Professional Certificate in IBM Certified Maximo Manage v9.0 Functional Deployment

Inventory Management

Inventory Management:

Inventory management is the process of overseeing and controlling the flow of goods from manufacturers to warehouses and finally to the end consumer. It involves the management of stock levels, ordering, storage, tracking, and replenishment of inventory to ensure that the right amount of goods is available when needed. Effective inventory management helps businesses minimize carrying costs while maximizing sales and profits.

ABC Analysis:

ABC analysis is a method used in inventory management to categorize items based on their importance. The items are divided into three categories: A, B, and C. Category A items are the most important and typically account for a large portion of the inventory value but a small portion of the items. Category B items are moderately important, while Category C items are the least important and usually have the highest quantity but the lowest value.

Cycle Counting:

Cycle counting is a method of verifying inventory levels by conducting regular counts of a subset of items within a warehouse. Unlike traditional physical inventory counts, which require shutting down operations, cycle counting allows businesses to continuously monitor inventory levels without disrupting daily operations. This method helps identify and correct discrepancies in inventory records, leading to improved accuracy and efficiency.

Dead Stock:

Dead stock refers to inventory that has not been sold for an extended period and is unlikely to be sold in the future. This excess inventory ties up valuable warehouse space and capital, leading to increased carrying costs and reduced profitability. Businesses need to identify dead stock quickly and take appropriate action, such as discounting or liquidating the inventory, to free up space and resources for more profitable items.

Demand Forecasting:

Demand forecasting is the process of predicting future customer demand for products or services based on historical data, market trends, and other factors. Accurate demand forecasting is essential for inventory management as it helps businesses determine how much stock to order, when to reorder, and where to store inventory. By forecasting demand accurately, businesses can minimize stockouts, reduce excess

inventory, and improve customer satisfaction.

Economic Order Quantity (EOQ):

Economic Order Quantity (EOQ) is a formula used in inventory management to calculate the optimal order quantity that minimizes total inventory costs. The EOQ formula takes into account the ordering costs, holding costs, and demand rate to determine the most cost-effective order quantity. By ordering the EOQ, businesses can minimize inventory carrying costs while ensuring that enough stock is available to meet customer demand.

Just-In-Time (JIT) Inventory:

Just-In-Time (JIT) inventory is a strategy in which businesses only order and receive inventory when it is needed for production or sale. JIT inventory helps businesses reduce carrying costs, minimize waste, and improve efficiency by eliminating excess inventory and stockpiling. However, JIT inventory requires accurate demand forecasting, reliable suppliers, and efficient logistics to ensure that inventory is available when needed.

Kanban System:

The Kanban system is a visual inventory management method that uses cards or signals to control the flow of materials and production. Each card represents a specific quantity of an item, and as inventory is consumed, a card is sent to the supplier to replenish the stock. The Kanban system helps businesses maintain optimal inventory levels, reduce waste, and improve production efficiency by signaling when to order and produce more inventory.

Lead Time:

Lead time is the amount of time it takes for an order to be fulfilled from the moment it is placed until the goods are received. Lead time includes the time required for processing, production, shipping, and delivery. Understanding lead time is essential for inventory management as businesses need to account for it when determining reorder points, safety stock levels, and overall inventory levels to ensure that inventory is available when needed.

Material Requirements Planning (MRP):

Material Requirements Planning (MRP) is a computer-based inventory management system that uses software to plan and control the production and inventory of products. MRP helps businesses determine what materials are needed, when they are needed, and how much is needed to meet production requirements. By integrating sales forecasts, inventory levels, and production schedules, MRP helps businesses optimize inventory levels and production efficiency.

Order Point:

The order point, also known as the reorder point, is the inventory level at which a new order should be placed to replenish stock before it runs out. The order point is calculated based on factors such as lead time, demand variability, and safety stock levels to ensure that inventory is available when needed. By setting an appropriate order point, businesses can avoid stockouts and maintain optimal inventory levels.

Safety Stock:

Safety stock is extra inventory held by businesses to protect against unexpected fluctuations in demand, supply chain disruptions, or lead time variability. Safety stock acts as a buffer to prevent stockouts and ensure that inventory is available to meet customer demand. By maintaining safety stock, businesses can reduce the risk of lost sales, improve customer satisfaction, and mitigate the impact of uncertainties in the supply chain.

Stock Keeping Unit (SKU):

A Stock Keeping Unit (SKU) is a unique code assigned to each product or item in a warehouse or inventory system to track and manage inventory. SKUs typically contain information such as product description, size, color, and other attributes that help differentiate one item from another. By using SKUs, businesses can accurately identify, locate, and manage inventory, leading to improved efficiency and accuracy in inventory management.

Vendor-Managed Inventory (VMI):

Vendor-Managed Inventory (VMI) is a supply chain management practice in which the supplier is responsible for monitoring and replenishing the customer's inventory. In a VMI arrangement, the supplier has access to the customer's inventory data and takes responsibility for maintaining optimal stock levels. VMI helps businesses reduce inventory holding costs, improve supply chain visibility, and enhance collaboration between suppliers and customers.

Warehouse Management System (WMS):

A Warehouse Management System (WMS) is a software application designed to optimize and automate warehouse operations, including inventory management, picking, packing, and shipping. WMS helps businesses streamline warehouse processes, improve inventory accuracy, and enhance overall efficiency. By integrating with other systems such as ERP and inventory management systems, WMS provides real-time visibility into inventory levels and warehouse operations.

Zero Inventory:

Zero inventory, also known as zero stock or zero buffer inventory, is a concept in which businesses operate without holding any inventory on hand. Instead of stockpiling inventory, businesses rely on just-in-time production and supply chain management to meet customer demand. Zero inventory helps businesses reduce carrying costs, minimize waste, and improve efficiency by eliminating excess inventory and

optimizing production processes.