Introduction to Logistics and Supply chain Management

Logistics Meaning

Logistics is used more broadly to refer to the process of coordinating and moving resources – people, materials, inventory, and equipment – from one location to storage at the desired destination. The term logistics originated in the military, referring to the movement of equipment and supplies to troops in the field.

Elements of Logistic Management

1. Logistics and Maintenance Support Planning:

Interactive planning, organization and management activities are necessary to ensure that logistics requirements for any given program are properly coordinated and implemented. Initial planning and analysis lead to the establishment of requirements for logistics and the overall support of the system throughout its life cycle.

Maintenance planning for those activities related to the reverse flow convinces with the definition of maintenance concept and continues through supportability analysis to the ultimate development of a maintenance plan.

A comprehensive logistics plan needs to be implemented through the establishment and control functions to ensure that the plan is properly carried out.

2. Logistics Maintenance and Support Personnel:

The personal required to perform unique logistics and system maintenance activities are covered in this category.

Such activities include the initial provision and procurement of items of support, production related logistics functions, the installation and checkout of the system and its elements at the user's operational sites customer service functions, the sustaining support of the system throughout its planned period of use, and those functions required for the retirement and recycling or disposal of material.

Personnel at all levels of maintenance mobile teams, and operation or maintenance at special test facilities and calibration laboratories are included. It is important to include only those who can be directly attributed to the support of that system in evaluation of a particular system.

3. Training and Training Support:

This category includes all personnel, equipment, facilities data or documentation and associated resources necessary for the training of operational and maintenance personnel to include both initial and replenishment or replacement training.

Training equipment say simulators, mock-ups, special devices, training manuals and computer resources Software are developed and utilized as necessary to support the day-to-day-site training, distance education of a more formal nature.

4. Supply Support—Spares or repair parts and associated inventories:

This elements covers all spares say, repairable units, assemblies, modules and the like, repair parts say, non-repairable pasts or components, Censurable, liquids, lubricants, gases disposable items special supplies, and related inventories needed to maintain the prime mission related equipment computers and software, test and support equipment, transportation and handling equipment, training equipment, communications equipment and facilities or utilities.

Spares or repair parts are required throughout the system operational share and in support of the retirement and recycling or disposal of system components.

5. Computer Resources:

This category covers all computers, associated software connecting components, net works, and interfaces necessary to support the day-to-day flow of information for all logistics functions, scheduled and unscheduled maintenance activities and special monitoring and reporting requirements such as those pertaining to CAD/CAM/CAS data the implementation of condition monitoring programs and in support of system diagnostic capabilities.

6. Technical data, Reports and Documentation:

Technical data may include system installation and check out procedures operating and maintenance instructions inspection and calibration procedures, overhaul instruction, facilities data, system modification's engineering data such as specifications, drawings, materials and parts list, CAD/CAM/CAS data, special reports Logistics provisioning and procurement data, Supplier data, system operational and maintenance data, and supporting data bases. Included in this category is the on-going and interactive process of data collection, analysis and reporting covering the system throughout its life- cycle,

7. Maintenance and Support Facilities and Utilities:

This category covers all special facilities that are unique and are required to support logistics activities, to include storage buildings and warehouses and maintenance facilities at all levels.

Physical plant, portable buildings, mobile vans, personnel housing structures, intermediate level maintenance shops, calibration laboratories and special repair shops such as depots, overhaul material suppliers are considered.

Capital equipment and utilities heat, power, energy requirements, environmental controls, communications, safety and security provisions and the like are generally included as the part of facilities.

8. Packaging, Handling, Storage or ware housing and Transportation:

This category logistics includes all materials, equipment special provisions, containers both resistible and disposable and supplies necessary to support the packages, safety and preservation, storage, handling and or transportation of the prime mission related elements of the system, personnel spares and repair parts, test and support equipment technical data, computer resources and mobile facilities.

Covered in this group are the initial and sustaining transportation requirements for the distribution of materials and for the maintenance and support activities throughout the system life cycle. The primary modes of transportation—air, highways, pipelines railways and water ways and intermodal, truck, rail, truck, waters, rail, water, truck, air and the like are considered.

9. Test, Measurement, Handling and Support Equipment:

This category includes all tools, condition monitoring equipment, diagnostic and checkout equipment, special test equipment, metrology and calibration equipment, maintenance fixtures and stands and special handling equipment required to support operational and maintenance functions through-out the forward and reverse flows, Test and support equipment requirements at each level of maintenance must be considered as well as the overall traceability of test requirement or measures to a secondary standard, a transfer standard and finally to a primary standard.

10. Logistic Information:

This refers to the resources necessary to ensure that an effective and efficient logistics information flow is provided throughout and to the organizations responsible for all the activities that come within its focus. This flow includes the necessary, communication links among the customer, producer or prime contractor, sub-contractors, sup- priors and supporting maintenance organizations.

It is but essential that the proper type and amount of information be provided to the appropriate organizational elements, in proper formats and in a reliable and timely manner with the necessary security provisions included.

Inherent within this category is the utilization of the latest EC methods, EDI capabilities e-mail and the Internet.

This capability not only tends to facilitate the integration of the organizations participating in a given project but aids in the integration of SC and maintenance activities and the various logistic elements identified for this propose.

Importance of Logistics Management

1. Provide top service

Good logistics management helps businesses deliver better service to their customers. Correct management of your company's logistics should make you strive to improve delivery times and offer better customer service to all those who buy your products. Dealing directly with your customers gives you an advantage over competitors, but only if you give your customers what

they want. Customers ask for better service, and it's your job to deliver it. To meet customer demands you need to make sure you get your supplies or products on time and that you ship out products to your customers as quickly as possible.

2. Increase supply chain transparency

Greater visibility throughout your supply chain is one of the benefits of logistics management. You need to know what is happening at every stage of your supply chain, take a closer look at your logistics to help you understand how everything operates. You can take a look at historical data and analyze real-time events too, gaining insight into how things could be improved and how to prevent problems. You could make some significant savings by monitoring your supply chain, as well as delivering better service to your customers and any business partners.

3. Improve efficiency and reduce costs

Whether you're dealing with logistics in the UK or international freight logistics, you can improve efficiency and reduce costs with good management. Better supply chain transparency makes it easier to spot where you might be going wrong, as well as the aspects that your company is doing right. You can identify cost saving measures and keep your expenses lower by keeping a close eye on how everything is managed. Gain more control over both domestic and international freight, whether it's ingoing or outgoing, for greater efficiency and bigger savings.

4. Greater revenue

Boost your revenue by improving your logistics management. If your company provides a better service to your customers, you can attract more business. Improve your brand's reputation by delivering on your promises, never having to turn a customer away or let them down. With greater productivity you can do more with your time, allowing your business to handle more orders than ever before. People want a quick and accurate service from a company that does what it says it will do.

Supply chain management

Supply chain management is the management of the flow of goods and services and includes all processes that transform raw materials into final products. It involves the active streamlining of a

business's supply-side activities to maximize customer value and gain a competitive advantage in the marketplace.

SCM represents an effort by suppliers to develop and implement supply chains that are as efficient and economical as possible. Supply chains cover everything from production to product development to the information systems needed to direct these undertakings.

Importance of Supply Chain Management

It is well known that supply chain management is an integral part of most businesses and is essential to company success and customer satisfaction.

1. Boost Customer Service

- Customers expect the correct product assortment and quantity to be delivered.
- Customers expect products to be available at the right location. (i.e., customer satisfaction diminishes if an auto repair shop does not have the necessary parts in stock and can't fix your car for an extra day or two).
- Right Delivery Time – Customers expect products to be delivered on time (i.e., customer satisfaction diminishes if pizza delivery is two hours late or Christmas presents are delivered on December 26).
- Right After Sale Support – Customers expect products to be serviced quickly. (i.e., customer satisfaction diminishes when a home furnace stops operating in the winter and repairs can't be made for days)

2. Reduce Operating Costs

- **Decreases Purchasing Cost** – Retailers depend on supply chains to quickly deliver expensive products to avoid holding costly inventories in stores any longer than necessary. For example, electronics stores require fast delivery of 60" flat-panel plasma HDTV's to avoid high inventory costs.
- **Decreases Production Cost** – Manufacturers depend on supply chains to reliably deliver materials to assembly plants to avoid material shortages that would shutdown production. For

example, an unexpected parts shipment delay that causes an auto assembly plant shutdown can cost $20,000 per minute and millions of dollars per day in lost wages.

- **Decreases Total Supply Chain Cost** – Manufacturers and retailers depend on supply chain managers to design networks that meet customer service goals at the least total cost. Efficient supply chains enable a firm to be more competitive in the market place. For example, Dell's revolutionary computer supply chain approach involved making each computer based on a specific customer order, then shipping the computer directly to the customer. As a result, Dell was able to avoid having large computer inventories sitting in warehouses and retail stores which saved millions of dollars. Also, Dell avoided carrying computer inventories that could become technologically obsolete as computer technology changed rapidly.

3. Improve Financial Position

- **Increases Profit Leverage** – Firms value supply chain managers because they help control and reduce supply chain costs. This can result in dramatic increases in firm profits. For instance, U.S. consumers eat 2.7 billion packages of cereal annually, so decreasing U.S. cereal supply chain costs just one cent per cereal box would result in $13 million dollars saved industry-wide as 13 billion boxes of cereal flowed through the improved supply chain over a five year period.

- **Decreases Fixed Assets** – Firms value supply chain managers because they decrease the use of large fixed assets such as plants, warehouses and transportation vehicles in the supply chain. If supply chain experts can redesign the network to properly serve U.S. customers from six warehouses rather than ten, the firm will avoid building four very expensive buildings.

- **Increases Cash Flow** – Firms value supply chain managers because they speed up product flows to customers. For example, if a firm can make and deliver a product to a customer in 10 days rather than 70 days, it can invoice the customer 60 days sooner.

Lesser known, is how supply chain management also plays a critical role in society. SCM knowledge and capabilities can be used to support medical missions, conduct disaster relief operations, and handle other types of emergencies.

Whether dealing with day-to-day product flows or dealing with an unexpected natural disaster, supply chain experts roll up their sleeves and get busy. They diagnose problems, creatively work around disruptions, and figure out how to move essential products to people in need as efficiently as possible.

Difference between logistics and supply chain management

It is important to remember that while the terms should not be used interchangeably, they do supplement each other. One process cannot exist without the other. Here are some key differences between the two terms that will help you keep from blurring the lines between them.

- Supply chain management is a way to link major business processes within and across companies into a high-performance business model that drives competitive advantage.
- Logistics refers to the movement, storage, and flow of goods, services and information inside and outside the organization.
- The main focus of supply chain is a competitive advantage, while the main focus of logistics is meeting customer requirements.
- Logistics is a term that has been around for a long time, emerging from its military roots, while supply chain management is a relatively new term.
- Logistics is an activity within the supply chain.