

Key logistics activities and technologies related to logistics

[Technology](#)



Introduction Logistics play a major role in our life. Most of the people might not be aware of the importance of logistics until there are problems appear. Under the pressure of arising competitive environment, most of the business entities are initiated to focus on the development of logistics. Logistics can be said as the transfers of goods and services from the point of origin to the point of consumptions effectively and efficiently in order to meet the requirement of the customers (Logistics World, n. d.). Logistics include the distributions of raw materials, in-progress inventories, finished goods and other related information.

Successful logistics enable the business entities to deliver the goods and services consistently to the correct customers on time. Based on the question given, I do not agree with the statements saying that ' logistics is nothing more than getting goods from one point to another'. Logistics covered much more aspects and involved a lot other activities other than what the statement above mentioned. There are still many different types of activities in logistics such as customer services, inventory management, material handling and packaging, order processing, procurement and et cetera.

On the other hand, in order to improve the effectiveness and efficiency of logistics management, a variety of solutions and technology advancements had been introduced to the business market. The literature below will review the other activities and the technologies improvement for logistics (Stock & Lambert, 2000). Key logistics activities One of the activities involved in logistics is the customer service. Stock & Lambert (2000) stated customer service is " a customer oriented philosophy that integrates and manages all

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elements of the customer interface within a predetermined optimum cost-service mix" (p. 4). To design a logistics system, companies should always start with setting a strong and clear customer service objective. Without having a common objective for everyone in the company, decisions about order strategies, production, transportation, inventory investment, and warehousing will not be consistent and effective. Customer service objective acts as guidelines for the logistics managers in setting up targets of their performance as well as making decisions when they encounter problems in the future.

Logistics play an important role in ensuring high customer satisfaction. Getting the right product to the customers under the right condition, at the right place and the right time, as well as with the right cost are the main criteria for achieving a high customer satisfaction (Stock & Lambert, 2000). For example, Kraft Foods Incorporate make sure their customers get the right products they ordered at the right time and right place regardless of whether the customers are at the hypermarket in France or a cafe in Sweden (Kraft Foods, n. .). Other that the five rights, excellent customer services also need to make sure the order and return processes are convenient to customers. The company needs to provide accurate and consistent information to customer by selling the products and services that are worth for the price. Lastly, they need to deliver the products and services on time. By providing the best customer service and fulfilling all the five ' right' criteria, company will be able create higher customer satisfaction and therefore gaining competitive advantage.

When customers are satisfied with the products and services provided by company, they will most likely become the loyal customers and support the products and services from the company in long term scenario (Stock & Lambert, 2000). Besides that, Banning & Gibson indicate loyal customers can act as one of the advertising medium by conveying positive messages and comments to their friends and family (Banning & Gibson, n. d.). In that way, the market share and profitability of the company will increase and at the same time the total costs of logistics also will reduce.

Other than that, inventory management is also one of the activities under logistics. In the industries now, most of the company will hold inventory to achieve economies of scale. Company usually purchase and transport all inventory at once to reduce their cost. This is because purchase in a huge amount will reduce the cost of per-unit price while having a full truckload shipment will reduce the cost of per-unit transportation. Then, company will also choose to have a greater plant capacity so that the per-unit manufacturing cost will be lower.

However, holding inventory contributed a significant amount of expenses to the companies due to high storage costs, capital cost, service cost, risk cost, and some of the product can be obsolescence in short time. Therefore, the company might try to minimize the expenses by reducing the amount of inventory without interrupting the flow of the products to the customers. Since there is conflict between economies of scale with handling and warehousing costs, companies need to find a suitable way to balance of these two criteria.

For instances, company can use Economic Order Quantity (EOQ) to determine the best amount of inventory to order (Stock & Lambert, 2000). The objective of every inventory planner is controlling the inventory they hold to meet the exact amount of customers' demand. This is because either excess or shortage of inventory will bring up significant costs to the business affecting the operation and opportunities of the business (Management Study Guide, n. d.). In addition to that, raw materials and parts, work-in-process, and finished goods inventories are required to be considered.

These inventories require sufficient physical space, capital, and personnel time to maintain and pile up. A successful inventory management will determine the amount of inventory necessitate to meet the demand of customers and at the same time consider the costs needed to put in the logistic activities. Besides that, excellent inventory management can increase the cash flow and return on investment. Nowadays, many companies start paying more attention to inventory control especially on the products that can become obsolete in short time, such as high-tech merchandise, automobiles, and seasonal goods (Stock & Lambert, 2000).

For example, in April 2005, Mazda Motor Corporation comes out with its Mazda Materials Management Planning (M3P) which is an inventory control system. The system of M3P improved inventory levels, enhanced the speed of supply, and ensure the Mazda's retail and service operations are smooth all the time. Other than that, M3P also brings benefits to customer such as providing better customer service and shorten the length of responding time (Mazda, 2005). Furthermore, logistics need to take care of the material handling and packaging in the company.

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Material handling takes part in managing the flow of raw materials, in-process inventory, and finished goods inside a warehouse. The costs of firm will increase for each and every item handled. Since handling the item will not increase the value of a product but incur more costs to the company, company should always try to reduce the number of material handling wherever possible by decreasing the inventory. Then, materials handling design the plan to reduce distance travelled of the materials and minimize the work-in-process of the materials.

Other than that, material handling makes sure the materials can flow through the process consistently without having troubles. Lastly, material handling will find ways to decrease the possibility of getting losses from breakage, waste and spoilage (Stock & Lambert, 2000). On the other hand, packaging is the process of getting the container and wrapper to hold the products (Reference for Business, n. d.). In logistics aspect, packaging of the products can act as a barrier to prevent the products from getting damaged during transportation of the products or storing the products.

Furthermore, product with appropriate packaging is easier to be move or store. However, packaging will add up space and weights subsequently incur more cost. Thus, many people in this area always spend time in thinking ways to reduce to space and weight of the products after packaging (Stock & Lambert, 2000). A successful packaging strategy can help a firm to strengthen its competitive advantages such as optimizes service, cost, and become more convenient (Learn Marketing, n. d.). When a product go international, the packaging will becomes more important to a company.

The products are required to travel more distances and need more physically handling if compare to domestic packaging (Stock & Lambert, 2000). Additionally, order processing is taken to account when discussing about the activities of logistics. Order processing is the process or work flow that starts with the receipt order from customer, followed by verifying the order status and communicate about the order with customer, while lastly making order and ensure the availability of the products to satisfy customer's needs (Jetef, n. d.). Order processing can divide into three groups.

The first group is the operational elements, including order shipping, setting preparation, order entry, scheduling, and invoicing. Next group is the communication elements, for example, order status inquiries, order modification, error correction, tracing and expediting, and product information requests. The last group of order processing is the credit and collection elements, such as accounts receivable processing and credit checking. The quality and speed of the information flow provided by company during the order processing to their customers can affect the cost and the efficiency of the entire operation.

If the information flows are slow and erratic, the company will not only suffer from decreasing in customer, but also increasing transportation, inventory, and warehousing costs. The faster and more accurate the service the company can provide, the greater the customers satisfaction obtained by the company. Information system today can help in order processing by making the time of order processing to become shorter between order placement and product shipment. For example, customers' order can be placed and

sent to the company's computer directly by using electronic data interchange (EDI).

Decision support system (DSS), quick response (QR), efficient consumer response (ECR) and et cetera are other information system that can help the company to improve order processing and achieve customer service goals at competitive cost. Information system not only helps company to improve its speed, quality, and accuracy of order processing, but also help company to save some logistics expenses like transportation and inventory while boosting up the sales (Stock & Lambert, 2000). Finally, the last activity of logistics that this literature will discuss is procurement.

Procurement is the effective purchasing of goods and services to make sure the manufacturing and logistics processes of the firm are run in effectiveness. In order for the company to ensure them to obtain the supplies that can meet their requirement in terms of time, location, quality and quantity, the company is required to procure suitable goods and services (Procurement, n. d.). The procurement function includes supplier selection, determination of the form of material to acquire, purchasing time, pricing and quality control.

According to WiseGEEK, while " procurement logistics are the processes used in the delivery, receipt, movement and storage of materials purchased for a business or organization". The goals of procurement are to minimize the costs at the same time increase the service provided (WiseGEEK, n. d.). In the purchasing process, the most important task is to choose the best supplier from all the potential vendors. The purchasing process is complicated. Decision makers and decision influencers from decision making <https://assignbuster.com/key-logistics-activities-and-technologies-related-to-logistics/>

unit (DMU) need to go through twelve steps of buying process when purchasing items from supplier.

If company is doing routine buying, then some of the steps can be skipped (Stock & Lambert, 2000). When making purchasing decision, DMU also need to consider the number of orders, lead time requirements, delivery expectations, product reliability, drop-off locations and others. All of the final price of products should be including transportation and storage cost. Company can usually try to minimize these hidden costs by requesting just-in-time delivery from supplier (WiseGEEK, n. d.). In short, paying enough attention o the management of purchasing cost as well as the evaluation of purchasing performance can lead to increasing profitability of a company (Stock & Lambert, 2000). Technologies related to logistics Due to an increase in attention paid on the logistics, experts started to develop more and more ways to improve the effectiveness and efficiency of logistics through acquiring the technologies. One of the most significant improvements made by technology is the Electronic Data Interchange (EDI) (Stock & Lambert, 2000).

EDI is the exchange of business messages and information through computers of the trading partners via communication cables with standard protocols and standard data formats (EasyLink Services, n. d.). For example, EDI can be used when there are purchase orders. Organizations are able to make a purchase order with their suppliers through computers. EDI is more convenient for the organizations as the usage of internet are more and more common (Stock & Lambert, 2000). According to GXS, there are a few advantages of using EDI in logistics.

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EDI will transform most of the paper works into electronic base. Many of the procedures can be done automatically and quickly through the advancement of technologies. Therefore, the time taken to complete the process will be reduced significantly. It promotes the efficiency of the organizations which leads to the increase of productivity. Besides, EDI replaced human to key in the data of the organizations routinely. When there are less human works, the probability of getting error in data entry will be reduced drastically or even eradicated.

Furthermore, the data transferred among the computers are using the standard and same formats. This ensures that the data transferred to the receivers will be analyzed accurately and correctly. Thus, the communication error between the sender and receiver is diminished. The diminished in error will subsequently raise the efficiency of the organizations as well since there are less likely for the organizations to repeat the procedures and make corrections on the mistakes (GXS, n. d.).

In addition to that, EDI can also increase the accuracy of inventory and reduce the cycle time and thus reduce the cost of inventory. In such, EDI increases the productivity while reducing the costs as well. With the development of the internet, EDI is free if it flows through the internet instead of VAN. Many major companies such as NASA Goddard, UNISYS and AVEX Electronics are now using EDI supported by the internet (Stock & Lambert, 2000). Bar coding is another technology advancement that contributes to the improvement of logistics.

Bar coding are commonly use in our daily life such as the products in supermarket. Bar codes are a row of parallel bars distanced with a number of <https://assignbuster.com/key-logistics-activities-and-technologies-related-to-logistics/>

gaps with different width. They are able to convey different messages in the form of letters, numbers and special characters based on the array of gaps between the bars. A beam of light is used to interpret the information of the bar codes and sent it to the computers. These codes are used mainly on tracking and security purposes. They are important in decreasing the probability of errors compare to key in the information manually.

Statistics showed that the bar codes error rate is one out of hundred thousand while the error rate of manually key in data is one out of thirty. It had clearly showed that the error rate had been improved significantly (Stock & Lambert, 2000). In relation to the bar codes, as said by Lyne, Quick Respond (QR) codes from Japan are also introduced to the society. QR codes is a two dimensional barcodes that normally stored with specific links contained with extra information. QR codes are named because it can be scanned quickly even with the smart phones that installed with QR codes reader.

It is convenient for the consumers to obtain certain information about the products since it does not required a specific code reader device just like that bar code reader. Furthermore, QR codes able to store more variety of information instead of letters, numbers and special characters only such as url links and geo coordinates. QR codes are enable the customer to know about the product details, contact details, coupons or event a link to YouTube video for further information (Lyne, 2009).

For instance, the product code, manufacturing history, expiration date and other data can be encoded in the QR codes. Coca-cola had used this feature in their logistics management at Chukyo. They are able to check for the <https://assignbuster.com/key-logistics-activities-and-technologies-related-to-logistics/>

quality and track the products easily using QR codes (Sundaramurthy, n. d.). Management Information System (MIS) is also one of the technologies used to improve logistics. A successful MIS is able to provide sufficient and relevant information for the managers in order to make an effective decision. There are five areas that MIS need to fulfil which are the timing, accuracy, relevance, completeness and consistency (Office of the Comptroller of Currency, 1995). MIS should be able to provide the latest and current information using the shortest time. The information collected should be checked by auditors as well as ensuring the information is useful. Unwanted information need to be filtered and the relevant information need to be summarize completely. Lastly, the method in processing and compiling the information need to be consistent so that the manager will not misunderstand the information.

MIS is important in logistics for collecting, analyzing and interpreting the information from various aspects such as the suppliers, resources, transportation and so on. MIS can make sure there is no interruption in the supply chain. A well managed MIS allowed the organizations to control every detail in different region in a faster time (Stock & Lambert, 2000). In real example, WorldHealthOrganization need to have an uninterrupted supply of drugs through the supply chain to ensure the increasing number of HIV/AIDS patients are able to get their treatment (World Health Organization, n. d.).