

Logistics management.

Logistics can be defined as the science operating to movement of materials and the services along with its information.

It is the process of moving and positioning inventory to meet the customer requirements at the lowest possible total landed cost.

It has evolved due to the unionization of purchase and sales function.

It is first evolved in the defense operations i.e operation dynamo.

Elements of logistics management.

- Customer order processing.
- Flow of actions.
- Filling up the order form.
- Deciding the specifications of product.
- Deciding the quality of a product.
- Deciding the delivery schedule.
- Deciding the location of delivery.
- Factors to be considered.
- Cost of order processing
- Detailed list of specifications.

Elements of logistics management.

- Location analysis.
- Flow of actions.
- Cost of transportation of materials and finished goods.
- Proximity to suppliers
- Proximity to customers
- Availability of desired manpower at affordable cost.
- Communal harmony.
- Government regulation.

Elements of logistics management.

- Inventory control.
- Flow of actions.
- Communicating the quantity ,quality and timing of material with the supply points.
- Getting the material of right quality ,quantity at right time.

Elements of logistics.

- Packaging.
- Flow of actions.
- Primary packaging.
- Secondary packaging
- Cost of packaging
- Important factors to be considered.
- Product protection.
- Communicating the message to customers
- Cost of packaging.

Elements of logistics.

- Transportation.
- Flow of actions.
- Mode of transportation
- Cost of transportation
- Speed of transportation
- Urgency of product to customer.

Elements of logistics.

- Ware housing.
- **Flow of actions.**
- Location of warehouse.
- Inventory level at ware house.
- Storage requirement of product.
- Shelf life of product.
- Important factors.
- Availability of space
- Strategic location.
- Packing and replacement.
- **Techniques.**
- Third party logistics.

Inbound logistics.

- Receiving ,storing and disseminating incoming goods and material for use.
- **Objectives of inbound logistics.**
- Ensure that material received and related information are processed and made available promptly to production, store and other department.
- Completely and accurately document goods received and goods returned.
- Accept only items that were properly ordered.
- Accept those which meet the purchase order specifications.
- Safe guard goods received.

Inbound logistics.

- Ensure that vendor, inventory and purchase order information is accurately updated to reflect receipt.
- Return the rejected items promptly.
- Completely and accurately document all transfer to and from storage. Properly transfer all materials requisitioned.
- Maintain the safe working conditions and storage of hazardous materials.

Out bound logistics.

- Movement of material associated with storing, transporting and distributing firms goods to its customers.

inbound and outbound logistics covers
and supports the following processes
and options.

- 1.

- 1. all process in the warehouse from goods receipt through goods issue.
- Complete stock transparency to allow companies to know what is in the warehouse.
- Trace and track the history of the warehouse processes in detail for each individual article.
- Improve the accuracy of deliveries thus increasing customer satisfaction.
- Build optimal loads with the routing and scheduling allowing a close collaboration between shipper and carrier selection and tendering.

Figure.

Creating a logistics strategy.

- What is logistics strategy.
- Logistics strategy defines the service levels at which its logistics organization is at its most cost effective. Because supply chains are constantly changing and evolving a company may develop a number of logistics strategies for specific product lines ,specific countries or specific customers.

Four distinct levels of logistics organisation.

- Strategic: by examining the company's objectives and strategic supply chain decisions, the logistics strategy review how the logistics organization should contribute to those high level objectives.
- Structural: the logistics strategy should examine the structural issues of the logistics organization such as optimum number of warehouses and distribution centres or what products has to be produced at specific manufacturing plant.

Four distinct level of logistics organization.

- Functional : any strategy should review how each separate function in the logistics organization is to achieve functional excellence.
- Implementation.
- The plan of implementation will include development or configuration of an information system introduction of new policies and procedures and development of change management plan.

Components to examine when developing a logistics strategy.

- Transportation. Does current transportation helps service levels.
- Outsourcing. What outsourcing is used in logistics function? Would a partnership with a third party logistics company improve service levels.
- Logistics system.
- Do the current logistics system provide the level of data that is required to successfully implement a logistics strategy or new systems are required?
- Competitors: review what the competitors offer.
- Information. Is the information that drives the logistics organization real time and accurate.

Creating logistics organization.

- The problem with conventional organization.
- The horizontal organization features.
- Organized around process not tasks.
- Flat and delayered.
- Built upon multi functional teams.
- Guided by performance metrics that are market based.

Creating logistics organisation.

- In horizontal organizations there will be limited number of core processes which are likely to be central to most business.
- Brand development
- Consumer development
- Customer management.
- Supplier development

- Eliminating non value adding activities.
- Order fulfillment groups.
- The need for integration.
- Integrated information system.
- Centralization of inventory.

Third party logistics.

- Third party logistics refers to the concept of outsourcing the logistics and distribution activities to a logistics service provider so that the manufacturing firm can focus on its core competencies of new product development , manufacturing and marketing the product.

Reasons for 3pl

- Improve the strategic focus.
- Resource constraints.
- Lowered costs. Inventory maintenance costs can be decreased by 15 % to 30 % by logistics service providers.
- Expansion of markets.
- Improved service levels with improved response time.
- Freeing the resources for other uses.

Infrastructure required for a 3 pl.

- Ware house
- Fleet of vehicles.
- Hard ware and soft ware to take care of information needs.
- Advanced material handling capabilities.
- Good team of consultants.
- Trained manpower.
- Reach in terms of geography.

Steps while considering a 3 pl service provider.

- The manufacturing company should consider the following.
- Knowing where to go.
- Know the need and objectives.
- Getting the quotes from lsp.
- Evaluate the lsp.

Evaluating the logistics service provider.

- General company capabilities.
- Price
- Financial stability
- Experience in the same industry
- Location
- Asset ownership.

Capabilities of logistic service provider.

- Information systems and technology capabilities.
- Capacity to grow the clients business
- Responsiveness to unforeseen problems.
- Flexibility to handle the unique business requirements.
- The ability to meet promises.
- Service quality.
- Commitment to continuous improvement.

3 pl implementation.

- Measuring and evaluating performance.
- Transportation.
- On time shipment.
- Ontime delivery.
- Ware housing
- % of orders that 3 pl ships in exact quantity as against specified on shipping order.
- Per unit cost of ware housing.
- Picking accuracy.
- Order fulfillment.
- Inventory accuracy.
- Cost
- The number of times the service provider meets the targeted reduction in costs.

Role of inventory in the supply chain.

- It is the task of supply chain management to accomplish the 5 R 'S .
- RIGHT GOODS IN
- RIGHT PLACE AT
- RIGHT TIME IN
- RIGHT CONDITION AT
- RIGHT COST.

- TOTAL INVENTORY= raw materials+ components+ MRO+ WIP+ IN/OUT BOUND TRANSPORTATION+ FINISHED GOODS.
- THREE IMPERATIVES ON WHICH IMPROVEMENTS HAS TO BE MADE IN INVENTORY MANAGEMENT.

- IMBED INVENTORY DECISION MAKING WITH IN HOLISTIC SUPPLY CHAIN DECISION MAKING.
- Product inventory held at the end of the period= inventory in the beginning of the period+ product purchased or manufactured-product shipped.
- Here period may be a day,week etc..
- Inventory can be rm wip etc....

- 2. coordinate inventory decision making across strategic, tactical and operational planning horizons.
- Extend inventory planning methods to accommodate new technologies and new business process.

Inventory counting systems.

- Perpetual inventory system.
- Periodic inventory system.
- Two bin system.
- Just in time.
- JIT is a japanese management philosophy which has been applied in practice since the early 1970,s. it was first developed by TOYOTA manufacturing plants.

JIT

- It referred to the production of goods to meet the customer demand exactly in time , quality and quantity whether the consumer is a final purchaser of the product or another process further along the production line.
- The waste is reduced in production.
- Waste from over production
- Waste of waiting time
- Transportation waste.
- Processing waste
- Inventory waste
- Waste from the product defects.

JIT.

- ELEMENTS OF JIT.
- CONTINUOUS IMPROVEMENT.
- Attacking the fundamental problems
- Devising the systems to identify the problems.
- Striving for simplicity.
- Quality control at source: each worker is responsible for the quality of their own output.
- Total productive maintenance- ensuring machinery and equipment functions perfectly when it is required and continually improving it.
- Workplace cleanliness
- Ideal batch system.
- 1 item per batch i.e single piece flow.

Benefits of jit.

- Reduced levels of in process inventory , purchased goods and finished goods.
- Reduced space requirements.
- Increased product quality.
- Reduced manufacturing lead times.
- Smoother production flow with few disruptions.
- Pressure to build good relationships with vendors.