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Level 2 Certificate in International Supply Chain Logistics

# Warehousing and Material Handling

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## Warehousing and Material Handling Glossary

### 1. Automated Storage and Retrieval System (AS/RS)

An Automated Storage and Retrieval System (AS/RS) is a computer-controlled system that automatically places and retrieves loads from specific storage locations. AS/RS systems are used in warehouses to increase efficiency and reduce labor costs by minimizing human intervention in the storage and retrieval process.

### 2. Barcoding

Barcoding is a method of encoding data in a visual pattern of parallel lines of varying widths. Barcodes are used in warehousing and material handling to track inventory, shipments, and products throughout the supply chain. They are scanned using barcode readers to quickly and accurately capture information.

### 3. Cross-Docking

Cross-Docking is a logistics practice where incoming goods are directly unloaded from an inbound vehicle and loaded onto an outbound vehicle with minimal or no storage in between. This process eliminates the need for warehousing space and reduces handling costs and inventory holding time.

### 4. Dock Leveler

A Dock Leveler is a piece of equipment used to bridge the height difference between a loading dock and a truck bed, allowing forklifts and other material handling equipment to move goods between the dock and the vehicle safely and efficiently.

### 5. FIFO (First In, First Out)

FIFO (First In, First Out) is a method of inventory management where the oldest stock is used or sold first, ensuring that goods do not expire or become obsolete. FIFO is commonly used in warehouses to manage perishable goods or items with expiration dates.

### 6. Inventory Management

Inventory Management involves overseeing the flow of goods into and out of a warehouse, ensuring that the right products are in the right place at the right time. Effective inventory management helps minimize stockouts, reduce excess inventory, and optimize storage space utilization.

### 7. Just-In-Time (JIT) Inventory

Just-In-Time (JIT) Inventory is an inventory management strategy where goods are received and processed as close to the time of use as possible, minimizing inventory holding costs and reducing the risk of obsolescence. JIT inventory requires strong coordination between suppliers, manufacturers, and distributors.

### 8. Key Performance Indicators (KPIs)

Key Performance Indicators (KPIs) are measurable values that demonstrate how effectively a company is

achieving its business objectives. In warehousing and material handling, KPIs such as order accuracy, on-time delivery, and inventory turnover rate are used to evaluate performance and identify areas for improvement.

#### 9. Lean Manufacturing

#### Lean Manufacturing

10. Material Handling Equipment (MHE)  
Material Handling Equipment (MHE) refers to machinery and tools used to move, store, protect, and control goods throughout the supply chain. Common types of MHE include forklifts, conveyors, pallet jacks, and automated guided vehicles (AGVs), which help streamline material handling processes in warehouses.

#### 11. Order Picking

Order Picking is the process of selecting and gathering items from inventory to fulfill customer orders. Order picking methods, such as batch picking, zone picking, and wave picking, are used in warehouses to optimize picking efficiency and reduce fulfillment times.

#### 12. Pallet Racking

Pallet Racking is a storage system designed to store palletized goods in a warehouse or distribution center. Pallet racking systems, such as selective racking, drive-in racking, and push-back racking, help maximize storage density and facilitate efficient picking and retrieval of goods.

#### 13. Quality Control

#### Quality Control

14. Receiving Area  
The Receiving Area is a designated space in a warehouse where incoming goods are received, inspected, and processed before being stored or forwarded to other areas. Efficient receiving areas help streamline the inbound logistics process and ensure accurate inventory counts.

#### 15. Slotting

Slotting is the process of assigning storage locations to products based on their characteristics, demand patterns, and handling requirements. By optimizing the placement of goods in a warehouse, slotting helps reduce travel time, improve picking efficiency, and maximize storage space utilization.

#### 16. Transportation Management System (TMS)

A Transportation Management System (TMS) is a software solution that helps companies plan, execute, and optimize the movement of goods from origin to destination. TMS systems integrate with warehouse management systems to coordinate transportation activities and track shipments in real-time.

#### 17. Unit Load

A Unit Load is a grouping of items that are handled, stored, and transported as a single entity. Unit loads, such as pallets, containers, and cartons, help streamline material handling processes by reducing handling time, minimizing damage, and maximizing storage space efficiency.

#### 18. Vendor-Managed Inventory (VMI)

#### Vendor-Managed Inventory (VMI)

19. Warehouse Management System (WMS)  
A Warehouse Management System (WMS) is a software application that helps companies control and optimize warehouse operations. WMS systems track inventory levels, manage order fulfillment, and

automate tasks such as receiving, picking, packing, and shipping to improve warehouse efficiency.

#### 20. X-Dock

A X-Dock is a type of loading dock configuration that allows trucks to be loaded and unloaded from both sides simultaneously. X-Docks help streamline cross-docking operations by increasing throughput and reducing dwell times for vehicles at the dock.

#### 21. Yard Management System (YMS)

A Yard Management System (YMS) is a software solution that helps companies manage the movement and storage of trailers and containers in a warehouse yard. YMS systems track trailer locations, optimize yard space utilization, and streamline inbound and outbound transportation activities.

#### 22. Zone Picking

#### Zone Picking

#### 23. ABC Analysis

#### ABC Analysis

#### 24. AS/RS Crane

An AS/RS Crane is a type of automated equipment used in an Automated Storage and Retrieval System (AS/RS) to move pallets or bins between storage locations and picking stations. AS/RS cranes can operate vertically and horizontally, maximizing storage density and retrieval speed.

#### 25. Batch Picking

#### Batch Picking

A Carton Flow Rack is a storage system designed to store cartons or boxes on inclined shelves with rollers or wheels. Carton flow racks use gravity to move items to the picking face, facilitating fast and efficient order picking in warehouses with high-volume SKU turnover.

#### 27. Dead Inventory

#### Dead Inventory

#### 28. End-to-End Supply Chain

An End-to-End Supply Chain refers to the entire network of companies, processes, and activities involved in delivering goods from raw material suppliers to end customers. An end-to-end supply chain encompasses sourcing, manufacturing, warehousing, transportation, and distribution to ensure seamless product flow.

#### 29. Fulfillment Center

A Fulfillment Center is a facility where orders are received, processed, picked, packed, and shipped to customers. Fulfillment centers play a crucial role in e-commerce and omnichannel retail operations, ensuring timely and accurate order fulfillment to meet customer expectations.

#### 30. Goods-to-Person (G2P)

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#### High-Density Storage

#### High-Density Storage

#### 32. Inbound Logistics

#### Inbound Logistics

#### 33. Jidoka

#### Jidoka

#### 34. Kanban System

A Kanban System is a visual scheduling tool used to control inventory levels and production flow in lean manufacturing environments. Kanban cards signal when to replenish stock or produce more items, helping to maintain efficient production processes and minimize waste.

### 35. Lean Six Sigma

Lean Six Sigma

Mixed-Model Sequencing

Non-Conveyable Items

Order Cycle Time

Pick Pack Ship

Quality Inspection

Reverse Logistics

A SKU (Stock Keeping Unit) is a unique code or number assigned to a specific product to track inventory levels, sales, and pricing. SKUs help distinguish between different products, variants, or sizes in a warehouse and facilitate accurate inventory management and order fulfillment.

### 43. Takt Time

Takt Time

A U-Boat is a wheeled cart with a U-shaped handle used to transport goods, supplies, or equipment in a warehouse or retail environment. U-boats are commonly used for order picking, restocking shelves, and moving items between storage areas, improving efficiency and reducing manual handling.

### 45. Value Stream Mapping

Value Stream Mapping

Wave Picking

The X-Dimension is a measurement used to determine the size and spacing of barcode symbols in a barcode. The X-dimension represents the width of the narrowest element in the barcode, ensuring that the barcode is scannable and readable by barcode scanners.

### 48. Yard Jockey

A Yard Jockey is a specialized truck driver responsible for moving trailers and containers within a warehouse yard or distribution center. Yard jockeys help optimize trailer movement, organize the yard layout, and facilitate efficient loading and unloading operations to streamline inbound and outbound logistics.

### 49. Zero Defects

Zero Defects is a quality management approach that aims to eliminate defects, errors, and waste in production processes. Zero defects programs focus on preventing defects at the source, empowering employees to identify and resolve quality issues, and continuously improving processes to achieve perfect quality outcomes.