



INSE 6290 – QUALITY IN SUPPLY CHAIN DESIGN

A REVIEW ON PRODUCT INVENTORY MANAGEMENT

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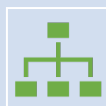
Inventory: Inventory is the raw materials, work-in-process products and finished goods that are considered as the portion of a business's assets that are ready or will be ready for sale



Supply Chain: Supply Chain is defined as a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer



Supply Chain Management: It deals with the total flow of materials from suppliers through end users. The process of strategically managing the movement and storage of materials, parts, and finishes goods inventory from suppliers through the firm and to the customer



Inventory Management: The continuing process of planning, organizing and controlling inventory that aims at minimizing the investment in inventory while balancing supply and demand

Steps in Inventory Management



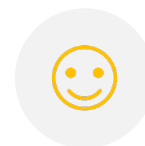
Inventory Management Statistics



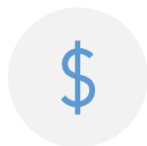
Disregard of inventory management results in a sizeable financial loss.



Maintaining inventory provides accuracy and visibility.



Good inventory control system improves customer satisfaction

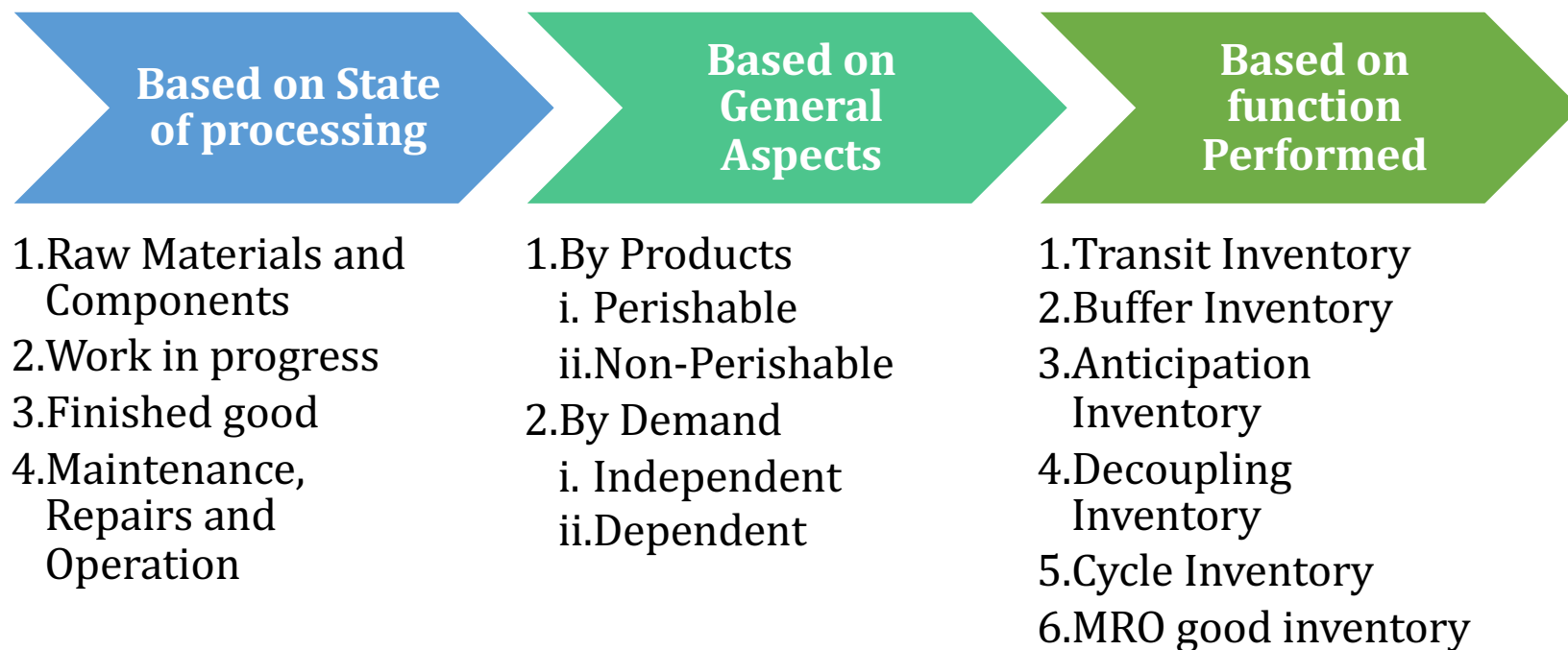


\$1.1 trillion in cash has been looked up in the form of inventory.



Only 43% of small businesses keep track of and manage their inventories.

Inventory Management Classification



Common Inventory Management Problems

Inefficient Inventory Management Process or Software

Lack of Inventory Visibility

Tracking Obsolete Material

Identifying Incorrectly Located Materials

Overstocked items and stock shortages

Managing Inventory Waste & Defects

Lack of Centralized Inventory Hub

Changing Demand

Supply Chain Complexity

Managing Warehouse Space and Efficiency

Inventory Management Techniques

ABC Inventory Classification Technique

- Based on relative value and importance to prioritize effort and resources

Just-In-Time (JIT) Inventory Management Technique

- Acquired only when needed to reduce carrying cost and waste

Bulk-Purchasing

- Bulk purchase to reduce per unit costs

Vendor-Managed Inventory (VMI)

- Supplier manages and replenishes customer inventory levels

Out-Sourcing Inventory Control Personnel

- Hiring third party to manage inventory

Lead-Time Analysis

- Planning based on time taken to receive ordered stock

Software Applications and Tracking System

- Real time monitoring and tracking of inventory and procurement

Inventory Management Channels





Focus on needs of business : Keeping the best-selling items in stock is a wonderful place to start when trying to keep customers satisfied.



Engage with suppliers : Good supplier relationship management is essential in any stock-based firm.



Develop an inventory management system : Adjust each procedure to the needs of the Particular firm, being careful to note what works and what doesn't.



Utilize real time data : Real-time data and analytics, including multilayer inventory management, forecasting data, automatic ordering, and personalized safety stock, can significantly improve the company.



Develop an inventory management system : For instance, barcode scanning speeds up the receipting and tracking of items and reduces errors. While on the go, sales apps give salespeople access to inventory information.

How to improve inventory management

's INVENTORY MODEL

The "maxi" logo is in a blue box with "maxi" in white and yellow lowercase letters. The rest of the title is in a large, bold, black serif font.

VENDOR SELECTION

Evaluating vendors based on factors such as price, quality, delivery time, and reliability



ORDER MANAGEMENT

Establishing order quantities, lead times, and other parameters that help ensure that inventory levels are maintained at the appropriate level



INVENTORY MONITORING

Tools such as inventory management software to track inventory levels, sales forecasts, and order history.



REORDER POINT DETERMINATION

The level of inventory at which a new order must be placed with the vendor to avoid running out of stock.



SAFETY STOCK MANAGEMENT

An additional quantity of inventory that is held in reserve to protect against unexpected demand or supply chain disruptions

's MEASURES OF INVENTORY PERFORMANCE



INVENTORY TURNOVER RATIO

Measures how many times a company's inventory is sold and replaced over a given period



GROSS MARGIN RETURN ON INVESTMENT (GMROI)

Calculates the amount of gross profit earned for every dollar invested in inventory



STOCKOUT RATE

Measures the frequency with which a company runs out of stock of a particular product



CARRYING COST OF INVENTORY

Cost of holding inventory, including costs associated with storage, handling, and insurance



LEAD TIME

Time it takes to receive an order from a supplier.



- MANAGING INVENTORY ACROSS SUPPLY CHAIN



**COLLABORATE
WITH SUPPLIERS**



**OPTIMIZE
INVENTORY
LEVELS**



**IMPLEMENT
JUST-IN-TIME
INVENTORY**



**USE DATA
ANALYTICS**

PITFALLS IN MANAGING INVENTORY

OVERSTOCKING

STOCKOUTS

**INACCURATE
FORECASTING**

**LACK OF
INVENTORY
VISIBILITY**

**INADEQUATE
TECHNOLOGY**

**POOR
COMMUNICATION**



OPPORTUNITIES IN INVENTORY MANAGEMENT

1

Design for Supply Chain Management (DfSCM)

- An approach that involves designing products and processes with supply chain considerations in mind.

2

Integrate Databases throughout the Supply Chain

- Can improve inventory visibility, reduce lead times, and improve collaboration with suppliers, resulting in reduced costs and improved customer satisfaction

3

Redesign Organizational Incentives

- Can motivate employees to prioritize inventory management and supply chain optimization, resulting in improved performance and efficiency.

4

Supply Chain Performance

- Can identify areas for improvement and make data-driven decisions to optimize its supply chain

Conclusion

- The Inventory management is significant for any retailers. It helps the retail stores in smooth running of its activities and in reducing the cost of managing the inventory.
- The techniques undertaken by the organization are helping it in continuous flow of its production activities.
- JIT, VMI model, KPI analysis are being undertaken efficiently and effectively. Inventory turnover ratio is also showing an increasing trend which indicates that sales of the retail stores increasing every month.



Thank You