Stock Management Methods in SAP:
Some distinctive differences between IM, WM, and EWM

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Learning Points

- Identification of available stock management solutions and the core functionality used within each solution.
- Key differentiators between the main stock management solutions:
  - Inventory Management
  - Warehouse Management
  - Extended Warehouse Management
- Guidelines to help determine under which circumstance to use each of the available stock management solutions.
SAP Solutions for Stock Management

- Inventory Management (IM)
- ERP Warehouse Management (WM)
- SCM Extended Warehouse Management (EWM)
Inventory Management (IM)

- Inventory Management tracks the quantity and value of a material as it progresses throughout the location.
- Stock is managed by storage locations, which are used to represent logical sections of the site where goods are stored.
- IM provides very limited information about individual lots, such as which materials are stored in specific storage bins.
Inventory Management – Key Features

- Fully Integrated within the Core Modules (MM, PP, SD, FICO)
- Real Time accounting posting
- Manages Special Stocks (sales order stock, consignment stock)
- Simple to use… If it posts, it works!
- No visibility of outstanding picking requests
- Limited reporting on picking accuracy (planned vs. actual)
- IM is well suited for...
  - Small facility with a simplified layout
  - Lower levels of inventory on hand
  - Visual Controls in place to enhance material handling
  - Simplified material handling processes
  - Outsourced warehouse operations
  - Only need visibility of aggregated inventory for the Storage Location
ERP Warehouse Management (WM)

- Warehouse Management (WM) provides flexible, automated support in processing all goods movements and in managing stocks in your warehouse.
- Stock is managed at the bin level for exact location of products.
- Movement of goods are Point to Point (Dock to Bin, Bin to Supply Area, etc…).
- Capacity and Volume assist with managing space in the warehouse.
- Core System processes support
  - Fixed Bin Replenishment
  - Putaway and Picking Strategies
  - Storage Unit Management
  - HAZMAT
  - Inbound Material Processing
  - Internal Movements
  - Outbound Material Processing
  - Physical Inventory
Yard Management
- Appointment scheduling, check in and check out,
- Assignment of dock doors, loading/unloading activities

Value Added Services
- A value-added service (VAS) is an operation performed on materials, which enhances their value, worth, functionality or usefulness. Value-added services include the following:
  - Repacking
  - Labeling
  - Shrink wrapping

Cross-Docking
- Management of inbound and outbound movements
- System-generated Decisions
Warehouse Management – Key Features

- Fully Integrated within the Core Modules (MM, PP, SD)
- Manages Special Stocks (sales order stock, consignment stock)
- Maximizes warehouse space with the use of storage capacities
- Provides full visibility into workload for the user community
- Limited reporting on picking accuracy (planned vs. actual)
- Enable the Extension Sets for complete functionality
- WM is well suited for...
  - Small – large facilities
  - Low – Mid level Volume of Picks
  - Facilities with Multiple types of storage (Rack, Bulk, Fixed Bin, etc…)
  - Direct paths for picking and putaway
  - Minimal need for complex Labor and Distance Calculations
  - Production sites that require bin level visibility on the shop floor
  - RF equipment in place to enhance picking and putaway
  - Simple to Complex material handling processes
Extended Warehouse Management

- Extended Warehouse Management (EWM) offers flexible, automated support for processing various goods movements and for managing stocks in your warehouse.
- EWM gives you the option of mapping your entire warehouse complex in detail in the system, down to storage bin level.
- You can always see the total quantity of a product in the warehouse, and also know exactly where a specific product is, at any time, in your warehouse complex.
- With EWM, you can optimize the use of various storage bins and stock movements, and can store together stocks from several plants in randomly-managed warehouse.
EWM Inbound Processes

1. Slotting
2. Receive ASN Data
3. ASN Validation and Correction
4. Transport Unit Arrival
5. Manage Transport Unit
6. Goods Receipt
7. Putaway Bin Determination
8. Unload Transport Unit
9. Deconsolidation (Internal Routing)
10. New
11. New
12. New
13. Process Exceptions/Manage Work in Process

Real Experience. Real Advantage.
EWM Outbound Processes

Order/Deployment ➔ Route Determination ➔ Wave Management ➔ Picking Bin Determination ➔ Warehouse Orders

Work Assignment ➔ Picking ➔ Packing ➔ Staging ➔ Loading and Goods Issue

Process Exceptions/Manage Work in Process
EWM Additional Processes

Yard Management
Management and Tracking of Vehicles/Transportation Units from yard check-in, throughout the yard movements tasks, and yard check-out

Quality Inspection Engine
Service oriented Quality Inspection Engine to support the quality processes for warehouse management

Environmental Health & Safety
EH&S data and checks used in Product Storage, Shipping Documents and Transportation Routing

Foreign Trade/Bonded Warehouse
Customs management
SPL Screening
Re-exports
Duty unpaid returns

Process Exceptions/Manage Work in Process
EWM – Process Oriented Putaway
EWM – Rearrangement
EWM additional processes support

**Inbound and Outbound Processes**
- Yard Management
- Expected Goods Received (ASN)
- Unloading and Deconsolidation
- Cross Docking / Transportation Cross Docking
- Pick from Goods Received and Push Deployment
- Kit to Stock / Kit to Order
- Wave Management
- Value Added Services

**Optimized Internal Processes**
- Slotting and Rearrangement
- Staging for Production Supply
- Process and Layout Storage Control
- Warehouse Monitoring
- Graphical Warehouse Layout

**Enhanced Cross Processes**
- Supply Chain Analytics
- Labor and Resource Management
- Material Flow System
- Auto ID / RFID / Radio Frequency Framework
- Managing Handling Units
- Serial Number Support
Extended Warehouse Management – Key Features

- Complete Functionality to support all major warehousing functions
- Master Data is completely separate from ERP
- Recommended to be deployed on a separate Infrastructure
- Future direction for warehouse management enhancements for SAP
- EWM is well suited for...
  - Small ~ large facilities
  - High Volume of Picks
  - High Volume of Cross Docking Opportunities
  - Complex picking and putaway requirements
  - Need for Labor Management
  - High volume of Value Added Service tasks
  - High level if integration with material handling and flow systems
    - Stackers
    - Conveyor Systems
A few points to consider?

- **Site Layout**
  - Overall size of the site
  - Travel Distance
  - Configuration of racking and storage areas
  - Flow of material

- **Business Processes / Services**
  - Production and/or Distribution
  - Value Added Services
  - Cross Docking

- **Physical Attributes of the layout and products**
  - Visual Controls
  - Material Handling Equipment
  - Product Labeling
Final Thoughts

- Gain a full understanding of each of the stock management solutions as you document your requirements
- Map your business process completely before deciding
- Make your selection based on your business need
Thank you for participating.