

OPERATION AND HANDLING OF A WAREHOUSE

The inbound flow in a warehouse begins when items arrive in the warehouse of the company location, either received from external sources or from another company location. An employee registers the items, typically by scanning a barcode. From the receiving dock, warehouse activities are performed at different complexity levels to bring the items into the storage area.

Outbound flow is the process of storing, transporting and distributing goods to customers. The outbound process starts with a customer sales order, moves on to warehouse packing and ends with product delivery.

Inbound logistics brings supplies or materials into a business, while outbound logistics deals with moving goods and products out to customers. Both focus heavily on the transporting of goods. But inbound is all about receiving, while outbound focuses on delivery.



LEARNING OUTCOMES

After studying this lesson the learner:

- defines the inbound and outbound operations in a warehouse;
- explains the materials management, logistics, supply chain, inventory management;
- finds the delivery process in warehouse management;
- observes the benefits of warehouse operations.



Notes

19.1 INBOUND AND OUTBOUND OPERATIONS IN A WAREHOUSE

19.1.1 Inbound operations in a warehouse

A. Receiving of Goods in the warehouse is the first step in inbound operations. It is carried out as

a. Pre-receiving-

To ease the receiving process, several companies enforce receiving requirements for suppliers and carriers. The intent is receiving cargo in such a manner that it is quick and easy to process. Pre-receiving includes activities like appointment scheduling, dock/door assignment, freight bill check.

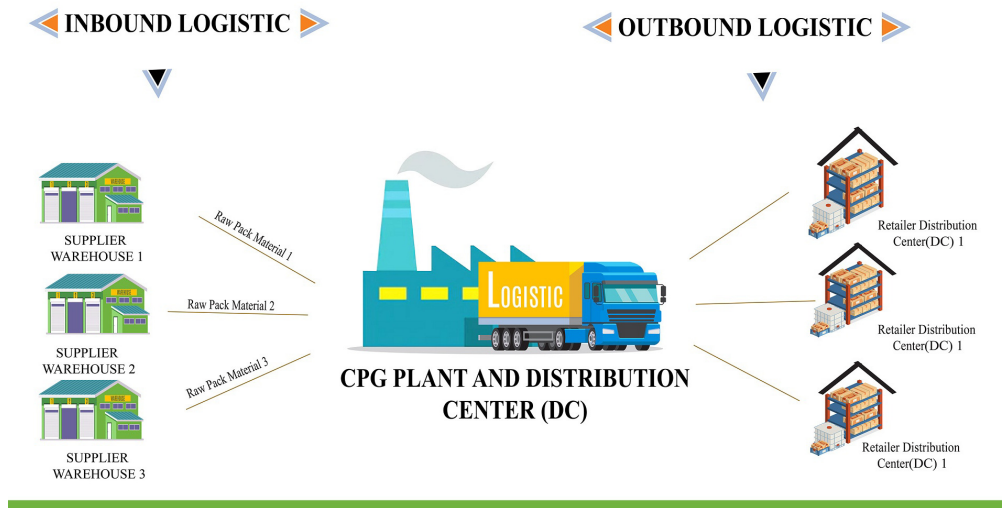


Fig. 19.1: Inbound and outbound operations

b. Receiving -

The first step in the warehousing process is the receipt of goods. The basic functions of receiving include verifying product quality and quantity, unloading the material, moving the material to optimum storage locations, preparing receiving reports and routing those reports to designated departments. Storage functions are an extension of receiving department duties. The basic functions of storage are the movement of products from the staging area to a storage location, the recording of the location and quantity, and the updating of storage records so that the product can be found easily when it is needed. The receiving function is the starting point for inventory control in the warehouse. All essential data should be gathered at this stage, and it should be documented on the receiving reports.

**Notes****B. Verification of Documents**

When the driver reports to the warehouse, he first reports with a certain set of documents. The warehouse receiving supervisor verifies the documents to check the following:

- Whether the cargo was meant for this warehouse or not.
- If the vehicle number on the documents and the vehicle number of the actual vehicle are matching.
- If the driver is carrying the entire original documents and not photocopies.
- If the driver is carrying the complete set of documents in terms of invoice, Packing list, E-way and other documents.

The transport document verification process ensures that the cargo being unloaded is meant for this warehouse and is carrying complete and original documents for the next steps to follow.

C. Unloading of material

The objective of the unloading process is to unload cargo safely and efficiently. This process includes:

- Checking seals of the vehicle
- Validating the number or booking reference.
- Checking temperature data in case of perishable goods being received.
- Allocating a bay for the vehicle
- Assign labour team to unload
- Assign proper equipment to unload.
- Assign Forklift in case of Palletized cargo to be unloaded.

When unloading the cargo, safety is as important as speed of unloading. All precautions have to be taken to ensure safety of the people operating and security of the cargo being unloaded.

a. Physical Verification of Material

The next step in the receiving process is to conduct a standard verification process that includes:

- Checking of Quantity received,



- Description of goods,
- Product Code.
- Batch/Lot number,
- Temperature in case of temperature controlled cargo
- Labelling, Weight of the cargo and Condition cargo-whether damaged or not.

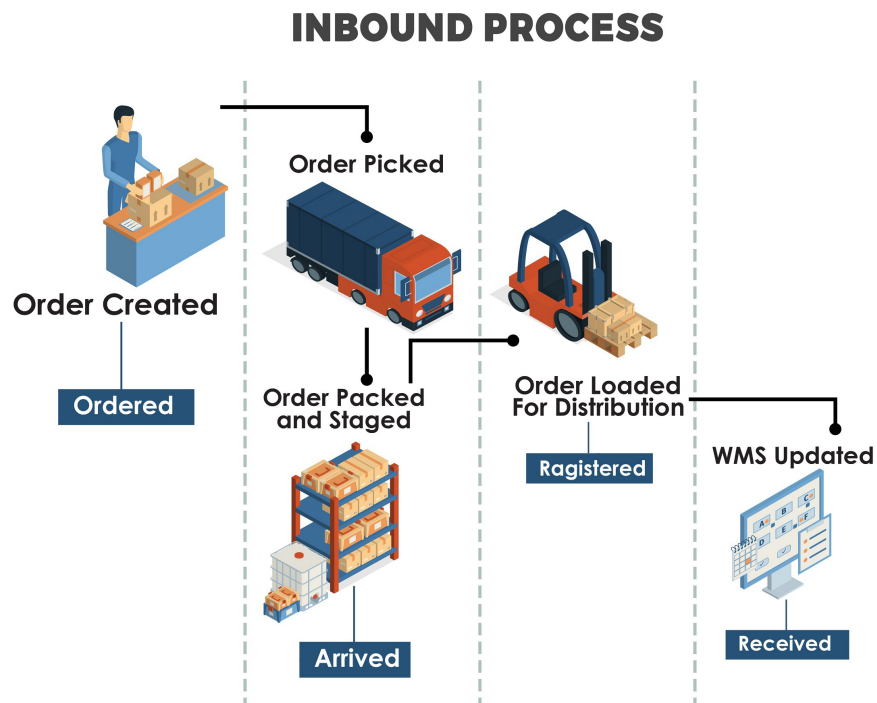


Fig. 19.2: Inbound Process

A critical part of the verification process is to record and report any discrepancies between what is expected and what is received. The use of warehouse technology such as barcode scanners or RFID integrated with the Warehouse Management System (WMS) is helpful to speed up counting and reduce errors. Another approach to speeding up the process is to conduct random checks.

One of the most time-consuming, labour-intensive and critical tasks is counting and verifying damaged cargo. It is essential to keep a record of all missing and damaged cargo and its supplier and carrier. Once data has been collected, receiving supervisors will use this data to make these companies, suppliers and carriers aware of the problem.



On the other hand, for warehouses required verifying weight and dimensions, weighing scales integrated with packet/pallet dimensioning systems and the warehouse management system are an excellent option for capturing all this information quickly and without errors.

D. Inspection of Quality of Material

Quality of the material is critical for both customer experience and manufacturing process. When the Finished goods are delivered to the final customer no company can afford a damaged or defective product. Similarly, during the manufacturing process, the Raw Material and parts have to be of the right quality and specifications to ensure the right final product. The inspection of the material at the warehouse involves following steps:

- Visual inspection of the goods to check for any dents, damages, leaks of the incoming products. In case of packaged products to check if the packaging is proper and not mutilated.
- In case the products are received in large numbers, random samples may be drawn. These samples may be visually checked or deeply tested based on the policies of the company.
- In case of rejection, the products may be returned to the supplier or reworked inside the warehouse based on the possibility and criticality of the material. In certain cases, poor quality may lead to credit notes from the supplier as a compensation for poor quality.

E. Issue of warehouse Receipt - GRN

Goods Receipt Note (GRN) is an important document evidencing receipt of the material at the warehouse. It is issued by the warehouse or Stores confirming the SKU and quantity received. The GRN is generally done against the Purchase Order issued to a supplier. GRN is used by the Purchase Department to keep a tab of the quantity received against each PO issued by them. It is used by the Accounting team to make payments to suppliers against their invoices. GRN allows the updation of inventory in the stock ledger so that it can be used for further dispatch planning.

F. Physical Putaway to Storage location

The goods received need to be physically moved and stored at the storage location. This process is called Put-away process. On the receipt of the material a Put-away list is created listing the number of SKU and their quantity to be stored. The Put-away list also carries the storage location where the material needs to be stored. The storage location



can be determined by the system when WMS is being used or can be manually fed when WMS is not being used.

G. Exception Management

As discussed, the receiving process is the key to efficiency and productivity of the warehouse. Any exception to this process needs to be dealt with on an immediate basis. There could be various kinds to exception which could happen during the process

- Material arriving without an ASN.
- The incoming vehicle is not carrying the complete set of documents.
- The quantity on the documents and physical quantity not matching.
- The product was damaged.
- The goods were not properly labelled.
- Warehouse labour or equipment not available.
- Bunching of large incoming shipments.
- Warehouse running short of storage space.

H. Advance shipment notice (ASN)

An Advanced Shipping Notice (ASN) is an important electronic data information tool which keeps the buyer informed, allows them to track the shipments, allows them to plan for their inventory and helps to improve the relation of the supplier and buyer. ASN simple yet powerful tool to reduce the customer service efforts and highly recommended for all progressive and professional companies. What Does an ASN Include?

- Material being shipped.
- The product description and code.
- The quantity of the shipment.
- Physical characteristics like weight, number of packages.
- The date of shipment
- The expected date and time of delivery.
- The details of the vehicle and the carrier.
- Pallet codes if required



I. Inbound Quality Inspection

The quality department will provide the warehouse with instructions on how to deal with incoming materials. Not all parts incoming shipments need to be inspected. Some low cost standard items may not require inspection at the time of receipt. However, for many items used in the production line, the part or raw material will be subject to inspection.

- a. **Visual Inspection:** The incoming pallet may be damaged from the side, the received white goods may be dented during transit, and the drum carrying chemicals may be leaking. Such items should be rejected immediately on unloading. Packaged items may be rejected if the packaging is damaged.
- b. **Sampling:** In case a large quantity of the particular parts or material arrives at the warehouse, not every part needs to be checked. The quality department generally instructs to do a random sampling and only the samples to be checked.
- c. **Failing Inspection:** Some products that are received at the plant may fail either the initial visual inspection or testing by the quality department. Return the shipment to the supplier for him to replace the defective items. This is possible when the items are available with the suppliers and quick turnaround is possible.

J. Put-Away Process

The prime objective of the put-away process is to move goods from the dock to the most optimal warehouse storage location. Put away process needs to ensure that:

- Material is stored quickly and efficiently
- The material is easy to locate for any physical count of the inventory.
- The travel distance in the warehouse from staging area to storage area is reduced to a minimum.
- Ensuring the safety of the people working in the warehouse and safety of the goods.
- At the time of picking, material is easy to locate and identify.
- Maximisation of the storage space utilisation in the warehouse.

Any failure in the put-away process can have a direct impact on the operations and lead to poor productivity of the warehouse. Put-away refers to a series of activities from initial receipt of stock until it is finally stocked at the destination. Put-away list helps to complete the process. The Put-away list consists of the list of items to be stored, their quantity and suggested bin locations.

**Notes****19.1.2 Outbound operations in a warehouse**

Outbound operation covers the process where goods are stored, moved, and distributed for delivery to customers. Dispatch of goods from a warehouse is the most fundamental job and is known as outbound operations in a warehouse. The dispatch process can be divided into four stages as under:

A. Order Processing

The outbound process begins with an order. This could be a sales order (SO) or a stock transfer order or a material requisition to the feeding line. The sales order will typically specify the SKU required by the customer and the quantities for each of them. The SO are generally processed by the Finance team which checks if the payment is received from the buyer or is there enough credit limit available. Once the SO has been processed and cleared in the system all the subsequent process of picking and dispatching starts. The Sales order processing also allows the sale invoices to be generated which accompany the goods during transit. Though in most of the cases the Sales Orders are processed not at the warehouse. There is a backend team which processes the Customer orders. However, in certain cases the ware-house team may be allowed to process the sales orders. In such cases, the customer purchase directly flows to the warehouse and warehouse processes the Sales Orders based on the material availability.

B. Picking and Pick List

Picking is an extremely important warehousing process. This stage drives the productivity of the whole dispatch and ordering process and makes it one of the most critical processes in supply chain management. The first decision in the picking is the decision to decide the methodology of processing the orders. There are two broad ways to achieve this: Discrete Order Picking and Batch Picking. There are two more methods of picking: Wave Picking and Zone Picking. Following are some of the other factors to be considered in determining the right picking system

- The pick location assigned to each product should be based on the 80/20 rule. This means that fast-moving products should be in picking locations that hold more stock.
- You should be able to move a product into or out of its picking location easily as the level of its activity moves up or down over time.
- The physical setup of the picking system should minimise the travel time of the pickers whenever possible. The same is true with the method of picking used.



- The picking method should minimise the number of times the products must be handled before they are placed into the final cartons used for shipping.

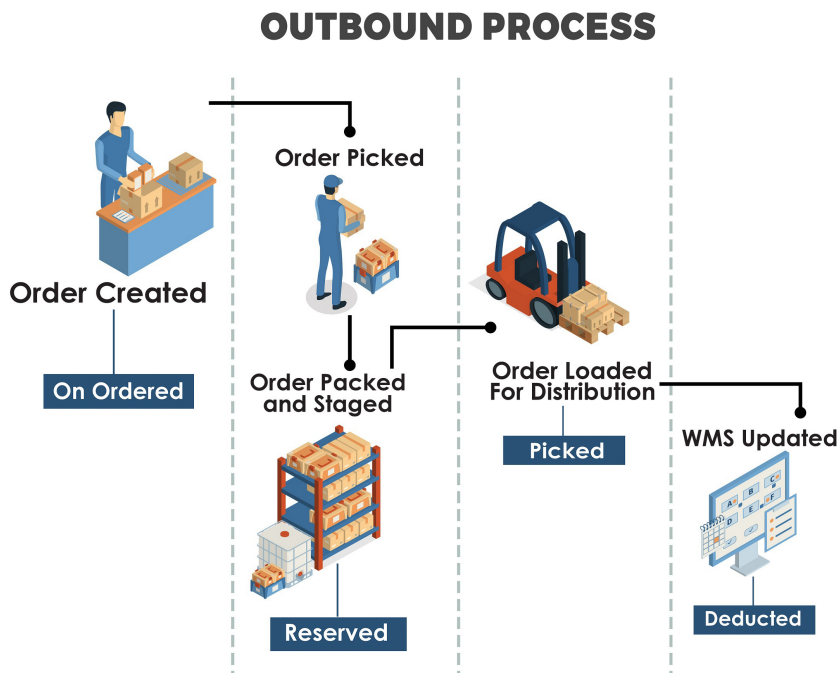


Fig. 19.3: Outbound Process

C. Packing - The goods once picked need to be packed before delivering to the final customer. In case of batch picking, the packing stage also allows checking the accuracy of the picking process. The product is packed into shipping cartons. The air space if any is filled with packing material like thermocol, airbags or shredded paper. The shipping cartons may be shrink wrapped or strapped. The cartons are labelled, stamped and marked. Returns from the customer should be closely monitored to find the returns related to poor packing and the process should be improved accordingly.

D. Shipping

Shipping is the last stage of dispatch, where the cargo is prepared for the requested mode of transit. The tasks performed usually include weighing each carton, labelling the carton, recording shipment information in a manifest system, and applying address labels generated by the manifest system. The packages may be sorted based on different modes of transport, or based on different carriers or based on different destinations. The carriers are invited and they pick up the shipment assigned to them. The carrier person also counts the packages assigned to him and tallied with the delivery note or the invoice.

**Notes**

It is usually considered shipping's responsibility to ensure that all shipments are picked up the day they are ready to ship and that all shipping paperwork is routed to the correct departments at the end of each shipping day. The successful art of dispatch lies in the operation's ability to have goods ready for departure, just in time for carriers to load their trucks. The DC manager must therefore balance and forecast packing and dispatching according to carrier pick-up times. Goods that are ready too early, for example, will clutter staging areas, while dispatches that are late, will delay loading and potentially cause late deliveries.

E. Warehouse document checklist

The following dispatch documents should be maintained (in chronological order) and made available for inspection by monitors, program management, and auditors. As these documents are used to develop many management and financial reports, procedures should be in place for adequately safeguarding them against improper access and loss. Warehouse dispatch document checklist.

- Dispatch invoice/Delivery challan /Dispatch Note
- Dispatch waybills
- Tally sheets (loading)
- Warehouse inspection reports
- Lorry Receipts from the Transporters/Bill of Lading for Sea/ Airway Bill for Air

The put away process includes putting goods away in a storage area in the warehouse. There are put away strategies in the Warehouse Management (WM) system that simplifies the search for appropriate storage areas. Put away list helps to control the put away process and assist to identify the minimum flow path. The storage location for any put away can either be decided using the functionality of WMS or manually decided. It is imperative to label all the storage locations in the warehouse. WMS cannot work without location labelling. The location numbers help in put away, picking, stock take and various audits.

The very purpose of the warehouse is to fulfil the customer orders. Warehouse dispatching is the most important part of the warehouse operations. The dispatching process starts with receipt and processing of customer orders. The sales order is translated into a picking list. There are various strategies for picking the material. The warehouse may choose the one best suited for them. The product picked is packed and prepared for the carrier to pick up. The documentation in the dispatch process is extremely critical and needs to be preserved for future reference and audits.



Handling of the inbound and outbound operations in warehouse prerequisites to have an idea of various practical aspects which are dealt in a brief manner below



INTEXT QUESTIONS 19.1

1. Define warehousing?
2. _____ is an outbound activity in warehouses
 - a. Delivery
 - b. Receiving
 - c. Put away
 - d. Pre-receiving

19.2 MATERIALS MANAGEMENT

19.2.1 Materials management

It is a subset of warehouse management dealing exclusively with material which contributes the maximum to completion of the end product. The objectives of material management are as follows:

- Lower the price of the raw materials.
- Reduce the cost of production and ensure the smooth flow of production.
- Maintain quality of raw material as well as finished goods.
- Maintain good relations with the supplier as to ensure a smooth flow of raw materials.
- Continuous improvement of the skill set of the workers thereby increasing overall efficiency within the organisation.

19.2.2 Supply chain

As per definition SCM is the management of a network of all business processes and activities involving procurement of raw materials, manufacturing and distribution management of Finished Goods. SCM is also called the art of management of providing



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the Right Product, At the Right Time, Right Place and at the Right Cost to the Customer.

Supply Chain Management encompasses, planning, design, control and implementation of all business processes related to procurement, manufacturing, distribution and sales order fulfilment functions of a business. All these activities involve multiple networks of vendors and service providers which are integrated and co-coordinated by the Supply Chain Experts of the organisation to move raw materials and finished goods from and to all distant locations across the globe.

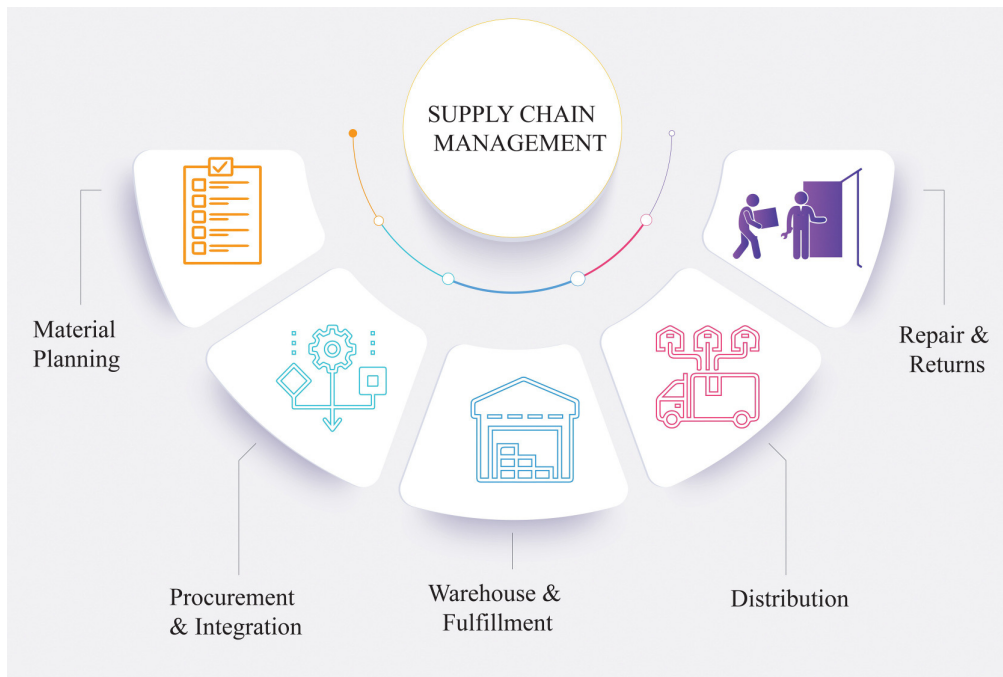


Fig. 19.4: Supply Chain Management

19.2.3 Logistics

Logistics is the backbone on which Supply Chains are driven. Logistics refers to the management of the flow of goods and supplies involving information, data and documentation between two entities or points. Logistics plays an important role in the post procurement function of delivery of raw material from the supplier to the point of production and Finished Goods from the point of dispatch from factory to the point of delivery to the customer. The goods flow through a network of transportation by road, rail, air or ship and intermediary warehouses to hold inventories before moving to the forward locations. The entire activity involves multi-tier suppliers, agents, and agencies including freight forwarders, packers, customs department, distributors and Logistics service providers, etc.



Take the case of production procurement, SCM strategy will define the process, selection of vendors, procurement strategy and the mode of order fulfilment coupled with cycle time and lead time to supply to the production floor. Logistics in this case details out the mode of transportation from the vendor, the consignment planning, process for order trigger, consolidation of shipments, detailing transportation modes and vendors, defines transit times, documentation process and implements the plan, controls and monitors the flow of goods from point of origin up to the point of delivery to the plant for production.

In the case of Finished Goods distribution, SCM strategy will define overall network design for stock holding and other channels of distribution. Logistics deals with the entire gamut of designing transportation network, partnering with 3rd party logistics providers to establish distribution centres and warehouses, planning inventory management and operations process including packing, promotional bundling, etc., primary, secondary distribution network and vendors and at the end the complete documentation and information process for the entire chain of activities

19.2.4 Inventory

Inventory is an idle stock of physical goods that contain economic value, and are held in various forms by an organisation in its custody awaiting packing, processing, transformation, use or sale in a future point of time. Any organisation which is into production, trading, sale and service of a product will necessarily hold stock of various physical resources to aid in future consumption and sale. While inventory is a necessary evil of any such business, it may be noted that the organisations hold inventories for various reasons, which include speculative purposes, functional purposes, physical necessities etc.

A manufacturing organisation holds inventory of raw materials and consumables required for production. It also holds inventory of semi-finished goods at various stages in the plant with various departments. Finished goods inventory is held at plant and at various stocking points or with dealers and stockist until it reaches the market and end customers. Besides Raw materials and finished goods, organisations also hold inventories of spare parts to service the products. Defective products, defective parts and scrap also form a part of inventory as long as these items are inventoried in the books of the company and have economic value.



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Table 19.1: Types of Inventories by Function

INPUT	PROCESS	OUTPUT
Raw Materials	Work In Process	Finished Goods
Consumables required for processing. Eg : Fuel, Stationary, Bolts & Nuts etc. required in manufacturing	Semi Finished Production in various stages, lying with various departments like Production, WIP Stores, QC, Final Assembly, Paint Shop, Packing, Outbound Store etc.	Finished Goods at Distribution Centres throughout Supply Chain
Maintenance Items/ Consumables	Production Waste and Scrap	Finished Goods in transit
Packing Materials	Rejections and Defectives	Finished Goods with Stockist and Dealers
Local purchased Items required for production		Spare Parts Stocks & Bought Out items
		Defectives, Rejects and Sales Returns
		Repaired Stock and Parts
		Sales Promotion & Sample Stocks

19.2.5 Delivery process

Warehouse Shipping or Delivery- There is three basic shipping process steps used in a warehouse:

- **Aggregate and manage order information:** This step involves getting the order information, validating addresses, confirming inventory availability, combining



orders going to the same address (or separating orders going to different addresses) and preparing the order for shipment.

- Pick, pack, weigh, and choose carrier and label: This is the process of picking and packing the products ordered, weighing the shipment, choosing the right carrier and labelling the package for delivery to the end customer's address.
- Ship the order: Shipping involves transferring the package to the selected carrier and updating the shipping information to all parties.

Common Shipping Issues

- Inventory shortages
- Storage and retrieval inefficiencies
- Cost-related problems
- Human errors
- Health and safety hazards
- Warehouse layout issues

Each issue has a solution. For example, to avoid inventory shortages, a warehouse needs to have a system that promotes constant checking and updating of inventory in real time.

If storage and retrieval inefficiencies are a problem, a warehouse may need additional workers or more reliable equipment. Using robotics and automation can also help improve accuracy, reduce human error and eliminate labour shortages.

To solve cost-related problems, shippers need to research all possible shipping methods and the associated costs. Transportation costs are always in flux, so it's important to stay up to date to ensure you get the best value.

Warehouse layout issues and health and safety hazards go hand in hand. If warehouse space isn't allocated properly, it will have a negative impact on the fluidity of the shipping process. Keeping things clean, organised and clearly labelled also goes a long way to making a warehouse a safer place to work. With warehousing best practices in mind, implementation and routine review, one can improve the performance of the warehouse shipping operations dramatically.

**Notes****INTEXT QUESTIONS 19.2**

1. Define supply chain
2. The objectives of material management do not include
 - a. Increase in the price of the raw materials.
 - b. Reduce the cost of production and ensure the smooth flow of production.
 - c. Maintain quality of raw material as well as finished goods.
 - d. Maintain good relations with the supplier as to ensure a smooth flow of raw materials.

19.3 BENEFITS OF INBOUND AND OUTBOUND OPERATIONS

Inbound operations provide these benefits:

- Better inventory management, lower inventory levels, reduced carrying costs.
- Improved on-time deliveries.
- Less handling and damage, efficient receiving.
- Proactive notification of disruptions.
- Administrative efficiency.
- Increased customer satisfaction.

A. Outbound operation benefits

Here are some tangible benefits of outbound logistics operations on the quality of delivery:

- Improved delivery speed. 63% of today's online shoppers expect three-day delivery for domestic shipments as a standard.
- Businesses with well-optimised outbound logistics choose the most efficient routes for all their deliveries, taking into consideration factors like vehicle capacity, location, and more On-time deliveries.
- Outbound logistics also plays a significant role in customer satisfaction. In fact, 45% of consumers are unlikely to continue shopping from a business if they



experienced a late delivery. While 40.5% of online shoppers prefer e-commerce stores that offer free shipping. Consumers expect fast and creative delivery options, as well as real-time information about the status of their order.

B. Difference between the two operations

Although both types focus on the transportation of items, there are some significant differences between inbound and outbound logistics.

Table 19.2: Difference between Outbound and Inbound Logistics

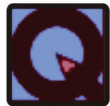
ATTRIBUTE	INBOUND LOGISTICS	OUTBOUND LOGISTICS
Direction	Inward	Outward
Focus	Supply	Demand
Role	Receiving	Delivery
Key Relationships	Suppliers, vendors and their distributors	Distributors, wholesalers, retailers, end customers
Processes	Sourcing, procurement, materials handling, putaway	Inventory management, order fulfilment, shipping
Activity	Raw materials or goods coming in from suppliers	Finished products going out to customers
Strategic Imperative	Obtaining goods or materials the company needs to make its products	Meeting customer demand, supporting the sales process to generate revenue

Inbound logistics deals with the purchase, storage, and transportation of goods to the company’s production facility, while outbound logistics deals with order preparation and distribution of packages to consumers. While inbound logistics is focused on raw materials sourcing, outbound logistics handles customer service and product distribution channels. With inbound logistics, the company interacts with suppliers, while in outbound logistics, the interaction happens between the company and its clients. Although different, upstream and downstream logistics work together, each maintaining its own role within the supply chain or delivery logistics.

**Notes****C. Handling operations in a warehouse in an efficient manner**

All the operations in a warehouse are efficiently carried out when the following strategies are considered

- Analyse picking methodology
- Communicate effectively with workers.
- Consider incentives for workers.
- Implement custom kitting strategies.
- Improve employee comfort.
- Invest in quality equipment.
- Measure and communicate the right metrics.
- Minimise errors.
- Purchase and install newer equipment.
- Schedule maintenance plans.
- Systematise workstations.

**INTEXT QUESTIONS 19.3**

1. Give the major benefits of inbound operations?
2. What is the difference between inbound and outbound operations
3. _____ is a tangible benefit of outbound operations
 - a. Improved delivery speed
 - b. More cancelled orders
 - c. Selection of Long routes
 - d. Improper loading



WHAT YOU HAVE LEARNT

Inbound flow

The inbound flow in a warehouse begins when items arrive in the warehouse of the company location, either received from external sources or from another company location.

Outbound flow

Outbound flow is the process of storing, transporting and distributing goods to customers. The outbound process starts with a customer sales order, moves on to warehouse packing and ends with product delivery.

Receiving

The first step in the warehousing process is the receipt of goods. The basic functions of receiving include verifying product quality and quantity, unloading the material, moving the material to optimum storage locations, preparing receiving reports and routing those reports to designated departments.

Goods Receipt Note

Goods Receipt Note (GRN) is an important document evidencing receipt of the material at the warehouse. It is issued by the warehouse or Stores confirming the SKU and quantity received.

Put-away

The goods received need to be physically moved and stored at the storage location. This process is called Put-away process.

Advanced Shipping Notice

An Advanced Shipping Notice (ASN) is an important electronic data information tool which keeps the buyer informed, allows them to track the shipments, allows them to plan for their inventory and helps to improve the relation of the supplier and buyer

Picking system

The physical setup of the picking system should minimise the travel time of the pickers whenever possible. The same is true with the method of picking used.



Notes

**Notes****Shipping**

Shipping is the last stage of dispatch, where the cargo is prepared for the requested mode of transit.

SCM

SCM is the management of a network of all business processes and activities involving procurement of raw materials, manufacturing and distribution management of Finished Goods.

Logistics

Logistics refers to the management of the flow of goods and supplies involving information, data and documentation between two entities or points

Inventory

Inventory is an idle stock of physical goods that contain economic value, and are held in various forms by an organisation in its custody awaiting packing, processing, transformation, use or sale in a future point of time.

**KEY TERMS**

Warehouse	Materials management	Inbound operations
Outbound operations	Inventory	Supply chain
Receiving	Picking	Packing
Shipping / Delivery		

**TERMINAL EXERCISE**

1. Define inbound operations
2. Define outbound operations
3. What is logistics



4. What is materials management
5. Explain the Inventory types
6. What is the GRN?
7. What are the picking types?
8. Explain consolidation
9. What is the difference between inbound and outbound operations
10. What is an advanced shipment notice?
11. What do you mean by Put-away?
12. How to perform inbound and outbound operations efficiently in a warehouse
13. How to decide the inventory, supply chain, logistics and delivery process in warehouse
14. What kind or types of benefits accrue from the warehouse operations
15. Give the process for performing warehouse operations in a flawless manner
16. Describe Receiving Procedure in warehouse.



ANSWERS TO INTEXT QUESTIONS

19.1

1. Warehousing is a set of activities that are involved in receiving and storing of goods and preparing them for reshipment
2. Choice a.

19.2

1. Supply Chain Management encompasses, planning, design, control and implementation of all business processes related to procurement, manufacturing, distribution and sales order fulfilment functions of a business.
2. Choice a.

**Notes****19.3**

1. Better inventory management, lower inventory levels, reduced carrying costs.
2. Choice a.

**DO AND LEARN**

Take the examples of agriculture goods and electronic goods that need the warehouse utilisation. Make two groups of your class and find out how the warehouse operations like inbound and outbound activities are to be performed in the warehouse for the two types of goods selected. Find the difference in handling these goods.

**ROLE PLAY**

Surendran is a trader who handles spices for his business and he utilises the warehouse facility for his business. One of his friend cum farmer, Nagaraj who grows tea in coonoor wants to get his expertise for using warehouse facilities. Here is the conversation of them

Nagaraj: Dear Surendran I know you store your spices in warehouse and I would like to know the details

Surendran: welcome, Nagaraj, I will share with you the process involved including the costs so that you also could use the warehouse facility

Nagaraj: Can I store the produce for six months

Surendran: Yes it all depends on your requirement, since there will be demand supply mismatch during the peak season as demand drops and supply booms, the warehouse facility could be very essential for the products we deal with.

Put yourself in the place of Surendran and your friend in the place of Nagaraj and continue discussion