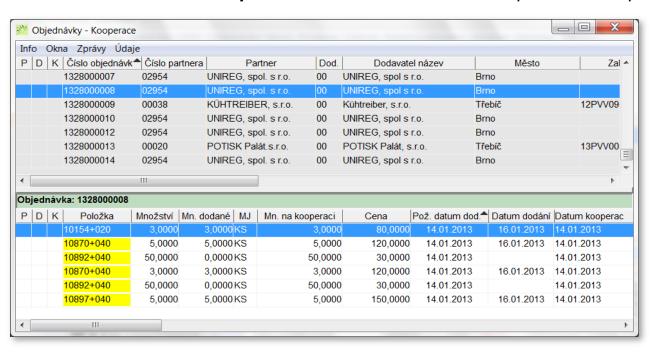
We order material

We produce

We deliver

We evaluate

Automatic creation of cooperation orders based on the requirements of production.



### MOBILE TERMINALS



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

- Module for managing mobile terminals is "native" applications myGEM and works in on-line mode module Warehouses.
  - Income and outflow of purchased items via mobile terminals
  - Quick outflow of items from the warehouse terminal using the so-called outflow batch
  - Automatic transfer, including generating the necessary documents, without manual user creation (transfers, requisitions, delivery notes, ...)
  - Carrying out incoming and final inspections on products
  - Outflow of items from the warehouse for each contract, for stacker, shipping/loading
  - Ability to perform an inventory of warehouses by mobile terminal
  - Change of storage location





Mobile terminals: Motorola TC26BK, Keyence BT-A700

#### AN EXAMPLE OF USING BARCODES AND QR CODES

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

Efficient mobile devices are used for receiving, storing, issuing material and inventory. For these devices we have prepared special software modules.



Printing labels from the product labelling app



Example of a storage label



GEMCO Uherské Hradiště Datum: 9.7.2008 VÝDEJOVÁ DÁVKA: 00000007 r wd davka Plán. datum výdeje: 02.07.2008 Položka Množství MJ E0001 Zdroj 220/9V 1A 8 ks B/2, B/3 E0003 Zástrčka 7 ks E0006 Tranzistor N-MOS 100V/18A/52m 42 ks E0007 Dioda stabilizačni 60 ks B/1

 Example outflow batch for picking items from the warehouse using a mobile terminal

### MANAGEMENT AND PRODUCTION PLANNING





- The module is used to time, quantitative, capacity planning by type of production.
  - Taking over from the sale, including automatic generation of documents and barcode labels in one step
  - Assessment of the capacitive loads of individual workplaces and their solutions
  - Evaluation of summary material requirements in individual planning periods
  - Making views, executive plan (plant, center, workshop) and fault solution
  - Identifying differences between the requirements of trade and production (overruns solution ...)
  - Modification of the plan of orders according to the agreed loading (application of the KANBAN principle)

## MANAGEMENT AND PRODUCTION PLANNING

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

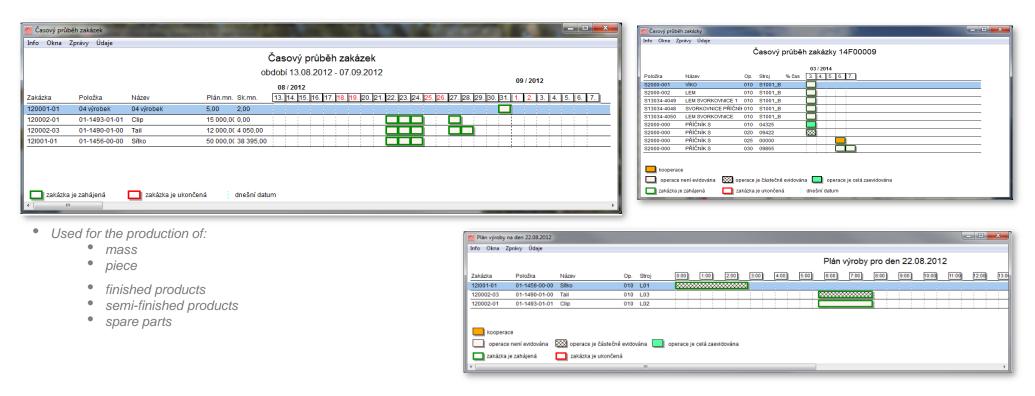
- Production planning and control of piece (custom), serial and mass
- Use of transport batches
- Scheduling, both progressive and regressive
  - According to throughput times, processing times, ...
  - Depending on the type of capacity, machine, ...
- **Production design / planning of finished** (FVV) and **semi-finished** (PVV) goods based on the requirements of production and sales and the current warehouse state
- Application of the **Synchro MRP** principle (production part planning, semi-finished, assembly according to orders)
- We provide accommodative planning for each process

## PLANNING EXAMPLES





Production can be planned in many ways but each production is specific.



## PLANNING EXAMPLES

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

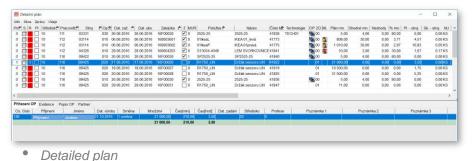
We order material

We produce

We deliver

We evaluate

Specific outputs are customized to customers.



An example of using barcodes in production: time card, production card

Capacity plan

# RVE PRODUCTION – RECORDS





- The module is used primarily for financial and quantitative evaluation of the status of work in progress, the evaluation of planned and actual costs, fulfilment of performance standards, preparation of documents for wages and quality monitoring.
  - Material requisitions (limit sheets), including the dispensing of a bar code
  - Job tickets (work container)
  - Time card clock-out via barcode
  - Records during production
  - Conscription of semi-finished products, finished products from production
  - Records of final inspection via terminals
  - **Records of non-conformities,** returns, downtime and other work
  - Monthly closing in production
  - Traceability (batches, serial numbers, ...)

## RVE PRODUCTION – RECORDS

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

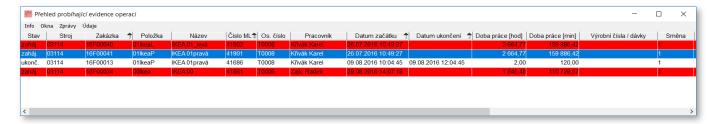
We deliver

We evaluate

Finished and released operations are monitored online during the implementation process.



Production records



Overview of ongoing records of operations

# PRODUCTION VISUALISATION



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

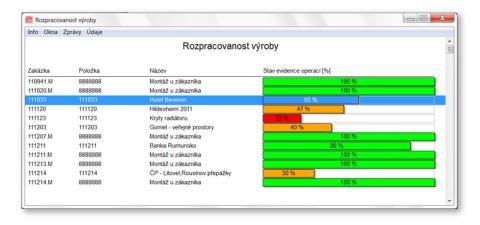
We order material

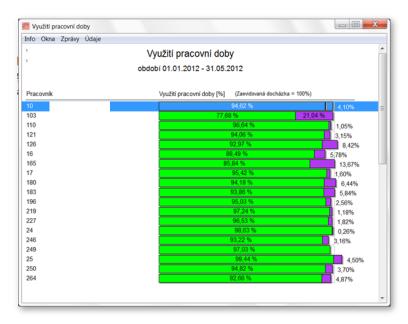
We produce

We deliver

We evaluate

- These reports provide a graphical view of the ongoing processes of production, fulfilment of contracts, use of machines and workers, including representation disputes and claims, using **Pareto analysis**.
- It is suitable for obtaining an overview for management, as well as for individuals at workstations, i.e. **display on screens** at workstations etc.





## PRODUCTION VISUALISATION

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

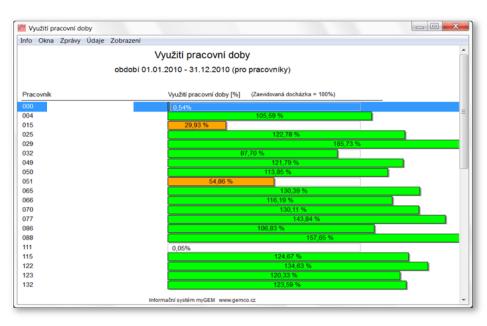
We order material

We produce

We deliver

We evaluate

In practice, it is important to monitor the use of working time. Data is evaluated online and presented in various forms.



Utilisation centre

# **myGEM**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

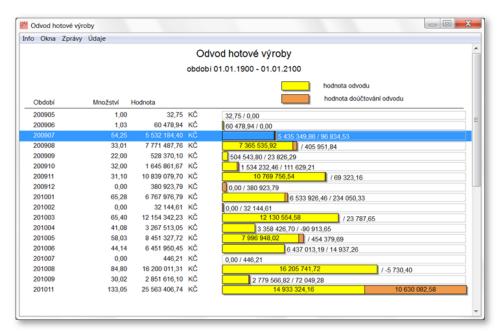
We order material

We produce

We deliver

We evaluate

- Finishing the production in real-time is important for creation of values.
- The overview below shows one of the options.



Output of finished production

# DISPLAYING OF TRACKED VALUES

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

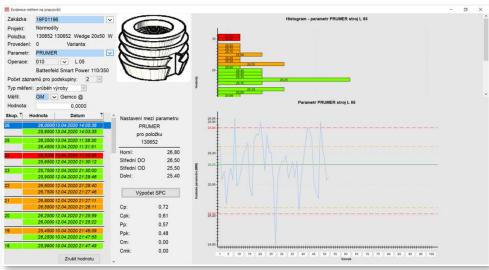
We order material

We produce

We deliver

We evaluate

- Key values that predict the quality of the process and products are captured and displayed from machines.
- Values are also captured from special single-purpose machines that are part of the automation of the manufacturing process. Standards that use protocol ProfiNET are primarily used here.



Online data acquisition from the machine

#### LINE-SIDE DOCUMENTATION DISPLAY EXAMPLE



We evaluate

We are dealing with a potential customer

We are checking options

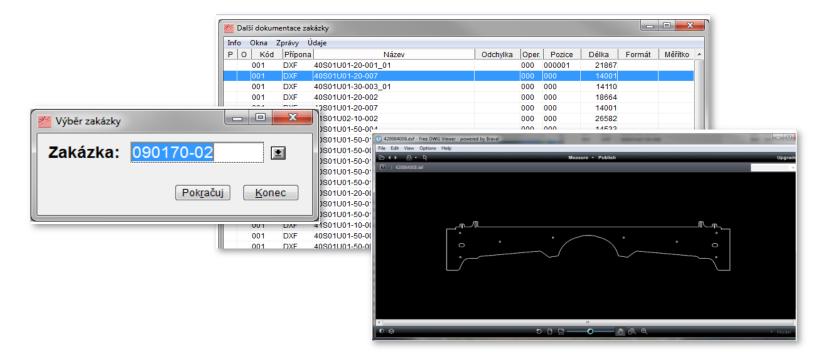
We have won, we start fulfillment

We order material

We produce

We produce

- To work flexibly and precisely, we provide product data directly to a specific machine.
- The data is subject to change service and eventual deviation management process.



#### MAINTENANCE AND DIAGNOSTICS OF MACHINES

We are dealing with a potential customer

We are checking options

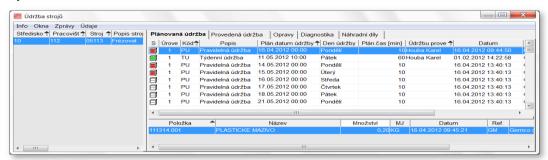
We have won, we start fulfillment

We order material

We produce

We deliver

- Machine maintenance is a simple tool for monitoring the status of production and maintenance of machines. The aim is to ensure maximum equipment life with higher safety and reduce costs. It provides:
  - Maintenance scheduling
  - Predictive maintenance plan
  - Monitoring and registrations of completed repairs (internal/external)
  - Machine diagnostics
  - Data imports
  - Control diagrams, ...



## RVE ATTENDANCE RECORDS



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

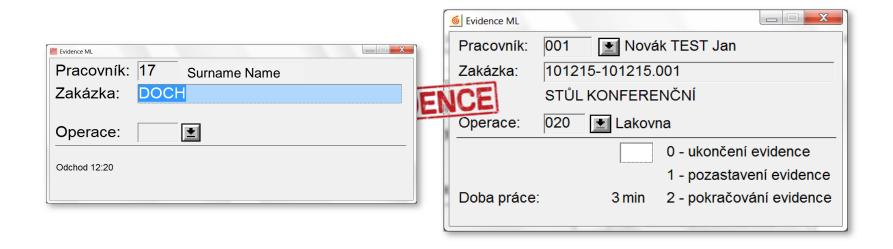
We order material

We produce

We deliver

We evaluate

- Attendance records provides Login/logout workers using chips or barcodes in the system, and automatic calculation of hours worked (according to set criteria).
- Hours worked on specific orders (registration payroll cards / operations) are also tracked in a similar manner.



## RVE BARCODES AND QR CODES – OUTPUT CONTROL

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

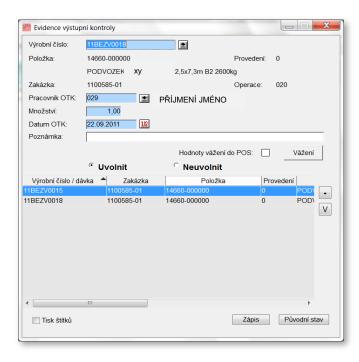
We order material

We produce

We deliver

We evaluate

Records of final inspection via barcode or QR code scanning of controlled products.





 Example of a print set of the product/dispatch label of the package

## WE PLAN THE LOADING



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

- It is a planning of loading.
- Breakdown of individual orders for distribution according to size, cars term.
- **Bill of lading** the accompanying document for the employee distributing products to individual customers and also **provides the basis for production planning** (when applying KANBAN).

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### SUPPLY DISCIPLINE

We are dealing with a potential customer

We are checking options

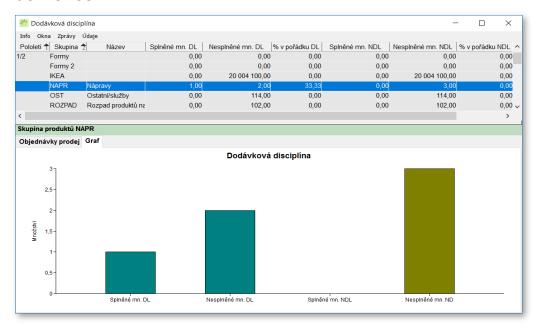
We have won, we start fulfillment

We order material

We produce

We deliver

- **OTD = On Time Delivery** is a timely delivery to the customer, the parameter is an important supplier rating indicator.
- In the case of a problem with deadlines, it is necessary to present an action plan to improve deliveries.



# **myGEM**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

We produce

We deliver

We evaluate

Documents are delivered as standard in printed or electronic form (EDI) to the delivery.

			DEI	LIVERYN	O.T.E.		16EXTE	00009
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Delivery note



Invoice

### MES PRODUCTION PARAMETERS

We are dealing with a potential customer

We are checking options

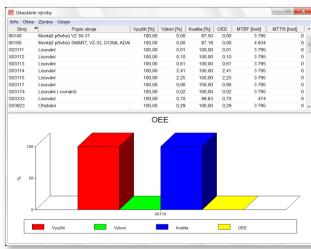
We have won, we start fulfillment

We order material

We produce

We deliver

- We monitor a number of parameters, among standards belong:
  - OEE Overall Equipment Efficiency
  - MTBF Mean Time Between Failure
  - MTTR Mean Time To Repair
  - Utilisation of machinery and equipment in %
  - Performance of machinery and equipment in %
  - Production quality in %



### MES OVERVIEW OF PRODUCTION MACHINES STATUS



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

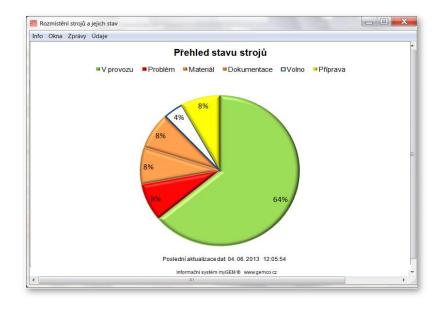
We order material

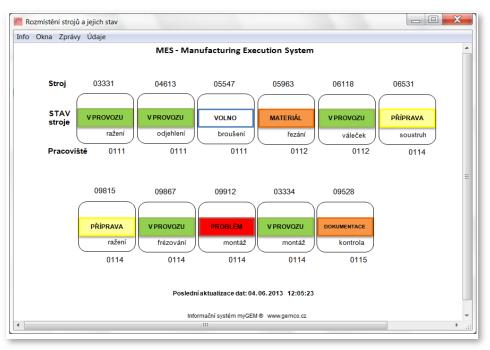
We produce

We deliver

We evaluate

- For production planning and the security of deliveries in time, it is necessary to ensure reliable operation of all equipment.
- Visualisation and overviews about machines are the basis of predictive maintenance.





### ECONOMIC EVALUATION OF THE CONTRACT

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

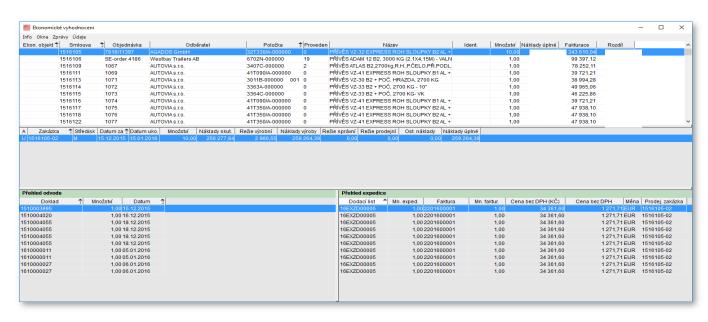
We order material

We produce

We deliver

We evaluate

- The order is evaluated after realization, more detailed evaluation is solved in the Planning and Controlling module.
- Evaluation can be done from many perspectives and dimensions. These tasks are always tailored to specific requirements.



## FINANCIAL ANALYSIS





- Most companies have a credit at the banks, which usually require reports of key indicators.
- We provide the following indicators as a standard:
  - Current liquidity
  - Return on sales
  - Short-term liquidity
  - Long-term debt
  - Total debt
  - Inventory turnover from sales
  - Maturity of payables/receivables
  - Expenses
  - Average daily sales
  - Option for reporting on other indicators according to user definition.

### STAV FIRMY

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

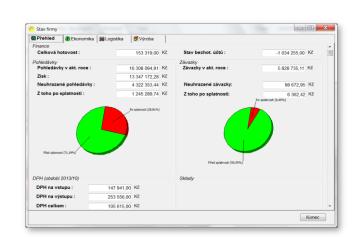
We order material

We produce

We deliver

We evaluate

- Quick overview of the current status of the company, designed especially for leadership. The option of viewing on devices such as tablets, mobile phones, etc.
- It offers:
  - General overview status:
    - cash
    - cashless accounts
    - assets and liabilities, including maturity
    - profit
    - VAT
    - inventory
  - Economics status:
    - selected accounts
    - financial flows
    - costs and revenues
    - economic results



# **myGEM**

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

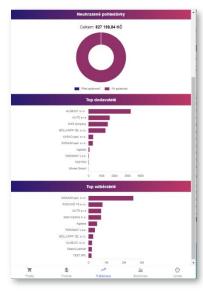
We order material

We produce

We deliver

We evaluate

- Logistics displays a detailed overview of:
  - the status of individual stocks,
  - top 10 (customers/suppliers),
  - real-time expedition.
- Production provides an overview of current contracts and their state of development in %.



### SOME BENEFITS





#### **Current overview**

of processes and business parameters that are important for management (sales analysis, supply discipline, workplace efficiency ...)



#### Extensive use of barcodes and mobile technologies

online receipt, dispatch, moving materials, products, transaction logs, expeditions ...



#### Fast mastering of software solution = security of investment



#### Integration of web applications and partners

(EDI, web portal solutions for communication with suppliers, customers ...)



#### The tool for managing all realisation processes

from offer /demand, contract, TPV, purchase, detailed planning, production records to expedition



#### Cost savings and higher performance!

Optimizing the staff in selected areas, integrating suppliers, improving warehouse management, expeditions ... and significantly boosting company performance with a suitable software application!



#### Quality data, the starting point for improvement!

process data provide valuable information for their further development; e.g. workplace efficiency and analysis of waste resources (downtime, manipulation ...)



... and many other solutions!

### EXAMPLES OF BENEFITS IN THE COMPANY



# AGADOS, spol. s r.o.

- **The entire realisation process** from trade, development to delivery is **fully covered** by the information system.
- Fulfillment of individual requirements with product configurator.
- Increase of production by 100% with minimal increase in technical and workers' personnel.
- Fast communication with the client **interconnection myGEM to the web** for new products and spare parts.
- **Saving workers** when processing COC sheets, vehicle registration certificates and communication on central records.
- Gradual shortening of deliveries.
- And many others ...

# REFERENCES









EBZ Hoffmann s.r.o.



DFK Cab, s.r.o.



**EUROWAGON**, s.r.o.



4 COILS TECH s.r.o.

and many other companies ...

### SECURITY ALWAYS AT A HIGH LEVEL



- Examples of myGEM product security solutions:
  - compatibility with the latest valid version of operating systems (MS Windows, Windows Server, Oracle Linux) and new versions of databases
  - implementation of TLS 1.3 security protocol for safer communication and higher performance with web services for communication with external entities
  - implementation of OAuth 2.0 authentication, multi-factor login
  - direct SOAP and REST API support for communication with modern web services
  - support for generating 64-bit applications
  - new tools for CI/CD (acceleration of software delivery time)
  - use of new, more secure encryption algorithms
  - support for the security of multi-layer applications using the latest valid versions of .NET CORE
  - increasing the security of one's own database against attacks by attackers e.g. monitoring possible attacks
  - and many other tools and rules...

### **MYGEM LEARN**



- The supplier provides training throughout the use of myGEM.
- Training takes place according to regularly posted dates or at the user's request.
- The training is designed to develop the knowledge of existing and new myGEM users.
- The trainings are divided into several levels:
  - beginner
  - self-employed clerk
  - specialist
  - treiner
- The effectiveness of the training is supported by the fact that the training takes place on specific model data, which allows to present and understand exactly the meanings, contexts and importance for the smooth running of the whole process.
- The trainee will receive suitable materials in the form of presentations, instructions for specific functions (if needed) and a certificate of competence achieved.
- The supplier also keeps track of the list of trained workers and their achieved competencies for a specific client.
- The mentioned procedure helps a lot in the development and sustainability of the myGEM system.

### **CERTIFICATES**



The quality of our work is regularly audited by independent certification companies.





### WE ARE LOOKING FORWARD TO COLLABORATE WITH YOU!



We successfully increase efficiency!





www.gemco.cz

