

# **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.

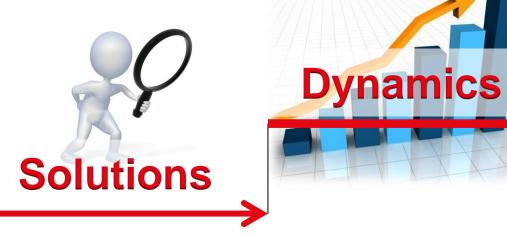


Own team for implementation, support and future development.

## **myGEM**

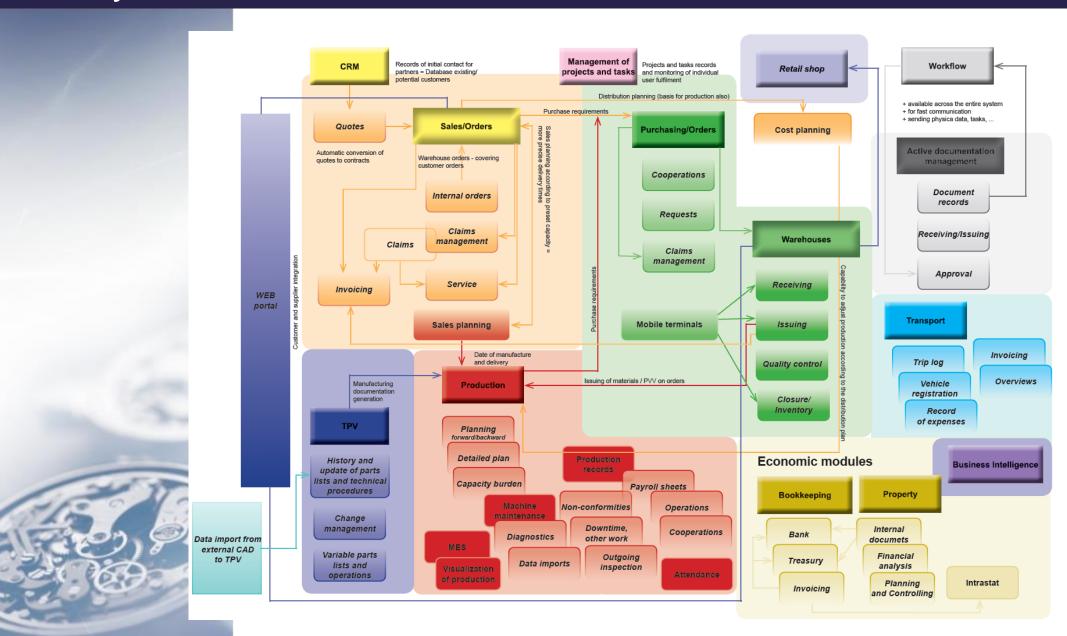


Ideas



- Analysis
- Consultation and training
- ERP myGEM

### myGEM DIAGRAM



#### LIST OF MODULES

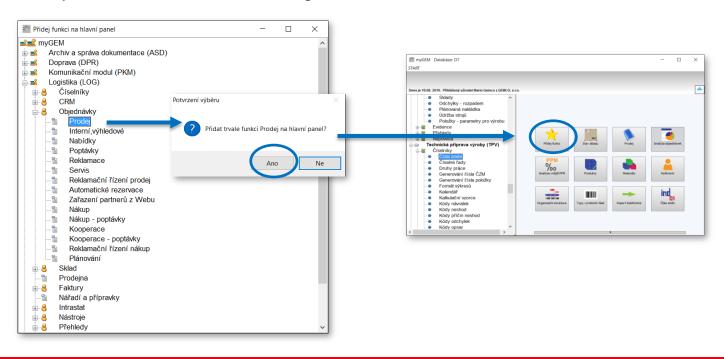


- Bookkeeping (UCT)
- Property (MAJ)
- Planning and controlling (PaC)
- Business Intelligence (BI)
- Company status (SF)
- Report generator InfoMaker (GS)
- Customer Relationship Management (CRM)
- Projects and tasks management (RPU)
- Logistics Sales (LPR)
- Shop (PRO)
- Sales planning (OPL)
- Service (SE)
- Complaints from customers (REP)
- Complaint procedure (RR)
- 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)
- Suppliers integration (ID)
- E-shop (ES)
- Electronic communication (EDI)
- Displaying of documents (ZD)
- Production process monitoring (MES)
- **.**..

#### 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
- using the Add function button can easily add selected and frequently used functions directly into the window after starting



#### TECHNOLOGY myGEM = INVESTMENT PROTECTION



#### Data layer

We use an Oracle database for storing data and ensuring data consistency through trigers. Oracle is a modern multi-platform database system with highly advanced data processing options, high performance and easy scalability.

We are **Oracle Silver partner**.



Data management and creating stored procedures in PLSQL language used the tool Toad for Oracle. It is the most advanced and widely used Oracle DB tool of its kind from DELL



- Presentation layer "Thick client"
  - It is about the basic environment in which users work. For its work high-performance object-oriented tools for enterprise application development are used.

#### TECHNOLOGY myGEM = INVESTMENT PROTECTION



- Applications are primarily designed to run in the internet browser window or mobile phones. In this environment we create a **fully-fledged solution** for myGEM.
- The ionic framework (mobile app framework) is a complete SDK (Software Development Kit). It was built on top of AngularJS (application platform) and Apache Cordova (mobile application development framework); Ionic provides tools and services such as CSS, HTML5 and Sass.







These languages and libraries are managed by through the Visual Studio Code development environment. This editor is newly defined and optimized for creating modern web and cloud applications.



#### 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)
- Technical cards printed online, exporting 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 functionality Example 5 functions in one "click" to minimize open windows
- Integration with external programs ENOVIA PLM, SolidWorks, ...
- Special methods of production planning

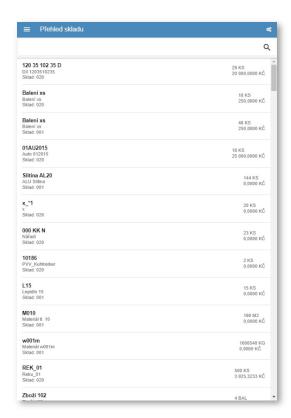
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### WEB APPLICATIONS



- Above the myGEM system it is possible to operate online **Web applications** that communicate via the service online with the database server.
- Applications are standardly ported to mobile devices.

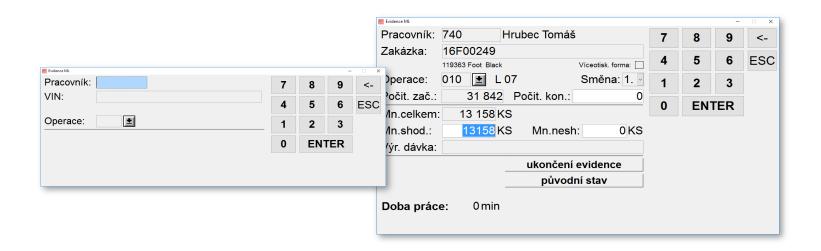




#### MINI APPLICATIONS



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



#### PRODUCT SHEETS

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





#### HOW IS THE PRESENTATION PREPARED?



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

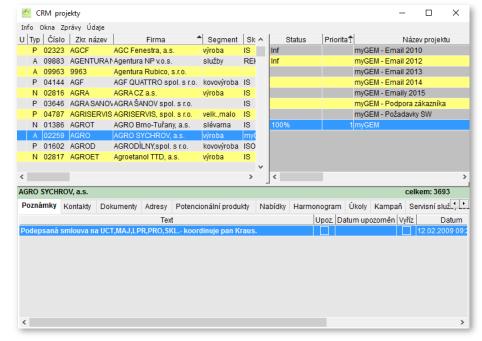
We order material

We produce

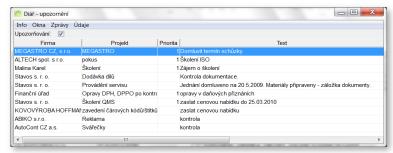
We deliver

We evaluate

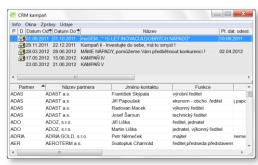
 Each customer has tracked specific project types that are continuously monitored including tracking of past and future activities.



 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

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We have won, we start fulfillment

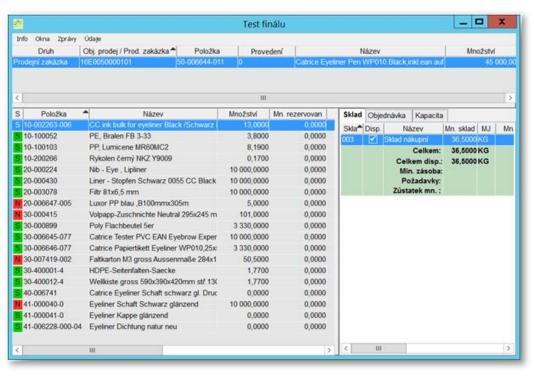
We order material

We produce

We deliver

We evaluate

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

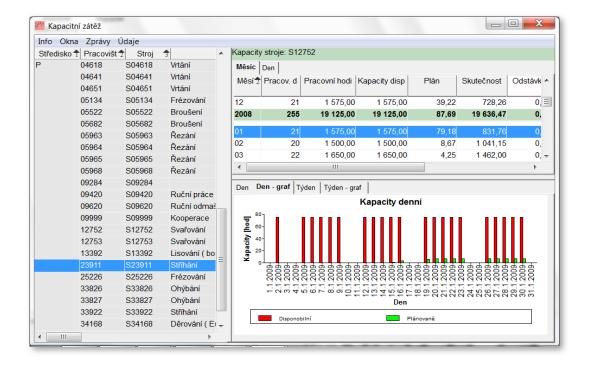


#### RVP CAPACITY BURDEN





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



#### TECHNICAL PREPARATION OF PRODUCTION

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We evaluate

- 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**

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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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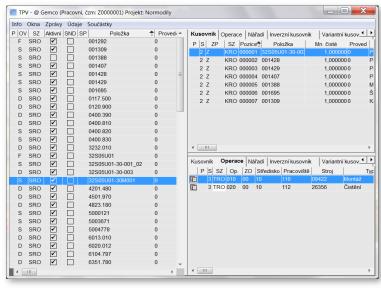
We order material

We produce

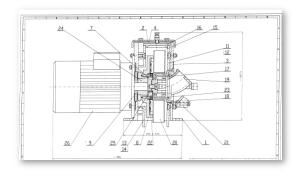
We deliver

We evaluate

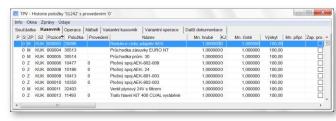
TPV je těsně spojeno s řízením dokumentů a integruje dokumenty ze všech dílčích systémů. U položky vzniká "trezor" platné dokumentace, která je použita pro výrobu. Výrobek tak sebou nese kompletní informace pro výrobní proces.



Bills of Materials items, operations



Enclosed documentation



Item history

#### TPV EXAMPLE



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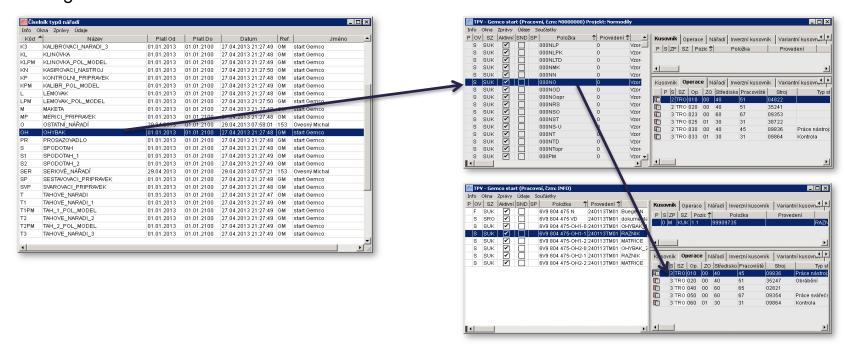
We order material

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

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We have won, we start fulfillment

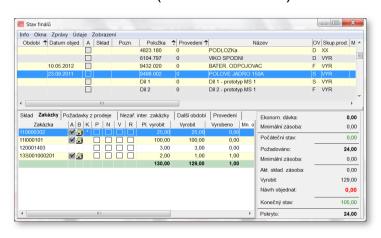
We order material

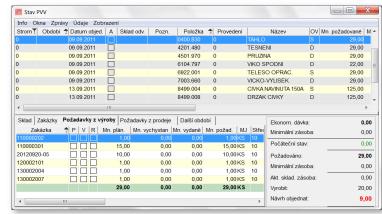
We produce

We deliver

We evaluate

- 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

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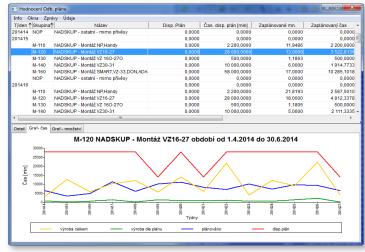
We order material

We produce

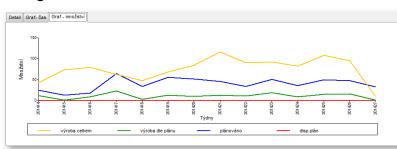
We deliver

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.







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

#### **EXAMPLES OF ANALYSIS**



We are dealing with a potential customer

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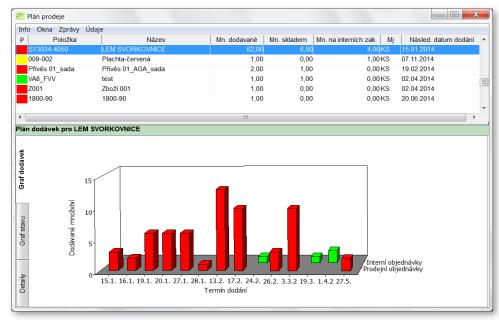
We order material

We produce

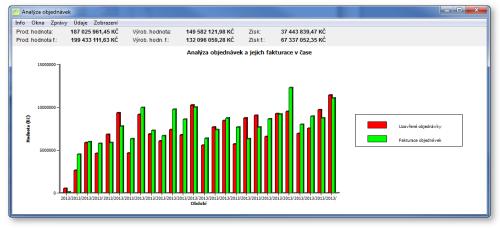
We deliver

We evaluate

There are important additional information for our decisions.







Analysis of orders

#### PROJECTS AND TASKS MANAGEMENT

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We evaluate

- **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
  - 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

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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.



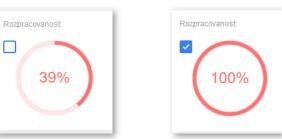
Chronological project view and its phases.

Tasks are also used on the mobile phone.





• Task management window



Editing of task processing

#### ORDER ISSUING

We are dealing with a potential customer

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We have won, we start fulfillment

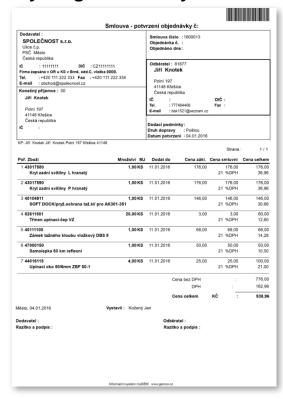
We order material

We produce

We deliver

We evaluate

Everything for delivery is verified, we issue an order confirmation.



#### 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

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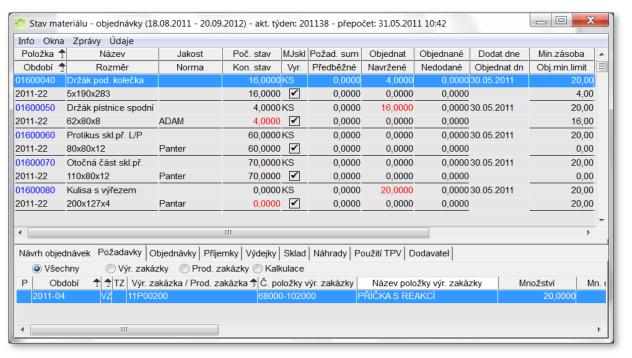
- Managing data on purchased items (batch, storage space, inspections, ...)
- Monitoring of material invoices and cost
- Monitoring and evaluation of the quality of supplies and suppliers
- Monitoring inventory and manufacturing requirements
- Income and output from the store using mobile terminals
- 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

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We have won, we start fulfillment

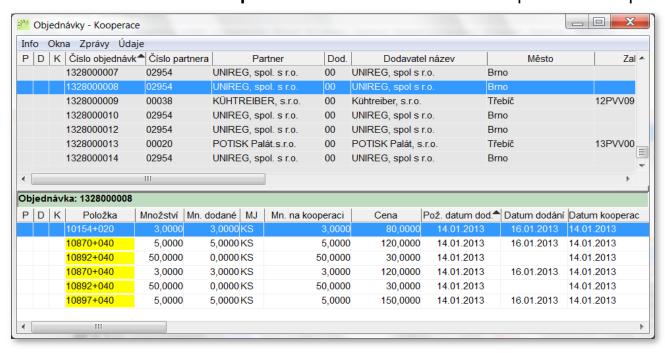
We order material

We produce

We deliver

We evaluate

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



#### MOBILE TERMINALS





- 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

#### BARCODE USE EXAMPLES

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We evaluate

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



Printing labels from Microsoft for labelling products



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

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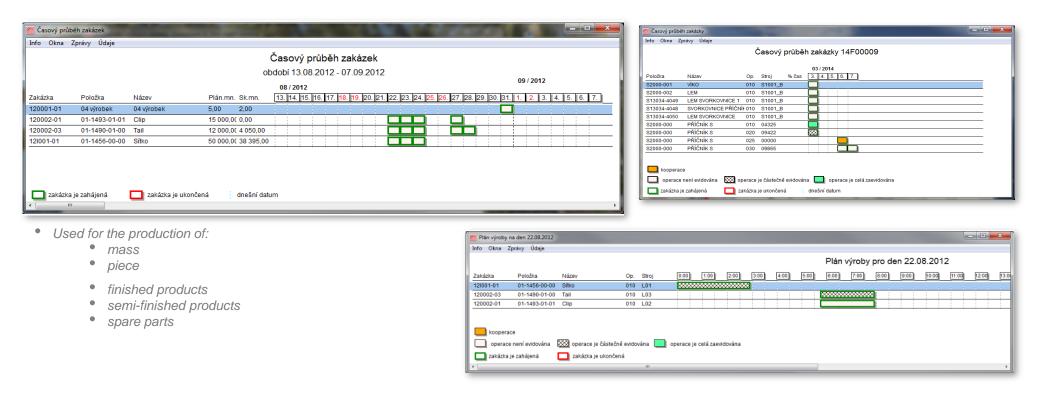
- Production planning and control of piece (custom), serial and mass
- Use of transport batches
- Scheduling, both progressive and regressive
  - According to throughput times, processing times, ...
  - Depending on the type of capacity, machine, ...
- **Production design / planning of finished** (FVV) 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

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We have won, we start fulfillment

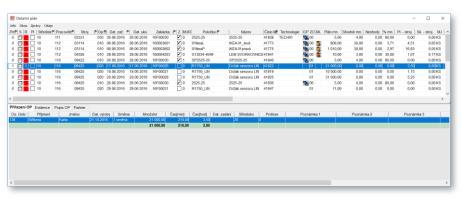
We order material

We produce

We deliver

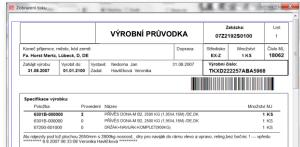
We evaluate

Specific outputs are customized to customers.



Detailed plan





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

### 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

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We have won, we start fulfillment

We order material

We produce

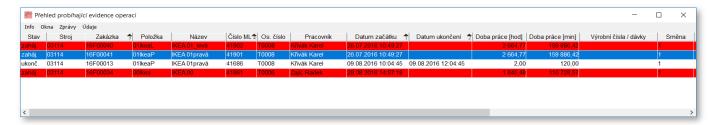
We deliver

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

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We have won, we start fulfillment

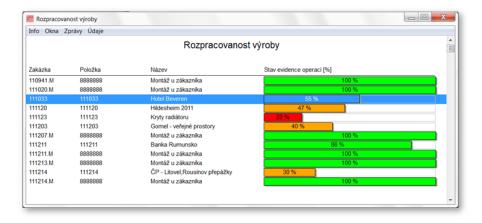
We order material

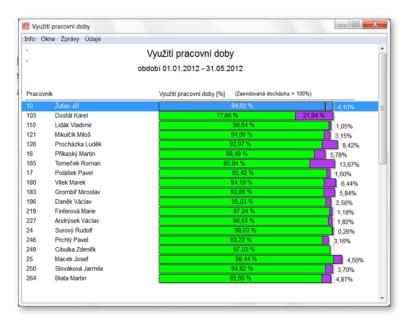
We produce

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

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We have won, we start fulfillment

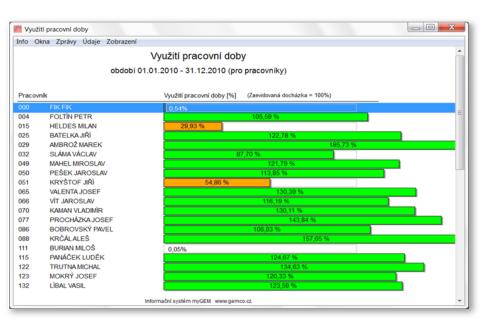
We order material

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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

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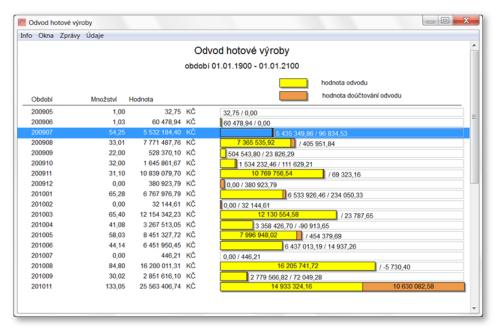
We order material

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

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We have won, we start fulfillment

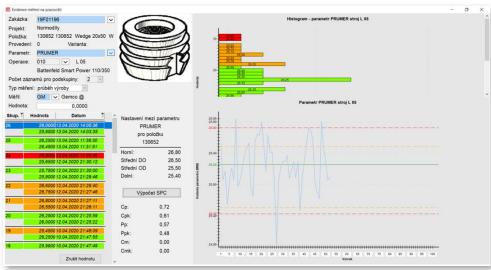
We order material

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.



On-line snímání dat ze stroje

#### LINE-SIDE DOCUMENTATION DISPLAY EXAMPLE



We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

We order material

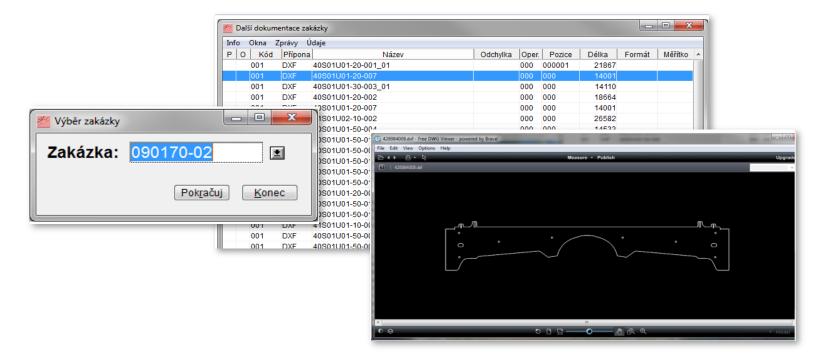
We produce

We deliver

We evaluate to the control options

We are checking options

- 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

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We have won, we start fulfillment

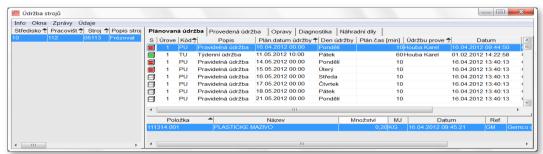
We order material

We produce

We deliver

We evaluate

- 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



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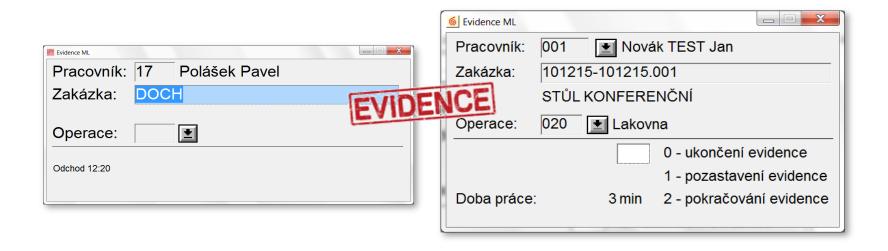
We order material

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 – OUTPUT CONTROL

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

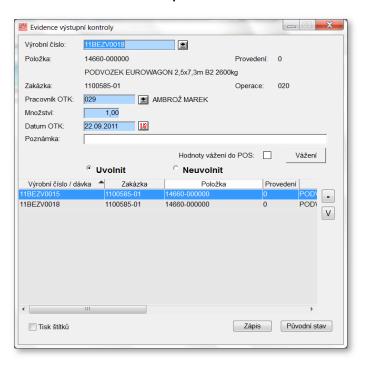
We order material

We produce

We deliver

We evaluate

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





### 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 of the control options options

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

GE	MCO	PLÁNOVA	ΝÝ	NÁKLA	DOVÝ	LIST č	. NL9	00004	
Datum naklá	ádky:	11.03.2009		Týden:		200911			_
Předpokládaný čas nakládky:				Pořadí auta:					
SPZ vozidla:				Poznámky	oro řidiče:				
Řidič:									
Přepravní sp	oolečnost:								
Smlouva		Popis zboží	VIN	Objednané množství	Objednávk	a KW obj dod	Lokace	Množství na dodání	MJ
Semaco pro	ogresivní obrabe	ni s.r.o 790 01 Jeseník	:						
090035	5-600001, Výrob	ek-finál		1,00		00 10		1,00	ks
Trans Tech	Tooling,s.r.o (	513 00 Brno							
080448	99000001, Plach	:a		1,00		00 46		1,00	ks
090034	00125M -VČ - F - F - Agados	Agados, Výrobek 0125M -VČ -		1,00		00 11		1,00	ks
080445	001, Polštář			2,00		00 45		2,00	ks
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AUTO DOBR		r.o 59401 Velké Meziří							
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080165	Adi-p02, produkt	02	0032	50,00		00 13		1,00	ks
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### SUPPLY DISCIPLINE

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

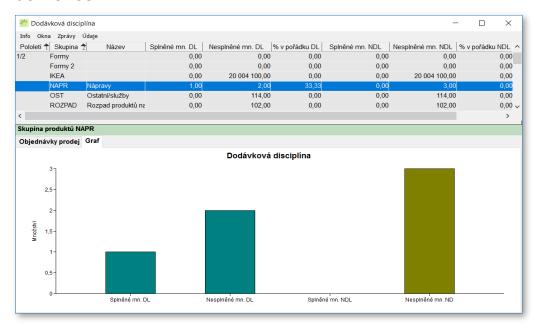
We order material

We produce

We deliver

We evaluate

- 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.

	D.E.	LIVERYNOTE	16EXTD0009
	D E		
Supplier :		Date	: 05.01.2016
SPOLEČNOST s.r.o.		Contract No.	: 1515817
Ulice č.p.		Order No.	1
PSČ Město		Invoice No.	: 1201600067
Česká republika		Cancel shipping note h	¥o.;
ID: 11111111	VAT: CZ11111111	Customer:	
Tel: +420 111 222 333	Fax: +420 111 222 334	Industrial Enginee	ering s.r.o.
E-mail:obchod@spolecnost.	cz	Svatopluka Čecha 1934	1/58
Consignee :		612 00 Brno	
Industrial Engineering s.r	.0.	Česká republika	
Bustonluka Časka casus		ID: 29186676	VAT: CZ29186676
Svatopluka Čecha 1934/5 612 00 Brno	•	Tel: 724662064	Fax:
612 00 Brno Česká republika		E-mail:	
ID: 29186676	Name:		
Tel:	Fax:	Terms of delivery:	
		-	
Description of goods	Order No.	Contract No.	Quantity MJ
1 32N00/99-001600 Canvas VZ 32 ALU "EXP Canvas colour : white RAL 90	RESS" / 1,60 m complete with	1515817-01 cons	1,00 pcs
2 32T330/A-000000			1,00 pcs
confirmation: the goods prope	rrly delivered		
Supplier :		Customer :	
	ature, name)		gnature, name)
Supplier :			gnature, name)
Supplier :			gnature, name)
Supplier :			gnature, name)
Supplier :			grature, name)

Delivery note



Invoice

### MES PRODUCTION PARAMETERS

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We are checking options

We have won, we start fulfillment

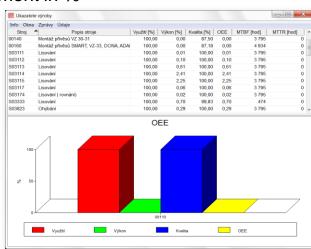
We order material

We produce

We deliver

We evaluate

- 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



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We are checking options

We have won, we start fulfillment

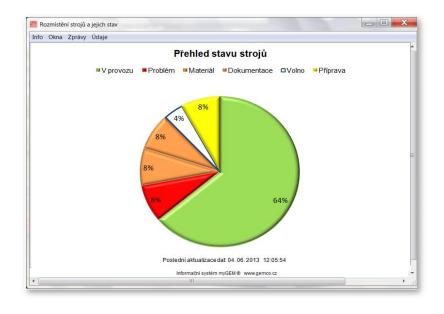
We order material

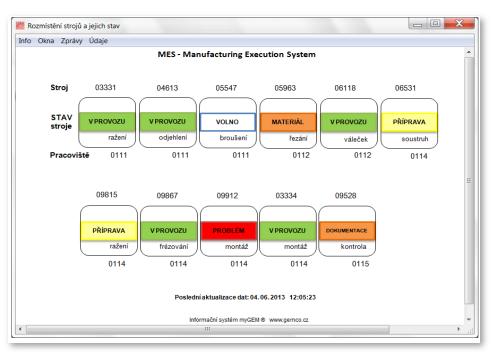
We produce

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

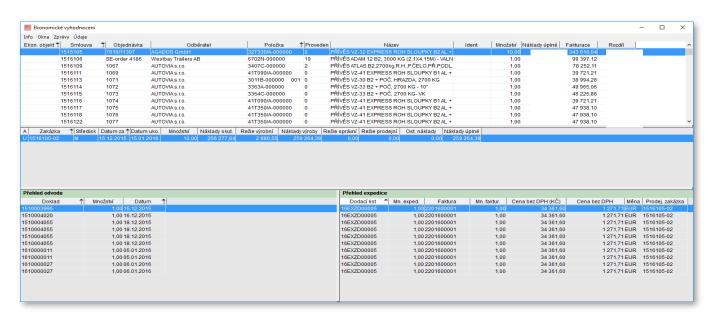
We order material

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



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 to the control of the control options options

- 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





#### STAV FIRMY

We are dealing with a potential customer

We are checking options

We have won, we start fulfillment

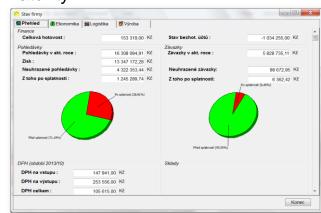
We order material

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

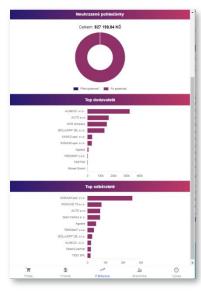
We order material

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 %.



## EXAMPLES OF OTHER MODULES

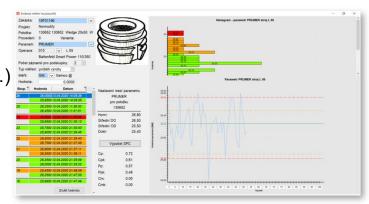
- Quality management modules
- Paperless production
- Automated warehouse Kardex Remstar
- Sprinter
- Online process analysis
- Accountancy
- EET
- EDI
- PKM
- Business Intelligence



### QUALITY MANAGEMENT MODULES



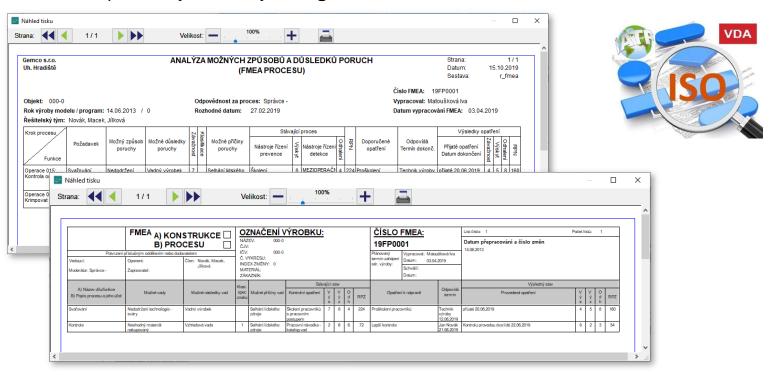
- The system works **online** with standard myGEM data and is supplemented by robust modules of selected Core Tools.
- Includes:
  - FMEA process/product
  - Control plans
  - Module for measuring process values and SPC evaluation (P<sub>PK</sub>, C<sub>PK</sub> ...
  - Nonconformance management and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





#### 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



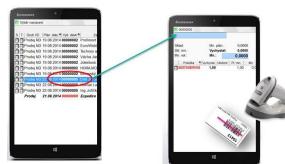
Realized issues in any way will be automatically displayed as standard in the Warehouse – Issue slips.



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 information system myGEM is linked online with the Kardex Remstar warehouse 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-remstar.cz

### **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**



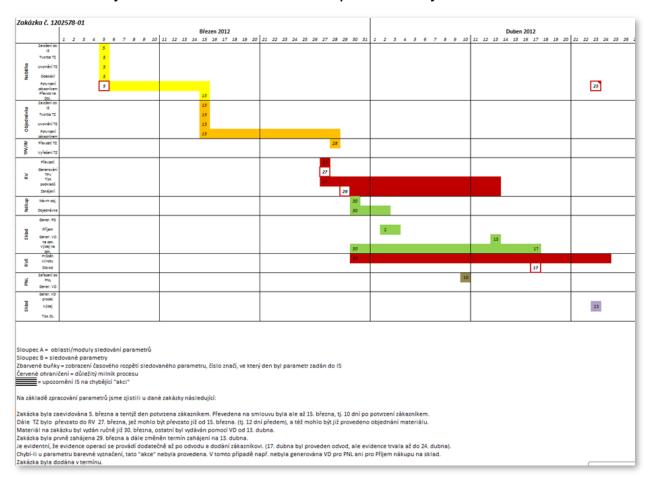
- That which threatens out timing it is usually very simple. There is a lack of materials for production, for example.
  - Do we really have these activities under control?
  - Why not order and deliver materials on time, who and what is holding-up the whole process?
- For these and many other questions 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

### ACCOUNTING

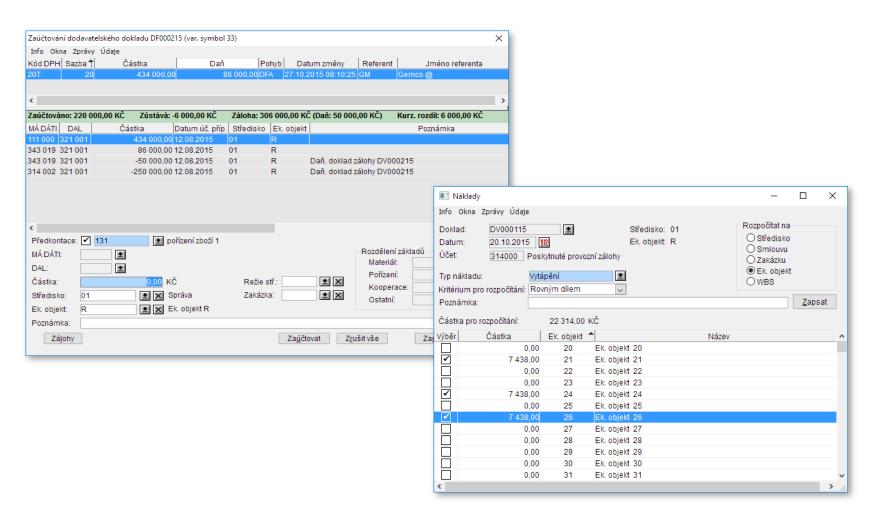


- Standard features for management accounting agenda. Parametric construction enables its use in any types of organizations of various sizes and activities:
  - Invoicing
  - Treasury
  - Financial planning
    - comparing the plan and reality monthly, cumulatively, ...
  - Property
    - automatic control 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.



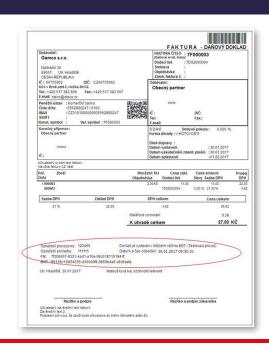
### **OTHERS**

- 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

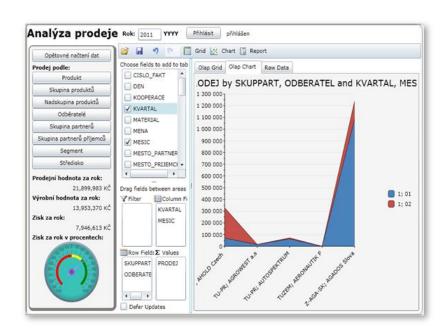
#### **PKM**

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

### **BUSINESS INTELLIGENCE**



- 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.



### 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, technical cards and communication on central records.
- Gradual shortening of deliveries.
- And many others ...

#### 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

# **myGEM**

- 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



#### HOW TO IMPLEMENT



- 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.

#### SOME BENEFITS



- Current overview
  - of processes and business parameters that are important for management (sales analysis, supply discipline, workplace efficiency ...)
- Fast mastering of software solution = security of investment
- The tool for managing all realisation processes
  - from offer /demand, contract, TPV, purchase, detailed planning, production records to expedition
- 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 ...)
- Extensive use of barcodes and mobile technologies
  - online receipt, dispatch, moving materials, products, transaction logs, expeditions ...
- Integration of web applications and partners (EDI, web portal solutions for communication with suppliers, customers ...)
- 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!

... and many other solutions!

### REFERENCES









EBZ Hoffmann s.r.o.



EVEKTOR, spol. s r.o.



EUROWAGON, s.r.o.



■ MESIT defence, s.r.o.

and many other companies ...

### **CERTIFICATES**



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





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