SAP Extended Warehouse Management
rapid-deployment solution
V5.91
Solution Details
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Technical Details
Overview of SAP rapid-deployment solutions
SAP rapid-deployment solutions

A complete solution

Fast
- Quickly address specific needs
- Gain fast time to value with seamless rapid-deployment tools, embedded best practices
- Speed end-user adoption with guides and educational materials

Simple
- Clearly priced services and project time frames – help ensure a predictable outcome
- Modular yet integrated solutions – help ensure long-term landscape integrity
- Support across all environments (on-premise, mobile, and cloud) – leveraging the cloud to accelerate projects and deployment

Deployed in weeks
Assemble to Order is an approach to combine multiple rapid-deployment solutions and engineered services into a single implementation project. It provides a faster alternative to the normal design-based approach when the functional fit and coverage are high.

Example:

SAP ERP Best Practice + SAP EWM rapid-deployment solution + Extra scope, design, integration, testing and governance. = Project

Provides a new way to deliver projects faster

Uses a mix of local, near-shore and offshore resources
Overview of the Solution
SAP Extended Warehouse Management rapid-deployment solution

Business challenges

- Complex warehousing processes with high degree of variations
- Automating mission-critical warehousing processes
- Processes closely aligned with physical layout
- Complex task of implementing a warehousing solution within a fixed period
- Resource management targets

There is a solution

- The SAP EWM RDS helps you achieve supply chain operational excellence and responsiveness in terms of high warehouse productivity and efficiency, accurate inventory visibility, better space utilization, integrated warehousing and logistics, and better customer service.

Higher customer service

Increased efficiency & productivity

Reduced inventory & labor costs

Greater visibility & decision support

Process automation and scaleability

Compliance and sustainability
Reference Customers

“With SAP EWM we have a very flexible solution. We were able to uniformly map all necessary processes. Plus, we can use it to entirely control the floor-cutting machine.”

Jens Hungershausen, Head of IT, MEGA Gruppe

“We didn’t have the luxury of sandboxing the software for six months. We wanted to get out quickly. The SAP EWM rapid-deployment solution helped us do exactly that.”

Dominik Beck, SAP Team Leader of Logistics at Papyrus

“The SAP solutions helped us realize a 10% savings on the cost of goods transported. In addition, our warehouse worker productivity increased by 30%, as measured in hours spent per 100 kilos transported.”

Norberto Delendati, Organization and IT Director, Artoni
Analyst Quotes

“…[SAP EWM] has gained strong traction in the marketplace due to its robust functionality, interoperability with the SAP suite of solutions…”


SAP has global go-to-market and deployment capabilities, in addition to its experience.

Magic Quadrant for Warehouse Management Systems

Dwight Klappich, Gartner, February 27, 2012, p. 21
# Solution Details SAP EWM

## Features of EWM leveraged in EWM RDS

**Inbound Processing**
- ASN data receiving, validation, correction
- Transportation unit mgmt.
- Goods receipt
- Putaway bin determination
- Internal routing
- Slotting
- Deconsolidation
- Putaway
- Returns / reverse logistics
- Goods receipt optimization
- Advanced returns mgmt.

**Storage & Operations**
- Rearrangement
- Inventory counts / record accuracy
- Replenishment
- Freight order management
- Kit-to stock

**Outbound Processing**
- 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

**Core Processes**
- EWM 5.0
- EWM 5.1
- EWM 7.0
- EWM 7.01
- EWM 7.02
- EWM 9.0
- EWM 9.1

**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

**Supporting Areas**
- RF Enablement
- Quality inspection
- Import / export integration
- EH&S integration
- eSOA enablement
- Migration Tools
- Pick by Voice
- ERP-QM Integration
- Direct TM/EWM Integration
- RFID Enablement
- 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

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Business Process Scope Covered in RDS

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

<table>
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<th>Batch Management</th>
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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)
SAP Extended Warehouse Management (SAP EWM) rapid-deployment solution

SAP ERP Best Practice*
- Purchase order
- Sales order
- Customer Returns Order
- Inventory Management

SAP EWM application
- Inbound delivery
- Outbound delivery
- Customer returns delivery
- To receive goods from vendor at the warehouse
- Replenishment
- To deliver goods from warehouse to customers
- To receive customer returns with quality inspection
- Physical inventory and Cycle Counting
- Scrapping

*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)
Benefits for You

**Business benefits**
- Jumpstart for an EWM implementation project with less risk and higher predictable outcome
- Fit to SAP ERP Best Practice processes
- Integration with SAP ERP out of the box
- Core warehouse processes with a high fit to high rack with narrow-aisle, high rack with and without pick point and mezzanine physics
- Package is designed to be deployed and subsequently extended or adjusted as required by logistics optimizations

**Measurable success**
- A running system for blueprint available in a very short time frame and with a defined business scope
- Lower Pick-to-Ship cycle time allowing to increase warehouse performance ratings
- Higher number inventory turns per year allowing to save costs
- Less errors in cases shipped leading to higher customer satisfaction
SAP ERP and SAP EWM Integration
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 benefits

- 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.
In the System

Key process flows covered

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

SAP ERP and SAP EWM integration
Sample Warehouse Structure
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 benefits

• 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
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
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
EWM Storage Concept: 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.
EWM Storage Concept: Bulk Storage

Two bulk storage types are available for different business needs. Depending on product attributes, pallets of a product 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 putaway block in this bulk storage type.
Sample Warehouse Layout
Central Master Data
Central Master Data: Scope and Benefits

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 benefits

- 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
Inbound from Vendor to Narrow Aisle Storage / Mezzanine
Inbound from Vendor to Narrow Aisle Storage / Mezzanine

Scope and Benefits

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 benefits

- 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 put away to a final destination in the warehouse.
In the System

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

Inbound from Vendor to Narrow Aisle Storage / Mezzanine

Create PO
Create EGR
Create IDN
Create IDLV
Update I.DLV & Stock (ROD)
Posting Change (AFS)
Update I.DLV – final completion

Create IDLV
Unload
Post GR
Putaway
Last Putaway Confirmation
Inbound from Vendor to High Rack (with Bin Sectioning)
Inbound from Vendor to High Rack (with Bin Sectioning)
Scope and Benefits

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 benefits
• 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.
In the System

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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<td>Posting Change (AFS)</td>
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<td>Post GR</td>
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<tr>
<td>Unload</td>
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</table>
Inbound of Batch-Managed Products from Vendor
Inbound of Batch-Managed Products from Vendor

Scope and Benefits

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 benefits

- 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.
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

Inbound of Batch-Managed Products from Vendor

- SAP ECC 6.0
  - Create PO
  - Create IDLV
  - Create Batch
  - Update I.DLV & Stock (ROD)
  - Posting Change (AFS)
  - Update I.DLV – final completion

- SAP EWM 9.1
  - Create EGR
  - Create IDN
  - Create IDLV
  - Replicate Batch
  - Post GR
  - Putaway
  - Last Putaway Confirmation

Warehouse YER2

- Y003 Point: Hand-over
- Y004 Point: Hand-over
- Y031 High Rack
- Y011 NA
- Y002 Pick Point
- Y041 Bulk Storage
- Y051 Picking
- Y042 Bulk Storage
- Y052 Picking Area

Receiving Office

- Y820 Quality Inspection
- Y840 Scrapping Area

Shipping Office

- Y920 - Provide in Goods Issue
  - GI-YDO1
  - GI-YDO2

Mezzanine

- Y021

Clarification Zone

- Y970

Packing Zone

- Y831

Hand-over Point

- Y001

High Rack

- Y011

Putaway

- Y021

Shipping Office

- Y930 – Doors Outbound
  - YDO1
  - YDO2

Quality Inspection

- Y820

Scrapping Area

- Y840

Packing Zone

- Y831

Hand-over Point

- Y001

High Rack

- Y011

Putaway

- Y021

Shipping Office

- Y930 – Doors Outbound
  - YDO1
  - YDO2

Quality Inspection

- Y820

Scrapping Area

- Y840

Packing Zone

- Y831

Hand-over Point

- Y001

High Rack

- Y011

Putaway

- Y021

Shipping Office

- Y930 – Doors Outbound
  - YDO1
  - YDO2

Quality Inspection

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Scrapping Area

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Hand-over Point

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High Rack

- Y011

Putaway

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Shipping Office

- Y930 – Doors Outbound
  - YDO1
  - YDO2

Quality Inspection

- Y820

Scrapping Area

- Y840

Packing Zone

- Y831

Hand-over Point

- Y001

High Rack

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Putaway

- Y021

Shipping Office

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Hand-over Point

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Shipping Office

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  - YDO2

Quality Inspection

- Y820

Scrapping Area

- Y840

Packing Zone

- Y831

Hand-over Point

- Y001

High Rack

- Y011

Putaway

- Y021

Shipping Office

- Y930 – Doors Outbound
  - YDO1
  - YDO2
Inbound from Vendor to Bulk Storage
Inbound from Vendor to Bulk Storage
Scope and Benefits

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:
  a) Bulk Storage A (Partial Pallets Allowed)
  b) 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 benefits

- 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.
In the System

**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

**Inbound from Vendor to High Rack with Bin Sectioning**

**SAP ECC 6.0**
- Create PO
- Create IDLV
- Update I.DLV & Stock (ROD)
- Posting Change (AFS)
- Update I.DLV – final completion

**SAP EWM 9.1**
- Create EGR
- Create IDN
- Create IDLV
- Unload
- Post GR
- Putaway
- Last Putaway Confirmation

**Warehouse YER2**
- Y930 Doors Inbound
- Y910 Goods Receipt
- Y820 Quality Inspection
- Y840 Scrapping Area
- Y003 Hand-over Point
- Y001 Hand-over Point
- Y031 High Rack
- Y011 NA
- Y002 Pick Point
- Y051 Picking
- Y041 Bulk Storage
- Y042 Bulk Storage
- Y052 Picking Area
- Y920 - Provide in Goods Issue
- Y970 Clarification Zone
- Y831 Packing Zone
- Y930 – Doors Outbound

**Zone**
- Y820 Quality Inspection
- Y840 Scrapping Area
- Y831 Packing Zone
- Y920 - Provide in Goods Issue
- Y970 Clarification Zone
- Y930 – Doors Outbound

**Points**
- Y930 Doors Inbound
- Y910 Goods Receipt
- Y003 Hand-over Point
- Y001 Hand-over Point
- Y031 High Rack
- Y011 NA
- Y002 Pick Point
- Y051 Picking
- Y041 Bulk Storage
- Y042 Bulk Storage
- Y052 Picking Area
- Y920 - Provide in Goods Issue
- Y970 Clarification Zone
- Y930 – Doors Outbound

**Office**
- Receiving Office
- Shipping Office
- Y920 - Provide in Goods Issue
- Y970 Clarification Zone
- Y930 – Doors Outbound

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Initial Stock Upload
Initial Stock Upload
Scope and Benefits

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 benefits
• 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
Replenishment
Replenishment

Scope and Benefits

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 benefits

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

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

Warehouse YER2

- Y930 Doors Inbound
  - YDI1
- Y910 Goods Receipt
  - GR-YDI1
- Y031 High Rack
- Y003 Hand-over Point
  - Y002 Pick Point
  - Y041 Bulk Storage
- Y011 High Rack
  - Y011 NA
- Y051 Picking Area
- Y820 Quality Inspection
- Y840 Scrapping Area
- Y970 Clarification Zone
- Y831 Packing Zone
- Y920 - Provide in Goods Issue
  - GI-YDO1
  - GI-YDO2
- Y930 – Doors Outbound
  - YDO1
  - YDO2

Replenishment

SAP ECC 6.0

SAP EWM 9.1

- Confirm Pick WT
- Create Repl. WT
- Confirm Repl. WT
Physical Inventory
Physical Inventory: Scope and Benefits

**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 benefits**

- 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
Process

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).
Cycle Counting
Cycle Counting: Scope and Benefits

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 benefits

- 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
Process

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).
Scrapping
Scraping

Scope and Benefits

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 benefits
• 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.
In the System

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

**Variant A**: Create Posting Change

- Change the stock type and create WT
- Post Goods Issue

**Variant B**: Create Ad-Hoc WT

- Create WO and assign to RF-queue
- Confirm WT (goods at scrapping zone)
- Remove goods from scrapping zone
- Post Goods Issue

**SAP ECC 6.0**

- Posting Change
- Goods Issue Posting

**SAP EWM 9.1**

- Variant A: Create Posting Change
- Variant B: Create Ad-Hoc WT
Outbound to Customer from Narrow Aisle Storage / Mezzanine
Outbound to Customer from Narrow Aisle Storage / Mezzanine
Scope and Benefits

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 benefits
• 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.
In the System

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

Outbound to Customer from Narrow Aisle Storage / Mezzanine

- Create SO
- Create O.DLV
- Create ODR
- Create ODO
- Wave Assignment
- Release Wave
- Create WO and WT
- Confirm Pick WT
- Pack
- Create Stage WT
- Confirm Stage WT
- Create TU
- Load
- Departure TU & GI

Update O.DLV & Stock

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Task Interleaving for High Level Order Truck Resource

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 Low Level Order Truck Resource

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

Warehouse YER2

1. Y930 Doors Inbound
2. Y910 Provide in Goods Receipt
3. Y920 - Provide in Goods Issue

Clarification Zone

Y003 Hand-over Point
Y001 Hand-over Point

Y011 High Rack Buffer

Y831 Packing Zone

Receiving Office

Y920 - Doors Outbound

Y930 – Doors Outbound
Outbound to Customer from High Rack (with Pick Point)
Outbound to Customer from High Rack (with Pick Point)
Scope and Benefits

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 benefits

- 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.
In the System

Overview

- Sales Orders to sell goods
- Creation of Outbound Delivery
- Assignment to picking waves automatically by route and pl. shipment

Picking:

1. Fast Mover / Full Pallet – directly to Packing Zone
2. Slow Mover / Full Pallet via Hand-over Point
3. Partial quantities of a pallet via Pick Point

- Packing / Printing / Loading

Outbound to Customer from High Rack with Pick Point

Create SO → Create O.DLV

Create ODR → Create ODO

Wave Assignment → Release Wave

Create WO and WT → Confirm Pick WT

Pack → Create Stage WT

Confirm Stage WT → Create TU

Create TU → Load

Departure TU & GI

Update O.DLV & Stock
Outbound of Batch-Managed Products to Customer
Outbound of Batch-Managed Products to Customer
Scope and Benefits

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 benefits

- 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.
In the System

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

Outbound of Batch-Managed Products to Customer

- Create SO
- Create O.DLV
- Create ODR
- Create ODO
- Wave Assignment
- Release Wave with batch determination
- Create WO and WT
- Confirm Pick WT
- Pack
- Create Stage WT
- Confirm Stage WT
- Create TU
- Load
- Departure TU & GI

Update O.DLV & Stock

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Outbound to Customer from Bulk Storage
Outbound to Customer from Bulk Storage

Scope and Benefits

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:
  a) Bulk Storage A (Partial Pallets Allowed)
  b) Bulk Storage B (No Partial Pallets) with Picking Area

Business benefits

- 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.
In the System

**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 Transportation Unit by HU

**Inbound**
- Y930 Doors Inbound
- Y910 Goods Receipt
- Y003 Point
- Y031 High Rack
- Y051 Picking
- Y041 Bulk Storage
- Y042 Bulk Storage
- Y052 Picking Area
- Y820 Quality Inspection
- Y840 Scrapping Area

**Outbound to Customer from Narrow Aisle Storage**
- Y003 Hand-over
- Y001 Hand-over
- Y011 NA
- Y021 Mezzanine
- Y030 Doors Outbound
- Y041 Bulk Storage
- Y042 Bulk Storage
- Y052 Picking Area
- Y830 Clarification Zone

**Create**
- Create SO
- Create O.DLV
- Create ODR
- Create ODO
- Create WO and WT
- Create TU
- Stage WT

**Update**
- O.DLV & Stock
- Departure TU & GI

**Outline**
- SAP ECC 6.0
- SAP EWM 9.1

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Customer Returns with Quality Inspection
Customer Returns with Quality Inspection

Scope and Benefits

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 benefits

- 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.
In the System

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

Customer Returns with Quality Inspection

SAP ECC 6.0
- ODLV exists
  - Create RE
  - Create IDLV
  - Post GR Qual. Stock ROD
  - GI for Scrap
  - Posting Change (AFS, free)
  - Update I.DLV – final completion

SAP EWM 9.1
- Create IDN
  - Create IDLV
  - Create HU
  - Post GR
  - Qual. Insp. Decision
  - Scrap
  - Putaway
  - Putaway Confirmation

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## EWM W001 and EWM RDS V5.91 Warehouse Feature Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>W001</th>
<th>EWM RDS V5.91</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse Integration with ERP Best Practice (A2O)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Warehouse Structure</td>
<td>Wide Aisle</td>
<td>High Rack with Hand Over Point and Pick Point, High Rack Narrow-Aisle, Bulk Storage, Mezzanine</td>
</tr>
<tr>
<td>Inbound – Paper based simple inbound process</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Inbound – HU with Unknown Content</td>
<td>Yes</td>
<td>No, but inbound with quantity classification based putaway provided</td>
</tr>
<tr>
<td>Inbound – Putaway based on quantity classification</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Inbound – Cross Line Putaway</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Handling Units with SSCC</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Outbound using Pick-HUs as Ship-HUs (paper based)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Outbound using Wave, Pick-HU, Packing, Staging and Loading</td>
<td>Yes</td>
<td>Outbound to customers (using Wave, Pick-HU, Packing, Staging and Loading).</td>
</tr>
<tr>
<td>Outbound with large-small quantity picking</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Outbound – packing with „bus stop“ concept</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Replenishment</td>
<td>Automatic Replenishment</td>
<td>Automatic Replenishment</td>
</tr>
<tr>
<td>Replenishment – Fixed Bins</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Phys. Inventory</td>
<td>Physical Inventory and Cycle Counting</td>
<td>Physical Inventory and Cycle Counting</td>
</tr>
<tr>
<td>Customer Returns</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Unplanned Scrapping</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Service Delivery
Implementation Methodology – Live in 3 Weeks

1. Start
2. Deploy
3. Run

SAP CRM Rapid Deployment Solution

STEP BY STEP GUIDE

Start: Prepare Project

Start: Prepare Project

The SAP project lead does the following:
1. Directs a configuration to SAP resource management to hand off the resources required for the project.
2. Updates the system elements in the project (DSR), schedule and effort estimation based on the project scope, and any resources required.
3. Updates the Consultant delivery guide with information for consultants.
4. Confirms that all administrative preparations have been made by the customer and by the SAP delivery team as specified in the project delivery requirements checklist.
5. Schedule an initial call with the customer to discuss any outstanding topics, and agree on a date for the kick-off meeting.
6. Communicates the delivery model (e.g., on-site, remote activities) to the customer, and ensures that consultants have made appropriate travel arrangements for example, visas.

The customer project team ensures that the required preparations have been made as specified in the Pre-delivery requirements checklist.

Result

The kick-off workshop is organized and the project is ready to be executed.

Configuration Guide

Kickoff Workshop

Project Schedule

Scoping Questionnaire

Check Lists

Support Portal

Note: This slide represents a typical deployment. Exact details may differ according to solution.
SAP EWM rapid-deployment solution

Key Facts

**Value Proposition**
- Rapid availability to pre-configured, ECC integrated EWM 9.1 Sandbox
- Rapid implementation that reduces the TCI
- Standard functionality, which is scalable with other functionalities
- Training and hands-on with users can start quickly
- Flexible choice of functionalities based on building block principle
- Anytime enhancement and upgrading possibility (→ Standard SAP Solution)
- Blueprint Accelerator with a higher blueprint quality
- Fixed Price Model

**Benefits**
- Preconfigured Ready to use Sandbox with Best Practice EWM core-processes
- Knowledge Transfer to key project members for Best Practice processes
- Rapid delivery in 20~22 Days (total duration)
- A clear path to your full EWM vision

**Service Description**
- The Service consists of Preparation & Workshop, Solution Activation and Knowledge Transfer
- The customer receives in his sandbox system a new client with a predefined warehouse layout and working processes
- It is the foundation for a subsequent SAP EWM implementation project
- The activation is done for 1 company code and 1 warehouse

**Service Content**
- The service content for the rapid deployment of SAP EWM for CI includes
  - Project kick-off
  - Setting-up SAP ERP – SAP EWM connectivity
  - Integration and set-up of relevant master data objects
  - Solution Activation
  - Validation of selected processes
  - Hand-over process workshop with key users

**Delivery Details**
- On-site and remote with a consultant from local market unit
- Implementation time: ~ 3 weeks
- Effort: ~ 20~22 person days
- Costs: contact local market unit

**Related Services**
- EWM Business Assessment
- AGS EWM Rapid Prototyping service
- Deployment of Add-ons for SAP Extended Warehouse Management
Project Planning

**Start**
- Prepare Project
- Kick off workshop
- Confirm Installation

**Deploy**
- Activate Solution
- Confirm Activation
- Unit Test solution
- Key user training

**Run Blueprint**
- Sign-off RDS Best Practice Processes by Customer
- Leverage RDS Best Practice processes in Blueprint Phase

**Steps**
- Weeks

**SAP involvement**
- Customer involvement
System Requirements

SOFTWARE

• SAP EWM 9.1
• EHP7 for SAP ERP 6.0
• SAP NetWeaver 7.4
System Landscape

SAP EWM standalone

SAP ERP 6.07
SAP EWM 9.1
EHP3 for SAP SCM 7.0

SAP EWM as an add-on with SAP ERP

SAP ERP 6.07
SAP EWM 9.1
SAP NW 7.4
SAP EWM 9.1
SAP ERP 6.07
EWM RDS V5.91 was developed on EWM9.1, and all deliverables/documents/language settings were tested and offered for the target customers with EWM9.1 license.

While the followings were also tested during development, and customers with EWM9.0 license are able to reuse the EWM V5.91 assets for the implementations if the technical conditions fit.
SAP EWM RDS on SAP Store
SAP Pre-Assembled RDS on Amazon Cloud

**READY-TO-ACTIVATE**
Pre-assembled by SAP in the Cloud

SAP EWM 9.1
SAP ERP 6.0 EHP7

**EXECUTE** Quick Start in the cloud

Activate EWM RDS pre-configured processes, or with delta changes by customer needs

**TRANSPORT to**
Customer environment on-Premise

Why EWM RDS on Cloud?

- Use as sandbox for Proof-of-Concept, trainings, blueprint discussion, etc.
- Use as development environment to accelerate SAP implementations with preconfigured business processes in the cloud
- Quickly configure, enhance, and test in the cloud
- Experience no delay (hardware availability) to project kick-off
- Run productive environment on-Premise

For more information please visit SAP Store
SAP Rapid-Deployment solutions
The fastest way to run your business better