SAP Extended Warehouse Management
Optimized Warehouse Productivity, Utilization and Efficiency

What is EWM?
- It is a best-in-class warehouse management solution designed to manage & track logistics execution processes
- It offers flexible, automated support for processing various goods movements and for managing stocks in a whse.
- In 1 solution provides labor management, slotting, advanced optimization techniques, connection to automation

How do companies benefit from EWM?
- High warehouse productivity / efficiency
- High inventory accuracy
- Reduced labor costs
- Better customer service

What are key capabilities of EWM?
- Multi customer warehouse
- Flexible modeling of warehouse processes
- Stock and process transparency
- Optimization in storage planning and process execution
- Seamless integration of Automation (RF, RFID, Pick-by-Voice, …)
- Integration in the overall SAP Logistics Solution
Our Warehouse Experience
SAP: 17 Years Warehouse Experience

Evolution of Warehouse Operations

- First software systems support warehouse operations
- Optimization strategies
- Connecting to relational databases
- Wireless data transfer
- Connecting Pick-by-light systems
- First RFID
- Browser Technology / Pick by voice

1970: First software systems support warehouse operations
1980: Optimization strategies
1990: Connecting to relational databases
2000: Connecting Pick-by-light systems
2010: First RFID

R/3 Release
- 2.0/2.1
- 3.0/3.1
- 4.0
- 4.5
- 4.6
- 4.7 EE1
- 4.7 EE2
- 4.8
- 4.9
- 5.0
- 5.1
- 5.2
- 6.0
- 6.1
- 7.0
- Ehp 1

Storage Units
Integration
Rough Workload Estimate
Picking Waves
Two Step picking
Warehouse Monitor
HR Integration

Decentral WM
Prototype of RF
Native RF / SAP Console
HUM
Packing

Task & Resource Mgmt
ERP EWM
XD
YM
VAS

Sloting
Rearrange-ment
Warehouse Orders
Warehouse Monitor
Internal Routing

Labor Mgmt
MFS
WH Cockpit
RFID Integr.
Batch Mgmt
Serial Nr
Catch Weight
ESA

Graphical WH Layout
Production Supply
Merchandise Distrib. XD
Task Interleaving

Integration to Transportation Processes
Enhancements to Claims & Returns
BOBJ Content

Enterprise Focus
Evolution of SAP Solutions
Network Focus
SAP EWM has closed the gap with Best of Breeds and is the way to go for SAP customers

“Some of these [SAP EWM] customers claim that the functionality is on par or exceeds that of well known best of breed solutions. They [SAP] are poised for very fast growth as they penetrate their installed base.”


“From this retail customer's perspective [Indigo Books], SAP has narrowed (closed?) the functionality gap with best-of-breed WMS solutions. This milestone is reflected in the hockey-stick growth in EWM implementations SAP experienced in 2009 compared to previous years.”

“Case Studies from SAP Insider: Indigo Books and Newell Rubbermaid” by Adrian Gonzalez, ARC in Logistics Viewpoints Blog, 03/2010

“For SAP users considering upgrading WMS, the Extended Warehouse Management (EWM) application is to the point where it at least deserves to be put on the short list. EWM has more functionality, and is far more flexible.”

Dwight Klappich, Gartner quoted in article “SAP shops holding onto SAP WMS, but there are benefits to upgrading” by Marc Fortier, Search SAP 07/15/2010

“The offering was designed to provide functionality for complex warehouses and increasingly broad capabilities, such as yard management, slotting, material flow solutions and engineered labor standards.”

“Magic Quadrant for Warehouse Management Systems” by Dwight Klappich, Gartner, 07/29/2010
EWM Adoption Status: July 7, 2011

EWM Live Customers and Sites

Q2
YoY quarterly growth
128%
SAP Extended Warehouse Management
Selected implementing Customers

Barloworld
Leading brands

DANSK

SFS unimarket

DAIMLER

BMI

Roche

BMW

MINI

gsk

GlaxoSmithKline

Bontia

Woolslager

Sika

DANONE

Humana

ministry of defence

the Netherlands

Dow

Schering-Plough

BD

NALCO

Monsanto

Würtz

Severtrans

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## Select Active SCM EWM References
### June 2011

<table>
<thead>
<tr>
<th>Customer</th>
<th>Industry</th>
<th>Market Segment</th>
<th>Country</th>
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<th>Partner</th>
<th># of live Warehouses</th>
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<td>Primat and SAP</td>
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Countries with active EWM deployments
July 2011
Functional Comparison EWM and ERP WM

Figure 1. WMS Capabilities Ecosystem

EXTENDED WMS CAPABILITIES

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<th>Labor Mgmt.</th>
<th>Task Interleaving</th>
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<td>Dock Schedule</td>
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<td>Slotting</td>
<td>Value-Added Services</td>
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<td>3PL Billing</td>
<td>Parcel Manifest</td>
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</table>

CORE WMS CAPABILITIES

- Receiving
- Inspection/QA
- Put-Away
- Cross Docking
- Inventory Mgmt.
- Location Mgmt.
- Replenishment

- Picking
- Wave Mgmt.
- Staging
- Packing
- Truck Loading
- Manifesting
- Cycle Counting

Rule-Based Locator

Visibility
- Voice

Event Management
- RF

Performance Management
- RFID
- Automation Interface

Source: Gartner (August 2009)
Functional Comparison EWM and ERP WM

Figure 1. WMS Capabilities Ecosystem

- **Extended WMS Capabilities**
  - **Core WMS Capabilities**
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    - Inspection/QA
    - Put Away
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    - Location Mgmt.
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  - Picking
  - Wave Mgmt.
  - Staging
  - Truck Loading
  - Manifesting
  - Cycle Counting

- **Rule-Based Locator**
- **Visibility**
  - Voice
  - RF
  - RFID
- **Event Management**
- **Performance Management**
  - Automation Interface

**Source:** Gartner (August 2009)
Functional Comparison EWM and ERP WM

Figure 1. WMS Capabilities Ecosystem

EXTENDED WMS CAPABILITIES

CORE WMS CAPABILITIES

- Receiving
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Rule-Based Locator

Visibility
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Event Management
- RF

Performance Management
- RFID
- Automation Interface

Task Interleaving
- Dock Schedule

Dock Management
- Value-Added Services
- Parcel Manifest

Source: Gartner (August 2009)
Are you facing these Challenges?

Exemplary Situations when SAP EWM will help immensely. RDS speeds up the process.

Do you...

✔ Have a full or partially automated warehouse?

✔ Have multiple warehouses and material flows between them?

✔ Evaluate the implementation of a SAP decentralized WM?

✔ Have a legacy WMS which can not cover business requirements and needs replacement?

✔ Have a legacy WMS and is facing high effort for monitoring and adjusting interfaces?

✔ Have an existing SAP WM / SAP LES which is highly modified and enhanced?

✔ Require a solution for business continuity, i.e. warehouse processes need to be performed in case of an ERP downtime?
SAP Extended Warehouse Management
Solution Overview

Core Warehouse Operations and Inventory Management
- Receive ASN data
- ASN Validation & Correction
- Transportation Unit Arrival
- Manage Transportation Unit
- Goods Receipt
- Putaway Bin determination
- Unload Transportation Unit
- Internal Routing
- Slotting
- Deconsolidation
- Putaway
- Returns / Reverse Logistics
- Goods Receipt - Optimization

Storage and 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

Cross Processes
- Transportation Cross Docking
- Picking fr. Inb./ Push Deployment
- Yard Management
- Labour Management
- Opportunistic Cross Docking
- Merchandise Distr. X-Docking
- Task Interleaving
- Execution Constraint
- Semi-System-Guided work

Supporting Functions
- Packaging Specification
- GTS Integration
- EH&S Integration
- eSOA enablement
- Integration to QIE
- RF support for all exec.processes
- Batch Management
- Serial Numbers
- RFID Enablement
- Material Flow System
- Warehouse Cockpit
- Graphical Warehouse Layout

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Ferrero Sweetens Its Logistics Flow with SAP® Extended Warehouse Management

QUICK FACTS
- **Ferrero**
  - Industry: Consumer products – food (confectionary)
  - Employees: 22,000
  - Founded: Alba, Italy
  - Website: www.ferrero.com
  - SAP® solutions and services: SAP® Extended Warehouse Management (SAP EWM) application
  - Implementation partners: SAP Consulting and major international system integrators

Key Challenges
- Support growth with efficient IT
- Streamline warehouse processes
- Integrate warehousing and logistics
- Manage distribution data effectively

Implementation Best Practices
- Created clear vision and blueprints
- Assigned personnel appropriately
- Used innovative testing methodologies
- Optimized integration between SAP® EWM and legacy systems

Financial and Strategic Benefits
- Projected payback in just 3 years
- System reliability, allowing on-time goods dispatch
- Enhanced competitive advantage
- Improved management of resources
- Increased speed to market
- Greater customer satisfaction

Why SAP Was Selected
- Complete, integrated, scalable logistics solution to replace legacy software
- Lower cost than legacy systems
- Solution able to pace company growth
- Integration with installed SAP software

Low Total Cost of Ownership
- Deployed software on time
- Achieved minimal impact to business
- Deactivated legacy systems
- Assigned key users to train users
- Increased system availability

Operational Benefits
- Increased logistics transparency
- Improved on-time delivery
- Cut IT maintenance requirements
- Maximized storage capacities
- Reduced IT support needed for logistics
- Enhanced daily truck movement

"The SAP Extended Warehouse Management application has provided a firm foundation for Ferrero’s streamlined logistics and fulfillment processes during a time of rapid corporate growth."

Enzo Bertolini
Group CIO
Ferrero
SAP brings together software and services in an offering that gives you essential warehouse management functionality quickly and affordably

- Preconfigured software: 1 to 6 critical, popular processes with several variations provided
- Rapid delivery in 20-24 weeks: accelerators, RDS methodology
- An affordable, well-priced solution: fixed-price for fixed scope, variable license pricing according to your needs
- A clear path to your full EWM vision: use the pre-configured scenarios as they are or as a big stepping stone
### Solution at-a-Glance

**SAP Extended Warehouse Management (EWM) rapid-deployment solution**

SAP Extended Warehouse Management (EWM) rapid-deployment solution is essential software combining fixed scope, predefined services at a predictable price with the flexibility for future extension.

<table>
<thead>
<tr>
<th>Business Requirement</th>
<th>Solution</th>
<th>Target Market</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is my pain?</strong></td>
<td><strong>Solution Description</strong>&lt;br&gt;This SAP Rapid Deployment Solution provides easily adaptable &amp; flexible preconfiguration for critical fixed scope warehousing processes with predefined services &amp; fixed consulting days to make it ‘ready to run’ within a fixed duration. Customers shall witness up &amp; running predefined scope within a promised horizon with supreme quality.</td>
<td><strong>Industry</strong>&lt;br&gt;All industries</td>
</tr>
<tr>
<td>▪ Automating mission critical warehousing processes&lt;br&gt;▪ Processes closely aligned with physical layout&lt;br&gt;▪ Complex processes with high degree of variations&lt;br&gt;▪ Complex task of implementing a warehousing solution within a fixed period&lt;br&gt;▪ Resource management targets</td>
<td><strong>Business Processes</strong>&lt;br&gt;Simple inbound, complex inbound, simple outbound, complex outbound, physical inventory, cycle count, automatic replenishment, simple scrapping, customer returns.</td>
<td><strong>Type of Customer/Prerequisite</strong>&lt;br&gt;▪ Existing ERP Installed Base&lt;br&gt;▪ EWM 7.0 installed Base</td>
</tr>
<tr>
<td><strong>What are my needs?</strong></td>
<td><strong>Technical Components</strong>&lt;br&gt;SAP Extended Warehouse Management 7.0, SAP ERP6.0 EHP 4</td>
<td><strong>Target Geography</strong>&lt;br&gt;Global</td>
</tr>
<tr>
<td>▪ Functioning warehousing system without spending too much effort &amp; time&lt;br&gt;▪ Basic warehousing processes running smoothly with experts’ involvement&lt;br&gt;▪ Opportunity to adopt next generation warehousing automation techniques &amp; achieve continuous improvement in supply chain execution</td>
<td><strong>Business KPI's</strong>&lt;br&gt;▪ Warehouse Shrinkage&lt;br&gt;▪ On-Time shipment completion&lt;br&gt;▪ Timely product availability for sales&lt;br&gt;▪ Inventory accuracy&lt;br&gt;▪ Visibility and reduction of Warehousing costs as % of gross sales</td>
<td><strong>General Availability</strong>&lt;br&gt;Available</td>
</tr>
</tbody>
</table>

**SAP Contact**<br>rapid.deployment@sap.com
SAP EWM Rapid Deployment Solution
Detailed Scope - Pre-Configured Critical Warehousing Business Scenarios

- **Inbound**
  - Inbound Process with no Packing Information from Vendor (Automatic WT, Manual GR)
  - Inbound Process with no Packing Information from Vendor - Pack for Put away

- **Outbound**
  - Outbound Process Using Pick-HUs as Shipping HUs
  - Outbound Process Using Wave, Pick-HU, Packing, Staging, and Loading

- **Inventory Counting**
  - Periodic Physical Inventory
  - Cycle Counting

- **Replenishment**
  - Automatic Replenishment
  - Planned Replenishment

- **Customer Returns**
  - Customer Returns with Quality Inspection
  - Customer Returns with Scrapping

- **Scraping**
  - Scraping due to Best Before Date/Shelf-Life Expiration Date
EWM RDS = Immediate Value
You Get What You Need to Run Your Business ‘Out-of-the-box’

Value Adding
- Powerful warehousing solution, delivered out-of-the-box based on EWM 7.0
- Start fast, with what’s most important, and expand later
- Seamless access to ERP delivery information

Quick and Lean
- Clearly defined scope
- Includes pre-configured content and knowledge transfer to project team
- Fast-track methodology
- Enables you to go live in 20-24 weeks

Cost-effective
- Flexible pricing – ‘only pay for what you need’
- Attractive fixed-price services
- Reduced resource requirement from Business and IT
Thank You!

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