



Think Tomorrow.



Agenda

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SSI SCHAEFER
at a Glance

02

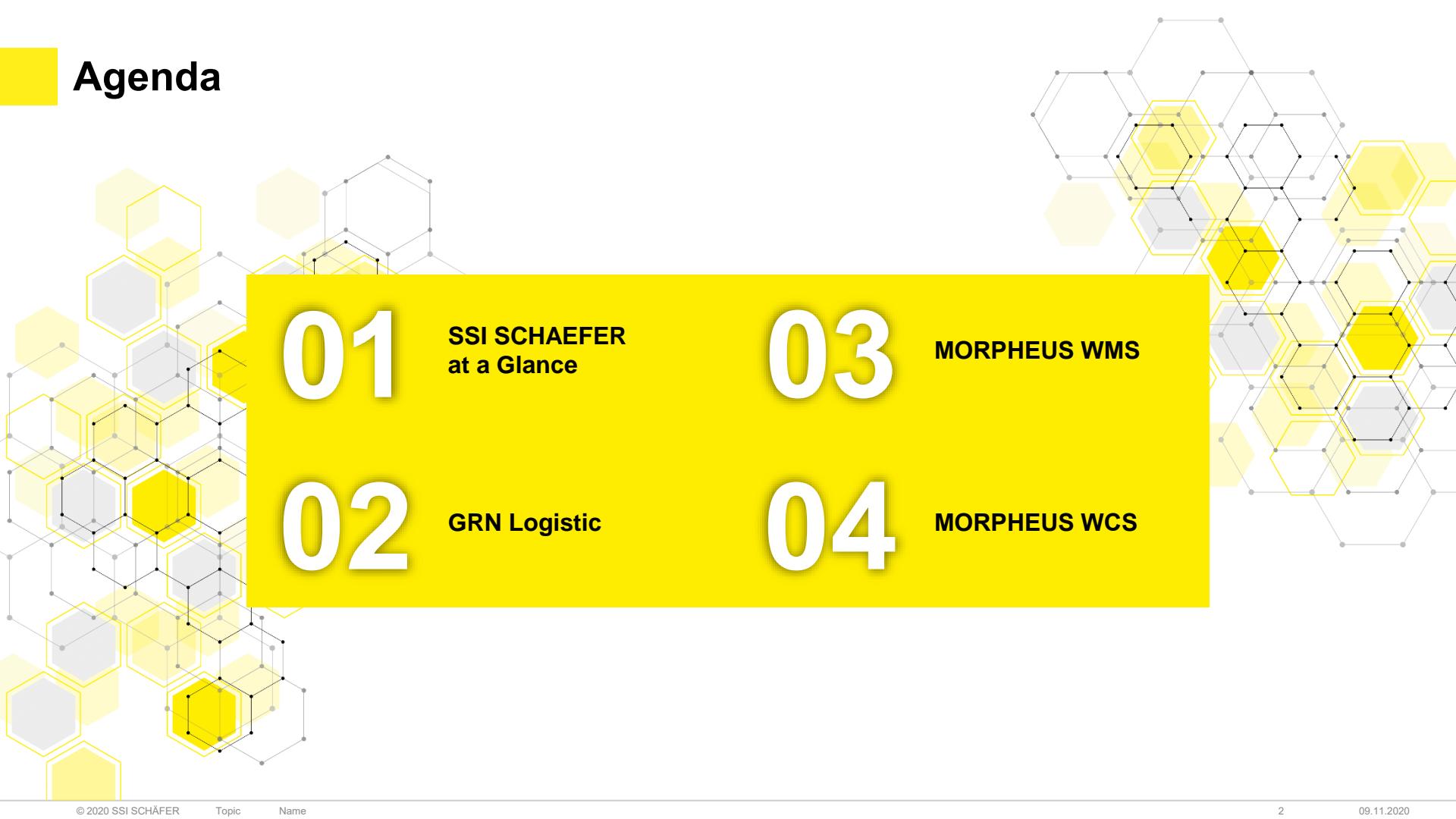
GRN Logistic

03

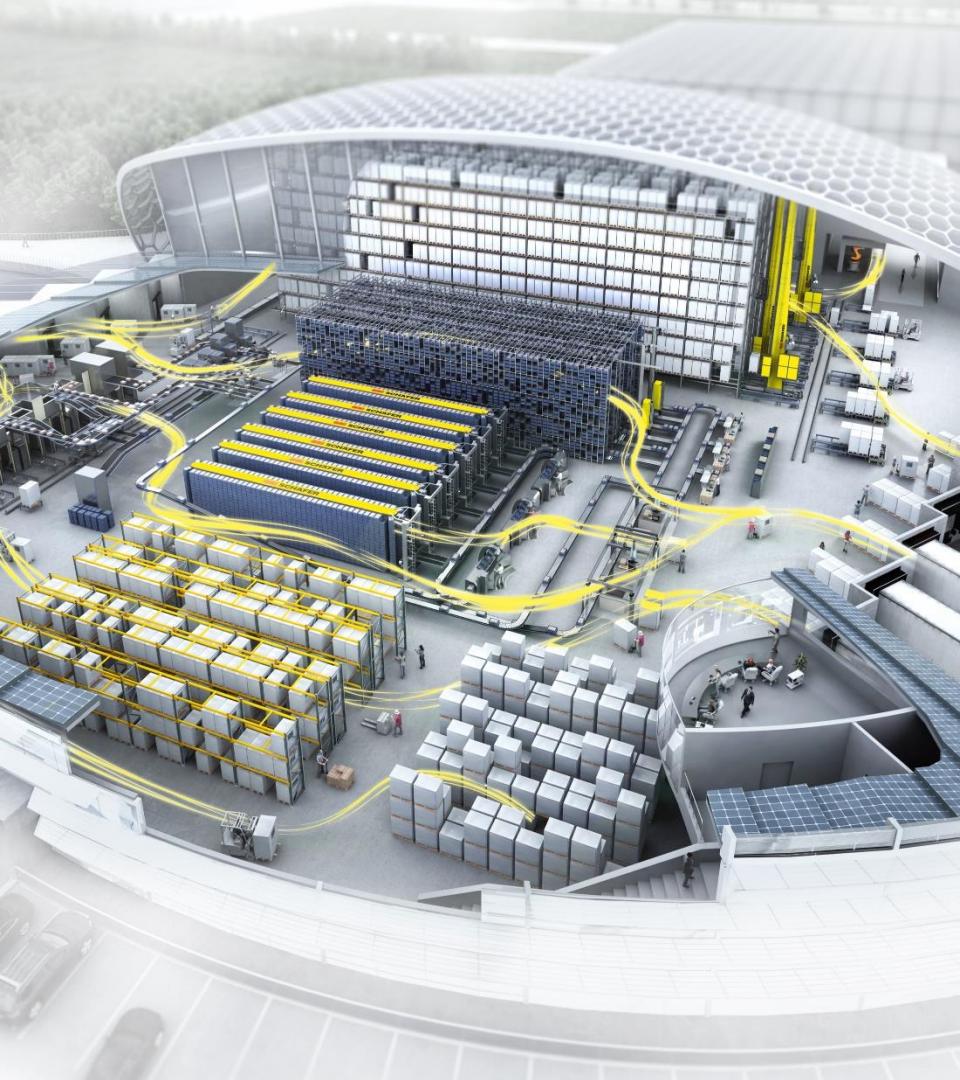
MORPHEUS WMS

04

MORPHEUS WCS



SSI SCHAEFER at a Glance



SSI SCHAEFER – A History of Success



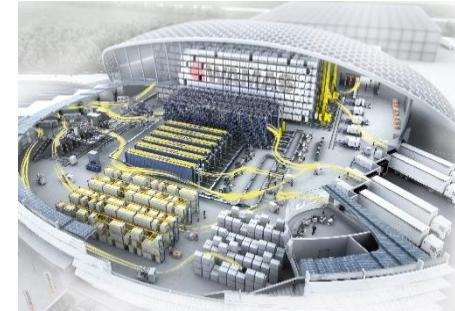
Fritz Schäfer **founded** his family-owned company for “factory manufacturing of sheet metal goods”



HUBs throughout the world founded



Salomon Automation, **an expert in software**, became part of SSI SCHAEFER



1937

1953

1958

2002

2008

Today

The revolutionary **“Lager-Fix-Kasten”** was developed



Noell and Peem diversified the portfolio of SSI SCHAEFER with **automation solutions** and merged under the **umbrella brand SSI SCHAEFER**



SSI SCHAEFER is a globally active corporate group and the **first point of contact worldwide** for manual, partially automated and fully automated **intralogistics solutions** including releasable software

Executive Board of SSI SCHAEFER Group



Bruno Krauss
CFO

Steffen Bersch
CEO

Harald Rackel
COO

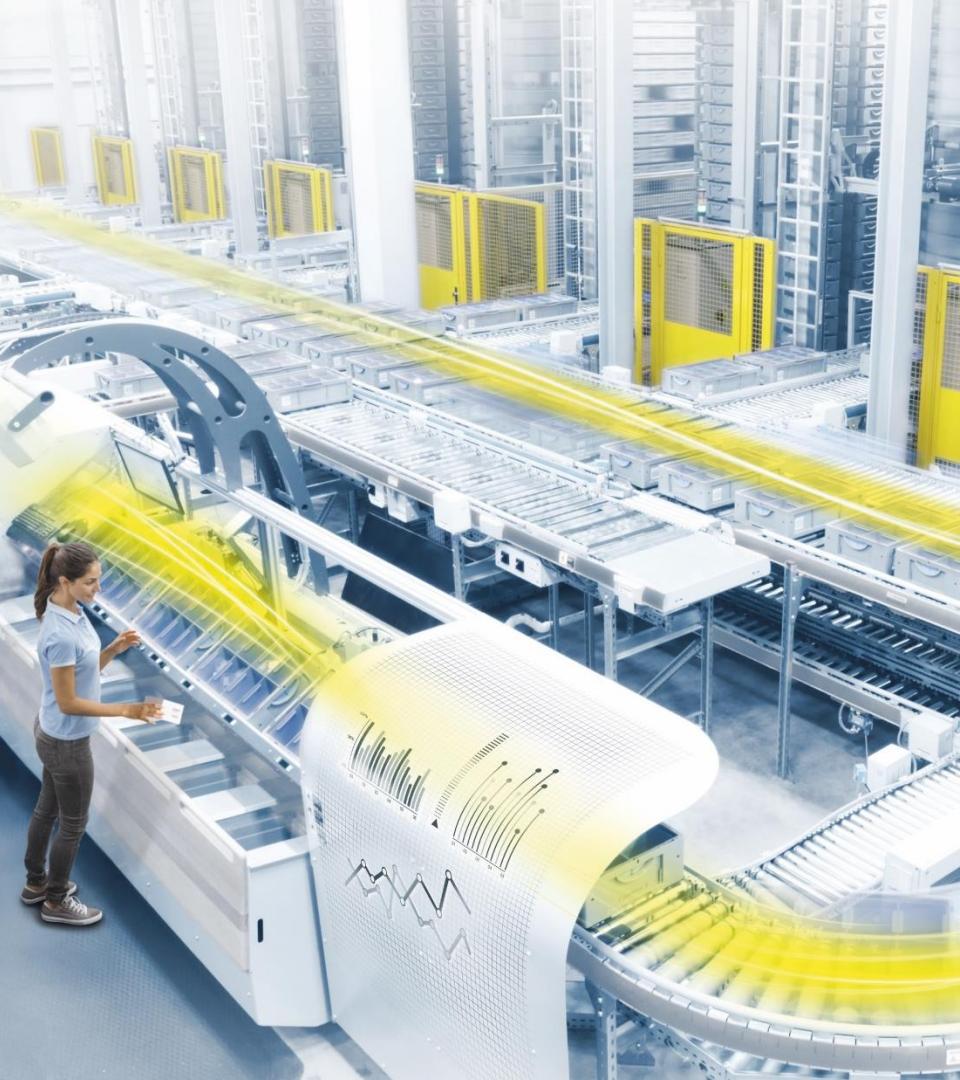
Close to Customers Worldwide

With locations across six continents, SSI SCHAEFER provides innovative concepts and solutions for its customers and combines both global and local strengths.

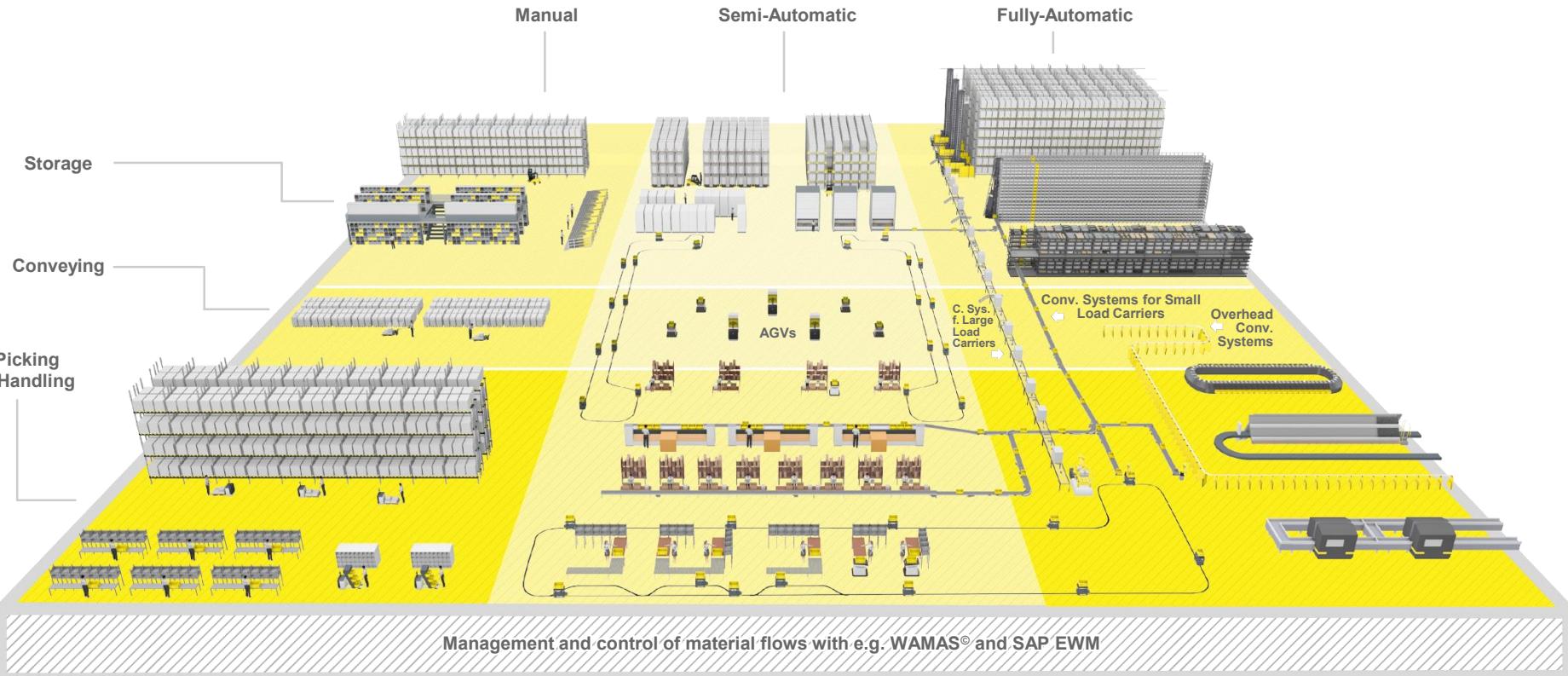
- 8 production sites
- Over 70 subsidiaries
- More than 10,500 associates



Products & Solutions



Our Logistics Solutions



Services from a Single Source

SSI SCHAEFER offers highly sophisticated logistics systems. As an international player, we can deliver one-stop solutions to all four corners of the earth. Our comprehensive portfolio encompasses design, planning, consulting, and customer-specific aftersales services and maintenance.



General Contractor

Planning, building and project management
for holistic projects



Component Supplier / SSI Integrator Business & Logistics Software

Individual components as well as complete systems including software and assembly to interconnect machines and systems



Planning, Consulting & Simulation

Holistic project approach with modern analytical tools and logistics software



Customer Service & Support

Wide range of services using innovative technologies such as augmented support or data-driven prevention



Automated Storage Systems

Design, static layout, construction,
and in-house production



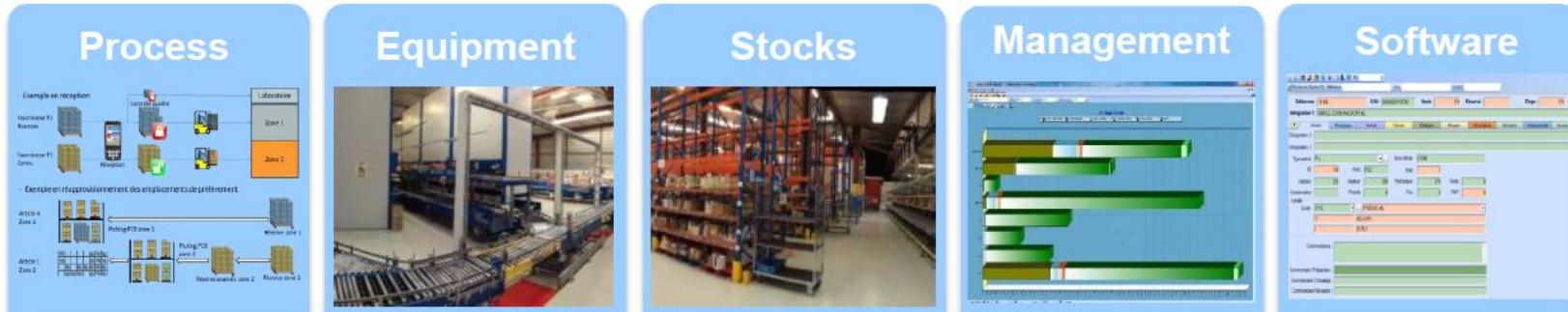
Waste Management

Comprehensive solutions and modular concepts
for waste management

GRN LOGISTIC



GRN LOGISTIC: HOLISTIC MARKET APPROACH



Consulting

Finding the most suitable organisation for your activity

Software Editor

MORPHEUS Software Suite : WMS, WCS,TMS

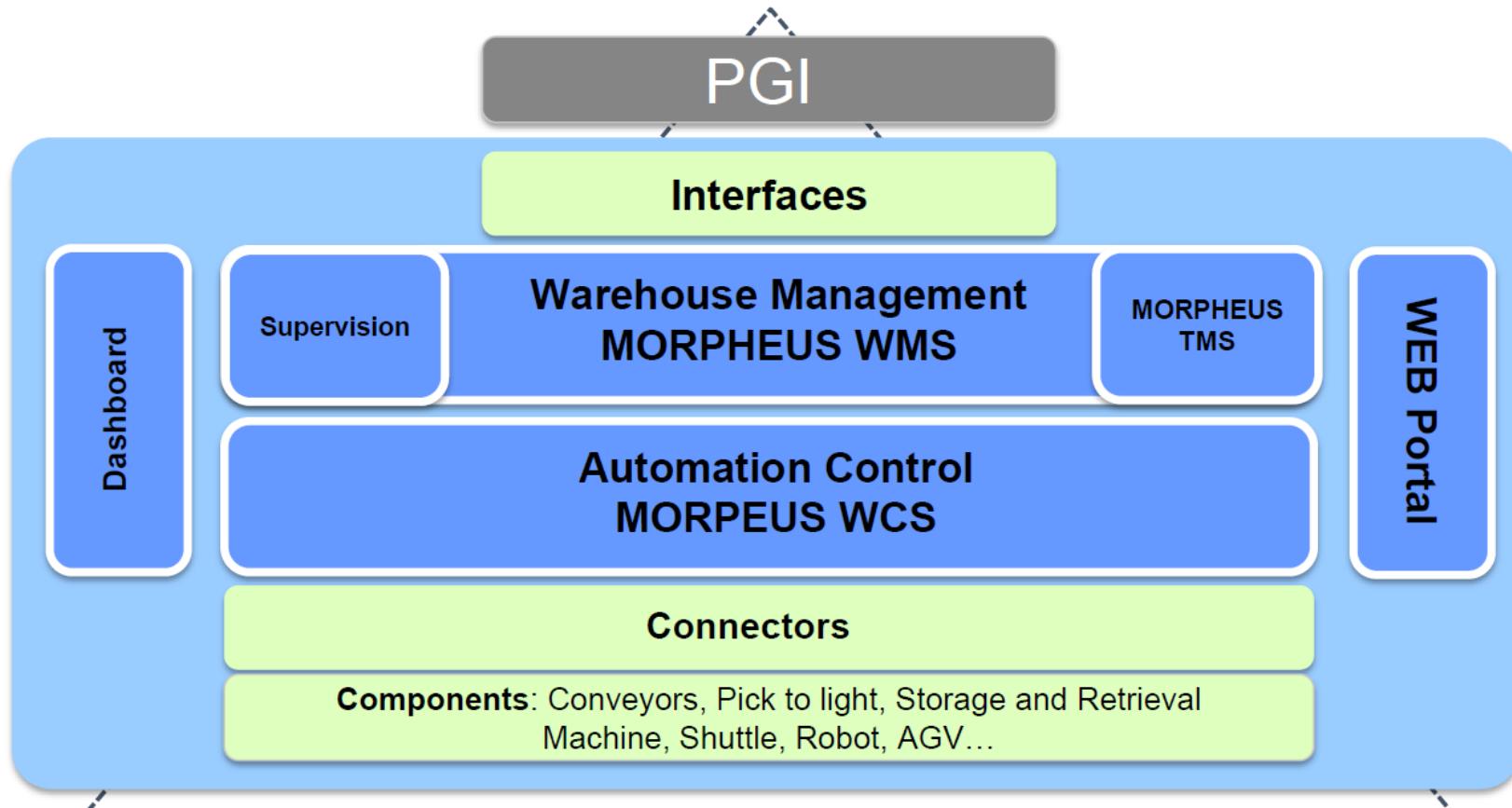
Project Management

Planning and monitoring the integration of new components

One Goal

That you profit from an optimised solution to increase your productivity

GRN LOGISTIC: MORPHEUS SOFTWARE SUITE



OUR HAPPY CUSTOMERS



MORPHEUS SOFTWARE SUITE:

LAYOUT



MORPHEUS: USER INTERFACE

Ergonomic & Mobile

Computer



Touch Pad



RF Terminal



A POWERFUL RULE ENGINE

Flexibility, Adaptability and Configurability



MORPHEUS relies on strategy classes to set up business rules for:

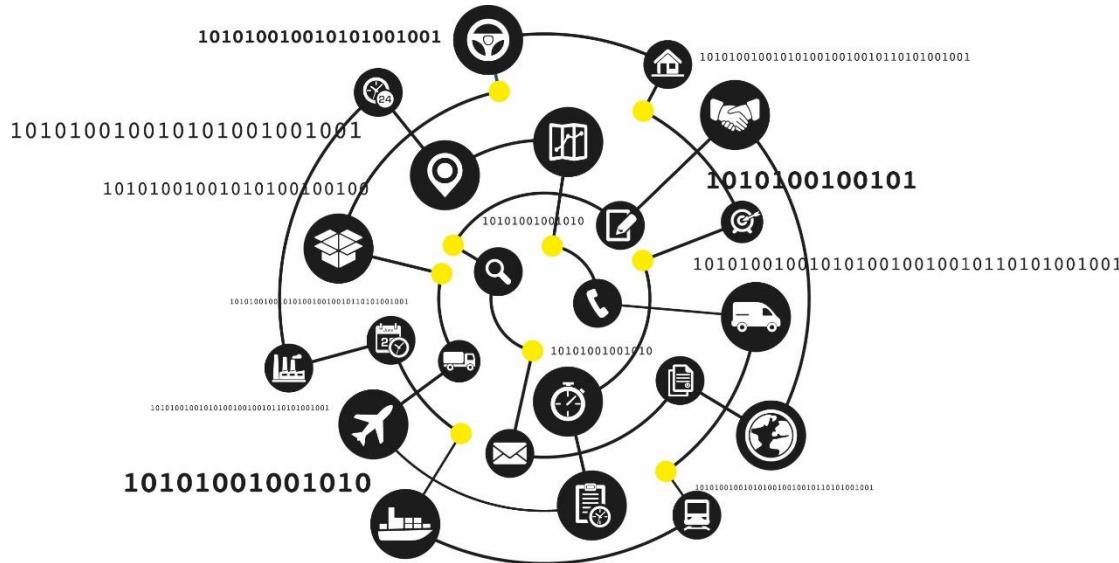
- Incomings
- Storage
- Replenishment
- Transfers
- Picking ordering

According to the characteristics of the:

- Product
- Location
- Packaging
- Need of purchase
- Supplier
- Destination
- Carrier

**Management rules can be adapted and applied
according to your business issues.**

AN OVERHALL TRANSPARENCY

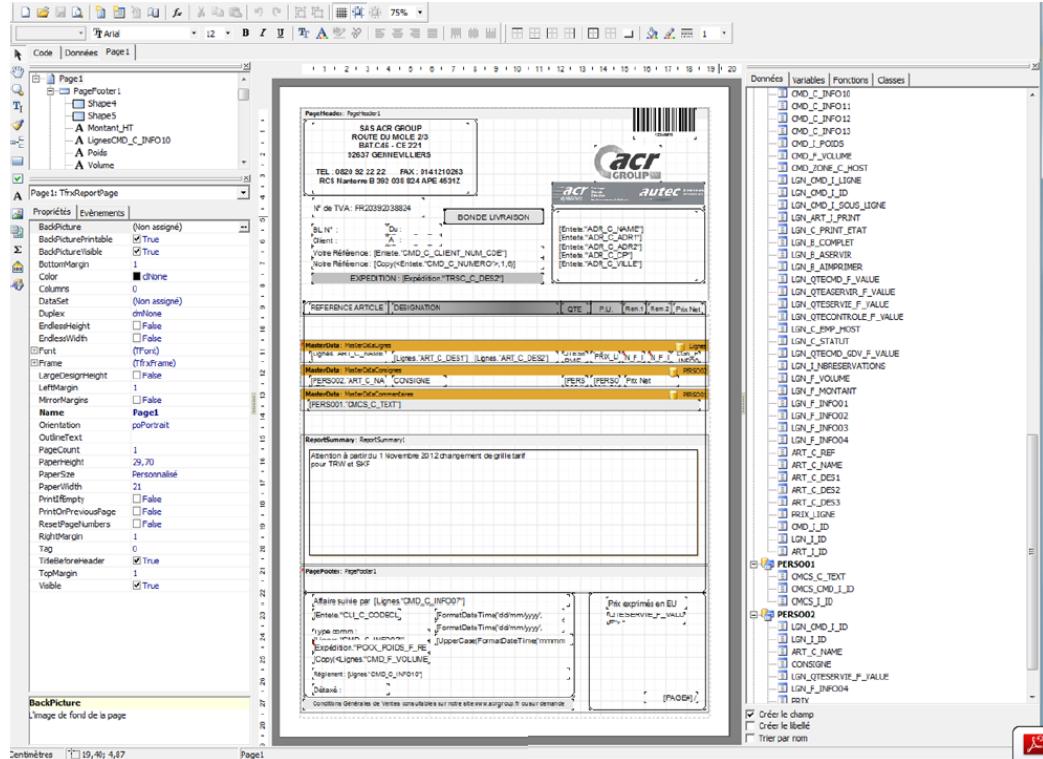


A complete transparency all around the warehouse, visualisation of:

- Goods flow
- Single articles
- Batches flow
- Serial number
- Operators
- Customer orders
- Suppliers order
- Historical Database

Keep an eye anywhere in your warehouse.

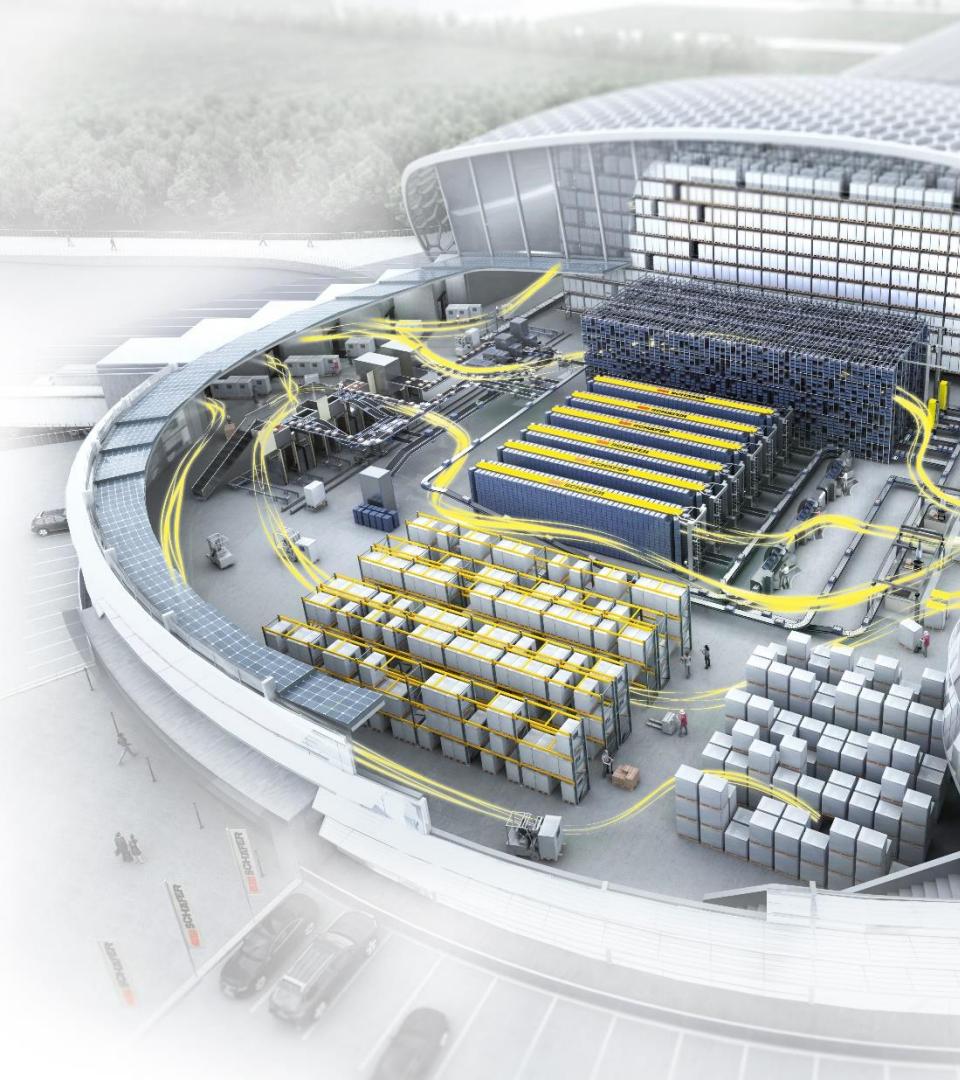
DOCUMENTS EDITOR



MORPHEUS has an **integrated tool** to develop its own **reports or labels**.

The editions **can be different** according to the customer, the type of order, the country of destination ...

MORPHEUS WMS

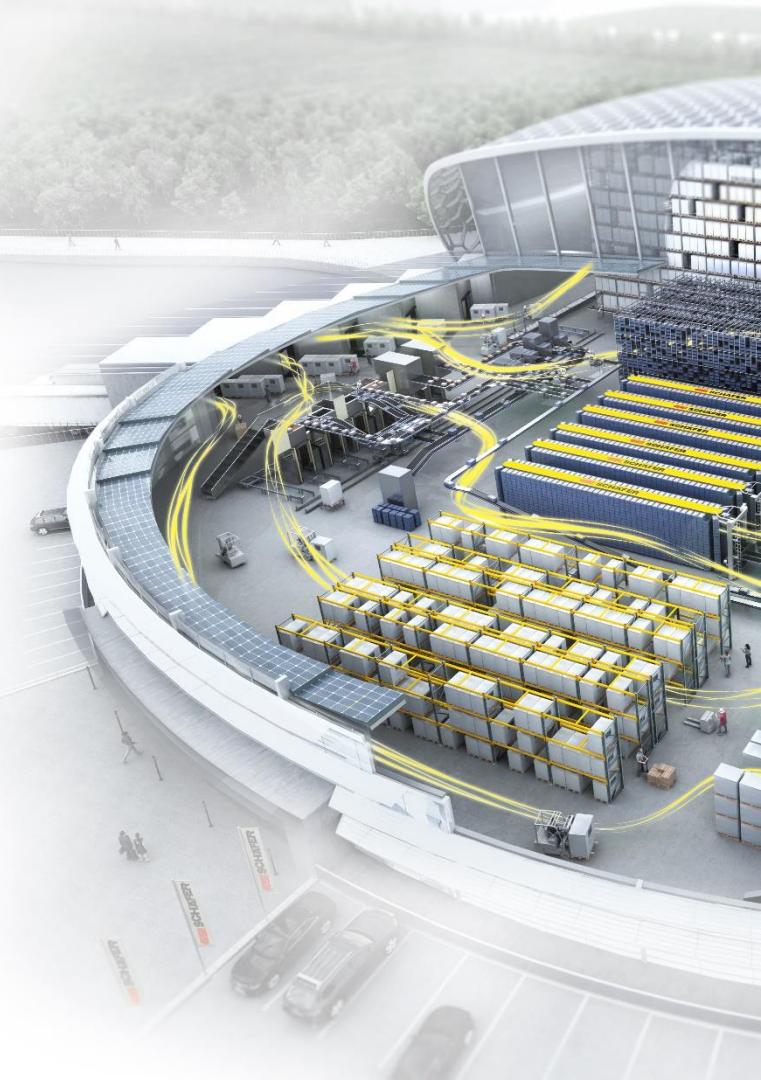


AN OVERHALL SOLUTION



INCOMINGS GOOD: PRE-SELECTION

- Purchase sequence **integration**
- **Organization** of the receipts:
 - Planning of **arrivals**
 - Declaration of arrival **without receipts**
 - Creation of **multi-orders** delivery bills
 - **Scheduling** receptions
- Supplier **quality** monitoring
- Respect of **deadlines**
- Missings / Surplus
- Quality



INCOMINGS GOOD: SELECTION



- At the **workstation** and/or **RF terminal**
- 4 reception **modes**
- Direct Storage
- **Placing** in storage trolleys
- Traceability and **serial number**

INCOMINGS FLOW: QUALITY CONTROL



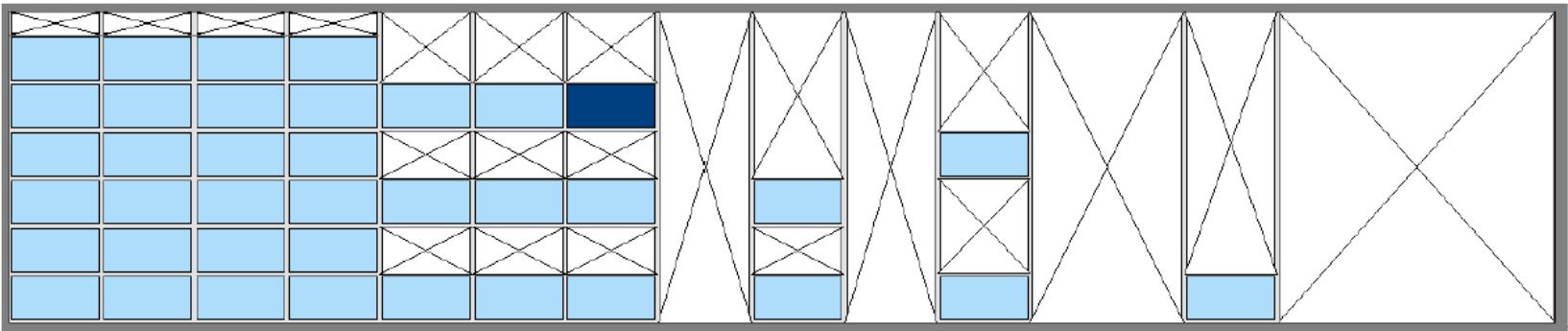
- **Stock management** in quality area
- **Calling** the handling unit control station
- Monitoring control, **recording decisions**
- Transfer sequence generation for a **stock return**

INCOMINGS FLOW: STORAGE



- At the tablet, at the RF terminal, at the touch PC for the **storage units**
- **Change of location** depending on settings. Recording the change and the operator
- **Stock entries**, by selection, list, trolley, ...
- The **location can be changed** according to the settings. Recording the change and the operator

INCOMINGS FLOW: STOCK OPTIMISATION



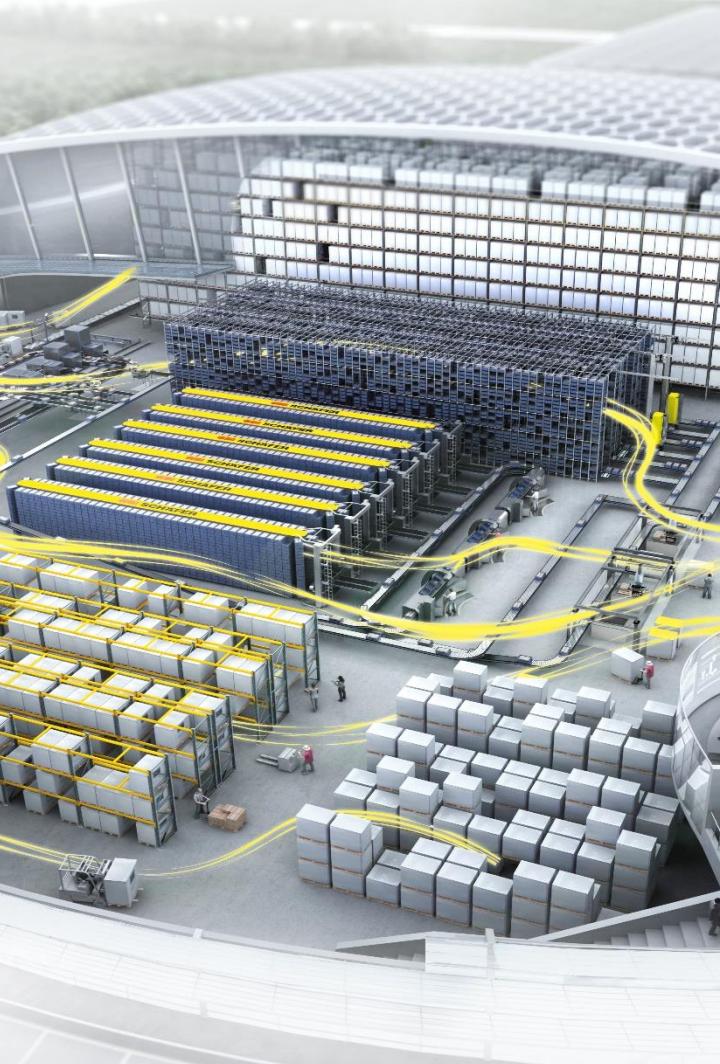
NEW TECHNOLOGY: Dynamic location creation :

When MORPHEUS has to find a **new location** for an article, it looks for an empty location (blank above) that **best corresponds** to the quantity entered **according to the product dimension**.

- It **creates the location** and assigns the article.
- It determines the new place available
- When looking for a tray, MORPHEUS takes into account :
 - Incompatibility between items
 - Article grouping rule

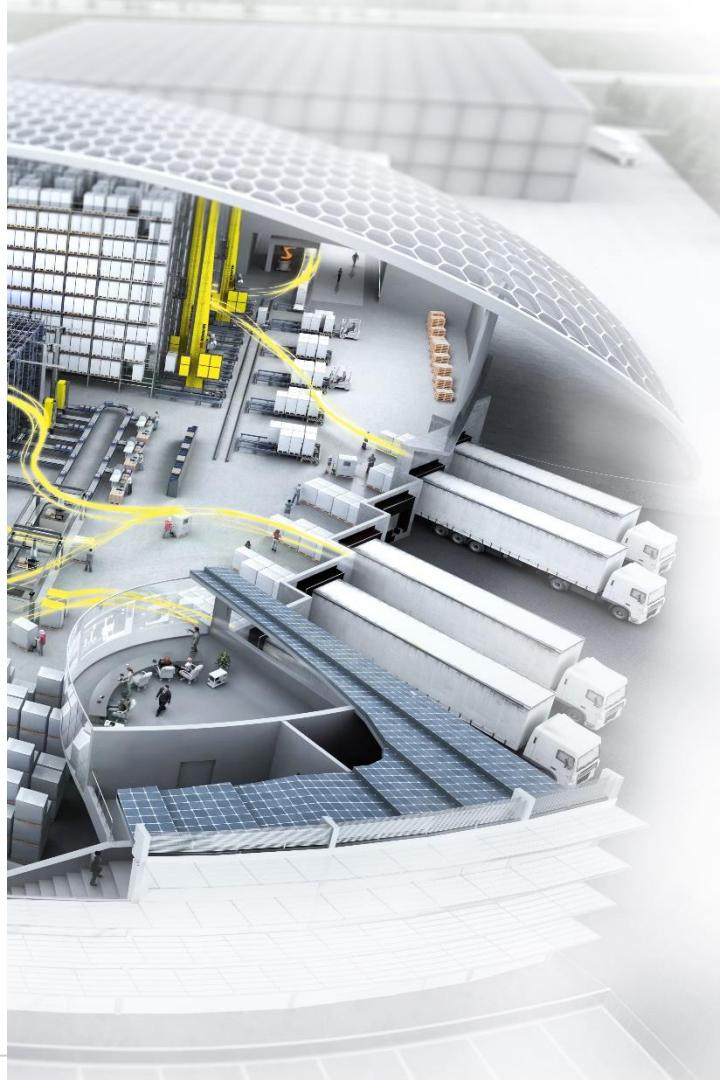
INTERNAL FLOWS: REPLENISHMENTS

- Multi-zone, multi-level replenishment
- Manual or automatic release
- Movements at the **RF terminal, tablet or PC** for the storage units
- Monitoring and controlling **any stock movement**
(reorganization of stock can be done in full activity)



OUTGOING FLOWS: SCHEDULING

- Automatically **change the priorities** of orders according to the parameters, the workload per station or per zone and the time slot.
- **Visualize the workload** by station or by zone and manually change the priorities and deadlines for preparation or packing.
- Manage **groupings** in preparation, packing or picking (Grouping orders and carrying out a single preparation, or a single dispatch).
- Take into account in real time any change in lead time or priority.
- Visualize the workload by zone



OUTGOING FLOWS: DIFFERENT METHODS

Picking methods	Multi-zones	RF Terminal	PC Tablet	Touch PC
Order preparation by lists (each list can be filtered according to the operator)	X	X	X	
Preparation for single-zone support in parallel (picking conveyor station)	X	X	X	
Multi-order burst preparation with manual selection	X	X	X	
Multi-order burst preparation with automatic selection (according to schedule)	X	X	X	
Preparation in multi-mission mode (preparation and replenishment)	X	X		
trolley picking with manual order selection	X	X		
Trolley picking with automatic order selection (assignment according to schedule)	X	X		
Preparation of a global collection of "mono wave" then packaging	X	X	X	
Preparation of a global collection of "multi wave" then packaging	X	X	X	
Picking for automatic storage systems	X			X
Manual Burst preparation for automatic storage systems	X			X
Dynamic Burst preparation for automatic storage systems	X			X
Preparation in Trolley with Manual Selection for automatic storage systems	X			X
Preparation in Trolley with Automatic Selection for automatic storage systems	X			X
"GoodsTo Man" picking for automatic storage systems	X			X
"PickToLight" Picking	X			X

Multi-zone mode allows:

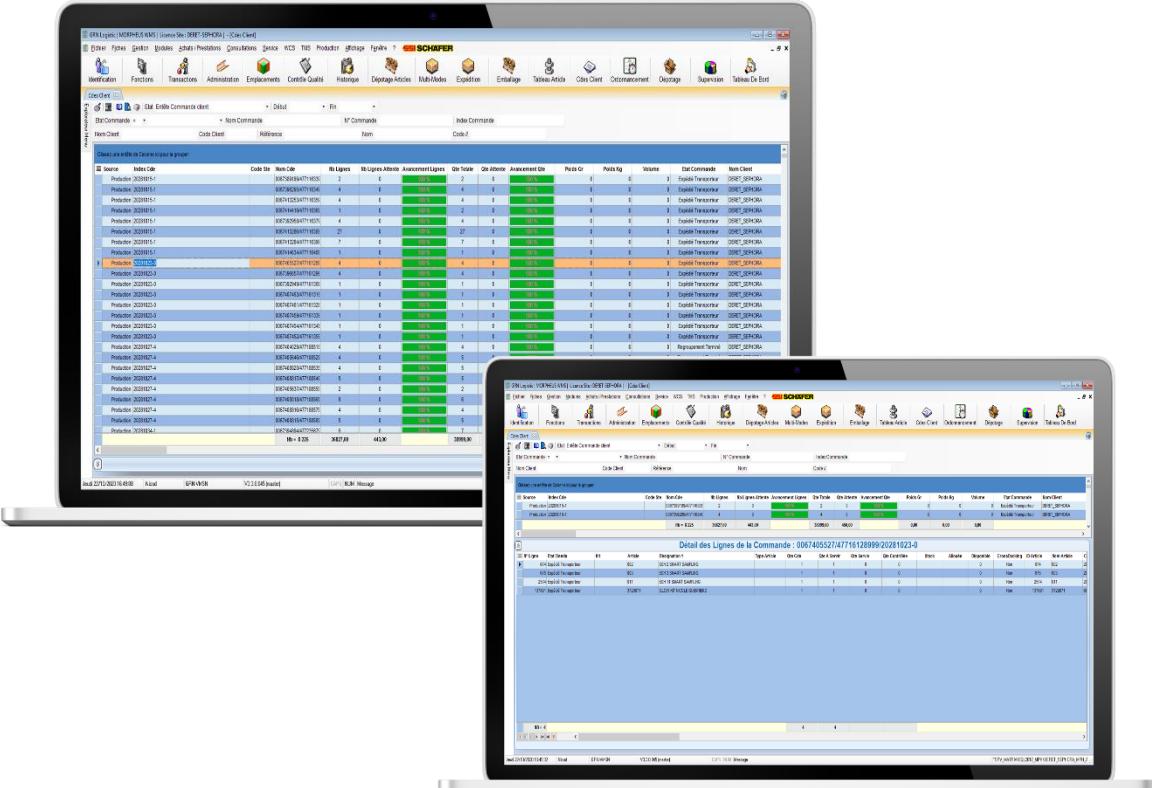
- Cutting the preparation by picking zone
- Carry out the preparation sequentially (zone by zone with possibly the same support) or in parallel (the removal is carried out independently in each of the zones).

OUTGOING FLOWS: PICKING



- MORPHEUS **assigns orders** to the operator according to order type filters, scheduling priorities and the area in which the operator is located.
- The manager priorities **preparations and dates** by type and area.
- Several settings allow to **specify the validation** mode of the picking and the quantities according to the profile of the operator
- When the bin is assumed to be empty, a **confirmatory inventory** is requested from the operator.

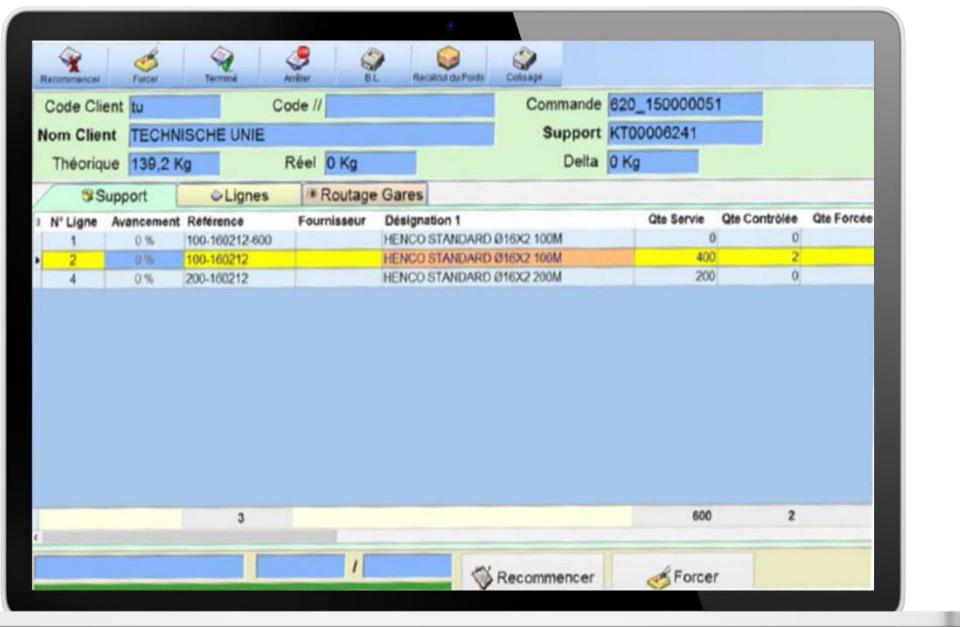
OUTGOING FLOWS: PICKING MONITORING



Several monitoring modes :

- Order by order
- All current orders
- Remaining to be done by zone with display of the number of operators connected
- Graphical progress per area

OUTGOING FLOWS: PICKING CONTROL



- **Control commands** by scan or force the control for an order or for a component
- Integrate control criteria (type of customers, product lines, etc.)
- Save control actions

OUTGOING FLOWS: PACKING

Packaging:

- Per order
- To the preparation
- From a PC with touch screen or RF terminal
- Management of returnable pallets
- Automatic carrier selection
- Printing of transport labels
- Print delivery notes, packing lists, invoices...



OUTGOING FLOWS: SHIPMENT



Several management modes:

- Shipping
- Goods pickup
- At the RF terminal, loading control, counter delivery, collection with signature registration
- Block pending settlement

E-MAIL ALERT

A unique extension allows you to **send E-Mails** to mailing lists according to different events.

Example of events:

- Arrival of supplier order
- Anomalies of reception
- End of order preparation
- Out of stock
- Shipments



MORPHEUS WMS

THE GOALS



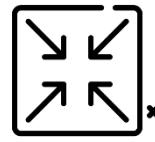
Increase
productivity



Managing
the warehouse



Optimising
the floor space



Reduce
picking error

MORPHEUS WCS



WHY DO YOU CHOOSE GRN LOGISTIC – SSI SCHÄFER?

WORLD LEADER IN WCS SOLUTIONS

- A know-how at the origin of the company
- Comprehensive advice and support
- A strong experience as an integrator



WHY DO YOU CHOOSE GRN LOGISTIC – SSI SCHÄFER?

WORLD LEADER IN WCS SOLUTIONS

- Increase productivity (frequently over 30%)
- A single cockpit for all your logistics chains.
- A single technology compatible with all your mechanized systems.



CONTROL AND AUTOMATION

Control of conveyors for the transport of cartons, containers, etc.

- Real-time driving multi-station routing
- Real-time management workloads per station
- Overall integration of the WMS Warehouse management and order preparation

Storage and picking drivers:

- Unique driving ability for several automatic storage machine (Storage and retrieval machine, Miniload, Shuttle, Vertical lift machine...)
- 3D management for storage emplacement (optimization algorithm)

Sorter and robotic drivers:

- Unique driving for Pick to light and Put to light
- Automatic driving for the filing of documents and labels
- Driving of palletizing and sorting robots



MORPHEUS WCS

Native piloting and optimization function for automatic storage systems

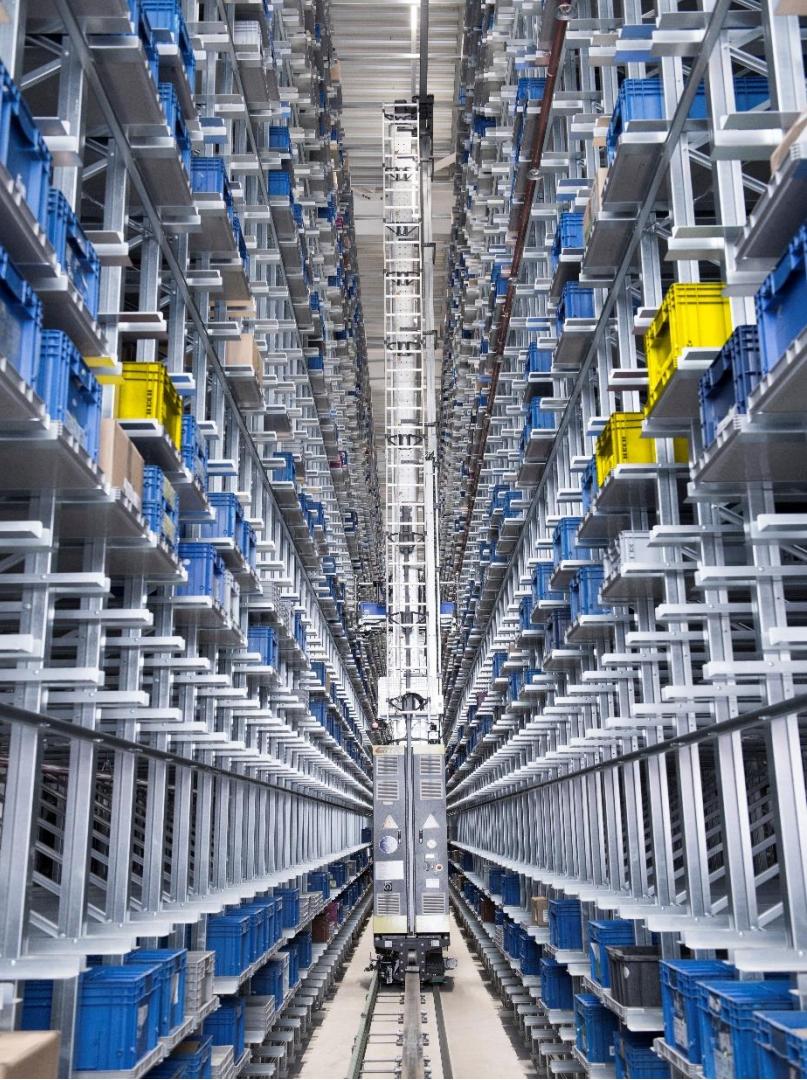
- Printing dynamically in preparation
- Barcode // dynamic control according to products and order profiles
- Display and management of packaging during picking
- Full decoding of EAN128 for batch and expiry traceability
- Displaying product images
- MORPHEUS manages an internal messaging system for dialogue with operators.



MORPHEUS WCS

Management of location allocation strategies by storer or storer's group

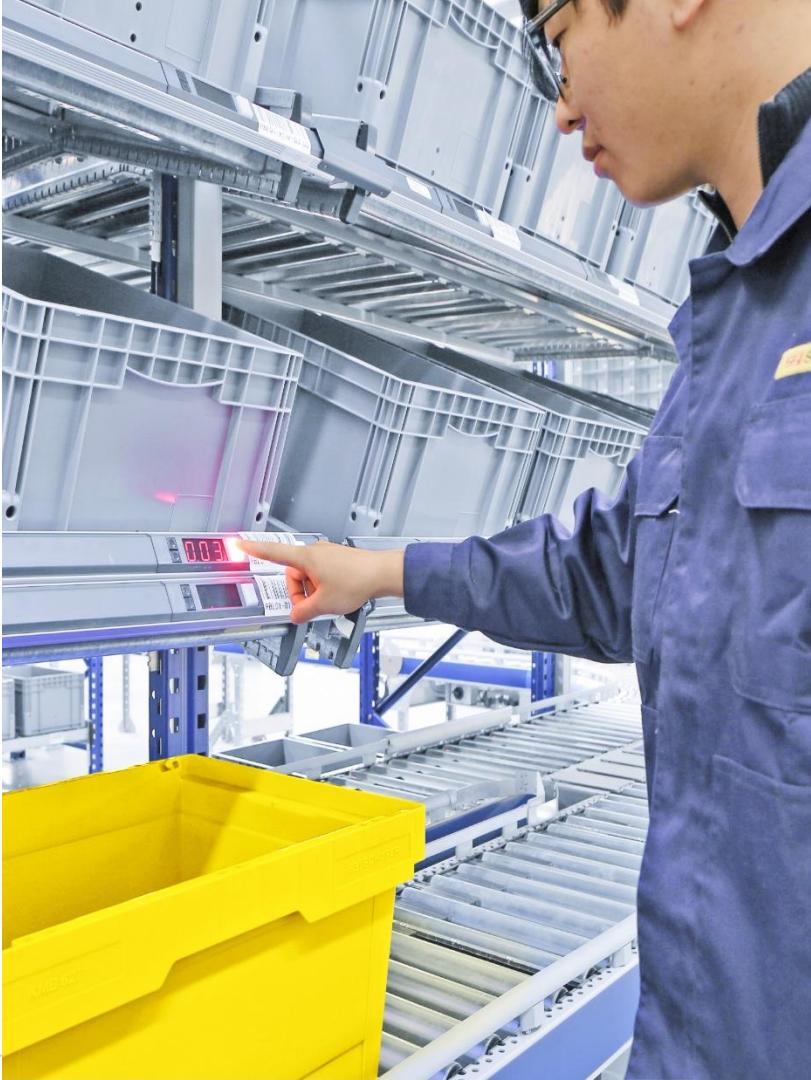
- Guarantee availability in the event of a breakdown
- Optimizing the distribution of flows between storage operators or groups of storage operators in order to manage control and movement in hidden time.
- Manage the temporary blocking of a storage unit with load transfer to another storage unit or group of storage units.
- Manages the failure of a storage unit or a group of storage units with dynamic reallocation of the slots to other machines



MORPHEUS WCS

Picking management (Wave, Sorting furniture, Packaging...):

- Native PickToLight
- Collects : Wave / Sorting rack, Packaging
- Mono and multi collection per wave
- Mono packaging with direct control of the conveyor belt for a deposit in parcels according to the size of the products.
- Sorting rack with management of deposit detection by infrared barrier.
- The detection of the catch to automatically print the documents in less than a second.
- Depositing them in boxes with real time allocation of parcels and routing.
- MORPHEUS manages the printing of different documents, fully configurable
- Management at the end of the wave of the distribution of the different pieces of furniture according to the load.



MORPHEUS WCS

Management of document generation with a report tool ability to:

- Generate all types of barcodes // (Code 39, 128 ABC, 2/, QR ...)
- Generate saving PDFs on the fly in its database as a BLOB Data.
- To design all types of layouts (Label, Plan, A4 sheet, multi-level break, 5 levels of sub-reporting)



OUTGOING FLOWS: PICKING MONITORING

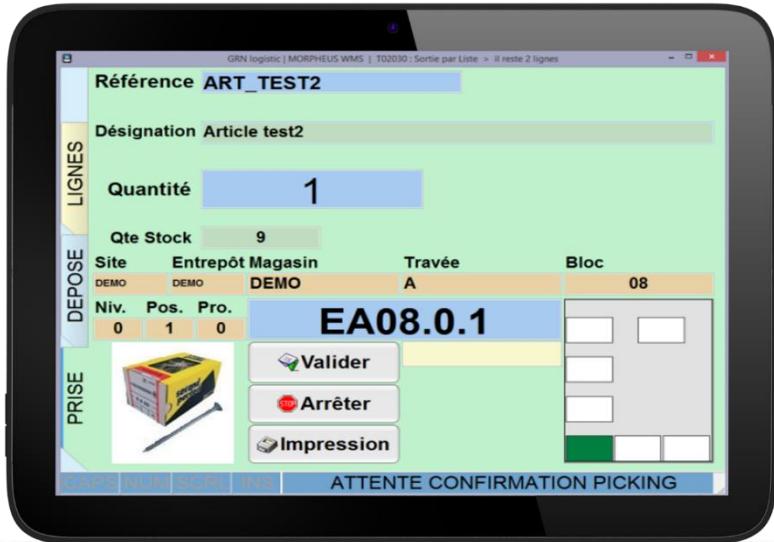
Management of documents automatic deposit:

- Multi-layout design (Label, Plan, A4 sheet, multi-level break, 5 levels of sub-reporting)
- Connecting to the database
- Manage Scripting with events in the report to handle special cases
- Generate HTML dynamically on-the-fly for visualization



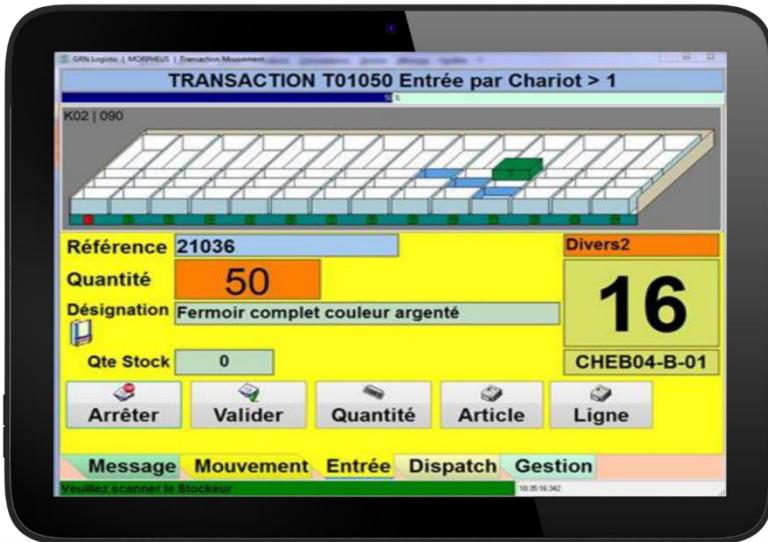
MORPHEUS WCS

Management of all transactions with a touch tablet:



- Entry into stock
- Order picking, trolley, burst ...
- Replenishment
- Inventory
- Printing dynamically in preparation
- Control barcode // according to products and order profiles
- Display and management of packaging during picking
- Decoding of EAN128 for batch and expiry traceability
- Display of product images
- Internal messaging for dialogue with operators
- Voice messages in case of error to warn the operator without constantly checking the screen.
- MORPHEUS manages the virtual piloting of automatic storage devices.

MORPHEUS WCS



Graphical representation of stock movements:

- Positioning of the product in the tray
- Photo display if available
- Full touch screen
- Background color depending on movement and/or emergency

METHODOLOGY



METHODOLOGY

FUNCTIONAL ANALYSIS

- Launch meeting
- Knowledge transfer
- Functional analysis
- Specifications
- IT architecture
- Warehouse organization
- Switch plan

ACCEPTANCE TESTS

- Key-Users Training
- Unitary tests
- Integration tests
- Solution correction
- Switch tests
- Process documentation
- Switch preparation

SPECIFICATION VALIDATION	TEST ENVIRONMENTS	SYSTEM AND PROCESS VALIDATION	OPERATION SOLUTION
	<ul style="list-style-type: none">• Test plans and scenarios• Software setting• Specification development• interfaces• IT installation• PGI Adjustments		<ul style="list-style-type: none">• Physical switch• Data integration• Launch• On-site support• Users training

SOLUTION IMPLEMENTATION

SWITCH



Thank you!

Think Tomorrow.

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