SAP Extended Warehouse Management
Operational Excellence in Warehousing

SAP Americas
SAP Supply Chain Execution Platform Highlights

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


Flexibility & scaleability  Native technology integration  Rapid Deployment Solutions
SAP Supply Chain Execution Platform Strategy

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

**SAP GTS**
- Customs & compliance mgmt.

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Supply Chain Execution Platform

- **SAP Transport. Management**
- **SAP Extended Warehouse Mgmt.**
- **SAP Event Management (Track & Trace)**

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Supply Chain Execution Platform

- Synchronized solution delivery
- SCE Suite implementation in 1 instance
- Out-of-the-box SCE integration
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
(DAP EWM 5.0–5.1)
Distribution center logistics

2015
(SAP EWM 7.0–9.2)
Best-in-class warehouse management

…. (SAP EWM 9.3)
Advanced warehouse management for LSP
SAP Customers are Investing in Warehousing for...

- Customer service
- Warehouse transparency
- Inventory costs
- Reduced labor costs
- Process automation
- Compliance
SAP Extended Warehouse Management
Best-in-class warehouse management solution

World-class analytics
Built-in optimization
High-performance execution

Comprehensive integration with SAP Business Suite applications
Leading-edge warehouse technology integration
High degree of flexibility and adaptability
Overview SAP EWM Customer & Market Status
Strong customer growth and implementation momentum

Facts and figures

- Over 200 active customers added in 2013
- More than 700 distinct live customers
- Productive use of SAP EWM in more than 20 countries and 24 industries

Sample customers

- MEGA
- Kimberly-Clark
- Indigo Books & Music Inc.
- Würth
- Daimler
- Sony
- Dansk Supermarked
- LENTA.RU
- Dr Pepper Snapple Group
- Linfox

Live customers and live sites

Customer geographical coverage
Customer geographical coverage
SAP SCM EWM was designed to provide functionality for complex warehouses, and SAP continues to broaden its capabilities, such as yard management, slotting and rearrangement.

SAP has a compelling platform strategy for addressing SCE convergence. This product offers strong integration with SAP Business Suite and other components, such as transportation management; trade compliance; and environmental, health and safety.

Magic Quadrant for Warehouse Management Systems

Dwight Klappich, Gartner, September 30, 2014
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
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

Inbound Processing  Storage & Operations  Outbound Processing
Overview of SAP Extended Warehouse Management
A complete and integrated solution

- Inbound processing
  - Transportation unit processing
  - Goods receipt mgmt. and optimization
  - Inbound quality management
  - Yard management

- Storage and operations
  - Physical inventory
  - Replenishment and rearrangement
  - Kit-to-stock management
  - Warehouse billing
  - Transit warehousing for LSP

- Outbound processing
  - Outbound planning (route, wave, bin, cartonization, and so on)
  - Picking optimization, packing, staging, and load management
  - Value-added services

Analytics
- Labor management
- Cross-docking
- Compliance
- Native technologies
- Implementation tools
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…)

Storage Planning & Processing

- 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
World-class analytics with SAP EWM
Comprehensive stock and process transparency

Supply chain manager
Cross-warehouse performance monitoring

Warehouse supervisor
Comprehensive, central warehouse operation monitor
Alert and exception monitoring, Drill-down and direct-action triggering

Real-Time operational reporting and predictive analysis
Built-in optimization
Wave management, labor management, and slotting

Wave management  ➤  Optimized work orders; efficient pick path

Labor management  ➤  Reduced labor costs; improved labor planning

Slotting  ➤  Advanced storage concept; ABC goods classification

Cartonization  ➤  Automatic handling-unit determination
Leading-edge warehouse technology integration
Increased accuracy, efficiency, and visibility

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

Native technology integration
- Mobile radio frequency (RF)
- Pick by voice
- RFID
- Augmented Reality glasses
Native integration with SAP Business Suite
Comprehensive, smooth, and real-time process integration

| Sales and distribution | • Order processing  
|                        | • Customer relationship management (CRM)  
|                        | • Back-order processing (global available to promise)  
|                        | • Advanced claims and returns management  
|                        | • Track and trace  
| Procurement            | • Advance shipping notification (ASN)  
|                        | • Inbound quality management  
| SAP Manufacturing      | • Advanced Manufacturing Integration  
|                        | (Production/Process orders and crate parts)  
| SAP Environment, Health, and Safety Management | • Dangerous goods handling  
|                        | • Storage and document printing  
| SAP Global Trade Services | • Compliance with import and export regulations  
|                        | • Customs; bonded warehouse  
| SAP Quality Management | • Pre-sampling in Production, Acceptance Sampling before GR, Inspection Lot Summary, Recurring Inspection, Control Invoice Verification  

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## Verticalized offering
Examples of support for in-depth industry-specific processes in SAP EWM

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High flexibility and adaptability
Tailor SAP EWM to your specific needs

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

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

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

**Service-oriented architecture**
- Development of composite applications
- Integration to legacy systems and third-party software
2014 Innovations

EWM 9.2
Optimized Integration in Production Process

Staging & Consumption

- Productions Order in EWM
- EWM is leading
- Work Center/RF/MES
- Material Document in ERP instead of Delivery Document

Goods Receipt from Production

- EWM is leading
- RF/MES
- Performance
- Material Document in ERP instead of Delivery Document
2014 Innovations for Warehousing Management
EWM 9.2 in Ramp-Up till end of March 2015 (cont.)

SAP EWM 9.2

Quality Management
- Master data integration
- Quality Info Record
- Vendor Block
- Inspection before Goods receipt

Multi deep Warehousing
- Reduce implementation costs and streamline process
- Easily monitor and consume MFS data
- Support for multi-depth storage types

Solution Round-offs
- Dock Appointment Scheduling for Carriers
- Extending Labor Demand Planning
- TCO/TCI
  - RF Repacking
  - Zero Downtime Upgrade
  - Master Data Integration
  - Wave item clearing
Augmented Reality
Augmented Reality
SAP Prototypes for Smart Glasses

Warehouse Picking

https://www.youtube.com/watch?v=9Wv9k_sLcl

Service & Maintenance

https://www.youtube.com/watch?v=UlpGDrSmg38

1. Picking App  B2E
2. Service App  B2B / B2C
Augmented Reality Video

Available on You Tube: > 178,000 views

http://youtu.be/9Wv9k_ssLcl
Outlook 2015

EWM 9.3 Planned for Ramp-Up in May
Supply Chain Execution Platform
- Transit Warehousing
- Warehouse Billing

HANA Reporting
HANA Live - SAP Smart Business
- Picking Waves
- Warehouse Tasks
Transit Warehouse
Supply Chain Execution Platform – HUB Handling
Transit Warehousing/Cross-Dock Warehouses

Integrated Planning and Execution

- Package tracking over complex transport net
- Transparency on warehouse data
- Handling instructions

- Packages instead of products
- Process control defined by handling instruction
- Unload, consolidate, load
Transit Warehousing
Packages instead of products

- Handling unit #1234
- Packaging material, capacity, status, labels (with barcodes), multiple IDs
- HU hierarchy possible (consolidate)

**HU in classical warehouse**
- HU content as HU item: product #4711, quantity, owner, product attributes
- Putaway based on product attributes from product master record
- Outbound requests product quantity

**HU in transit warehouse**
- No HU item. Cargo attributes from inbound document: shipper, consignee, DG, HVC, etc.
- Putaway based on cargo attributes
- Outbound requests specific HUs
- Air cargo security status
- Seals (for ULDs)
Warehouse Billing
Warehouse Activities outsourced to the LSP
EWM still controlled by Client of the LSP

Client

ECC

SCE

Self Billing

LSP

Standard EWM Integration
Warehouse Activities Outsourced to LSP
EWM controlled by LSP
Solution architecture for SAP EWM
Deployment options

SAP EWM on SCM Server

SAP ERP
SAP ERP

SAP EWM
SCM Server

SAP EWM standalone

Most common option

SAP ERP
SAP ERP

SAP EWM standalone

SAP ERP
SAP ERP

SAP EWM add-on

SAP EWM
SAP ERP

SAP ERP

SAP note 1606493 - SAP EWM Deployment Options Best Practices
Customer benefits of SAP EWM

- Increased warehouse productivity
- Greater transparency
- Increased accuracy
- Better service levels
- Reduced costs
- Flexibility and scalability
The best are leading the way with SAP EWM

Dansk Supermarked

Increased **speed** and significantly reduced picking times

FAW - VOLKSWAGEN

**34%** ongoing labor cost reduction

Humana Unternehmensgruppe

**Near zero** customer-complaint rate

MAPLE LEAF

20 warehouses live using the same template
Chinese joint venture between First Automobile Works (FAW) and Volkswagen Group

With SAP software, FAW-Volkswagen (China) reports a 20% increase in warehouse efficiency and resulting cost savings.

- **70%** increase in real-time visibility of daily workload and the pick, pack, and load status of an order
- **34%** ongoing labor cost reduction
- **13%** ongoing packaging material expense reduction

SAP EWM and integrated RF technology achieved real-time visibility of warehouses.

Wave management greatly increased picking efficiency.

Precise bin management greatly increased accuracy.
Total cost of implementation: strategy for SAP EWM

Rapid-deployment solutions

- Complete solution that is ready to run
- Fixed scope, fixed cost, and 100% transparency

Migration tools

- Accelerated migration of data from WM in SAP ERP to SAP EWM
- Master data migration
- Migration guide
# Services and ecosystem around SAP EWM

## Strong service offering and ecosystem

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<td>SAP Community Network</td>
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<td>24x7 global support</td>
<td>Expert logistics partners</td>
<td>E-learning</td>
<td>User group for SAP EWM</td>
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<td>Quality assurance services and SAP Safeguarding</td>
<td>Local partners</td>
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<td>Rapid-deployment solutions</td>
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<td>Custom development</td>
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More Information on SAP EWM…

Landing page for SAP EWM

www.sap.com/ewm

Solution Explorer

www.sap.com/solutionexplorer > By Line of Business
> Supply Chain > Efficient Logistics & Order
  Fulfillment > Warehouse Management

SAP EWM on SAP Community Network
(SCN - External)

http://scn.sap.com/community/extended-warehouse-management

Application Help for SAP EWM

http://help.sap.com/ewm92
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
Thank you

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