



# GIMM STOCS

## Warehouse Management

T · Systems ·

Let's power  
higher performance



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01

# GIMM and GIMM STOCS Introduction

# GIMM

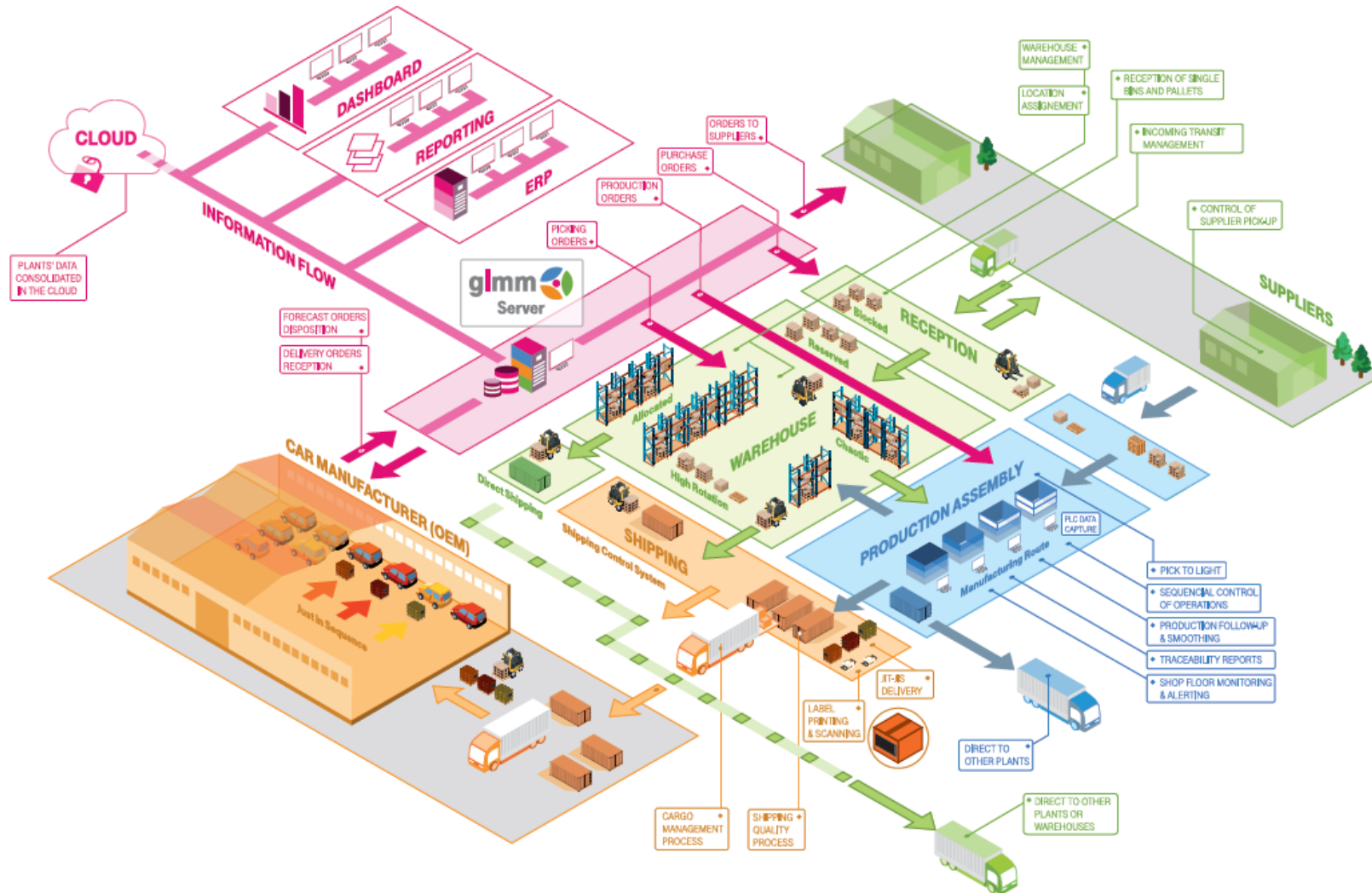
## A Supply Chain Management solution

**GIMM** (Global Integrated Manufacturing Manager) is a T-SYSTEMS solution created to synchronize the automotive supply chains (car manufacturers and first tier suppliers) giving a specific answer to Just in Time, Just in Sequence, Traceability, Production Control and Warehouse Management.

**GIMM** manages the logistic and productive activities in discrete delivery or production environments, synchronizing the processes of the plant to ensure proper keeping of the supply chain.



# GIMM Business Processes Coverage



# GIMM STOCS Solution Coverage



Warehouse Management

STOCS manages company's logistic chains and flows based on real demand (B2O-Build-to-Order), controlling reception and storage of the components delivered by suppliers, the internal preparation handling operations of material as well as the storage and shipment of finished products delivered to their customers.

Some main functionalities covered by STOCS:

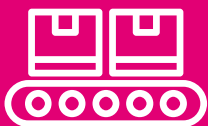
- Incoming transit management
- Reception of single bins, mono-reference pallets, multi-reference pallets
- Multi-plant & Multi-warehouse layout management
- Support for milk-run operations within the warehouse
- Automatic relocation orders
- Automatic stock allocation based on standard/customizable rules



# GIMM

## Powerful and versatile solution

What is really unique about GIMM is the combination of these 4 elements



### Product

- Focused on automotive sector for JIT/JIS and traceability
- Flexible, scalable and highly configurable
- Standard interfaces
- Innovative processes for picking, e-INK, AR quality assurance
- Poka-yoke, error-proof systems
- Long experience at SF & PLC communication
- Product management & roadmap



### Support

- 24x7 expert assistance specialized on mission-critical environments
- +80% of incidents resolved within first contact
- OEM demand compliant
- Multilanguage support service
- Worldwide support



### Know-how

- Single provider worldwide coverage
- Cost effective
- Global approach
- T-Systems product



### Partner

- Industrial expertise
- Highly skilled team worldwide
- +15 years business experience
- Excellent knowhow in shop-floor processes
- Supply chain management auto

**01**

# GIMM STOCS in-depth



## GIMM STOCS A Warehouse Management Solution

**GIMM STOCS** is a Warehouse Management System (WMS) designed to control the stocks of industrial plants and retailers (small-medium warehouses). Provides the services to control and trace the incoming and outgoing transits.

Manages warehouse inventory, space, material handling and transportation resources in real time to assure timely, error-free fulfillment, delivery, and visibility of order status throughout the supply chain.

**GIMM STOCS** provides its maximum benefits when implemented together with **PROCS** and **LINCS GIMM** products.



# GIMM STOCS

## Main Warehouse Operations

### Reception

Interfaces with the Suppliers. It controls the incoming transits.

### Put Away

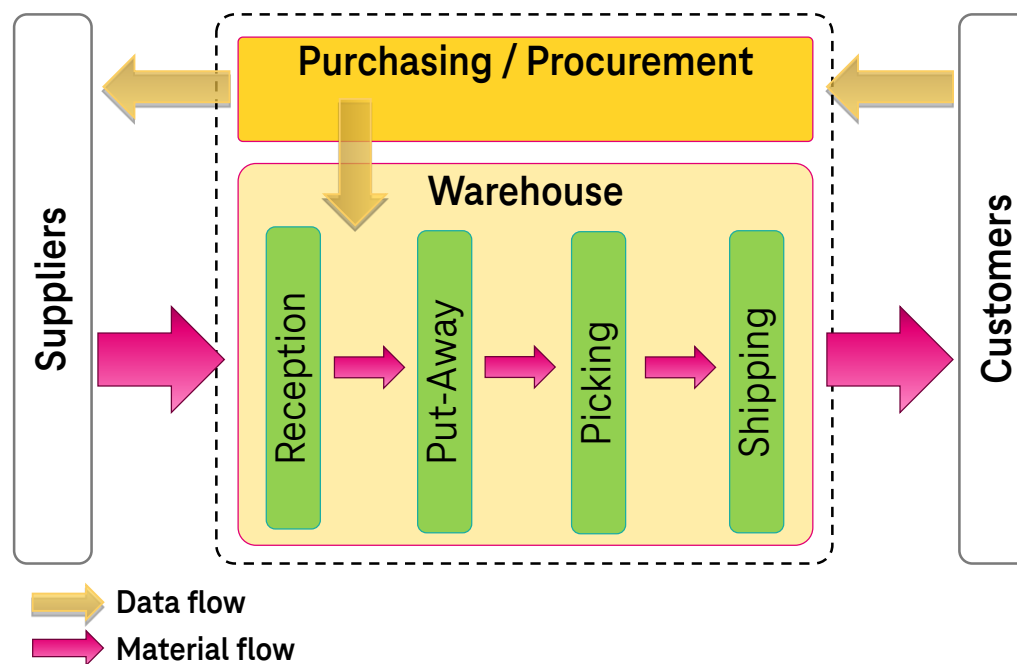
Manages the put-away process and the storage patterns.

### Picking

Controls the picking activities based on optimized algorithms to reduce travel distances.

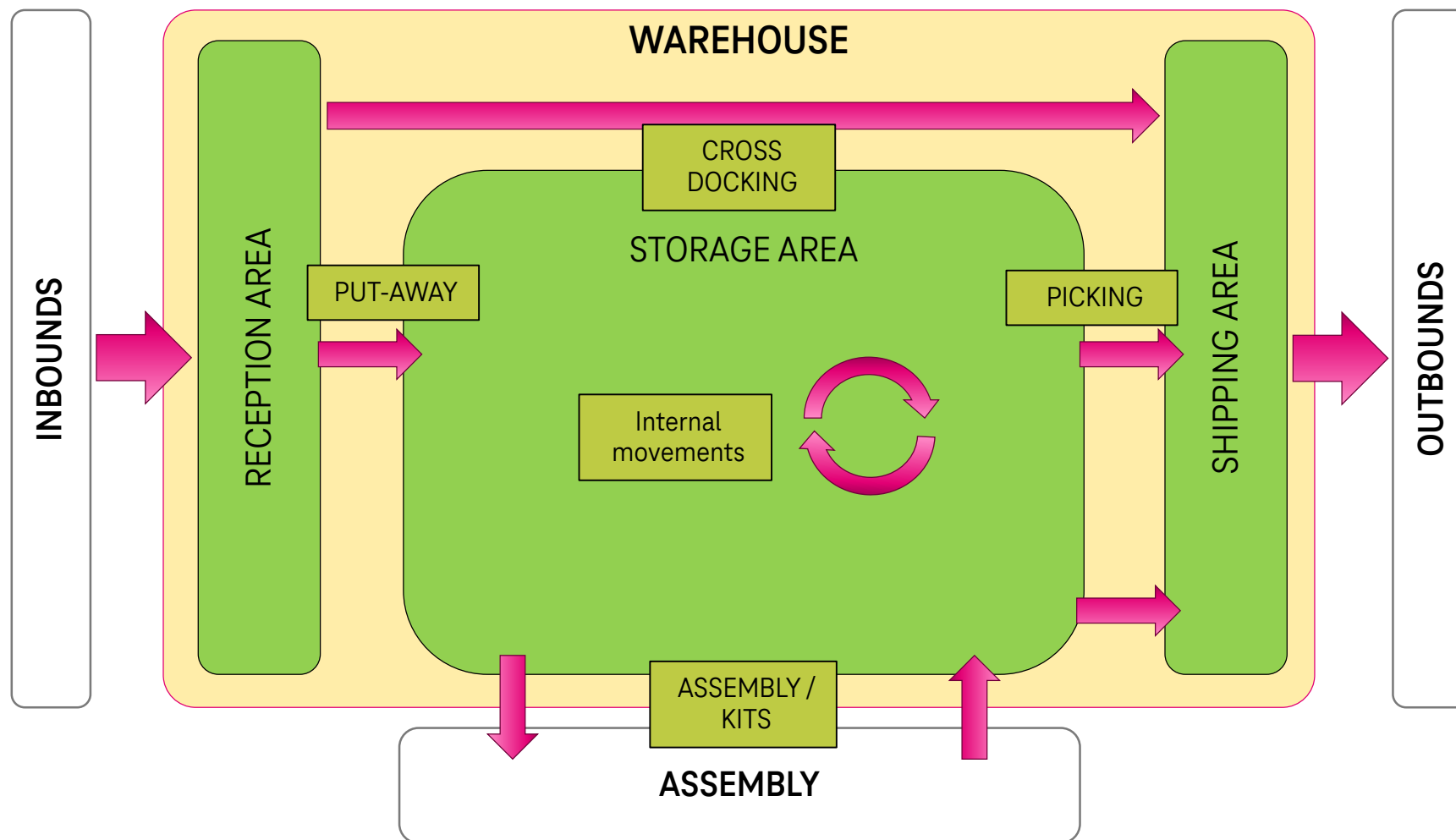
### Shipping

Secures and relocates the stock to be delivered to Customers based on adaptive rules.



# GIMM STOCS

## Warehouse Materials Flow



# GIMM STOCS Reception Area

**STOCS** material reception can be manually handled or automated by receiving **EDI** or other **standard files**. This allows the plant to check and validate incoming transits previously to the physical reception.

EDI & Standard files		Existing OEM EDI integration (Automotive Industry case)					
UN/EDIFACT	Standard						
DELJIT	Flat Files						
DESADV/AVIEXP	CSV File						
DELFOR	XML files						
VDA							

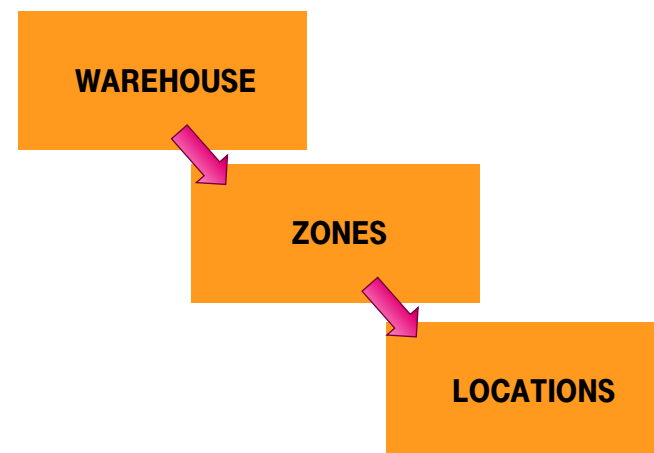
**STOCS** is able to **receive** the goods in different ways (individual containers, mono and multi reference pallets, etc.) and execute **quality audits**. The operator shall easily validate the orders and the quantity using **handheld terminals** and/or a **client PCs** provided with large screens that can be seen from long distances.





## GIMM STOCS Storage Area: Modelling

The storage area is modelled in a hierarchical mode, and several warehouses can be managed by the same **GIMM STOCS** system:



Comprehensive and flexible location identification to facilitate user's orientation:

Z - A - S - P - L				
<u>Z</u> one	<u>A</u> isle	<u>S</u> ide	<u>P</u> osition	<u>L</u> evel

# GIMM STOCS

## Storage Area: Put-Away & Picking

The **Storage Rules** (also known as Policies) are defined at the level of zone and locations in order to have **chaotic**, **fix-location** or **mixed** stocks.

### Zones & Locations

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#### Zones

- Reception
- Mobile
- Standard
- Blocked
- Quality



#### Locations

- Capacity, Weight, Volume
- Customer, Supplier
- Mono/Multi reference
- Pericity
- Access type

The end of a put-away action, triggers a picking action (to optimize operators productivity).





## GIMM STOCS

### Storage Area: Put-Away & Picking

To facilitate the later shipping process, it is needed the stored material to be located properly for each situation. In this sense, STOCS allows storing goods to be extracted based on either standard or tailored rules:

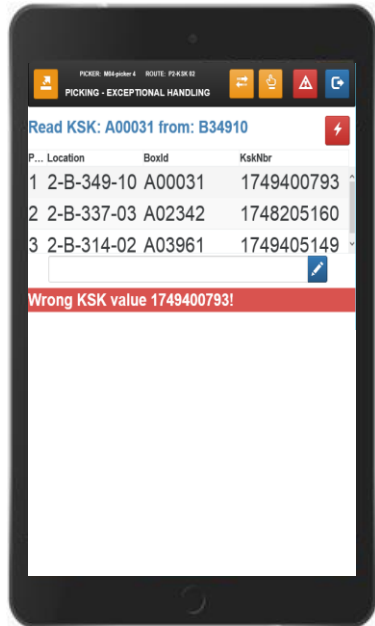
- First In First Out
- First In Last Out
- First Expired First Out
- Customized algorithm

This extraction algorithm can be configured at the level of part number.



# GIMM STOCS

## Storage Area: MANUAL management



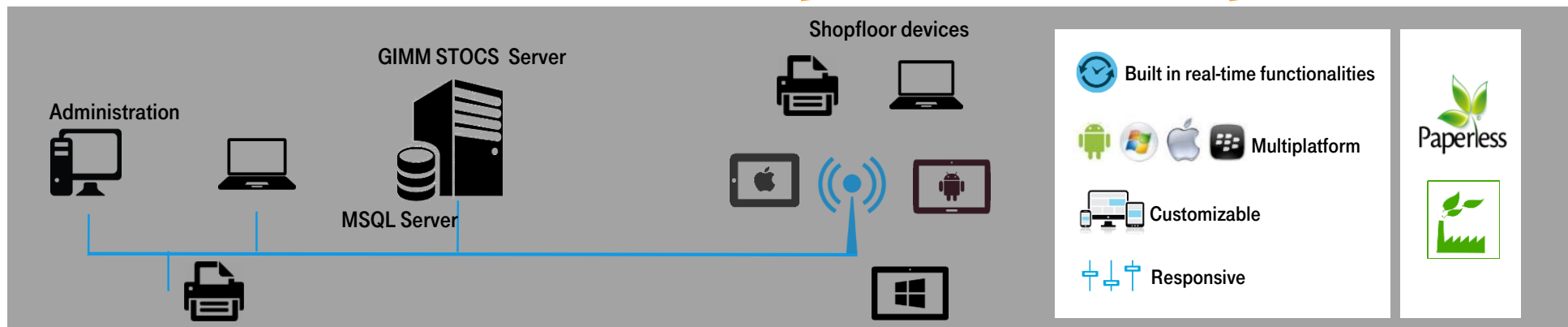
**WebStocs** is a solution to provide put-away and picking interface for any kind of device:

- Web deployment with responsive design and multi-device support
- Increase efficiency and decrease response times by operator.
- Optimization and reduction of displacement times.
- Human error reduction.
- Fast training of operators.
- Scalability.

**NO HARDWARE  
INSTALLATION**

**EASY  
DEPLOYMENT &  
CONFIGURATION**

**USER FRIENDLY &  
PRODUCTIVE  
INTERFACE**





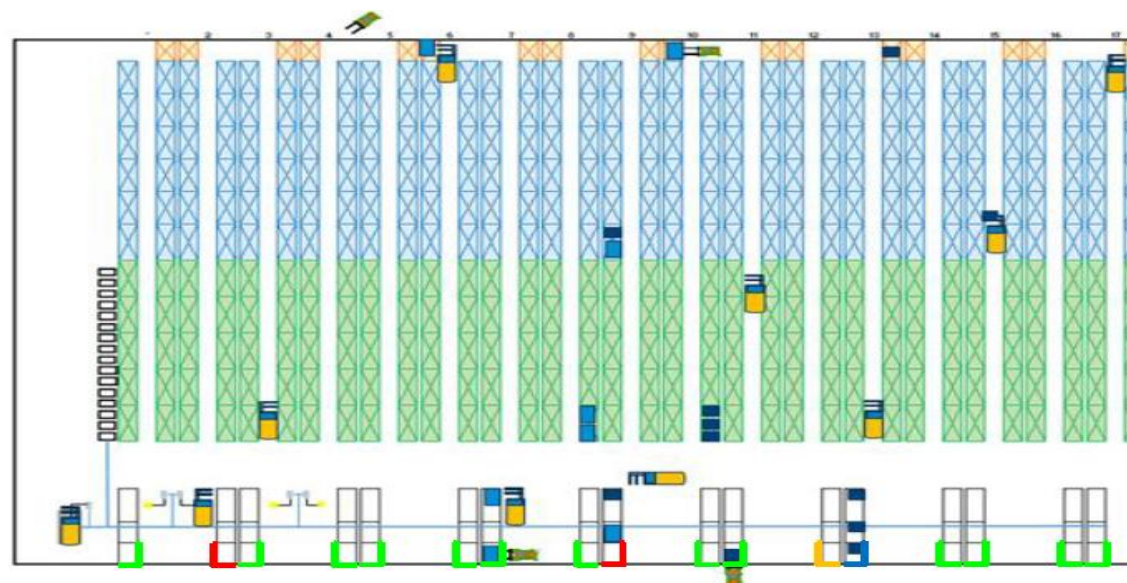
# GIMM STOCS

## Storage Area: AUTOMATIC management



**GIMM STOCS** can manage an automatic storage area by interfacing with autonomous warehouse devices:

- Communicating with **Auto Guided Vehicles (AGV)** for the picking and put-away processes.
- Communicating with transportation **Conveyors** for the inbound and outbound of materials on the storage area.



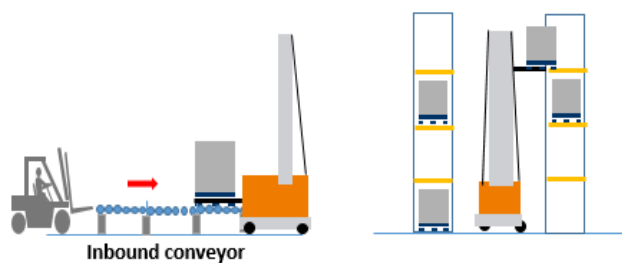
# GIMM STOCS

## Storage Area: AUTOMATIC management. Processes

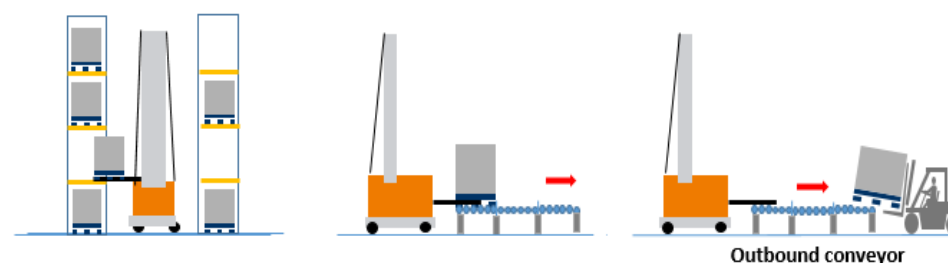
### Inbound Process



### Induction and Put-Away

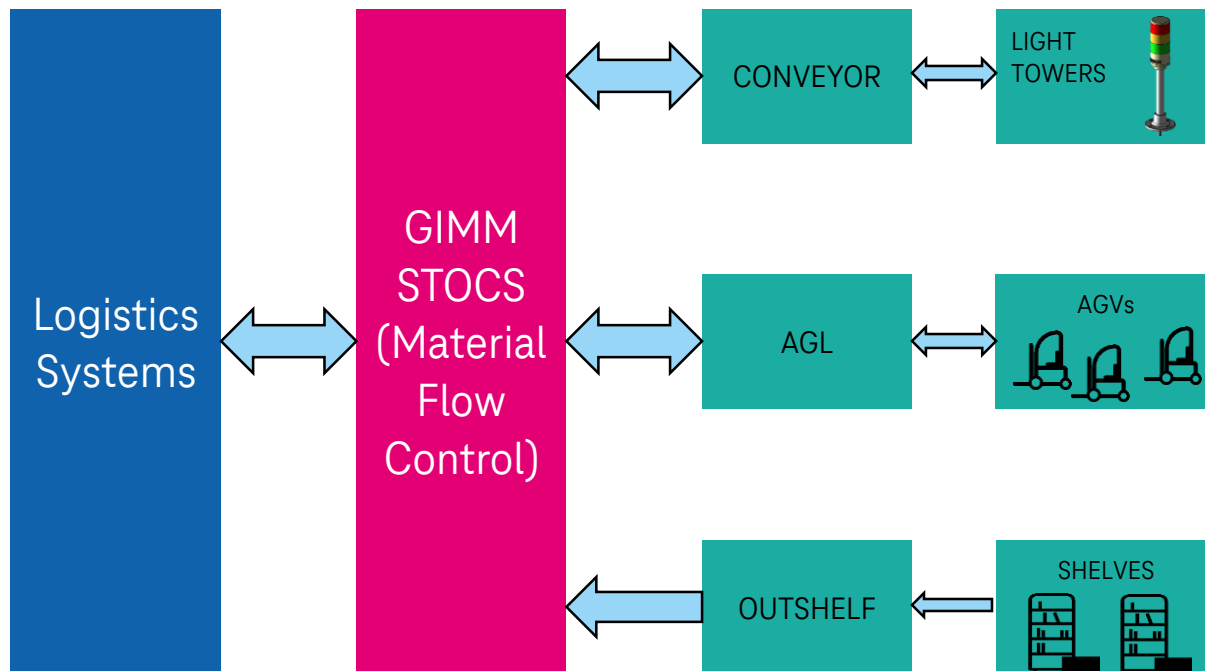


### Picking and Outbound



# GIMM STOCS

## Storage Area: AUTOMATIC management. Systems Involved



### Logistics Systems

It is a backend system which centralizes all warehouse activities and interfaces with other backend systems. It has a bidirectional communication with GIMM STOCS.

### Conveyor

System that controls the devices in charge of feeding each one of the warehouse aisles. It controls light tower to warn users on different events.

### AGL

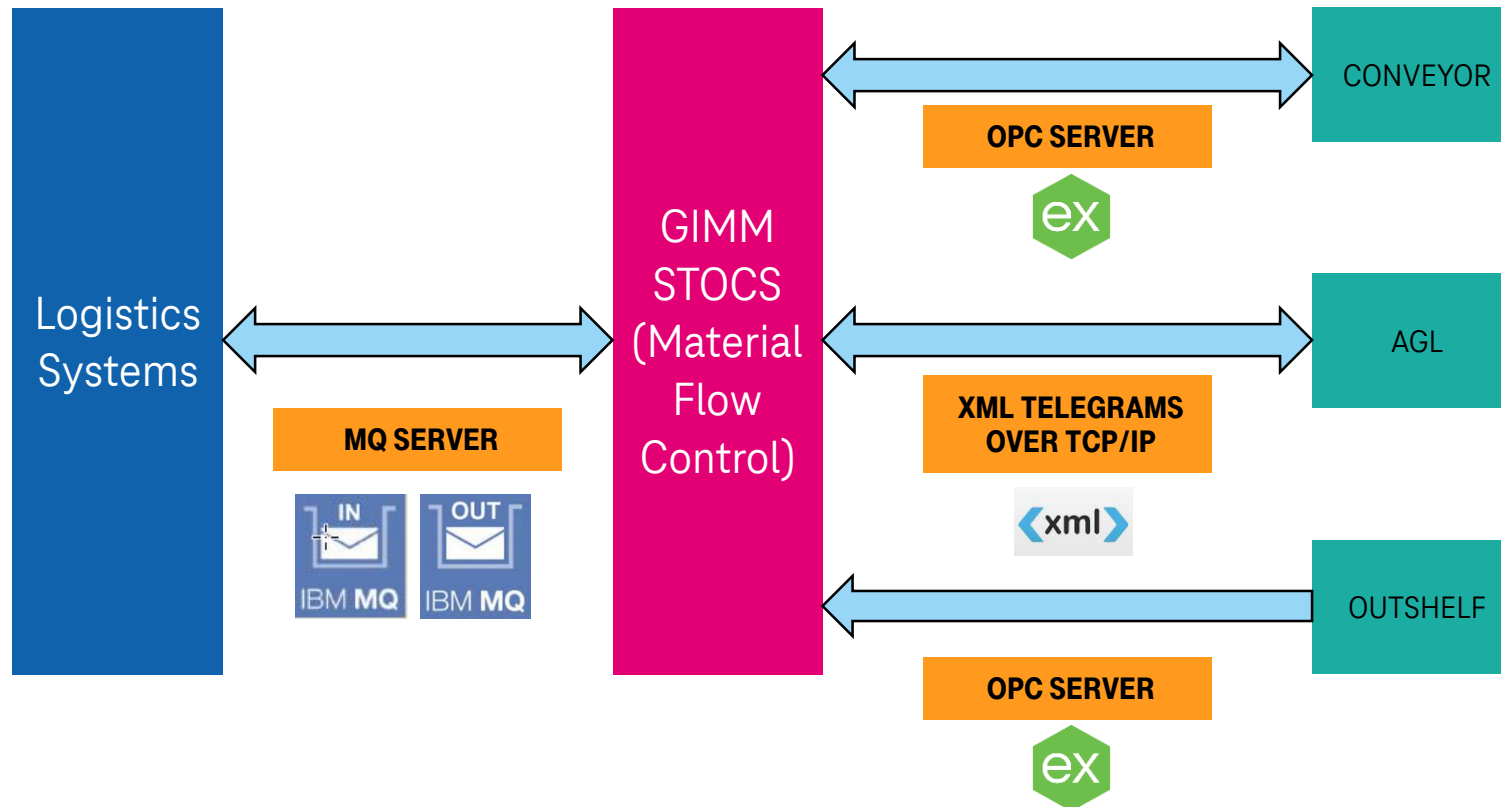
System in charge of controlling the different Automatic Guided Vehicles which perform the movements within the Automatic Warehouse

### OUTSHELF

System controlling the different removal racks (output shelves) where removed containers are placed by AGVs when completing the picking transport.

# GIMM STOCS

## Storage Area: AUTOMATIC management. Technologies





# GIMM STOCS

## Storage Area: AUTOMATIC management. Monitoring Screens

WebMFC - VWAE AGL STOCS

MONITOR VIEWS

**ALL**  
All Systems Monitor

**LOGIS**  
Monitor LOGIS

**AGL**  
Monitor AGL Instances

**Conveyor**  
Monitor conveyors

**WH**  
Warehouse Monitor

Corridor Capacity

Picking Orders - Running

Picking Orders - Completed

WebMFC LOGIS : Orders: 0 | 0 0 0 0 W.Mode:

CONVEYORS POSITION DETAILS

CONVEYOR01

M

CONVEYOR02

A

CONVEYOR03

A

CONVEYOR17

A

WebMFC LOGIS : Orders: 3 | 0 0 1 2 W.Mode: 2021/03/12 11:14:40

Regular Orders

Wish Time	Part Number	Label N.	P.Feed	Wait T.
2021-11-03 20:50:00	LOG_PN	00002021110302	POINT01	923m 19s
2021-03-12 12:05:00	LOG_PN	00002021031202	POINT01	

Manual Orders

Part Number	Label N.	P.Feed	Wait T.

WebMFC LOGIS : Orders: 3 | 0 0 1 2 W.Mode: 2021/03/12 11:42:59

Running Picking Orders

Part Number	Label N.	Status	Wish Time	P.Feed	Vehicle
LOG_PN	00002021110305	2021-03-11 20:02:18.703	2021-03-11 22:05:00	POINT01	

## GIMM STOCS Shipping Area

Goods are automatically reserved based on its location: shipping location or other specific areas defined for the warehouse.

Main **GIMM STOCS** features for Shipping and Transportation:

- Optimization of packages loading
- Optimization of loaded space on transports
- Manage of transport types (airborne, maritime, trailer, etc.)
- Transport routes generation
- Follow-up of the trucks (documentation history, control points, etc.)



# GIMM STOCS Interfaces

## Input Files

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- Master Data
  - Parts catalogue
  - Structure catalogue
  - Features catalogue
- Order messages (custom format)
- Delivery forecast (VDA4905, VDA4915)

## Output Files

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- Notice of expedition (VDA4913, DesAdv)
- Invoices (VDA4913, VDA4908)
- Parts delivered (customized format)
- Stock movements



# GIMM STOCS Reporting

GIMM STOCS is using Microsoft Reporting Services.

- There is a set of reports pre defined: full map of the stock, movements, stock coverage
- New reports can be added depending on customer requirements
- Reports can be exported to csv file, excel, pdf for internal purposes

### Locations with Empty Boxes

Zone : %	Box Id. : %	From : %	Status : %
	KSK Nr. : %	To : %	Dias em Stock : 0

### Locations

<b>Totals</b> 4032	Free : 1265	Occupied : 2767	Com Caixas Vazias : 498
Corridor 1	Free : 366	Occupied : 1650	Com Caixas Vazias : 247
Corridor 2	Free : 899	Occupied : 1117	Com Caixas Vazias : 251

Location	Box Id.	KSK Nr.	Status	Item	Destination	Reception Date
1-A-001-01	3333333333	VAZIA	AVAILABLE	0000024736	1-A-001-01	14/12/2017 12:16:46
1-A-001-01	3333333333	VAZIA	AVAILABLE	0000024737	1-A-001-01	14/1
1-A-001-01	3333333333	VAZIA	AVAILABLE	0000024738	1-A-001-01	14/1
1-A-001-02	123457	VAZIA	AVAILABLE	0000024733	1-A-001-02	14/1
1-A-001-02	123457	VAZIA	AVAILABLE	0000024734	1-A-001-02	14/1
1-A-001-02	123457	VAZIA	AVAILABLE	0000024735	1-A-001-02	14/1
1-A-001-03	J123456	VAZIA	AVAILABLE	0000024730	1-A-001-03	14/1
1-A-001-03	J123456	VAZIA	AVAILABLE	0000024731	1-A-001-03	14/1
1-A-001-04	123451	VAZIA	AVAILABLE	0000024732	1-A-001-04	14/1
1-A-001-05	J123	VAZIA	AVAILABLE	0000024724	1-A-001-05	14/1
1-A-001-05	J123	VAZIA	AVAILABLE	0000024725	1-A-001-05	14/1

**DRILL DOWN REPORTS**

09/05/2016 09:52:44  
Pag.: 1 / 1

### Stock Per Reference. Planta 01

Supplier %	Reference %						
Stock Coverage based on consumption forecast							
Date	Supplier	Reference	Description	Stock Avail.	FOR 09-05	ENV 09-05	COB 09-05
160508	CEFA	A4476801506 9051	Peldaño Del. Izqdo. Sin Luz	901	1.576	86	- 589
160508	CEFA	A4476801606 9051	Peldaño Del. Drcho. Sin Luz	880	1.576	86	- 610
160508	CEFA	A4476801906 9051	Peldaño Del. Izqdo. Con Luz	314	604	34	- 256
160508	CEFA	A4476802006 9051	Peldaño Del. Drcho. Con Luz	328	604	34	- 242
160508	CEFA	A4476802106 9051	Peldaño Corr. Izqda. Sin Luz	298	408	16	- 94
160508	CEFA	A4476802206 9051	Peldaño Corr. Drcha. Sin Luz	587	928	45	- 296
160508	CEFA	A4476802506 9051	Peldaño Corr. Izqda. Con Luz	314	532	34	- 184
160508	CEFA	A4476802606 9051	Peldaño Corr. Drcha. Con Luz	299	532	34	- 199
160508	CEFA	A4476803106 9051	Peldaño Corr. Izqdo. Suelo Cabina	141	220	10	- 69

**STANDARD AND INTERNAL REPORTS**



# GIMM STOCS

## Benefits

### Potential Improvements in:

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- Inventory accuracy
- Space utilization
- Stock rotation
- Order, lot and serial number tracking
- Backorder handling
- Crossdocking
- Transportation
- Customer service

### Potential Reductions of

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- Damage / Shrinkage
- Lost stock
- Safety stock
- Search time
- Paperwork
- Human errors
- Physical inventory taking
- Delivery costs
- Outside warehousing

A man in a dark suit is seen in profile, looking out of a large window. The view outside is a city at night, with a river and a bridge. The scene is overlaid with vibrant, multi-colored light trails (pink, blue, yellow) that create a sense of motion and energy. In the top right corner, there is a large pink rectangular box containing the text 'THANK YOU.' in white, bold, sans-serif font.

**THANK YOU.**

**T · Systems**

Let's power  
higher performance