

LOGISTICS & SUPPLY CHAIN MANAGEMENT

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Abstract : Supply chain management (SCM) is "the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole." [2] It has also been defined as the "design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally.

Global business is becoming ever more reliant on logistics and supply chain management in order to keep pace with the demands of an increasingly global economy. This is why business leaders acknowledge that the supply chain can be a value creator and a source of competitive advantage.

Logistics is the term widely used in business for the range of activities associated with the movement, storage and handling of materials. The management of logistics has been revolutionised over the past 30 years and has come to be regarded as a key determinant of business competitiveness. Companies have substantially improved their performance not only by overhauling their internal logistics, but also by managing more effectively their external links with suppliers. This has become known as supply chain management. These developments have created a healthy demand for well-qualified logistics and supply chain managers in most sectors of the economy.

Over the past few years there has been confusion and disagreement among general business practitioners and operations professionals concerning the terms "logistics" and "supply chain management". Various formal definitions have been offered for both terms. In addition, the common usage of each term in industry varies. Business terms are often defined over time, by the common use or application of the term. Examines the historical definitions of both terms, looks at current practitioner views of the terms, and proposes a hierarchy for the relationship between logistics and supply chain management.

INTRODUCTION

Concept of Logistics Logistics is a supply chain enabler coordinating the inventory movement process by optimizing the flow of materials and supplies through the business operations to finally reaching to the customers. Logistics is concerned with getting products and services wherever they are needed, whenever they are required. It is rather difficult to visualize marketing or manufacturing without logistics support.

Logistics is that part of the supply chain process which plans, implements and controls the effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption, in order to meet customer's requirements.

≠ Logistics management is the governance of supply chain functions. Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management,

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supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes customer service, sourcing and procurement, production planning and scheduling, packaging and assembly. Logistics management is part of all levels of planning and execution - - strategic, operational and tactical. It is an integrating function, which coordinates all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology.

Functions of logistics:

Order processing

Order processing, with the support of various procedures, forms the basis of all logistics activities at a company. This makes it a crucial factor in logistics operations

.Warehouse

Warehouses serve as vital hubs in the flow of goods within a logistics system. They are responsible for efficient storage and supply as well as rerouting of goods.

Inventories

A warehouse is a valuable facility for a company only when it is put to effective use. This requirement leads to the question about the optimal level of inventories in a warehouse.

Packaging

Optimal packaging of a product is a critically important factor in logistics. It serves as a protective layer, a source of information and a prerequisite for efficient and safe storage and rapid transport.

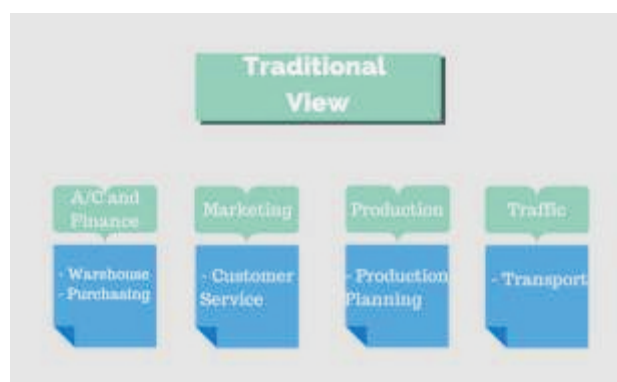
Transport

Goods should be moved from Point A to Point B as efficiently as possible. The specific strengths and weaknesses of each means of transportation within a freight-transport system must be weighed and possibly linked.

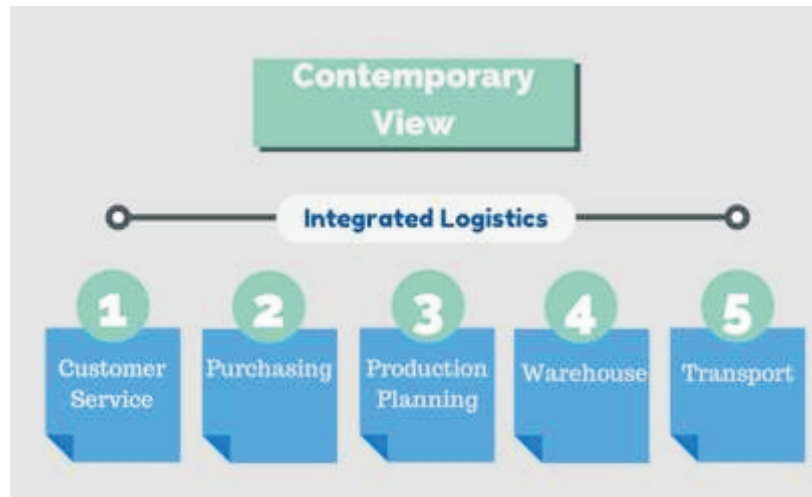
Logistics has its root from the military activities associated with moving troops into the battlefield. Later, the application has moved into business field. One of the most confusing thing is the difference between logistics and supply chain management. Lummus et al 2001 made a clear distinction between both terms in the article named

The logistics involves planning, implementing and controlling efficient, effective flow and storage of goods and services from the beginning point of external origin to the company and from the company to the point of consumption for the purpose of conforming to customer requirements. Logistics is generally viewed as within one company, although it manages flow between company and its suppliers and customers. Supply chain management includes logistics flows, the customer order management and production processes and information flows necessary to monitor all activities at the supply chain nodes.

Traditional view of many organizations is modeled after the military organizations where many players are under the command of a leader. Then, many related tasks have to be performed by different people from different function. Doing this way, coordination among each function is not effective because each function considers only their own objectives.



Modern logistics are now pay attention to more integrated process under the same unit to formulate more productive workflow.



Supply Chain Management Concept

SCM concept can trace back to the intense competition in textile industry worldwide. Prominent figure in US apparel industry formed the “Crafted with Pride in the USA Council” in 1984 (then become Kurt Salmon Associates in 1993). They were commissioned to conduct the analysis. The results revealed that total lead-time in apparel industry took 66 weeks long from raw material to consumer; 40 weeks were spent in the warehouse or in transit. So, Quick Response strategy (QR) has emerged to make suppliers and retailers works together to shorten lead-time.

In 1993, group of grocery industry leaders formed a task force to examine grocery industry (ECR Working Group). They identified best practices and take an implementation of SCM concept into action. They projected an overall reduction in pipeline inventory of 37 percent (Lummus, Krumwiede and Vokurka 2001)

According to APICS Dictionary, Supply Chain is

"The global network used to deliver products and services from raw materials to end customers through an engineered flow of information, physical distribution, and cash". Simple structure of supply chain network can be depicted as below,



SCM covers lots of activities to plan, implement and control products from point of origin to point of consumption. Each researcher defines SCM differently. Johnson and Pyke (2000) then compiled the contents taught in many management and engineering schools then develop a framework for Supply Chain Education consists of 12 components as following,

- 1) Location strategy considers how to choose facility location quantitatively and qualitatively. Decision at this point has the impact on the structure of Supply Chain which includes transportation cost at particular location, government incentives or promotion of foreign investment, taxes & duties and country differences. Then strategy will be more tactical.
- 2) Transportation and logistics includes all aspects of material flows through the supply chain including issues in transportation and warehousing such as vehicle routing, fleet management and material handling.
- 3) Inventory and forecasting includes various techniques used to develop the good forecasting models for both existing and new product forecasting. Reducing inventory cost by providing right amount of stock level is the basic concept that can lead to more understanding about other issues.
- 4) Marketing and channel restructuring explores fundamental structure and the use of relationship management to enhance the coordination among each members. This area encompasses mainly the activities from manufacturers to end customers.
- 5) Sourcing and supplier management pays much attention to determine source of products, whether they should be produced internally or bought from vendors. Managing supplier networks can prevent raw material shortage, material quality problem and delivery reliability.
- 6) Information and electronic mediated environments addresses application of information technology in many aspects such as to reduce inventory, to better communication between trading partners, integrated software system (ERP, MRP, WMS) and electronic commerce.
- 7) Product design and product development handles the method used to design the new products and how to introduce them to customers successfully.
- 8) Service and after sales support deals with the tasks to provide support, spare parts and repair service after the purchase of customers. This area helps to retain customers.
- 9) Reverse logistics and green supply chain examine the best way to return products back to a manufacturers to repair, reuse, recondition and disposal. Information obtained from returned products will help makers to diagnose production problem to avoid possible defects. Environment related issues are also determined.
- 10) Outsourcing and strategic alliances consider what kind of activities we should ask specialists to handle and how to create a firm relationship with service providers. Outsourcing is the great way to reduce capital investment because important assets will be shared.
- 11) Metrics and incentives control the business performance between trading partners to ensure that every members do their best to provide products and services to customers. Economic incentives from performance compliance will be explored as well.
- 12) Global issues and global supply chain examine how well each company operates in multiple countries.

Conclusions:

A number of conclusions can be drawn from observing product flow management at the present time. Clearly, excitement and focus are directed toward supply chain management. First, we can say the supply chain management is concerned with realizing the opportunities from integrated management of product flow processes across functions and between channel members. Although the idea is potent and the benefits obvious, the notion of lowering costs by including more of a system in decision making is not new. It was at least embodied in the systems approach promoted by operations researchers in the 1940s and 1950s.

Second, logistics is now being viewed as a subset of supply chain management. The scope of logistics is being limited to the boundaries of the function within a firm and is primarily concerned with activity administration, which was not the early view. Interfunctional and interorganizational management seem to be within the purview of supply chain management rather than logistics. Logistics, as an identifying name, supersedes physical distribution.

Third, purchasing and production are now included within the scope of supply chain management. As a result, SCM is responsible for 70 to 80% of the cost of sales for many firms.

Fourth, so many functional areas of the firm are embracing supply chain management that it is in danger of becoming so broad that it loses its identity and focus. Some limitations and organizational subdividing may occur.

Fifth, although supply chain management promotes coordination, integration, relationship building, and collaboration throughout the entire supply channel, SCM currently takes place to a very limited degree. The most likely place for SCM to occur is between the firm and its first-tier suppliers. Currently, SCM is practiced as logistics and not the broad, theoretical scope envisioned for it. Perhaps managers will begin to practice SCM when its benefits are better documented and measured, and the techniques and tools needed to achieve the benefits are refined.

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Supply chain management is an exciting and important area of study. Specialist companies like Exel are able to save the world's leading businesses large amounts of money, time and effort by creating an effective supply chain. Next time you see a new VW Beetle you will be better able to appreciate that the high quality of the product and its value for money are not only a result of high quality design and engineering, but also a direct result of lean production, just-in-time methods and premium supply chain management.