Introduction

Solution Overview and Highlights

Solution Details

SAP EWM Implementation

SAP Development Focus & Strategy

Summary & Wrap-Up
Introduction
SAP Customers are Producing....

- 86% Of sport shoes worldwide
- 70% Of chocolate worldwide
- 50% Of branded jeans worldwide
- 9 Mio. Tons of cheese
- 72% Of beer production worldwide
- 77,000 Cars per day

...and all of this has to be transported & stored
SAP Customers are Investing in Warehousing for…

- Higher customer service
- Increased efficiency & productivity
- Reduced inventory & labor costs
- Greater visibility & decision support
- Process automation and scaleability
- Compliance and sustainability
History (1994–2014)
A long history of warehouse management business, process, and IT expertise

1994
SAP R/3: warehouse management functionality (SAP R/3 2.0–4.7)
Goods storage
Logistics execution

2007
SAP Supply Chain Management (SAP SCM)
SAP EWM application
Distribution center logistics
Advanced warehouse management

2014
(SAP EWM 7.0–7.02)
Best-in-class warehouse management

….
(SAP EWM 9.1)
SAP EWM Positioning
New generation warehouse process flexibility, performance and coverage

SAP ERP
Warehouse Management
(Continuous improvement / maintenance)

- Basic warehouse processes
- Simple warehouse operations
- Small & medium-sized warehouses

SAP SCM
Extended Warehouse Management
(Strategic investment solution / strong roadmap)

- Comprehensive warehouse mgmt. processes
- Full process transparency
- Flexible automated processes
- High performance, high volume warehouse operations
- Medium & large-sized warehouses

Migration Tools
SAP Transportation & Logistics Coverage Today
Processes, players and collaboration

Planning, orchestration, execution and tracking of the physical movement of goods

Freight Forwarder

Shipper

Order Management

Transportation Planning

Warehouse Execution

Freight Execution & Monitoring

Freight Settlement

Tracking

Cargon

Carriers

Consignee
SAP Supply Chain Execution Mission and Strategy

Mission  The World's Best Supply Chain Execution Platform

Best-in-class  Integrated  Connected  Verticalized

Freight Forwarder


Carriers

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SAP Supply Chain Execution Platform Strategy

SAP ERP
- Order-to-Cash
- Procure-to-Pay
- Dangerous Goods Mgmt.

SAP GTS
- Customs & compliance mgmt.

Supply Chain Execution Platform
- SAP Transport. Management
- SAP Event Management (Track & Trace)
- SAP Extended Warehouse Mgmt.

Supply Chain Execution Platform
- Synchronized solution delivery
- SCE Suite implementation in 1 instance
- Out-of-the box SCE integration
SAP Supply Chain Execution Platform

Comprehensive Transportation Mgmt.
- Multi-mode
- Domestic, international, inbound & outbound transportation
- Shipper & freight forwarder processes

Best-in-class Warehouse Mgmt.
- All industries
- Distribution centers & production warehouses
- Simple & complex, high volume warehouse operations

Holistic Track & Trace
- Process & logistics execution milestone tracking
- In-transit visibility of goods & assets
- Event & exception management

Supply Chain Execution Platform
- SAP Transportation Management
- SAP Extended Warehouse Mgmt.
- SAP Event Management (Track & Trace)
SAP Supply Chain Execution Platform Highlights

Best-in-class functionality
Deep process integration
Powerful decision support

Capacity Procurement & Network Planning
Order Management
Warehouse Execution
Freight Execution & Monitoring
Customer Billing & Freight Settlement

Tracking

Flexibility & scaleability
Native technology integration
Rapid Deployment Solutions
SAP is #1

#1 in the software WMS market

“SAP EWM has gained strong traction in the marketplace due to its robust functionality, interoperability with the SAP suite of solutions, and the large existing SAP installed base of potential customers.”

Steve Banker, Clint Reiser, ARC Report, August, 2012

So, is SAP EWM a rival to best of breeds? Yes they are.

SAP EWM: A Rival to Best of Breed Solutions?
Steve Banker, ARC Brief, October 14, 2010, p. 5
Solution Overview and Highlights
SAP Extended Warehouse Management
Best-in-class warehouse management

Best-in-class Warehouse Management

• All industries
• Distribution centers & production warehouses
• Simple & complex, high volume warehouse operations
SAP Extended Warehouse Management Overview
A complete, integrated, best-in-class solution

SAP Extended Warehouse Management

Inbound Processing
- Transportation Unit Processing
- Goods Receipt Management & Optimization
- Inbound Quality Management
- Internal Routing

Storage & Operations
- Physical Inventory
- Replenishment / Rearrangement
- Kit-to-Stock Management

Outbound Processing
- Outbound Planning (Route, Wave, Bin…)
- Picking Optimization, Packing, Staging & Load Management

Analytics & Reporting
Resource & Labor Management
Cross Docking
Yard Management
Import / Export, Dangerous Goods & Compliance
Native Technologies (RF, RFID, Voice, Material Flow System)
TCI, TCO Reduction, HANA, Optimization Tools

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Inbound Processing with SAP EWM

Inbound Processing Highlights

- Advance Shipping Notification processing (Automatic/ manual creation)
- Automatic, rules-based process guidance
- Comprehensive quality management and returns management
- Leading-edge warehouse technology integration (PLCs (pallet/case conveyors, RF, RFID..))
- Integrated import and dangerous goods compliance (bonded warehouse; DG handling)
Storage with SAP EWM

Storage Planning & Processing Highlights

- Complete labor management solution (planning, execution, monitoring, HCM integration)
- Comprehensive slotting rules (condition technique), incl. rearrangement
- Broad set of replenishment strategies
- Value added service orders (Kit-to-stock, Kit-to-order, repackaging, labeling…)

Warehouse Planning

- Labor Management
- Labor Demand Planning
- Slotting
- Replenishment
- Kit-to-stock

Storage

- Put-away strategies
- Rearrangement
- Dangerous goods storage
- Physical inventory
- Value Added Services
Outbound Processing with SAP EWM

Outbound Processing Highlights

- Wave, labor & cartonization optimization
- Full native technology support (mobile radio frequency, pick-by-voice, RFID)
- Material Flow System for direct PLC and conveyor system communication
- Transportation process integration
- Comprehensive warehouse performance analytics & operations monitoring
SAP Extended Warehouse Management Highlights

SAP EWM Solution Highlights

- Powerful warehouse analytics and monitoring
- Advanced warehouse optimization
- High performance warehouse execution
- Built-in Material Flow System technology
- Deep integration with SAP Business Suite
- Comprehensive mobile offering for warehousing
- Industry-specific process support
- Implementation tools for lower TCI/TCO (Rapid Deployment Solutions and Migration Tools)
Solution Details

World-class analytics
Built-in optimization
High performance execution
Industry-specific process support
Deep SAP Business Suite integration
World-class Analytics with SAP EWM
Comprehensive stock and process transparency

Supply chain manager
Comprehensive, central warehouse operation monitor
Alert and exception monitoring
Drill-down and direct-action triggering

Warehouse supervisor
Cross-warehouse performance monitoring
Key Performance Indicators

- Outbound delivery items (value / # per worker)
- Service level analysis (% delivery errors / % on time)
- Warehouse capacity usage (% level / stock value)

Key Performance Indicators

- Warehouse activity area (volume / weight)
- Worker performance (average / per execution step)
Cross Distribution Center Performance Dashboard

Warehouse Performance Dashboard
Warehouse performance overview at a glance with graphical display of top key performance indicators for DC comparison and decision support

Cross Distribution Center Performance
• Key KPI monitoring
• Service level analysis
• Warehouse capacity usage overview
• Drill-down to details
Warehouse Operations Reporting & Monitoring

Analytics & Reporting

- Full warehouse operations visibility for efficient performance monitoring & problem resolution

Warehouse Management Monitor

- Warehouse activity monitoring with direct activity triggering
- Graphical view with SAP Crystal Reports

Warehouse Cockpit

- Multi-KPI / area monitoring cockpit with SAP Easy Graphics Framework

- Comprehensive, real-time warehouse operations overview
- Activity and exception monitoring with alert management
- Direct follow-up action / exception handling capabilities
Solution Details

World-class analytics
Built-in optimization
High performance execution
Industry-specific process support
Deep SAP Business Suite integration
Built-in Optimization in SAP EWM
Wave management, labor management, and slotting

**Slotting**
- Advanced storage concept; ABC goods classification

**Cartonization**
- Automatic shipping-unit determination

**Wave management**
- Optimized work orders; efficient pick path

**Labor management**
- Reduced labor costs; improved labor planning
Slotting with SAP EWM

Slotting
Optimal storage parameter determination

Planning Parameters

Product Demand
- SAP APO forecast / historical data

Product Data
- Weight, volume, height...

Storage Requirements
- # order items, storage qty.

Packaging data
- Single item, pallet, cases,…

Slotting Determination

- Storage section
- Storage bin properties
- Put-away strategy

Supported Tasks

- Storage bin determination
- Rearrangement
- Replenishment

- Advanced, fully automatic slotting determination for efficient goods storage

- Optimal storage determination for improved warehouse capacity utilization
Cartonization Planning with SAP EWM

Cartonization Planning
Efficient packaging planning for improved load planning and lower material costs

Planning Parameters
Product Data
- Volume, Weight
Delivery Order Data
- Customer
- Carrier, Transport Mode
- Quantity
Warehouse Data
- Warehouse Activity Area

Algorithm Calculation
- # of Packages
- Packaging Type
- Package Content

Supported Tasks
Load Planning
Picking
Packing
Loading

- Manual / automatic cartonization planning with delivery order transfer
- Early load / handling unit visibility for better labor & load planning
- Advanced algorithm for packaging type and handling unit optimization
Advanced Wave Management with SAP EWM
Comprehensive wave planning, execution and monitoring tools

Wave Management
Efficient workload planning & leveling

Delivery 100
- Item 10
- Item 20

Delivery 101
- Item 10
- Item 20
- Item 30
- Item 40

Wave 1
- Pick 11:00
- Load 12:00

Wave 2
- Pick 10:00
- Pack 11:00
- Stage 11:30
- Load 12:00

Shipment
- Departure 12:30

- Automatic, semi-automatic & manual wave planning & release
- Template-driven wave creation (wave templates with predefined completion times)
- Delivery item grouping/split (according to route, pick area, packing lanes, product)
- Wave milestone status tracking and monitoring
# Labor Management with SAP EWM

## Labor Management
Increased warehouse productivity with labor & resource planning, visibility and reporting

<table>
<thead>
<tr>
<th>Labor Planning /Simulation</th>
<th>Workload Monitoring</th>
<th>Labor Analytics / Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Short &amp; mid-term resource planning based on:</td>
<td>• Planned / executed task monitoring</td>
<td>• Task performance reporting</td>
</tr>
<tr>
<td>− Planned workload (ERP purchase orders &amp; deliveries)</td>
<td>− Warehouse orders, indirect labor, physical inventory…</td>
<td>− Employee &amp; supervisor views</td>
</tr>
<tr>
<td>− Planned work duration (Engineered labor standards, historical data, route network / travel distances)</td>
<td>• RF &amp; desktop-based task confirmation</td>
<td>− Direct &amp; indirect labor</td>
</tr>
<tr>
<td></td>
<td>• Exceptions &amp; alerts</td>
<td>− Planned &amp; actual times</td>
</tr>
</tbody>
</table>

• Task performance reporting
  − Employee & supervisor views
  − Direct & indirect labor
  − Planned & actual times
• Cross-warehouse / DC comparison
• Performance transfer to HCM
  − Compensation / incentives

- Accurate workload forecast for efficient capacity balancing
- Real-time labor activity visibility for improved efficiency & timely problem
Labor Demand Planning

Interactive, graphical workload overview for shift planners with combined planned and forecast workload data

- Operational planning in real time
- Quick intuitive Setup
- Great user experience
Dock Appointment Scheduling

Collaborative, graphical planning cockpit for efficient handling of incoming & outgoing truck deliveries on warehouse doors

- Intuitive dock appointment planning
- Appointment monitoring & analysis
- Web Access for carriers
- Quick wizard-based setup
SAP EWM Shipping Cockpit

Shipping office clerk cockpit for outbound delivery planning, execution processing & monitoring

Planning View

Shipment Execution & Monitoring
Solution Details

World-class analytics
Built-in optimization
High performance execution
Industry-specific process support
Deep SAP Business Suite integration
High Performance Execution with SAP EWM
Leading-edge warehousing strategy, operations and technology support

Native Technologies
Leading-edge technology integration

High Volume Operations
High performance & response times

Value Added Services
Customer-specific requirement support

Internal Routing
Automatic routing determination & control

Rearrangement
Optimal product location storage

Cross Docking
Direct transfer to goods issue

Advanced Returns Mgmt.
Efficient returns processing & follow-up action execution
High Volume / High Performance Operations
Real-world simulation proves high performance, stability, and scalability

Day-in-the-life retail warehouse simulation

- Retail-typical logistical volumes
  - 10 picking waves for 42,000 delivery items
- Warehouse processes with retail-specific requirements
  - Inbound goods receipt (incl. MFS / PLC emulation)
  - Outbound goods issue
  - Flow-through & cross-docking

Performance test results

- ERP sales order transfer & wave creation in EWM (420,000 delivery items)  ▶ 1 hr
- Picking wave release (42,000 per wave)  ▶ 15 mins
- Mobile response time  ▶ 0.8 secs
- Material Flow System response time  ▶ 0.5 secs
Leading-edge Warehouse Technology Integration
Increased accuracy, efficiency, and visibility

Material flow system (MFS)
- Programmable logical controllers (PLC)
- Pallet and case conveyors

Native technology integration
- Mobile radio frequency (RF)
- Pick by voice
- RFID
Comprehensive, Native Technology Support & Integration

Native Technology

Native integration with the latest technologies for efficient warehousing operations

- **Standard Mobile User Interfaces**
  - Full set of mobile-based transactions
  - Flexible configuration and personalization
    (UI sequence, layout, content, size, color, font)
  - Native integration
    (Direct integration without 3rd party software / mapping tools)

- **Complete Warehouse Execution Support**
  - Full RF/barcode execution support incl. EAN/GTIN
    (Receiving, moving, physical inventory, picking, packing, loading..)
  - Voice recognition support for picking
  - RFID-supported receiving and goods issue
Pick-by-Voice with SAP EWM

Pick-by-Voice
Seamless integrated optimized pick-by-voice transactions

- Embedded in well established RF framework and Internet Transaction Server (ITS)
- Widespread standards applied (XHTML+Voice)
- Fast Pick-by-Voice Response Times
- Non-disruptive error handling
- Partnering with voice recognition providers (TopSystems, VoCollect)
Warehouse Automation with SAP EWM using MFS

Material Flow System
Seamless, direct integration between SAP Extended Warehouse Mgmt. and programmable logic controllers (PLC)

- Flexible, well documented framework approach to connect PLCs
- Complete routing & event modelling in SAP EWM
- Comprehensive monitoring & control of Handling Unit events & exceptions in SAP EWM
- Message & event control in sub-second response time via telegrams
Warehouse Management System Architecture Options
SAP EWM with integrated Material Flow System (MFS)

Order / Inventory Management

SAP ERP

Warehouse Management

3rd Party Warehouse Mgmt. System

SAP EWM (including Material Flow System)

Material Flow Control

3rd Party Material Flow System

Plant Connectivity

Programmable Logical Controller

PLC
Internal Routing with SAP EWM

Internal Routing
Efficient, automatic routing determination for multi-step put-away, stock moves and picking

- Complete process coverage - routing determination & step/process control
- Layout-oriented routing (for equipment resources incl. material flow system conveyor segments)
- Process-oriented routing (based on sales / purchasing order, product, customer & vendor data)
Advanced Returns Management with SAP EWM

Advanced Returns Management
Comprehensive, end-to-end process support for efficient order processing & goods handling

Returns Mgmt. Variants
- Counter return
- Customer returns order
- Returns stock transfer order

Goods Receipt
- Inspection
- Inspection decision
- Follow-up action decision

Quality Inspection

Follow-up Actions
in SAP EWM
- Putaway (w/ batch change)
- Scrap
- Outbound delivery

in SAP ERP
- Internal/external repair
- Return to vendor
- Valuation posting / credit memo request

- Seemless integration with SAP ERP advanced returns management
- End-to-end process support for comprehensive order and logistics activity support
Value Added Services in SAP EWM

Value Added Services
Flexible support of customer-specific requirements for high customer service

Inbound Process
- Kit-to-Stock
- Repacking

Outbound Process
- Kit-to-Order
- Customer-specific services (labels, price tags, accessories, docs.)
- Packaging

- Seemless integration with internal routing
- Value added service time & material reporting
Cross-Docking with SAP EWM

Cross-Docking
Direct transfer from goods receipt to goods issue for reduced handling & storage costs

Planned cross-docking
- Transportation cross-docking (based on route determination from defined route network)
- Merchandise cross-docking (based on retail allocation for inbound delivery split across multiple retailers)

Opportunistic cross-docking
- Inbound-driven (automatic check at goods receipt for suitable outbound orders/delivery items)
- Outbound-driven (automatic check at wave release for suitable inbound orders / delivery items)
- Push deployment (automatic SAP Service Parts Planning (SPP) demand check for incoming parts)
- Pick from goods receipt (automatic SAP SPP customer back order check for needed parts in goods receipt)
Rearrangement with SAP EWM

Rearrangement
Optimal product location storage for better labor and picking efficiency

• Dynamic and planned rearrangement based on slotting optimization results
  (i.e. based on product demand data - promotions, seasonal plans, etc.)

• Flexible rearrangement execution to fit capacity / workload plans

Rearrangement
High & slow moving product relocation

"Golden Zone" for Fast Movers
Solution Details

World-class analytics
Built-in optimization
High performance execution
Industry-specific process support
Deep SAP Business Suite integration
Verticalized offering
Examples of support for in-depth industry-specific processes in SAP EWM

**Automotive**
- Production supply
- Kit to stock
- Kit to order

**Chemicals**
- Batch management
- Dangerous goods

**Consumer products**
- Catch weight
- Batch management
- Best-before handling

**Retail**
- Merchandise distribution cross-docking
- High-volume throughput
- Best-before handling

**Service parts**
- Slotting
- Kit to stock
- Kit to order

**Transportation and logistics**
- Transportation cross-docking
- Dangerous goods
- Transport integration

**High tech**
- Serial numbers
- Production supply

**Life sciences**
- Batch management
- Best-before handling
Batch Management with SAP EWM

**Batch Management**
Full tracking & traceability of batch managed products for all warehouse processes

---

**EWM Batch Data**
- Batch number
- Batch characteristics
  - Production date, country of origin, expiration date, ingredient value
- Batch specifications
- Batch status

**EWM Batch-supported Processes**
- Goods receipt
  (batch master creation, batch charact. recording)
- Putaway strategies
  (with batch compatibility & mixing rules)
- Movement control
  (via batch-based restrictions for replenishment, internal movement)
- Picking
  (via batch characteristics)
- Shipping
  (batch number recording)

---

- Full batch management or simple "documentary batch" support
Catch Weight Management with SAP EWM

**Catch Weight Management**
Recording of logistical and weight unit of measures for material valuation and customer invoicing

**Catch Weight - supported Processes**
- Goods receipt
- Physical inventory
- Shipping

- Logistical UOM recording
  - Number of pieces
  - Number of cases

- Weight recording

- Stock kept in two independent units of measure
  - Logistic unit of measure for warehouse execution activities
  - Valuation unit of measure (weight) for ERP material valuation & invoicing

- Flexible weight recording set-up to suit warehouse needs & defined processes
Serial Numbers in SAP EWM

Serial Numbers
Flexible serial number management in warehouse processes for accurate location, & single unit life-cycle tracking

Serial Number Recording in EWM
• Recording for specific processes
  - i.e. for shipping, returns management
• Recording at receiving and shipping
  - For serial number stock management at warehouse level
• Recording also with partial HU quantity moves
  - For serial number stock management at HU and/or bin level

• Easy, flexible configuration for serial number tracking in any warehouse process
• Serial number transfer to ERP to update delivery documents
Stock Specific Unit of Measure

Stock Specific Unit of Measure
Handling of stock in different Unit of Measures (UoM) throughout warehouse processes

Highlights

Inbound Process
• Apply alternative UoM from ERP delivery
• Propose preferred UoM
• Change of UoM at different steps
• Putaway strategy via UoM/quantity classifier

Internal Process
• Physical Inventory
• Monitoring

Outbound Process
• Small/Large quantity picking (w/o packaging specification)
• Send UoM information to ERP
Production Integration with SAP EWM

Production Integration / Production Supply
Integrated production and warehousing processes to support leading-edge production replenishment strategies and finished goods receipt

Production Supply Strategies
- Pick parts
- Release order
- Crate parts / Kanban

Production Data
- Production date
- Production batch

- Seamless, deep integration with ERP production planning & execution processes
- Modeling of production physical locations in EWM for efficient replenishment & accurate production stock visibility
Solution Details

World-class analytics
Built-in optimization
High performance execution
Industry-specific process support
Deep SAP Business Suite integration
Deep Integration with SAP Business Suite
Comprehensive, smooth, and real-time process integration

<table>
<thead>
<tr>
<th>Sales and distribution</th>
<th>Procurement</th>
<th>SAP Manufacturing</th>
<th>SAP Environment, Health, and Safety Management</th>
<th>SAP Global Trade Services</th>
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</thead>
<tbody>
<tr>
<td>• Order processing</td>
<td>• Advance shipping notification (ASN)</td>
<td>• Comprehensive production supply support (process orders and crate parts)</td>
<td>• Dangerous goods handling</td>
<td>• Compliance with import and export regulations</td>
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<tr>
<td>• Customer relationship management (CRM)</td>
<td>• Inbound quality management</td>
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<td>• Storage and document printing</td>
<td>• Customs; bonded warehouse</td>
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<td>• Back-order processing (global available to promise)</td>
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<tr>
<td>• Advanced claims and returns management</td>
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<td>• Track and trace</td>
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SAP EWM Integration with SAP Env. Health & Safety (EHS)

Hazardous Substance Handling & Dangerous Goods Mgmt
Deep integration with SAP EHS for compliant handling and storage of hazardous products and dangerous goods in the warehouse

Hazardous Substance Handling
- Put-away strategies and storage locations
- Handling instructions - for print-out & radio frequency (RF) devices
- Hazardous substance inventory list for fire departments

Dangerous Goods Management
- Delivery note including dangerous goods data
- Dangerous good-specific route and mode determination
SAP EWM Integration with SAP Global Trade Services

Import / Export Compliance & Customs Management
Deep integration with SAP Global Trade Services (GTS) with automatic status checks & warehouse process control for regulatory compliance

Inbound
• NCTS procedure support (New Computerized Transit System)
  - Inbound delivery status check ("Blocked" or "Released for customs")
  - For transit, w/o customs clearance, &/or unpaid duty goods

Storage
• Bonded warehouse (Customs-blocked goods)

Outbound
• Sanction party list screening (Consignee check)
• Embargo check (Country check)
• Export control (Product/material check)
Supported Integration Scenarios with Release 9.0

- Order and delivery-based planning and execution
- Warehouse execution & freight settlement
- Shipment cancellation

SAP Enterprise Resource Planning
- Customer order
- Delivery
- Shipment

SAP Transportation Management
- Transportation Planning
- Freight Order Mgmt.
- Freight Settlement

SAP Extended Warehouse Management
- Picking, Packing, Staging
- Loading
- Goods Issue
Direct TM – EWM Integration

End-to-end, integrated transportation planning, warehouse execution, & freight settlement via direct interface between SAP TM and SAP EWM
SAP EWM Implementation
## Services and ecosystem around SAP EWM

### Strong service offering and ecosystem

#### Service and support
- SAP consulting practice
- 24x7 global support
- Quality assurance services and SAP Safeguarding
- Rapid-deployment solutions
- Custom development

#### Partners
- Global partners
- Expert logistics partners
- Local partners
- Complementary software products

#### Education
- Classroom training
- E-learning
- Certification program

#### Ecosystem
- SAP Community Network
- User group for SAP EWM
- Social networks for SAP EWM
SAP EWM Documentation & Guides

Best Practice
Full system documentation as well as best-practice installation, process & configuration guides for reduced implementation time, effort and cost

System Documentation / Help
- Full SAP EWM Documentation
- What's New - Release Notes Documents

System Administration and Maintenance
- Application Operations Guide

Installation and Upgrade Information
- Master Guide / Upgrade Master Guide
- Installation & Upgrade Notes

Configuration and Deployment
- Business Process Overview Presentations
- Business Process Documentation
- Configuration Guides
Warehouse Management with Preconfigured Processes
A complete example warehouse

Basic EWM Processes Preconfigured
Part of EWM Standard delivery: Complete ready-to-run sandbox warehouse implementation

Configuration Guide & Process Descriptions
- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Warehouse processes

Preconfigured, Best Practice Processes
- Inbound & outbound processes
- Periodic physical inventory & cycle counting
- Automatic replenishment
- Customer returns with quality inspection
- Scrapping based on expiration date
EWM Rapid Deployment Solution
A complete example warehouse

EWM Rapid Deployment Solution
Fixed scope, fixed cost solution and service for a complete ready-to-run warehouse implementation

EWM RDS

- PREDEFINED SERVICE
- ENABLEMENT CONTENT
- PRECONFIGURATION CONTENT
- SOFTWARE

Configuration Guide & Process Descriptions
- SAP ERP and SAP EWM integration
- Sample warehouse structure
- Central master data
- Warehouse processes

Preconfigured, Best Practice Processes
- Inbound & outbound processes
- Periodic physical inventory & cycle counting
- Automatic replenishment
- Customer returns with quality inspection
- Scrapping based on expiration date

Predefined service offering
- Full implementation service
- Or lean service offering
Migration Tools
Accelerated migration of data from WM in SAP ERP to SAP EWM

- Master data migration
  - Products
  - Bins
  - Stock
  - Physical Inventory

- Migration guide
Graphical Warehouse Layout

Warehouse Layout
2 dimensional graphical warehouse layout for warehouse master data set-up visualization and warehouse object details

Warehouse Layout Overview
- Visual display of master data set-up
- Warehouse & yard overview
- Color-coded storage types (High rack, bins, handling unit, conveyor...)
- Travel paths & distances
- Aerial warehouse & rack frontal views (with zoom-in/out)

Drill-down Details
- Resource status / location
- Storage bin status (empty, blocked)
Overview SAP EWM Software Partners & Extension Areas

- Warehouse Layout Planning & Optimization
- Packing Optimization & 3D Visualization
- Parcel Service Provider Integration
- Multi-client Warehousing
- Mobile Add-on Solutions
- Load & Vehicle Space Optimization

SAP Extended Warehouse Management

Web Services

3rd Party Software
High flexibility and adaptability
Tailor SAP EWM to your specific needs

**Personalization**
- Role-based menus
- User-specific reports
- Role-based user interfaces
- Multilingual support

**Customer-specific extension**
- Open code for reuse
- Documented interfaces
- Modification-free extensions
- Upgrade security or upgrade-secure interfaces

**Configuration**
- Warehouse layout
- Industry-specific warehouse processes
- Strategies (picking, putaway, and so on)

**Service-oriented architecture**
- Development of composite applications
- Integration to legacy systems and third-party software
Solution architecture for SAP EWM
Deployment options

SAP EWM on SCM Server

SAP ERP

SAP EWM

SCM Server

Recommended option

SAP EWM standalone

SAP ERP

SAP ERP

SAP EWM standalone

SAP ERP

SAP ERP

SAP EWM add-on

SAP EWM

SAP ERP

SAP note 1606493 - SAP EWM Deployment Options Best Practices
SAP Development Focus & Strategy
2011 Innovations for Warehousing Management

SAP EWM 7.02

ERP WM > EWM Migration Tools
- Master data migration
- Migration guide
- Rapid Deployment Solution

EWM Rapid Deployment Solution
- Configuration guides
- Sample warehouse structure & master data
- Preconfigured warehouse processes
- Predefined implementation service

EWM Solution Round-offs
- Returns & claims mgmt.
- Cartonization
- Multiple GTIN/EAN
- Material Flow System - case conveyor support
- Warehouse monitor using Chrystal Reports

SAP ERP  →  SAP EWM
- Products, bins, stock, inventory,...
2012 Innovations for Warehousing Management

SAP EWM 9.0

EWM - TM Integration (via ERP)
- Order or delivery-based planning and execution
- Warehouse execution & transportation costs
- Cancellation Scenario

Dock Appointment Scheduling
- Dock planning & workload scheduling
- Carrier appointment planning
- Un/load execution monitoring & control

EWM Solution Round-offs
- Analytics dashboards: Cross-distribution center; Top 15 KPIs
- Stock-specific unit of measure
- …
2013 Innovations for Warehousing Management

SAP EWM 9.1

Shipping Cockpit
- Shipping planning
- Shipping execution monitoring

Labor Demand Planning
- Advanced workload analytics
- Shift planning decision support

Solution Round-offs
- Direct EWM-TM integration
- Dock Appointment Scheduling
- Retail enhancements
- TCO / TCI reduction
Summary & Wrap-Up
The best are leading the way with SAP EWM

Dansk Supermarked

- Increased **speed** and significantly reduced picking times

34% ongoing labor cost reduction

Near zero customer-complaint rate

20 warehouses live using the same template
Overview SAP EWM Customer & Market Status
Strong customer growth and implementation momentum

Facts and figures

600 Customers
15 Industries
24 Countries

Sample customers

Dansk Supermarked
Coca-Cola Enterprises

Customer geographical coverage

Live customers and live sites

- Warehouses
- Customers

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Customer benefits of SAP EWM

- Increased warehouse productivity
- Greater transparency

- Increased accuracy
- Better service levels

- Reduced costs
- Flexibility and scalability
Differentiators and value of SAP EWM

Comparison of SAP EWM with WM functions of SAP ERP

- SAP’s strategic warehouse management solution
- Strong investment and supply chain execution roadmap
- Enhanced process flexibility
- Full warehouse visibility
- Latest technology support
- Labor management
- Better performance

<table>
<thead>
<tr>
<th>Functional area</th>
<th>WM</th>
<th>SAP EWM</th>
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<tbody>
<tr>
<td>Manage stock at storage location</td>
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<td>Removal strategies</td>
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<td>Pick logic – wave management</td>
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<td>Standard mobile RF technology</td>
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<td>Handling / storage unit management</td>
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<tr>
<td>Yard management</td>
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<td>Enhanced configurable RF technology</td>
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<td>Flexible process modelling</td>
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Wrap-up

- Comprehensive, deep warehouse management expertise
- Best-in-class, integrated warehouse management solution
- Strong and growing customer base
- Strategic investment area for SAP
- Integral part of platform road map for supply chain execution
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