Overview

Purpose

An overview of Extended Warehouse Management

Overview

A warehouse management system is one of the key technologies required to create a successful Adaptive Supply Chain Network (ASCN). In an ASCN, the extended warehouse must respond to a variety of business requirements.

SAP Extended Warehouse Management (EWM) is an integral part of SCM addressing advanced Warehouse Management functions and processes. EWM offers you flexible, automated support for processing various goods movements and for managing stocks in your warehouse complex. The system supports planned and efficient processing of all logistics processes in your warehouse.

Extended Warehouse Management - A major component of an effective overall supply chain management systems solution

SAP Extended Warehouse Management gives you the option of mapping your entire warehouse complex in detail in the system, down to storage bin level. Not only does this give you an overview of the total quantity of a product in the warehouse, but you can also always see 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 combine the storage of stocks from several plants in randomly-managed warehouses. Using EWM, you can control and optimize various processes in the warehouse, for example:

- Notification of changed data before goods receipt from EWM to the ERP system; Notification of a reversal or correction of the goods receipt from EWM to the ERP system
- Deconsolidate handling units containing different products before put away in different storage sections
- Automatically determine storage concepts using slotting for products and accordingly optimize the arrangement of your products in the warehouse
- Control warehouse activities such as picking or posting changes with Wave Management
- Create executable work packages, consisting of warehouse tasks, that warehouse employees should perform at specific times
- Manage and Track Vehicles/ Transportation Units from yard check-in to yard check-out, including movements tasks within the yard
- Provide quality process support with integration to the SAP Quality Inspection Engine (QIE)
- Support the safe handling and storage of hazardous substances and the transport of dangerous goods in accordance with regulations with SAP Environmental Health & Safety (EH&S) integration
- Automatically communicate deliveries and goods movements to SAP Global Trade Services (GTS) via the ERP system for customs management, re-exports and Duty unpaid returns
- Plan labor times and resources more effectively, thereby making your warehouse more productive using functions to measure, plan, simulate, and visualize the activities in the warehouse
- Use the Warehouse Cockpit to display warehouse key figures graphically and to evaluate or monitor activities using defined chart types
- Use RFID within the inbound, internal and outbound processes to expedite Warehouse task confirmation, Loading, Unloading, Automatic packing
- Optimize your goods-receipt based on purchase orders and production orders
- Create kits and then transfer them to stock or to outbound orders
- Use integrated batch-management in the inbound and outbound delivery processes
- Use the Material Flow system to control your automated warehouse
- Specify serial numbers for the outbound delivery process
- Use process-oriented as well as layout-oriented methods for storage control for your complex putaway or stock removal process steps based on your processes or your layout data
- Streamlined business partner collaboration via Enterprise Services based on international communication standards (EDIFACT) and out-of-the-box process integration with global SCM players
- Choose between centralized or decentralized deployment options
- Expedite your inbound and outbound flow, lower warehouse costs and material handling by cross-docking your orders
- Use transportation cross-docking to support the transportation of handling units across different distribution centers or warehouses, up to the final place of destination

SAP Extended Warehouse Management 7.0 - Graphical Warehouse, Resource Management, Manufacturing and Retail-specific Improvements

SAP EWM 5.1 introduced a new sub segment of capabilities. Labor management, Warehouse Cockpit, Material Flow System, RFID, ESA enablement, Kitting, Batch Management and Serial Number enhancements, Catch-Weight support and Goods Receipt and Goods Issue optimization all serve to improve efficiency within the warehouse, resulting in improved customer service levels. On this same note, EWM 7.0 offers the following key enhancements:

The graphical warehouse layout defines the structure of the warehouse and/or yard in a two dimensional graphical form. The functionality can
be used to verify configuration. It is also possible to check the stock situation, the number of empty storage locations and the location of resources. Warehouses are shown in a graphical layout according to warehouse number. A graphical display provides the ability to quickly determine whether a warehouse object has been correctly customized. If something needs to be corrected, you can navigate from the graphics to the related information.

To optimize the work with RF devices in a warehouse, three types of resource management optimization:

- **Task interleaving**: a process by which a resource, having just completed and confirmed a task, is assigned a new task, the source of which is close to the resource's current location
- **Execution constraint**: enables you to control the execution of tasks in predefined zones of a site, preventing resource bottlenecks and ensuring the workability of the semi-system guided mode of task selection
- **Semi-system guided work**: whenever the user has finished his actual task and requests new work, the system checks the available open tasks in an area and sends a user to this area without assigning a specific task

With the integration of production management in EWM, you have the necessary tools available to execute the processes required to strategically stage products necessary for production supply. In order to use a product (component) for a production order, it has to be brought to the production supply area. When EWM is used, the products have to be picked in the warehouse and moved to the production supply area. There are several ways to provide components that are required for a production order:

- **Pick parts/release order parts**: The products that are needed as components for an individual order (pick parts) or for multiple orders (release order parts) have to be staged in the production supply area in time and in the required quantity.
- **Crate parts/kanban**: Products that are often used in the production area are provided independently from the existing orders. The warehouse is responsible for filling containers as requested by production. Kanban is a specialized way to handle crate parts.

**Cross-docking** is a method of materials processing by which materials that have arrived at the warehouse are brought from goods receipt directly to goods issue without being put away:

- **Retail Merchandise XD** is an existing cross-docking scenario in SAP ERP 6.0 with Retail Solution switched on. Merchandise Distribution is essential for logistics processes in the retail industry. The retailers plan, control, and manage their flow of merchandise from the vendors via distribution centers to the stores or customers.
- **Opportunistic cross-docking** allows incoming deliveries to be redirected to cover outbound requirements. The cross-docking decision is made in EWM based on information available in the warehouse.
- **Production cross-docking** and production supply cross-docking. Opportunistic cross-docking for production supply.

**Related Content**

**Related Documents**

**Related SAP Notes/KBAs**