OneService Model Company - Logistics

Scenarios & Solution Overview

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OneService, Business Solution Architecture

21.08.2016

Introduction
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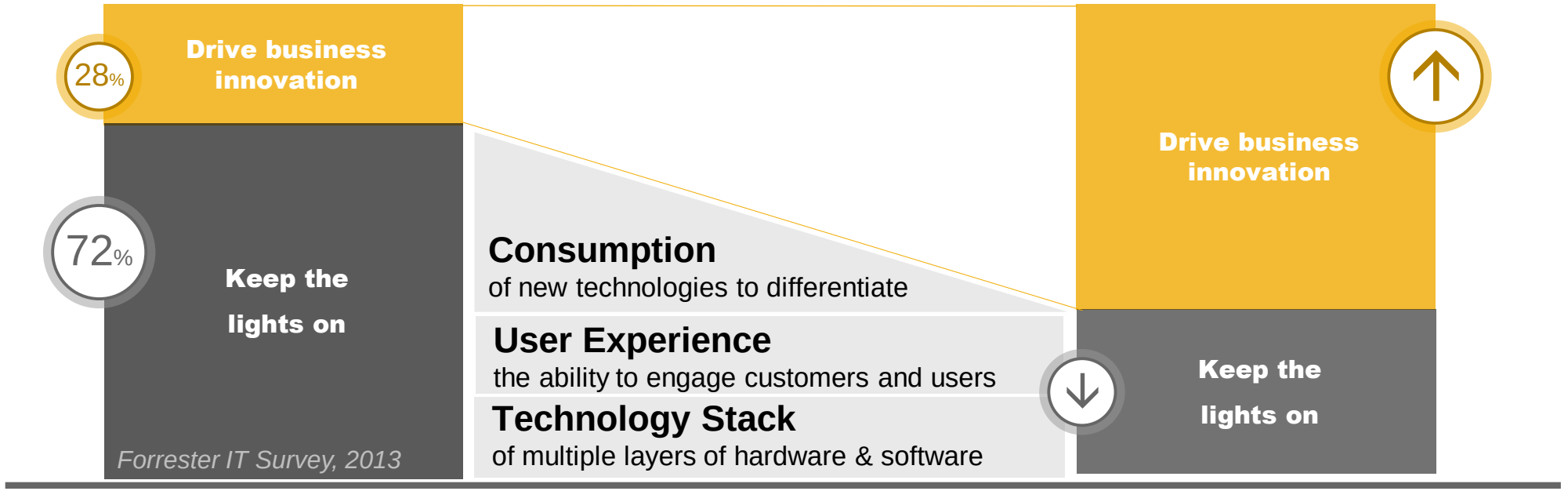
Complexity built up over decades hampers the ability to innovate Radical simplification is needed to unlock the potential



> 40% executives **worry that their organizations will not keep pace** with technology change and lose their competitive edge.
>
> *– McKinsey study, 2013*

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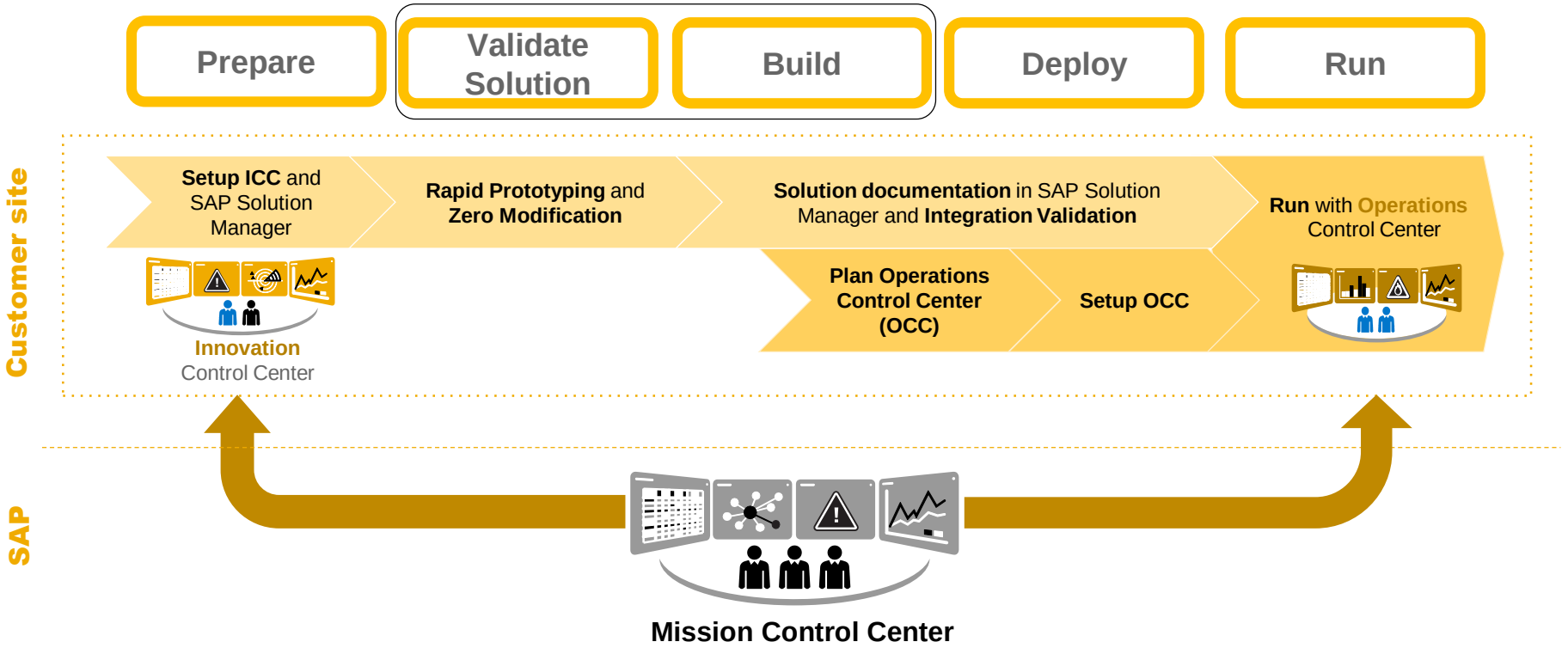
Build SAP like a Factory



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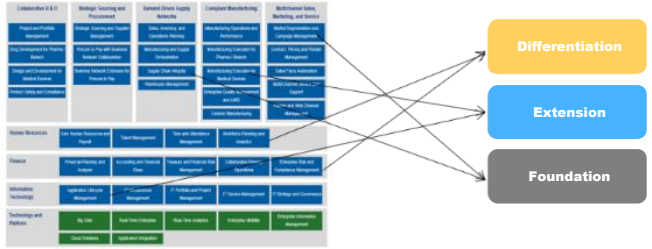
Rapid Prototyping - Roadmap

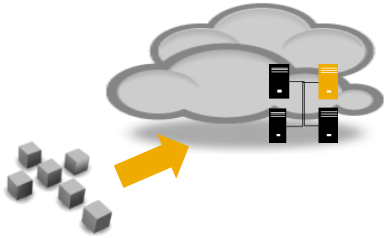
1 Categorize Business Processes



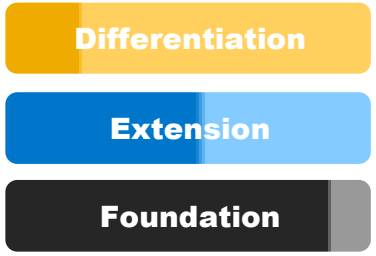
2 Select relevant Solutions

3 Identify potential Accelerators

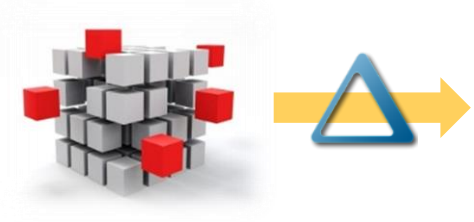
4 PreAssembly



5 Scope Validation



6 Delta Handling



- Customization
- Re-use from as-is
- Partner Offering
- Co-innovation
- Modification

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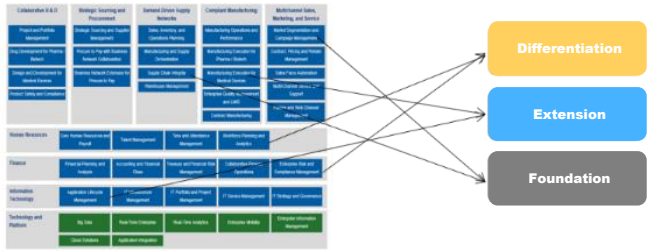

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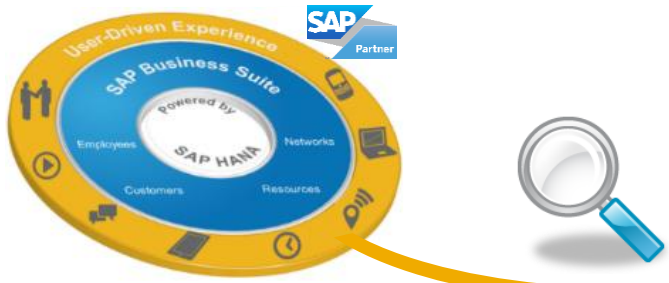

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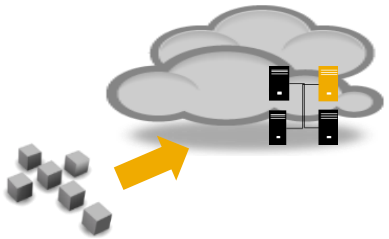
4 PreAssembly



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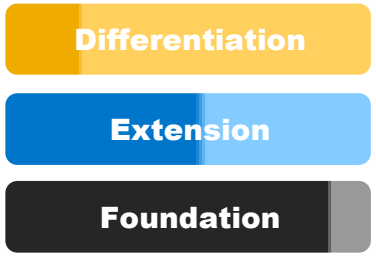

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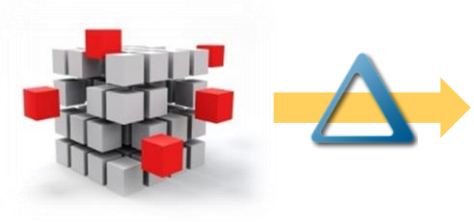

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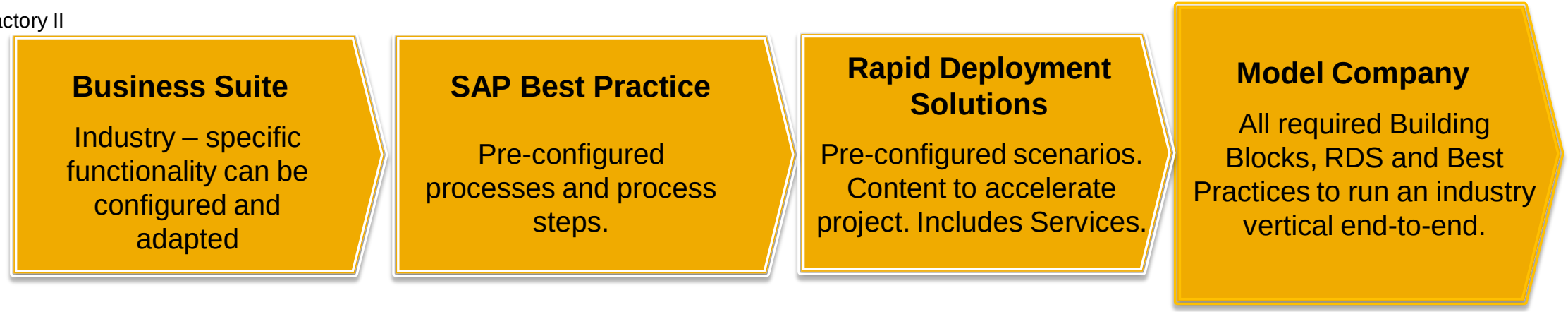
One Service Model Company – General Introduction



Model Company

- Is the ultimate form of standardization for a specific LoB or industry vertical
- Provides a comprehensive baseline for Rapid Prototyping
- Provides customer specific cloud for demo and implementation quick start
- Simplifies and harmonizes implementations in target segments
- Leverages key experts across projects and allow better scale by reduced risk
- Reduces implementation costs
- Increases ability to innovate
- Accelerates time-to-value
- Minimizes total costs of ownership

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One Service Model Company for Logistics

One Service Model Company with a regional focus can help to support the Business Transformation of One-Service-Customers, accelerate the implementation of SAP solutions, providing agile project deployments and accelerate license sales for the underlying SAP solutions.

Both, onsite team members of SAP as well as customers can plan their implementation scope using packaged solutions, or identify solution areas that can be covered using SAP Rapid Deployment- as well as preconfigured scenarios and processes.

What is OneService Model Company?

- Zero-Modification Standard SAP functionality
- Selected SAP Applications reflecting latest solution capabilities
- SAP Core Configuration + RDS + Best-Practice content for specific countries (e.g. China)
- All implemented for a local Model-Company and completely integrated
- Solution Architect Validation
- Integration Validation
- Best Practices process modeling (signavio)

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One Service Model Company for Logistics

Being used as a regional presales platform – the Model Company approach can not only be used to map package offerings to specific customer requirements, or to generate cross-selling opportunities but also share best-practices from similar implementations in the industry to underpin SAP's leadership.- providing the following benefits:

Core benefits

- Being complete - Helping presales team to demo the art of the possible with ready-to-go E2E processes
- Being regional - Helping customers to understand SAP's value proposition for the region
- Being up-to-date – Helping customers to leverage latest technology based on HANA and Cloud
- Being fast - Helping to accelerate solution deployments and jump-start implementations
- Being flexible – Helping onsite teams to rapidly build demo environments and POCs
- Being innovative – Helping customers to go for co-innovation cycles and have quick access to innovations
- Being a reference – Showing industry know-how and best practices
- Being simple – Turnkey integrated landscape and documented scenarios

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Building Block – Enablement

Detailed step by step description how to integrate the solution landscape and proceed in case of e.g. client copy:

To Do After Client Copy in TM - Customizing

Referred RDS Guides: TMA

System	Type	New Client	Path/Transaction	To Do	Reference	Print Screen
Connectivity						
TM	Customizing	x	SPRO --> SAP Customizing Implementation Guide --> SAP Transportation Management --> Transportation Management--> Master Data --> Create Active Version and Model	check the activation of Version and Model	Guide TMA. 3.1.1	
TM	Customizing	x	SPRO -> SAP Transportation Management -> SCM Basis -> Integration -> Basic Settings for Creating the System Landscape -> Assign Logical Systems to a Client	assign new logical system TM to a client	Guide TMA. 3.2.2	
TM	Basis	x	SM59	define RFC connection to new ERP system	Guide TMA. 3.2.4	
TM	Customizing	x	SPRO -> SAP Customizing Implementation Guide -> SAP Transportation Management -> SCM Basis -> Integration -> Basic Settings for Creating the System Landscape -> Assign Logical System and Queue Type	create entries for new TM system and new ERP system check of there is the entry for PI system maintained	Guide TMA. 3.2.3	
TM	Basis	x	SMQR	register CF*, XBQ* and XBT* queues	Guide TMA. 3.2.6 and 3.2.7	
TM	Basis	x	SMQS	register new ERP system		
TM	Customizing	x	SM30	table name - /SCMB/TBUSSYS create new entries for new ERP and TM systems		

Assignment of Logical System to Business System Group

BusSystGrp	Logical sys...	SAP Ind.	Rel...	Queue Type	Err. Hndlg
ERP_BG1	ECNCLNT510	X	700	I Inbound Queues	Strict (Term
ERP_BG1	P7ACLNT001	X	700	I Inbound Queues	Strict (Term
ERP_BG1	TM9CLNT510		8.00	I Inbound Queues	Strict (Term

	Destination	Type		Max.Conn.	Max. Runtime
100	R6ECLNT100	R		10	60
100	R6HCLNT100	R		10	60

Buffer for SLD Data of Business Systems

Business System	Manual Maint.
ECNCLNT510	Flag is Not Set
P7ACLNT001	Flag is Not Set
TM9CLNT510	X Flag set. Event has occur...

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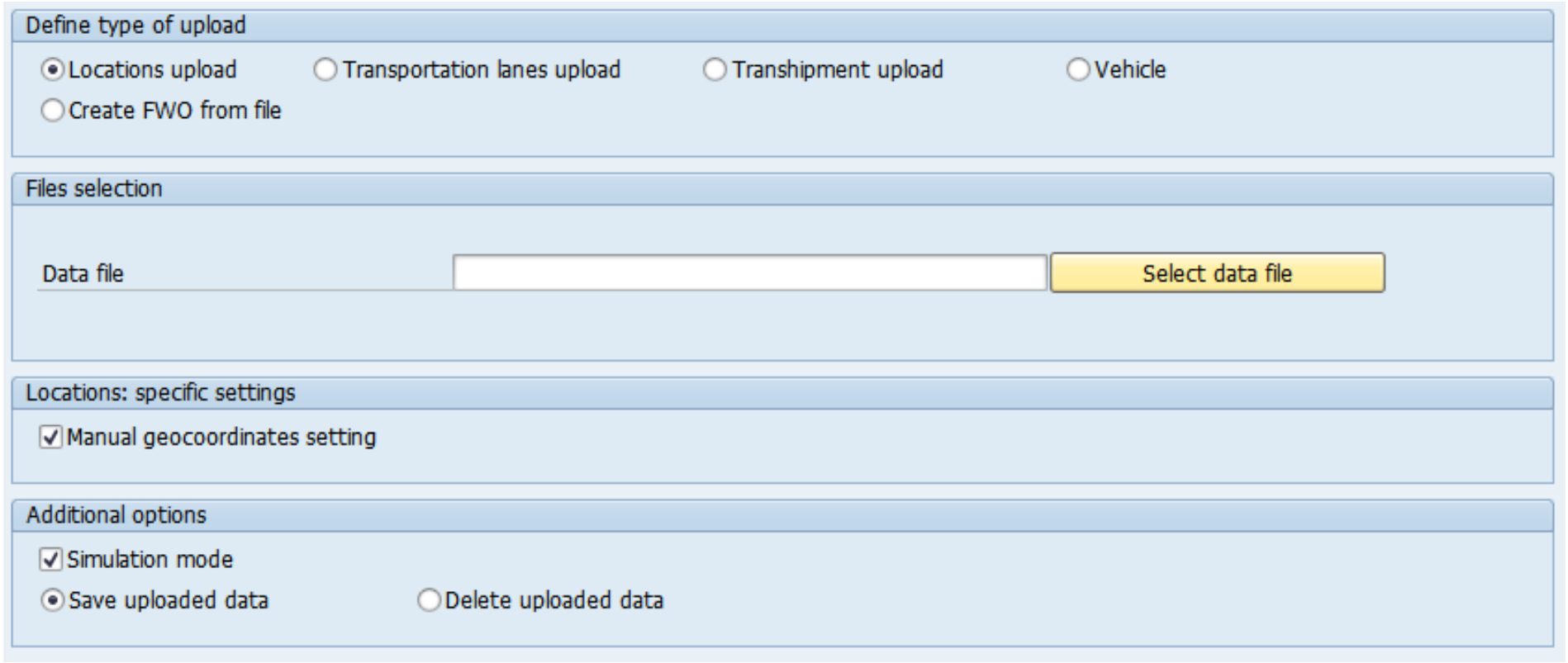
Building Block – Content

For Demo, Proof of Concept or Project Jump-Start – easy to use and fast data uploading tools:



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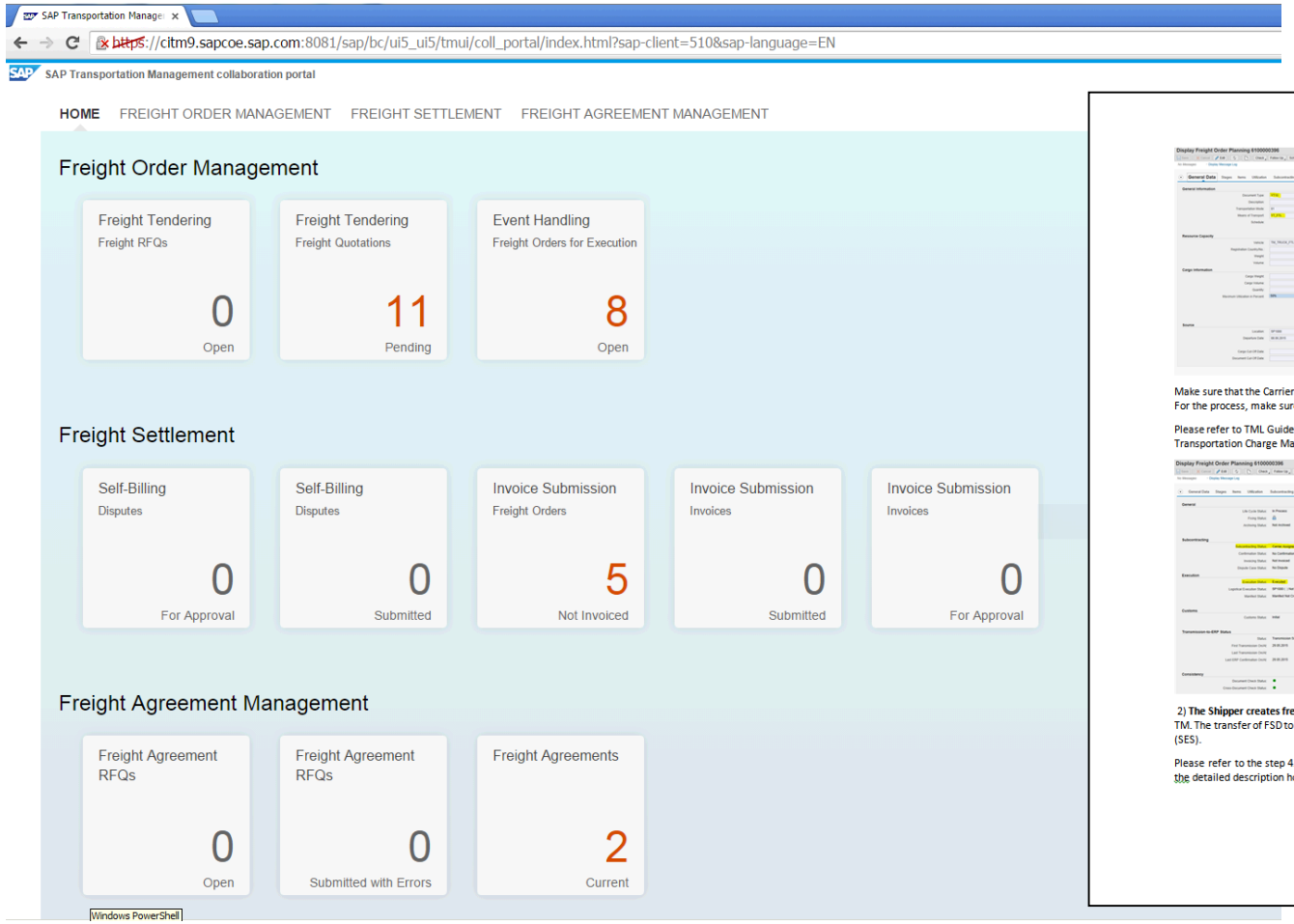
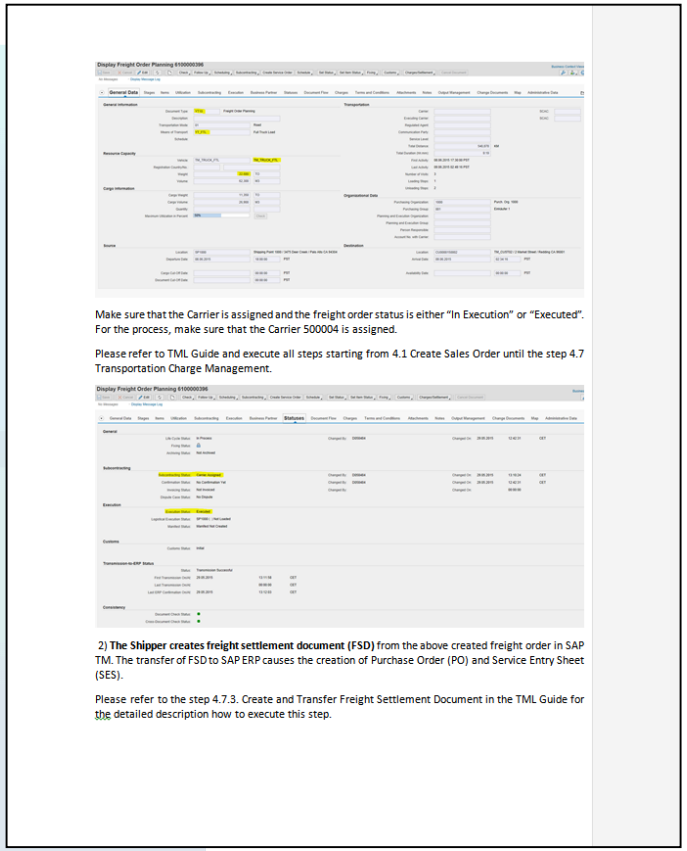
Building Block – Content

Preconfigured TM Collaboration Portal with process description guides, e.g. Invoice Submission





Make sure that the Carrier is assigned and the freight order status is either "In Execution" or "Executed". For the process, make sure that the Carrier 500004 is assigned.

Please refer to TML Guide and execute all steps starting from 4.1 Create Sales Order until the step 4.7 Transportation Charge Management.

2) **The Shipper creates freight settlement document (FSD)** from the above created freight order in SAP TM. The transfer of FSD to SAP ERP causes the creation of Purchase Order (PO) and Service Entry Sheet (SES).

Please refer to the step 4.7.3. Create and Transfer Freight Settlement Document in the TML Guide for the detailed description how to execute this step.

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Building Block – Content

Not all mentioned functionality is already available in the system

Focus on Truck Transportation

- Gantt Chart functionality
- GPS Integration
- GIS Integration
- Load Planning and Pallet Building
- Transit Warehouse (after upgrade to 9.3)

➢ New available functionality is ready to use / test / proof

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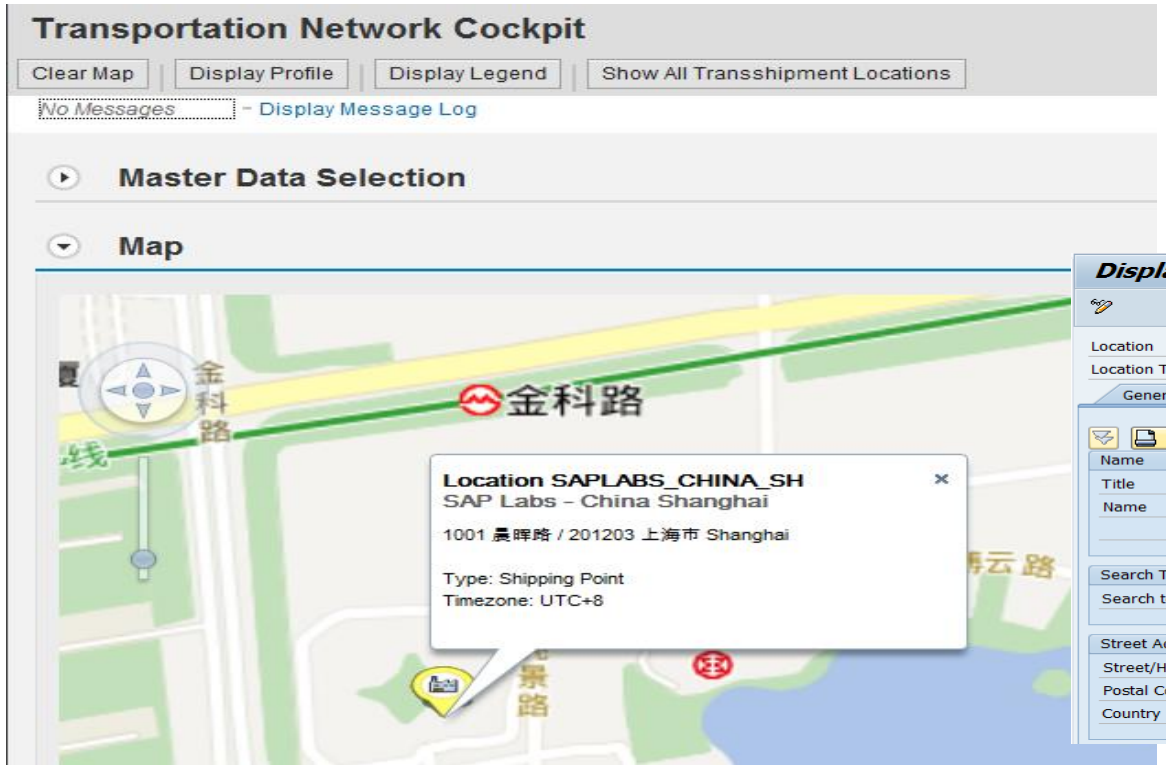
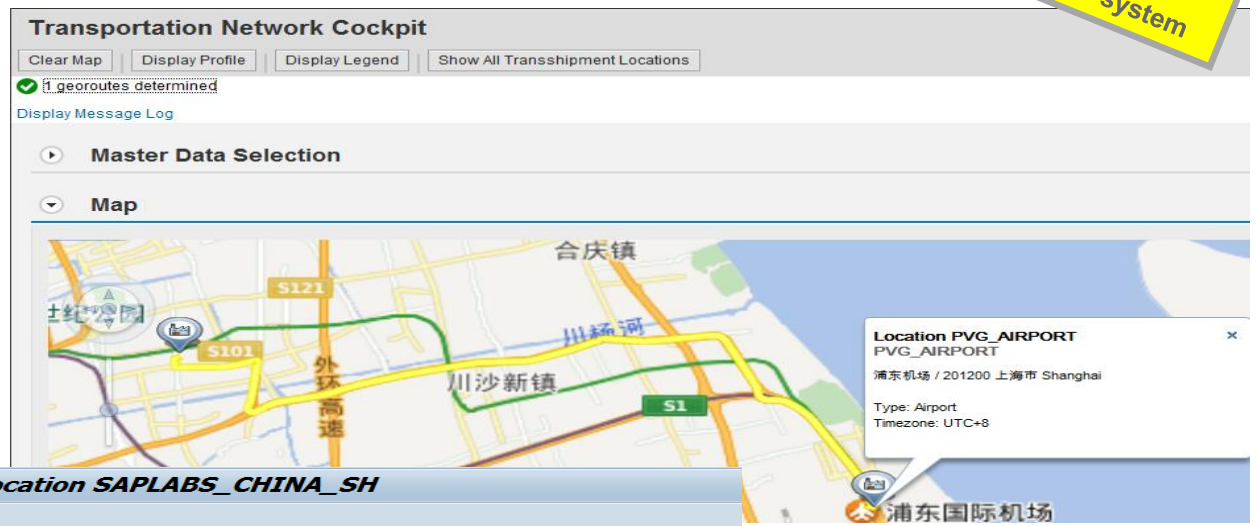
Building Block – Content

Not all mentioned functionality is already available in the system

GIS Integration to AutoNavi / Nokia HERE / OpenStreetMap

- Map Display
- Geo-coding
- Geo-routing
- Distance / Duration Determination





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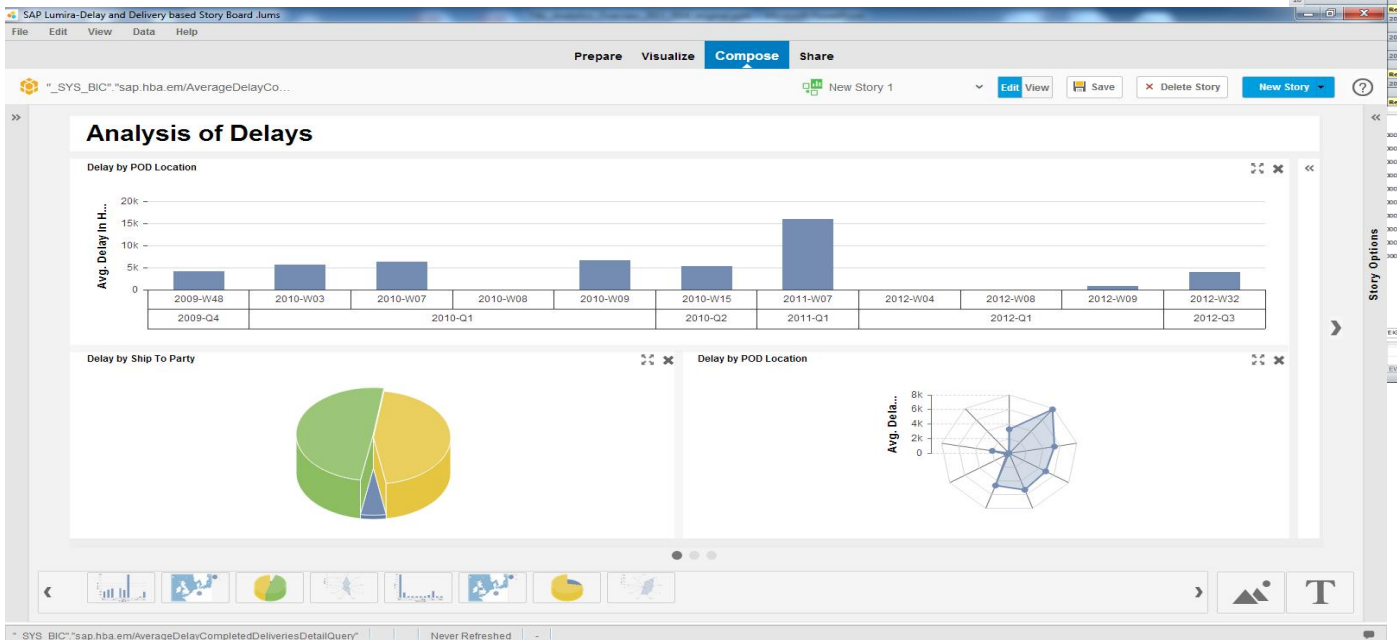
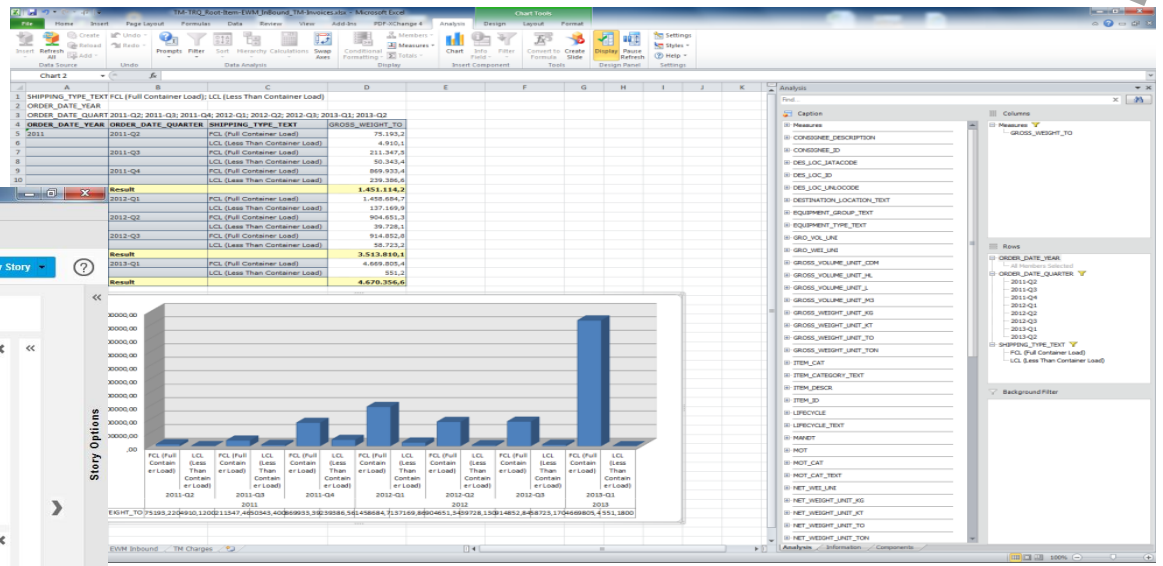
Building Block – Content

Not all mentioned functionality is already available in the system

Analytics Integration:

- Lumira
- Smart Business
- Analysis for Office





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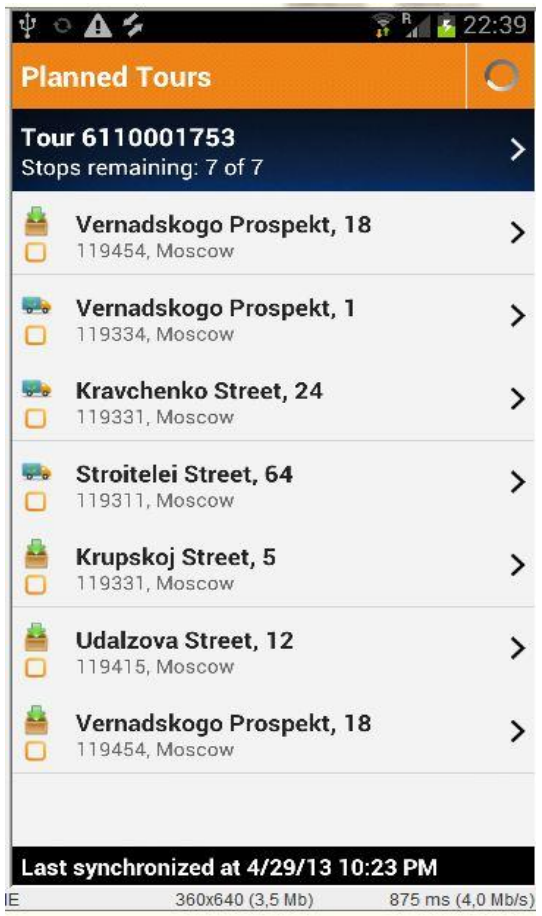
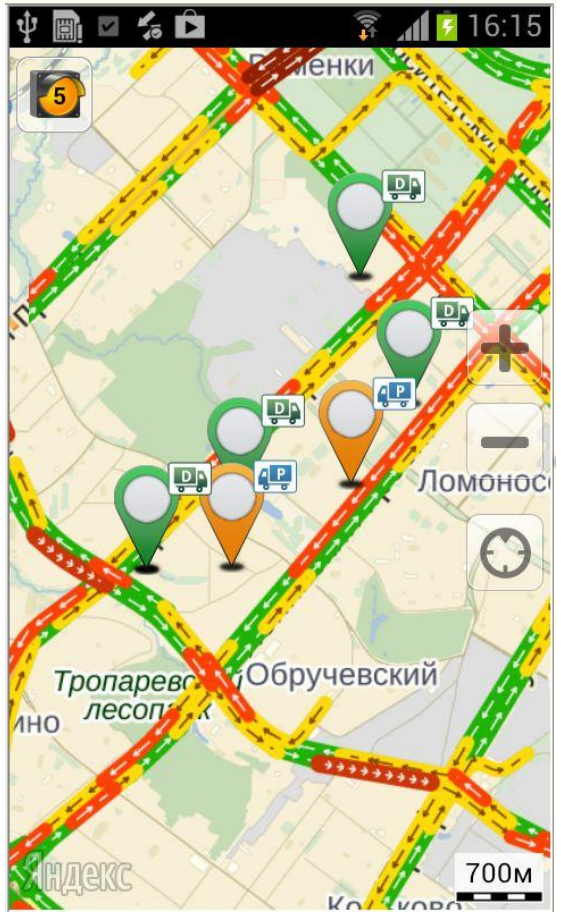
Building Block – Content

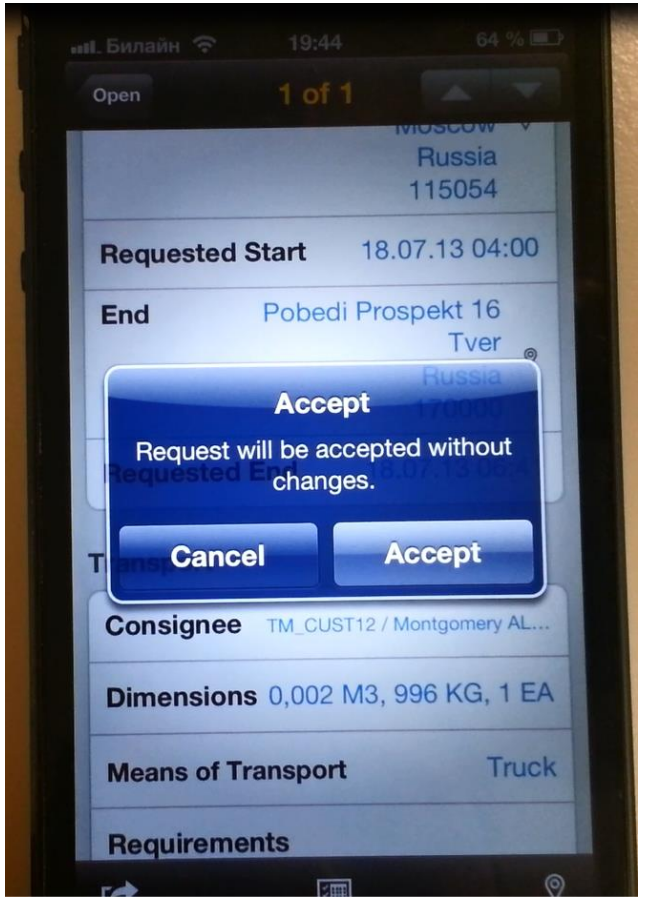
Shows enhancements

Mobile Applications Integration

- Transportation Management Notifier
- Transportation Management Tendering







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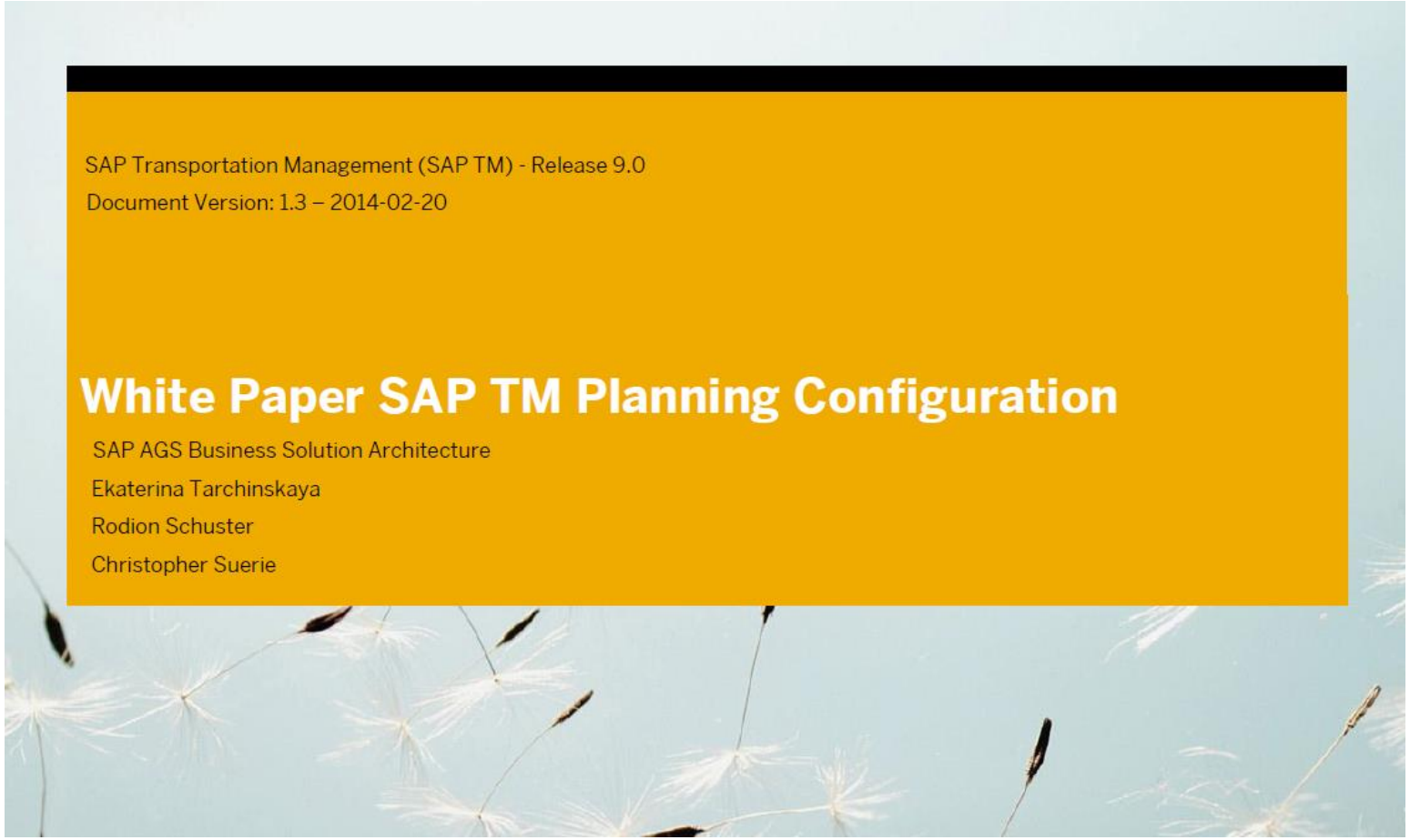
Building Block – Enablement

For example – detailed solution knowledge - how to configure the TM Optimization Engine:



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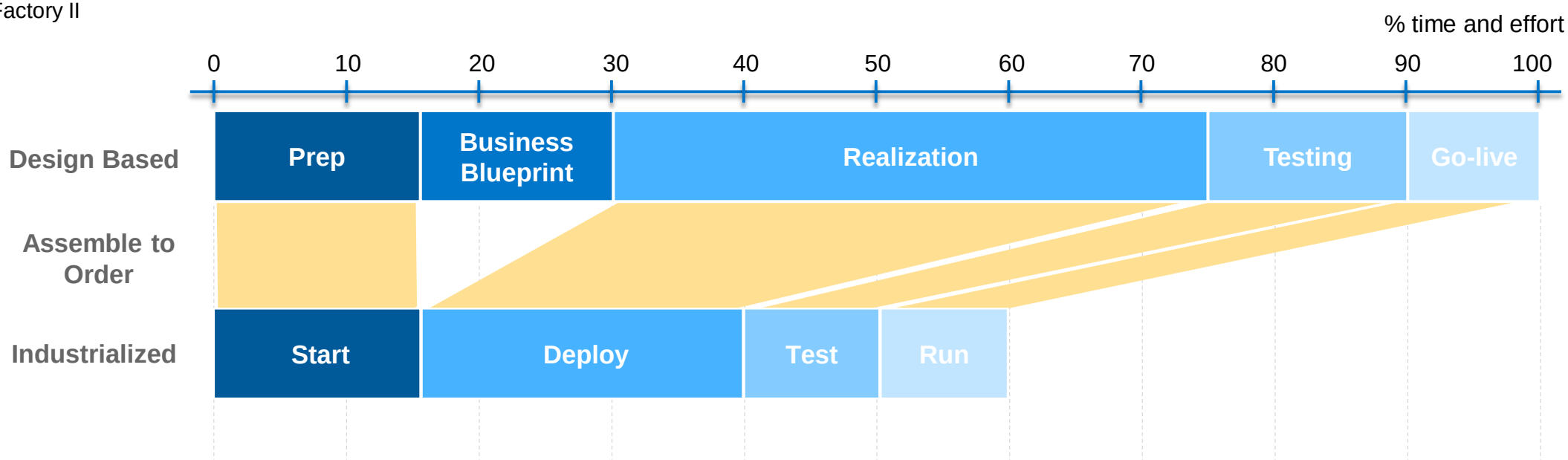
Building Block – Services



Blueprint - up to 100% Savings

- Fixed scope
- Business Blueprint ready to validate
- Best Practice processes modeled and described

Realization - up to 50% Savings

- Best Practices processes configured and documented
- Delivery through transports and BC Sets
- Operational Support Documents available

Testing- up to 30% Savings

- Test Case templates supplied
- Operations support templates available

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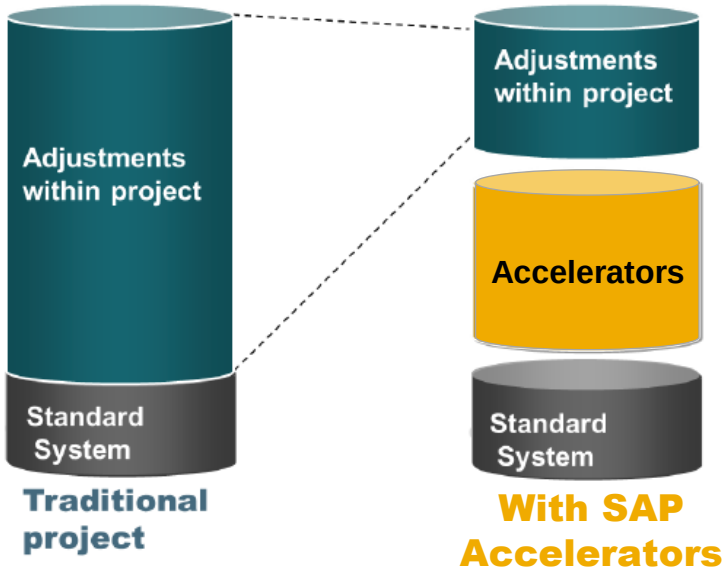
Benefits & Proof-Points



Tangible Benefits	Enabler
Faster Implementation	
Fast learning curve	Extensive documentation
Project quick-start	Preconfigured system, industry template
Reduce Blueprint effort	Start with scope validation on existing BPD
Flexible addition of processes	Use of flexible building blocks
Lower Cost	
Reduced project duration	Proven methodology
Reduced maintenance	Standardized industry processes
Reduced number of interfaces	Integrated solution
Reduced project cost	Quick access to prototype, blueprint and training systems
Reduced customization effort	Pre-configured industry template
Lower Risk	
Reduction of configuration issues	Proven pre-configuration
Industry-specific solution	Extensive experience from SAP and partners
Future proof solution	Scalable solution

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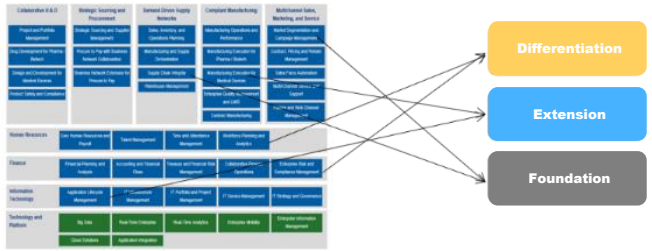

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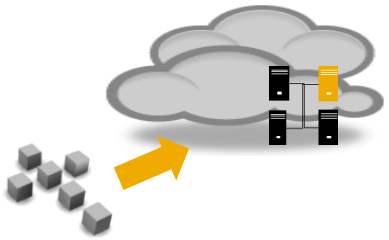

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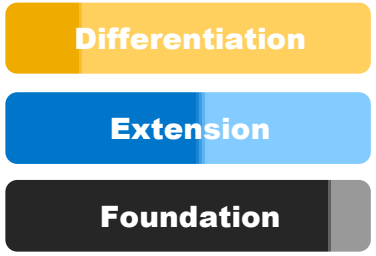

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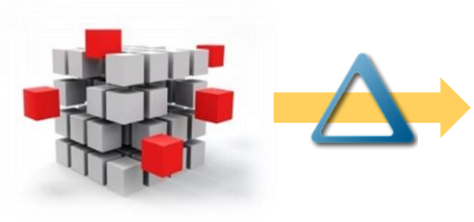

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Approach Options for Preassembly

Clean Slate Model Company

Select rapid deployment solutions

SAP Best Practice Industry Package

SAP Best Practice Baseline Package

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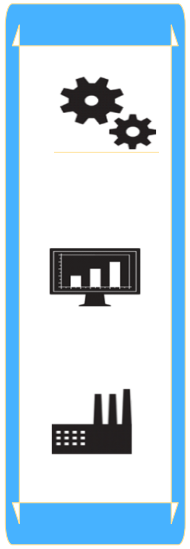


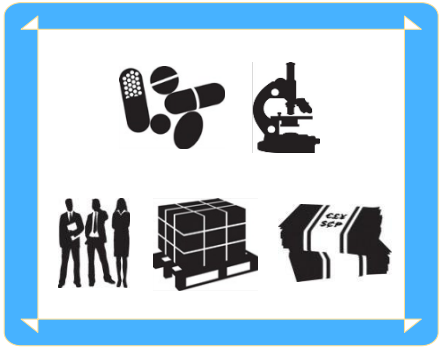
Customer-specific Adjustments

= **Greenfield Project**

A

Qualified Model Company

Select rapid deployment solutions



System Copy of Existing Customer Environment

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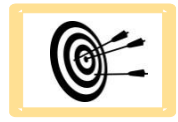
HANA based Simplification



Functional Upgrades

Reduction of Custom Code

= **Installed Base Project**

B

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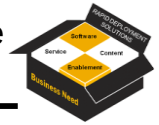
Approach Options for Preassembly

A. Clean Slate Model Company

Pre-assembled packages from the SAP Package Library



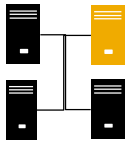
RDS

SAP Best Practices

(China) Model Company

B. Qualified Model Company

Copy of the customer System landscape



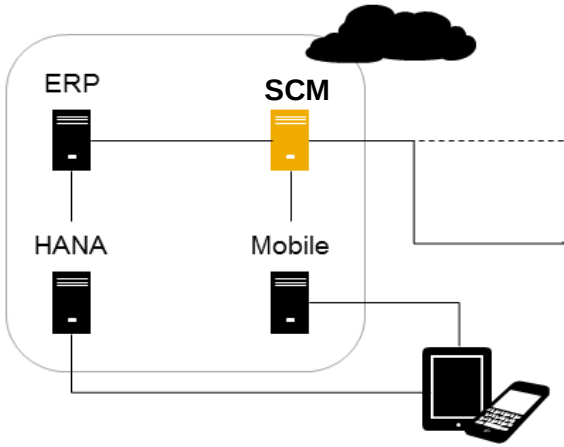
Pre-assembled packages from the SAP Package Library

RDS

SAP Best Practices

Customer Starting Point

Pre-Assembled Solution



I. Access in the Cloud

II. Move to Customer Environment

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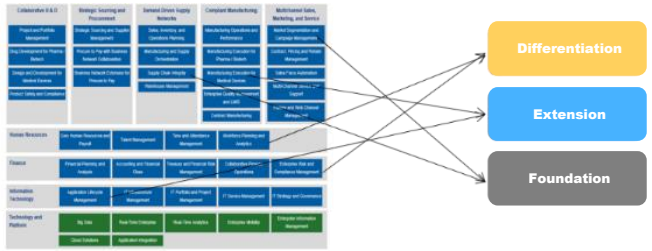
Rapid Prototyping - Roadmap

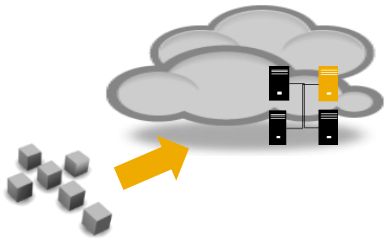
1 Categorize Business Processes



2 Select relevant Solutions

3 Identify potential Accelerators

4 PreAssembly



5 Scope Validation

- Differentiation
- Extension
- Foundation

6 Delta Handling

- Customization
- Re-use from as-is
- Partner Offering
- Co-innovation
- Modification

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Scope Validation

The Goal is:

- To conduct an end-to-end solution walk through for the scope of the rapid prototype
- To validate the customer processes against the processes pre-configured in the assembled system
- To identify potential business process changes to stay close to best practice
- To collect, structure and prioritize Perceived functional gaps

Approach Benefits:

- Working System on day one
- Show process flow – show the system

Expected Outcome:

- Verified detailed business process descriptions
- Business Process change recommendations
- List of detailed PFG descriptions and required enhancements

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Rapid Prototyping - Roadmap

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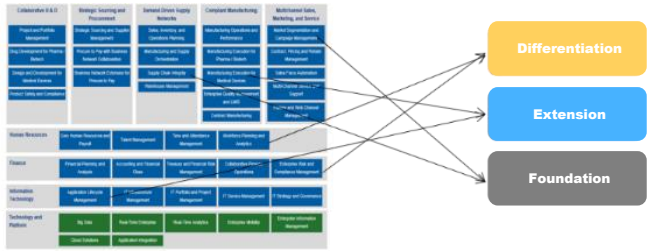

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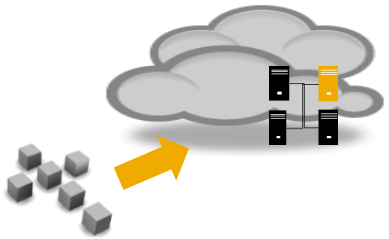
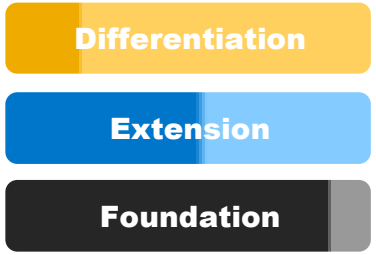
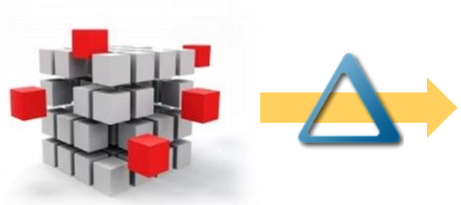


5 Scope Validation



6 Delta Handling



- Customization
- Re-use from as-is
- Partner Offering
- Co-innovation
- Modification

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Delta Requirements – Zero Modification Approach

- Customization
- Re-use from as-is
- Partner Offering
- Engineered Custom Dev.
- Co-innovation
- Modification

The Goal is:

- To eliminate Perceived Functional Gaps (PFG) that can actually be handled in SAP standard, but the system integrator did not have the appropriate level of know how
- To identify delta requirements that are on the SAP roadmap and will be addressed in an upcoming release
- To identify non-business suite standard alternatives that are suitable to meet customer requirements

Expected Outcome:

- Validated Solution Scope
- RICEF list that takes a holistic SAP solution review into consideration
- Detailed gap documentation with a proposal how to resolve
- Finalized project and deployment Roadmap

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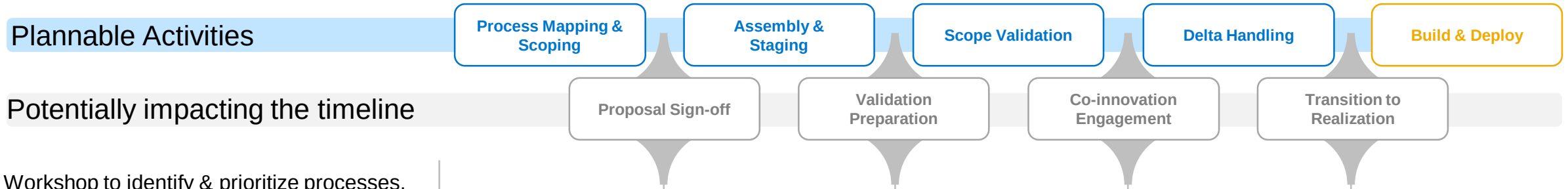
Build SAP like a Factory II

Timeline and Activities - Example



Workshop to identify & prioritize processes, conduct solution and accelerator mapping Who: SAP; SI; Customer	Duration: 2 weeks Effort: ~15-20 days				
Assembly & Staging of System Who: SAP, Customer		Duration: 3 weeks Effort: ~30 days			
Optional: Solution Walk through for all processes Who: SAP, Customer, SI			Duration: 2 weeks Effort: ~40 days		
Verify detailed scope validation topics and finalize list of perceived functional gaps Who: Customer, SI, SAP			Duration: 3 weeks Effort: ~40 days		
Complete delta handling and PFG elimination via Zero Modification Who: SAP, SI, Customer				Duration: 3 weeks Effort: ~40 days	
Build & Deploy Who: SI (Foundation & Extension); SAP (Differentiation); Customer					Duration: tbd Effort: Time & Material

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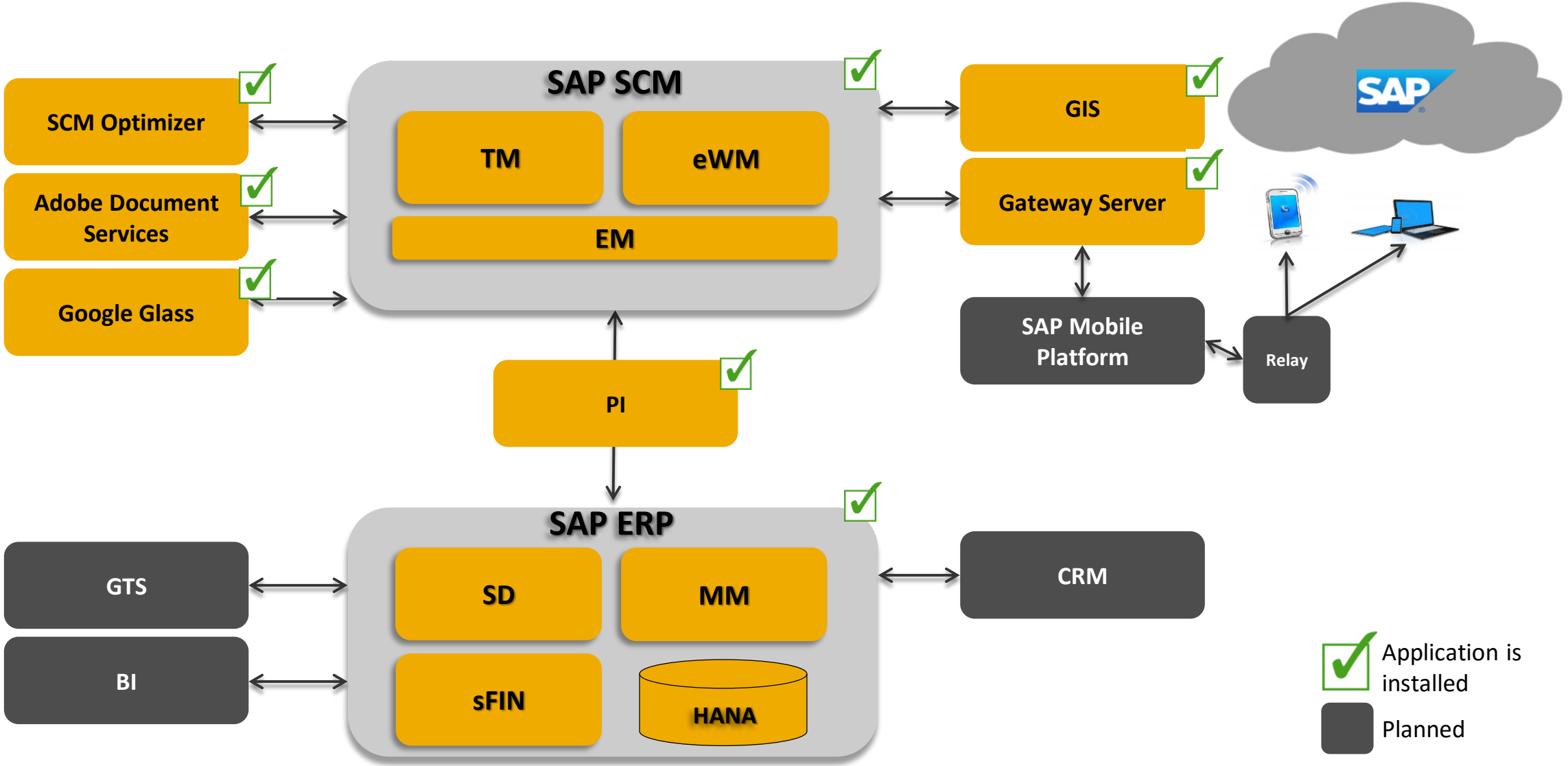
High Level Overview Systems (Logistics Area)



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Supply Chain Execution Business Scope

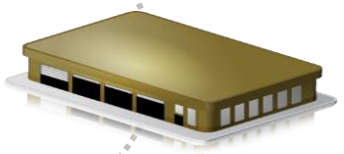
Freight Forwarder

Shipper

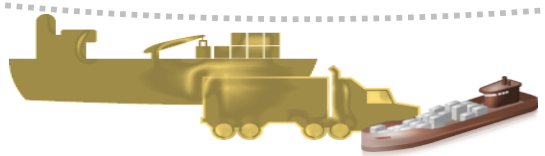
Capacity & Network Planning ⟩ Order Mgmt. & Freight Planning ⟩ Warehouse Execution ⟩ Freight Execution & Monitoring ⟩ Freight Settlement & Billing

Track & Trace

Consignee



Carrier



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Solution Basis TM RDS TT

SAP Truck Transportation for Shippers RDS

Freight Forwarder

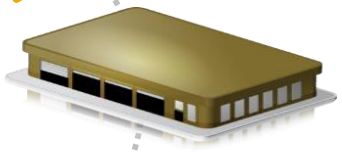
Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

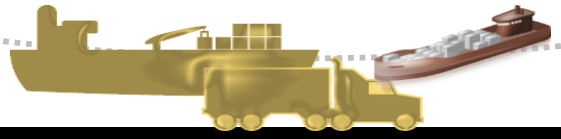
- Business Scope

Shipper

Consignee



Transportation requirements (Integration SAP ERP-SAP TM)	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
Sales Order & Delivery Integration	Pool Distribution	Over Collaboration Portal/Email		Cost distribution and handover to SAP FI
Purchase Order, Stock Transfer Order & Delivery Integration	Automatic Freight Order Creation (FTL)	Variability Carrier Profiles		Variability Charge Elements
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			



- Software Scope Options

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Solution Basis TM RDS TT

Truck Transportation RDS – Scenarios Covered

Freight Forwarder

Capacity & Network Planning ⟩ Order Mgmt. & Freight Planning & Communication ⟩ Warehouse Execution ⟩ Freight Execution & Monitoring ⟩ Billing & Freight Settlement

Tracking

Shipper

Transportation requirements
Integration SAP ERP-SAP TM

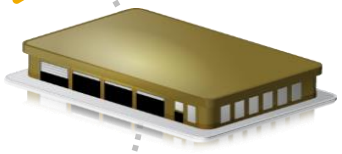
Planning

Tendering and carrier communication

Event monitoring

Charges and invoicing

Consignee



Scenarios:

(1) Transport planning for FTL-LTL with tendering, status tracking and freight charging (TML)
(2) Automatic freight order creation for FTL with direct tendering, status tracking and freight charging (TMM)
(3) Transport planning for intermodal rail versus FTL (T77)
(4) Transport planning for pool distribution (T79)
(5) Transport planning for stock transport orders with freight charging (TMS)
(6) Transport planning for purchase orders with freight charging (TMT)
(7) Transport charge management based on ERP shipment (TMJ)

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Solution Basis TM RDS TT

Scenario 1: Transport planning for FTL-LTL with tendering, status tracking and freight charging (TML)

Freight Forwarder

Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
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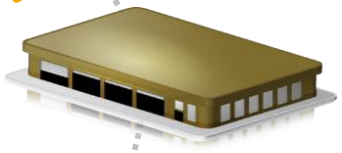
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee



Used functionality
Not used functionality

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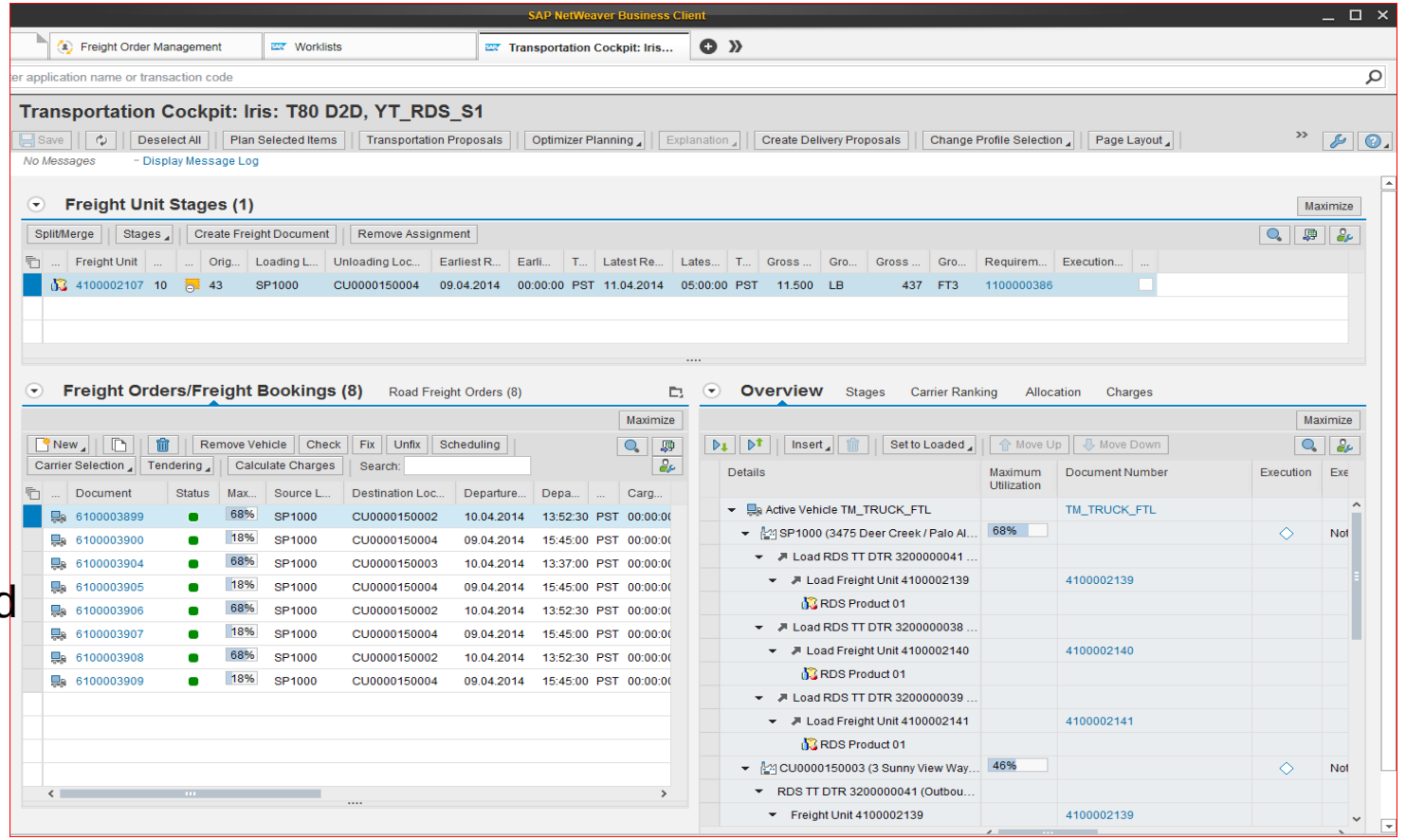
Scenario 1: Transport planning for FTL-LTL with tendering, status tracking and freight charging (TML)

Key functionality

- Sales-order creation and generation of order-based transportation requirements as well as freight-unit building
- Interactive or optimizer-based planning
- Carrier selection with or without multistep tendering and communication with the carrier
- Delivery and shipment creation
- Execution tracking at the freight-order and freight-unit levels
- Freight calculation
- Invoice verification
- Cost distribution at delivery-item level



Transportation Cockpit with results after planning run for LTL-FTL

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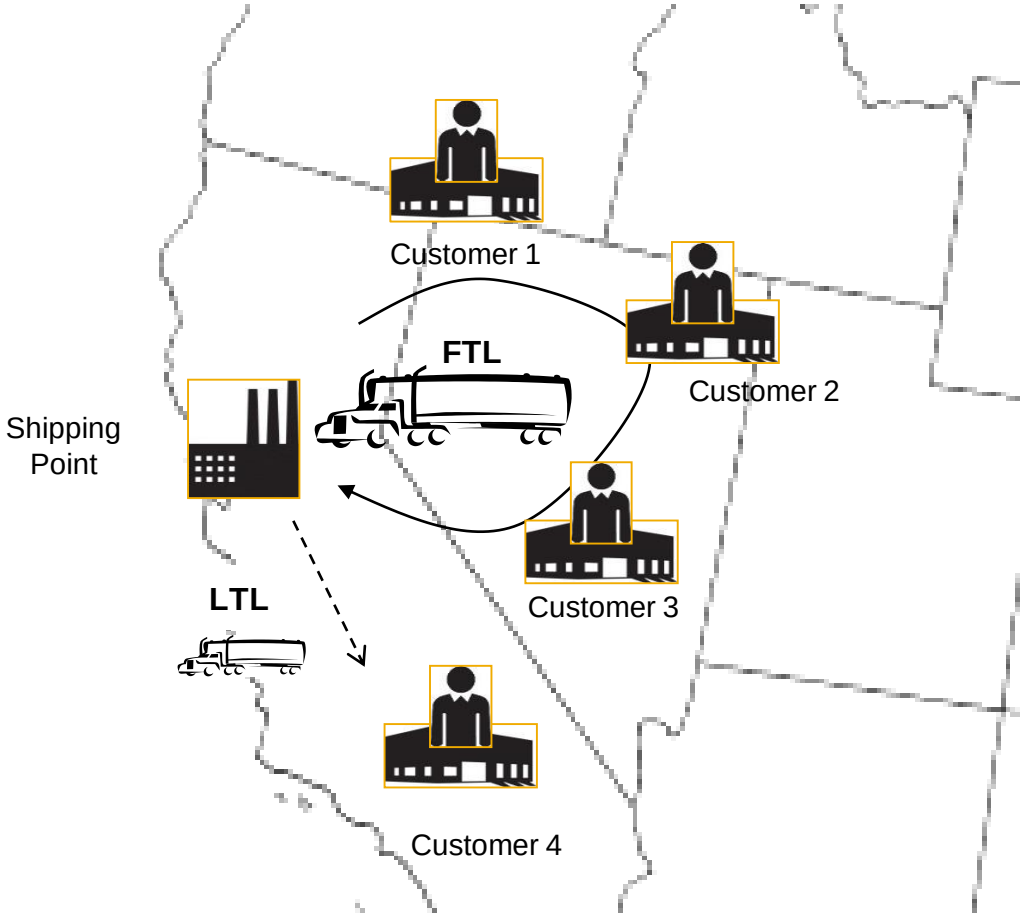
Scenario 1: Transport planning for FTL-LTL with tendering, status tracking and freight charging (TML)



Example: Planning decision for FTL versus LTL

Four Sales Orders to different Customers result in

- One FTL Freight order with multistops
- One LTL Freight Order

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Scenario 1: Transport planning for FTL-LTL with tendering, status tracking and freight charging (TML)

Scope

- Several **sales orders** create the need for truck transportation services.
- By consolidating transportation requirements, **optimizer-based planning** helps ensure the best cost proposal for freight-order creation based on real freight charges for the carrier. The decisions are made between LTL and FTL alternatives. Interactive planning is also an option.
- With **multistep tendering**, the preferred carriers are asked to accept the transport service first. If they reject it, broadcast tendering is executed.
- Communication with the carrier through the **collaboration portal** and e-mail.
- **Delivery and shipment** creation in SAP ERP can be triggered from SAP TM.
- When execution of the transport starts, the **status** can be **monitored** at the freight-order and freight-unit levels.
- After the goods are delivered, the **freight charges are calculated** and **cost distribution** at the delivery-item level can be performed in SAP TM.
- With the transfer of the values, the **invoice** can be **verified** in SAP ERP and it can be used to update the material **profitability analysis** in SAP ERP.

Benefits

- Select the best option between FTL and LTL based on the combination of cost, transit times, sequence, and locations.
- Integrate agreed carrier costs in planning and invoice verification.
- Incorporate tracking for visibility into execution status and exceptions.
- Manage the end-to-end outbound process, from transportation planning with carrier communication and status tracking to freight calculation and invoice verification.

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Solution Basis TM RDS TT

Scenario 2: Automatic freight order creation for FTL with direct tendering, status tracking, and freight charging (TMM)

Freight Forwarder

Capacity & Network Planning › Order Mgmt. & Freight Planning & Communication › Warehouse Execution › Freight Execution & Monitoring › Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
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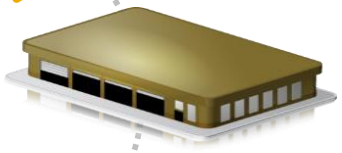
Purchase Order, Stock Transfer Order & Delivery Integration	Automatic Freight Order Creation (FTL)	Variability Carrier Profiles		Variability Charge Elements
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee



Used functionality
Not used functionality

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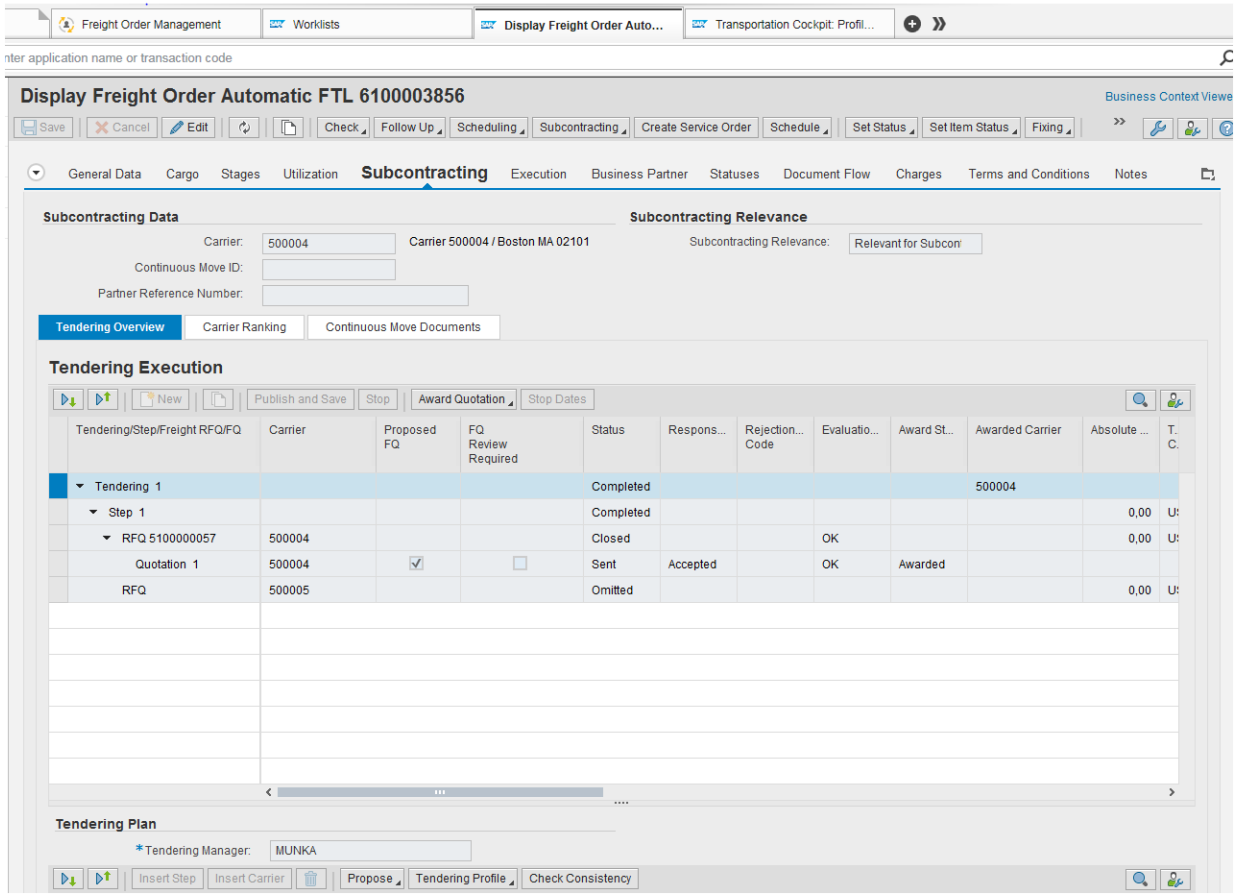
Scenario 2: Automatic freight order creation for FTL with direct tendering, status tracking, and freight charging (TMM)

Key functionality

- Sales-order creation and generation of a freight order
- Carrier selection and communication to the carrier
- Delivery and shipment creation
- Execution tracking at freight-order and freight-unit levels
- Freight calculation
- Invoice verification
- Cost distribution at delivery-item level



Direct Tendering for automatically created FTL Freight Order

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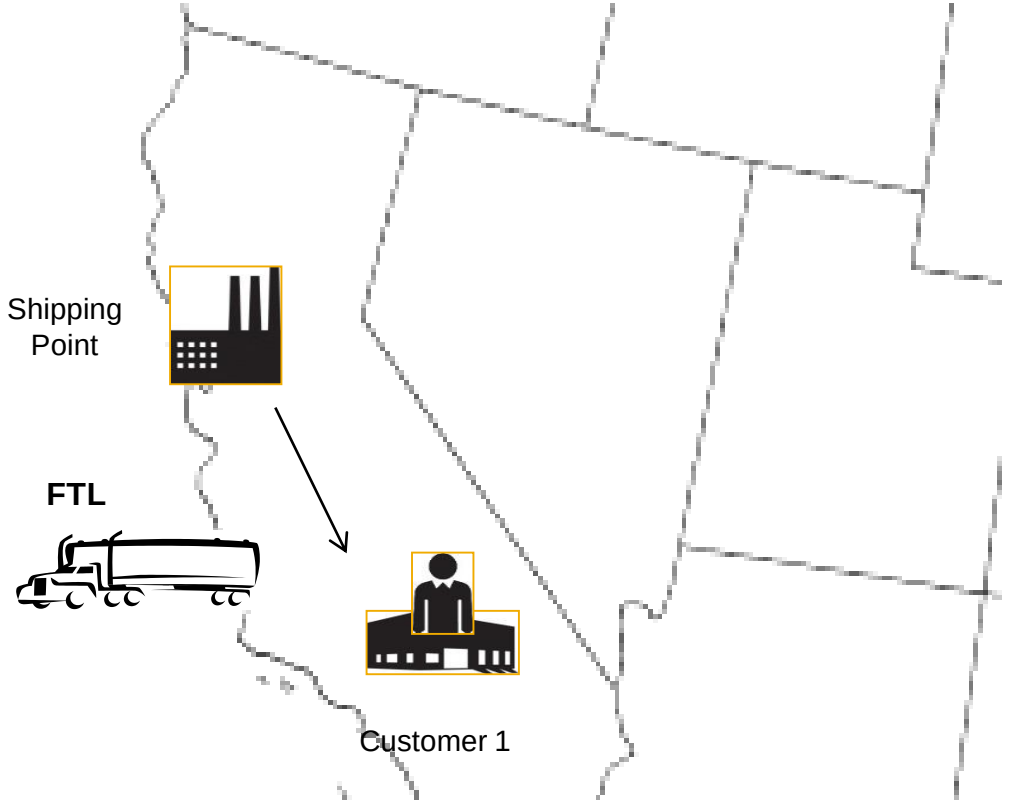
Scenario 2: Automatic freight order creation for FTL with direct tendering, status tracking, and freight charging (TMM)



Example: Automatic Freight Order Creation for FTL

- 1 Sales Orders creates a need for a FTL transport service
- Result in Freight Order

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Scenario 2: Automatic freight order creation for FTL with direct tendering, status tracking, and freight charging (TMM)

Scope

- A sales order creates the need for an FTL transportation service.
- The freight order is created automatically.
- Communication to the carrier can be accomplished with direct tendering through the collaboration portal and e-mail.
- Creation of the delivery and shipment in SAP ERP can be triggered from SAP TM.
- When execution of the transport starts, the status can be monitored at the freight-order and freight-unit levels.
- After the goods are delivered, the freight charges are calculated and cost distribution at the delivery-item level can be performed in SAP TM.
- With the transfer of the values, the invoice can be verified in SAP ERP and then used to update the material profitability analysis functionality in SAP ERP.

Benefits

- Reduce transportation planning lead time.
- Streamline the planning and decision making process.
- Manage the end-to-end process, from carrier commissioning and status tracking to freight calculation and invoice verification.

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Solution Basis TM RDS TT

Scenario 3: Transport planning for intermodal rail versus FTL (T77)

Freight Forwarder

Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
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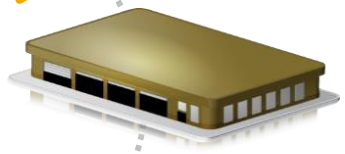
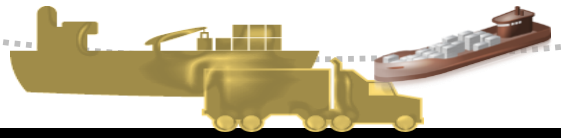
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee





Used functionality
Not used functionality

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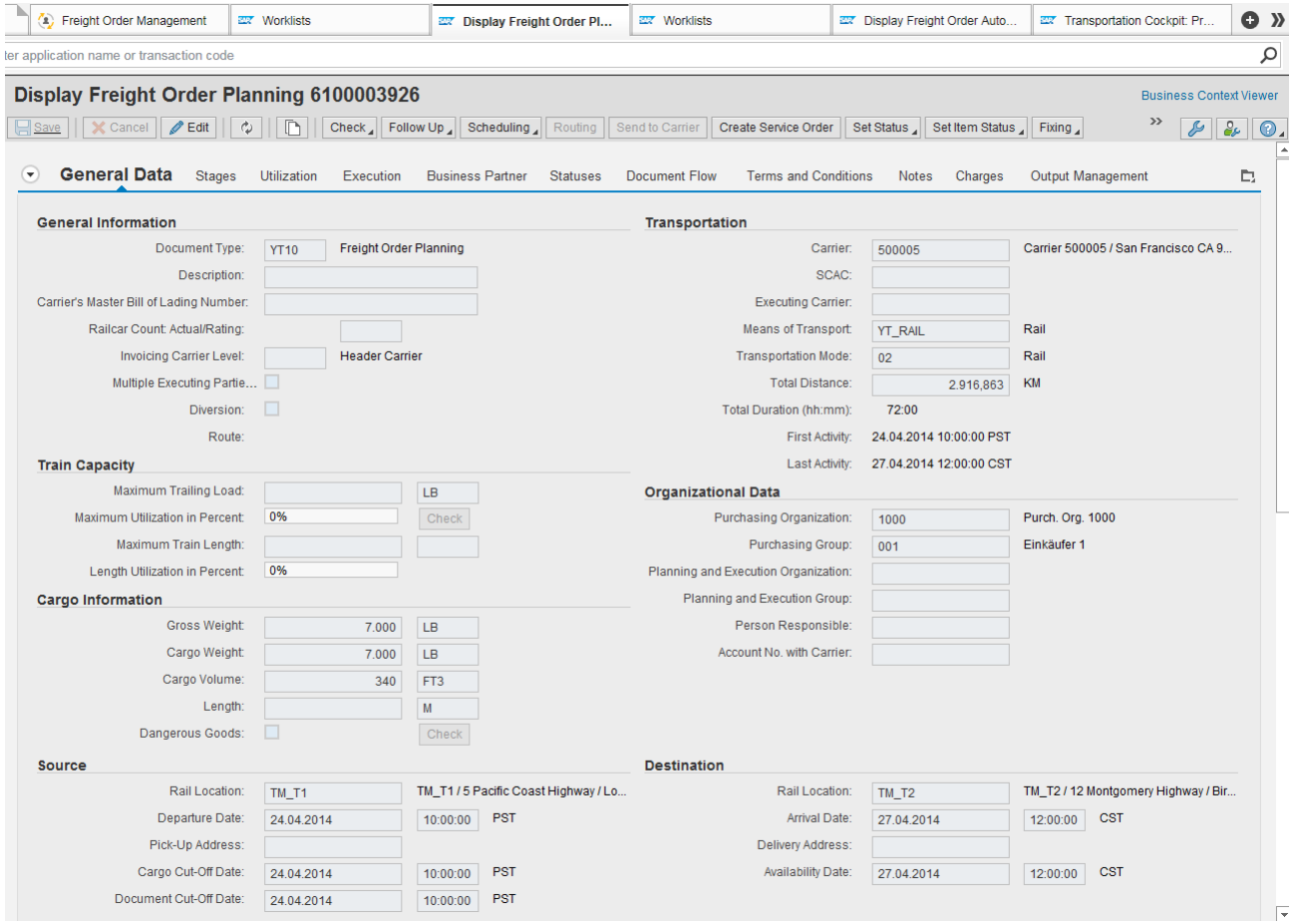
Scenario 3: Transport planning for intermodal rail versus FTL (T77)

Key functionality

- Sales-order creation and generation of order-based transportation requirement as well as freight-unit building
- Optimizer-based or interactive planning for intermodal rail, including pre-carriage and on-carriage, versus a direct full truck load
- Delivery and shipment creation
- Optional execution monitoring and charge calculation

This scenario intends to provide a planning proposal that considers different modes of transport. There is no intention to provide deep, rail-specific functionality.



Freight Order General Data

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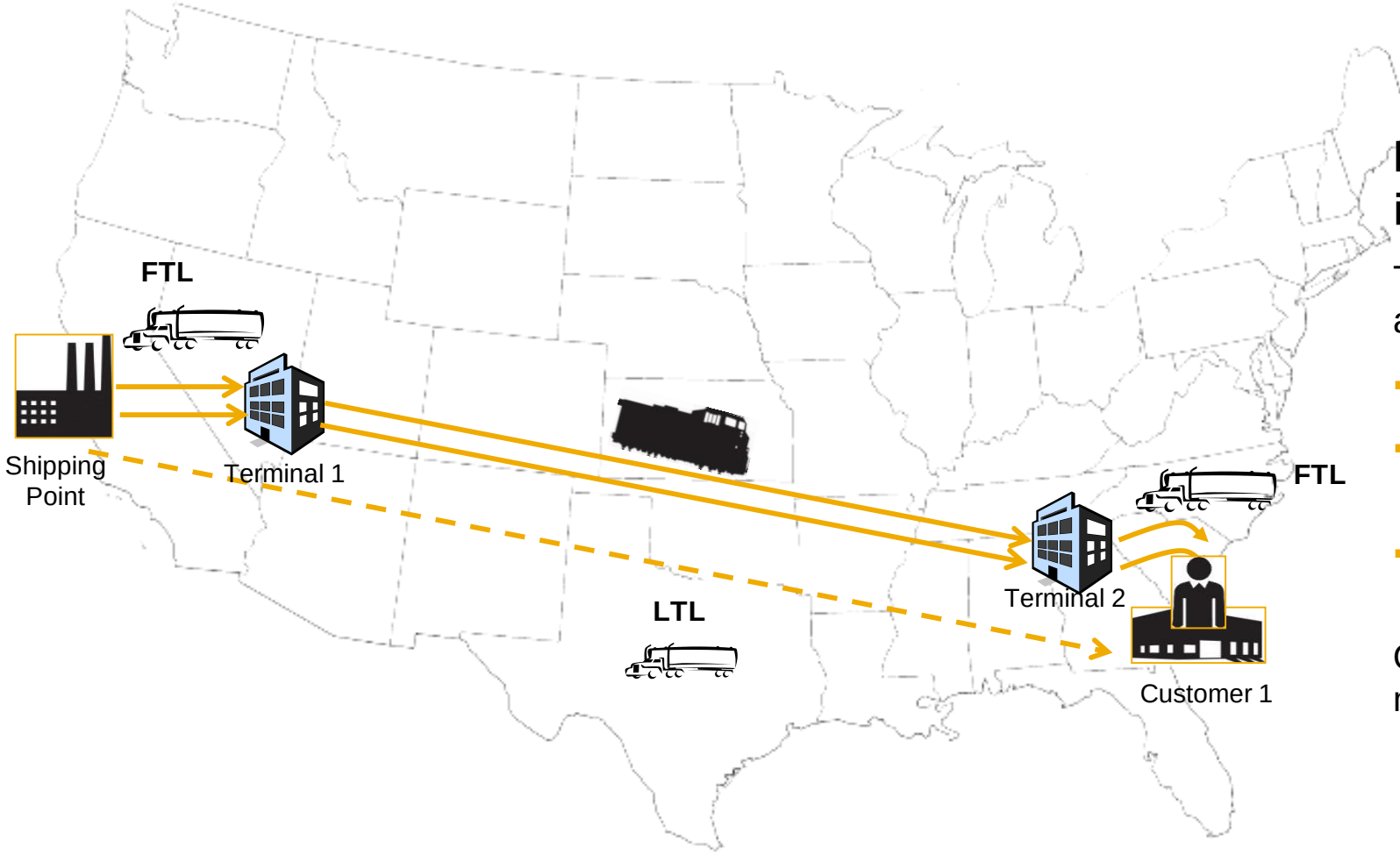
Scenario 3: Transport planning for intermodal rail versus FTL (T77)



Example: Planning decisions for intermodal rail versus FTL

Two sales orders with different delivery dates and incompatible products result in:

- One direct LTL freight order
- Two freight orders for scheduled trains (due to incompatibility)
- Four freight orders for trucks (two for pre-carriage and two for on-carriage)

One product could not be transported due to missing allowed vehicle resource.

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Scenario 3: Transport planning for intermodal rail versus FTL (T77)

Scope

- Several **sales orders** create the need for a transportation services.
- By comparing the transport costs of intermodal lane or truck lane, optimizer-based planning helps ensure the best cost proposal for freight-order creation. Interactive planning is also an option.
- **Delivery and shipment** creation in SAP ERP can be triggered from SAP TM.
- Execution-monitoring and charge calculation can be added as options.

Benefits

- Reduce costs by selecting the best option between intermodal rail shipment and FTL.
- Incorporate tracking for visibility into execution status and exception (optional).
- Integrate agreed carrier costs for truck-related parts in planning and invoice verification (optional).

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Solution Basis TM RDS TT

Scenario 4: Transport planning for pool distribution (T79)

Freight Forwarder

Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
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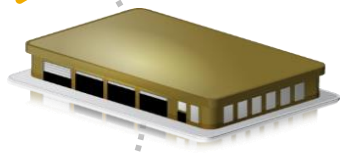
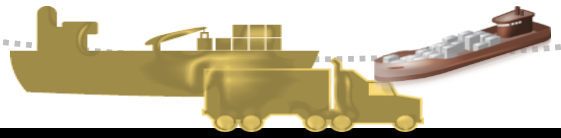
Purchase Order, Stock Transfer Order & Delivery Integration	Automatic Freight Order Creation (FTL)	Variability Carrier Profiles		Variability Charge Elements
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee





Used functionality
Not used functionality

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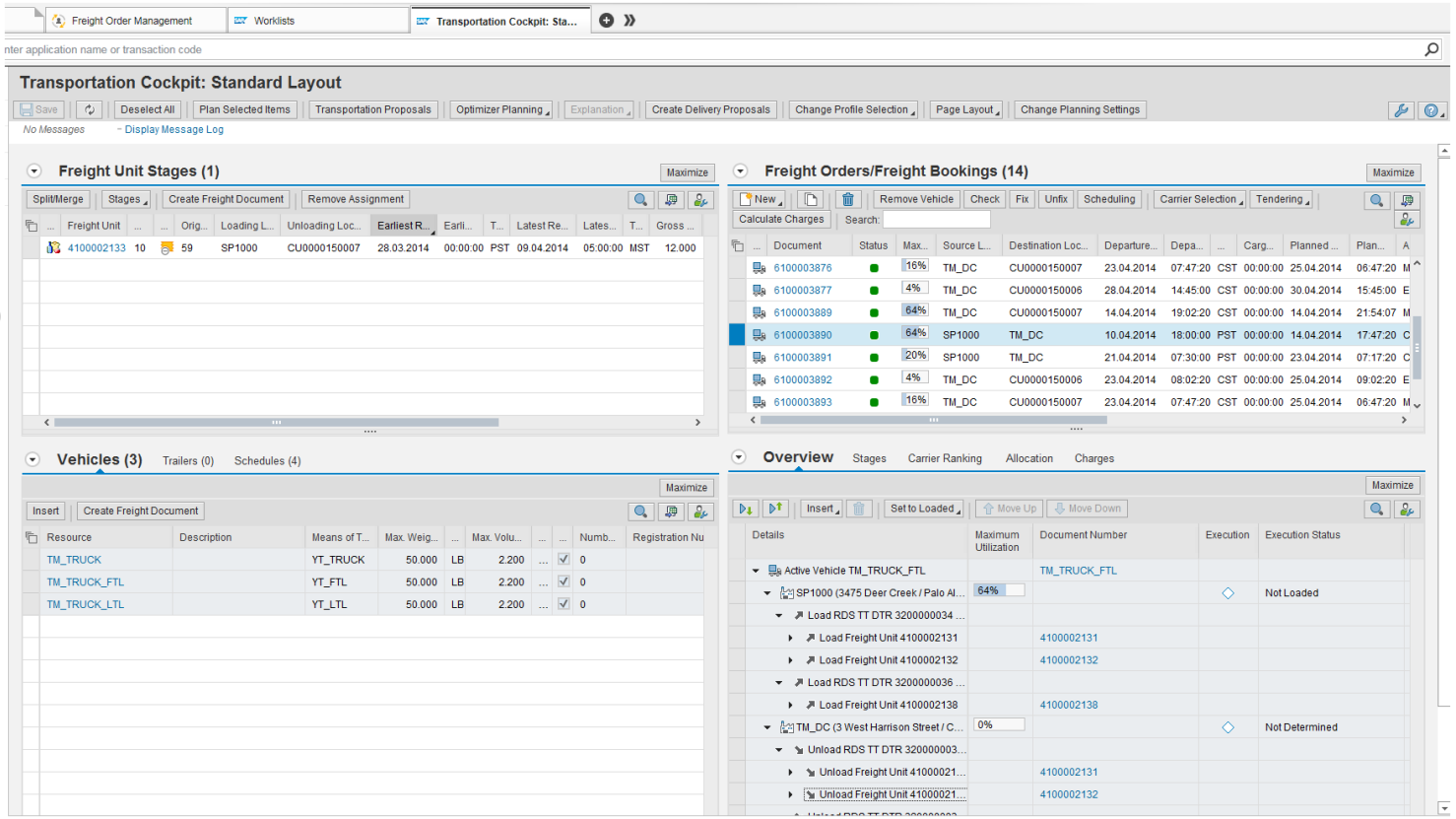
Solution Basis TM RDS TT

Scenario 4: Transport planning for pool distribution (T79)

Key functionality

- Sales-order creation and generation of order-based transportation requirements as well as freight-unit building
- Optimizer-based or interactive planning fo distribution centers
- Delivery and shipment creation
- Tendering, execution monitoring, and charge calculation (optional)



Transportation Cockpit with results after planning run for distribution centers

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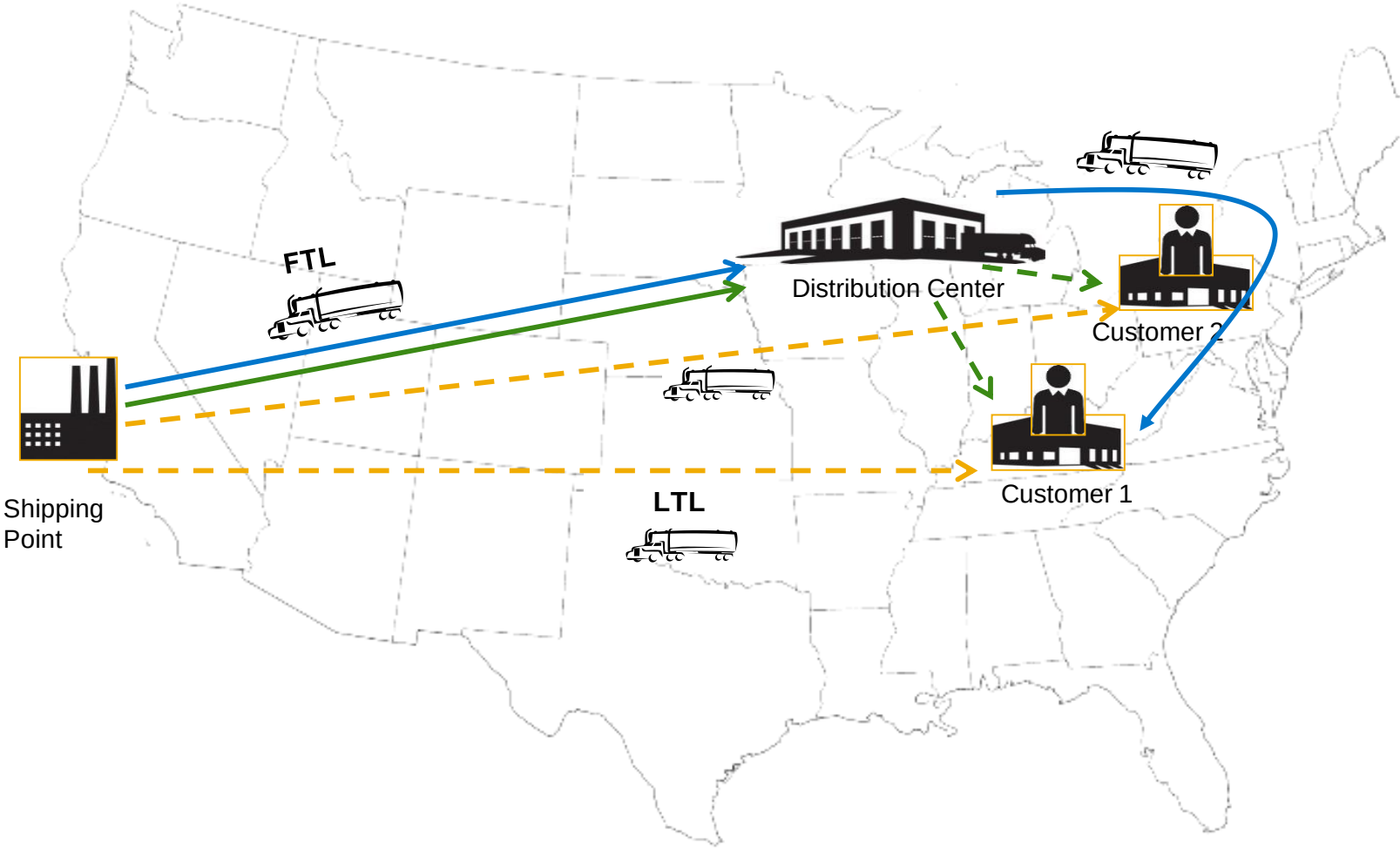
Solution Basis TM RDS TT

Scenario 4: Transport planning for pool distribution (T79)



Example: Planning decisions for pool distribution

Six sales orders to two customers with different delivery dates result in:

- Two direct LTL freight orders (due to short-term delivery dates)
- One FTL freight order to the distribution center followed by one FTL multistop freight order from the center to two customers
- One FTL freight order to the distribution center followed by two separate LTL freight orders to the customers

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Scenario 4: Transport planning for pool distribution (T79)

Scope

- Several **sales orders** create the need for transportation services in a particular region.
- By comparing transport time and costs for consolidated or separately transported goods, **optimizer-based planning** helps ensure the best proposal for freight-order creation, either transporting over a hub or pool location with consolidation on the first leg and separate transport for the second leg or transporting with a direct service. Interactive planning is also an option.
- **Delivery and shipment** creation in SAP ERP can be triggered from SAP TM.
- Tendering, execution-monitoring, and freight charge master data can be added as options.

Benefits

- Save costs by selecting the best option between transportation over a hub or distribution center or direct LTL shipments
- Optional direct tendering or multistep tendering
- Optional incorporated tracking offers visibility on execution status and exception
- Optional integration of agreed carrier costs in planning and invoice verification

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Scenario 5: Transport planning for intra-company stock transport orders with freight charging (TMS)

Freight Forwarder

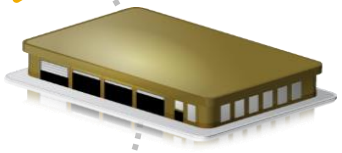
Capacity & Network Planning › Order Mgmt. & Freight Planning & Communication › Warehouse Execution › Freight Execution & Monitoring › Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
Sales Order & Delivery Integration	Pool Distribution	Over Collaboration Portal/Email		Cost distribution and handover to SAP FI
Purchase Order, Stock Transfer Order & Delivery Integration	Automatic Freight Order Creation (FTL)	Variability Carrier Profiles		Variability Charge Elements
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee



Used functionality
Not used functionality

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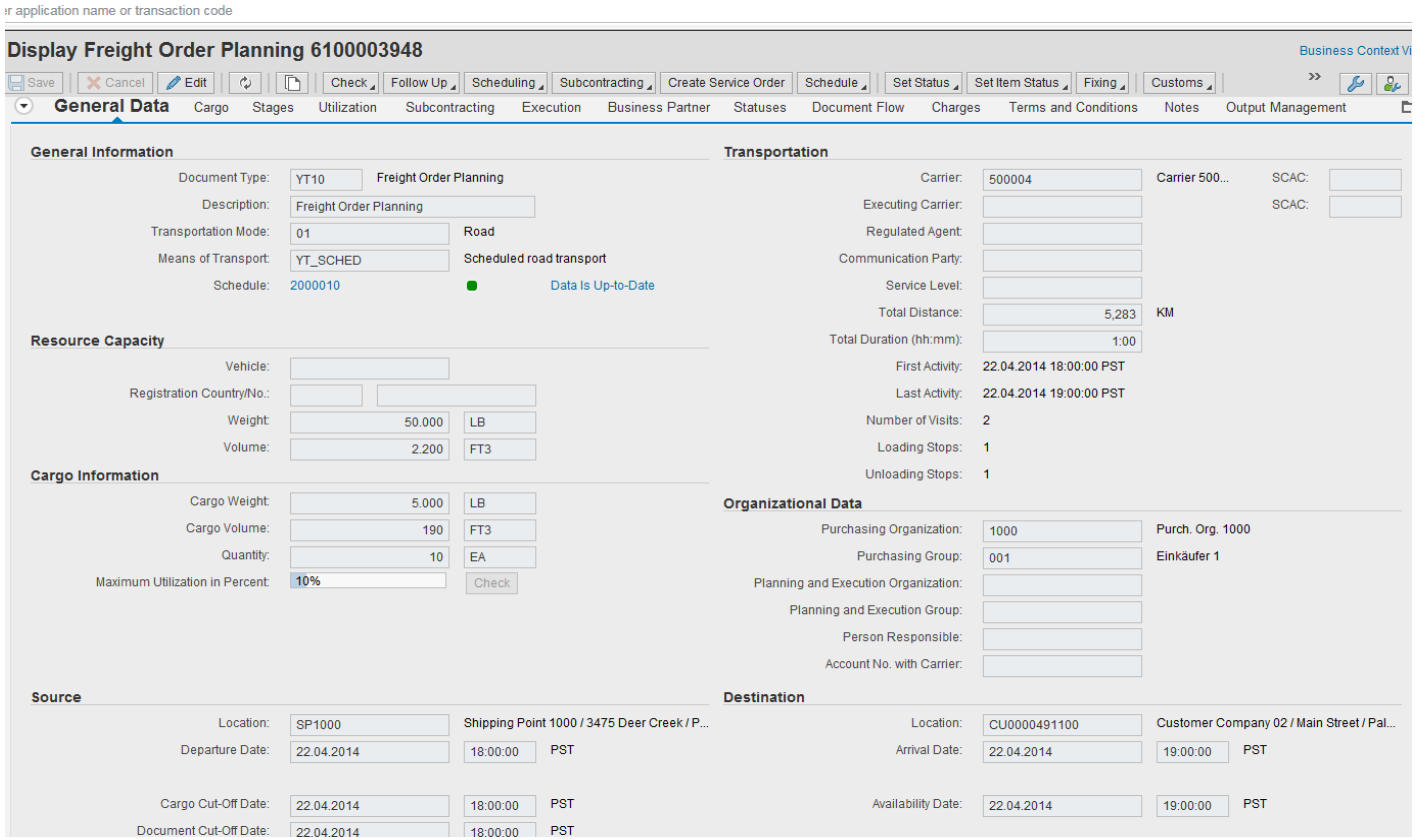
Scenario 5: Transport planning for intra-company stock transport orders with freight charging (TMS)

Key functionality

- Stock-transport-order creation and generation of order-based transportation requirement as well as freight-unit building
- Creation of freight orders for every day of the current week
- Interactive or optimizer-based planning
- Delivery and shipment creation
- Optional execution tracking at the freight-order and freight-unit levels
- Freight calculation
- Invoice verification
- Integration with finance functionality



Regular Freight Order between plants

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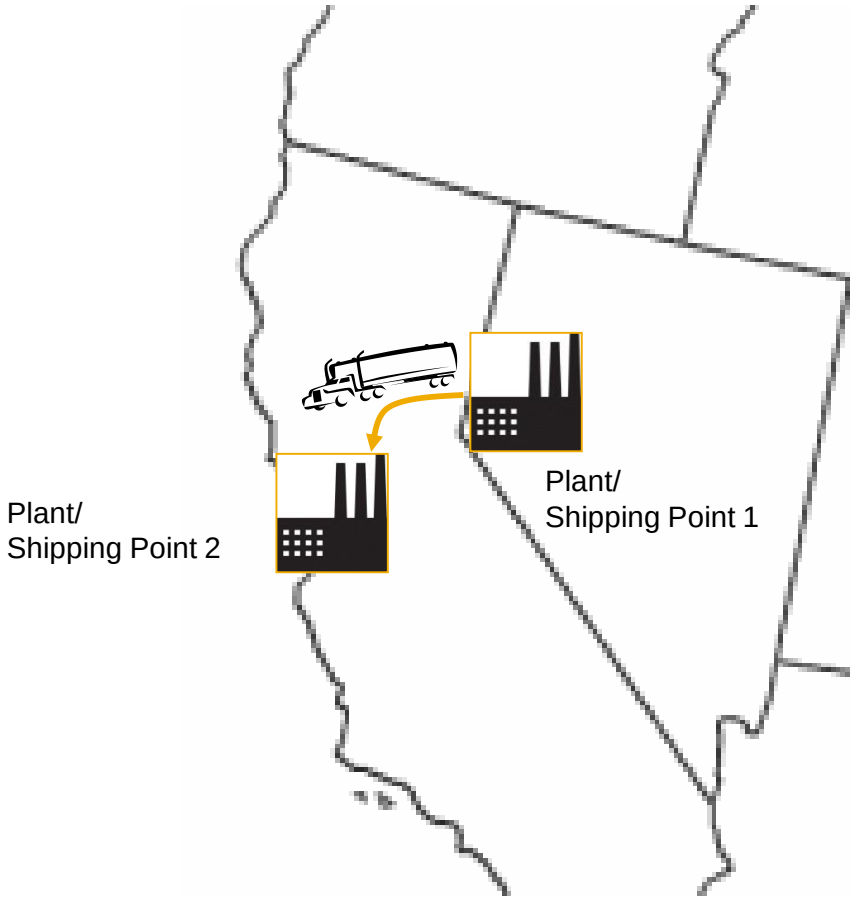
Scenario 5: Transport planning for intra-company stock transport orders with freight charging (TMS)



Example: Intracompany Stock Transport Order with interactive planning with regards to daily schedule

One or more stock-transport orders assigned to one scheduled freight order for intracompany transports

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Scenario 5: Transport planning for intra-company stock transport orders with freight charging (TMS)

Scope

- **Stock-transport orders** create the need for an intercompany truck transportation service.
- By consolidating the transportation requirements **interactively** to daily scheduled freight orders, potential priorities and demand variations can be considered. Alternatively, optimizer-based planning can be used.
- **Delivery** creation in SAP ERP can be triggered from SAP TM.
- When execution of the transport starts, the **status** can be **monitored** at the freight-order and freight-unit levels.
- After the goods are delivered, the **freight charges are calculated** in SAP TM.
- With the transfer of the values, the **invoice** can be **verified** in SAP ERP and then used to update the **finance functionality** in SAP ERP.

Benefits

- Takes advantage of freedom of choice for assigning transport requirements interactively to regular transportation schedules for intercompany stock transports
- Integration of agreed carrier costs in planning and invoice verification
- Optional incorporated tracking offers visibility on execution status and exceptions
- Offers an end-to-end process from transportation planning to freight calculation and invoice verification

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Solution Basis TM RDS TT

Scenario 6: Transport planning for purchase orders with freight charging (TMT)

Freight Forwarder

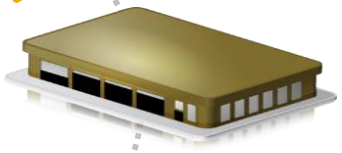
Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

Shipper

Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
Sales Order & Delivery Integration	Pool Distribution	Over Collaboration Portal/Email		Cost distribution and handover to SAP FI
Purchase Order, Stock Transfer Order & Delivery Integration	Automatic Freight Order Creation (FTL)	Variability Carrier Profiles		Variability Charge Elements
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			

Consignee



Used functionality
Not used functionality

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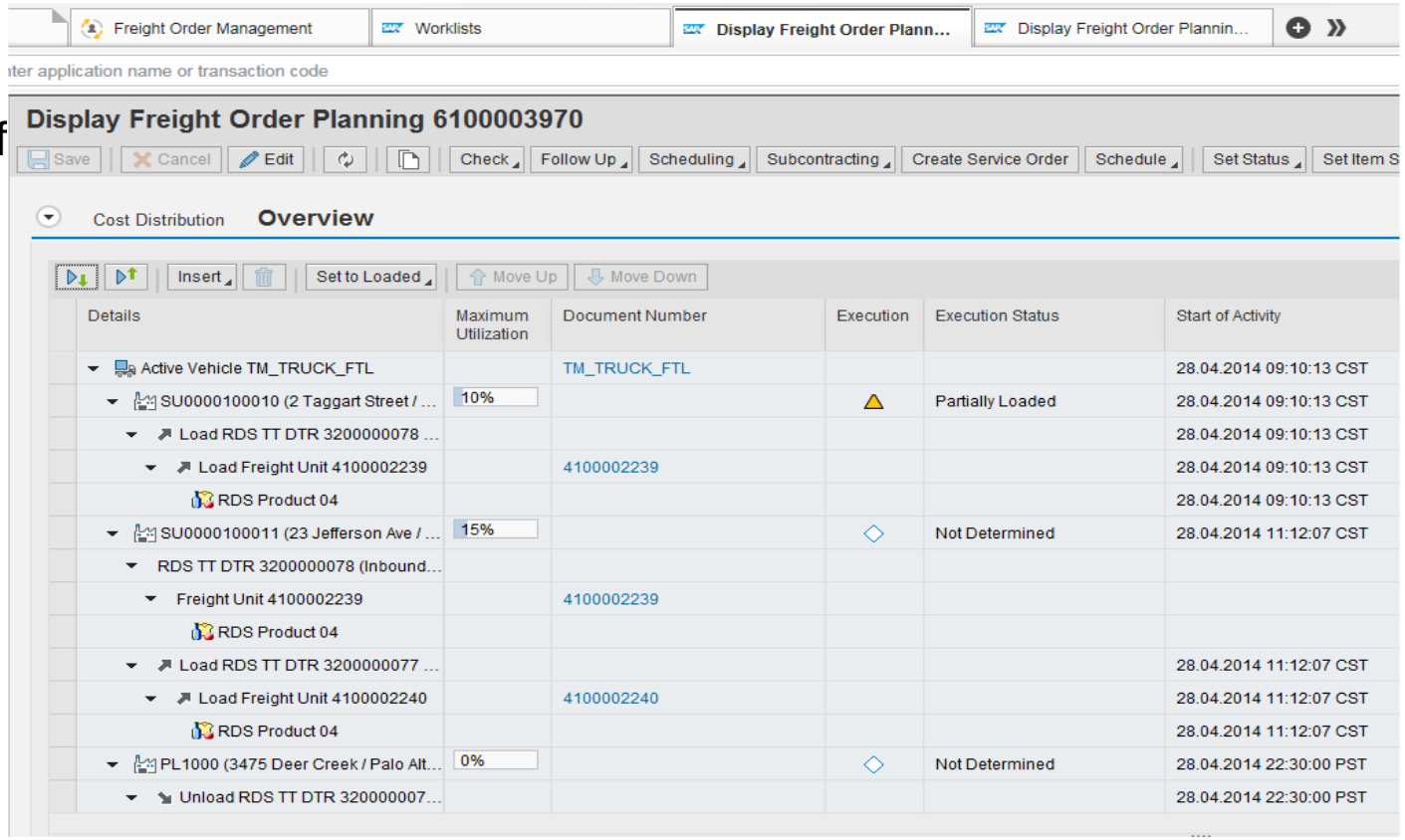
Scenario 6: Transport planning for purchase orders with freight charging (TMT)

Key functionality

- Purchase-order creation and generation of order-based transportation requirements as well as freight-unit building
- Interactive or optimizer-based planning
- Delivery and shipment creation
- Execution tracking at the freight-order and freight-unit levels (optional)
- Freight calculation in SAP TM and invoice verification in SAP ERP
- Integration to finance functionality



Freight Order with overview of pick up and delivery locations and utilization

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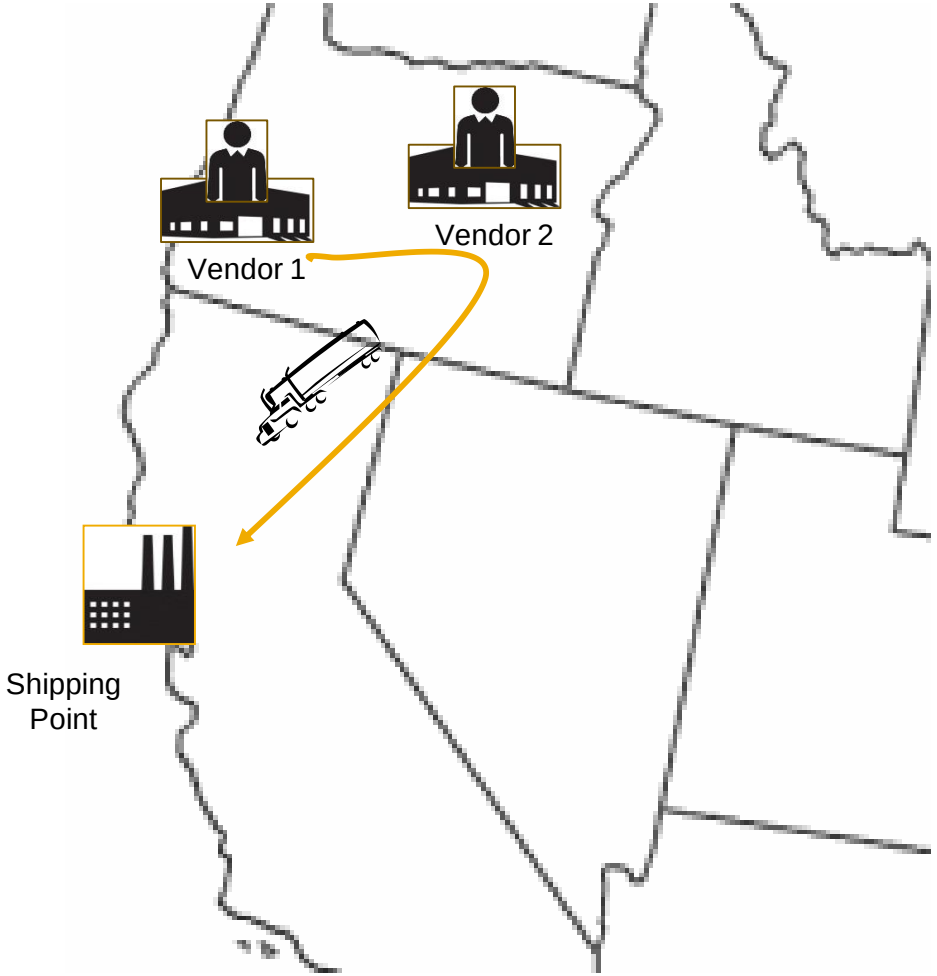
Scenario 6: Transport planning for purchase orders with freight charging (TMT)



Example: Planning decision for incoming goods

Two purchase orders result in one multistop freight order

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Scenario 6: Transport planning for purchase orders with freight charging (TMT)

Scope

- **Purchase orders** create the need for a truck transportation service.
- By consolidating transportation requirements, **optimizer-based planning** ensures the best cost proposal for freight order creation – based on real freight charges for the carrier. Interactive planning is also an option.
- **Delivery** creation in SAP ERP can be triggered from SAP TM.
- When execution of the transport starts, the **status** can be **monitored** on the freight order– and freight unit–levels.
- After the goods are delivered, the freight **charges are calculated** in SAP TM.
- With the transfer of the values, the **invoice** can be **verified** in SAP ERP and it can be used to update **finance** in SAP ERP.

Benefits

- Saves costs by selection the best consolidation option of inbound transportation requirements based on the combination of cost, transit times, sequence, and locations
- Integration of agreed carrier costs in planning and invoice verification
- Optional tendering functionality
- Optional incorporated tracking offers visibility on execution status and exceptions
- Offers an end-to-end inbound process from transportation planning to freight calculation and invoice verification

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Solution Basis TM RDS TT

Scenario 7: Transportation charge management based on SAP ERP shipment (TMJ)

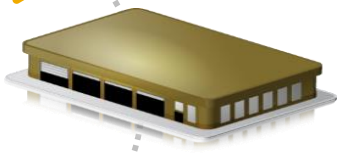
Freight Forwarder

Capacity & Network Planning → Order Mgmt. & Freight Planning & Communication → Warehouse Execution → Freight Execution & Monitoring → Billing & Freight Settlement

Tracking

Shipper

Consignee



Transportation requirements	Planning	Tendering and carrier communication	Event monitoring	Charges and invoicing
Integration SAP ERP-SAP TM				
Connectivity PI	LTL vs. FTL	Multi-step-Tendering with peer-to-peer and broadcast tendering	Status Tracking and Monitoring for Freight Orders and Freight Units	Freight calculation in SAP TM
Basic Settings & Master Data Integration	Intermodal rail vs. FTL	Direct Tendering		Invoice verification in SAP ERP
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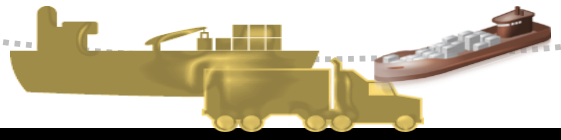
Shipment Integration SAP TM → SAP ERP	Interactive			
Shipment Integration SAP ERP → SAP TM	Variability Transport-Network			



Used functionality
Not used functionality

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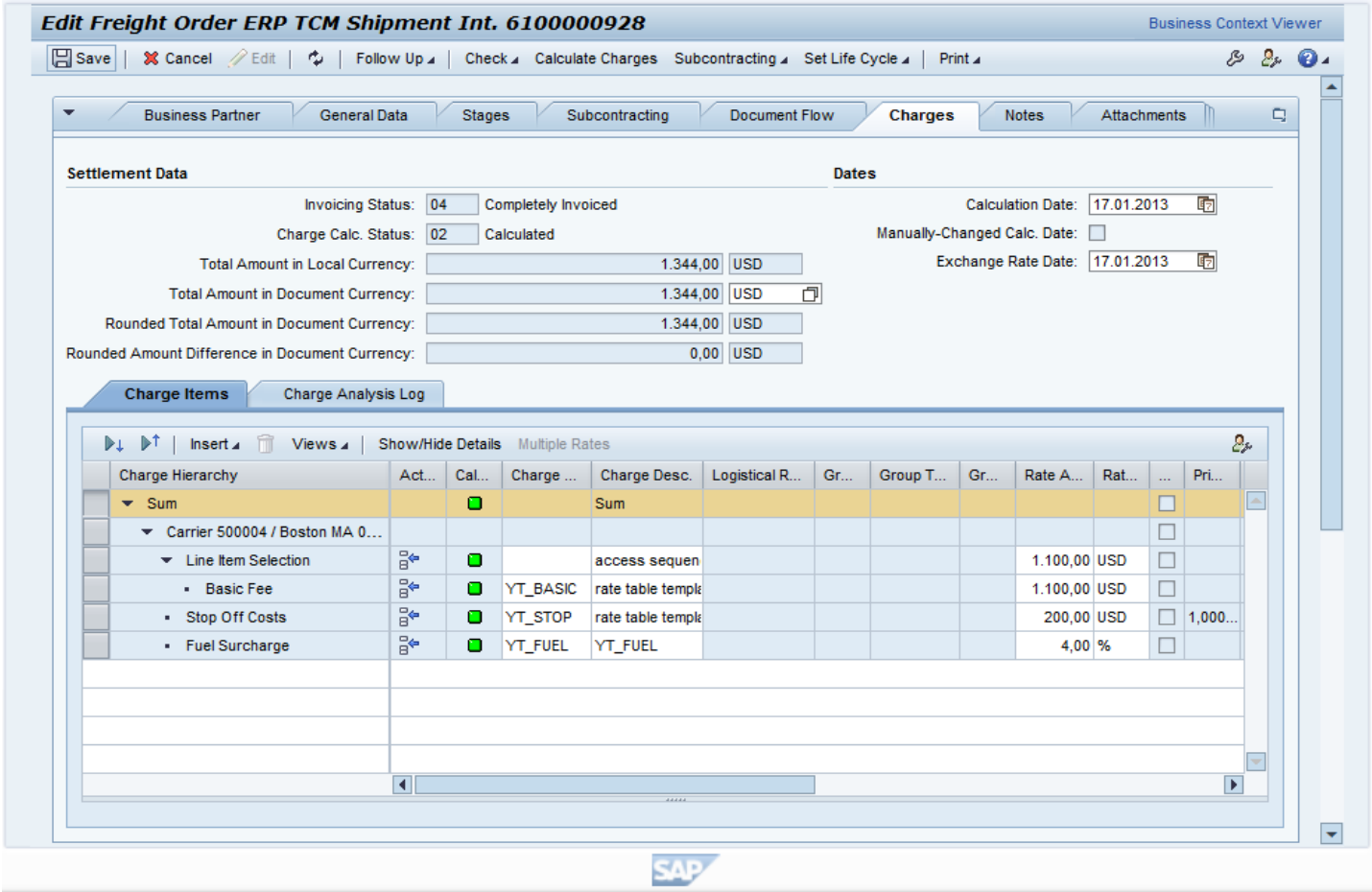
Scenario 7: Transport planning for purchase orders with freight charging (TMJ)

Key functionality

- Sales order and deliveries are executed within SAP ERP
- Shipment of SAP ERP initiates directly a freight order in SAP TM
- Freight charge calculation based on freight agreements in SAP TM
- Cost distribution calculation at delivery-item level in SAP TM
- Invoice verification in SAP ERP (on the directly created purchase order and service-entry sheet)
- Handover of the charges and cost distribution at delivery-item level to SAP ERP for material profitability analysis



FTL truck transport charges including basic fee, stop-off costs, and fuel surcharge

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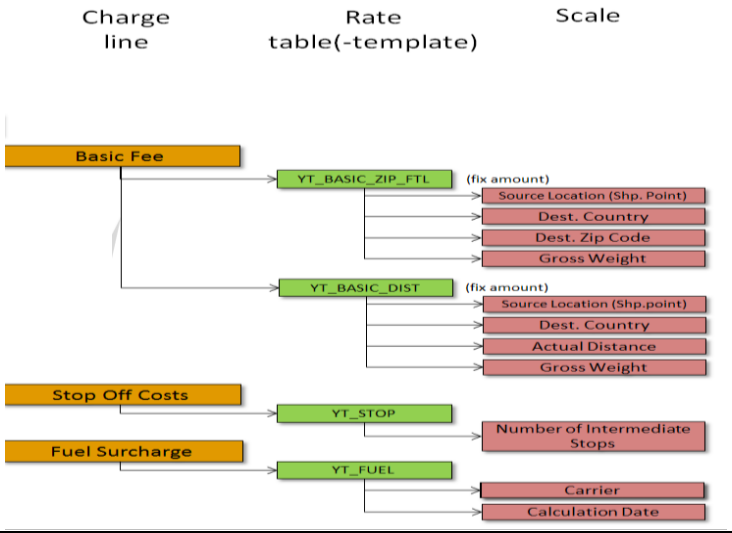
Scenario 7: Transport planning for purchase orders with freight charging (TMJ)

Freight charge elements for Full Truck Load (FTL)

- Basic Fee
  - Freight charge based on ZIP code
  - Freight charge based on distance (if zip code is unavailable)
- Stop Off Costs depending on number of intermediate stops
- Fuel Surcharge Charge elements depending on carrier and validation date

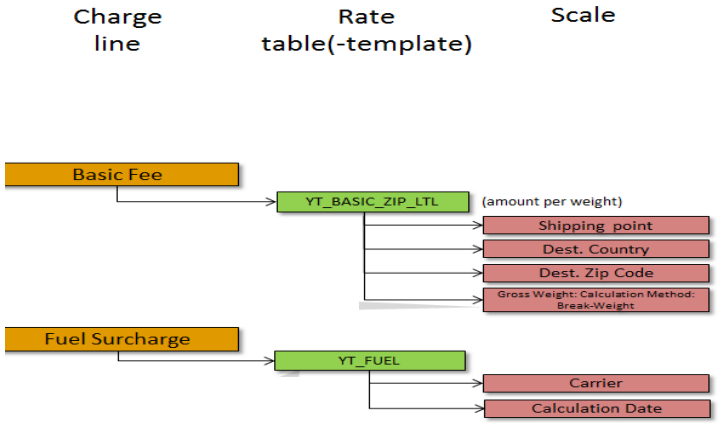
Charges FTL



Freight charge elements for Less Than Truck Load (LTL)

- Basic Fee
  - Freight charge based on ZIP code
- Fuel Surcharge Charge elements depending on carrier and validation date

Charges LTL



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Scenario 7: Transport planning for purchase orders with freight charging (TMJ)

Scope

- An SAP **ERP Shipment** based on a sales order and outbound delivery creates the need for a freight charge calculation in SAP TM.
- After the transportation execution is finished a **freight order** is automatically created in SAP TM.
- Based on shipment weight, it is derived if the truck transport was a **full truck load (FTL)** or **less than truck load (LTL)** transport. This is considered as a parameter to determine the correct freight charges.
- Freight charges calculated **based on freight agreements** with carriers and calculation examples offered for FTL and LTL truck transports
  - **FTL** based on basis fee dependent on weight and Zip/distance, stop-off costs, and a fuel surcharge
  - **LTL** costs based on basis fee dependent on weight with break-weight method and fuel surcharge
- After **freight charge calculation** and **cost distribution** in SAP TM, purchase order and service entry sheet in SAP ERP are created as the basis for **invoice verification**.
- Besides this, the charges and cost distribution can be used to update the **material profitability analysis** in SAP ERP.

Benefits

- Easy to use as a starting point to use SAP TM functionality on top of existing SAP ERP logistics processes
- Tight integration of SAP ERP Shipment and transportation charge management in SAP Transportation Management (SAP TM)
- Usage of broad charge management features in SAP TM for truck transport
- Invoice verification, cost distribution and integration to finance on delivery-item level

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Summary Truck Transportation for Shippers RDS

Business Benefits

- Enable higher productivity and flexibility in planning, managing, and monitoring truck transportation
- Improve resource utilization through better order consolidation
- Provide an ability to react to and reflect real-time changes
- Take advantage of a variety of tendering processes
- Expedite and simplify connectivity to carriers or freight forwarders
- Improve visibility of transportation progress, concentrating only on the exceptions
- Ensure that a carrier's transportation charges reflect agreed-upon contracts and tariffs

Measurable Success

- Lower transportation cost with better resource utilization
- Improve delivery reliability
- Improve visibility of truck transportation status
- Reduce freight expenses by avoiding overpayment

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Solution Basis TM-ERP-EWM

SAP TM – ERP – EWM Integration
Integrated Outbound Process

Order Processing (ERP)

- Sales order or delivery creation (SAP ERP)
- Automatic transportation request creation (SAP TM)
- Automatic freight unit creation (SAP TM)

Transportation Planning (TM)

- Interactive / automatic transportation planning
- Carrier selection
- Carrier tendering
- Freight order creation
- Automatic delivery creation in ERP

Warehouse Execution (EWM)

- Wave creation
- Picking optimization, packing, staging and load management
- Delivery data update
- Value-added services
- Waybill print
- Appointment scheduling

Transport Execution (TM)

- Shipment status check
- Shipment execution monitoring and event tracking

Freight Order Settlement (TM / ERP)

- Transportation charge calculation
- Freight invoice request creation and transfer to ERP

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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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Solution Basis EWM RDS

SAP EWM RDS – solution details

- EWM 5.0
- EWM 5.1
- EWM 7.0
- EWM 7.01
- EWM 7.02
- EWM 9.0
- EWM 9.1

	Inbound Processing	Storage & Operations	Outbound Processing
CORE PROCESSES	**ASN data receiving, validation, correction** **Transporation unit mgmt.** **Goods receipt** **Putaway bin determination** **Internal routing** Slotting Deconsolidation **Putaway** **Returns / reverse logistics** Goods receipt optimization Advanced returns mgmt.	Rearrangement **Inventory counts / record accuracy** **Replenishment** Freight order management Kit-to stock	Order deployment **Route determination** **Wave management** **Picking bin determination** **Warehouse order creation** **Work assignment** **Picking, packing, staging** **Loading & goods issue** Kit-to-order Manual outbound deliveries Production supply Shipping Cockpit
CROSS PROCESSES	Transportation cross docking Pick from goods receipt/ push deployment Yard management	Labor management Opportunistic cross docking Merchandise distr. X-docking **Stock specific unit of measure**	**Task interleaving** Execution constraint mgmt. Semi-system-guided work Labor Demand Planning
SUPPORTING AREAS	**RF / RFID Enablement** **Quality inspection** Import / export integration EH&S integration eSOA enablement Migration Tools Pick by Voice ERP-QM Integration Direct TM/EWM Integration	**Packaging specification** **Batch management** Serial numbers Catch weight Material Flow System Warehouse cockpit Enhanced Dock Appointment Scheduling	Graphical warehouse layout Transp. integration (LES) Claims & Returns ERP transportation integration **Multiple EAN** Cartonization **Rapid deployment package** KPI's, Performance dashboard

green = used in EWM RDS

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Business Process Scope Covered

SAP Extended Warehouse Management

Inbound Processing

- Goods Receipt Management & Optimization
- Quantity based putaway
- Cross-Line Putaway
- Customer Returns with Quality Inspection on RF
- Bin Sectioning

Storage & Operations

- Cycle Counting
- Physical Inventory
- Replenishment
- Scrapping with RF

Outbound Processing

- Large-Small quantity picking with picking waves
- Using Pick Point for picking partial quantities
- Consolidation for packing at “bus stops”
- Staging
- Loading on transportation unit

Batch Management

Task Interleaving

Sample warehouse structure: High Rack with Narrow-Aisle, High Rack with Pick Point, Bulk Storage, Mezzanine

Central master data

SAP ERP and SAP EWM integration

Country-specific settings and documents translations to seamless work together with SAP ERP Best Practices US, German, Chinese, Brazilian and Russian Baseline (Sales Order Processing and Procurement)

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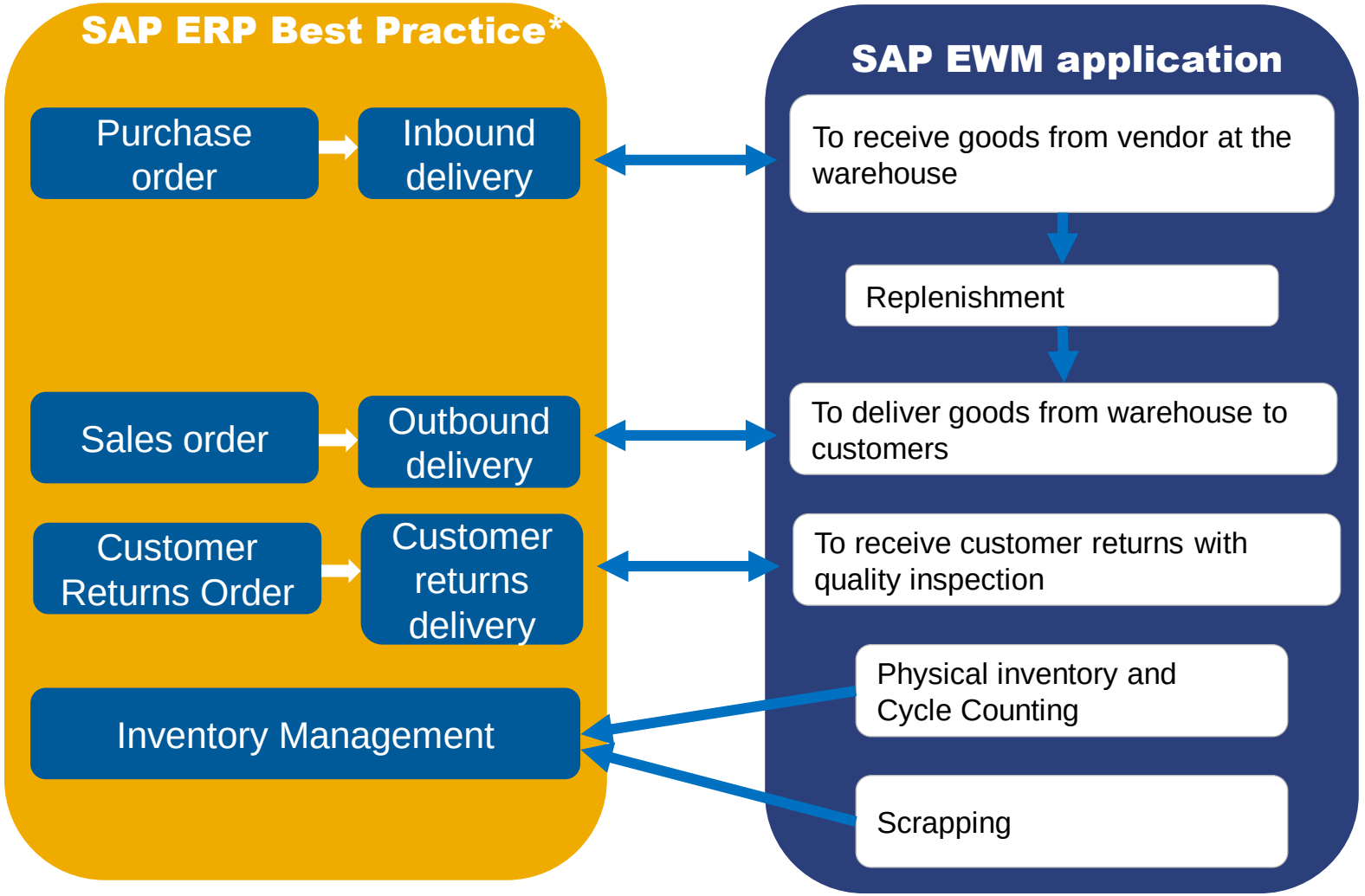
Business Process Scope Covered



*Not covered in the scope of this rapid-deployment solution, except for all setup activities for integration between the SAP ERP and SAP EWM applications and implementation of basic ERP scenarios (Sales from stock/Procurement without QM)

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SAP EWM RDS – processes

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1. SAP ERP and SAP EWM integration: Scope and Benefits

What‘s included

- This component quickly connects a running SAP ERP application to the SAP Extended Warehouse Management application. It combines rapid automation with accurate documentation to provide you with the information you need to effectively implement functionality that enables this critical and fundamental process.

Business Benefit

- Facilitates a smooth communication pattern between your SAP ERP and SAP EWM applications, providing processes for minimizing errors
- Establishes a fundamental integration layer, an essential process regardless of business process variations, and specific or unique warehousing constraints

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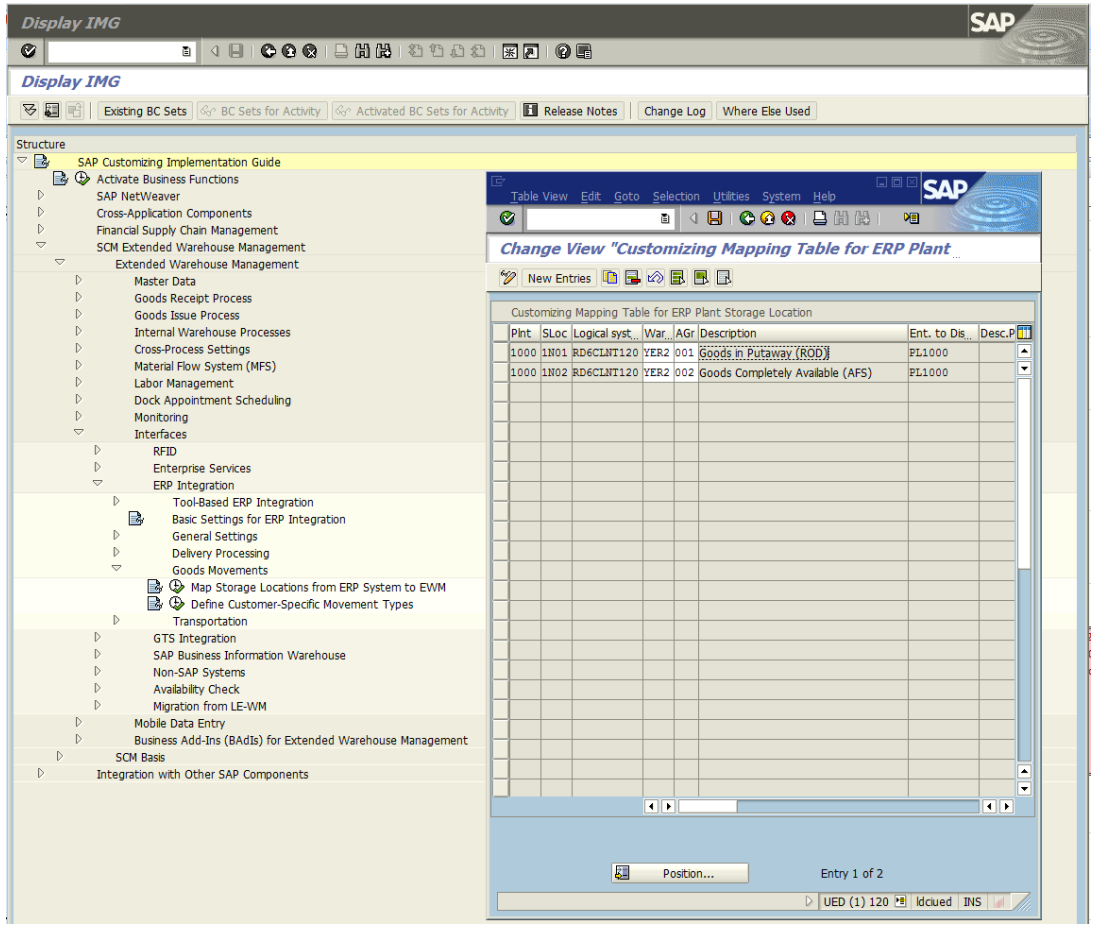
1. SAP ERP and SAP EWM integration: in the system

Key process flows covered

- Connect SAP ERP and SAP EWM
- Integrate points for information exchange



SAP ERP and SAP EWM integration

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SAP EWM RDS – processes

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2. Sample Warehouse Structure: Scope and Benefits

What's included

- This process provides a sample warehouse structure (YER2) containing all necessary entities to run the specified processes and beyond. This structure contains a narrow-aisle high rack storage with corresponding hand-over points, a high rack with bin sectioning enabled and pick point, bulk storage, a mezzanine storage, packing station with bus stop concept implement and many more entities. While being a necessary part to run the specified processes this structure is extensible in many ways to add further processes or customize the existing ones

Business Benefit

- Sets up – quickly and smoothly – a sample warehouse
- Replicates a physical warehouse, storing its characteristics and parameters in the warehousing software
- Initiates the implementation of future business processes

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2. EWM Storage Concept: Narrow Aisle Access

- The narrow aisle is one special type of high rack. The aisles are too narrow to allow two trucks at the same time.
- Low Level Trucks (see A) can access the lower levels of the aisles and handover points only (see C).
- High Level Trucks (see B) can operate in one or several aisles but can not move to GR-Zone or Packing Area. They can access all levels in the Narrow Aisle.
- Only one truck is allowed in one aisle at the same time.
- To pick from the lower levels, the low level truck is faster (more optimal) than the high level truck.
- The high level truck is slower than the low level truck, especially the going up in height is time-consuming. Changing of aisles are also time-consuming.

Narrow Aisle is modelled in EWM with 3 storage types:

Y001 – handover points (see C)

Y051 – lower levels

Y011 – upper levels

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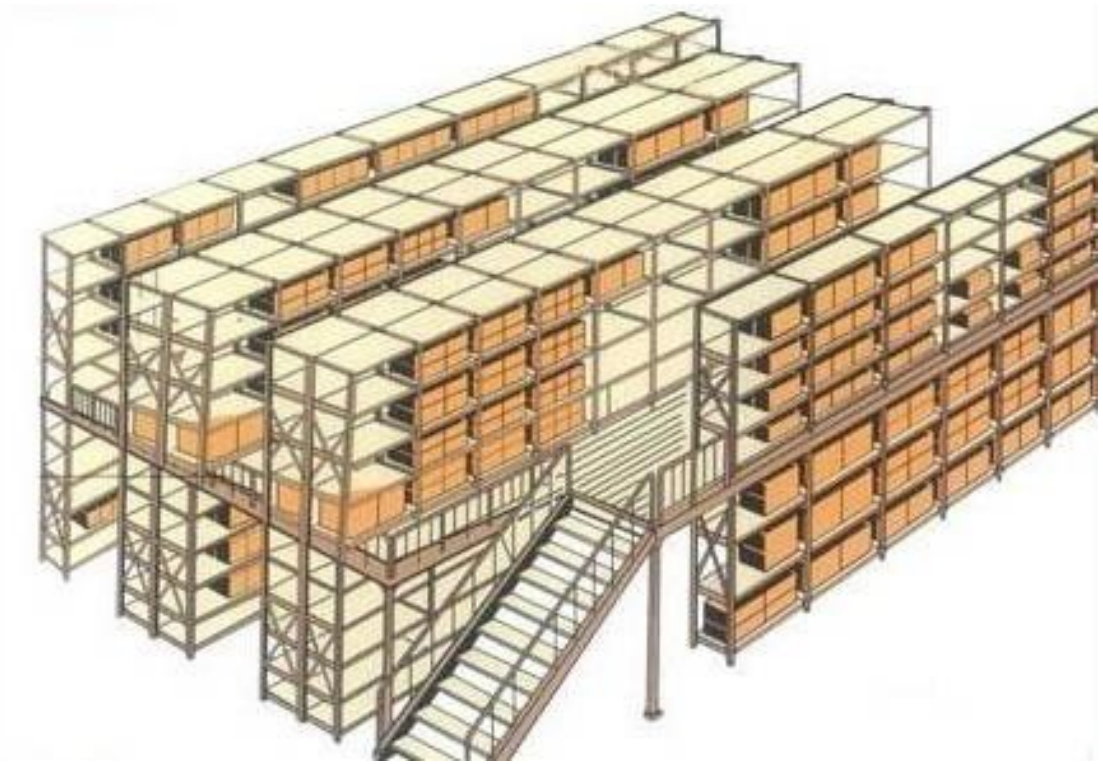
2. EWM Storage Concept: Mezzanine

Inbound/Receiving:

- Small products received in small quantities are stored in mezzanine.
- Transport from Goods receipt zone to final bin using storage container.
- One storage container holds same quantity as one final bin.
- Storage container is returned empty from mezzanine to GR-Zone.

Outbound:

- If customer orders a small product in a small quantity (less than a pallet), this product is picked from mezzanine.
- No forklift/truck access in mezzanine, operator uses a trolley with 3 compartments for multi-customer picking.



Mezzanine is modelled in EWM with storage type Y021

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2. EWM Storage: High Rack with Pick Point (Wide Aisle)

Inbound:

•Products are heavy, or partial picking at bin is difficult for the products. There is no further restriction.

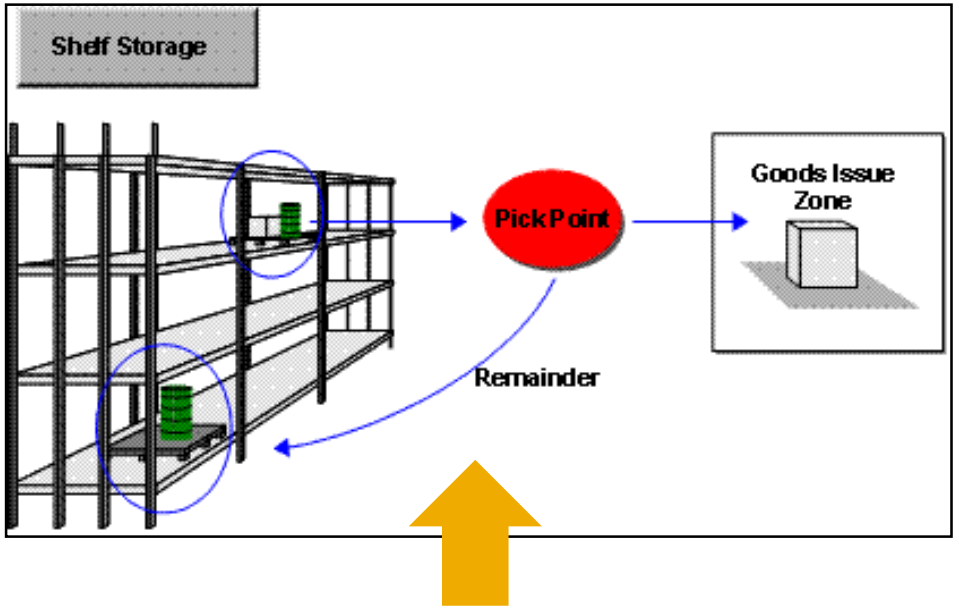
• Full pallets are received and put away to higher levels via hand over point (slow movers) or into lower levels directly (fast movers).

•Bin Sectioning are executed when pallets of products are put away into a storage bin for the first time, according to the pallet type (e.g. Euro vs US pallet).

Outbound:

•If customer orders a full pallet or exact remaining quantity of a pallet, it is taken (from higher level via hand over point) to the packing station directly, without going through the pick point.

•If customer orders less than a pallet, the pallet is taken to the pick point and returned to the high rack with remaining quantity after picking is done. Either high-level-truck (from upper levels) or low-level-truck (from lower levels) moves pallet to/from pick-point.



The wide aisle allows more trucks in the aisle at the same time and has a pick point as an option to be used for picking partial quantities

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2. EWM Storage: High Rack with Pick Point (Wide Aisle)

Two bulk storage types are available for different business needs. Depending on product attributes, pallets of a products are routed to one bin (bulk lane) in one of the bulk storage types.

A) - Y041 Bulk Storage A (Partial Pallets Allowed)

- Two sizes of bulk lanes are offered: a short bulk lane and a long bulk lane.
- In the system the maximum number of pallets for a bulk lane in that storage type is defined.
- Once stock removal has started for a bulk lane, the system automatically sets a putaway block until the bulk lane is emptied again.
- It is allowed to have one partial pallet serving for stock removals of non-pallet quantities and to directly pick them.

B) - Y042 Bulk Storage B (No Partial Pallets) with Y052 Picking Area

- This bulk storage offers a set of short bulk lanes.
- In the system the maximum number of pallets for a bulk lane is defined.
- Partial pallets are not allowed.
- To allow for non-pallet quantities in stock removal, there is a specialized Picking Area which is replenished from the bulk storage B.
- No putway block in this bulk storage type

Y052

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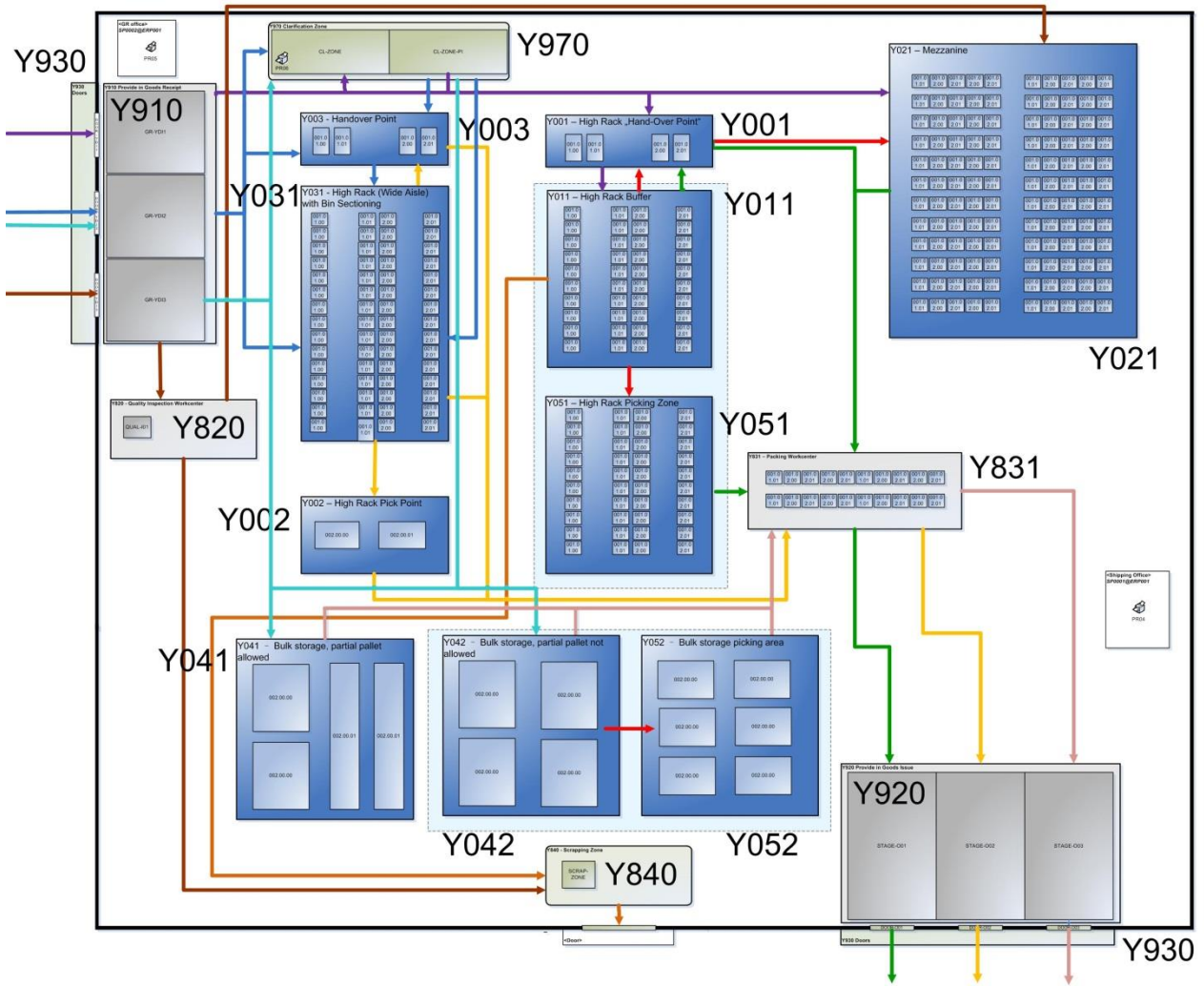
2. EWM Sample Warehouse Layout

EWM RDS Warehouse V 5.91



Process List

- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack with Bin Sectioning / Inbound of Batch-Managed Products from Vendor
- Replenishment
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack with Pick Point / Outbound of Batch-Managed Products to Customer
- Scrapping
- Customer Returns with Quality Inspection
- Inbound from Vendor to Bulk Storage
- Outbound to Customer from Bulk Storage
- Initial Stock Upload
- Physical Inventory
- Cycle Counting

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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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3. Central Master Data

What's included

- This component can help you quickly set up the essential master data to implement functionality to support your key warehousing processes – while minimizing potential errors. It contains the ERP part of data definition as well as distribution of the data to SAP EWM and necessary adjustments at EWM side
- Step-by-step or automatic setup of sample master data for plant, shipping and receiving points, customers, vendors, products (fast and slow movers), storage bins, doors
- Domestic routes are used to show the flexibility of the solution while being easy to apply in any specific country and with dedicated customers

Business Benefit

- Provides the master data required to perform required processes and scenarios
- Delivers a standard data integration concept for master data over SAP ERP and SAP EWM
- Eliminates troubleshooting by establishing all core requirements for managing data

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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
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- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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4. Inbound from Vendor to Narrow Aisle Storage/Mezzanine

What's included

- Performing this process, you can receive goods from vendors and move them to final bin in a narrow aisle storage. You get full system support for the receiving, packing and putaway steps including automated generation and assignment of warehouse tasks.
- The putaway step is oriented on quantity classifications – full pallets are routed to the high rack, big parts to picking area of the high rack and small parts to mezzanine
- In case putaway is not possible due to capacity reasons or because of not maintained master data the goods are routed to the clarification zone where after the issue is fixed the final warehouse task for putaway is created

Business Benefit

- Provides flexible variations of the inbound process via pre-configured scenarios.
- Quantity-based putaway of pallets and cartons into a Narrow Aisle pallet buffer or a small items Mezzanine.
- Fully RF/mobile device enabled process steps within the warehouse.
- Workload distribution between the different resources (Low Level Trucks, High Level Trucks, Human Resources etc.) using the full capabilities of RF Queues following the physical layout of the warehouse
- Support of a clarification zone for handling unit which currently cannot be pit away to a final destination in the warehouse.

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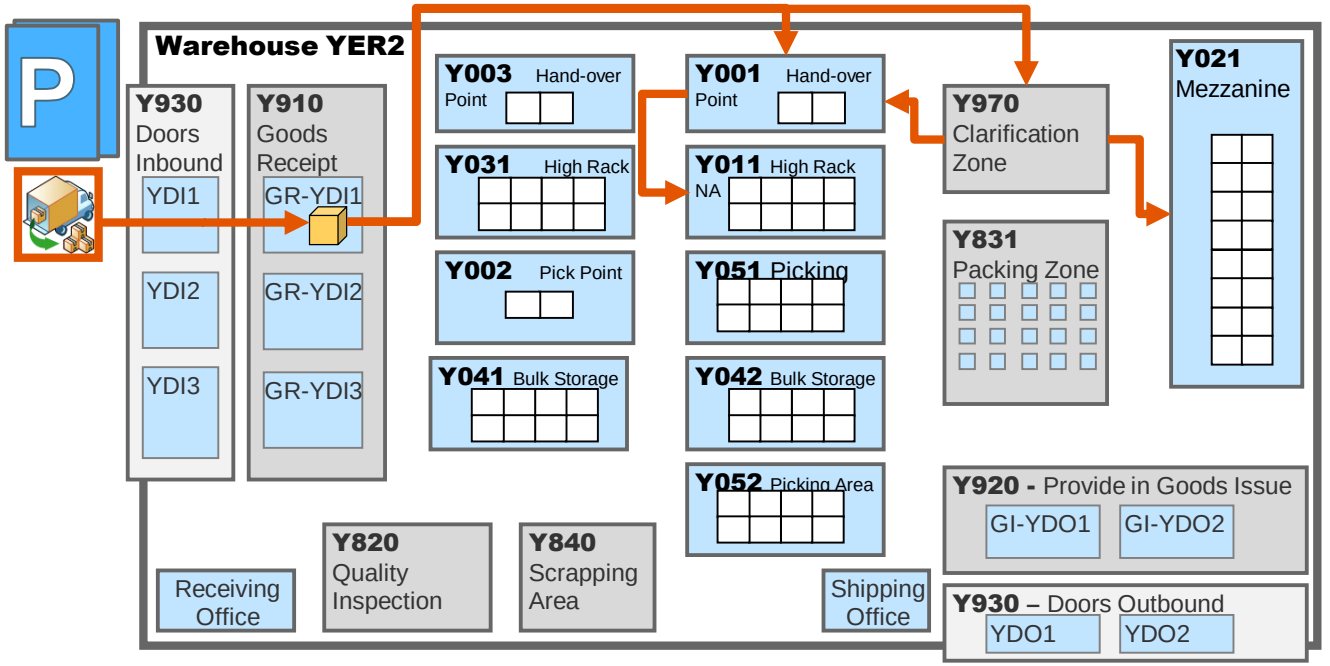
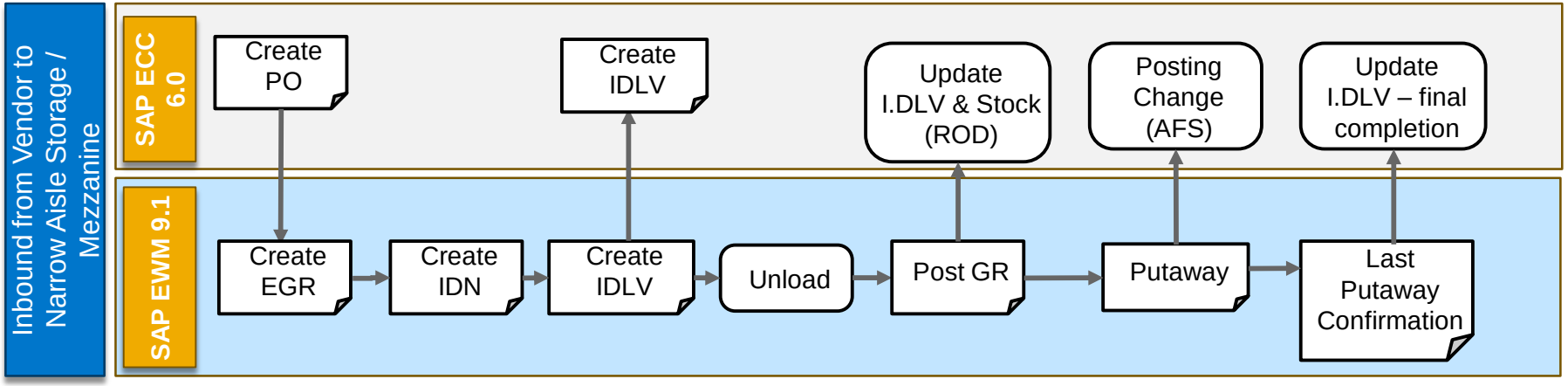
Solution Basis EWM RDS

4. Inbound from Vendor to Narrow Aisle Storage/Mezzanine

Overview

- Create Purchase Orders
- Create Expected Goods Receipts
- Create Inbound delivery with or without packaging information
- Pallets unloaded and HUs created in the system
- Putaway based on quantity to High Rack via Hand-over Point or Mezzanine
- Clarification Zone





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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5. Inbound from Vendor to High Rack (with Bin Sectioning)

What's included

- Performing this process, you can receive goods from vendors and move them to final bin in a high rack. The storage bins in the high rack are configured to dynamically create a number of sections depending on type of the first handling unit. You get full system support for receiving, packing and putaway steps including building handling units, posting goods receipt and automated generation and assignment of warehouse tasks.

Business Benefit

- Provides flexible variations of the inbound process via pre-configured scenarios.
- Bin sectioning depending on the actual pallet type to efficiently use space in a pallet rack.
- Fully RF/mobile enabled process steps within the warehouse.
- Workload distribution between the different resources (Low Level Trucks, High Level Trucks, Human Resources etc.) using the full capabilities of RF Queues following the physical layout of the warehouse
- Support of a clarification zone for handling unit which currently cannot be pit away to a final destination in the warehouse

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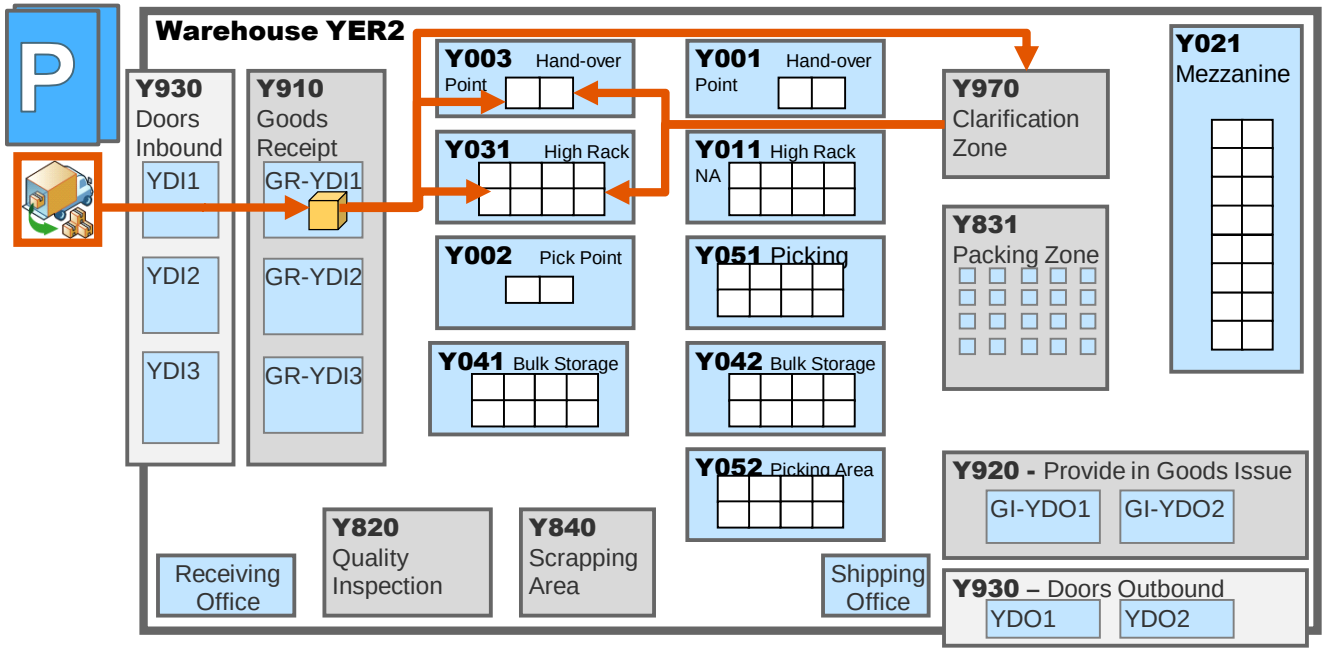
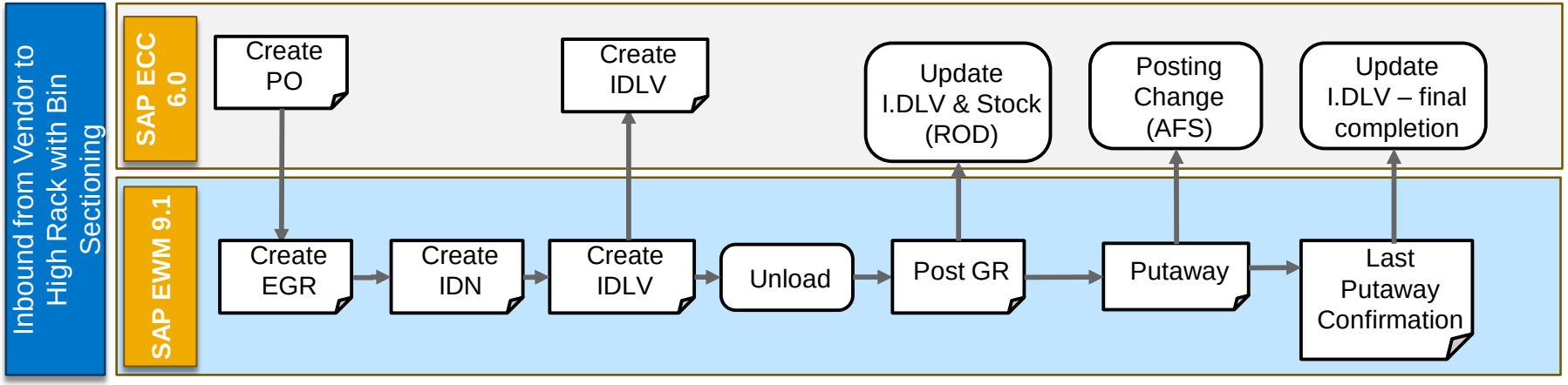
Solution Basis EWM RDS

5. Inbound from Vendor to High Rack (with Bin Sectioning)

Overview

- Create Purchase Orders
- Create Expected Goods Receipts
- Create Inbound delivery with or without packaging information
- Pallets unloaded and HUs created in the system
- Putaway to High Rack directly or via Hand-over point
- St. Bins sectioning depending on HU Type





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SAP EWM RDS – processes

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6. Inbound of Batch-Managed Products from Vendor

What's included

- Performing this process, you can receive batch managed products from vendors and move them to final bin in a high rack. Using RF device the handling units are created during goods receipt and corresponding batch number is entered. The batch contains characteristics like country of origin to be used for batch selection during outbound.

Business Benefit

- Provides flexible variations of the inbound of batch-managed products process.
- Maintenance of batch characteristics (here: country of origin) and batch ID during receiving allows later to select goods following a specific batch ID or a batch characteristic
- Fully RF/mobile enabled process steps (including batch creation) within the warehouse.
- Workload distribution using the full capabilities of RF Queues following the physical layout of the warehouse.

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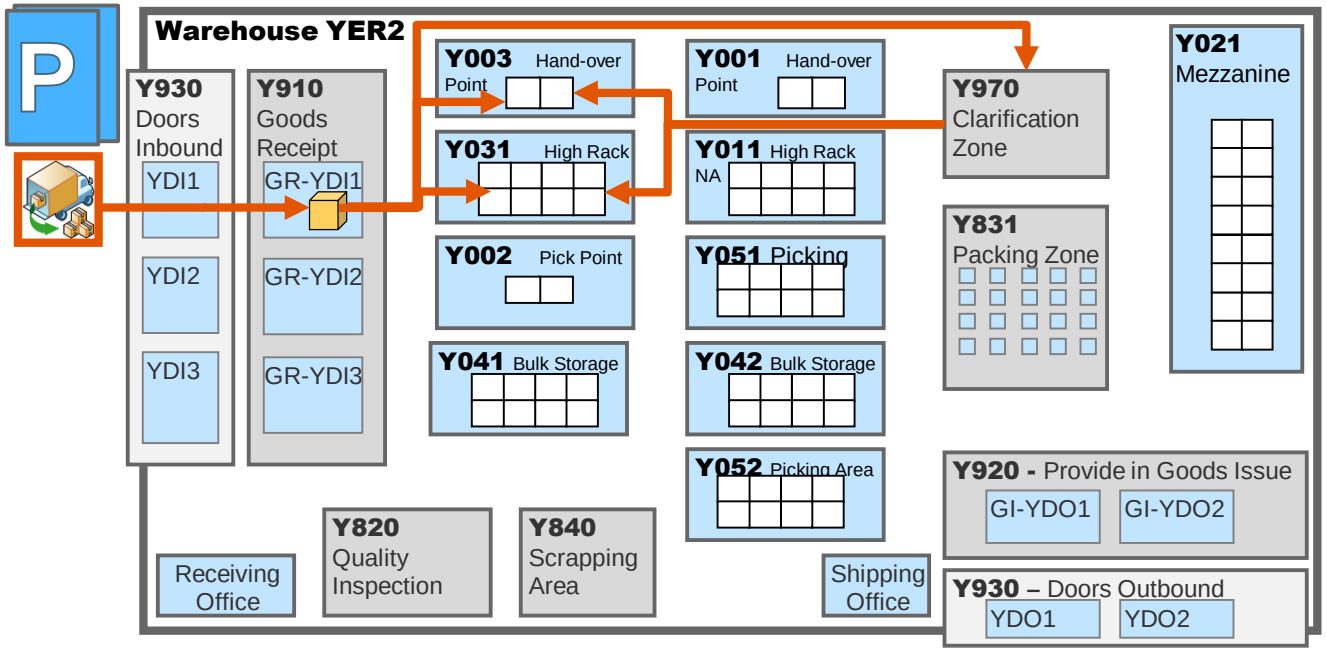
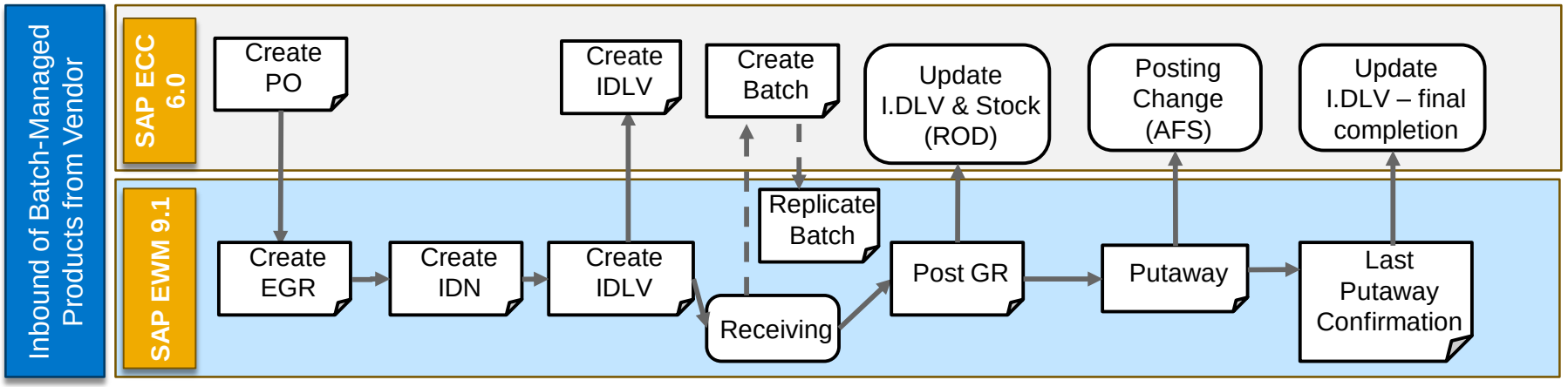
Solution Basis EWM RDS

6. Inbound of Batch-Managed Products from Vendor

Overview

- Create Purchase Orders
- Create Expected Goods Receipts
- Create Inbound delivery with or without packaging information
- Pallets unloaded and HUs created in the system. Batch data entered by user.
- Putaway to High Rack directly or via Hand-over point
- St. Bins sectioning depending on HU Type





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SAP EWM RDS – processes

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7. Inbound from Vendor to Bulk Storage

What's included

- In this process, you receive goods from vendors and move them to their final bins in the bulk storage areas.
- You get full system support for the receiving, handling unit creation and putaway steps including automated generation and RF Queue assignment of the warehouse orders and tasks. You can receive goods from vendors, create handling units directly in the RF/mobile device environment and then move them to their final bulk storage areas in the warehouse.
- There are 2 bulk storage types available for different business needs.:
  - Bulk Storage A (Partial Pallets Allowed)
  - Bulk Storage B (No Partial Pallets) with Picking Area
- In the system the maximum numbers of pallets for a bulk lane in both bulk storage type are defined. Depending on product attributes, pallets of a product are routed to the right bulk lane in bulk storage A or B.

Business Benefit

- The usage of put-away block prevents pallets of first-in fast-moving products from lasting for a long time in the bulk lane. Otherwise, new pallets might always be put on top of old pallets and will be always picked first. Also, it ensures the already picked partial pallets are reachable.
- Maximum numbers of certain types of pallet on one bin are defined, so that the system will automatically determine the capacity of one bulk lane depending on different pallet types.
- Fully RF/mobile enabled process steps within the warehouse.
- Workload distribution between the different resources (Low Level Trucks, Human Resources etc.) using the full capabilities of RF Queues following the physical layout of the warehouse

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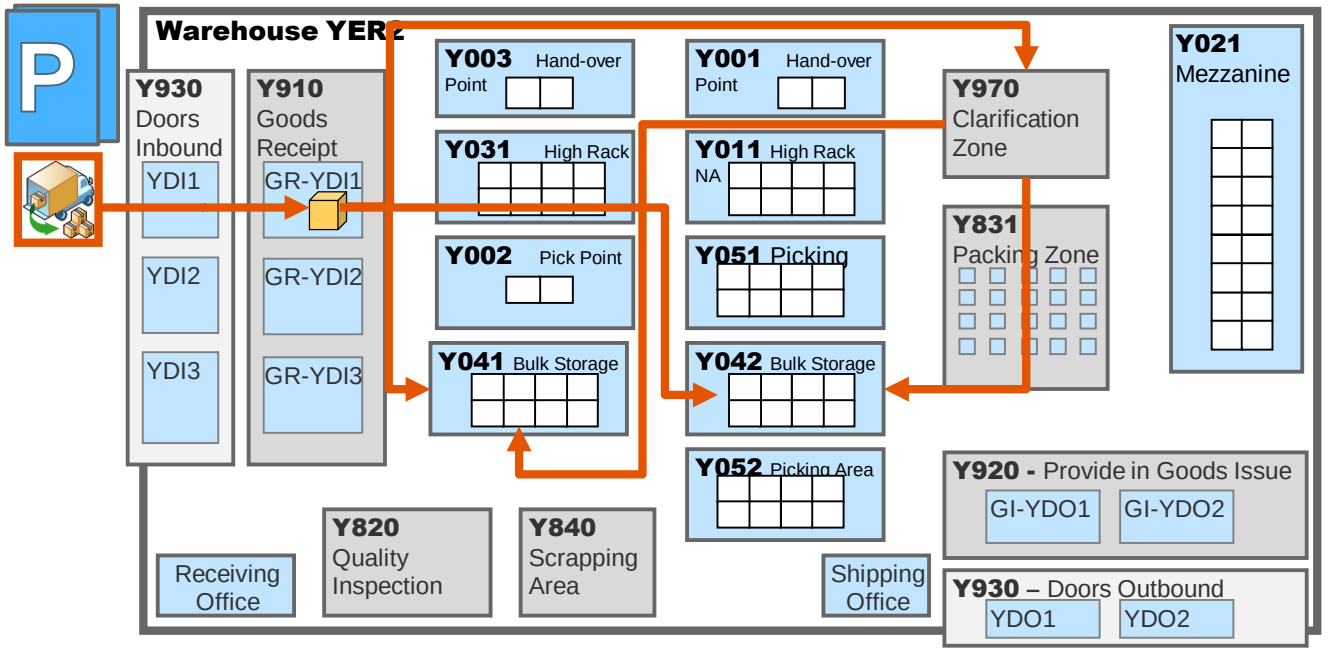
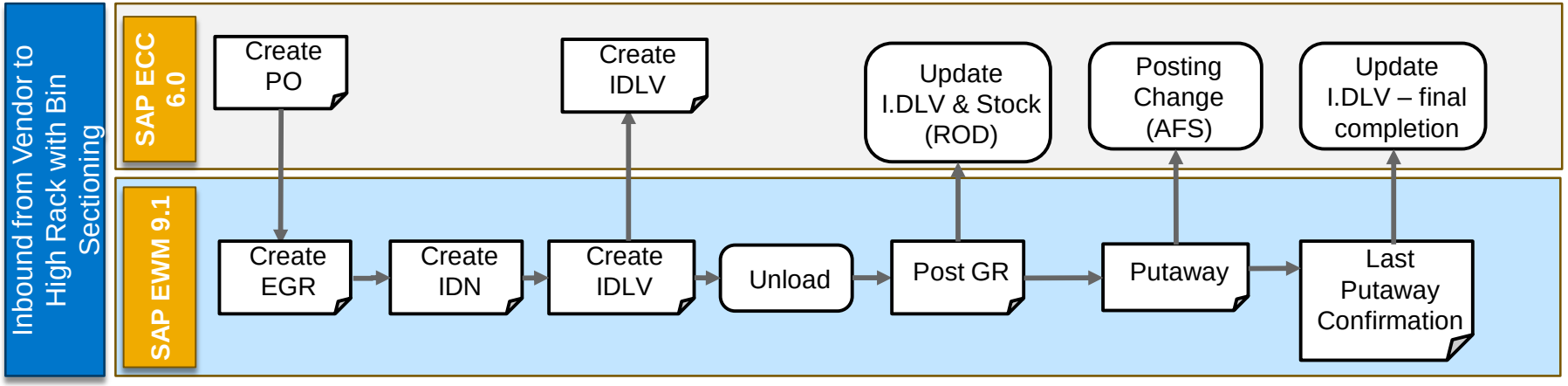
Solution Basis EWM RDS

7. Inbound from Vendor to Bulk Storage

Overview

- Create Purchase Orders
- Create Expected Goods Receipts
- Create Inbound delivery with or without packaging information
- Pallets unloaded and HUs created in the system
- Putaway to bulk storage
- Maximum numbers of pallets in the destination bins are decided based on HU Type





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
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8. Initial Stock Upload

What‘s included

- Performing the initial stock upload, you can easily create stock in your EWM RDS warehouse. The process is necessary when starting an EWM implementation at a non-empty warehouse as well as for creating different stock situations for tests

Business Benefit

- Demonstrates the SAP EWM stock upload capabilities in general
- Provides storage type, product and process specific stock upload data for all supported processes in the usual SAP EWM stock upload Excel-file format

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9. Replenishment

What's included

- Performing this business process, you can fill up a picking area in accordance with the demand for products that you pick in this area
- You use warehouse orders (WOs) to carry out replenishment via "letdown" of pallets from High Rack to the Picking Area / lower level of the high rack or via cross aisle replenishment
- The replenishment WOs are created by the system in the background when you confirm a pick-WO and the stock in the source bin falls below a predefined threshold. The system calculates the replenishment quantity in accordance with the maximum and minimum quantity maintained in the product master

Business Benefit

- Runs the replenishment process using pre-configured software
- Enables the use of radio frequency–based to replenish inventories that fall below threshold levels

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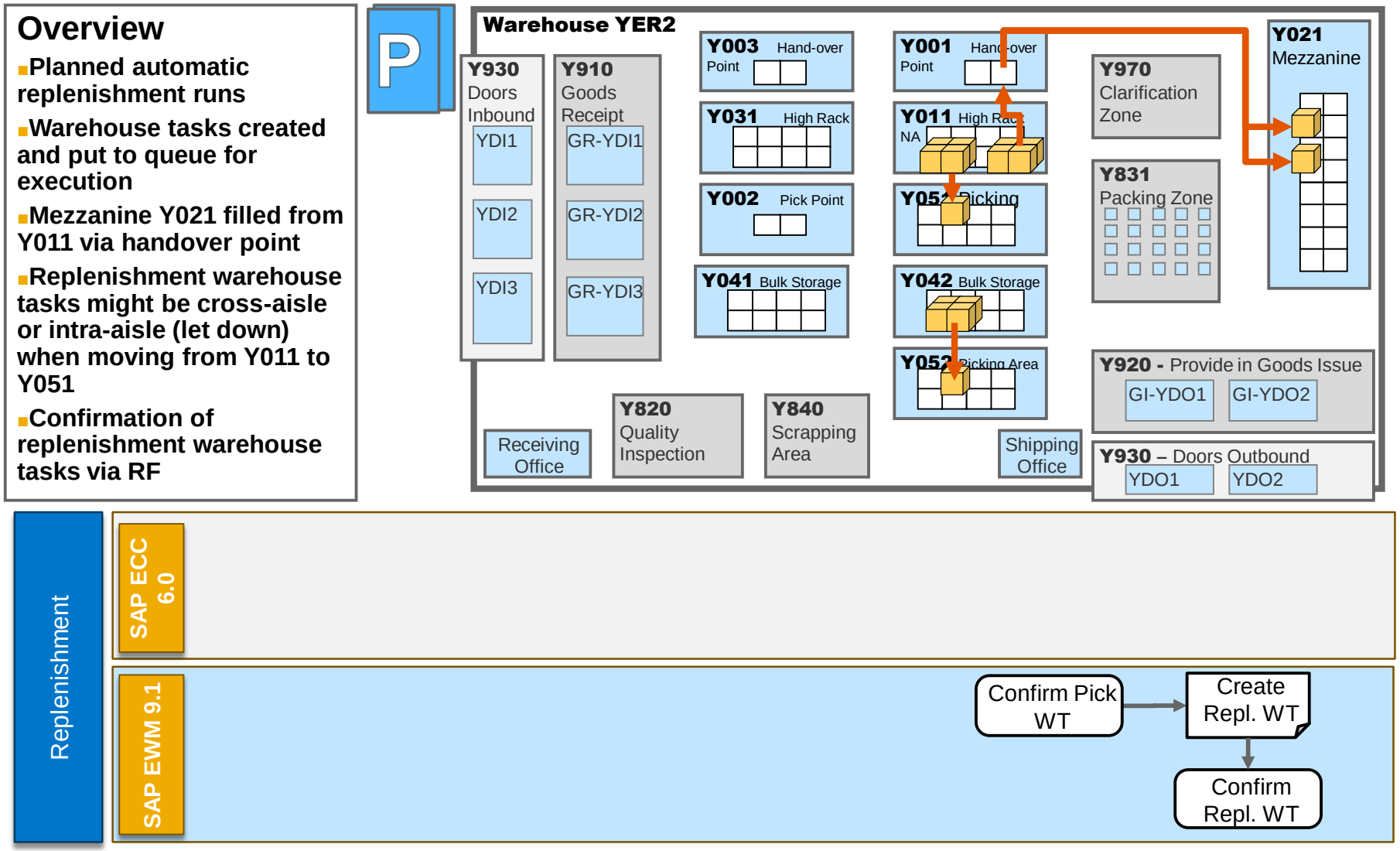
Solution Basis EWM RDS

9. Replenishment

Overview

- Planned automatic replenishment runs
- Warehouse tasks created and put to queue for execution
- Mezzanine Y021 filled from Y011 via handover point
- Replenishment warehouse tasks might be cross-aisle or intra-aisle (let down) when moving from Y011 to Y051
- Confirmation of replenishment warehouse tasks via RF



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10. Physical Inventory

What's included

- Performing this business process, you can control your warehouse stock and meet legal requirements. In this process, you create physical inventory (PI) documents for a chosen number of storage bins or products on a regular basis to spread the PI workload over the year. You carry out the counting using a radio frequency (RF) device or paper. By posting the PI documents, you adjust the book inventory in the SAP Extended Warehouse Management (SAP EWM) application. By posting the differences to the SAP ERP application, you balance the stock accounts. You can monitor the progress of your PI by using the warehouse management monitor.

Business Benefit

- Establishes an inventory counting process – with a periodic physical counting approach – via pre-configured software
- Enables radio frequency–based or paper-based counting
- Helps maintain accurate inventory levels and manage replenishment processes for demand and supply planning

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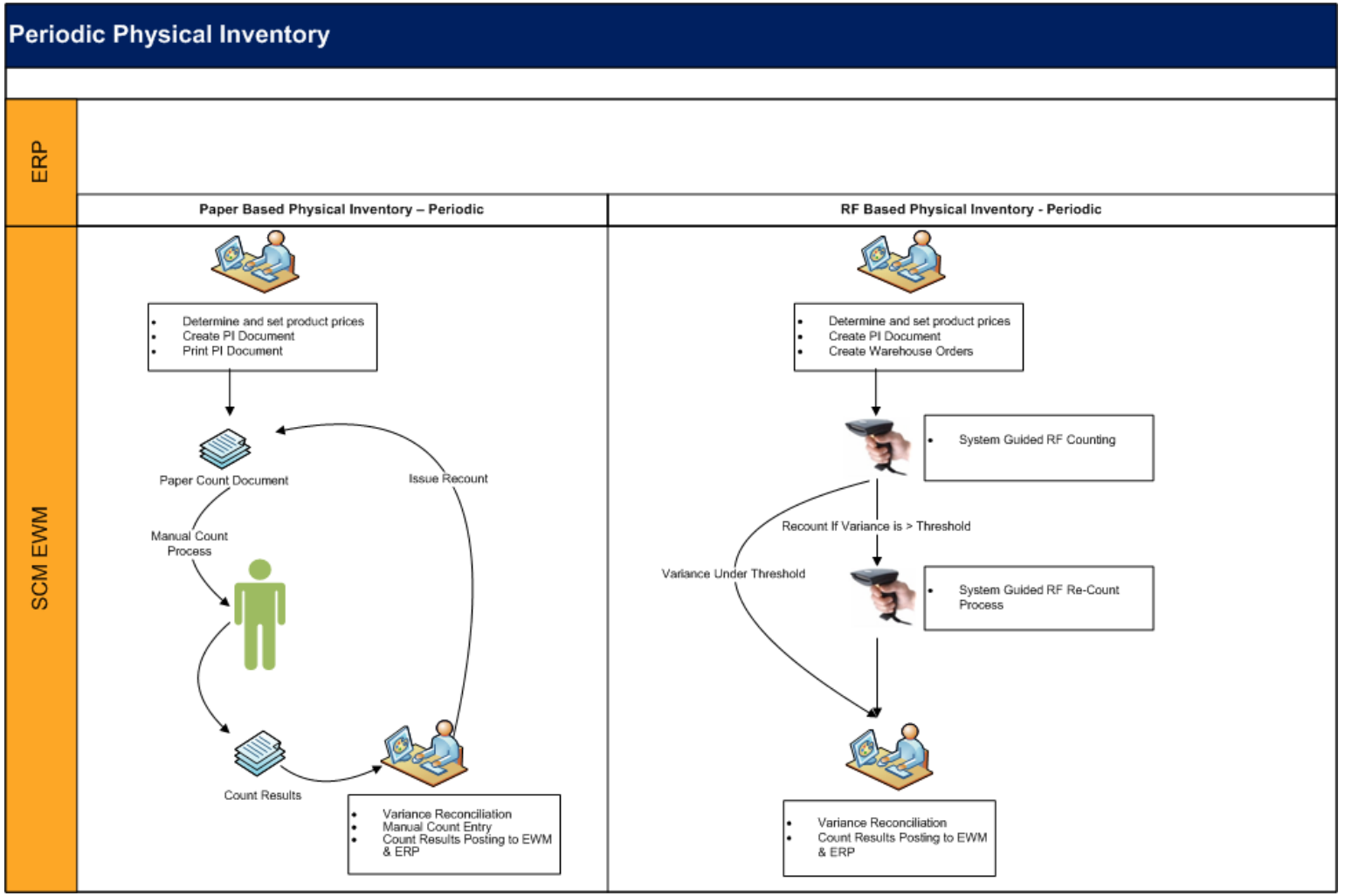
10. Physical Inventory

Key process flows covered

- Create PI documents and work orders (WOs) (SAP EWM).
- Count the bins or products (SAP EWM).
- Create recount documents, and carry out the recounting (SAP EWM).
- Post the PI documents (SAP EWM).
- Set completeness (SAP EWM).
- Post the differences (SAP EWM).



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SAP EWM RDS – processes

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11. Cycle Counting

What's included

- You perform this business process as a product-specific physical inventory (PI) process at regular intervals to help ensure inventory accuracy in your warehouse and to meet legal requirements. These intervals depend on the cycle-counting indicator field that you maintain for all products that you want to include in cycle counting. The cycle-counting indicator field reflects the classification of your products according to their impact on operations and finance.
- In this process, you create PI documents for all cycle counting–relevant products that are due to be counted. You carry out the counting using a radio frequency (RF) device or paper. By posting the PI documents, you adjust the book inventory in the SAP Extended Warehouse Management (SAP EWM) application. By posting the differences to the SAP ERP application, you balance the stock accounts.
- You can monitor the progress of your PI by using the warehouse management monitor.

Business Benefit

- Establishes an inventory counting process via pre-configured software
- Supports radio frequency-based or paper-based counting
- Facilitates accurate inventory counting, supporting replenishment processes as well as demand and supply planning

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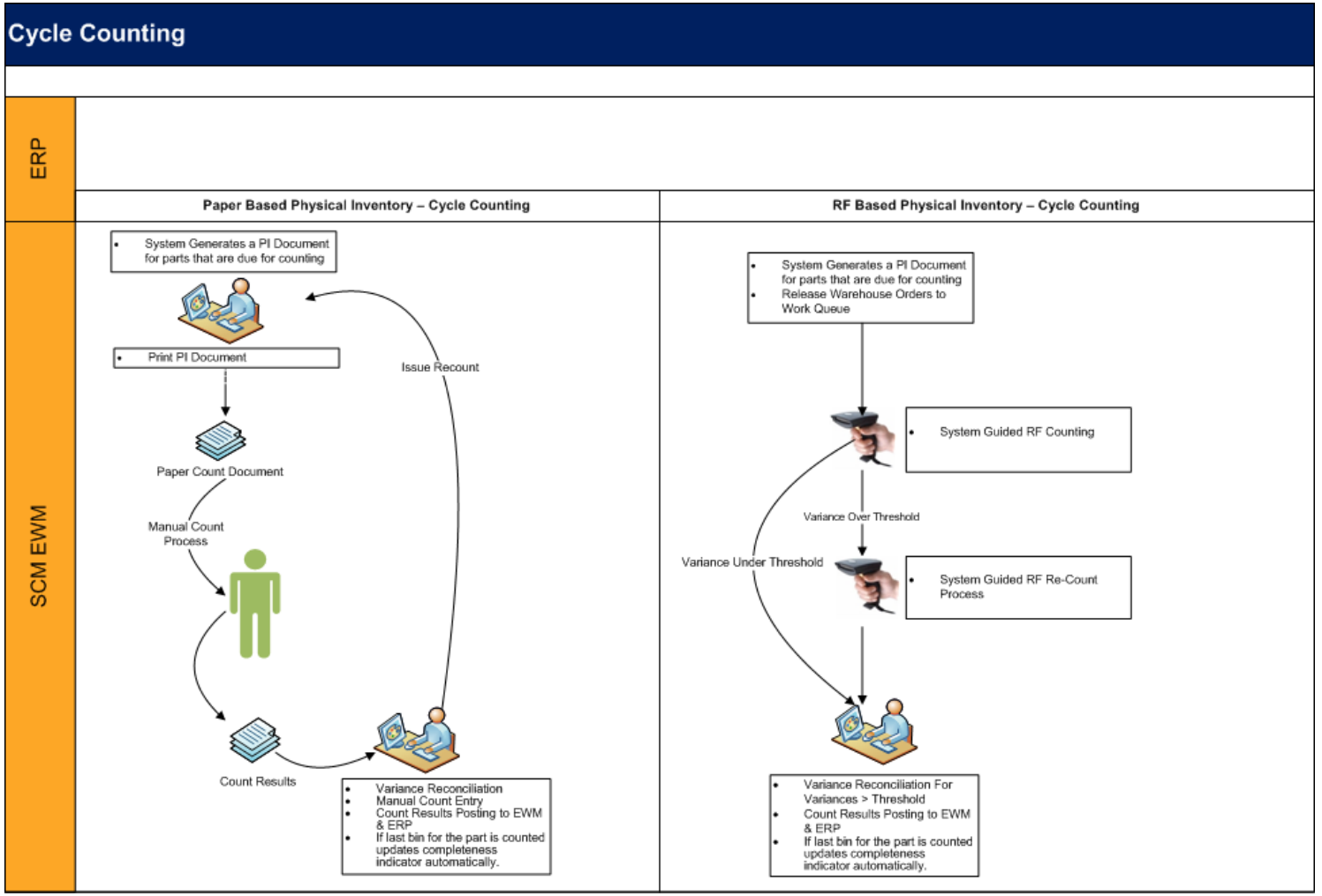
11. Cycle Counting

Key process flows covered

- Create PI documents and work orders (WOs) (SAP EWM).
- Count the products (SAP EWM).
- Create recount documents and carry out the recounting (SAP EWM).
- Post the PI documents (SAP EWM).
- Set completeness (SAP EWM).
- Post the differences (SAP EWM).



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SAP EWM RDS – processes

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12. Scrapping

What‘s included

- You can track and manage your damaged or expired inventories – at regular intervals – and create a warehouse area to store scrapping products and empty the area regularly
- This process contains two variants:
- Variant A: Scrapping due to expired BBD/SLED - Stock items to be scrapped are identified by means of an expired shelf-life report and a corresponding posting change with a warehouse task for movement of goods to scrapping zone are created
- Variant B: Scrapping due to Damaged Stock – goods to scrap are selected and ad-hoc warehouse task is created manually
- Warehouse orders and tasks are assigned to the corresponding RF Queues
- Actual scrapping and the related financial postings are either triggered manually or by means of a periodically scheduled run.

Business Benefit

- Provides flexible variations of the scrapping process
- Supports all storage types
- Fully RF/mobile enabled process steps within the warehouse
- Integrated with the SAP ERP system to document the financial posting of scrapping to a cost center.

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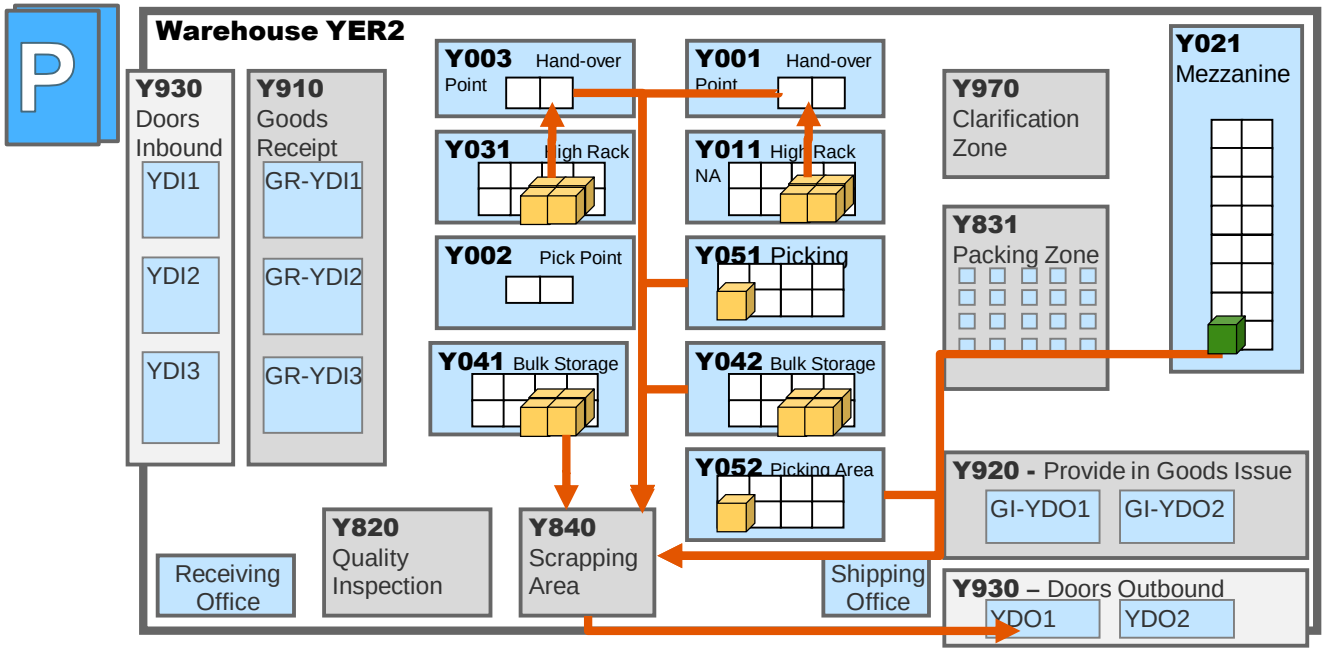
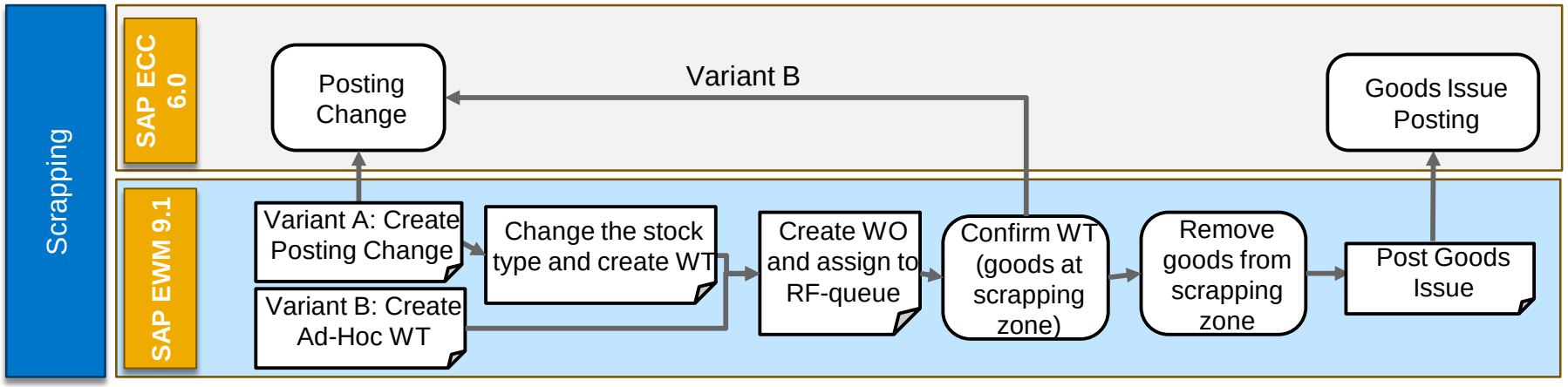
Solution Basis EWM RDS

12. Scrapping

Overview

- Variant A: Stock items to be scrapped are identified by means of an expired shelf-life report
- Variant B: Scrapping tasks are initiated manually
- Warehouse orders and tasks are assigned to the corresponding RF queues
- Actual scrapping and the related financial postings are triggered manually or by means of a periodically scheduled run





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
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- Cycle Counting
- Scrapping
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- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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13. Outbound to Customer from Narrow Aisle Storage / Mezzanine

What's included

- You perform this business process to send ordered goods to external customers. In this process, you can send different quantities (for example, cartons or pallets) to the customers
- You pick goods by waves into pick-handling units (pick-HUs) or in full pallets based on quantity classifications. Full pallets picked via hand over points by different resources
- The goods are consolidated into shipping HUs at a packing station using a dynamic bus stop concept to use the storage space efficiently
- You then stage the shipping HUs and load them into a truck before posting the goods issue
- You use routes defined based on postal codes.
- For more convenient monitoring of waves, delivery documents, stock etc. a process focused warehouse monitor is configured

Business Benefit

- Provides flexible variations of the outbound process for sending goods from a narrow aisle storage and/or mezzanine.
- Shows the detailed use of handover points, picking waves, staging, loading and the RF/mobile environment incl. the corresponding RF Queues which follow the physical layout of the warehouse.
- Shows quantity based picking that is, if the customer ordered full pallets they are picked from the pallet storage, whereas individual parts or single cartons are either picked from the large part's picking area or the small part's mezzanine storage.
- Shows the use of SSCC (Standard Shipping Container Code) numbers for pallet/HU labels.
- Introduces an effective way of consolidating deliveries at the packing work center by using a dynamic "bus stop" concept.

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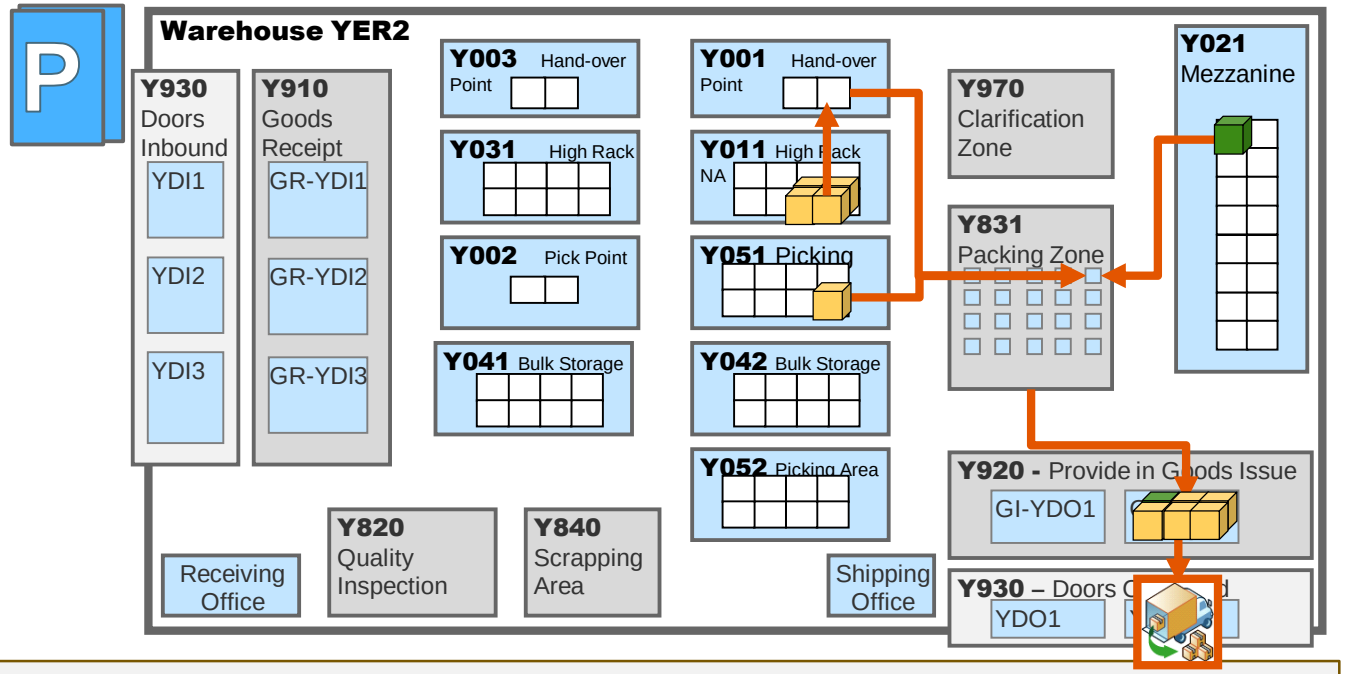
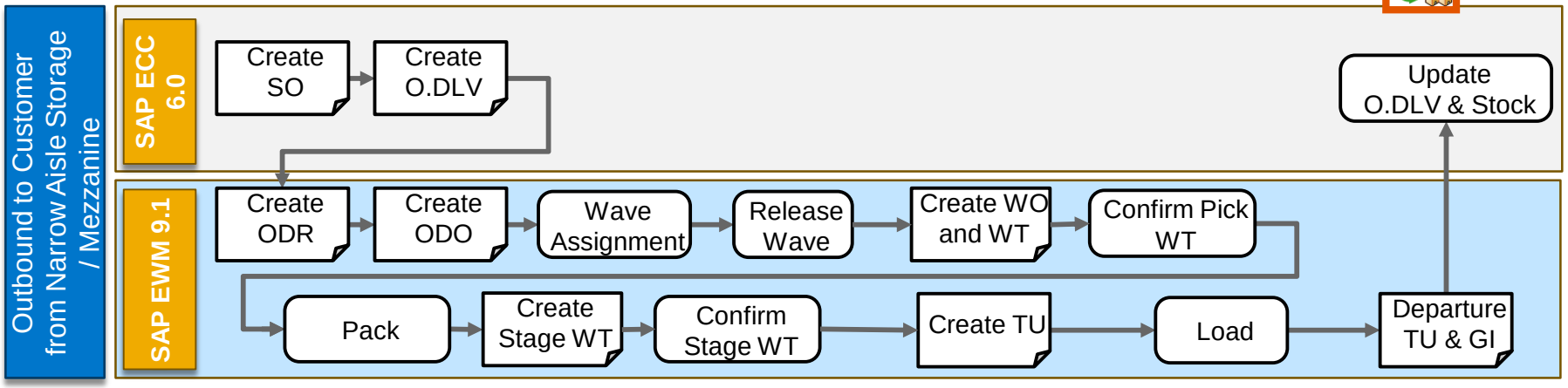
Solution Basis EWM RDS

13. Outbound to Customer from Narrow Aisle Storage / Mezzanine

Overview

- Sales Orders to sell goods
- Creation of Outbound Delivery
- Assignment to picking waves automatically by route and pl. shipment
- Picking by quantity with removing full pallets via Hand-over point
- Packing at bus stops into Shipping HUs
- Loading to Transportaion Unit by HU





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Solution Basis EWM RDS

13. Outbound to Customer from Narrow Aisle Storage / Mezzanine

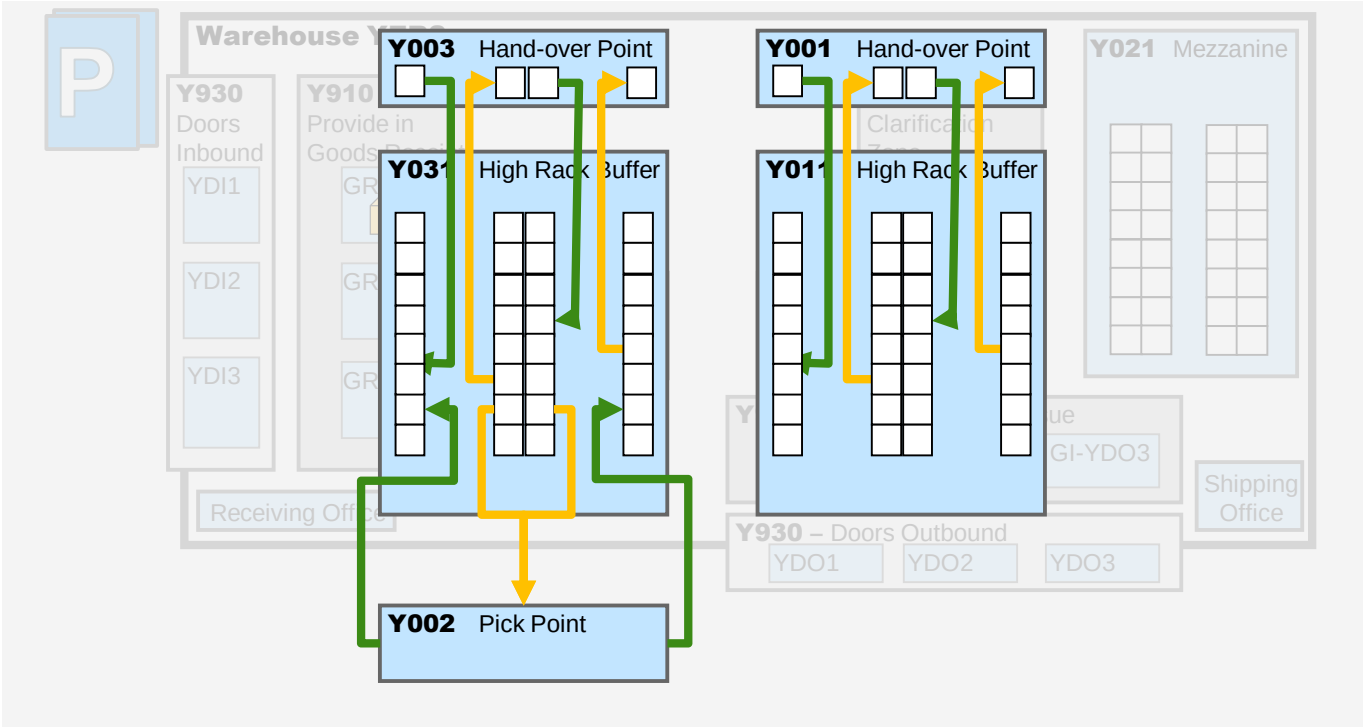
Overview

- Warehouse Orders for putaway and stock removal created and assigned to queues accordingly for pallets to and from High Rack, Hand Over Point and Pick Point
- Resources take the orders with alternating directions (green = inbound, yellow = outbound)
- Possible routes:

  High Rack: Y003-> Y031 -> Y002 -> Y031 -> Y003

  Narrow Aisle: Y001 -> Y011 -> Y001

- Queues of replenishment considered too



Task Interleaving for High Level Order Truck Resource

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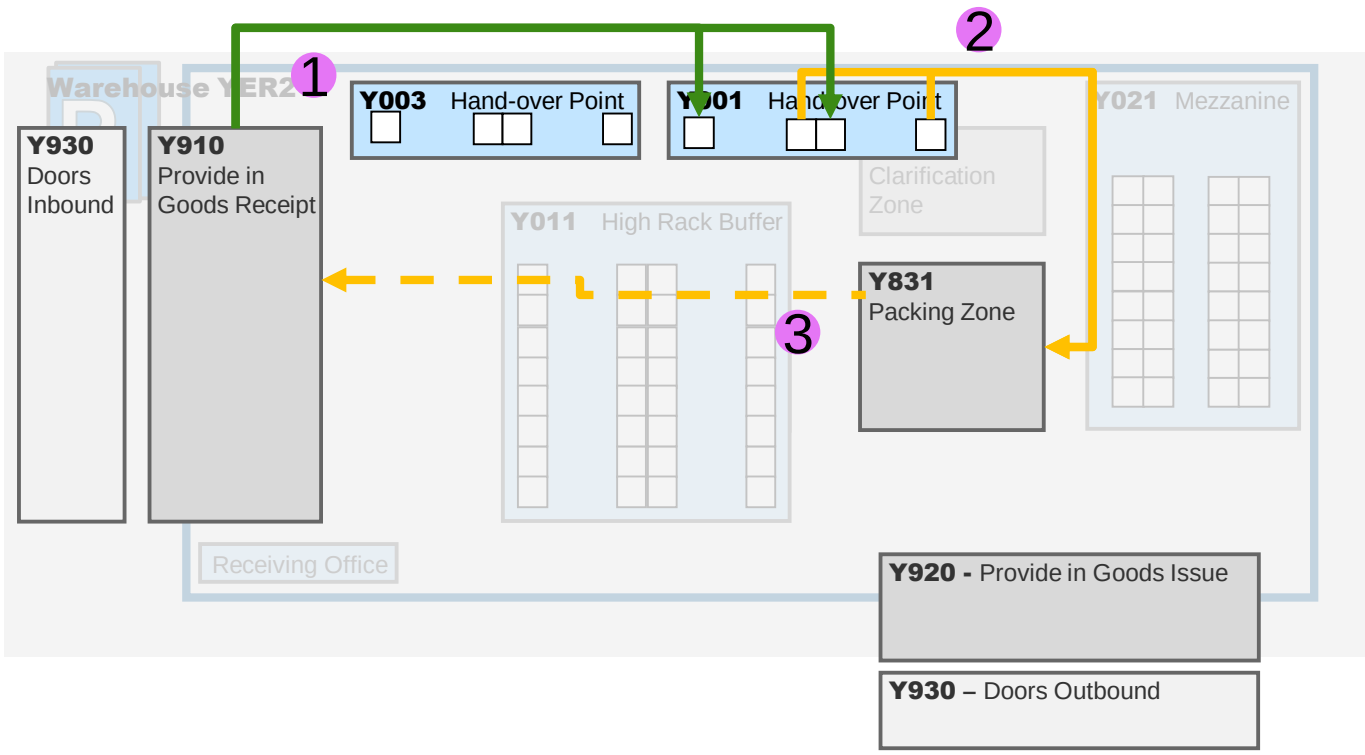
Solution Basis EWM RDS

13. Outbound to Customer from Narrow Aisle Storage / Mezzanine

Overview

- **Warehouse Orders for Putaway created and assigned to YI-910-001, YO-001-831 accordingly if pallets go to Narrow Aisle High Rack and from there**
- **Possible route: Y910-> Y001 -> Y831 -> Y910**
- **Queues of Replenishment are considered, too**



Task Interleaving for Low Level Order Truck Resource

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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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14. Outbound to Customer from High Rack (with Pick Point)

What's included

- Performing this warehouse process, you can expedite large number of shipments of goods including picking in waves, packing, staging and loading. In case only partial quantity of a full pallet must be picked the pallet is moved to a pick point, the required quantity is withdrawn and finally the pallet returned back to the high rack.
- The goods are consolidated into shipping HUs at a packing station using a dynamic bus stop concept to use the storage space efficiently.
- You then stage the shipping HUs and load them into a truck before posting the goods issue.
- You use routes defined based on postal codes.
- For more convenient monitoring of waves, delivery documents, stock etc. a process focused warehouse monitor is configured.

Business Benefit

- Provides flexible variations of the outbound process for sending goods from a High Rack with optionally Pick Point Storage, Hand Over Point or direct Stock Removal depending on ordered quantity and stock availability at the High Rack.
- Shows the detailed use of a pick point, handover points, picking waves, staging, loading and the RF/mobile environment incl. the corresponding RF Queues which follow the physical layout of the warehouse.
- Shows the use of SSCC (Standard Shipping Container Code) numbers for pallet/HU labels.
- Introduces an effective way of consolidating deliveries at the packing work center by using a dynamic "bus stop" concept.

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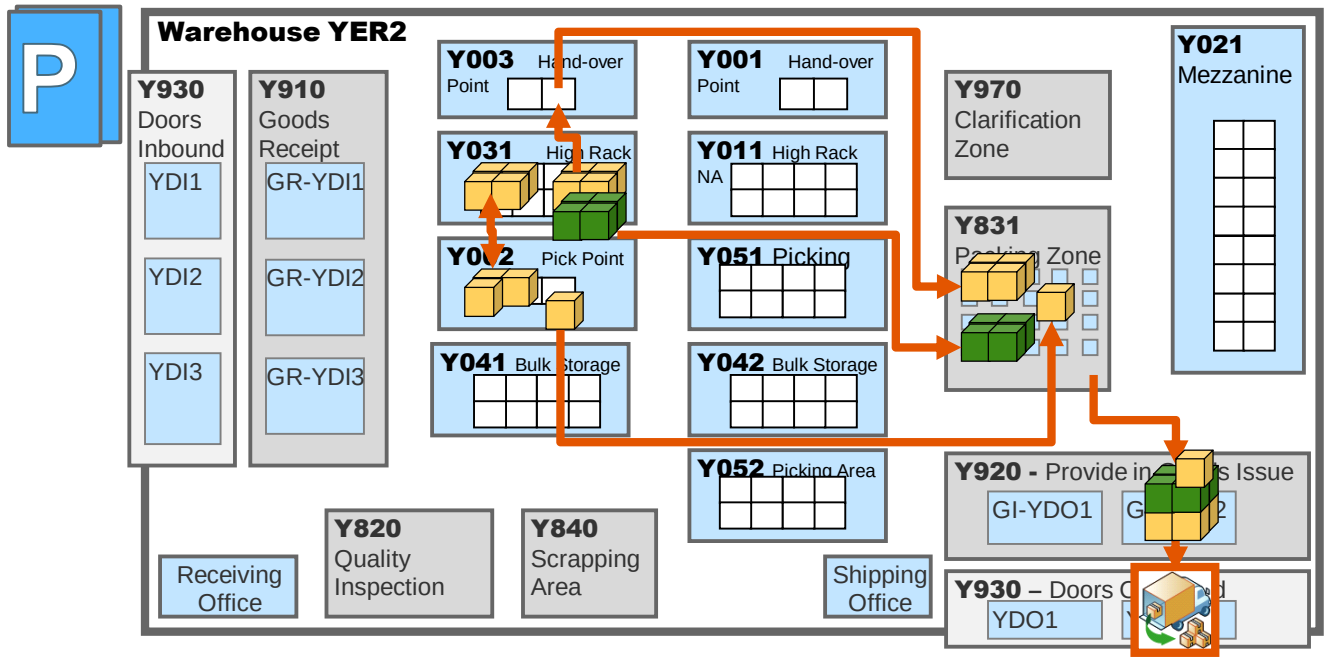
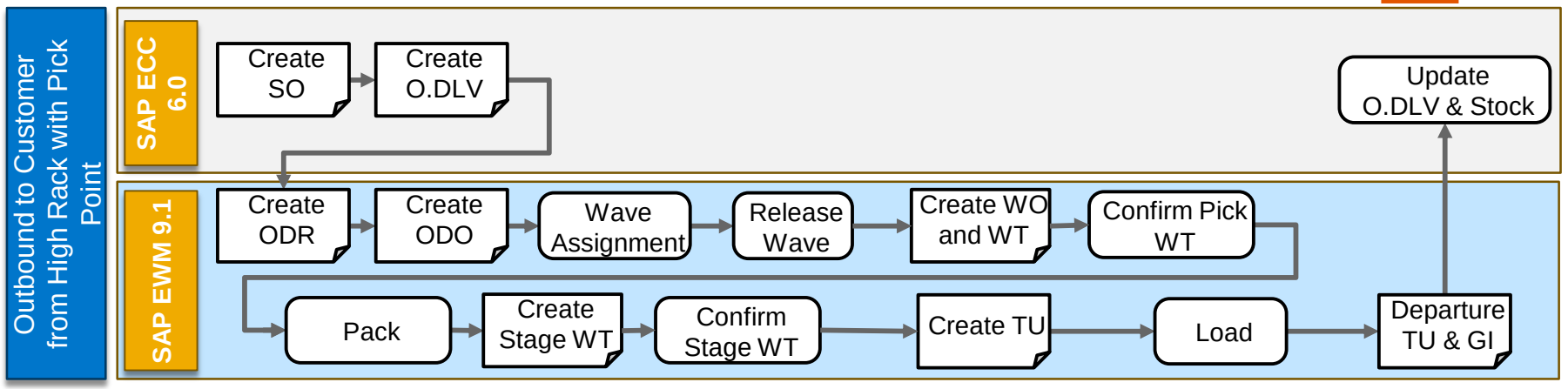
Solution Basis EWM RDS

14. Outbound to Customer from High Rack (with Pick Point)

Overview

- Sales Orders to sell goods
- Creation of Outbound Delivery
- Assignment to picking waves automatically by route and pl. shipment
- Picking:
  - I. Fast Mover /Full Pallet – directly to Packing Zone
  - II. Slow Mover / Full Pallet via Hand-over Point
  - III. Partial quantities of a pallett via Pick Point
- Packing / Printing / Loading





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
- Inbound from Vendor to High Rack (with Bin Sectioning)
- Inbound of Batch-Managed Products from Vendor
- Inbound from Vendor to Bulk Storage
- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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15. Outbound of Batch-Managed Products to Customer

What's included

- Performing this warehouse process, you can expedite batch-managed goods including picking in waves, packing, staging and loading. It allows picking of goods by considering batch-determination criteria like avoiding goods with a specific country of origin or blocked batch identifiers.
- The goods are consolidated into shipping HUs at a packing station using a dynamic bus stop concept to use the storage space efficiently
- You then stage the shipping HUs and load them into a truck before posting the goods issue.
- You use routes defined based on postal codes.
- For more convenient monitoring of waves, delivery documents, stock etc. a process focused warehouse monitor is configured.

Business Benefit

- Provides flexible variations of the outbound process for sending batch-managed goods from a High Rack with Pick Point Storage.
- Demonstrates the capability of using batch-managed products, customer-specific batch determination criteria and the actual batch selection in the SAP EWM system.
- Shows the detailed use of a pick point, picking waves, staging, loading and the RF/mobile environment incl. the corresponding RF Queues which follow the physical layout of the warehouse.
- Shows the use of SSCC (Standard Shipping Container Code) numbers for pallet/HU labels.
- Introduces an effective way of consolidating deliveries at the packing work center by using a dynamic "bus stop" concept.

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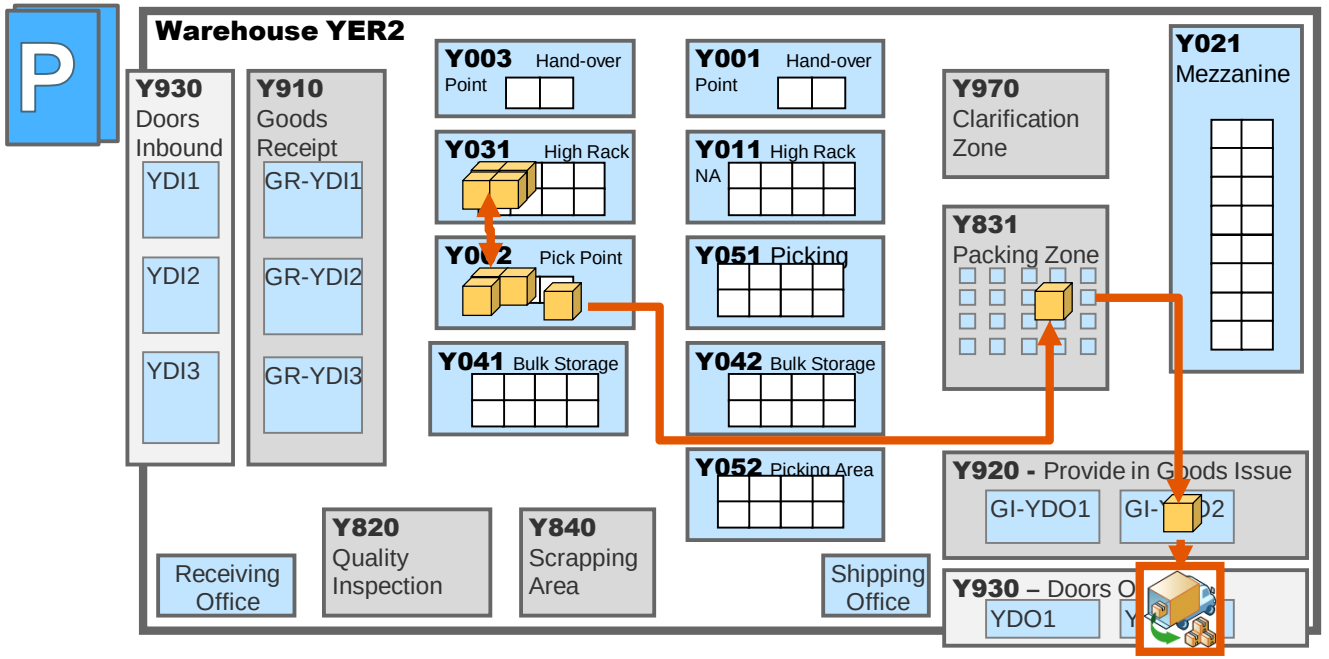
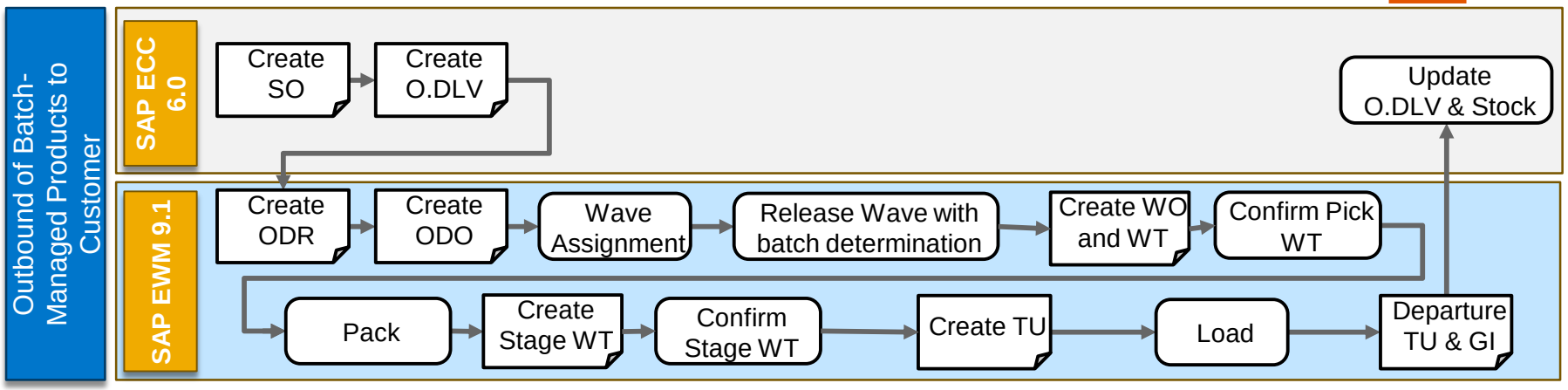
Solution Basis EWM RDS

15. Outbound of Batch-Managed Products to Customer

Overview

- Sales Orders to sell goods. Batch selection criteria at SO Item entered by user (optional)
- Creation of Outbound Delivery at ERP w/o batch determination
- Assignment to picking waves automatically by route and pl. shipment
- Wave Picking executes batch determination
- Packing / Printing / Loading





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
- Sample warehouse structure
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- Inbound from Vendor to Narrow Aisle Storage / Mezzanine
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- Initial Stock Upload
- Replenishment
- Physical Inventory
- Cycle Counting
- Scrapping
- Outbound to Customer from Narrow Aisle Storage / Mezzanine
- Outbound to Customer from High Rack (with Pick Point)
- Outbound of Batch-Managed Products to Customer
- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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16. Outbound to Customer from Bulk Storage

What's included

- You can use this process to pick ordered goods from bulk storage areas and ship them to customers.
- No matter you have large shipments (i.e. full pallet quantities) or small quantities (i.e. individual cartons or pieces) to deliver, the system offers standardized warehouse processes fully supported by RF / mobile devices. You are guided to pick the right handling units by waves, pack them at the same place (bus-stop) by customers and delivery time, stage and load them to the transportation units.
- Based on the products and quantities to be shipped, the system automatically creates the picking warehouse tasks from suitable source bins of the following two bulk storage types:

1. Bulk Storage A (Partial Pallets Allowed)
2. Bulk Storage B (No Partial Pallets) with Picking Area

Business Benefit

- Provides flexible variations of the outbound process for sending goods from bulk storage areas.
- Shows the detailed use of picking area, picking waves, staging, loading and the RF/mobile environment including the corresponding RF Queues which follow the physical layout of the warehouse.
- Shows quantity based picking that is, if the customer ordered full pallets they are picked from the pallet storage lane, whereas individual parts or single cartons are either picked from the picking area or the existing partial pallets.
- Shows the use of SSCC (Standard Shipping Container Code) numbers for pallet/HU labels.
- Introduces an effective way of consolidating deliveries at the packing work center by using a dynamic "bus stop" concept.

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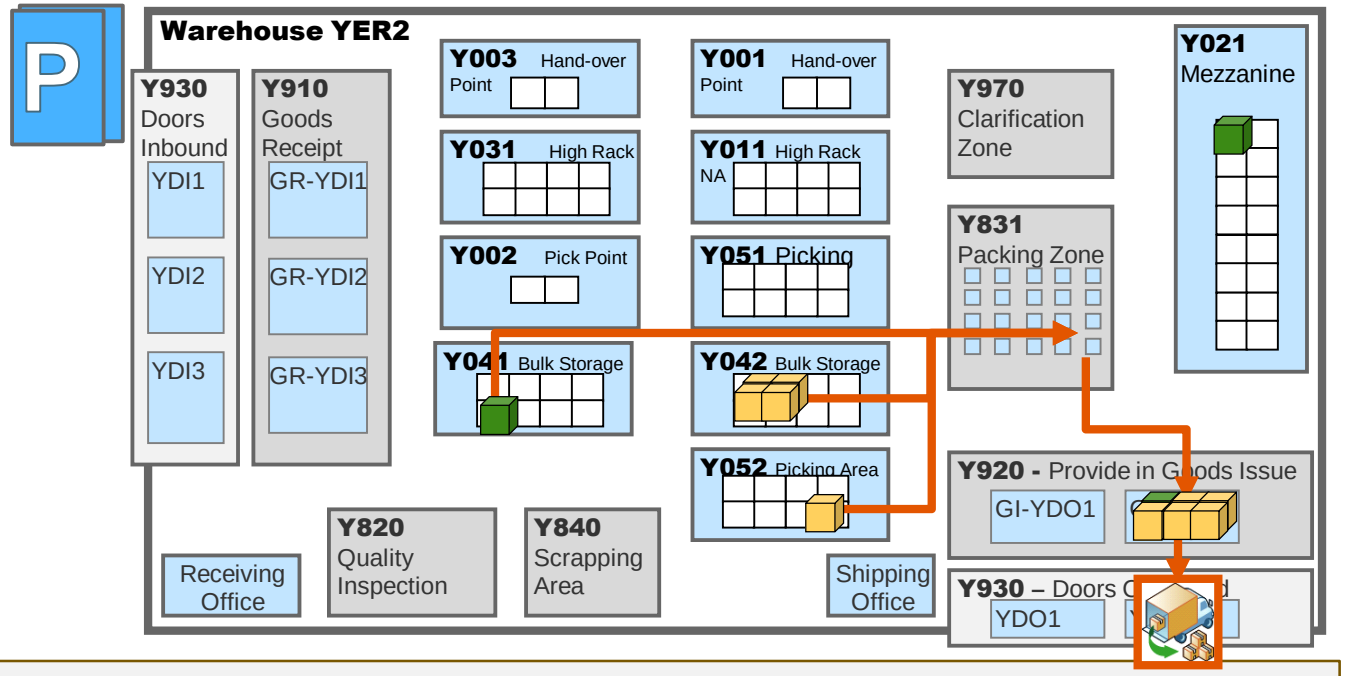
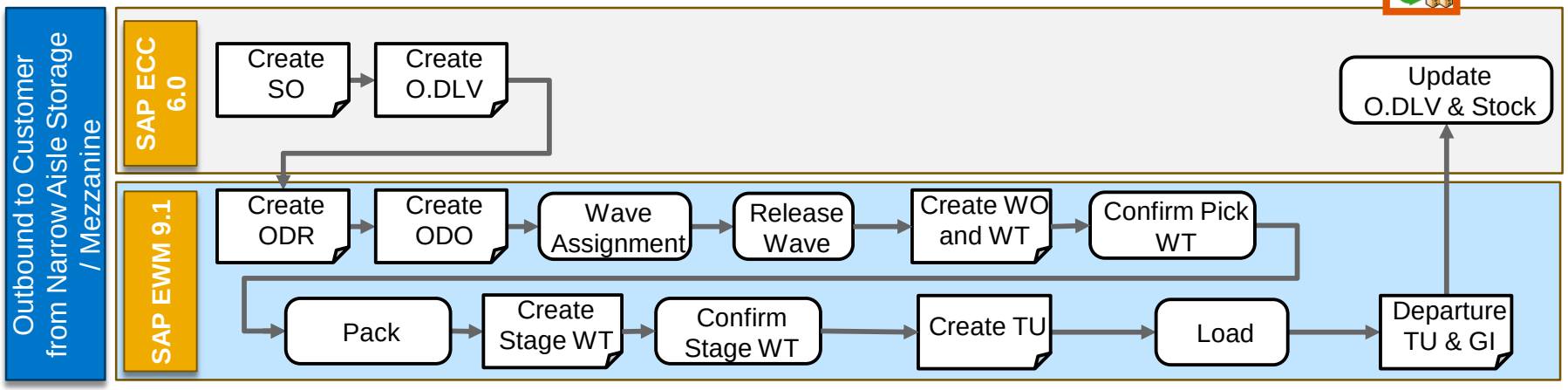
Solution Basis EWM RDS

16. Outbound to Customer from Bulk Storage

Overview

- Sales Orders to sell goods
- Creation of Outbound Delivery
- Assignment to picking waves automatically by route and pl. shipment
- Picking by quantity
  - Full pallets picked from bins in Y041 or Y042
  - Partial pallets picked from bins in Y041 or Y52
- Packing at bus stops into Shipping HUs
- Loading to Transportaion Unit by HU





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SAP EWM RDS – processes

- SAP ERP and SAP EWM integration
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- Outbound to Customer from Bulk Storage
- Customer Returns with Quality Inspection

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17. Customer Returns with Quality Inspection

What‘s included

- Performing this business process, you can process customer returns and manage the quality inspection of the rejected goods to determine if you should restock or dispose the returned product.
- The received items are checked and based on the decision for each handling unit the system automatically either creates warehouse orders and tasks to move the goods back to the storage or to the scrapping zone.
- The actual usage decision in the system can be processed using the RF/mobile user interface.

Business Benefit

- Provides flexible variations of the customer returns process.
- Customer Returns creation in SAP ERP and data transfer to SAP EWM.
- Fully RF/mobile enabled process steps within the warehouse, inclusive the usage decision to either scrap or re-store returned items.

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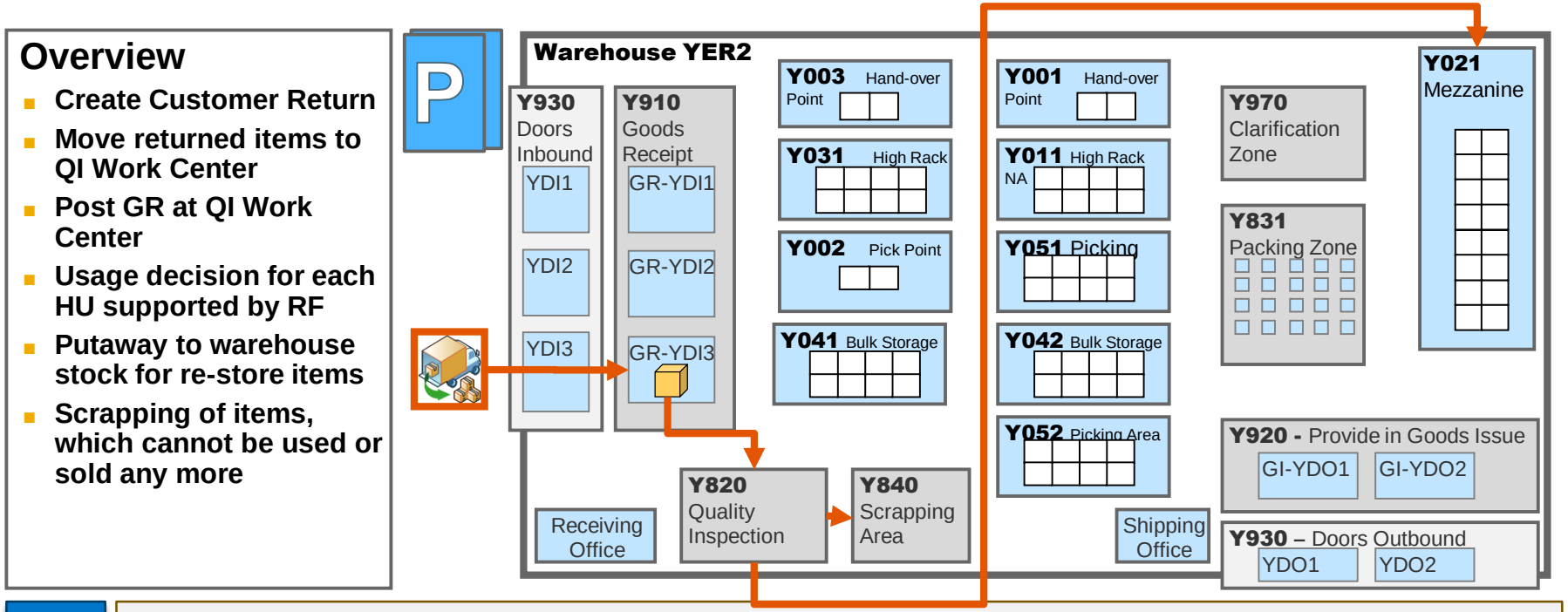
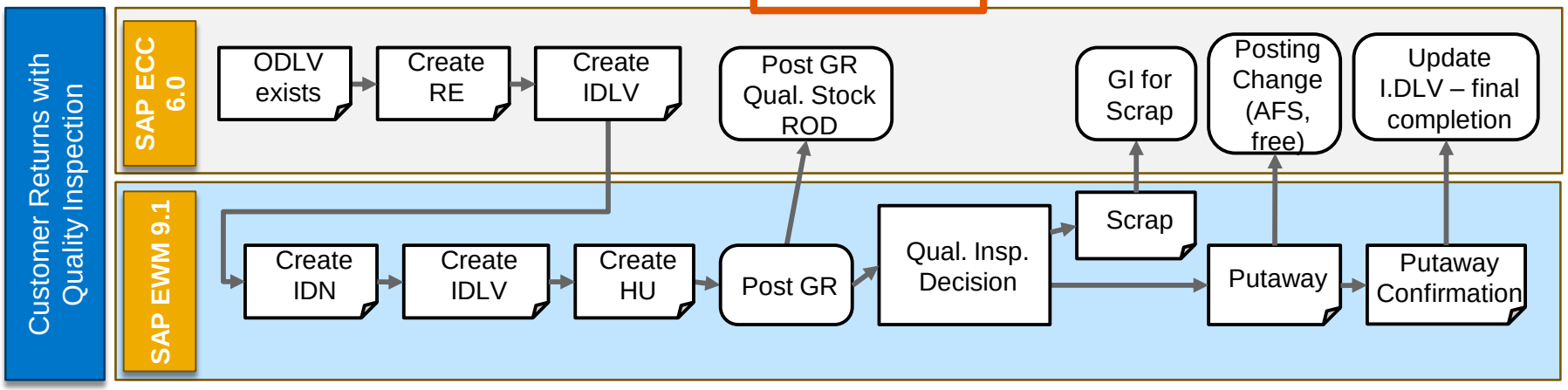
Solution Basis EWM RDS

17. Customer Returns with Quality Inspection

Overview

- Create Customer Return
- Move returned items to QI Work Center
- Post GR at QI Work Center
- Usage decision for each HU supported by RF
- Putaway to warehouse stock for re-store items
- Scrapping of items, which cannot be used or sold any more





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Solution Basis EWM RDS
Solution EWM preconf. WH

EWM W001 and EWM RDS V5.91 Warehouse Feature Comparison

Feature	W001	EWM RDS V5.91
Warehouse Integration with ERP Best Practice (A2O)	No	Yes
Warehouse Structure	Wide Aisle	High Rack with Hand Over Point and Pick Point, High Rack Narrow-Aisle, Bulk Storage, Mezzanine
Inbound – Paper based simple inbound process	Yes	No
Inbound – HU with Unknown Content	Yes	No, but inbound with quantitiy classification based putaway provided
Inbound – Putaway based on quantity classification	No	Yes
Inbound – Cross Line Putaway	No	Yes
Handling Units with SSCC	No	Yes
Outbound using Pick-HUs as Ship-HUs (paper based)	Yes	No
Outbound using Wave, Pick-HU, Packing, Staging and Loading	Yes	Outbound to customers (using Wave, Pick-HU, Packing, Staging and Loading).
Outbound with large-small quantity picking	No	Yes
Outbound – packing with „bus stop“ concept	No	Yes
Replenishment	Automatic Replenishment	Automatic Replenishment
Replenishment – Fixed Bins	Yes	No
Phys. Inventory	Physical Inventory and Cycle Counting	Physical Inventory and Cycle Counting
Customer Returns	Yes	Yes
Unplanned Scrapping	Yes	Yes

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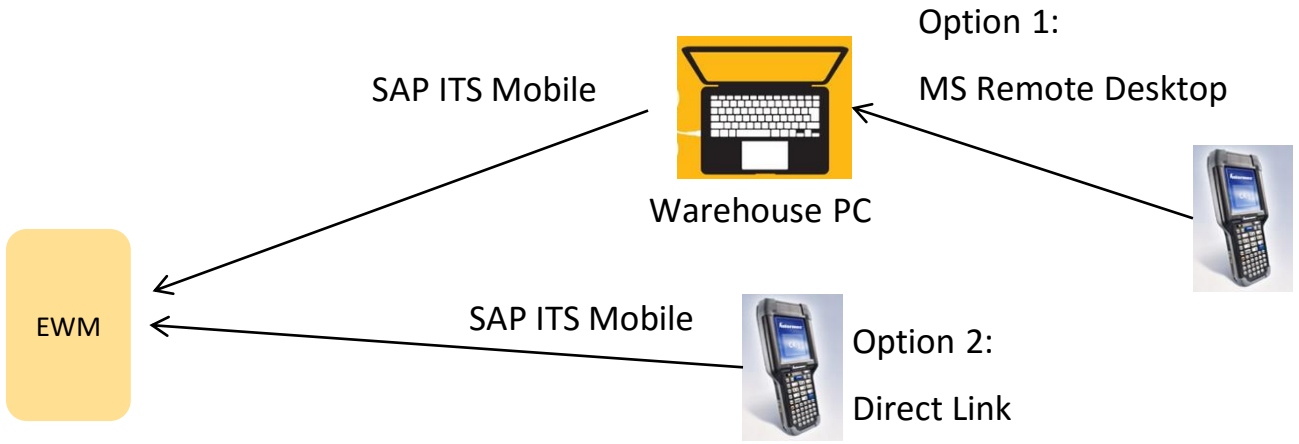
Solution Basis EWM RDS
Solution EWM preconf. WH

Beyond EWM RDS

OneService Model company has robust warehousing processes

Scenarios covered:

- Production supply with/without supermarket between warehouse and line bins.
- Discreet putaway and discrete picking.
- Efficient physical inventory model: 0 stock PI and low stock check.
- “Lean” EWM yard management
- Smart logistics – slotting
- Direct outbound and inbound processing.
- Connectivity: AGS helps customers to choose between Option 1 and 2 based on business volume, concurrent scanners, connection speed etc.
- and more…



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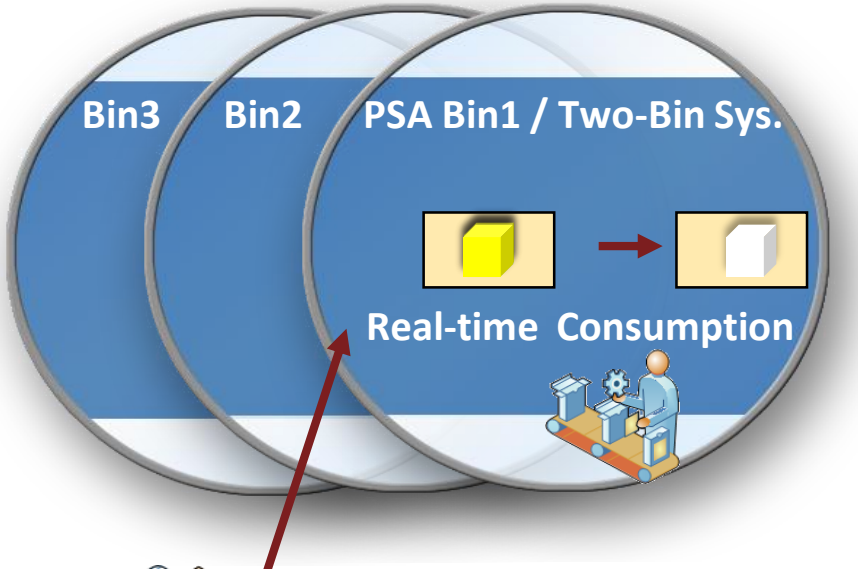
Solution Basis EWM RDS
Solution EWM preconf. WH

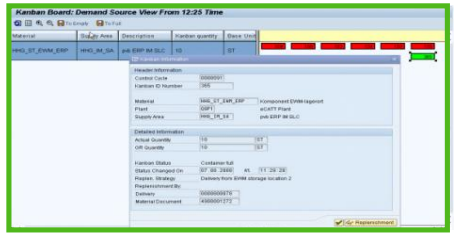
Production Line Supply With/Without Supermarket

Integrate to ERP Kanban and PSA



Production Order

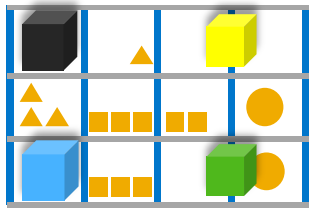
ERP Kanban



MES Pull

Material Supply

Production Line Supermarket



Replenishment

Warehouse

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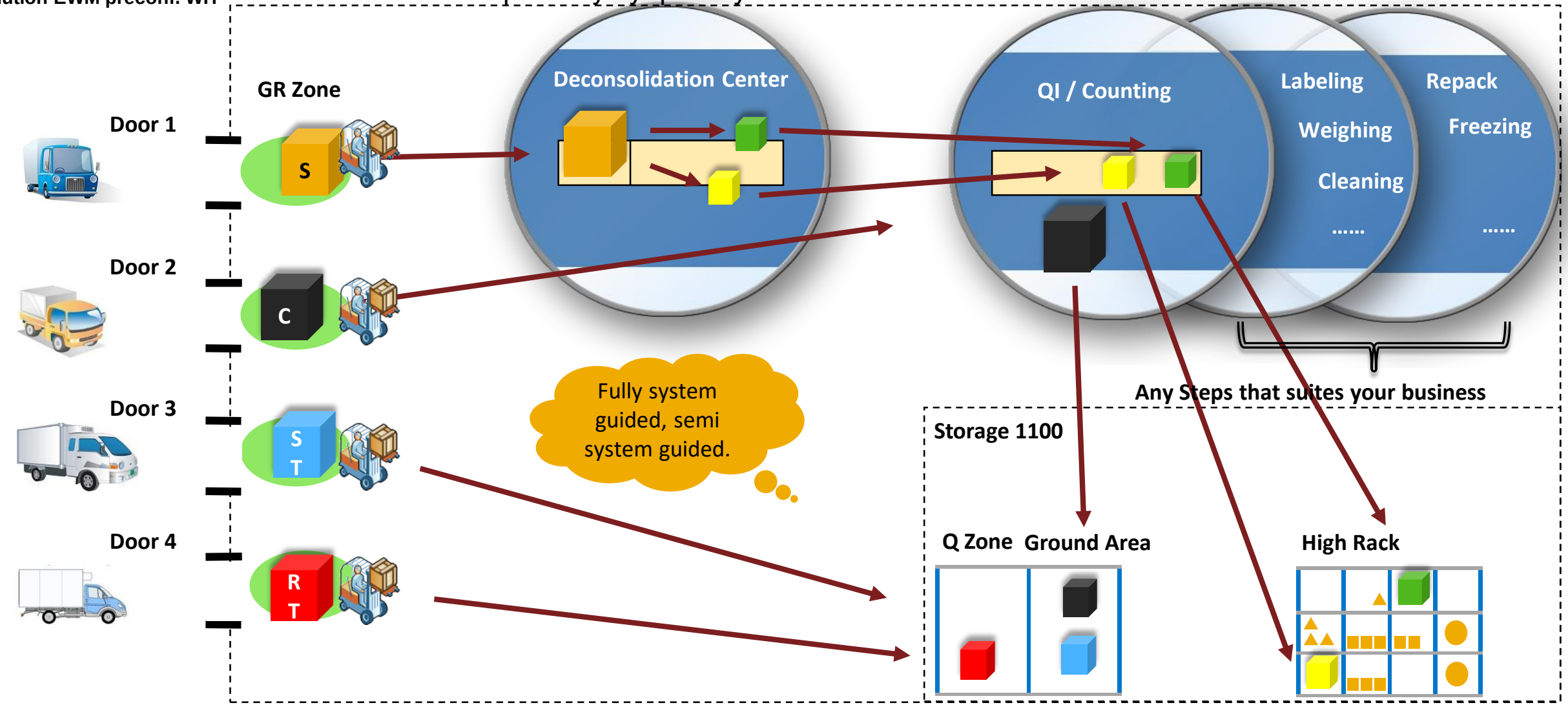
Discrete Picking & Putaway Process

Pick and putaway by quantity classification



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Solution Basis EWM RDS
Solution EWM preconf. WH

Efficient Physical Inventory Model

0 stock PI and low stock check

AGS Recommended Best-Practice:

Count when bin stock drops to 0 (or very low).

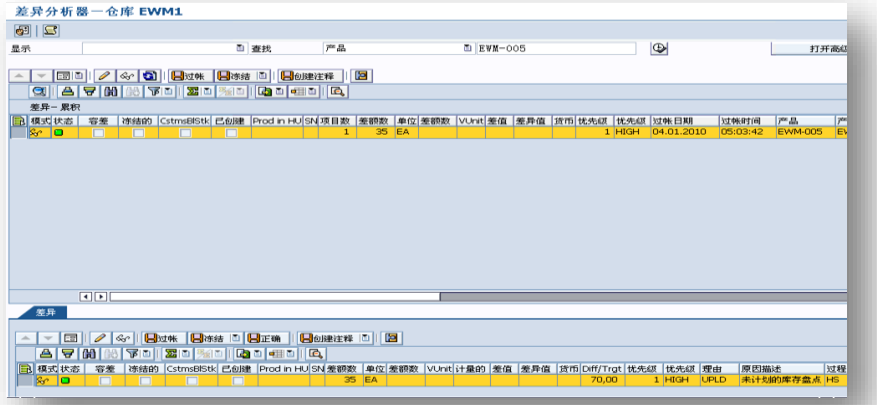
Immediate, automatic trigger

Very quick to enter the result

Fast-moving material get counted frequently

Slow-moving material counted less.

As an additional PI method of year-end PI.

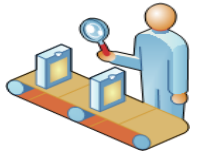


PI Task：is the Quantity 729?

Any discrepancies?

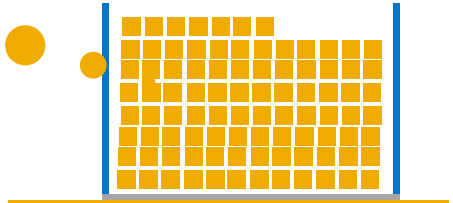
PI Task：is the Quantity 0?

Bin 0020-01-A



仓位0020-01-A

Takes 15 minutes, easy to make mistakes



Traditional PI

Takes 2 seconds

EWM 0 stock PI

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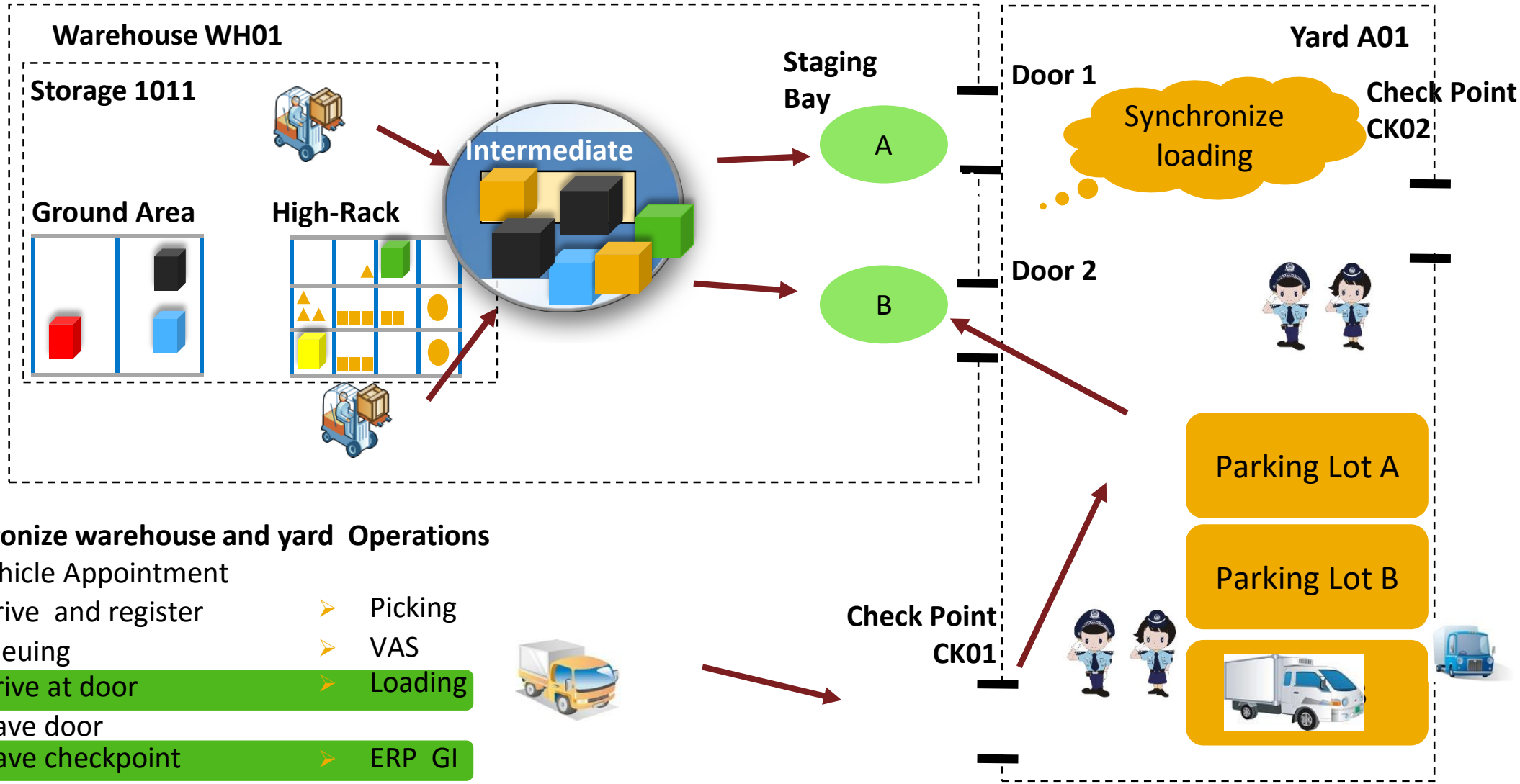
Solution Basis EWM RDS
Solution EWM preconf. WH

"Lean" EWM Yard Management

Synchronize yard and warehouse movement



Synchronize warehouse and yard Operations

- Vehicle Appointment
- Arrive and register
- Queuing
- Arrive at door
- Leave door
- Leave checkpoint
- Picking
- VAS
- Loading
- ERP GI

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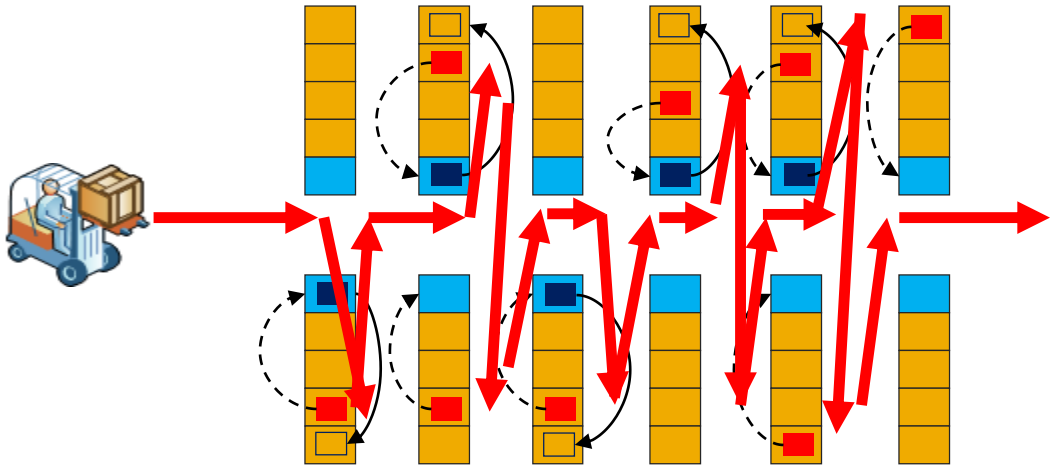
Solution Basis EWM RDS
Solution EWM preconf. WH

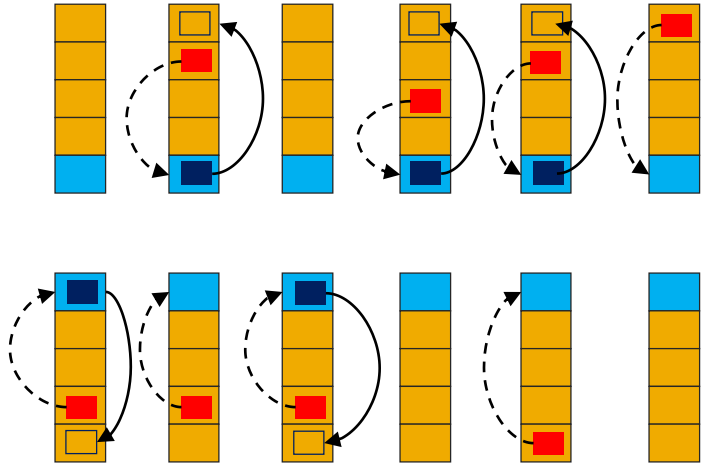
Slotting

Smart, automatic product master data updates proposal

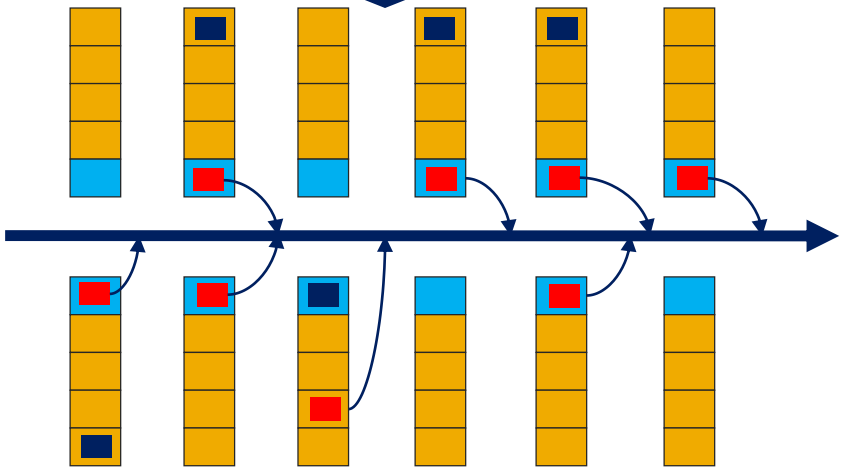
Before Slotting



Slotting and Re-arrangement



After Slotting



Suggest product master data based on：

- Delivering frequency（ integrated to SAP SPP forecasting or 3rd party system ）
- Delivery amount
- Product attributes （ tepmrature condition, volume, weight etc.
- Packaging attributes

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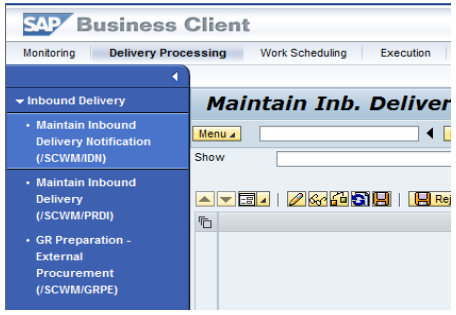
Solution Basis EWM RDS
Solution EWM preconf. WH

Direct Outbound/Inbound delivery

Suppliers customers, 3PLs

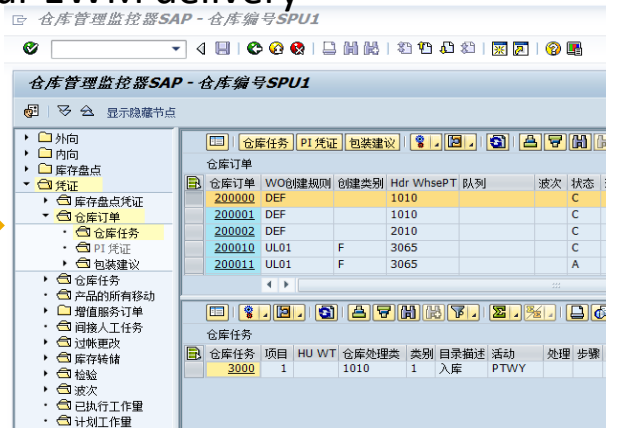


DAS App. Online Shopping Sys Partner's ERP/SNC

Genuinee Interface

Create Inbound/Outbound deliveries directly in EWM

Your EWM delivery



creation through interface also possible.

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CONNECTED Logistics in Supply Chain Execution

Warehouse Management

Transportation Management

Track & Trace

Transportation Resource Mgmt.

Hub Logistics

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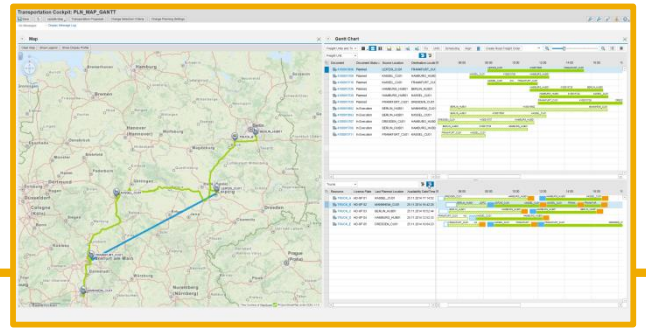
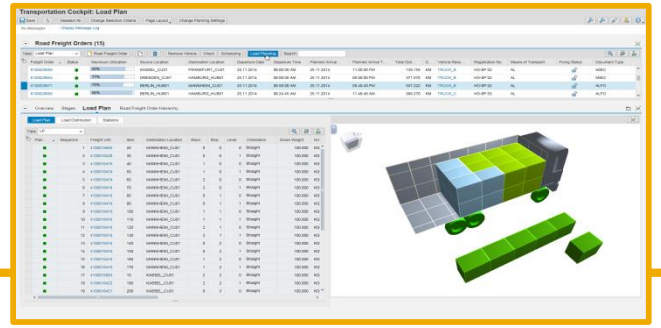
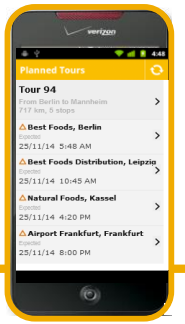
Connected Transportation Management







Transportation Management

Real-time Transportation Planning

Real-Time Freight & Truck Visibility

- **Gantt Chart**
  - Transportation demand status
  - Fleet usage / availability
  - Execution status
- **Map Visualization**
  - Transportation demands & plan
  - Nearby resource & demand search
  - Actual truck positions & planned route

Real-Time Adaptive Planning

- **Drag-&-Drop-based Replanning**
- **Load Optimization**
  - 3D visualization

Real-time Driver Communication

- **Mobile Integration**
  - Tour update
  - Event reporting

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Connected Transportation: Real-time Visibility & Planning

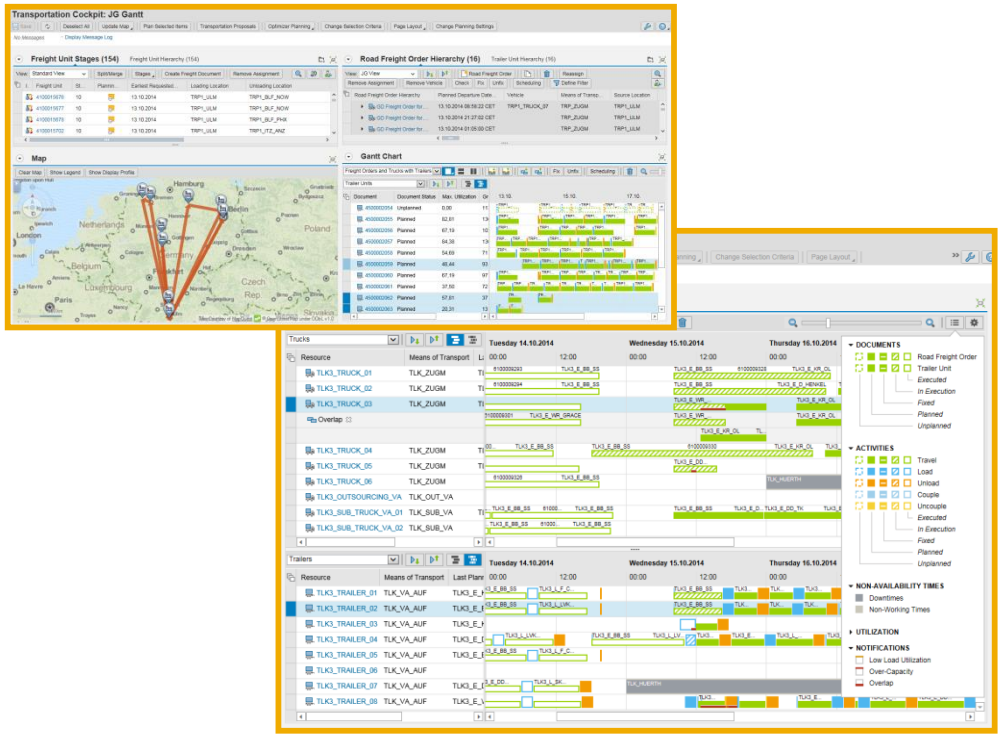
Intuitive, Graphical Gantt Chart Planning

Real-time Visibility

- Truck, trailier, load availability & usage
- Execution status and event / location times

Flexible Views

- Tuck, trailer, order & activity
- Single, dual, aggregated, detail…



Interactive Planning

- Drag & drop assignment & re-sequencing
- Map interplay

High Configurability

- Layouts, views, hierarchies, fields
- Color schemes, patterns

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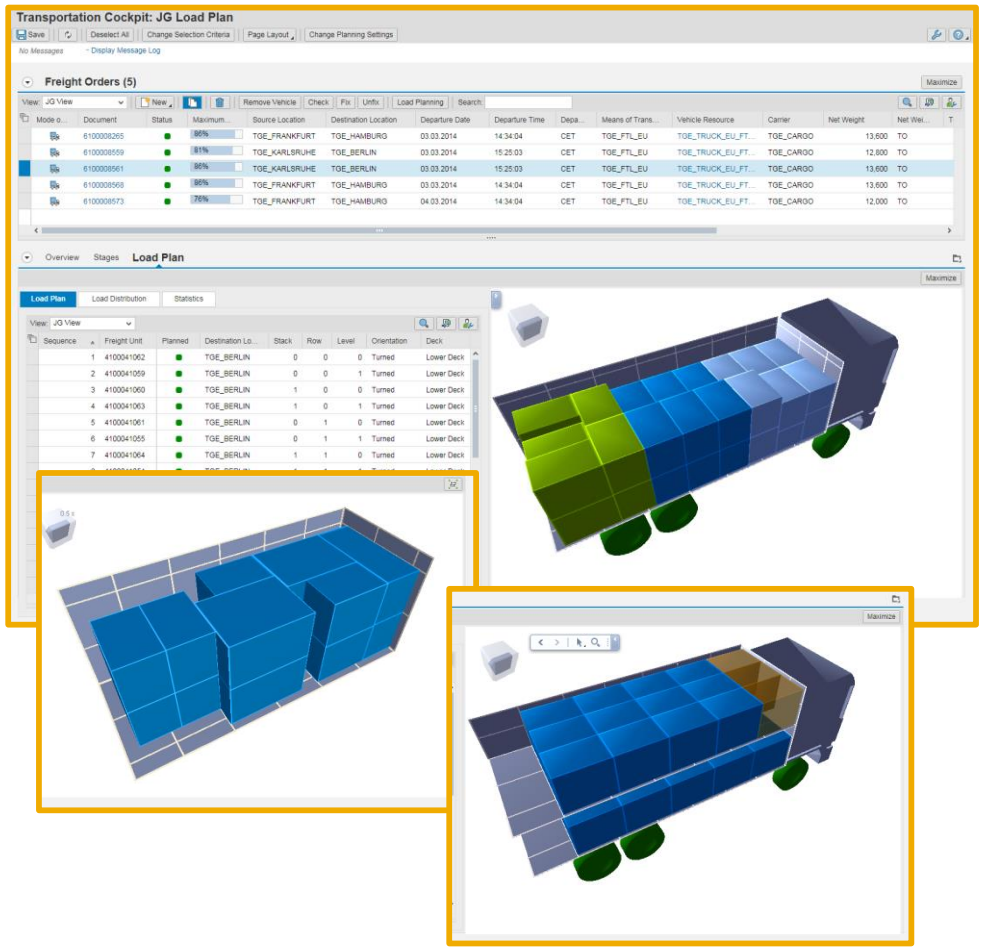
Connected Transportation: Load Optimization



Pallet Load Optimization

with 3D Load Plan Visualization

- For trucks, trailers, containers

- Rules-based
  - Dimensions
  - Axel weight constraints
  - Stacking rules
  - LIFO
  - ….

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CONNECTED Logistics in Supply Chain Execution

Warehouse Management

Transportation Management

Track & Trace

Transportation Resource Mgmt.

Hub Logistics

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Connected Track & Track & Trace

Shipment Tracking

- Freight Orders, Units, Parcels
- Vehicles, Containers,…
  - End-to-end event tracking
  - Exception reporting & handling

Track & Trace

SAP Event Management (EM)
SAP Object Event Repository (OER)
SAP TM Notifier (Mobile App.)

Condition Tracking

- Secured Transportation (Seals / Locks)
- Cold Chain (Temperature)
  - In-transit monitoring
  - Life-cycle tracking & analysis

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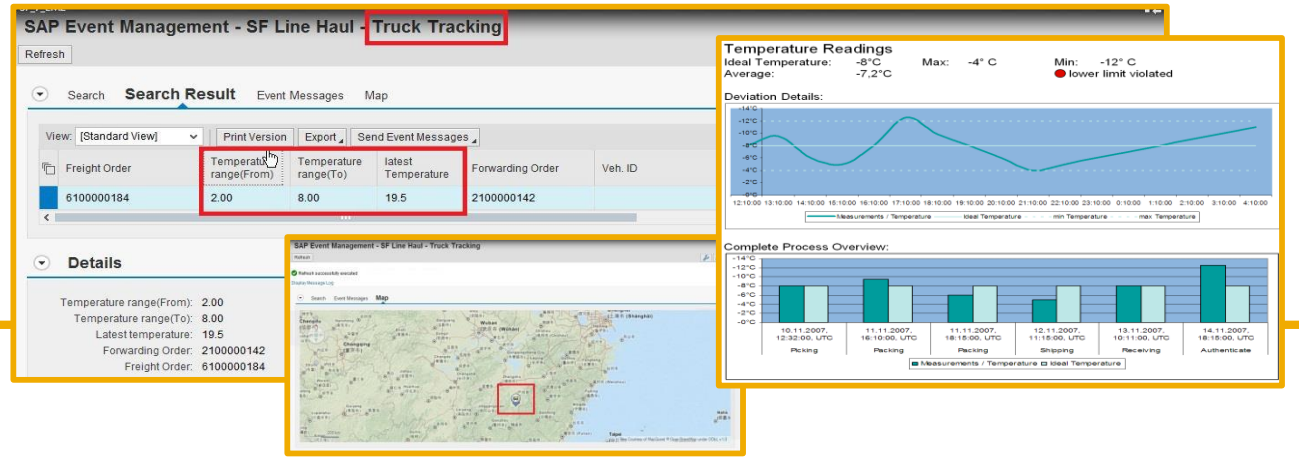
Connected Track & Trace: Cold Chain Monitoring

Via **SAP Event Mgmt.**

Or

SAP Object Event Repository



Refrigerated Product Shipment

- With cold chain sensor tag
- And given temperature ranges

In-Transit Monitoring

- Shipment geo location (onboard unit)
- Shipment status
- Temperature status (sensor tag)

Exception Reporting & Analysis

- Out-of-range temperatures
  - Email notification alert
  - Event Management status alert
  - Map-based event location visualization
  - Cold chain analysis

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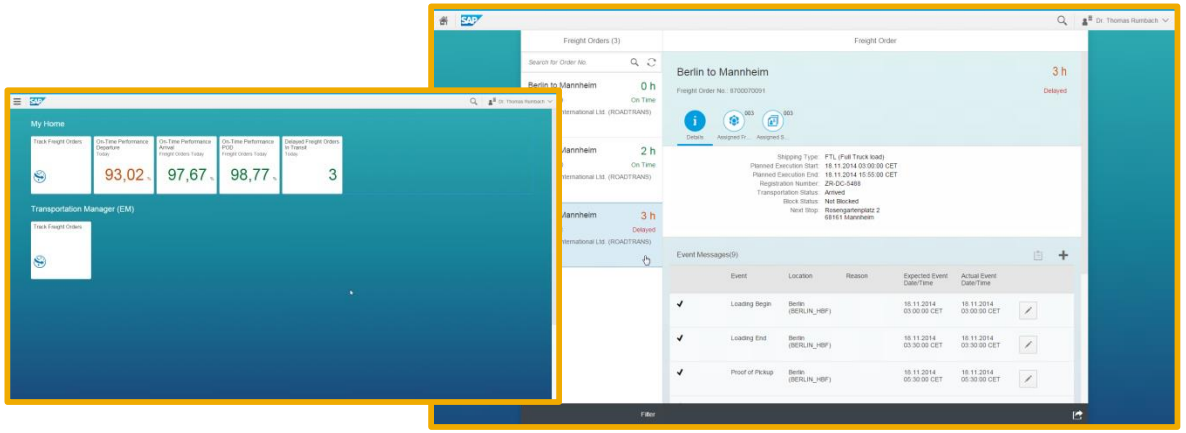
Connected Track & Trace: Parcel Tracking

Via **SAP Event Mgmt.**

From Registration & Pick-up

Across DC / Hub Sorting

To Customer Delivery (POD)



- Parcel shipment status tracking
- Automated exception handling (rules-based)
- Execution performance analytics

Big Data Processing: 10+ million events per day

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Freight Forwarder Scenarios

- 1. Air Consolidation Export prepaid FR to SG, DAP
- 2. Sea/Air managed by import office, SG-UAE-ZA
- 3a. Air Back-2-Back Control Tower US to FR
- 3b. Air Back-2-Back Export US to FR
- 4. Air Consolidation US to FR
- 5. PO Management with Ocean LCL
- 6. Sea with in-transit cargo split to air freight
- 7. Ocean Multimodal with Inland Legs CDN to Africa
- 8. Air Automation (Automatic next flight out)

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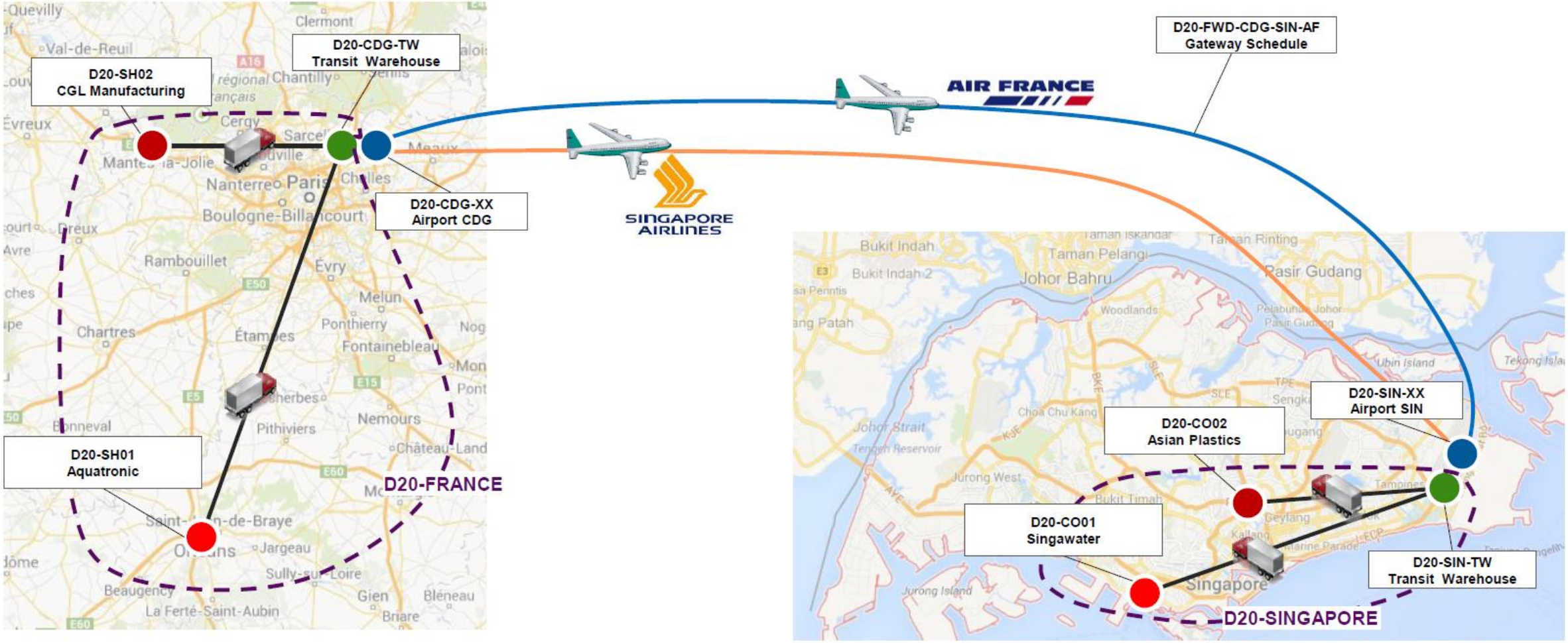
Scenario 1: Air Export prepaid FR-SG, DAP consignee warehouse



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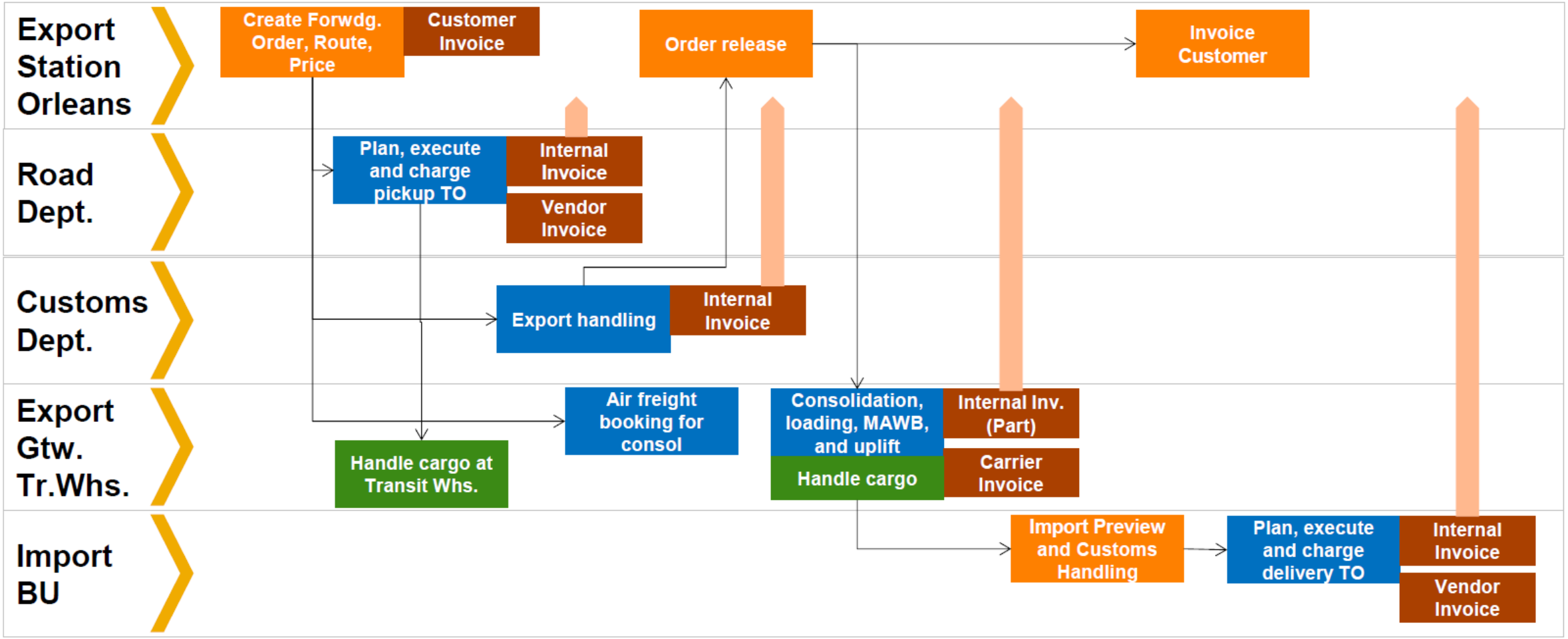
Scenario 1: Air Export prepaid FR-SG, DAP consignee warehouse



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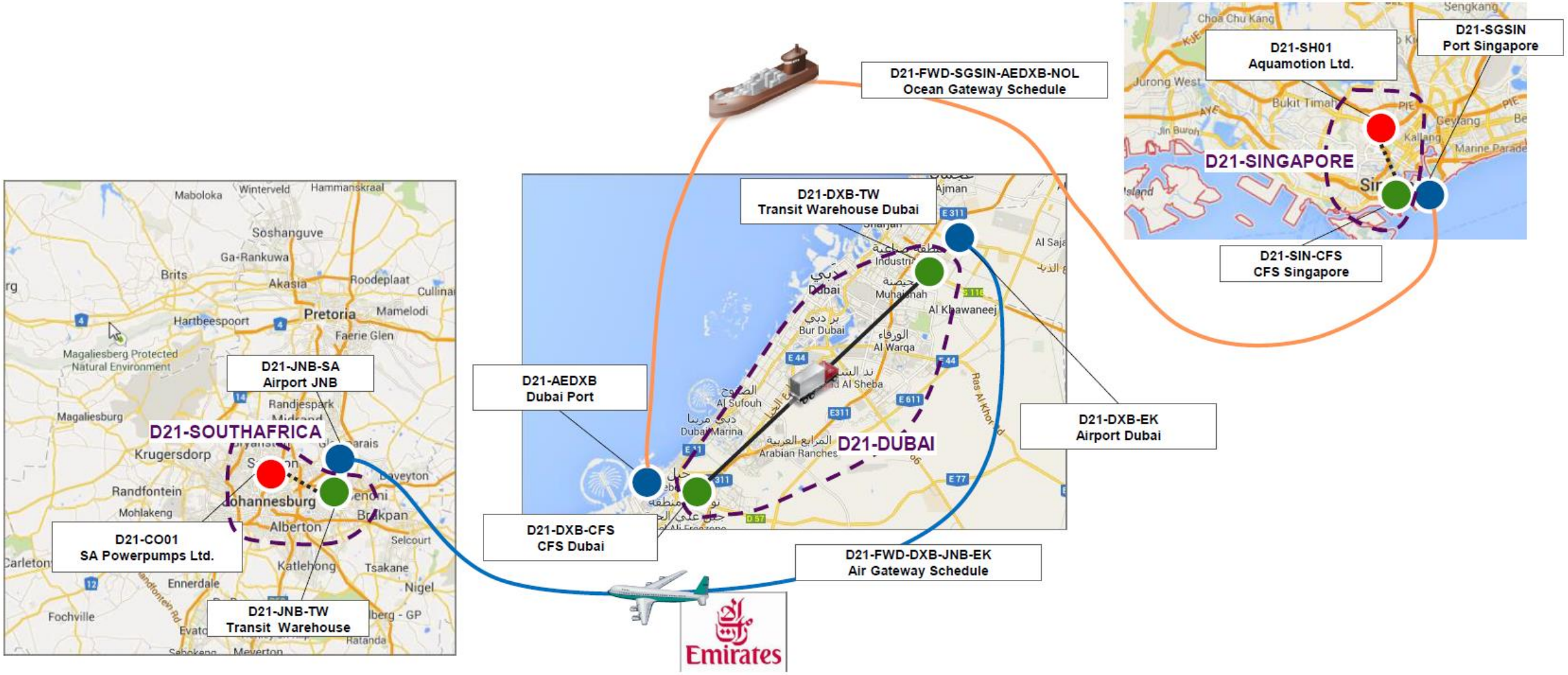
Scenario 2: Sea/Air managed by the import office



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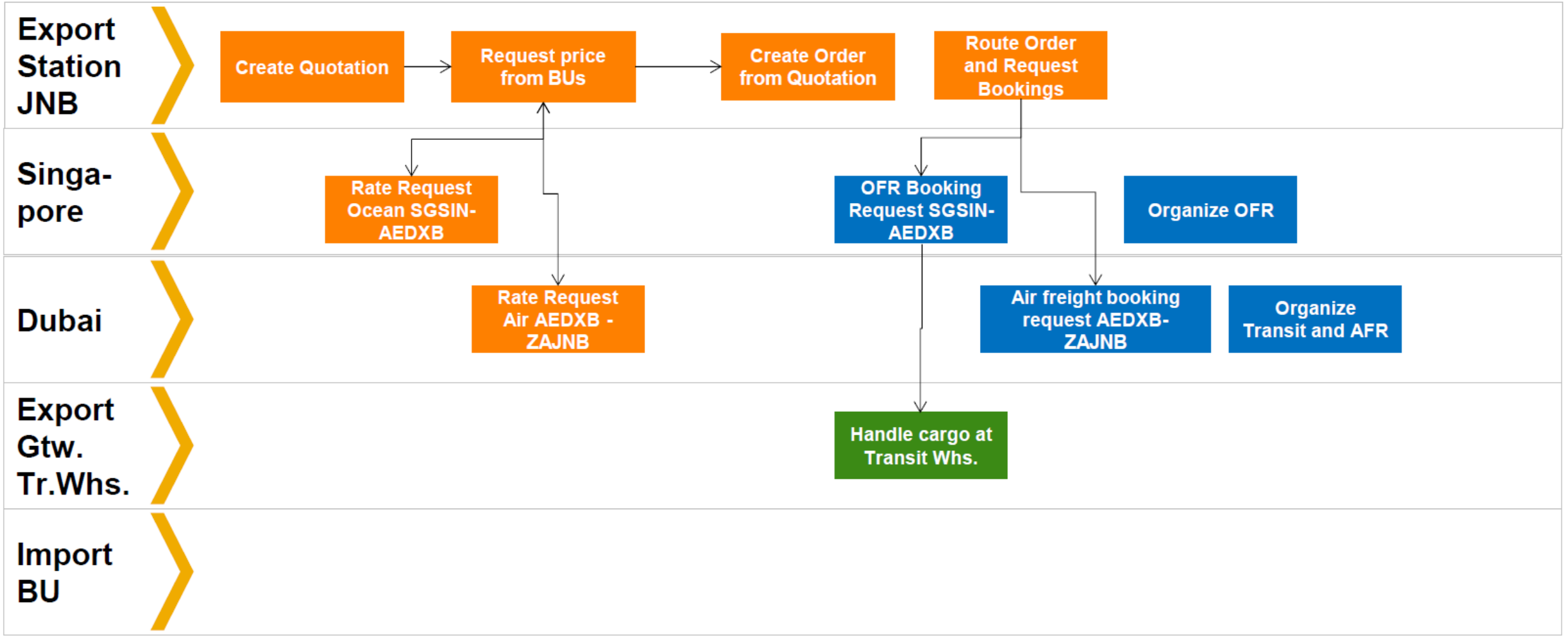
Scenario 2: Sea/Air managed by the import office



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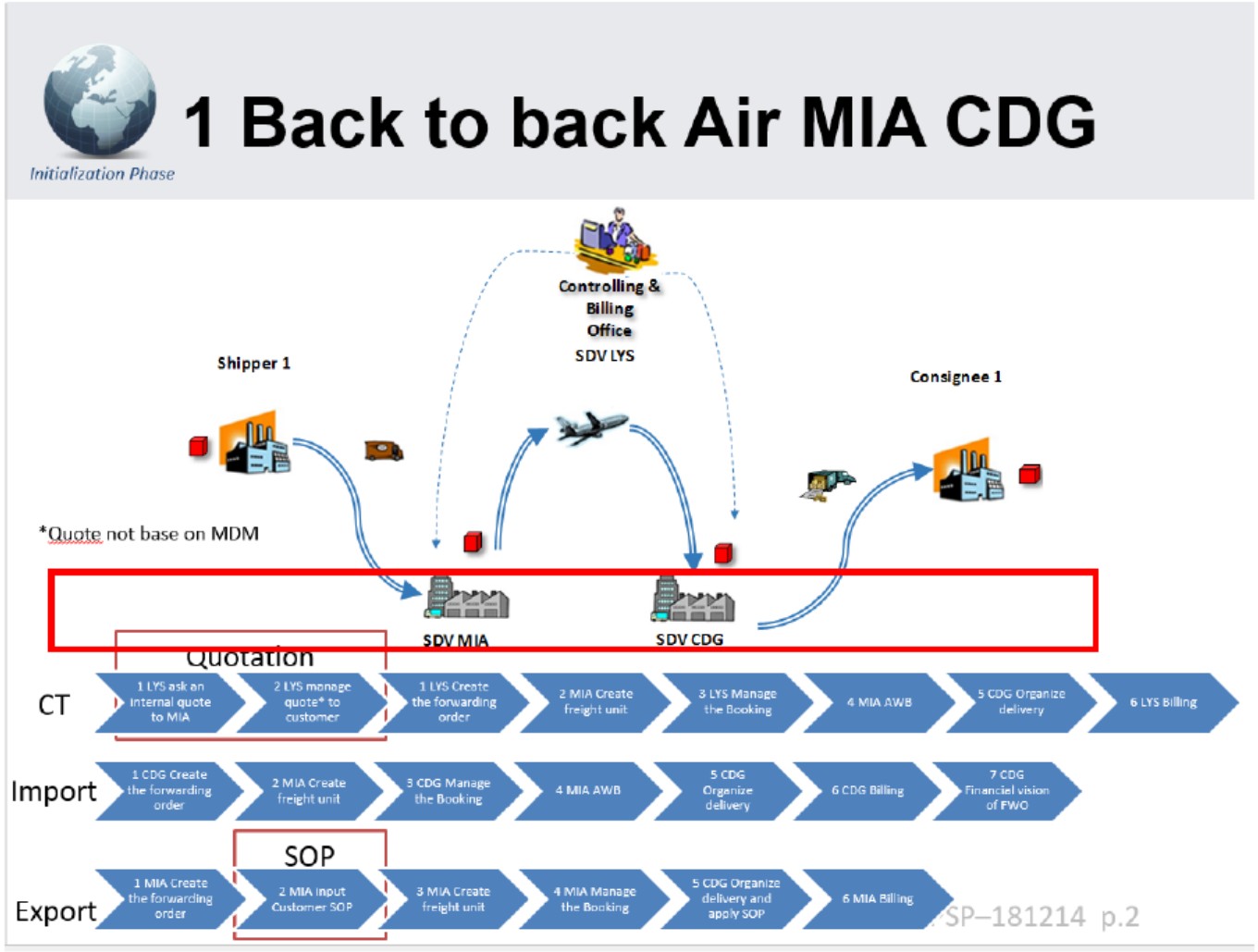
Scenario 3a: Air Back-2-Back Control Tower US to FR



MAIN STEPS:

1. LYS request airfreight quotation from MIA
2. MIA creates Internal Quote 'MIA-CDG Airfreight' for LYS
3. LYS creates Customer Quotation (not based on MDM)
4. Customer accepts quote
5. LYS creates Forwarding Order based on Quotation
6. LYS creates Air Freight Booking (Planning & Exec.)
7. MIA is purchase organization for Airfreight Booking
8. MIA performs charge calculation for Airfreight

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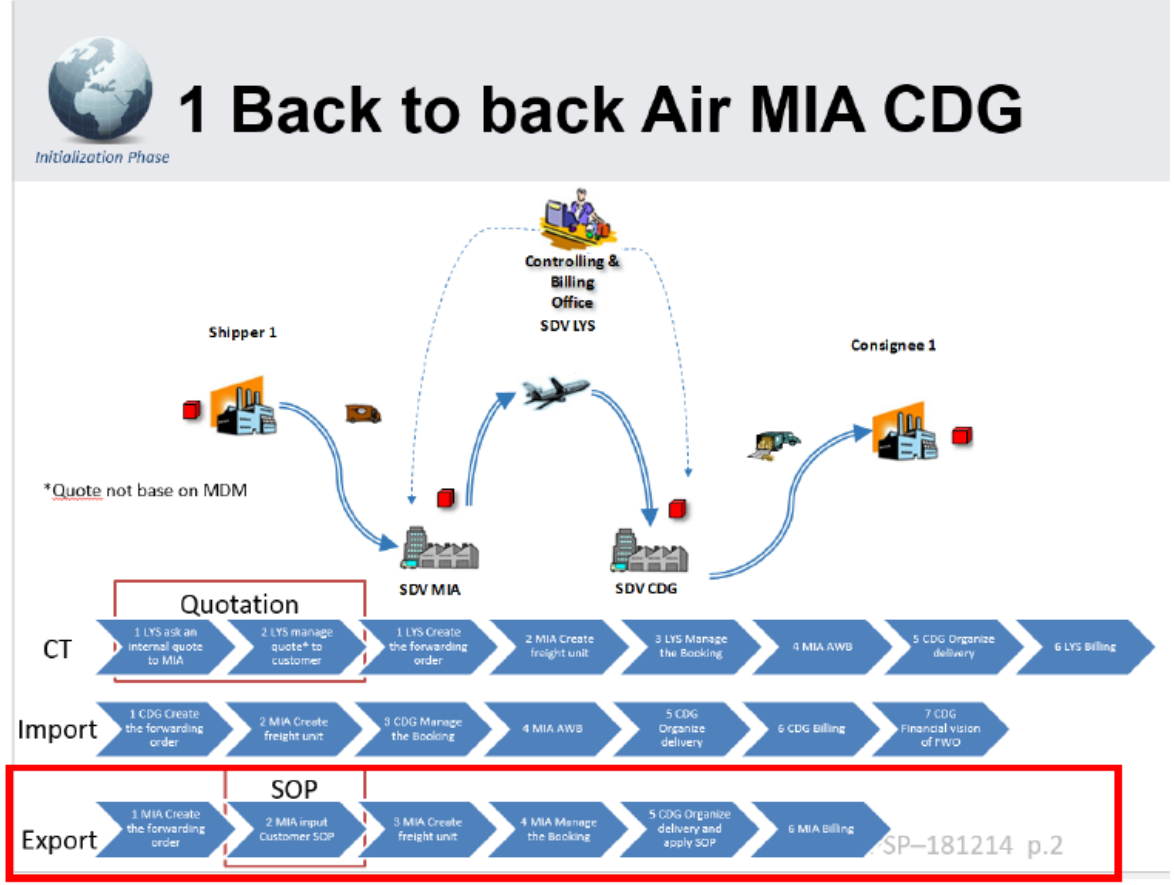
Scenario 3b: Air Back-2-Back Export US to FR



MAIN STEPS:

1. **Create Air B2B Export FWO (Single File Concept)**
2. **Stages tab: manually plan and accept route (=stages)**
3. **MIA: Create Freight Order for Pickup and Calculate**
4. **MIA: Schedule and create Air Freight Booking**
   Charges, Output Documents, Execution information
5. **MIA: Calculate and execute Freight Booking**
   Charges, Output Documents, Execution information
6. **Stage execution Forwarding Order and outputs (HAWB)**
7. **Automatic charge calculation of Forwarding Order**
8. **Customer SOP (Instructions and separate worklist)**
9. **CDG (roles) have access to SOP / Instructions as well**

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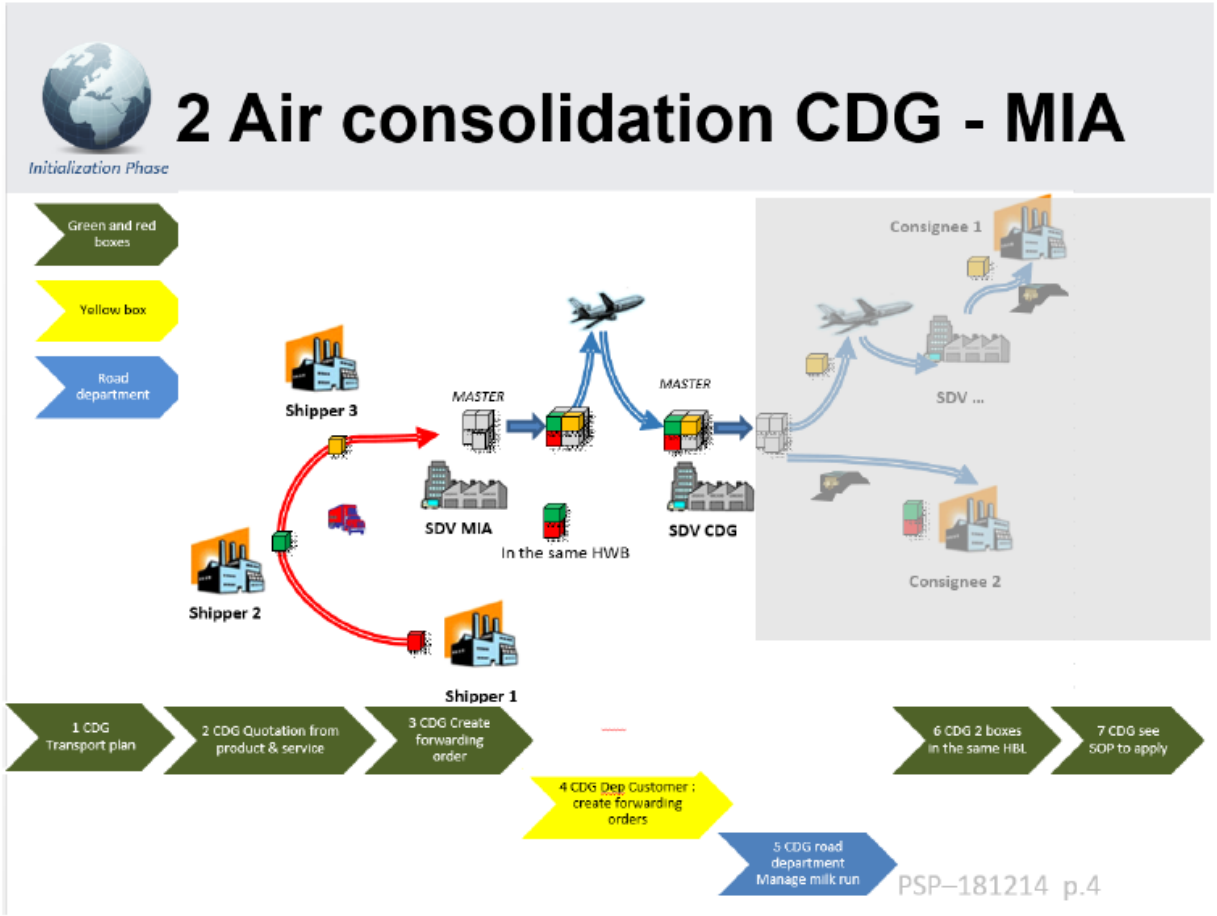
Scenario 4: Air Consolidation US to FR



MAIN STEPS:

1. Create 2 Air FWO's
   1st Order with multiple loading addresses
   2nd Order with one address
2. Plan Pick-up freight order in Planning Cockpit and and simulate execution.
3. Perform charge calculation on Freight Orders and Air Bookingf
4. Perform charge calculation on the forwarding order.
5. Select Output management MAWB preview
6. Select Output management HAWB preview

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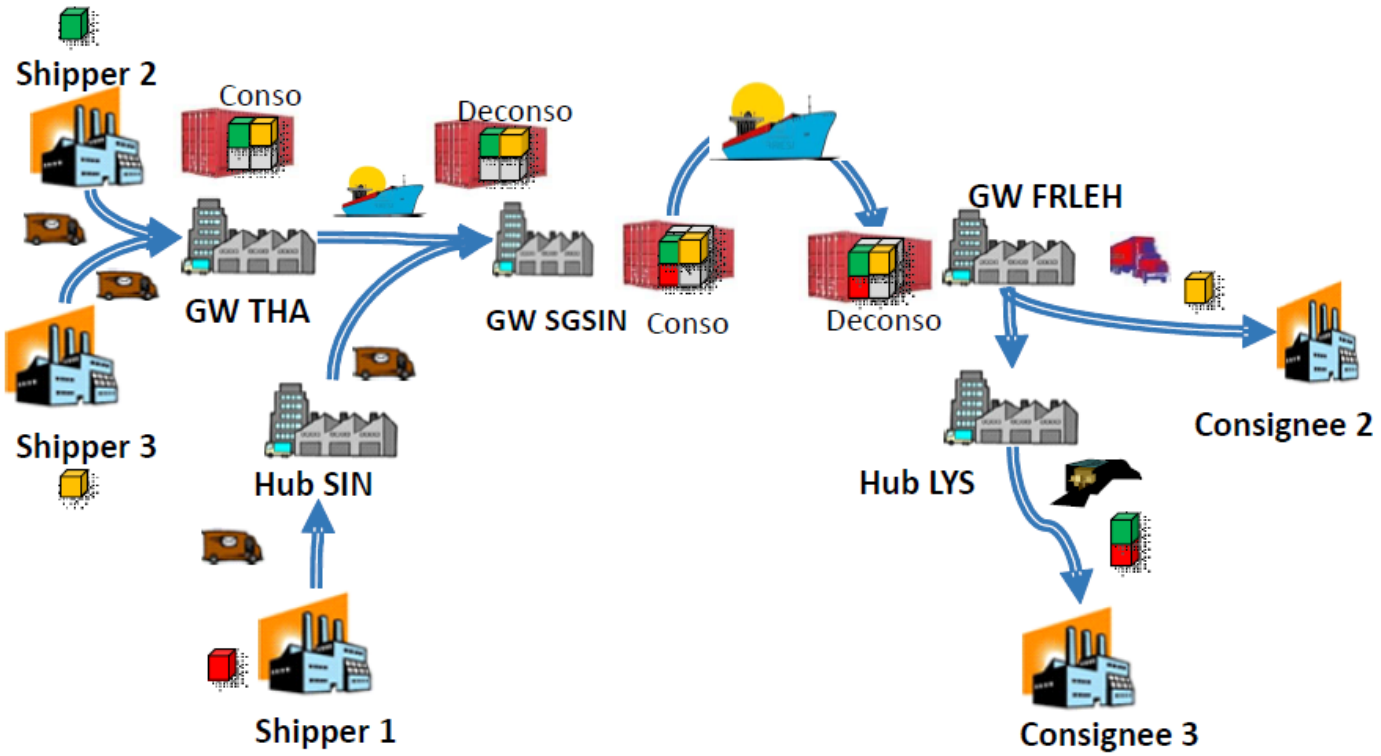
Scenario 5: PO Management with Ocean LCL



MAIN STEPS:

1. Pre-create 3 Ocean Freight Bookings
2. Create overall Purchase Order (from template)
3. Create 4 PO Shipments (Ordering Consignee)
4. Overview created PO and PO Shipments
5. Planning & Execution Thailand – Pickup
6. Planning & Execution Thailand – Ocean
7. Planning & Execution Singapore – Pickup
8. Planning & Execution Singapore – Pre-carriage
9. Planning & Execution Singapore – Ocean
10. Overview Purchase order and shipments in Event Management

1 LYN manage P/O and FWOs → 2 THA manage conso + BL → 3 HUB SIN : deconso and conso + BL → 4 HUB SIN : deconso and conso → 5 LYN P/O follow up + landed costs → 6 TSL LEH Billing TSL HUB

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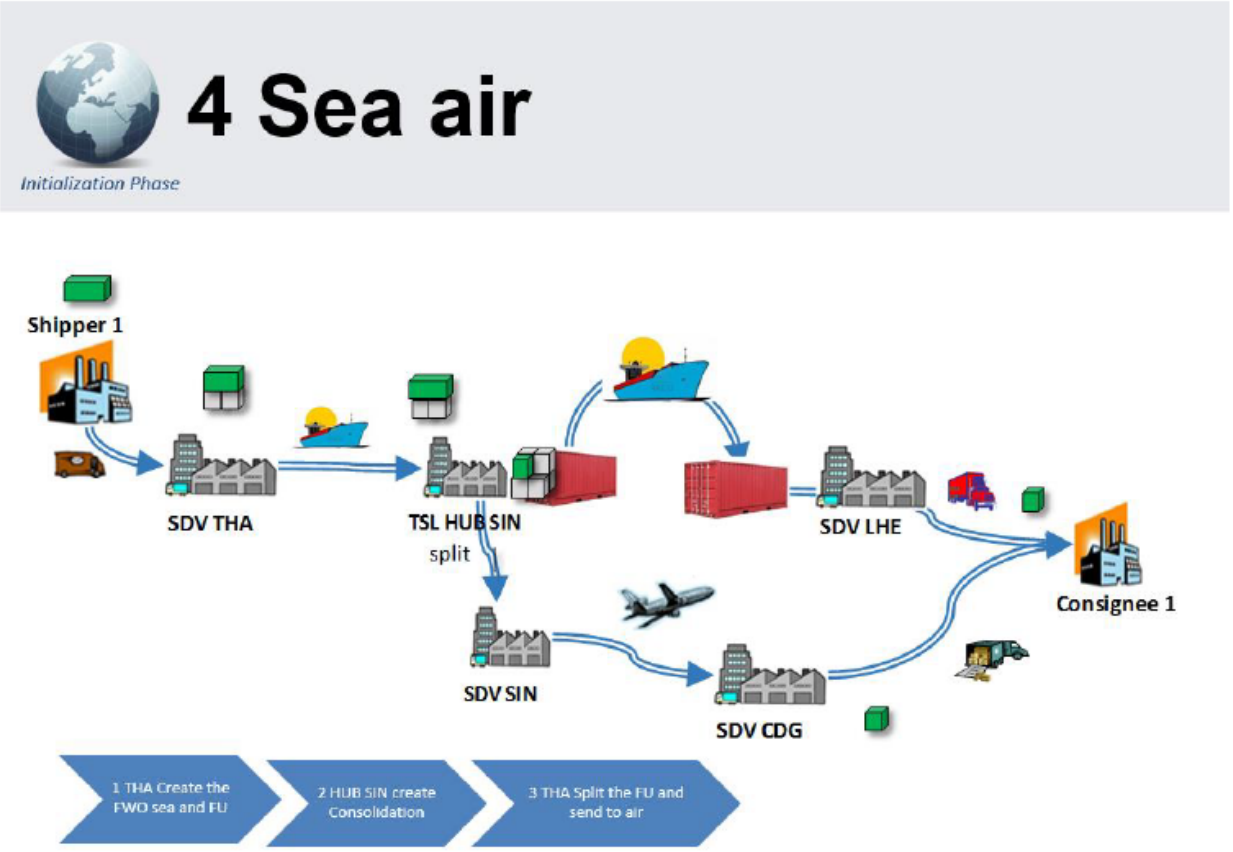
Scenario 6: Sea-Air with in-transit cargo split



MAIN STEPS:

1. Create Ocean FWO new (or from template)
2. Plan a route for the FWO (stages created)
3. Create Pickup Freight Order and simulate execution of this Freight Order.
4. Create Ocean Booking (assign ocean schedule) and simulate execution of this Freight Booking
5. Customer calls and needs split of cargo
6. Select, Edit and Split Freight Unit
7. Select Forwarding Order and adopt delivery date/time and transportation mode of the new air Freight Unit
8. Create and accept the transportation proposal (accept route)

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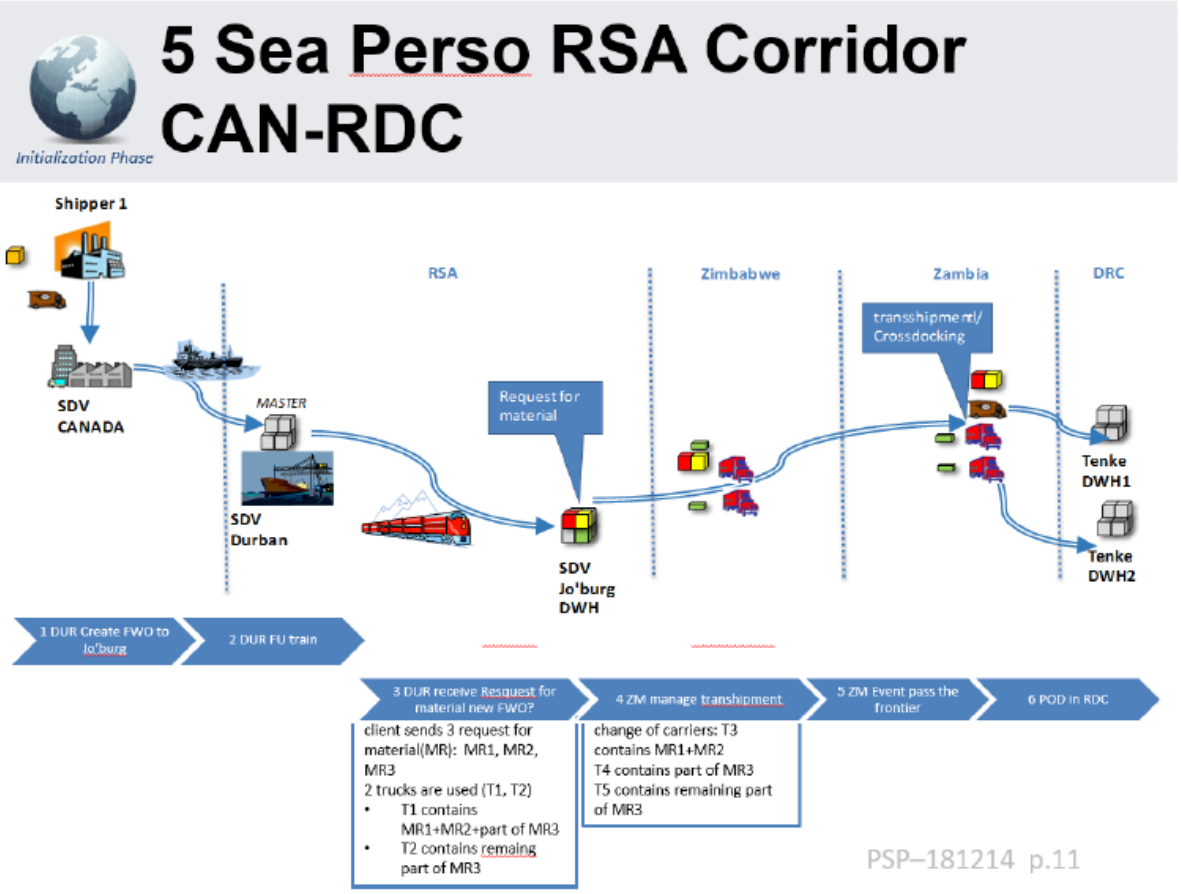
Scenario 7: Ocean Multimodal with Inland Legs CDN to Africa



MAIN STEPS:

1. Create 1 Ocean Forwarding Order CAN - JBG from template 2190000111 (Delivery to JBG Warehouse)
2. Plan route directly from ocean forwarding order, or via Follow-Up → Transportation Cockpit.
3. Execution takes place and goods arrive in DWH Jo'Burg
4. Create 3 road Forwarding Orders JNB – RDC.
   2 orders base on template 2190000112 (MR-1 or MR-2)
   1 order based on template 2190000113 (MR-3A + MR-3B)
5. Select stages and only Accept Routing for 3 FWO's.

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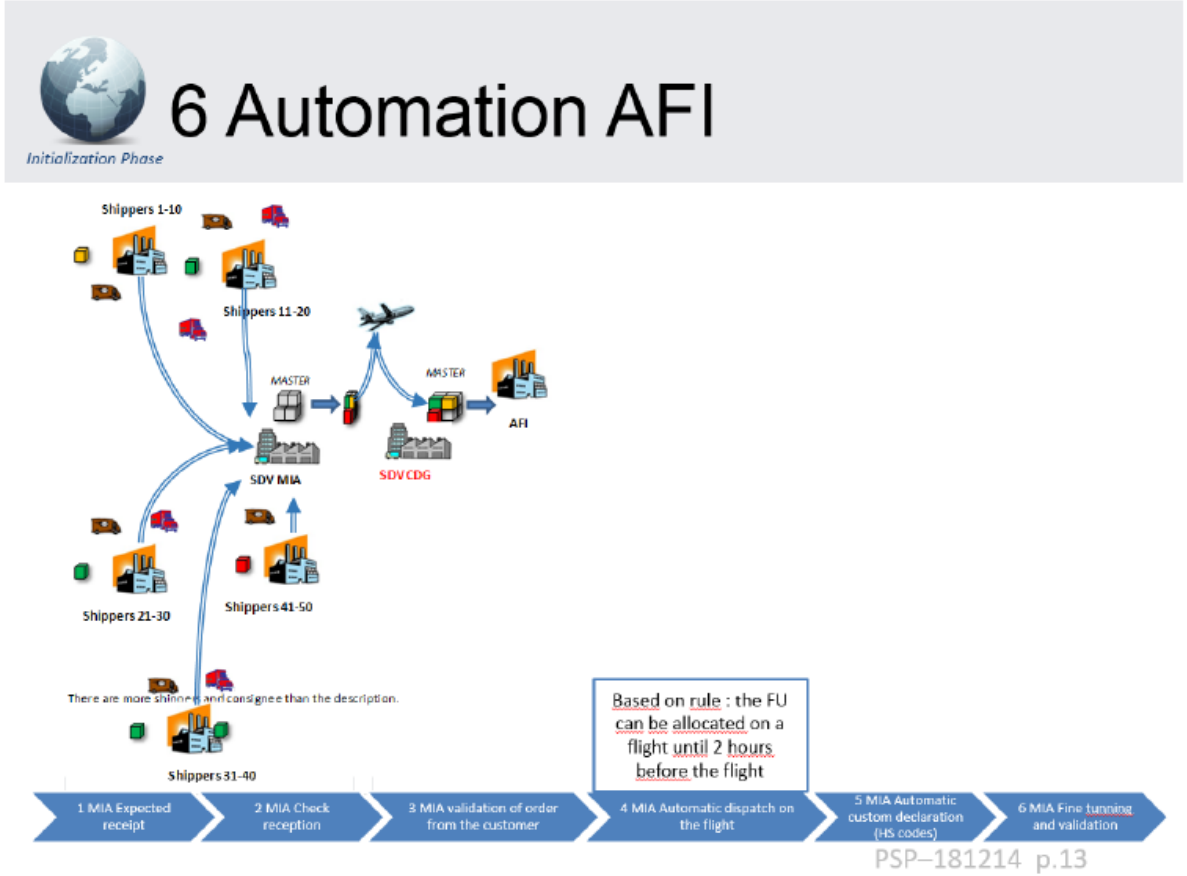
Scenario 8: Air Automation



MAIN STEPS:

1. **Create Forwarding Orders from template (2190000121) (standard routing is used here)**
2. **Only enter following data: pickup/deliver date/time, shipper and item details.**
3. **Select main stage and click Freight Order → Select**
4. **Select from available air freight bookings (departure date/time and cargo cut-off)**
5. **Save Forwarding Order**

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Who's behind CBP
Phases & Timeline
Roles & Assignment
Action Plan
Rules
FAQ

Who's behind Model Company for Logistics

Peter Göbbels
Vice President, Active Global Support
SAP AG

Rodion Schuster
Senior Solution Architect, AGS
SAP CIS

Stanley Hao
Senior Solution Architect, AGS
SAP China

Ekaterina Tarchinskaya
Solution Architect, AGS
SAP CIS

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