

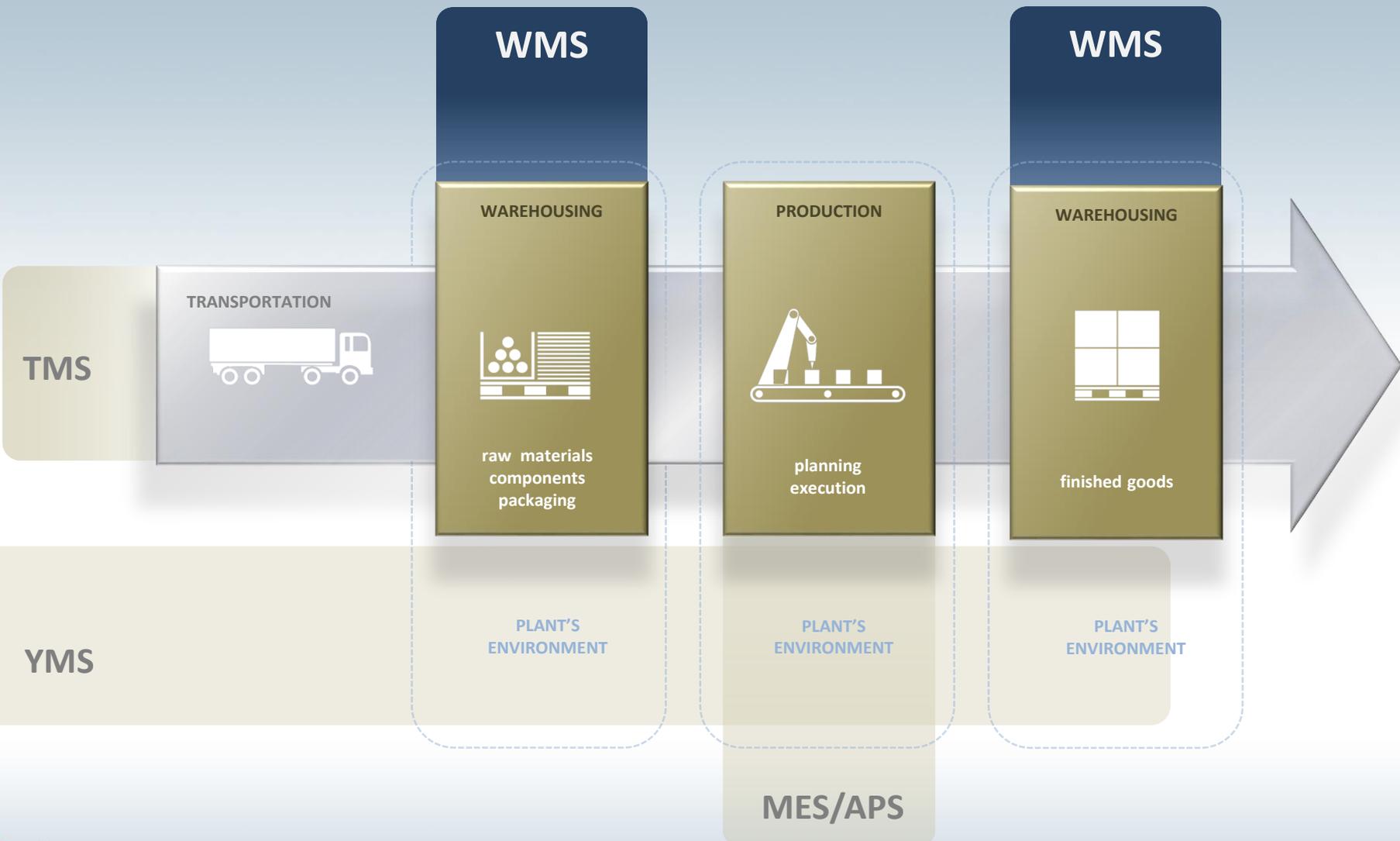


Qguar WMS Pro

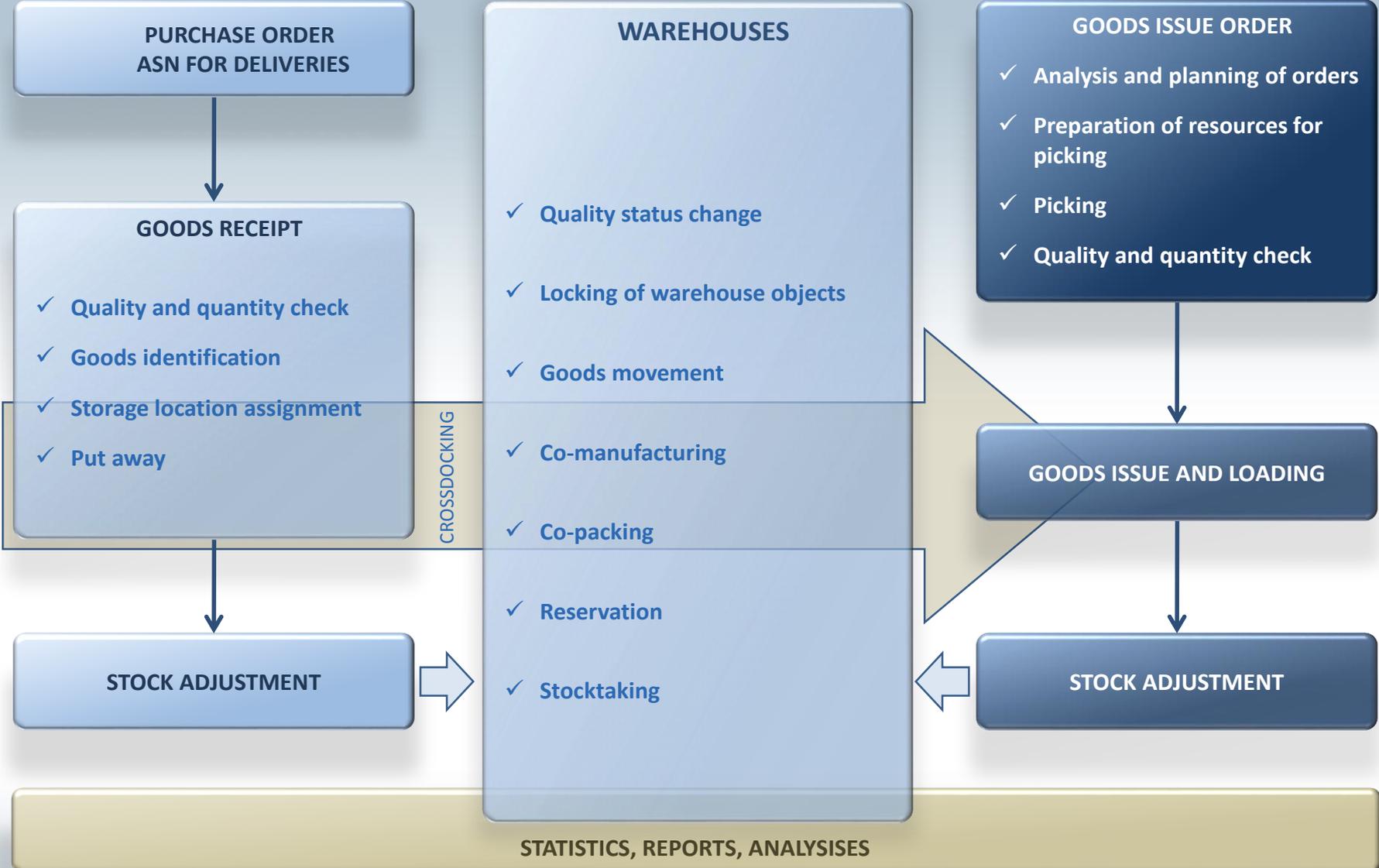
Warehouse Management System Professional



Company as element in the supply chain and main Quantum's solutions



General QGUAR WMS flow-chart (split into main processes)





RF
Wireless data exchange



RFID
Electronic tags



Voice picking
Information passed on by voice



GS1
Global system for bar coding of logistic units

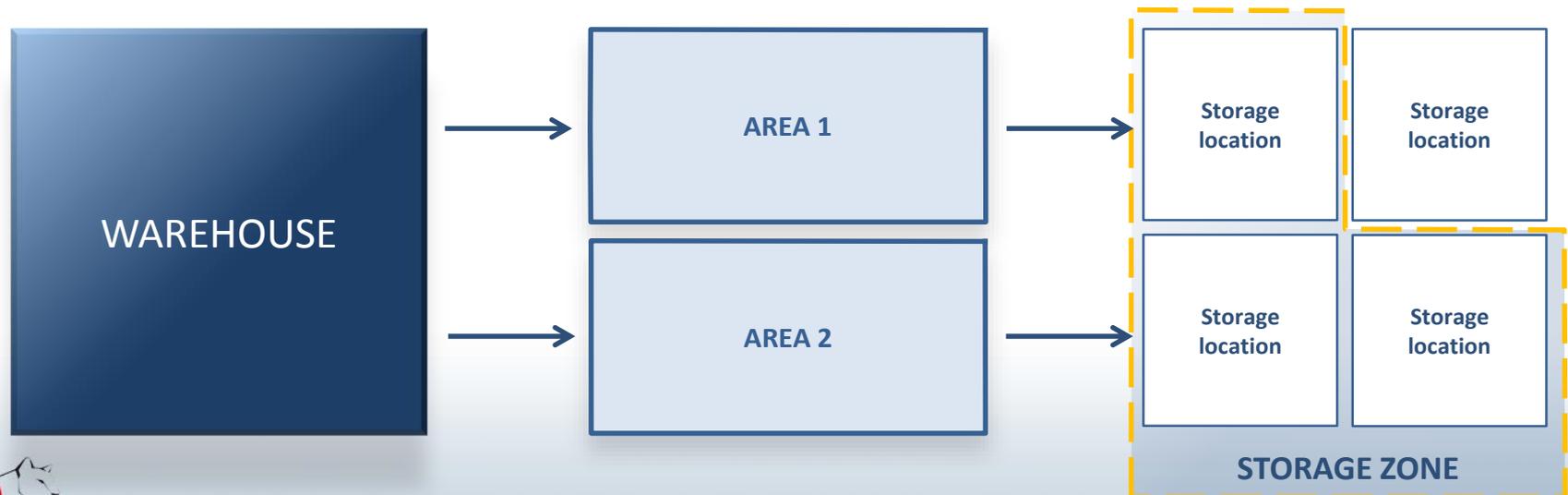
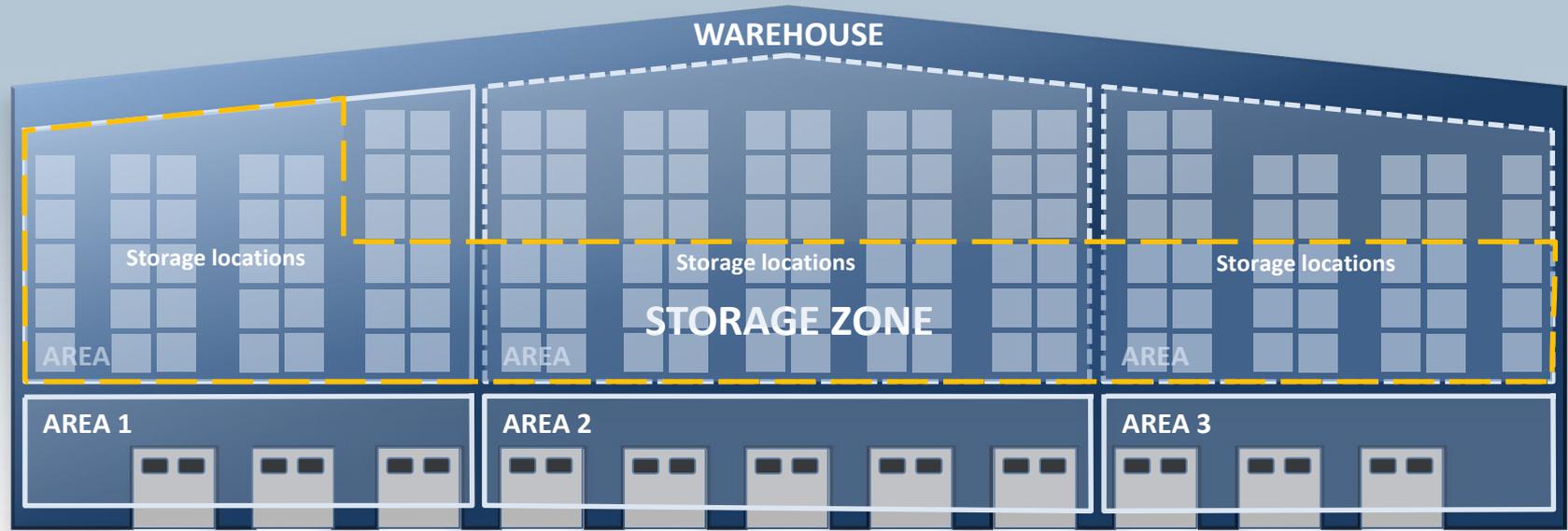


Pick by Light
Control over processes by luminous signalisation

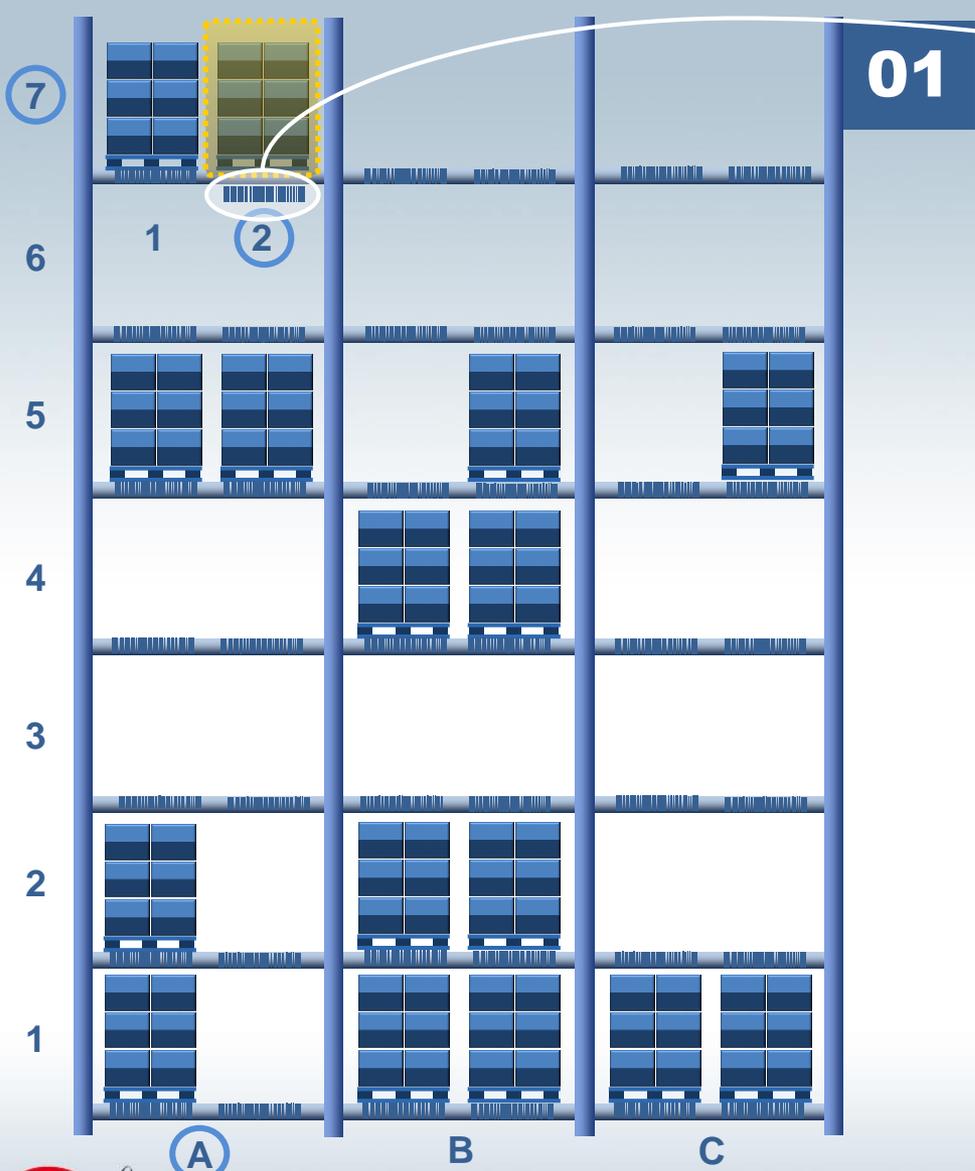


GPS
Tracking of processes in the Supply Chain

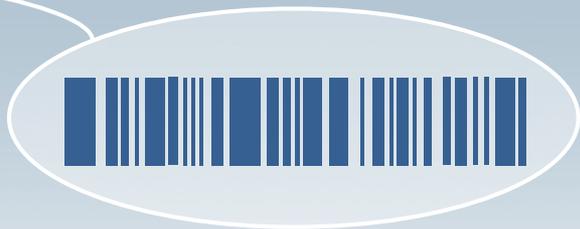
Areas, zones, warehouse locations



Storage location's identification

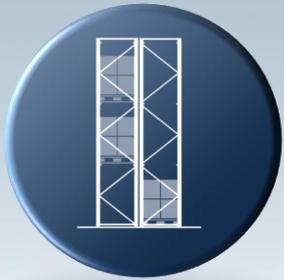


Number of storage location (example)

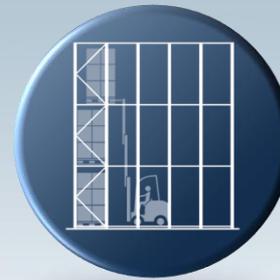


Raw	Column	Level	Slot
01	A	7	2

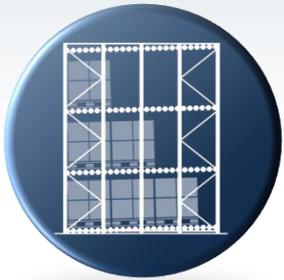
Any storage methods



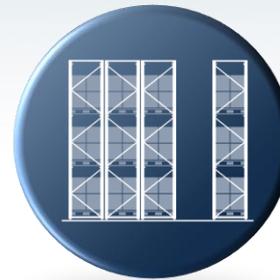
Classic racks



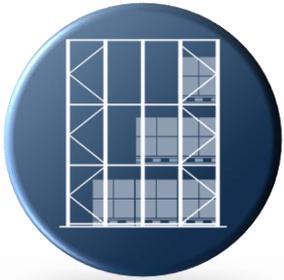
DRIVE-IN racks



Gravity racks



Movable racks



PUSH-BACK racks



SCHUTTLE racks

Any storage methods



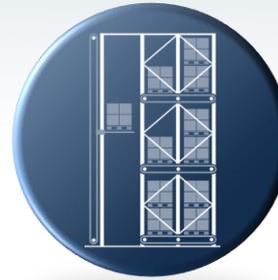
LEAN-LIFT racks



PICK BY LIGHT



Shelf racks



Automatic racks

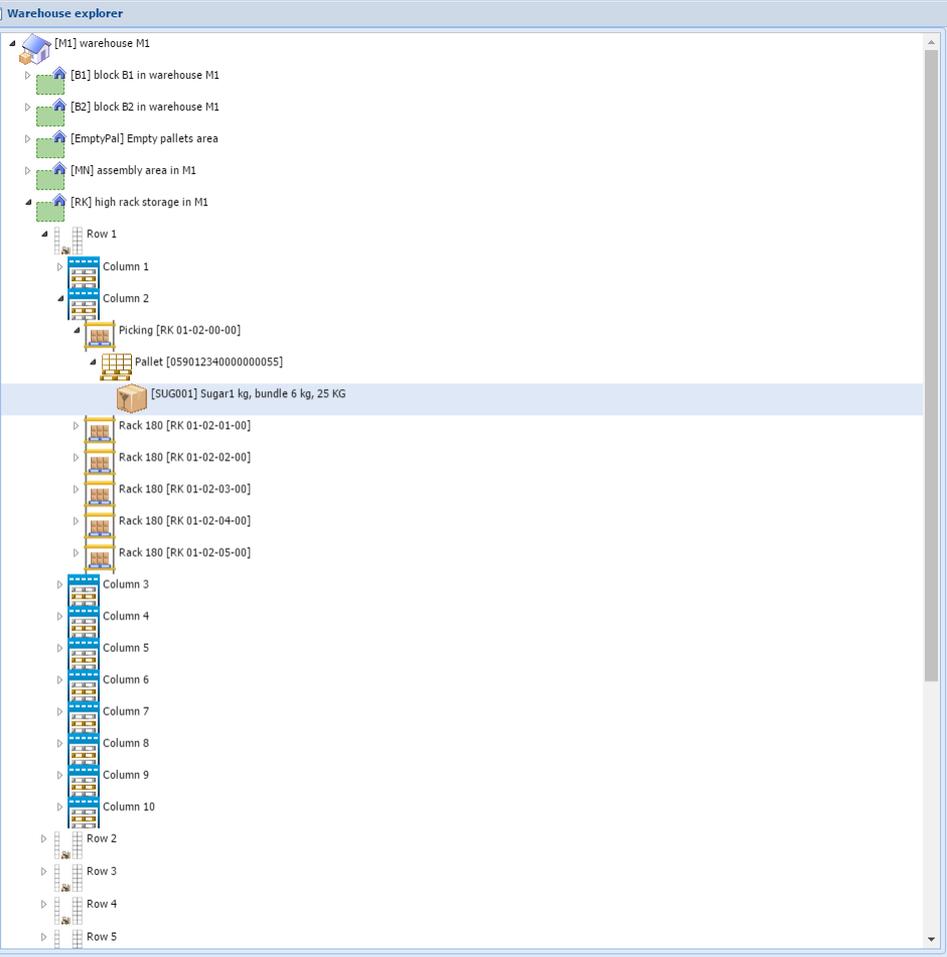


Bracket racks



Block storage

Warehouse explorer



Information about load unit content

Owner:	Z1
Line:	1
Product Code:	SUG001
Product Name:	Sugar1 kg, bundle 6 kg
Quantity:	25 KG
Production date:	2016-02-29
Expiry date:	2017-02-28
Batch:	190/2013
Locked:	<input type="checkbox"/>
Status:	O.K.
Modification date:	2016-09-20 12:29:47
Modified by:	RADIO

Set filter

Refresh

END



ARTICLE

BASIC DATA

- ✓ Article ID
- ✓ Name
- ✓ EAN Code
- ✓ Basic measure unit
- ✓ ADR number
- ✓ Articles group
- ✓ Batch number
- ✓ Expiry dates, validity period
- ✓ Raw material, semi-finished or finished good

LOGISTIC DATA

- ✓ Warehouse group
- ✓ Quantity rounding, e.g.: 0.1, 0.01
- ✓ Stockpile
- ✓ Storage location level
- ✓ Overhang
- ✓ Replenishment trigger
- ✓ Default quality status

PACKAGING STRUCTURE

Basic unit
(e.g.: piece)

↓

Packaging unit – lower level (e.g.:
box)

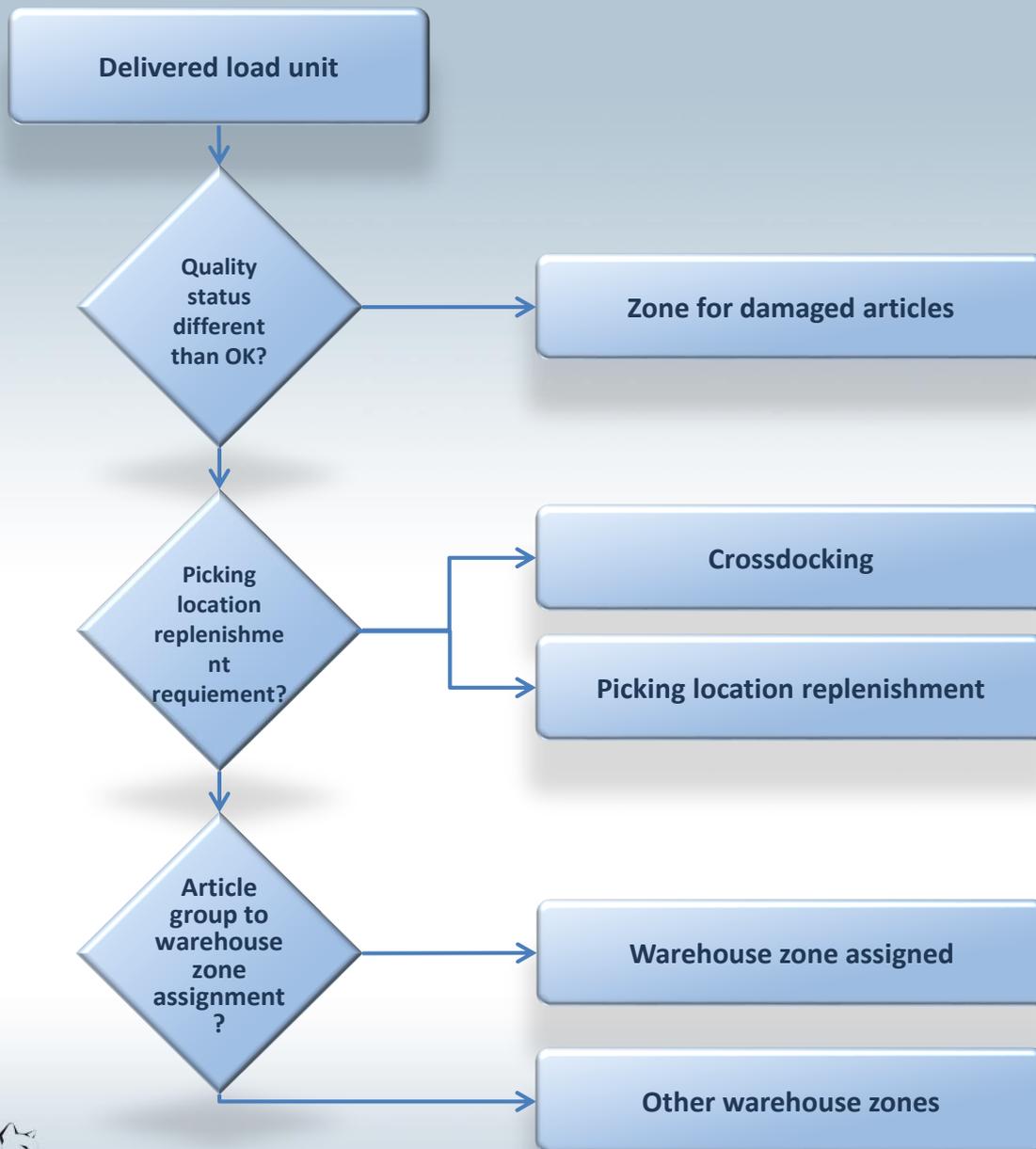
↓

Packaging unit – higher level (e.g.:
layer)

↓

Load Unit (e.g.: pallet)

Storage place assignment process (simplified approach)



ADDITIONAL CRITERIA FOR STORAGE PLACE ASSIGNMENT

- ✓ Nearness to picking location
- ✓ Specific article features, e.g. long articles
- ✓ Requirements for ADR articles
- ✓ Matching of LU dimension and weight with storage place dimensions and carrying capacity
- ✓ Steady arrangement of load units in racks
- ✓ Possibility of placing of pallets one on the other

List of put away strategies

Type	Priority	Name	Strategy definition	Use	Information
Complex replenishment	19	CUR_FILL_SPLIT	User	Yes	Strategy of distributing for an incoming load unit. For all load units. Finds existing load units with the product. Sequence according to quantity, first the places with smaller quantities.
Standard	3	CUR_INVALID_QS_SP	Structural	Yes	Finds a location in the area for damaged products (if existing) if the load units quality is neither '0' nor '2'. No picking places. Height, weight, product location levels, "only one product" option will be co...
Standard	30	CUR_NOTFULL_SIMP_SP	Structural	Yes	If the load unit is not full, with one product, assign a one-load-unit place (i.e. in a rack), but only in the area for incomplete load units (storage area class). Automatic put away in the location class mu...
Standard	40	CUR_NOTFULL_BULK_SP	Structural	Yes	If the load unit is incomplete, only one product, assign a block place in the area for incomplete load units (area class attribute). Automatic put away in the location class must be on. Height, weight an...
Standard	50	CUR_LU_SPLIT	Structural	Yes	If only one product on the load unit, load unit doesn't have to be full, there is no load unit with the product outside the picking and the assigned picking location is empty - take this picking location. Mu...
Standard	60	CUR_SP_NEAR_PICK	Structural	Yes	Assigns empty one-load-unit location as near to the picking location as possible checking: weight and height, assignment to the load unit type, product location levels and and the "only one product" o...
Standard	70	CUR_SIMP_SP_STRICT	Structural	Yes	Assigns one-load-unit location, the assignment between warehouse group and warehouse zone must be there. The filling factor, weight and height, assignment to the load unit type, product location l...
Standard	80	CUR_BULK_SP_STRICT	Structural	Yes	Finds block places only (!) with assignment between warehouse group and warehouse zone. Only 'OK' status locations, not locked. Automatic put away in location class must be on. Filling factor, weigh...
Standard	90	CUR_SIMP_SP	Structural	Yes	Assigns one-load-unit location checking: filling factor, weight and height, assignment to the load unit type. Product location levels and and the "only one product" option will be checked too. 'OK' status...
Standard	100	CUR_BULK_SP	Structural	Yes	Finds block places. Assignment between warehouse group and warehouse zone won't be checked! Only 'OK' status locations, not locked. Automatic put away in location class must be on. Filling factor, ...
Pick plan	99999	CUR_LU	Structural	Yes	
Replenishment - storage place...	1	CUR_CLS_TIME	Structural	Yes	Finding the load units with no picking for a long time. Time period is defined in the system parameter REPLENISHMENT_MIN_CLEAN_TIME.
Replenishment - storage place...	1	CUR_CLS_TIME_PICK_ZONES	Structural	Yes	Finding the load units within the picking zone with no picking for a long time. Time period is defined in the system parameter REPLENISHMENT_MIN_CLEAN_TIME.
Tests for errors	99999	CUR_ERR_LOADING_AG_NOT_FI	User	Yes	Test - checking if the marshalling transport order has been finished
Tests for errors	99999	CUR_ERR_LOADING_DIR_LOAD	User	Yes	Test - checking if the direct loading from the location is possible
Tests for errors	99999	CUR_ERR_LOADING_MSG	User	Yes	Test - checking if there was any problem while loading the load unit
Tests for errors	99999	CUR_ERR_LOADING_TRANSPORT_EXISTS	User	Yes	Test - checking if there is a transport order (except marshalling) for the load unit
Tests for errors	99999	CUR_ERR_LOADING_YMS	User	Yes	Test - if the loading is executed by YMS
Tests for errors	99999	CUR_ERR_PL_ASSIGN_LU2SP_CLASS	User	Yes	Test - if the load unit from the picklist is properly assigned to the location class
Tests for errors	99999	CUR_ERR_PL_MISSING_PRODUCTS	User	Yes	Test - returns a list of products from the picklist with no stock on picking locations
Tests for errors	99999	CUR_ERR_PL_PICKLIST_STOCK	User	Yes	Test - checking the stock on picking locations for the picklist position
Tests for errors	99999	CUR_ERR_PL_REPLENISHMENT	User	Yes	Test - checking if for the picklist position the replenishment demand and replenishment were created
Tests for errors	99999	CUR_ERR_PL_REPL_WH_TRANS	User	Yes	Test - returns the numbers of transport orders replenishing the picking locations for the products from the picklist
Tests for errors	99999	CUR_ERR_PL_SPLIT_QS	User	Yes	Test - what quality status of the product from the picklist position occur on picking locations
Tests for errors	99999	CUR_ERR_PL_STOCK_OUT_OF_SPLIT	User	Yes	Test - checking stock for the picklist position (outside the picking zone)
Tests for errors	99999	CUR_ERR_REP_ASSIGNED_PLACES	User	Yes	Test - checking what quantities can fit on assigned and unassigned picking locations
Tests for errors	99999	CUR_ERR_REP_DATE_CHECK	User	Yes	Test - checking what quantity of a product fulfills the conditions of expiry date
Tests for errors	99999	CUR_ERR_REP_JOBS	User	Yes	Test - checking if the jobs for replenishment are running
Tests for errors	99999	CUR_ERR_REP_LU_DIMENSIONS	User	Yes	Test - checking if any load unit with the product fits on any picking location
Tests for errors	99999	CUR_ERR_REP_LUT_SPC_ASSIGN	User	Yes	Test - checking the assignments between load unit type and class of the picking location
Tests for errors	99999	CUR_ERR_REP_PICKLISTS_STOCK	User	Yes	Test - checking the stock on picking locations
Tests for errors	99999	CUR_ERR_REP_REASON	User	Yes	Test - reading reasons of replenishment demands
Tests for errors	99999	CUR_ERR_REP_SP	User	Yes	Test - checking if free locations places for the products are available
Tests for errors	99999	CUR_ERR_REP_STOCK_FOR_PRODUCT	User	Yes	Test - checking the stock outside the picking locations
Tests for errors	99999	CUR_ERR_REP_WH_TRANS_PRIORITY	User	Yes	Test - checking the sequence of replenishment orders for the product
Tests for errors	99999	CUR_ERR_REP_WH_TRANS_ROUTE_ZONES	User	Yes	Test - checking if the transport order can be executed (routing zones, forklift types)
Tests for errors	99999	CUR_ERR_REP_WH_TRANS_TIMES	User	Yes	Test - checking execution times for replenishment transport orders. Parameters for the strategy are response times to recognize TO as delayed.
Tests for errors	99999	CUR_ERR_SHI_REP_TRANSPORTS	User	Yes	Test sprawdzający sprawdzający wygenerowane zleceń transportowych uzupełniających zbiórkę towarem dla pozycji wysylik.
Tests for errors	99999	CUR_ERR_SHI_TYPES	User	Yes	Test - checking if shipment type and completion type properly defined for the shipment position



Transport orders – split of tasks into constituents

Reallocation methods



RF terminals

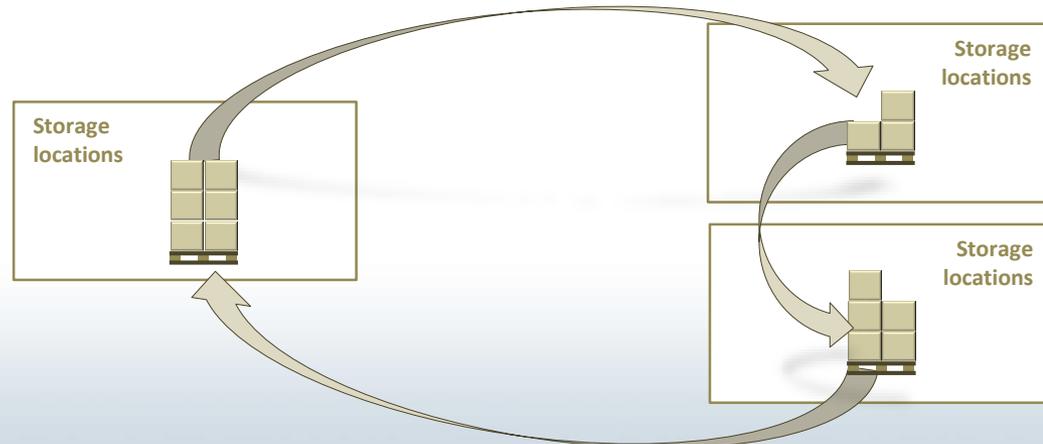


Print-out of transport task and confirmation

Order for transportation of goods from source place to destination locations (simple transport task)



Order for transportation of goods from source place to destination locations (compound transport task)



Warehouse contents

Warehouse contents

Filters

Owner: LU No.: Product: Product Name: Batch: Exp. d.: Warehouse: Location: QS: Locked:

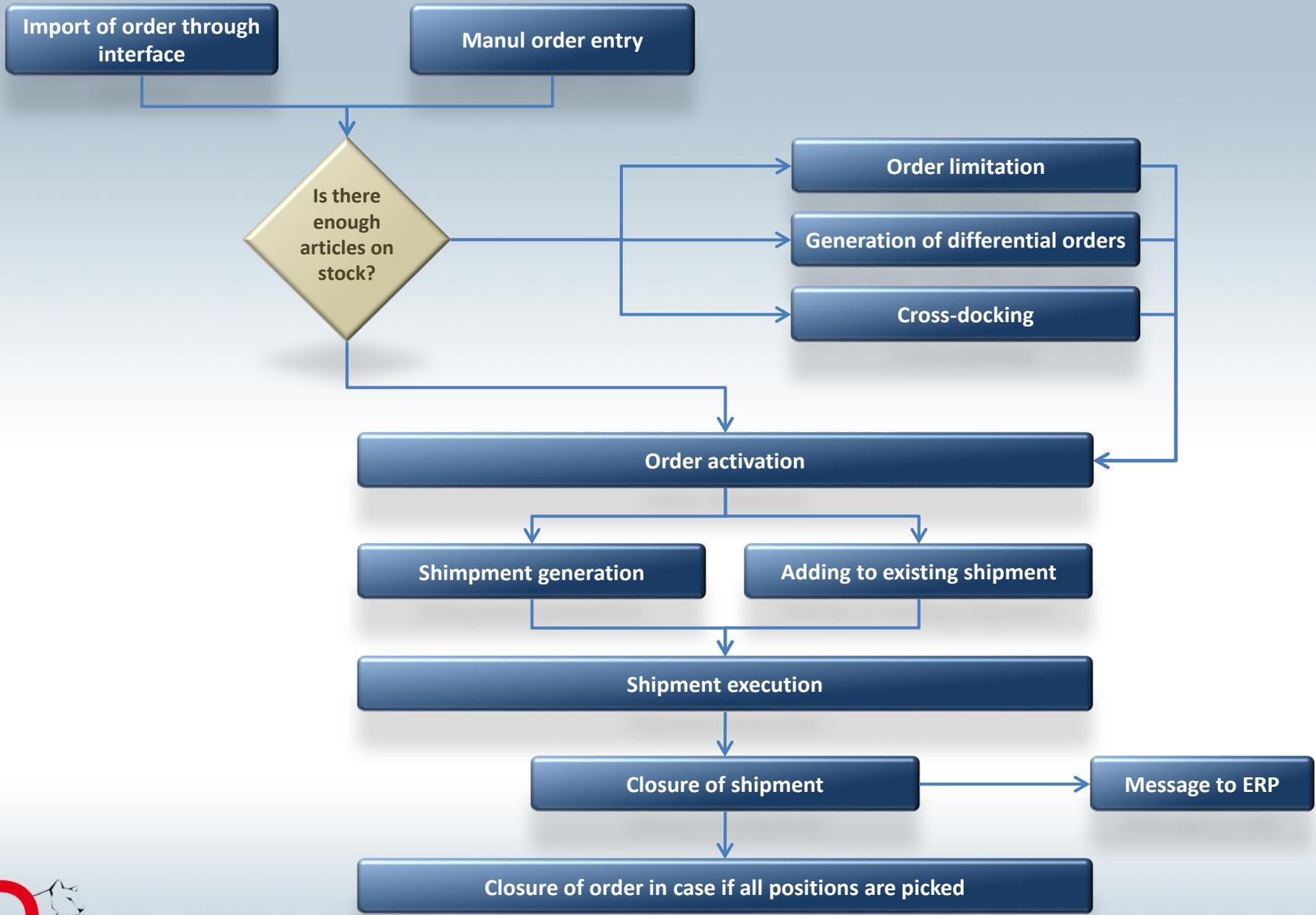
LU status: Load unit type: SA code: Area class: Location class: Reservation: Picking: Delivery no.: Product group: Product class:

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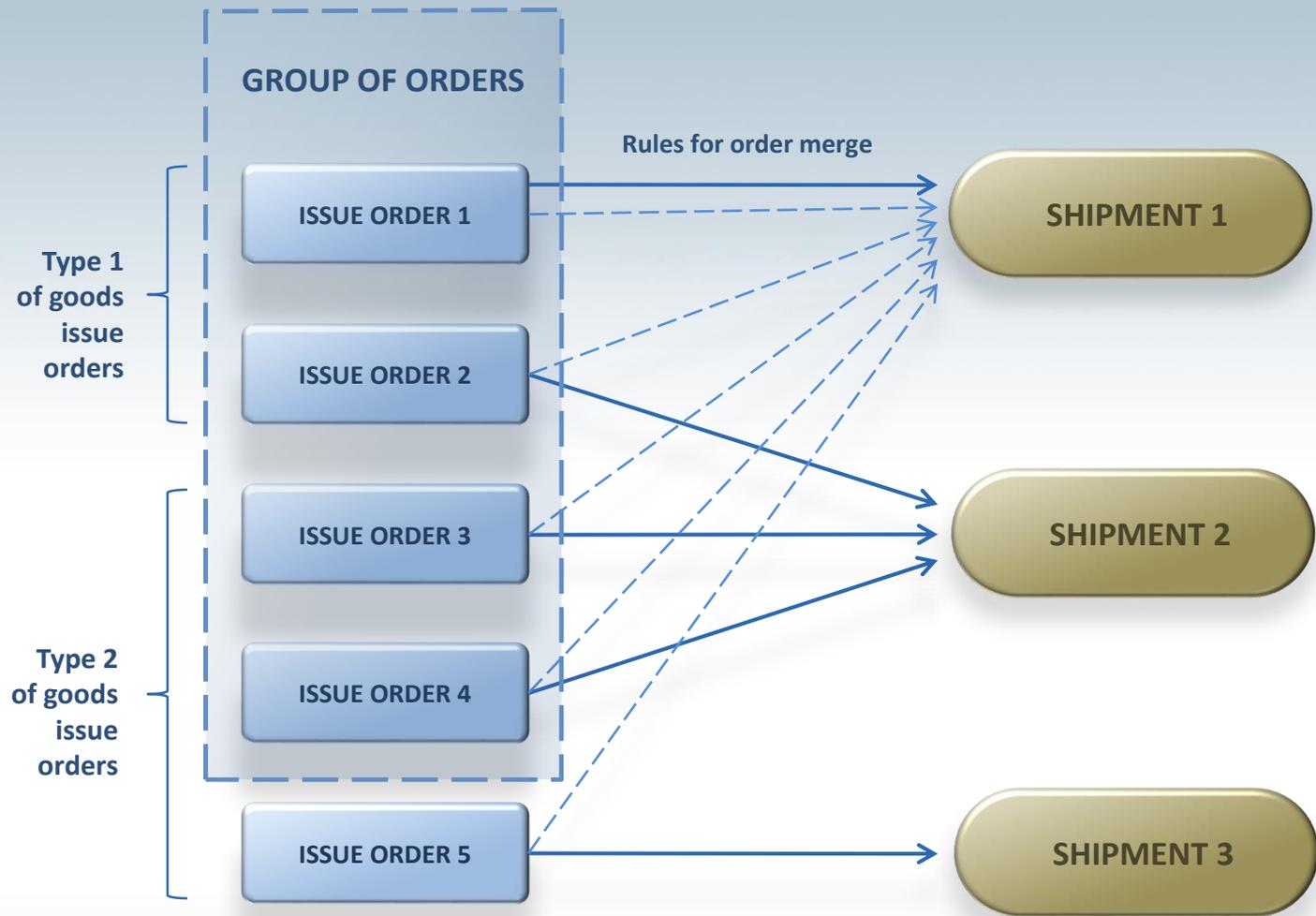
Owner	LU No.	Line	Product	Product Name	Batch	Exp. d.	Quantity	Unit	Warehouse	Location	QS	Locked	LU status	Load unit type	Location class	Reservation	Picking	Delivery no.	
<input checked="" type="checkbox"/>	Z1	02001234000000017	1	SUG001	Sugar1 kg, bundle 6 kg	2016/06	2017-05-26	240	KG	M1	RK 01-02-04-00	0	No	O.K.	Pallet	Rack 180	none	No	10
<input type="checkbox"/>	Z1	02001234000000024	1	OJUI	Orange juice 1l	900/2016	2017-05-22	240	pcs	M1	RK 07-02-01-00	0	No	O.K.	Pallet	Rack 180	none	No	11
<input type="checkbox"/>	Z1	02001234000000031	1	OJUI	Orange juice 1l	900/2016	2017-05-22	240	pcs	M1	RK 06-08-01-00	0	No	O.K.	Pallet	Rack 180	none	No	11
<input type="checkbox"/>	Z1	02001234000000048	1	OJUI	Orange juice 1l	900/2016	2017-05-22	240	pcs	M1	RK 06-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	11
<input type="checkbox"/>	Z1	02001234000000055	1	OJUI	Orange juice 1l	900/2016	2017-05-22	240	pcs	M1	RK 07-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	11
<input type="checkbox"/>	Z1	02001234000000062	1	OJUI	Orange juice 1l	900/2016	2017-05-22	240	pcs	M1	RK 08-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	11
<input type="checkbox"/>	Z1	02001234000000079	1	BEER	Excellent beer bottle 0.5l	005/2016	2016-11-01	1296	BOT	M1	W1 00-00-00-00	0	No	Edit	Pallet	Buffer in/out	none	No	12
<input type="checkbox"/>	Z1	02001234000000086	1	BEER	Excellent beer bottle 0.5l	005/2016	2016-11-10	432	BOT	M1	W1 00-00-00-00	0	No	Edit	Pallet	Buffer in/out	none	No	12
<input type="checkbox"/>	Z1	02001234000000093	1	BEER	Excellent beer bottle 0.5l	005/2016	2016-11-10	432	BOT	M1	W1 00-00-00-00	0	No	Edit	Pallet	Buffer in/out	none	No	12
<input type="checkbox"/>	Z1	02001234000000123	1	SUG001	Sugar1 kg, bundle 6 kg	2016/987	2017-05-18	240	KG	M1	W4 00-00-00-00	0	No	O.K.	Pallet	Buffer in/out	all	No	13
<input type="checkbox"/>	Z1	02001234000000130	1	SUG001	Sugar1 kg, bundle 6 kg	2016/987	2017-05-18	240	KG	M1	RK 01-04-02-00	0	No	O.K.	Pallet	Rack 180	none	No	13
<input type="checkbox"/>	Z1	02001234000000147	1	OJUI	Orange juice 1l	916/2016	2017-05-15	240	pcs	M1	RK 02-05-01-00	0	No	O.K.	Pallet	Rack 180	none	No	14
<input type="checkbox"/>	Z1	02001234000000154	1	OJUI	Orange juice 1l	916/2016	2017-05-19	240	pcs	M1	RK 05-06-01-00	0	No	O.K.	Pallet	Rack 180	none	No	14
<input type="checkbox"/>	Z1	02001234000000161	1	BEER	Excellent beer bottle 0.5l	006/2016	2016-11-04	432	BOT	M1	RK 08-06-01-00	0	No	O.K.	Pallet	Rack 180	none	No	15
<input type="checkbox"/>	Z1	02001234000000178	1	BEER	Excellent beer bottle 0.5l	006/2016	2016-11-04	432	BOT	M1	RK 02-07-01-00	0	No	Transport	Pallet	Rack 180	all	No	15
<input type="checkbox"/>	Z1	02001234000000185	1	BEER	Excellent beer bottle 0.5l	006/2016	2016-11-04	432	BOT	M1	RK 03-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	15
<input type="checkbox"/>	Z1	02001234000000192	1	BEER	Excellent beer bottle 0.5l	006/2016	2016-11-04	432	BOT	M1	RK 04-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	15
<input type="checkbox"/>	Z1	02001234000000208	1	BEER	Excellent beer bottle 0.5l	006/2016	2016-11-04	432	BOT	M1	RK 05-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	15
<input type="checkbox"/>	Z1	02001234000000222	1	SUG001	Sugar1 kg, bundle 6 kg	2016/987	2017-08-22	240	KG	M1	RK 01-04-03-00	0	No	O.K.	Pallet	Rack 180	none	No	13
<input type="checkbox"/>	Z1	02001234000000239	1	SUG001	Sugar1 kg, bundle 6 kg	2016/987	2017-08-22	240	KG	M1	RK 01-04-04-00	0	No	O.K.	Pallet	Rack 180	none	No	13
<input type="checkbox"/>	Z1	02001234000000246	1	SUG001	Sugar1 kg, bundle 6 kg	2016/987	2017-08-22	240	KG	M1	W4 00-00-00-00	0	No	O.K.	Pallet	Buffer in/out	all	No	13
<input type="checkbox"/>	Z1	02001234000000260	3	SUGJUI	Sugar + orange juice	12/2013	2017-02-28	10	pcs	M1	MN 00-00-00-04	0	No	O.K.	Pallet	Block no limit	all	No	0
<input type="checkbox"/>	Z1	02001234000000291	3	SUGJUI	Sugar + orange juice	12/2013	2017-02-28	2	pcs	M1	RK 03-08-01-00	0	No	O.K.	Pallet	Rack 180	all	No	0
<input type="checkbox"/>	Z1	02001234000000307	1	BEER	Excellent beer bottle 0.5l	006/2016	2017-03-18	432	BOT	M1	RK 02-08-01-00	0	No	O.K.	Pallet	Rack 180	none	No	17
<input type="checkbox"/>	Z1	02001234000000321	3	SUGJUI	Sugar + orange juice	12/2013	2017-02-28	5	pcs	M1	RK 04-08-01-00	0	No	O.K.	Pallet	Rack 180	none	No	0
<input type="checkbox"/>	Z1	02001234000000345	3	SUGJUI	Sugar + orange juice	12/2013	2017-02-28	10	pcs	M1	RK 01-07-01-00	0	No	O.K.	Pallet	Rack 180	none	No	0
<input type="checkbox"/>	Z1	02001234000000352	3	SUGJUI	Sugar + orange juice	12/2013	2017-02-28	10	pcs	M1	RK 02-03-01-00	0	No	Transport	Pallet	Rack 180	all	No	0
<input type="checkbox"/>	Z1	05901234000000031	2	SUG001	Sugar1 kg, bundle 6 kg	190/2013	2017-02-28	240	KG	M2	B2 00-00-00-00	0	No	O.K.	Pallet	Block no limit	none	No	0
<input type="checkbox"/>	Z1	05901234000000048	1	SUG001	Sugar1 kg, bundle 6 kg	190/2013	2017-02-28	202	KG	M1	MN 00-00-00-01	0	No	O.K.	Pallet	Block no limit	none	No	0
<input type="checkbox"/>	Z1	05901234000000055	1	SUG001	Sugar1 kg, bundle 6 kg	190/2013	2017-02-28	25	KG	M1	RK 01-02-00-00	0	No	O.K.	Pallet	Picking	none	Yes	0
<input type="checkbox"/>	Z1	05901234000000062	1	SUG001	Sugar1 kg, bundle 6 kg	190/2013	2017-02-28	237	KG	M1	RK 03-03-01-00	0	No	O.K.	Pallet	Rack 180	none	No	0
<input type="checkbox"/>	Z1	05901234000000079	1	SUG001	Sugar1 kg, bundle 6 kg	190/2013	2017-02-28	228	KG	M2	B2 00-00-00-00	0	No	O.K.	Pallet	Block no limit	none	No	0
<input type="checkbox"/>	Z1	05901234000000147	2	OJUI	Orange juice 1l	789/2013	2017-02-28	240	pcs	M2	B2 00-00-00-00	0	No	O.K.	Pallet	Block no limit	none	No	0
<input type="checkbox"/>	Z1	05901234000000154	1	OJUI	Orange juice 1l	789/2013	2017-02-28	237	pcs	M1	RK 04-03-01-00	0	No	O.K.	Pallet	Rack 180	none	No	0
<input type="checkbox"/>	Z1	05901234000000208	1	OJUI	Orange juice 1l	791/2013	2017-02-28	240	pcs	M1	RK 05-02-01-00	0	No	O.K.	Pallet	Rack 180	none	No	0
<input type="checkbox"/>	Z1	05901234000000215	1	OJUI	Orange juice 1l	791/2013	2017-02-28	202	pcs	M1	MN 00-00-00-01	0	No	O.K.	Pallet	Block no limit	none	No	0
<input type="checkbox"/>	Z1	05901234000000222	1	OJUI	Orange juice 1l	791/2013	2017-02-28	144	pcs	M1	RK 01-04-00-00	0	No	O.K.	Pallet	Picking	none	Yes	0

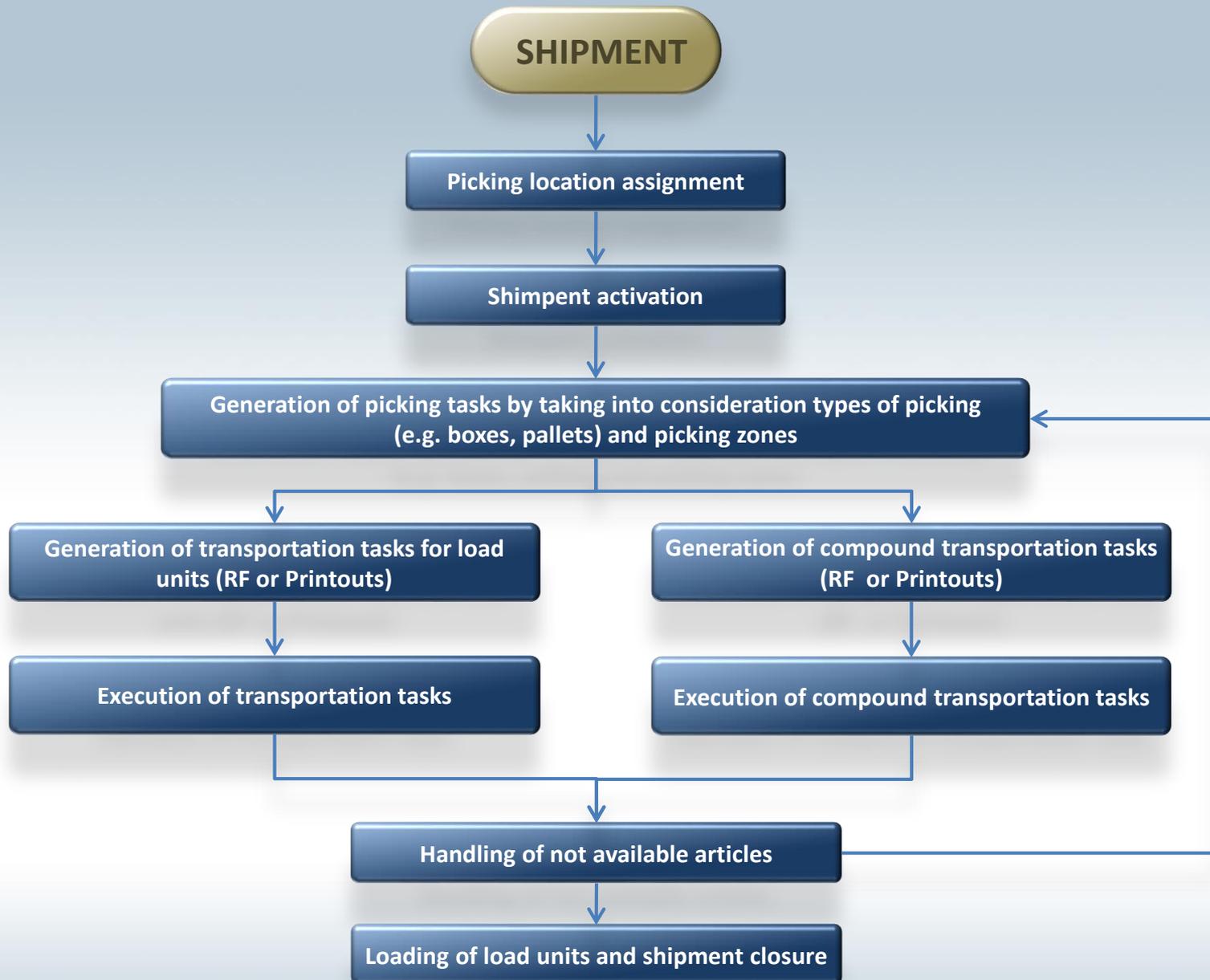


Management of goods issue orders



Assignment of orders to shipments





Shipment screen (list of positions and load units)

Shipment Filters

Owner: Shipment No: Shipment type: Status: Order no.: Customer Order No: Recipient: City: Warehouse: Picking location:

Loading: Priority: Product: Date created: Date of loading:

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Owner	Shipment No	Shipment type	Status	Order no.	Recipient	City	Warehouse	Picking location	Loading	Ready/picked	Weight [kg]	Volume [m3]	Priority	Date created	Date of loading	
<input checked="" type="checkbox"/>	Z1	6	Manual shipment	Active	000014/16	WH2	Man...	M1	W4 00-00-00-00	5	5/0	1023,4	2,54	2	2016-10-03 ...	2016-10-15 10:18
<input type="checkbox"/>	Z1	3	Manual shipment	Edit	000011/16	GSTORE	Edin...	M1	W3 00-00-00-00	0	0/0	0	0	2	2016-05-28 ...	2016-06-09 08:56
<input type="checkbox"/>	Z1	2	Manual shipment	Active	000010/16	SSHOP	Liver...	M1	W3 00-00-00-00	2	0/1	3	0,012	2	2016-05-28 ...	2016-06-09 08:55

Shipment

Shipment data | Shipment lines | Load units in shipment | Administration

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Load Unit ID	Location	Load unit type	Picked	Ship. line	TO	Status	Dimensions	Weight [kg]	In load.	Picklist no.	Picking type	Number of saved/all Ren	
<input checked="" type="checkbox"/>	059012340000000390	RK 06-02-01-00	Pallet	No	6:1	62	Planned	900x1200x800	274,2	Yes	21:38	Classic	1/1
<input type="checkbox"/>	020012340000000123	W4 00-00-00-00	Pallet	No	6:2	64	Picking finished	1150x1200x800	255	Yes	21:39	Classic	1/1
<input type="checkbox"/>	020012340000000178	RK 02-07-01-00	Pallet	No	6:3	64	Planned	900x1200x800	274,2	Yes	21:40	Classic	1/1
<input type="checkbox"/>	020012340000000246	W4 00-00-00-00	Pallet	No	6:4	66	Picking finished	1150x1200x800	255	Yes	21:41	Classic	1/1
<input type="checkbox"/>	020012340000000352	RK 02-03-01-00	Pallet	No	6:5	66	Planned	350x1200x800	35	Yes	21:42	Classic	1/1

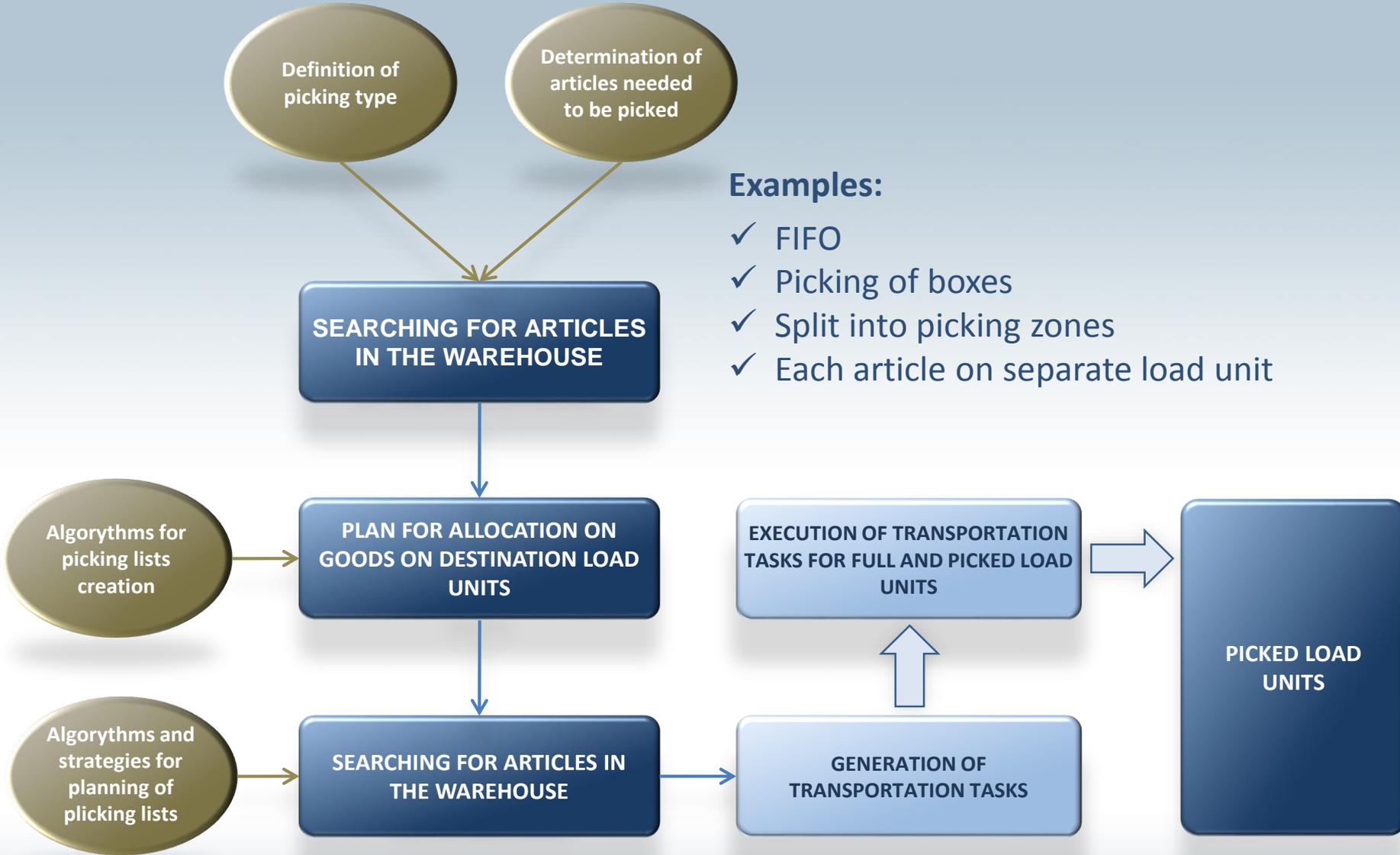
Change Delete

PL info | Check missing lines | Load | Undo loading | Detach LU from loading | Restore to loading | Detach LU from shipment | TO | Print label | Repack

Close Pick Plan | Cancel shipment | User tests | Shipment report | Attachments | Refresh | New | Save | END



Picking



Examples:

- ✓ FIFO
- ✓ Picking of boxes
- ✓ Split into picking zones
- ✓ Each article on separate load unit

- ✓ for deliveries
- ✓ for shipments and movements between warehouses:

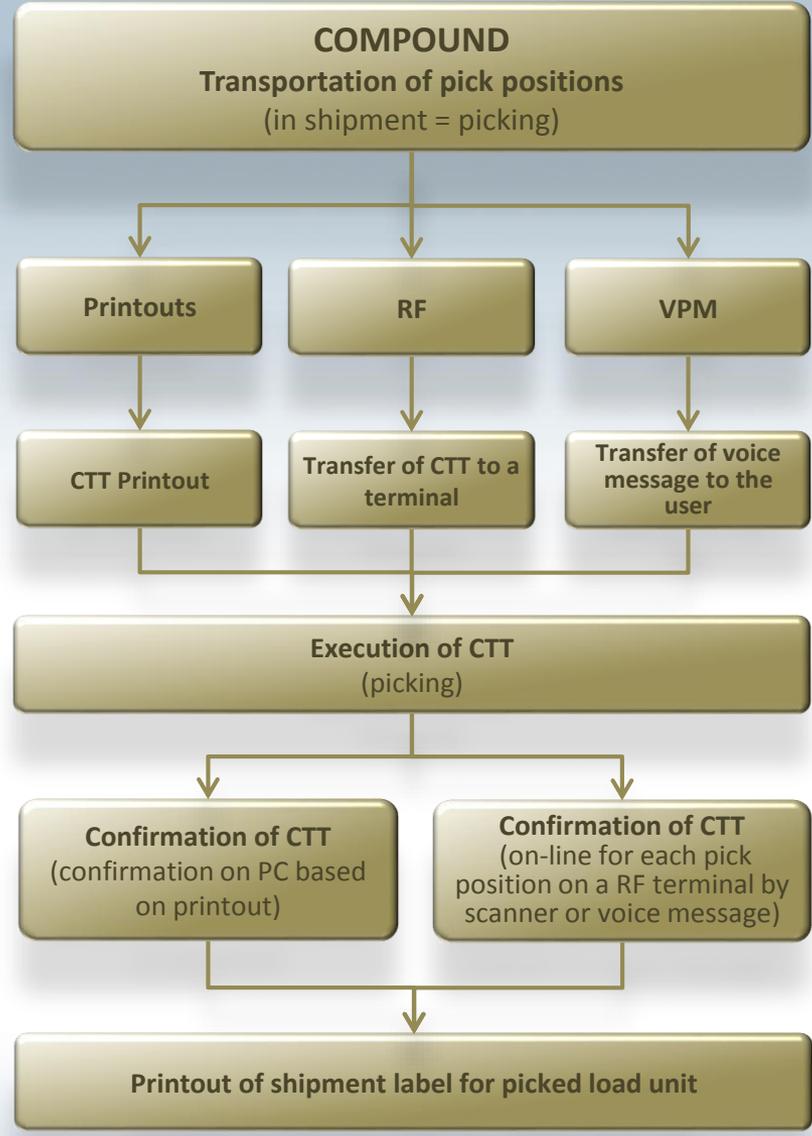
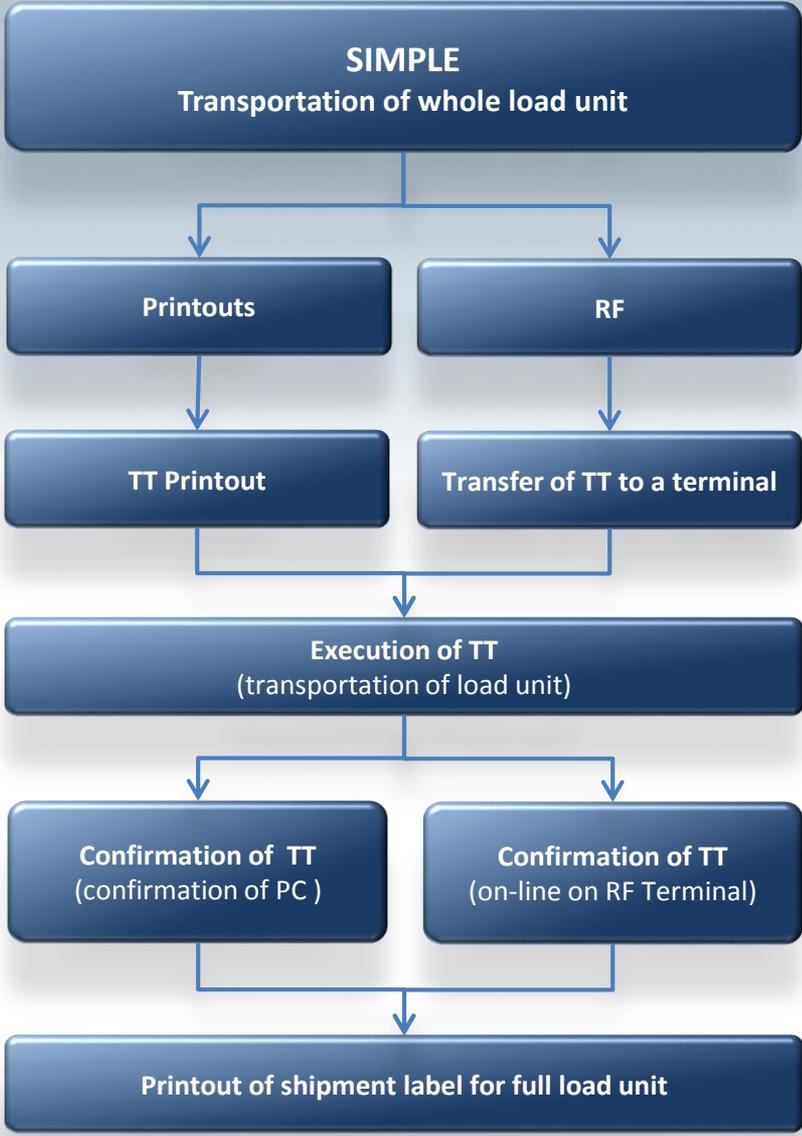
- classic picking
- picking of boxes
- picking on one virtual load unit
- picking in waves (waves of shipments)
- cross-dock shipment

- ✓ for replenishment
(by taking into consideration many defined strategies)

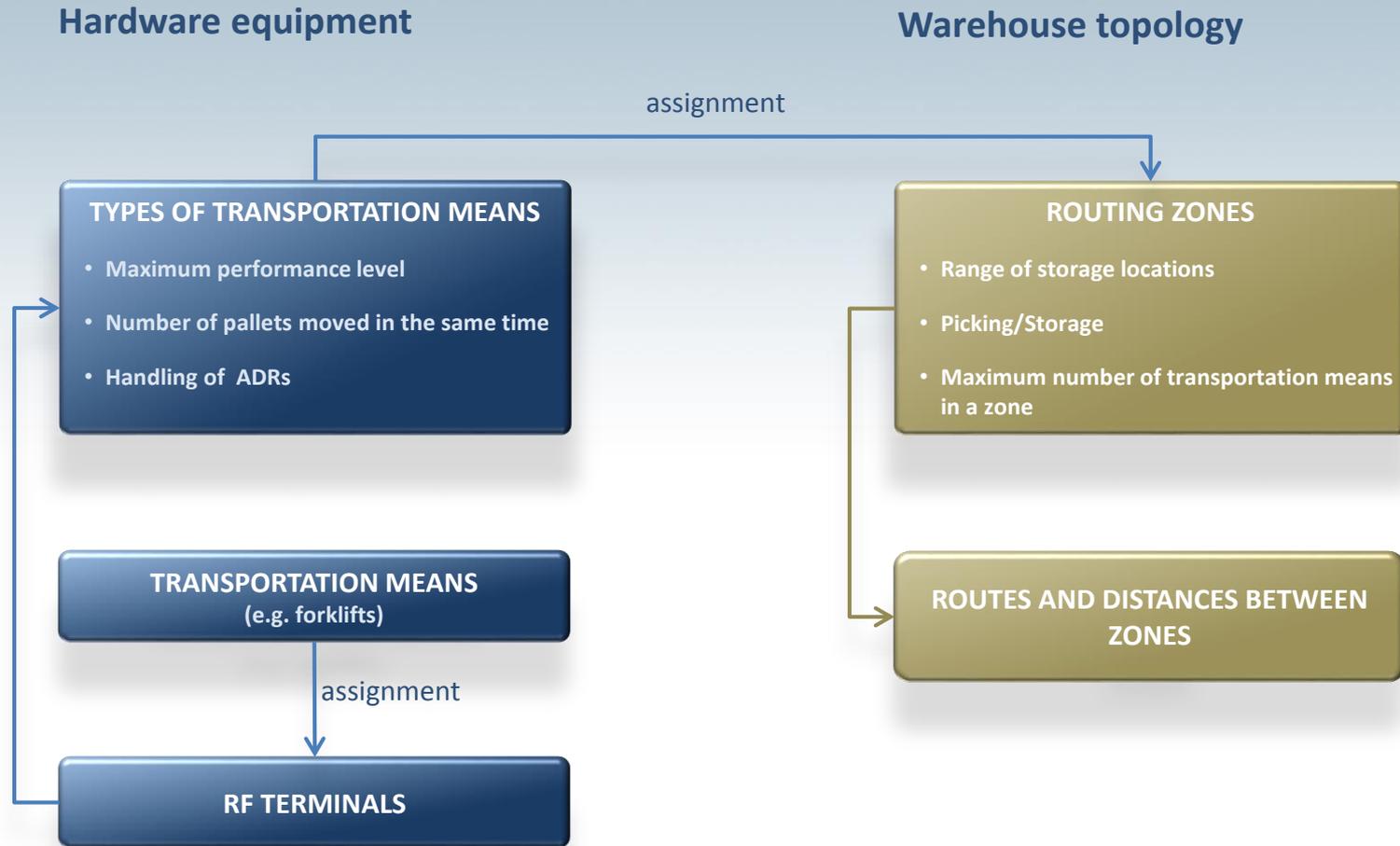
- ✓ for rework of sets



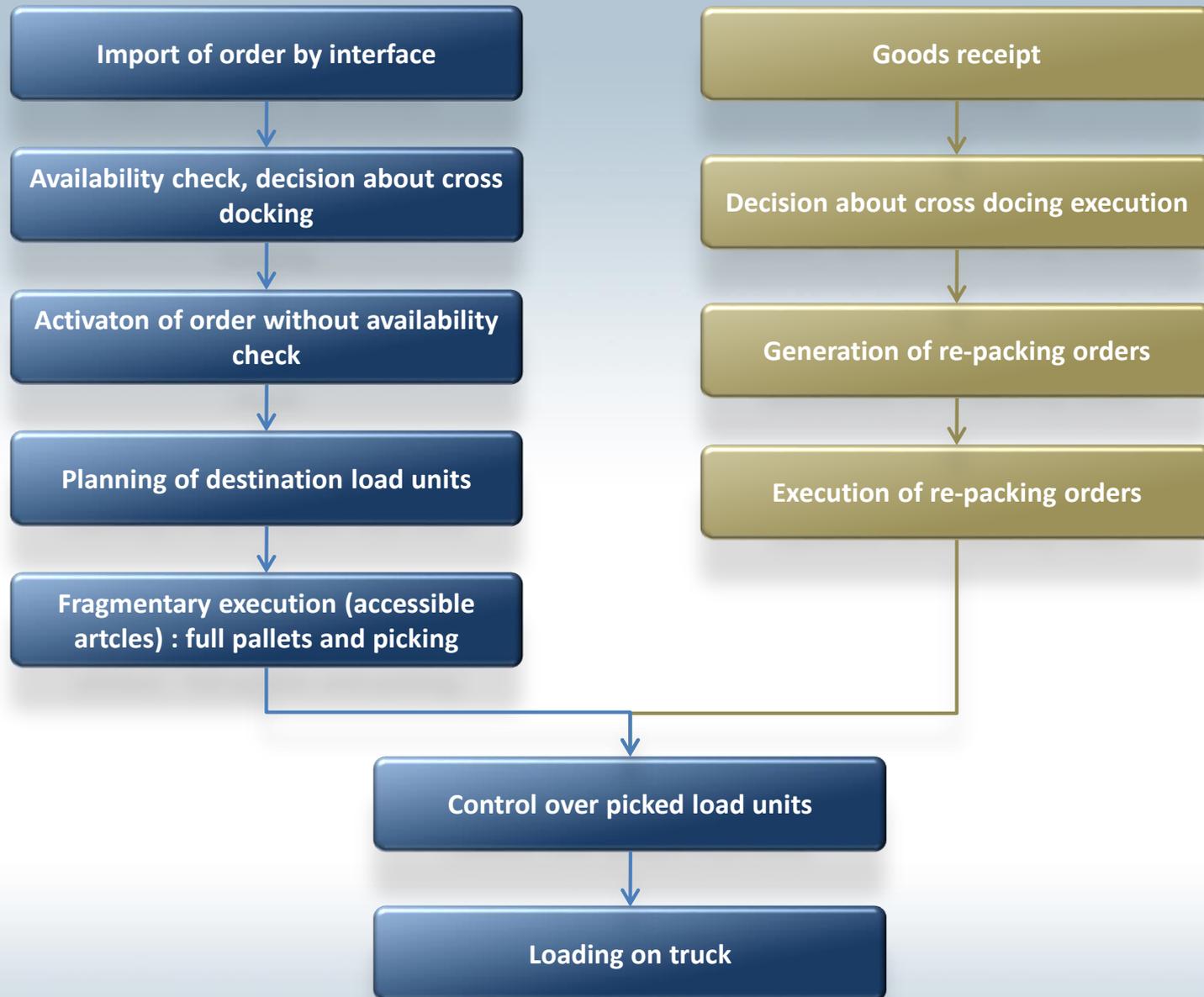
Execution of simple and compound transportation tasks (in shipments)



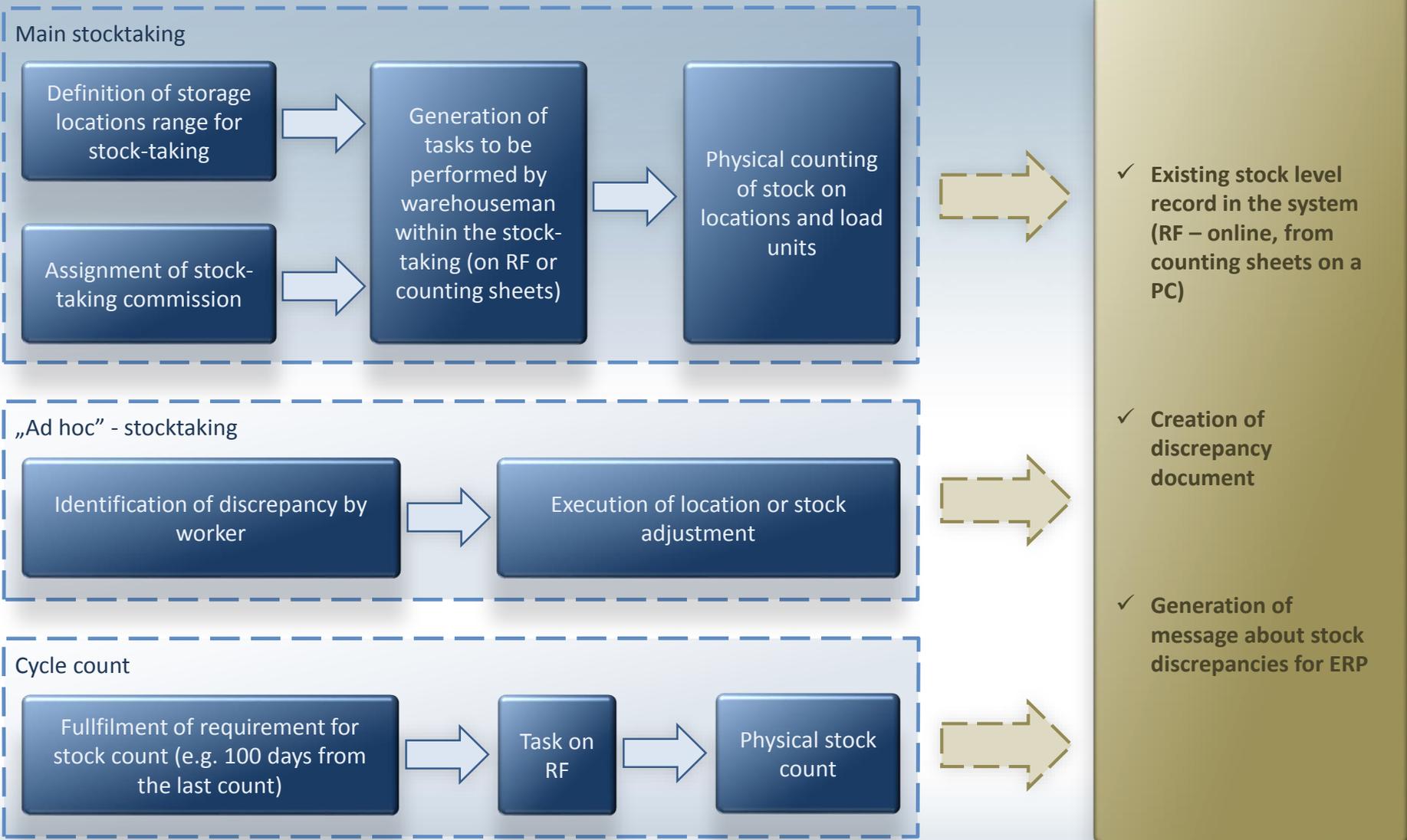
Configuration of internal transportation



CROSSDOCKING PROCESS



Stock-taking



Definition of stock-taking

Stock-taking

Filters

Stock-taking No.: Type: Status: Information: Method of execution: Priority:

Page 0 Quantity of rows on site 200 No data to display

Stock-taking No. Type Status Information Method of execution Stock-taking start date Stock-taking end date Priority

Stock-taking

Stock-taking data Stock-taking lines Skipped locations Administration

Basic data

Stock-taking No.: (Auto) Warehouse: M1

Type: Primary Type of document +: IW+ Type of document -: IW-

Method of execution: RF devices Priority: 0 Information:

Criteria defining the scope of stock-taking

Max. number of stock-taking loc.: Product owner:

Date of last stock-taking: 2016-07-05 Product:

Area: RK Batch:

Row from: 1 to: 6 Product class:

Column from: (all) to: (all) Product group:

Level from: (all) to: (all) Warehouse group:

Slot from: (all) to: (all) Quality status:

Location class:

Only empty locations Only picking locations Only storage locations Only locations marked for stock-taking

Generate lines Generate addition Stock-taking commissions

Activation Confirm all Differences report Close stock-taking New

Configuration of cyclic stock-taking

Basic data Administration

Configuration for:

Warehouse: MP Picking zone: All

Settings

Stock at picking location fell below threshold 10

Number of movements (stock changes) at the location (e.g. every 50 picks) 50

Number of days from the last stock-taking 60

Mismatch of execution of a transport order at pick location

Action to perform: Mark for stocktaking

New Save END

WMS

LSA

Clearing of logistic services and costs of intralogistic transactions

NRF

Utilization of RF terminals

ADR

Management of dangerous goods

IFC

Configurable interface to external solutions

RPS

Management of returnable packaging and load units clearing

MESSAGING

Notification about key-transactions done in the system

Configuration capability (examples)

Deliveries

Automatic put away rules definition

Different variants for goods receipt
(purchase order, ASN, goods issue document, physically delivered LUs)

Printout of labels in different sizes, types and quantity

For deliveries from production: configuration of production lines and articles being produced

Shipments

Definition of rules for orders merge

Automatic or manual shipments execution

Algorithms for splitting the shipments into picks

Algorithms of full pallets assignment

Algorithms for mixed pallets creation

Stock taking

Assignment of users to counting groups

Exact definition of locations for stock-taking

Definion of scope of data visible and confirmed during stocktaking

Configuration of automatic cycle count

Warehouse operations

Routing zones – assignment of forklifts to particular areas

TT configuration – way of assignment, execution and confirmation

Work-modes – scope of data visible for certain user

Configuraton of warehouses, picking zones – different ways of performing the tasks in different areas.

Configuration of shipment types

Shipment types

Filters
 Shipment type: Name: Default document type: Information:

Page 1 | Quantity of rows on site 200 | Displayed 1 - 4

Shipment type	Name	Default document type	Information
MANUAL	Manual shipment	WZ	Manual shipment
INTERNAL_DELIV	Internal outbound	RW	Internal outbound
AUTOMATIC	Automatic shipment	WZ	Automatic shipment
SIMPLE	Simple shipment	WZ	Simple shipment

Shipment type

Basic data | Interface configuration | Interface configuration | Interface settings | Administration

Main data

Shipment type: Creating a shipment at the RF terminal

Shipment type name: Executing by one user

Information:

Document configuration at shipment creation

Available document types: Changing document type at shipment line

Preferred document type:

Algorithms for picking

Picking separation alg.:

Picking type fixed:

Consolidation location selection alg.:

Target load units creation alg.:

Target load unit location assignment alg.:

Automatic execution statuses

Automatic execution with the status Edited

Automatic execution in the status Active

Automatic execution with the status Picking finished

Stock check

Autolimitation support method:

Manual adding of shipment line

Open shipment phases

Shipment activation

Shipment execution

Loading

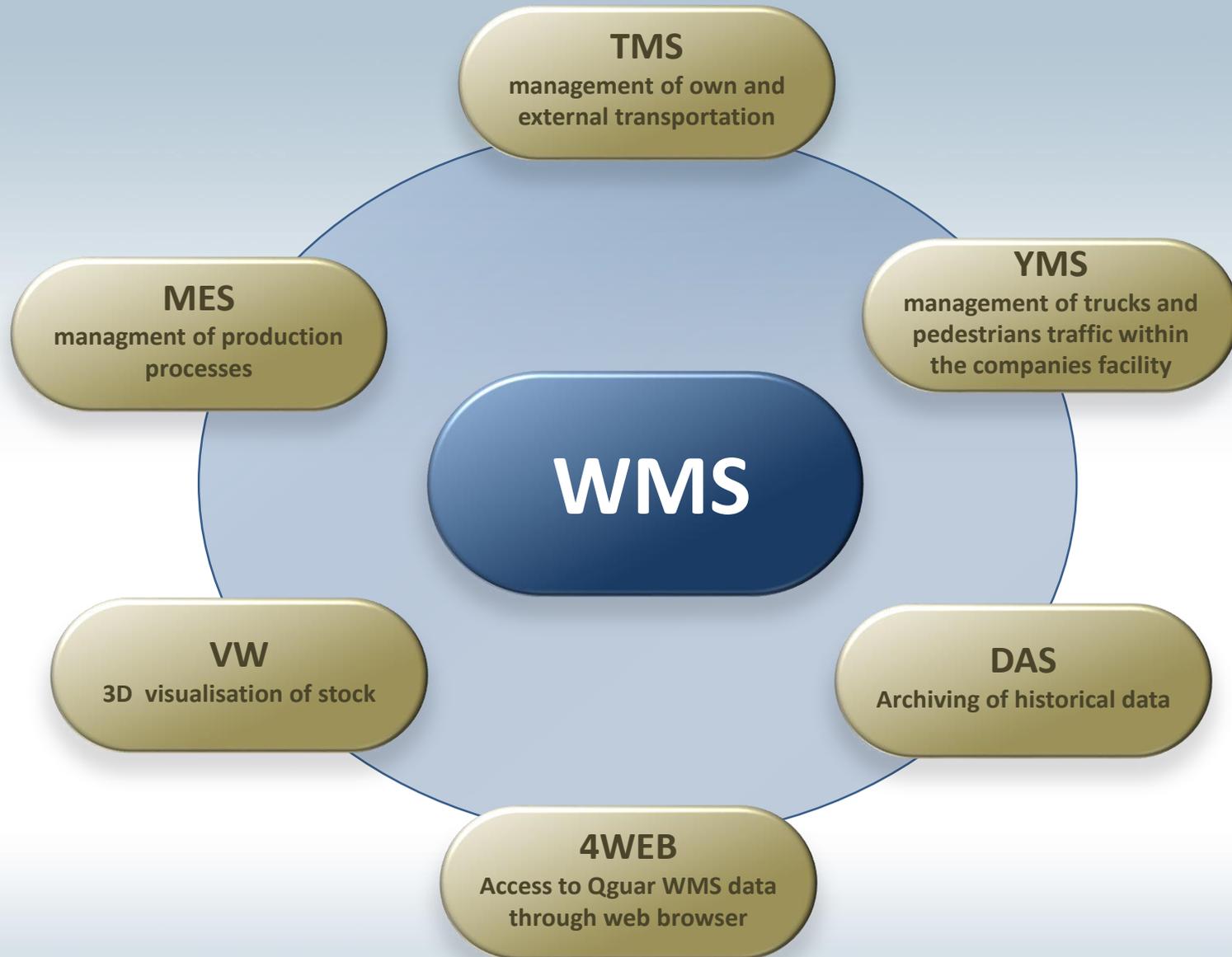
Possibility to load load units by means of shipment form

Automatic completion of loading at shipment closing

Loading creation/grouping algorithm:

+ Add Change Delete Finish





- ✓ Turn-key solutions
- ✓ Adjustment of WMS Qguar to specific requirements of the equipment
- ✓ Possibility of work in connection with bright spectrum of equipment and technology
- ✓ Experience won in polish and international projects

I-Net Crystal Clear

- ✓ documents
- ✓ labels
- ✓ current and statistics reports

Export of printout directly to the printer or with the view on the screen

Possibility to modify the existing printouts

Creation of own printouts by the client

Control queries

Definition as a query in SQL

Fast speed of control query definition on condition of knowledge about DB structure.

Definition of own filters

Effect of CQ:
Classic table of Qguar system

Placing of own tables into menu

Export to MS Excel

Export from any table available in the Qguar system

Definition of columns exported independently of columns visible

Further processing of data in MS Excel

Example of reports

- Warehouse explorer
- Warehouses
- Products
- Companies

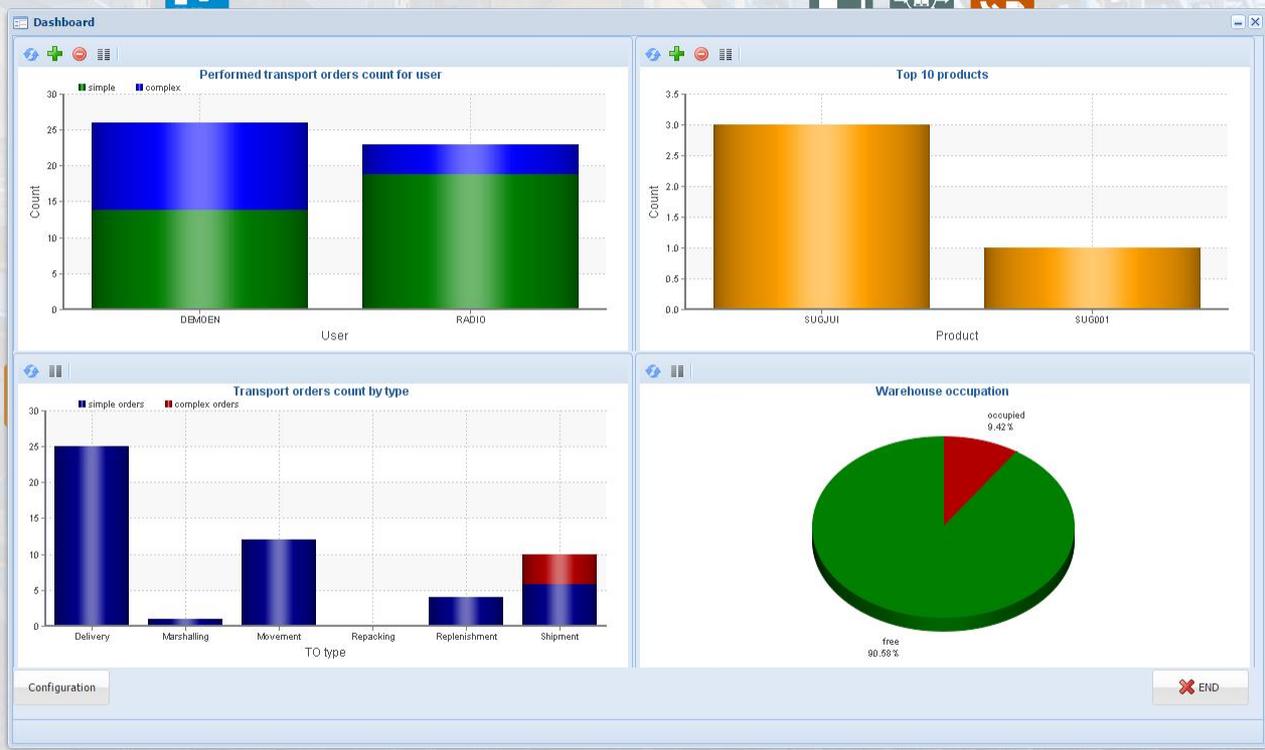
- Contents
- Stock levels

- Current transport orders
- Repacking
- Stock-taking

- Orders
- Shipments
- Loadings

- Purchase orders
- Warehouse inbound
- Delivery schedule
- In/Out area occupation

- System parameters
- System classes
- Users
- Access rights



demoen@demo
 Workstation: kratos.quantum.pl
 Safena Engine: 2.0.030.6462
 Safena DB: 2.0.030
 Tools DB: 3.0.301

✓ Standard embedded interface:

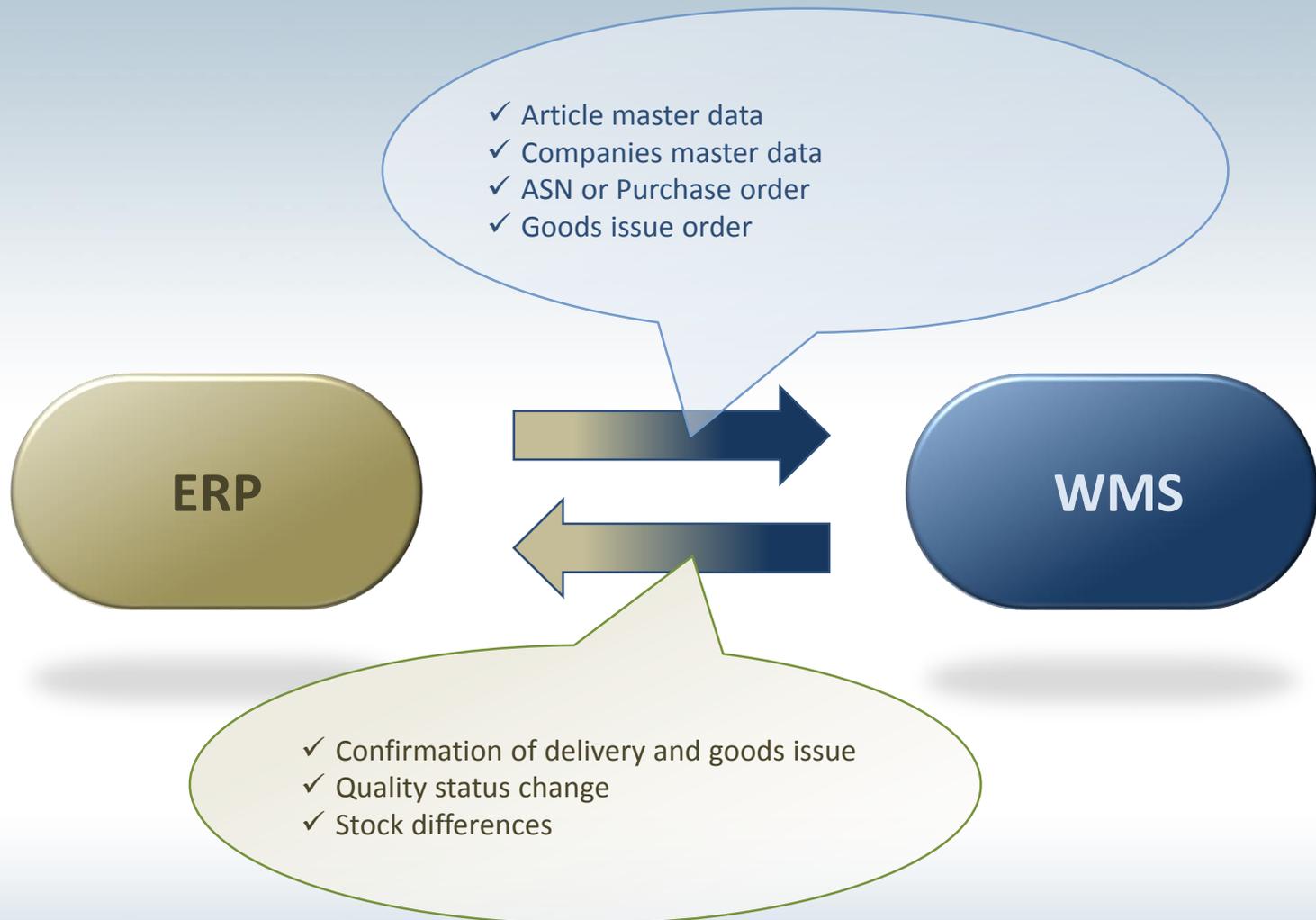
- Text files - **ASCII**
- Text files – **XML structure**
- Direct database communication
- 7 standardized messages to ERP

✓ Dedicated interfaces:

- Utilization of application possibilities (e.g. remote procedure call)
- Electronic telegrams (winsocket, rs232)
- Number and content of messages according to client's needs



Standard communication between ERP and WMS



Typical value of indicators improved after WMS Qguar implementation:

20-30%	↓	Reduction of shipment execution time by 20-30%
99,4-99,8%	↑	Grade of sales orders execution
30-40%	↓	Reduction of complaints
99,7-99,9%	↑	Accordance of real stock with annual stocktaking in the system
70-80%	↓	Shortening of annual stocktaking by using RF terminals
10-20%	↓	Reduction of costs for purchase of load units
up to few hours	↓	Shortening of new warehouse employee training time
10-20%	↓	Utilization of warehouse personnel

Examples of efficiency indicators:



Customers satisfaction – taken as number of mistakes reported by clients or based on effects of inquiries



Technical product's value – measured by indicators like: product's delivery, response time



User friendly interface



Inaccessibility of service/product



Percentage of undone tasks – counted against all processes, for example as number of undone orders against all of them

- ✓ Regular monitoring of processes
 - ✓ Fast reporting in case of irregularity
 - ✓ Possibility of fast reaction in extraordinary situations
 - ✓ Management of work in the warehouse (split into tasks, definition of preferred task-performers)
 - ✓ Improvement of time required for situation analysis
 - ✓ Graphical presentation of processes conditions
 - ✓ Modern and user friendly GUI
 - ✓ Storage of historical data
 - ✓ Automatic update of presented information
 - ✓ Adjustments of presented information's graphical form to client's requirements
- 



Thank you for your time

