

# PROWAY BUSINESS WORLD

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HIGHLIGHTS



# WAREHOUSE MANAGEMENT

EFFICIENT. PRECISE. FAST.

Proway Business World puts you in the position to make your value chain efficient, precise and fast. This ensures a continuous improvement of quality, customer satisfaction and sales.

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# PROWAY BUSINESS WORLD

*Organization, control, analysis and optimization of the flow of goods and logistics - worldwide.*

The heart of every logistics facility is the software which makes sure that all areas, transports, and processes interact smoothly with each other. With PBW software, all flows of goods and information alongside the intra logistics supply chain can be organized, steered, displayed and analyzed – even beyond various logistics facilities.

The Proway warehouse logistics solution PBW is multi-functional and structured in a modular fashion throughout. Therefore it is suited for all manual, half, or fully automatic intra logistics supply chain facilities, all the way up to high performance logistics facilities. PROWAY BUSINESS WORLD can be adjusted to new requirements or extended features at any time so it can keep pace with the continuing development of your business or with its cycles and processes.

Because of its modular and integrative structure, PBW can be used in projects according to the requirements and it allows an efficient distribution of functions. This brings along excellent possibilities for testing and it offers a transparent documentation. The functional separation enables the staff to work in parallel with the software without influencing each other's work and provides a high performance within the PROWAY BUSINESS WORLD software. The software allows warehouse management and material flow controller (MFC) to be executed within the same data base. That way, costs for server and licenses can be minimized.

An interface between the warehouse management system and the material flow computer is not required. The dialog of the various modules for warehouse management and

transport control are integrated into a single application for the user. Interfaces to external systems - such as SAP, Waagen, subordinate controllers - are already available as standard or can be implemented in a project-specific way, so existing systems and architectures do not need to be adapted.

PBW is currently available within the MS SQL Server landscape. The preferred operating system is Microsoft Windows Server. The application is based on a native Microsoft Windows client and is also available as a web application for various browsers. Centralized management allows software updates to be imported without major administrative costs.

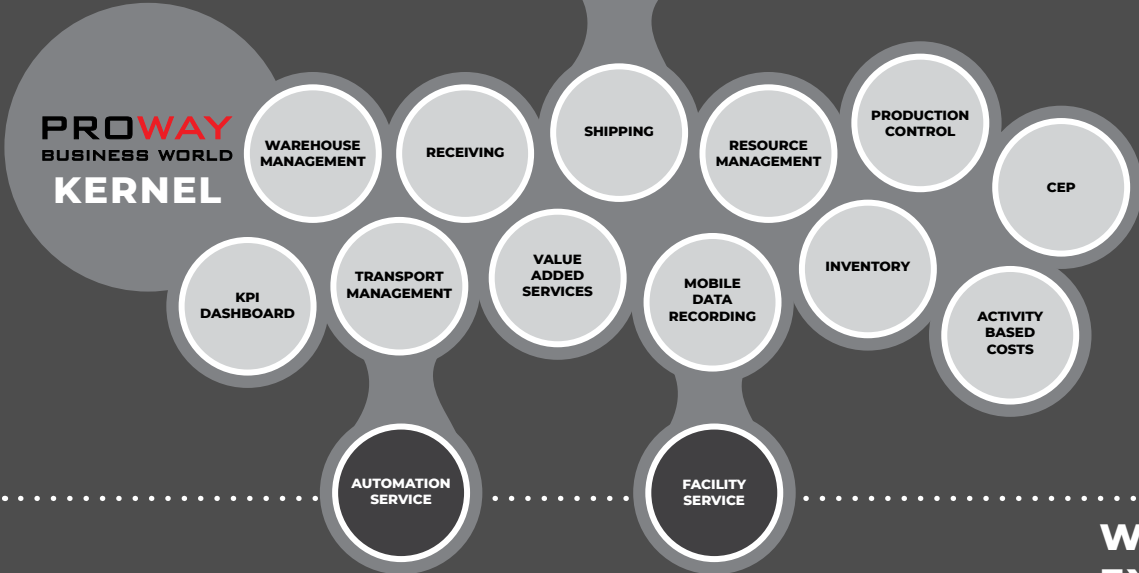
An online user handbook can be started directly from within a dialog of the application. It is completing the operating concept and offers the user the best possible support.



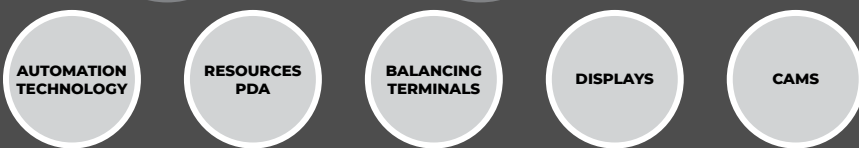
**ERP**



**WMS**

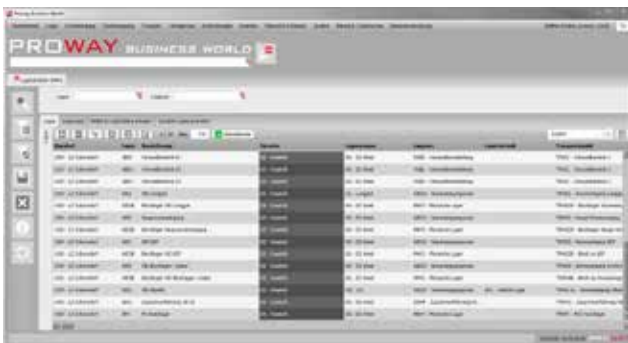


**WAREHOUSE EXECUTION**



# USABILITY & USERMANAGEMENT

*Dialogue-based and interactive customizations allow quick and efficient adjustments to the system.*



## USER INTERFACE

The intuitive user interface had been developed largely with known and common user interfaces in mind and offers therefore a quick and safe skill training of the user.

The basis of the overview dialogs is a standardized, tabular overview. For individual adjustments of those overviews, the user has a multitude of filter and sorting options available. Additionally, PBW offers selective Export and Print functions of certain tables to MS Excel.

Each user can individually adjust the filters, the layout, and the font sizes of the tables and save these changes at the individual work station. Furthermore, these adjustments can be rolled back at any time and the factory settings will be applied.

## USER- AND ENTITLEMENT MANAGEMENT

PROWAY BUSINESS WORLD is subject to an entitlement concept in which the resources, functions, and information cannot be used in an unrestricted way. User roles are collections of entitlements like e.g. reading rights for tables or execution rights for functions, which can be allocated to the users by a certain group membership.

The ability to independently group certain "roles" allows for the setting of different entitlements for discrete work spaces and individual users.

In addition to the above mentioned user entitlements are also work station entitlements with which an allocation of dialogs to certain work stations can be accomplished.



# PBW

## KERNEL

The basis of PROWAY BUSINESS WORLD is the kernel, which is the basis for all other modules and functions. All modules resort to these base functionalities.



# MATERIAL MASTER DATA

*The Material Master Data Administration in PROWAY BUSINESS WORLD contains all logistical base data for a product, which will not be changed during a certain period of time. With the help of the Material Master Data Administration, PBW achieves a maximum data quality for the product in relation to the logistic scope of work.*

## Material Master Data Administration

It differentiates by the means of origin and the usage between external and internal Material Master and groups the Material Master into the areas:

- ▶ Basic data
- ▶ Location and plant
- ▶ Quantity units
- ▶ Supplies
- ▶ Fixed bin location
- ▶ Hazardous substances and dangerous goods management
- ▶ Access statistics
- ▶ Package management
- ▶ Customer-specific information (additional to materials)



### ABSTRACT PARAMETERS

#### BASIC DATA

Material number  
 Material text  
 Material pictures  
 Reference texts  
 EAN  
 Base unit  
 Sales unit  
 Weights (net /gross)  
 Measurements  
 Volumes  
 Branch of materials  
 Product group  
 Assortment  
 Material type  
 Raw material  
 Storage conditions  
 Temperature  
 VCI Classes  
 Hazard Classes  
 Standard designation  
 ...

#### SITE AND PLANT

Storage strategy  
 Retrieval strategy  
 Batch Compliance  
 ERP plants  
 Quality obligation  
 Serial number profile  
 Procurement types  
 ...

#### UNITS

Different units per material  
 EAN per unit  
 Measurements per unit  
 Volume per unit  
 Weight per unit  
 Subordinated units  
 ...

#### SUPPLIES

Site  
 Warehouse area  
 Minimum quantity  
 Maximum quantity  
 ...

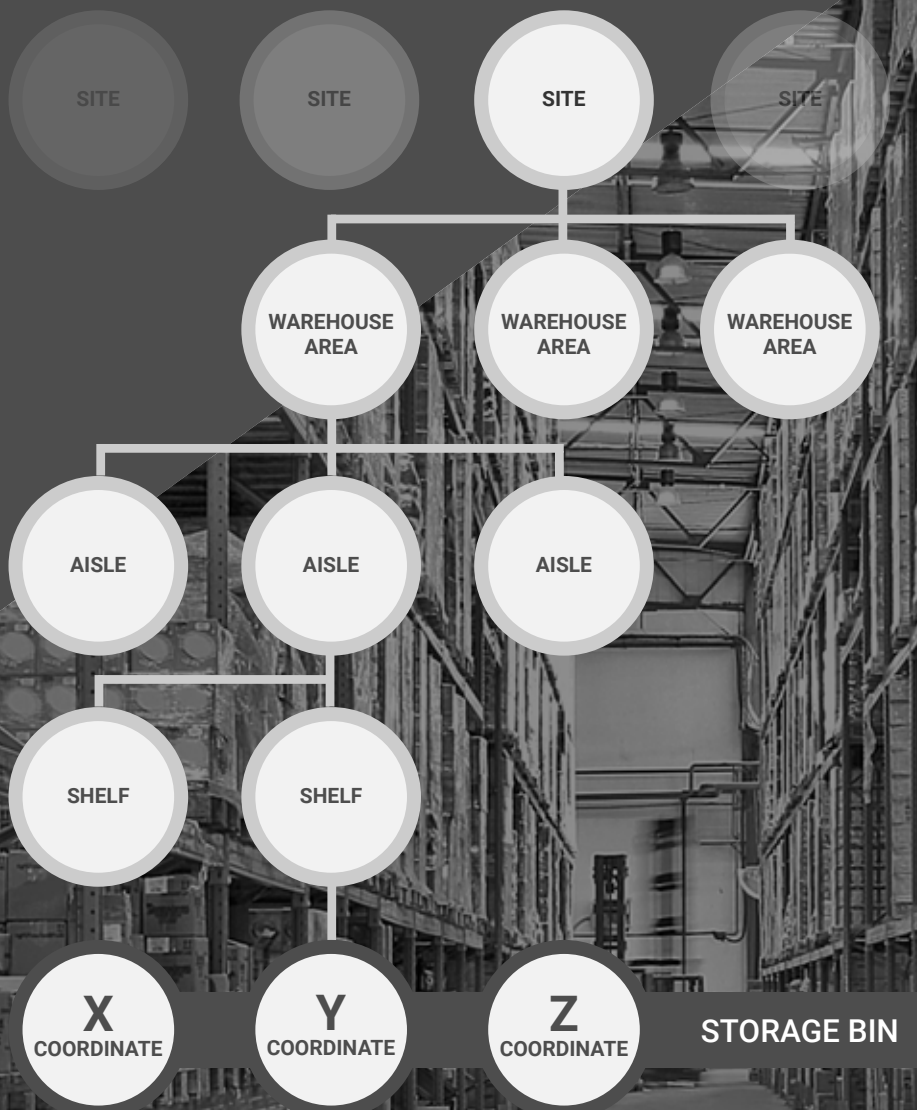
#### FIXED PLACEMENT

Owner  
 Site  
 Warehouse area  
 Aisle  
 Shelf  
 Location  
 ...

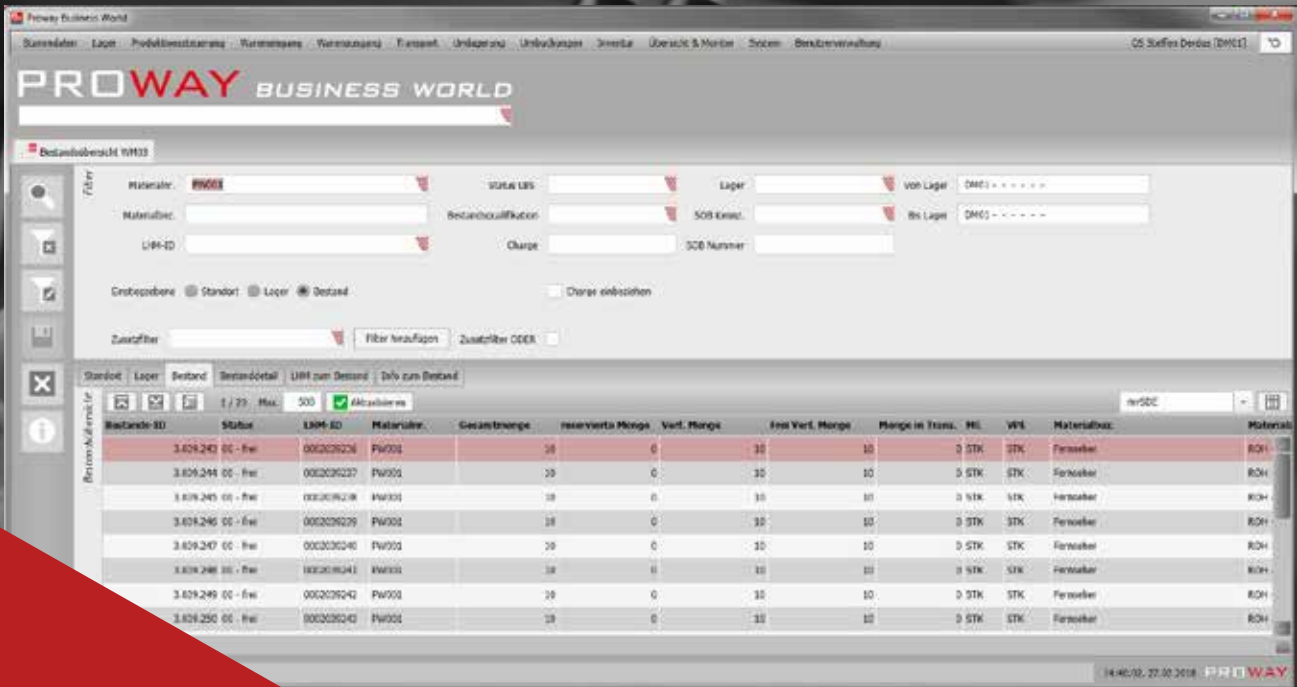
# WAREHOUSE STRUCTURE MANAGEMENT

*The warehouse structure management in PROWAY BUSINESS WORLD includes all physical and logical basic warehouse structure data for a warehouse complex, which will not be changed both by structural or organizational measures in a certain time.*

*With flexible location assignment it is possible to store different load carriers in the same area, automatically managed by PBW.*







# STOCK MANAGEMENT

*The PBW stock management handles storage units (pallets, containers, etc.), stocks (item quantities) and locations in the warehouse so that at each time it is exactly known which items are stored on which location in the warehouse.*

The stock can be viewed on the following levels:

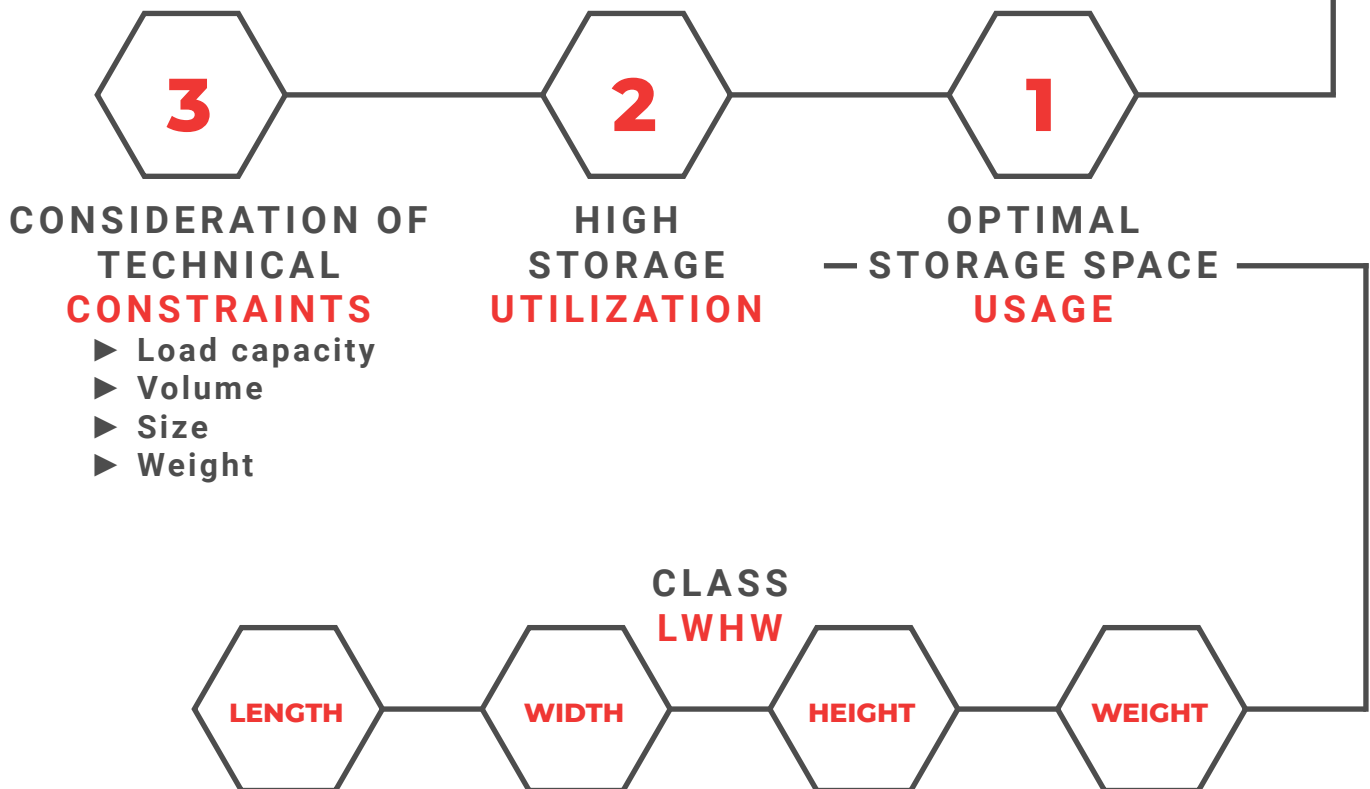
- ▶ Logistics site
- ▶ Warehouse area
- ▶ Location

Grouping can be made according to:

- ▶ Owner
- ▶ Batch
- ▶ Serial numbers
- ▶ Best before date

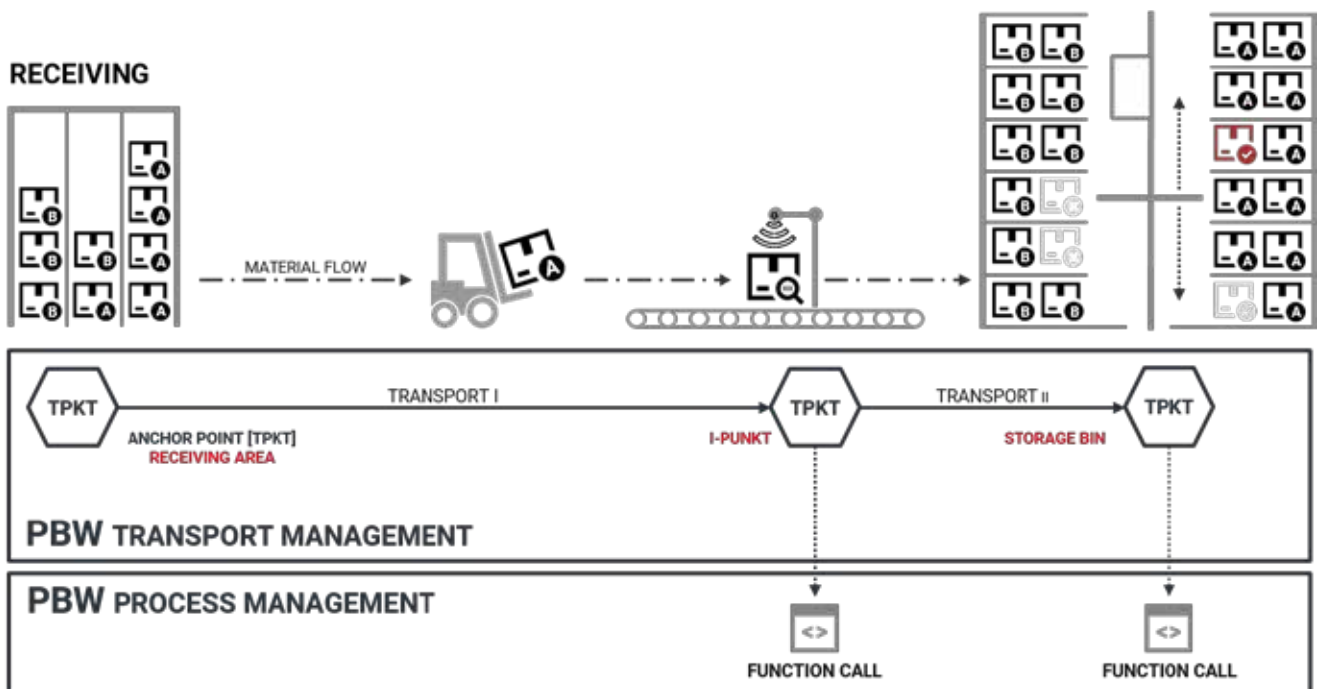
# CAPACITY CONTROL

*The PROWAY BUSINESS WORLD capacity control is the basis for logistical planning, according to which the reference value (location classes) to each of the realizable capacity of the storage bins and storage equipment are determined.*



# TRANSPORT CONTROL

*The transport control in PBW is responsible for executing all pending material movements in optimal order, so usually as fast as possible and with as few transport steps (transports) as possible.*



PBW transport control is used to perform all pending material movements in optimal order, i.e. usually as fast as possible and with a minimum number of transport steps. To solve this complex task, several strategies and the entire route network of the warehouse are stored in PBW.

The cross-system transport control takes account into both, manual stacker transports for different types of storage and retrieval machines, various picking equipment, as well as fully automatic conveyor systems and stacker cranes are supported.

Resource classes for each device define the maximum load capacity.

# PROCESS CONTROL

*The task of process control is to chain activities to processes and monitor the progress. PBW uses process plans to control the individual process steps and check their processing, depending on order types, for example.*

Nr.	Tranap-Wertigkeit	Tranap-Wert	Mittel / Objekt	Mitarbeiter	Quellensymbol	EA-Wert
1	LADART - Lagerart	V000 - Versandbereitstellung	PKL00000 - Abholung auftragsgut	KOPF - Kopf	LHM - LHM	
2	LADART - Lagerart	V000 - Versandbereitstellung	PAZTT - Packweise	POS - Position	POS - Position	1
3	LADART - Lagerart	V000 - Versandbereitstellung	BCC - BCC	POS - Position	LHM - LHM	1
4	LADART - Lagerart	V000 - Versandbereitstellung	KOPF000 - Köpfe	POS - Position	LHM - LHM	1
5	LADART - Lagerart	V000 - Versandbereitstellung	BAGD - Bagden	POS - Position	POS - Position	1
6	LADART - Lagerart	V000 - Versandbereitstellung	GGZEL - Güter	POS - Position	LHM - LHM	1
7	LADART - Lagerart	V000 - Versandbereitstellung	ETNETT - Etiketten	POS - Position	POS - Position	1
8	LADART - Lagerart	V000 - Versandbereitstellung	BCC - BCC	KOPF - Kopf	POS - Position	1
9	LADART - Lagerart	V000 - Versandbereitstellung	VSR - Versandbereitstellung	KOPF - Kopf	GWR - GWR	1,2,3,4,5
10	LADART - Lagerart	V000 - Versandbereitstellung	HRAD - Verpackung	KOPF - Kopf	LHM - LHM	9
11	LADART - Lagerart	HAZ0 - Warenübergabe/Verfahren	VERLENG - Abholen Verpackung	KOPF - Kopf	KOPF - Kopf	10
12	LADART - Lagerart	HAZ0 - Warenübergabe/Verfahren	SA - Beladung Aufzug	KOPF - Kopf	KOPF - Kopf	11
13	LADART - Lagerart	HAZ0 - Warenübergabe/Verfahren	AUFZUG - Aufzug	KOPF - Kopf	KOPF - Kopf	12

## PROCESS LINKAGE

The chaining of processes is fully configurable and thus perfectly adaptable to the needs of your business.

- ▶ At the end of a transport
- ▶ After completion of a function
- ▶ Upon completion of a dialog step

# GOODS RECEIPT

PBW handles all activities for the processing of the goods receipt starting from the notification until the actual storage onto a single storage location.



- ▶ Via interface
- ▶ Manually by PBW

- ▶ Order management
- ▶ External / Internal orders
- ▶ Production order
- ▶ Returns
- ▶ Part deliveries
- ▶ Short deliveries
- ▶ Over deliveries
- ▶ Goods receipt monitoring
- ▶ Assignment to anchor points
- ▶ Release management
- ▶ CEP parcel service

- ▶ By mobile devices
- ▶ Material picture
- ▶ Work instructions for
  - └ Order header
  - └ Order item
  - └ Material
- ▶ Homogeneous pallets
- ▶ Mixed pallets
- ▶ Refill pallets
- ▶ Repack pallets
- ▶ Deconsolidation
- ▶ Kitting
- ▶ LC tray management
- ▶ LC grid management
- ▶ Batch
- ▶ Serialnumber
- ▶ SSCC
- ▶ Manufacturer date
- ▶ Best before date
- ▶ Stock category
- ▶ Sperrbestand
- ▶ Special stock management
- ▶ Stock type management
- ▶ Degree of filling
- ▶ Weight control
- ▶ Palletizing proposal

...

- ▶ Measurements
- ▶ Weights
- ▶ Manual number assignment
- ▶ Number assignment by PBW
- ▶ Number range administration
- ▶ Printout of LC / SID labels
- ▶ Response to ERP system

- ▶ By list
- ▶ By mobile devices
- ▶ Determination warehouse area
- ▶ Determination storage location
- ▶ Check digit management
- ▶ Best Fit
- ▶ ABC classifications
- ▶ Flexible bins
- ▶ Storage check rules
- ▶ Multiple storage
- ▶ Loose items
- ▶ Fixed bin storage
- ▶ Hazardous goods and VCI
- ▶ Forbidden mixed storage
- ▶ Aisle assignment
- ▶ Double deep storage
- ▶ minimum and maximum quantity
- ▶ Weight control of
  - └ Storage bins
  - └ Storage bin ranges
- ▶ Scheduled / Unscheduled Cross-Docking
- ▶ Response to ERP system

# SHIPPING

*with optional connection to ERP systems*

PBW also plans and controls the shipping process. PBW receives the relevant order data from the ERP system of the customer. All data is automatically transmitted through the ERP system to PBW. If an order is just internal or during a possible system or connection failure, an order can even be generated manually in PBW, almost as an emergency function.

Via interface | Manually by PBW

Customer management | Forwarder management | Order type management | Route planning | Assignment of: Process plan, priorities, routes, shipping methods, forwarder, customer, time slots | Loading zones | Scheduling | Cancellation | Header- / Item texts | ...

Pre-Reservations | Stock Reservations | Cancellations | Warehouse area strategy | Location strategy | Retrieval check rules | Batch Management | Expiry date | Special stock | Stock category | Packaging hierarchy | Full pallet picking | Partial picking | Picking areas | Replenishment | ...

Manually | Automatically | Allocation of mobile devices | Allocation of work station

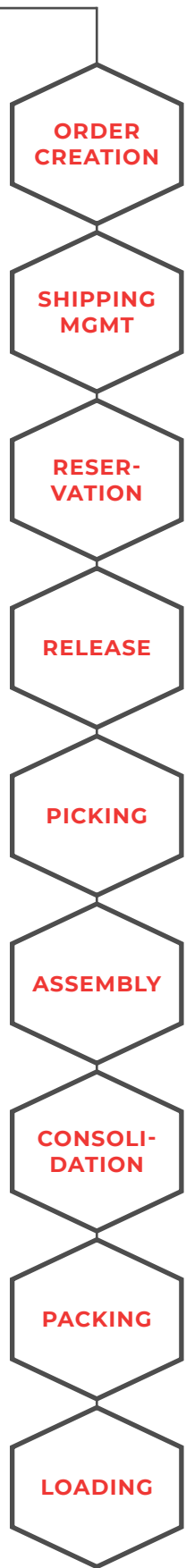
By list | By mobile device | In automated warehouses | Pick by light | Pick to light | Pick by voice | Pick und Pack | Optimized routes | Variable check criterias | Shortage management | Two stage picking | Picking buffers | High speed buffers | Negative picking ...

Rods | Sections of sheet | Handling of reference | Textes | Customer services | Consolidation | Kitting | Finishing | Bill of materials | Additional services: Banding, Stretching, Labeling, can be expanded ...

By order | By tour | By tour groups | Per loading zone

Packing station | Packing instructions | Forming packing unit | SSCC Label | Missing quantity | Repacking | Packing list | Mobile devices | Weighing machines | Planing of packing | Packing process in % | Cancelation after packing | Hazardous goods management | ...

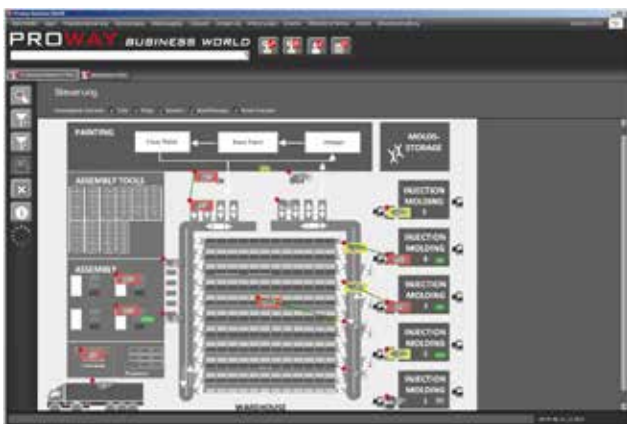
By list | By mobile devices | Dock management | Printing of: Delivery note, bill of landing, Dangerous goods advice | Photo manager | Lincense plates | Recessions non-loadable material | ...



# PRODUCTION

***PBW can also support the production. From replenishing the production lines, based on bills of materials and demand plans, the control of persons and machines in layer plans, up to the adaption of the amounts to be produced in the production plan.***

**WHAT HAD PREVIOUSLY TO BE DESIGNED IN COMPLEX TABLES AND CONNECTIONS CAN BE REALIZED WITH PBW IN A FEW MOUSE CLICKS.**



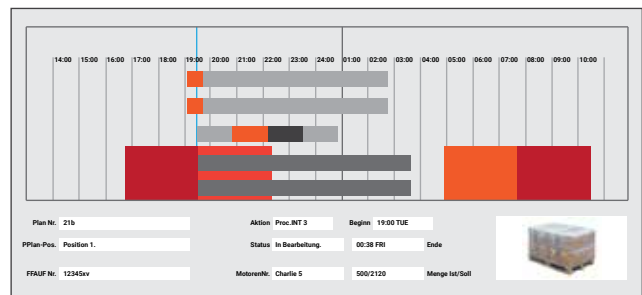
## GRAPHICAL VIEW OF THE WAREHOUSE

- ▶ Graphical view of the warehouse, the production and the shipping area
- ▶ Transport- and decision-points with actual stock
- ▶ Announcements of the way for products located in transport
- ▶ Topical degree of performance per production line by means of power controller
- ▶ New installations and changes of transport points and paths within the graphic can be easily created with the mouse and activated immediately
- ▶ Any number of warehouse layouts (eg ground floor and first floor, block warehouses and outdoor areas) can be integrated into the dialog

## PRODUCTION PLAN

The production plan administrates

- ▶ Shifts
- ▶ Workstations
- ▶ Storage technology
- ▶ Machines
- ▶ Persons
- ▶ Tools



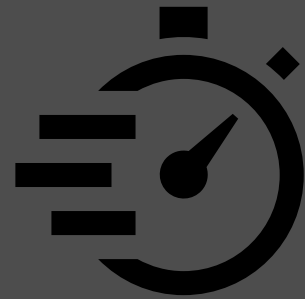
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# PROCESS COST ACCOUNTING

*PBW determines your costs within the logistics and maps each sub-process precisely. In this way, potential savings can be identified in real time and processes can be optimized.*

Activity-Based Costing is an approach that enables you to better plan and control the costs of the business areas and allocate them to products or services. In this process, orientation is based on the value-added chain by referring to the individual company processes.

The tasks performed in the company's cost centers are broken down into process-related activities. Costs are assigned to these activities, depending on what are known as cost drivers, and process cost rates are determined from them. Process cost records are used to calculate the process-related overhead costs on the products or services and can be billed to the service recipient or used to optimize internal processes.





# INVENTORY

*The inventory is the collection and verification of all existing stock of an owner at his site.*

The resources managed by PBW (mainly goods such as objects, materials or articles) are recorded by counting, measuring or weighing with respect to their location (storage location) and load carrier(LC). PBW guides the users through the process and provides all necessary and verifiable documents.

PBW differentiates the following inventory types

- ▶ End of period (annual) inventory
- ▶ Permanent inventory
- ▶ Time-shifted inventory



## ABSTRACT PARAMETERS

### SELECTIONS

Owner  
Material  
Warehouse area  
Load carrier  
Stock ID  
...

### RELEASE

First count  
Recounts  
Grouping  
Assignment mob. device  
...

### COUNT

Route optimisation  
Mobile devices  
Automatic Warehouse  
...

### RECORD

Completeness check  
Collection of quantities  
Note for quantity diff.  
...

### CHECK

Number of differences  
Item overview  
Colour marking of differences  
Generation recounts  
...

### CLOSE

Automatic confirmation to ERP systems  
...

### ANALYSIS

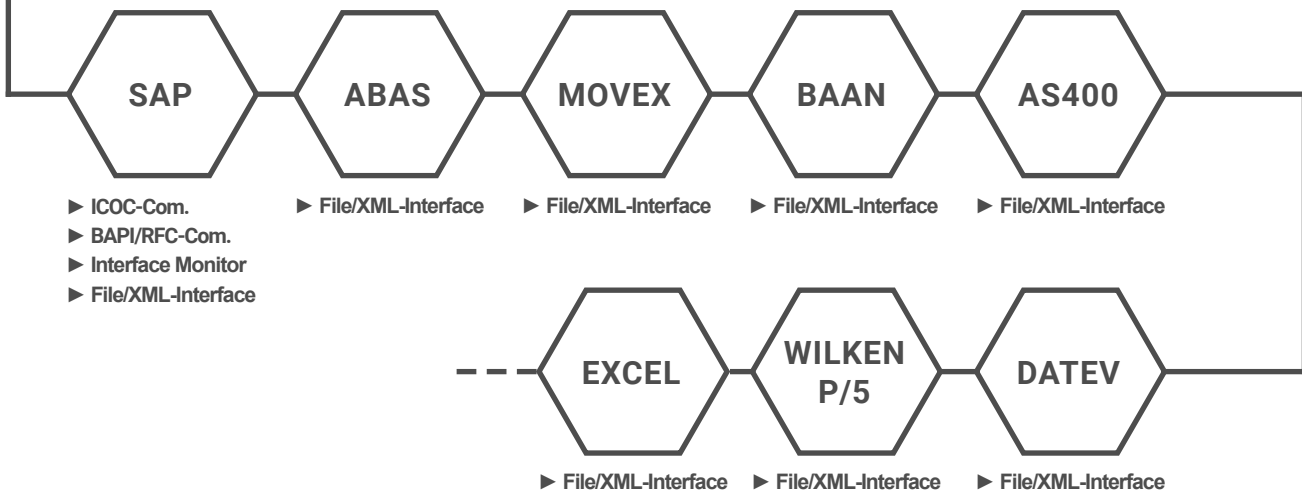
Inventory overview  
Inventory differences  
Open inventories  
Inventory reports  
...

# INTEGRATION MANAGEMENT

Additionally to its standardized interface to all common ERP systems (mainly SAP R/3 or Microsoft Dynamics (Navision)) PBW can be connected to any ERP system using a variety of industry specific as well as customer specific interfaces.

Data exchange between the ERP system and PBW does not necessarily take place using TCP/IP, but can be done also using tables, databases, XML, FTP and file interfaces.

Additionally, there are interfaces for connecting external shipping software systems to control systems for automatic labeling of already packaged goods. PBW also supports the integration of various peripheral devices such as scanners, weight scales, labelers or carton erectors.



Proway has perfected both its own standardized TCP / IP interface in many projects and established a long-standing expert knowledge about customized interface adjustments and techniques.

# AUTOMATION SERVICES

Function groups & functions  
(enter/show/change/delete)

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## SYSTEM CONTROL

- ▶ Start
- ▶ Stop
- ▶ Monitoring of the status quo in tabular form
- ▶ Monitoring of the status quo in graphical form
- ▶ Failure statistics in tabular form
- ▶ Failure statistics in graphical form
- ▶ Visualisation by app
- ▶ Collision monitoring

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## I-POINT

- ▶ Manually
- ▶ Automatically
- ▶ Combination workplace E/A/I

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## TELEGRAM HANDLING

- ▶ Interface for UST
- ▶ TCP/IP protocol
- ▶ Serial
- ▶ By VDI 5600
- ▶ Several sideflexing RGB

---

## K-POINT

- ▶ Manually
- ▶ Automatically
- ▶ Combination workplace E/A/I

# INNOVATIVE. MODERN. BETTER.

*Often, existing business processes have to be adapted to the WMS software. PBW is different. PBW can be adapted to your business processes. Extremely flexible.*

## MATERIAL FLOW AND TRANSPORT ROUTE MATRIX

- ▶ Graphical view of the warehouse with all transport points and routes
- ▶ New creation and modification of transport points and routes within the graphic
- ▶ All information about the transport points and its subfunctions can be displayed in the graphical view
- ▶ Any number of warehouse layouts (for example ground floor and first floor) can be integrated into the dialogue.

## PROCESS PLAN TEMPLATES

- ▶ Processes in PBW can be performed via process plan templates
- ▶ Process and material flows can be created in different variants
- ▶ Assignment of templates to object types (for example, order types, etc.)
- ▶ Management of customer-specific processes in a separate tab
- ▶ Linking actions in the process plan with predecessor or successor activity
- ▶ Different control and confirmation levels
- ▶ Determining the target time for an activity
- ▶ Record the lead time of the individual process steps for each order

## ACTIVITY BASED COSTING

- ▶ Definition of beneficiaries, cost centres, account assignments and types of benefits with their cost rates
- ▶ Forming benefit type groups to calculate costs for partial and main processes
- ▶ Fixed costs management
- ▶ Creation of invoices for the beneficiaries for any period
- ▶ Analysis and monitoring of processes up to individual activities
- ▶ Process Cost Accounting can be used with any journal file, regardless of PBW-WMS

## SYSTEM CONTROL

- ▶ Management of the functionalities in PBW via key fields, which can be adapted in large parts by the customer.
- ▶ Most of the parameters and functions can be adjusted via configuration tables. PBW can be adapted to the customer or to changed processes without reprogramming.
- ▶ The system control is clearly arranged, as the parameters are displayed in tabs for each module.
- ▶ It is possible to manage the communication with automatic warehouses and their conveyor technology, as well as communication with machines of a production line.

**OVERVIEW DIALOGUES**

- ▶ Graphical user interfaces for overview and analysis
- ▶ Automated optimization of e. g. misallocations in the warehouse due to dimensions, ABC classes, VCI and types of hazardous substances in the background or in the case of rest periods
- ▶ Process flow, material flow and inventory analyses on all levels in the warehouse possible (site / warehouse area / location / order / tour / process area / etc.)
- ▶ Display of key performance indicators (KPI) in workstations or in web-based on mobile devices
- ▶ KPIs can be created individually
- ▶ View of already stored archive data in overviews
- ▶ Transaction-related switching to other dialogues with the right mouse button
- ▶ User-specific dialog adjustments: Design, font size, show and hide columns, move columns, save filter variants
- ▶ Process control with more than 2000 information, warning and error messages
- ▶ Tool tip texts
- ▶ 1600 pages online help related to dialogues, tabs and functions
- ▶ The customer wording can be adopted for all texts in the dialogues. Programming is not necessary

**USABILITY**

- ▶ Clear and individually adjustable dialogs
- ▶ Input control via value lists, calendar function. Graphical highlighting of mandatory fields.
- ▶ Functions not required in the context are greyed out
- ▶ Context-dependent entries in value lists to avoid errors. This means that only combinations of values can be used which are stored in the PBW internal matrixes
- ▶ Customer-focused layout of filter and table fields in all dialogues. The adjustment are made via dialogue. Programming is not necessary

## MORE THAN JUST SIMPLE WMS.

PBW is generic, but as individual  
as each customer needs it.  
Start now!

# MORE FUNCTIONS. MORE POSSIBILITIES.

***Still not enough? KANBAN, CEP, FULFILLMENT are another excerpt of the powerful functionality in PBW.  
With PBW functionally no wishes remain open.***

## Kanban Processing

In Kanban processing, replenishment to a customer is based on its actual consumption. In this way, inventories are reduced to a minimum when, for example, a production supply is required and costs will be saved.

PBW supports this Kanban process

- ▶ With storage of the customer's empty Kanban boxes in the warehouse
- ▶ Confirmation of the box numbers to the assigned ERP system
- ▶ Receipt of the delivery order from the ERP system
- ▶ Assignment of the required materials to these boxes
- ▶ And delivery of the filled boxes to the respective customer.

## Fulfillment

Fulfillment includes shipping services provided by PBW on behalf of other trading platforms. For example, delivery notes, invoices or other documents are attached with the shipment.

- ▶ Management via order types
- ▶ Demand and printing of external delivery notes
- ▶ Confirmation to the corresponding ERP and / or customer systems

## Handling of parcel service providers – CEP

Providers of CEP services primarily transport consignments with relatively low weight (up to approx. 30 kg) and volume, such as letters, documents, parcels and small piece goods. These restrictions on size and weight allow a high degree of standardization in processing.

PBW supports CEP processing both for incoming goods of CEP deliveries and parcel shipments via CEP service providers.

### CEP Goods Receipt Processing

- ▶ Management of all delivered CEP packages of a service provider in an inbound delivery list
  - └ With the name of the delivery person
  - └ The respective CEP service provider
  - └ if necessary, a vehicle license plate
  - └ if necessary, comments on the delivery
- ▶ Recording of the package numbers for the respective packages
- ▶ A time-shifted collection of the material inside the packages is possible by means of:
  - └ Storage of the closed packages and assignment of a reference
  - └ Later issuing and collection of the contents of the package

### CEP Goods Issue Processing

- ▶ Administration of different shipping methods for the respective CEP services
- ▶ Separate packaging at specially designed packing stations
- ▶ Weight control of the packages
- ▶ Providing the packages with the corresponding CEP labels:
  - └ Customers address
  - └ Consignor
  - └ Size, weight and dimensions of the package
  - └ Reference numbers
  - └ Routing information
  - └ Shipment number
- ▶ Listings of all delivered order items or material and quantity
- ▶ Delivery note printing
- ▶ Scanning of documents
- ▶ Communication with the CEP service provider via interface

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# MOBILE SERVICES

People are getting more and more mobile - so do we!  
Of course, PBW also provides access to the dashboards on mobile!

**IN REAL TIME.  
ON YOUR MOBILE DEVICE.  
WORLDWIDE.  
AT ANY GIVEN TIME.**





## Feel free to contact us anytime.

We would be happy to advise you on a personal appointment and work with you to develop individual solutions for your specific problem. You deliver the challenge - we deliver the solution!



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