

WAREHOUSING



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CONCEPT

- ✦ Need for storage arises both for raw material as well as finished products
- ✦ **STORAGE** involves proper management for preserving goods from the time of their production or purchase till actual use.
- ✦ When this storage is done on a large scale and in a specified manner it is called **WAREHOUSING**.

MEANING AND DEFINITION

- ✖ Place where goods are kept is called **WAREHOUSE**
- ✖ The person in-charge of warehouse is called **WAREHOUSE-KEEPER**
- ✖ A commercial building for storage of goods
- ✖ Used by manufacturers, importers, exporters, wholesalers, transport business, customers etc.

DEFINITION

- ✦ **Warehousing refers to the activities involving storage of goods on a large-scale in a systematic and orderly manner and making them available conveniently when needed.**
- ✦ **Means holding or preserving goods in huge quantities from the time of their purchase or production till their actual use or sale.**
- ✦ **Creates time utility by bridging the time gap between production and consumption of goods**

BASIC FUNCTIONS PERFORMED

Movement function

**Receipt of
products from
manufacturing
plant**

**Transfer into
the warehouse**

**Placement at
designated
place**

**Regrouping
products**

**Transferring
on transport
vehicle**



Storage function

**Performed by storing products in the
warehouse till delivery to ultimate consumer**

NEED AND IMPORTANCE

- ✗ **REGULAR SUPPLY**
- ✗ **QUALITY**
- ✗ **STOCK OF TRADE**
- ✗ **PRICE STABILISATION**
- ✗ **SEASONAL PRODUCTS**
- ✗ **PERISHABLE GOODS**
- ✗ **CONTINUOUS PRODUCTION**
- ✗ **SEASONAL DEMAND**

- ✖ **LARGE-SCALE PRODUCTION**
- ✖ **QUICK SUPPLY**
- ✖ **PROTECTION AND PRESERVATION OF GOODS**
- ✖ **EASY HANDLING**
- ✖ **USEFUL FOR SMALL BUSINESSES**
- ✖ **CREATION OF EMPLOYMENT**
- ✖ **FACILITATES SALE OF GOODS**
- ✖ **AVAILABILITY OF FINANCE**

BASIC REASONS FOR NEED OF WAREHOUSE

RAW MATERIALS



WORK-IN-PROGRESS



**COSUMABLE STORES AND
SPARES**



**READY-MADE
COMPONENTS**



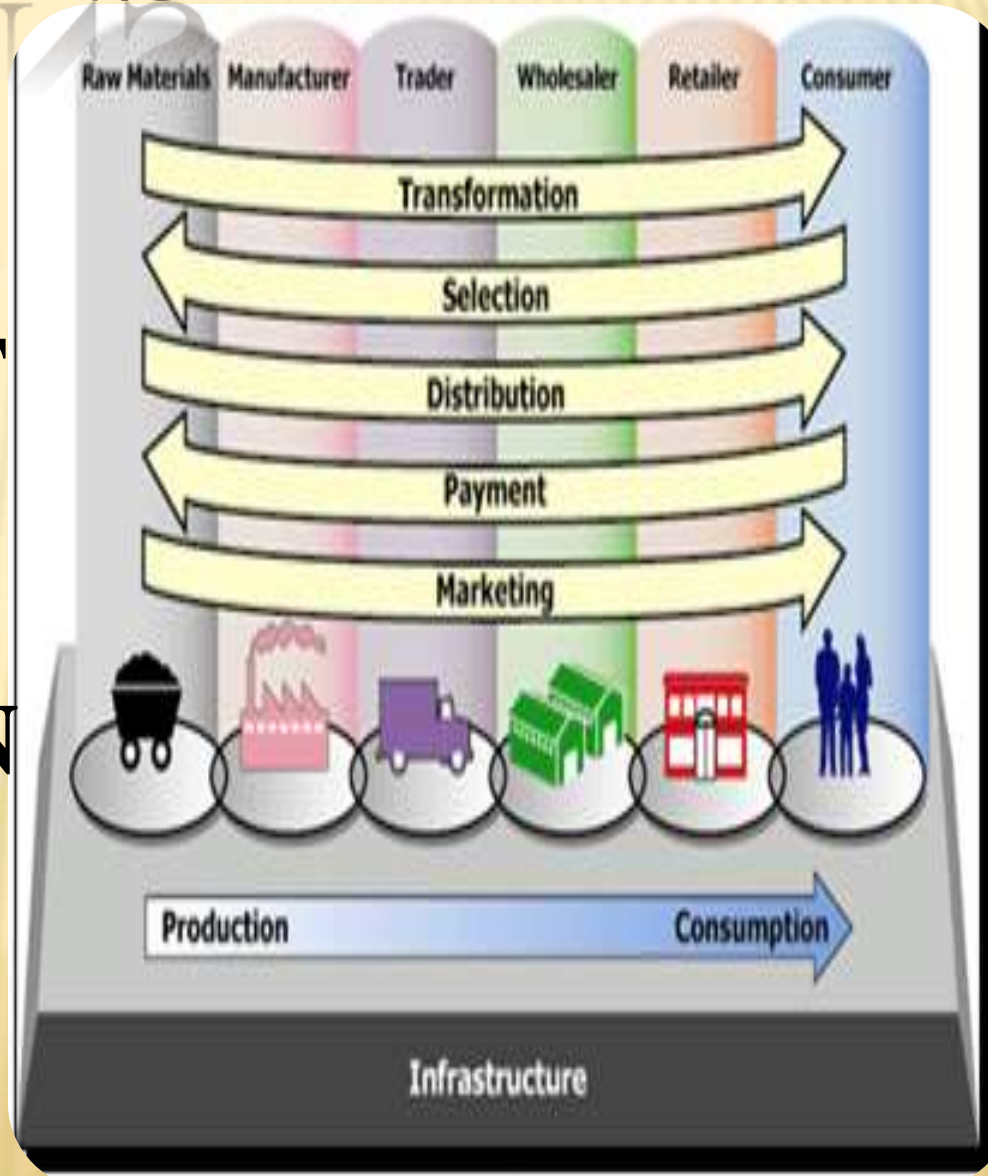
FINISHED GOODS

CHARACTERISTICS OF IDEAL WAREHOUSES

- ✗ CONVENIENT LOCATION**
- ✗ AVAILABILITY OF MECHANICAL APPLIANCES TO LOAD AND UNLOAD GOODS**
- ✗ ADEQUATE SPACE**
- ✗ COLD STORAGE FACILITIES**
- ✗ PROPER ARRANGEMENT FOR PROTECTION**
- ✗ SUFFICIENT PARKING SPACE**
- ✗ ROUND THE CLOCK SECURITY ARRANGEMENT**
- ✗ LATEST FIRE FIGHTING EQUIPMENTS**

FUNCTIONS

- **STORAGE OF GOODS**
- **PROTECTION OF GOODS**
- **RISK BEARING**
- **IDENTIFICATION OF GOODS**
- **FINANCING**
- **PROCESSING**



TYPES OF WAREHOUSES



1. PRIVATE HOUSES

- ✗ **OPERATED** by a company for shipping and storing its own products
- ✗ **OWNED AND MANAGED**- manufacturers or traders
- ✗ **CONSTRUCTION**- Farmers near their fields, Wholesalers and Retailers near their business centre's and Manufacturers near their factories
- ✗ **COMPANIES** – Stable inventory levels and long run expectations
- ⇒ **SUITABILITY**- Firms that require special handling and storage features and want to control design and operation of the warehouse

ADVANTAGES OF PRIVATE WAREHOUSES

- ✘ Better control over movement and storage**
- ✘ Chances of errors and mistakes are less as products are handled by its own employees who have full knowledge**
- ✘ Designing is done according to suitability of owner**
- ✘ Greater flexibility with respect to storage and material handling needs**

2. PUBLIC WAREHOUSES

- ✗ Provide storage and physical distribution services on rental basis**
- ✗ Used by SMALL FIRMS and LARGE FIRMS**
- ✗ Organizes to provide storage facilities to traders, manufacturers, agriculturists in return for a storage charge**
- ✗ Licensed by Govt.**
- ✗ In India OWNED and OPERATED – Central Warehousing Corporation and State Warehousing Corporation**
- ✗ SUITABILITY – seasonal production or low volume storage needs, companies with inventories maintained in many locations, firms entering new markets**
- ✗ OWNER –stands as an agent of goods**

ADVANTAGES OF PUBLIC WAREHOUSING

- ✖ More efficient and less expensive**
- ✖ Cost easily and exactly ascertained**
- ✖ Fixed cost distributed among many users**
- ✖ Strategically located and immediately available**
- ✖ Flexible to meet space requirements of different users**
- ✖ Companies have a wide choice of locations and warehouse types**

3. GOVERNMENT WAREHOUSES

- ✗ **OWNED, MANAGED AND CONTROLLED -**
Central or State Governments or public corporations or local authorities
- ✗ **EXAMPLES-** Central Warehousing Corporation of India, State Warehousing Corporation and Food Corporation of India
- ✗ If customer cannot pay rent within specified time authority can recover rent disposing of goods

4. CO-OPERATIVE WAREHOUSES

- **Owned, Managed and Controlled – Co-operative societies**
- **Facilities at most economical rates to members**
- **Located-Punjab, Karnataka, Maharashtra and Andhra**

5. BONDED WAREHOUSES

- ✗ **Licensed to accept imported goods for storage before payment of customs duty**
- ✗ **Imported merchandise is stored and released only after payment of appropriate taxes**
- ✗ **Cigarettes, Liquor, Other products are stored**
- ✗ **Owned and Operated – PORT TRUSTS**
- ✗ **Acts in two capacities viz LANDLORD and BAILEE OF GOODS**
- ✗ **As landlord provides storage facilities on rent**
- ✗ **As bailee of goods take reasonable care to handle and store goods as it has lien on goods under care for charges of its services**
- ✗ **Owner can sell goods wholly or in part by endorsing a warrant**
- ✗ **Facilitate enterpot trade- importer need not pay the import duty**

6. DISTRIBUTION CENTERS / WAREHOUSES

- ✓ **Designed to move goods**
- ✓ **Large and highly automated**
- ✓ **Receive goods from various plants and suppliers, take orders, fill them efficiently deliver to customers quickly**
- ✓ **Located near the market owned or leased by manufacturers**
- ✓ **Access to transport networks**

7. COLD STORAGE

- ✗ **Preserve perishability of goods against payment of a storage charge**
- ✗ **Temperature variation is controlled to degree necessary for certain sensitive items**

8. EXPORT AND IMPORT WAREHOUSES

- ✘ **LOCATION** –near ports where international trade is undertaken
- ✘ **Storage facilities** for goods awaiting onward movements
- ✘ **Facilities-** packaging , inspection, marking etc

9. CLIMATE-CONTROLLED WAREHOUSE

- ✘ **Handle storage** of many products including need special handling conditions
- ✘ **Freezers** for frozen products, humidity controlled environment for delicate products, produce or flowers, etc

10. FIELD WAREHOUSES

- **MANAGED-** Public Warehousing Agency in the premises of a factory or company which needs facility for borrowing from a bank against certification of goods in storage or in process by an independent professional warehouse man.

11. AGRICULTURAL WAREHOUSES

- ❖ **Store agricultural produce grown in a certain area**
- ❖ **Location – Assembling or regulated markets**
- ❖ **Receive agricultural commodities either directly from farmers or through their commission agents or from wholesalers**
- ❖ **Encourage speculative trading**

WAREHOUSING STRATEGY

- ✖ Depends on the Company's objectives in general and Logistics objectives in particular like :-**
 - a) Availability of goods to consumers**
 - b) Degree of customer service offered**
 - c) Minimum total distribution cost**

INTEGRATED WAREHOUSE STRATEGY

- ✕ **Focuses on two questions**
 - i. **How many warehouses should be employed ?**
 - ii. **Which warehouse types should be used to meet market requirements ?**
- ❖ **Firms utilize a combination of public private contract facilities**

- ✘ **PRIVATE OR CONTRACT FACILITIES** used to cover basic year round requirements

- ✘ **PUBLIC FACILITIES** used to handle peak seasons
- ❑ **FULL WAREHOUSE UTILIZATION** throughout the year is a remote possibility.
- ❑ It will be fully utilized between 75% to 85% of the time
- ❑ 15% to 25% of time to meet peak requirements is not utilized
- ❑ In such situations, more efficient to build **PRIVATE FACILITIES** to convert 75% requirements and **PUBLIC WAREHOUSES** to accommodate peak demand

✖ **After Defining Corporate Logistical Objectives Then Following Factors To Be Considered**

✚ **Buying Behavior of Customers**

✚ **Demand Pattern**

✚ **Warehousing Strategies of Competitors**

✚ **In case of stock out situation- reaction of customers**

✚ **OTHER FACTORS**

⇒ **PRESENCE SYNERGY**

⇒ **INDUSTRY SYNERGY**

⇒ **OPERATING FLEXIBILTITY**

⇒ **LOCATION FLEXIBILTITY**

⇒ **SCALE ECONOMIES**

❑ **PRESENCE SYNERGY**

Inventory located in a nearby building that is clearly affiliated with enterprise .

❑ **INDUSTRY SYNERGY**

Operating benefits of coordinating with other firms serving the same industry.

❑ **OPERATING FLEXIBILITY**

Ability to adjust internal policies and procedures to meet product and customer needs.

❑ **LOCATION FLEXIBILITY**

Ability to quickly adjust warehouse location with seasonal and permanent demand changes

❑ **SCALE ECONOMIES**

Ability to reduce material handling and storage through application of advanced technologies

WAREHOUSE OPERATIONS



**PUBLIC
WAREHOUSING-**
Client paying fee



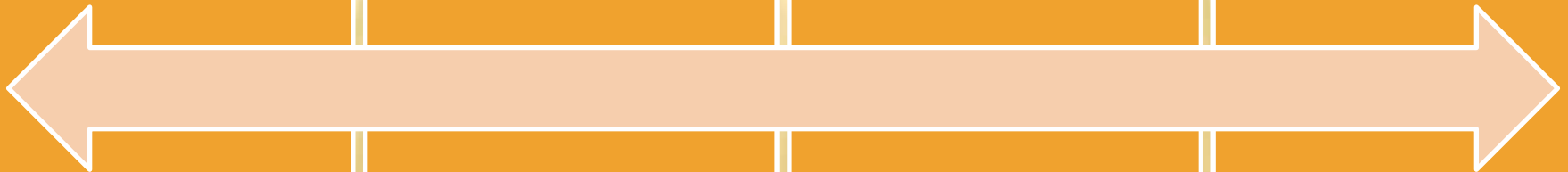
**PRIVATE
WAREHOUSE –**
Single
manufacturer



**LEASED
WAREHOUSING-**
Stable inventory



**CONTRACT
WAREHOUSING –**
Clients pay fees



- ★ **Delivery of goods takes place either by truck, rail, or boat on a dock or loading area**
- ★ **Goods are received, processed, and then sent into the warehouse for storage.**
- ★ **Products are placed on pallets.**
- ★ **INVENTORY CONTROL**
Ability to locate and track a given product within the warehouse to facilitate quick selection and loading for order fulfillment.
- ★ **METHODS of tracking inventory**
PERPETUAL, ANNUAL, PHYSICAL, CYCLE COUNTING

ORDER PICKING

Process of selecting products to fulfill an order

**Types of
picking
methods**

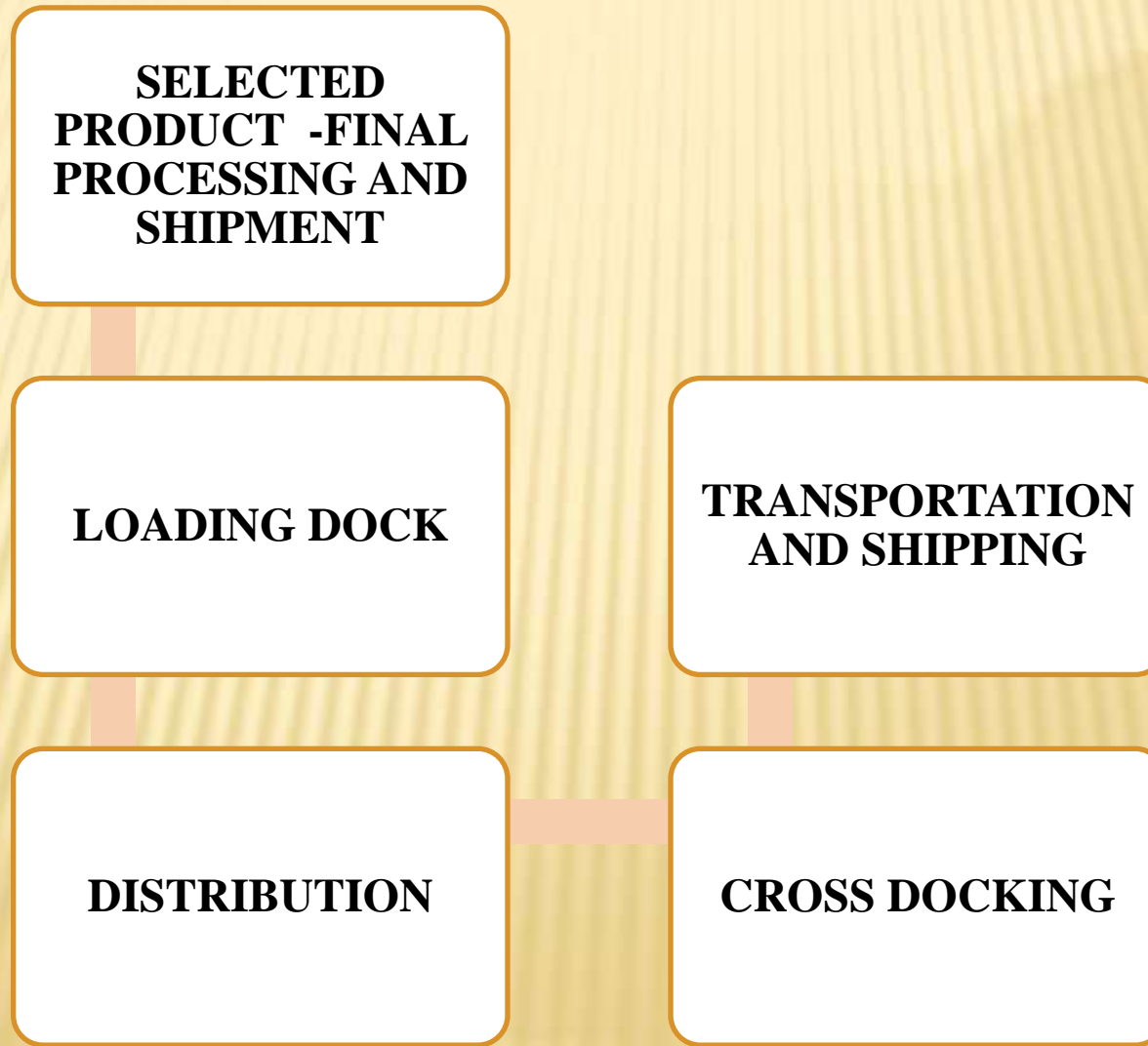
**DISCRETE
OR PICK-
BY-ORDER**

**BATCH OR
PICK-BY-
ARTICLE**

WAVE

**REVERSE
ORDER
(**CROSS-
DOCKING**)**

- ✖ **CROSS DOCKING:** Direct flow of goods from receiving to shipping with little if any storage
- ✖ **PACKAGING AND LABELLING OF A PRODUCT**



AUTOMATION IN WAREHOUSES

- ✓ **System where goods are placed into and removed from store by remote control with assistance of electronic data processing equipment.**
- ✓ **Reasons due to which company opts are:**
- ✓ **Reduce total cost of distribution**
- ✓ **Raise customer service by prompt delivery and accurate order filling**
- ✓ **More control distribution operations as a whole**

MODERN TRENDS

- ✖ **JUST IN TIME (JIT) system promotes product delivery directly from suppliers to consumers without the use of warehouse**
- ✖ **Retailing trends led to development of WAREHOUSE-STYLE RETAIL STORES**
- ✖ **INTERNET BASED STORES do not require physical retail space but still require warehouse to store goods**
- ✖ **Warehousing Companies are transforming into third-party logistics providers or 3PLs .**
- ✖ **RADIO FREQUENCY IDENTIFICATION (RFID)**
- ✖ **TRANSPORTATION MANAGEMENT SYSTEMS**
- ✖ **PICK-TO-LIGHT TECHNOLOGY**
- ✖ **VOICE-ACTIVATED RECEIVING AND PACKAGING**

BENEFITS

- × **Maximum usage of available floor space and building height**
- × **Increase storage capacity by up to 400%**
- × **Less land and smaller building**
- × **High productivity**
- × **Operate faster -24 hours a day, 7-days a week**
- × **No delays**
- × **Efficient flow of materials**
- × **Provide buffer storage functions**
- × **Need for drivers/operators eliminated**
- × **Risk of injury minimized by safety fences**
- × **Reduce stockholdings**
- × **Inventory accurately tracked at all stages**
- × **Ongoing operating costs eliminated**

MERITS

AND

DEMERITS

- ✗ **Meet demand fluctuations at short notice**
- ✗ **No dangers of stock out**
- ✗ **Transport facilities optimally used**
- ✗ **Bulk transportation cheaper**
- ✗ **Less warehousing costs**
- ✗ **Reduction in requirement of personnel**
- ✗ **Reduction in administrative cost**

- ✗ **Poor market coverage**
- ✗ **Distant market demand not met in short notice**
- ✗ **Transport cost maximum unless in bulk quantity**
- ✗ **Increased material handling cost**
- ✗ **Possibility of bottlenecks and resultant delays**
- ✗ **Greater danger of loss by fire**
- ✗ **Delay in customer service**

MERITS

AND

DEMERITS

- **Maximum market coverage**
- **Increased sales**
- **Maximisation of customer services**
- **Moderate transportation cost**
- **Better control**
- **Effect savings in freight charges**
- **Maximum time utility**

- ✗ **Huge investment in inventory**
- ✗ **Chances of stock-out situation is high**
- ✗ **Huge warehousing developments costs**
- ✗ **Shortage of goods at one warehouse from another require additional transportation costs**

Thank you