

## TOPIC 1: OVERVIEW OF BUSINESS LOGISTICS AND PLANNING

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### Topic Outcomes:

#### You should be able:

1. Define logistics
  2. Define activity mix in logistics business
  3. Determine the importance of business logistics
  4. Identify materials management
  5. Describe physical distribution
  6. Describe reverse logistics
  7. Identify activity mix
  8. Identify corporate and logistics planning
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### 1.1.1 LOGISTICS

- business planning framework for the management of material, service, information and capital flows. It includes the increasingly complex information, communication and control systems required in today's business environment. -- (Logistix Partners Oy, Helsinki, FI, 1996)
- the process of planning, implementing, and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements." Note that this definition includes inbound, outbound, internal, and external movements, and return of materials for environmental purposes. -- (Reference: Council of Logistics Management, <http://www.clm1.org/mission.html>, 12 Feb 98)

Table 1.1: Primary Logistics Activities

Primary Logistics Activities	Several Specific Activities
Transportation	<ul style="list-style-type: none"> <li>• Modes of Transport</li> <li>• Carrier Routing/ Scheduling</li> <li>• Shipment Size/ Consolidation</li> </ul>
Inventory	<ul style="list-style-type: none"> <li>• Inventory Level</li> </ul>

	<ul style="list-style-type: none"> <li>• Deployment of Inventories</li> <li>• Control Methods</li> </ul>
Location	<ul style="list-style-type: none"> <li>• Number, Size and Location of Facilities</li> <li>• Assignment of Stocking Points to Sourcing Points</li> <li>• Assignment of Demand to Stocking Points to Sourcing Points</li> <li>• Private/ Public Warehousing</li> </ul>

### 1.1.2 BUSINESS LOGISTICS: ACITIVITY MIX

Historically, goods that people want could not be accessible to other places or time because no well developed transportation and storage systems exist. So, the availability of the goods is restricted to the particular season or place of production. This will force people to live nearby to the source of production and consume a rather narrow of goods.

Though not all countries enjoyed the development of good logistics system but in general the logistics system has improved. This has led to the geographically separation of place of production and consumption. Places where goods are produced would produce higher level of goods and then distribute it to other places efficiently and economically.

For many years, individuals have carried out logistics activities followed by the business sectors. In recent years, there is a need for coordinated effort on the logistics activities for organization to be effective, efficient and cost savings. Now, most logistics activities are carried out by small, medium and large scale businesses and even to the international level.

Business logistics is also sometime known as physical distribution, materials management, transportation management and supply chain management. Activities involved in business logistics are:

- a. Transportation
- b. Inventory management
- c. Order processing
- d. Purchasing
- e. Warehousing
- f. Materials handling
- g. Packaging
- h. Customer service standards and
- i. Product scheduling

All or parts of the activities are being managed by the organization's logistician.

To achieve a successful coordination of the business logistics activities, it requires an effective and efficient management. Therefore, the need to manage these activities requires planning, organizing and controlling the logistics activities.

### **1.1.3 IMPORTANCE OF BUSINESS LOGISTICS**

An efficient system will ensure a good delivery of product to the place (where) and time (when) requested by consumers. This will create satisfaction among the consumers. Imagine a product is not available or is inadequate when a customer wants it, this will create dissatisfaction and will affect the good relationship between the seller and the buyer. Customer's satisfaction is an important factor to sustain customers long term purchasing. Ensuring the when (time) and where (place) will add value to logistics.

Therefore, each activity in the supply chain is viewed important as each process add value to logistics. There are few reasons for the importance of logistics which are the significant of costs, the length of supply and distribution lines, strategic role, customer value and customer wants.

The following are reasons for the importance of logistics:

a. Cost

It is well documented that among the most significant costs in most firms are logistic costs. This is true if logistics is not well planned and managed. Value to the customers and firms in term of quick delivery and cost savings will be value added to the logistics activities. Thus, the savings from minimizing costs could then benefit customers and company's shareholders.

b. Length of Supply and Distribution Lines

Firms are seeking or developing global strategies, whereby:

- i. Products are designed for a world market; or
- ii. Products are produced where the cost of raw materials, components and labour are lower; or
- iii. Products are produced locally but sold internationally.

This definitely will stretch the distribution lines compared to the products which are sold to local market only. Therefore, logistics plays an importance role as more cost will be incurred especially the transportation costs.

c. Strategic Role

As business logistics are capable of lowering a significant portion of the costs incurred by the organization, its role is now more prevalence in the strategic planning of the organization.

d. Customer Value

When the product requested reach the buyers at the time and place specified by the buyers, value will be created. There are four types of value in products or services. These are form, time and possession. Logistics will create two out of four values, which are time and place values in products mainly through transportation.

e. Customer Wants

Customer has needs and wants.

Needs refer to basic needs of human kind but wants are shaped by culture and changing environment.

## 1.2 SUPPLY CHAIN MANAGEMENT

Supply chain management is referring to the management of interaction and coordination of the upstream and downstream value-added flows of materials, final goods and related information among suppliers, the company, resellers and final consumers.

An upstream value-added flow is known as materials management

The downstream value-added flow is known as physical distribution

Another flow, which is also important in the whole flow process, is the reverse distribution

An important element in supply chain management is the strategic partnership among all members involved in the whole flow process.

### 1.2.1 MATERIAL MANAGEMENT

The thrust of materials management is towards the operating system such as manufacturing production line in terms of schedule for production or operations. Therefore, the operations of the firm are integral in materials management.

The needs of the production line or operating systems are translated into purchase orders. The important logistical information in the purchase order is quantity to be shipped, delivery destination and requested delivery date. Delivery might be handled by the supplier or the buyer depending on the purchase terms, Once the shipment or goods reached the destination, it is inspected for quality and then placed in inventory until it is needed in operations.

The primary materials management activities are:

- a. Transportation
- b. Inventory management
- c. Order processing

However, there are other supporting activities such as:

- a. Acquisition
- b. Protective packaging
- c. Warehousing
- d. Materials handling
- e. Information maintenance

### **1.2.2 PHYSICAL DISTRIBUTION**

Physical distribution is also called marketing logistics. It involves planning, implementing and controlling the physical flow of goods, services and related information from the points of origin to the points of consumption in order to meet customer requirements at a profit. Physical distribution is primarily concerned with finished and semi finished goods that a company produces and are usually on offer for sale.

From the time production is completed until the buyer takes possession of them, the goods are under the responsibility of the logistician. He may retain them at the plant warehouse or ship them to a field warehouse or ship them directly to a customer. Among the task that the logistician must carry out is whether he can provide the availability of the product to customers as they desire it and whether this can be done at a reasonable cost.

The logistician can arrange the distribution strategically through:

- a. Direct shipments from plant inventories; or
- b. Direct shipment from vendors
- c. The production line or shipment through the warehousing systems.

Direct shipment usually involves large quantities as the transportation cost will be lower. For smaller quantities, an alternative strategy is to supply it through the warehousing system. This would reduce the costs of transportation and increase level of customer service.

### 1.2.3 REVERSE LOGISTICS

**Reverse logistics** stands for all operations related to the reuse of products and materials. It is "the process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal. More precisely, reverse logistics is the process of moving goods from their typical final destination for the purpose of capturing value, or proper disposal. Remanufacturing and refurbishing activities also may be included in the definition of reverse logistics."The reverse logistics process includes the management and the sale of surplus as well as returned equipment and machines from the hardware leasing business. Normally, logistics deal with events that bring the product towards the customer. In the case of reverse logistics, the resource goes at least one step back in the supply chain. For instance, goods move from the customer to the distributor or to the manufacturer.

Product sent to customers might be returned by the customer if a wrong product is delivered, damaged, broken, unwanted, access for simply that the customer changes his mind. Therefore, procedures and arrangements for the products to be returned from customers' locations must be established. Similar arrangement must be conducted for product that becomes obsolete while in stock in order to be disposed of or returned to the plant for rework.

Let's look at an example; a manufacturer produces product A which moves through the supply chain network reaching the distributor or customer. Any process or management after the sale of product A involves Reverse Logistics. If product A happened to be defective the customer would return the product. The manufacturing firm would then have to organize shipping of the defective product, testing the product, dismantling, repairing, recycling or disposing the product. Product A will travel in reverse through the supply chain network in order to retain any use from the defective product. This is what reverse logistics is about.

### 1.2.4 THE ACTIVITY MIX

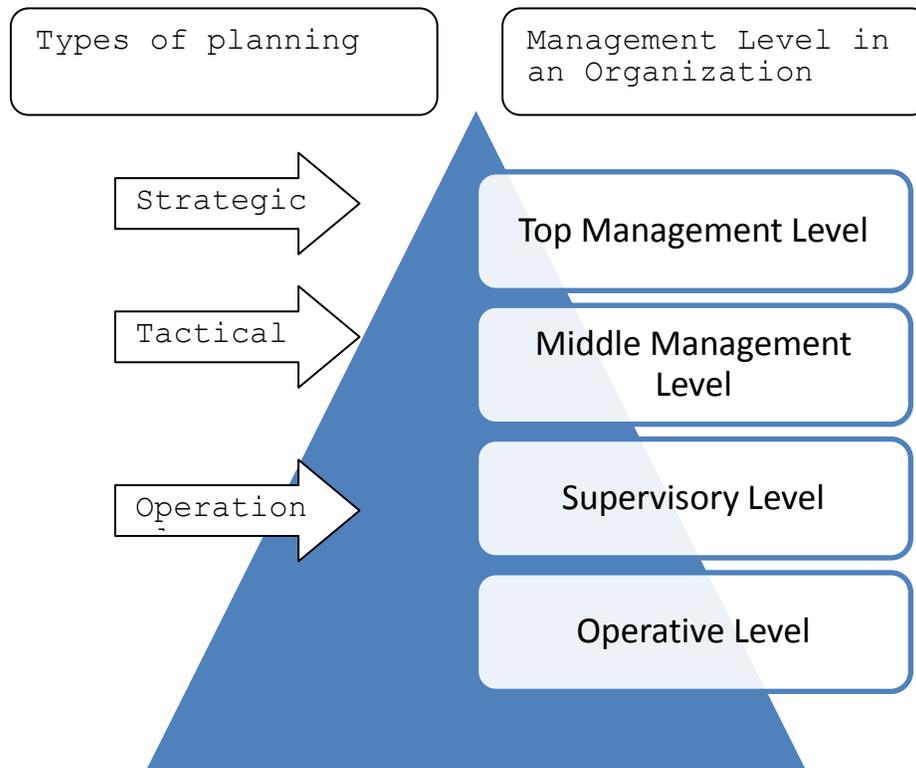
The activities to be managed that make up business logistics (supply chain management) vary from firm to firm, depending on a firm's particular organizational structure, management's honest differences of opinion about what constitutes logistics, and the importance of individual activities to its operations. There are various components or activities involved in business logistics. These activities are divided into key activities and support activities are shown below:

<b>Key Activities</b>	<b>Support Activities</b>
Customer Service Standards	Warehousing
Transportation	Material Handling
Inventory Management	Purchasing
Information Flows and Order Processing	Protective Packaging
	Cooperative with Production / Operations to Information Maintenance

Key and support activities are separated because certain activities will generally take place in every logistics channel, whereas others will take place depending on the circumstances within a particular firm. The key activities make up the critical loop either contributes most to the total cost of logistics or essential to the effectiveness coordination and completion of the logistic task.

### 1.2.5 CORPORATE AND LOGISTICS PLANNING

The broad and general statement that addresses the customers, suppliers, competitors and company makes up the corporate strategy. It serves as the plan of where the firm is going and how to get there. Mission statement is formulated to indicate its purpose of existence. This is called the corporate strategy. This is later converted into strategy, tactical and operational statement at different level in the organization.



Types of planning at different management levels

Each type of planning has different time frame. For example:

- a. Mission is long term
- b. Strategy is longer than one year
- c. Tactical usually less than a year
- d. Operational is short range with decisions made frequently

The type of information required also differs. The information for strategy is often incomplete and imprecise. Data may be average. An accurate data is required for the

operational level. For example, it is planned that all inventories do not exceed a certain amount but at an operational level, inventories are managed individually.

It has been suggested that a logistics strategy has three objectives:

- i. Cost reduction
- ii. Capital reduction
- iii. Service improvement through its major planning areas in customer service goals, facility location strategy, inventory decision and transport strategy of logistics.