

Logistics

[Business](#), [Company](#)



Logistics

Logistics is a broad term used to refer to the strategic coordination, and smooth flow of goods, services, information and other resources, with people included between production origin and consumption point i. e. transportation, distribution and management. All the above activities are done with the main aim of meeting the expectations of people in need of the goods. For effective logistics to take place there must be reliable transport system, proper inventory services, enough warehousing facilities and packaging facilities.

Logistics roots can be traced back to ancient times when militaries need to supply themselves with arms, and other necessary supplies were high. This was necessary as they went on with their normal practices of moving from one base to another. Therefore, the modern logistics practices are attributed to those early logistics practices. Logistics as a profession has therefore continued to grow and now, many branches of logistics can be distinctively pointed out, these branches include military logistics, business logistics, space logistics, and production logistics among many others ([http://www.alaa.org/tc/sl/indexfiles/SLTCpage0009.htm\(spacelog\)](http://www.alaa.org/tc/sl/indexfiles/SLTCpage0009.htm(spacelog))). Military logistics, as already stated above deals with the movement of arms and other materials from one military base to another. Business logistics on the hand deals with the movement of goods in the required amount, to the required place, in required state and for the set prices. Another branch of logistics is production logistics. This deals with the facilitation of raw materials in required amounts to the right machine at the right time.

All the above examples of logistics seek to add weight to the previous definition of logistics. Therefore, it can be mutually agreed that logistics seeks to place an item or a resource where it is needed in the required quantity and quality and in good time, in simple terms logistics is the timely positioning of resources, and as such, seeks to create human systems.

Due to its paramount utility to the wellbeing of people, logistics therefore needs to be managed so that all the relevant aspects and elements are in harmony and a smooth flow of events guaranteed. Logistics management as it is referred is therefore the planning, implementing, and controlling of the smooth, effective forward and backward flow of goods and services between places of origin and places of destination with the chief objective of meeting customers requirements. It is in light of this information that professionals known as logisticians are engaged in to oversee the due process of logistics (timely placing of resources). Due to the sophisticated nature of the science of logistics, bodies and international organizations have been duly formed to oversee the deliberate process of training of potential logisticians. Some of these bodies include the American Production and inventory control society (APICS) headquartered in Chicago, Illinois, the chartered institute of logistics and transport (CILT) of the United Kingdom. Moreover, for efficient management of logistics practices different departments were created. These departments include, container department, conventional department, warehousing department, marine engineering department, heavy haulage department among many others.

For the management of logistics to remain steadfast in respect to the changing world of technology, logistics management software was created. This software, which is mainly used in logistics automation, helps in automating the general logistics system i. e. flow of goods and services as well as the smooth management of the entire system. However, there are no set rules as to how this software system should be applied in the workflow.

Nevertheless, companies have continued to use this service for ease of workflow. As seen above logistics have different departments and as such therefore, each department has its own software system e. g. warehousing software, containerization software etc.

The start, growth, and expansion of FedEx logistics (selected topic)

With the detailed account about logistics, it is now time to take a few cases of logistics companies, which offer logistics services to the different parts of the world. These companies range from national based ones to internationally recognized ones. The internationally recognized companies include, DHL, TNT, UPS, BAX Global and FedEx among many others. To obtain an insightful knowledge about these logistics companies it is wise to pick one company as a representative of the others since their mode of operation is relatively similar. In this case, FedEx Corporation will be considered.

Fredrick W. Smith a descendant of a transport-oriented family founded FedEx, headquartered in Memphis, Tennessee, United States in 1971. The transport business was deep inside the heart of Smith and therefore with a paltry monetary inheritance from his father plus help from Capitalists Corporation

he sole handedly started the company. Initially business was not very brisk especially with the monopolies awarded to postal companies for delivering packages a thing that was compounded by strict regulations by airline regulations on the size of aircrafts they could mange and fly. The initial name Federal Express may seem confusing as to whether this was a private owned company or a public corporation. However, informed sources claim that the company adopted the name to bring out a national appeal in the logistics market of the time.

Initially the company offered service to over twenty-five U. S cities but with time it expanded greatly and now it commands a large market share of the US overnight freight. This is coordinated from its Memphis base and other bases across the World which includes Subic Bay in Philippines, Toronto Canada, Miami, Indianapolis among others. The company has since tested the sweeter and the bitter sides of the logistics world pill, with a significant flop witnessed back in 1986 when the company ventured into the offering of fax services to customers as a way of informing them on the progress of goods delivery. This service caused a huge loss and it was subsequently abolished as it was seen to be a commercial failure. However, business stabilized in the following years and in 1989, the company bought an international cargo airline known as flying tigers. Consequently, FedEx entered into a contract with the US military whereby they transported passengers between US and overseas military bases. Out of this contract, FedEx gained some business mileage and this resulted into the buying of another logistics company known as Caliber systems incorporated. This merger subsequently resulted to a new organization called FDX corporation,

ironically this name was less used, as “ FedEx” was popularly used instead, although unofficially. The company eventually adopted this name and the new identity was” FedEx corporation”

(<http://www.viual.com/resources/nl/novoz/artificial.asp>)

The growth of the company accelerated on a relatively high note with another acquisition witnessed in the year 2002 when FedEx acquired American freighters. This merger subsequently led to the creation of FedEx freight department that offered freight services within both US and overseas destinations. Another remarkable merger followed shortly in 2004 in the acquisition of Kinko, a Dallas based outlet that dealt with printing/copying services. This series of new mergers led to the inevitable expansion of its Indianapolis hub to help boost service delivery and efficiency ([http://www.fedex.com/us/about/today/history/-FedEx history](http://www.fedex.com/us/about/today/history/-FedEx%20history)).

On a sad note, the US Department of Internal Revenue Service in its hawk-eyed scrutiny of companies discovered that FedEx ground division might have been deceitfully evading full remittance of taxes. This they argued that FedEx secretly classified its operatives as independent contractors and thereby evading the payment of benefits to its employees who they classified as independent contractors a thing FedEx denied vehemently. Auditing procedures are underway and any positive results will see FedEx facing multiple legal challenges from its long roster of contractors. (<http://www.pittsburgh.tribune-review.com>, 2007-12-27).

FedEx has successfully cut itself a firm niche in the international logistics market by engaging a series of popular slogans, which includes the famous “absolutely, positively” referring to their overnight services. Another slogan going by “relax its FedEx” has helped to solidify the customers trust and confidence. Other slogans are, “don’t panic”, “whatever it takes” among many others. The entering in to a contract with United States Postal Services(USPS) has also helped to ease the flow of parcels, a thing which has solidified FedEx competitive advantage over its long time rivals which includes, TNT, UPS, and DHL among many others.

The above detailed analysis of FedEx subsequent growth and expansion has necessitated to the formation of units, which offer different logistical solutions world over. The first unit in this order is the FedEx freight, which can be claimed to be currently number three among US freight companies after YRC international, and Con-way. FedEx freight with its red logo color has small other divisions including, FedEx freight west, and east among others. Still in this category, is FedEx kinko, which has a blue logo color. Kinko’s formerly offered printing services when it was still an independent holding, and now an affiliate of FedEx continues to offer the same services on its two divisions. The roster of units is long and it has eight distinct units. The other six units are FedEx express (logo color orange), FedEx ground (logo color green), FedEx trade networks (logo color yellow), FedEx supply chain services (logo color platinum), and lastly FedEx custom critical (logo color blue) that deals with delivery of valuables, dangerous goods, perishable and other urgent services (<http://www.fedex.com/us/customersupport/customcritical/faq.services.html/>).

Following the current turbulent state of security prevailing since the beginning of an era of terrorism, no one is safe. Logistics companies have not been spared either, with a terrorist attack on a DHL plane that happened in Baghdad in 2003. This therefore served as a revelation, to logistics companies to invest in research services, to come up with a reliable protection plan for their fleets of planes. As such, FedEx was not left behind and because of its research in collaboration with security organizations such as the Homeland Security Department and Northrop Grumman, an anti-missile system (FXE Northrop Grumman Guardian) was developed. This gadget was fixed to a number of its aircrafts to beef up security protection measures on them ([http://www. aviationweek. com/aw/generic/story-generic. jsp? channel= awst&id= news/aw091806p3. xml](http://www.aviationweek.com/aw/generic/story-generic.jsp?channel=awst&id=news/aw091806p3.xml)).

FedEx being one of the successful companies in US is involved in the funding of political campaigns. According to a private research company (centre for responsive politics), FedEx have contributed over 20 million dollars since 1990, to both democrats and republicans. This pumping of campaign money has helped FedEx to successfully seal deals with USPS in delivering their overnight express mails. Again, through these political ties FedEx has managed to challenge International trade and tax policy debates (). FedEx has also been a regular sponsor of sporting activities ranging from car rally championships, building of basket ball and soccer pitches in US, among many other sport related sponsorships. FedEx has also participated in making of films with many films shot in FedEx facilities. These films includes, cast away, the Addams family and the king of queens among others.

The above detailed and chronological analysis of what was once a scratch of a company back in 1971 to the now famed international logistics company, has been expertly researched and written to offer a deep insight into the world of logistics and in particular FedEx logistics corporation. The paper offers a basic knowledge to readers about logistics and gradually expands this knowledge by tackling a case study on the topic of 'the history of the start, growth and expansion of FedEx logistics'. This topic has been carefully selected among many others due to its great significance to FedEx, in particular, and logistics in general as "we" succeed because of a careful scrutiny of our past and a focused approach to the future.

A life cycle cost analysis (LCCA)

A life cycle cost analysis (LCCA) is an economic analysis tool that allows one to assess different alternatives for a given project or asset. LCCA as such therefore is an insightful research and analysis on the total cost of a product from the manufacturer's plant (cradle, womb) up to the final user (grave, tomb). In other words, LCCA refers to the total cost of an asset or product whole life. It is also referred to 'cradle to grave' or 'womb to tomb' costs. The paramount objective of LCCA is to put into comparison the full cost of particular asset's life in relation to another. The 'life cycle' phrase here refers to the beginning of the life of an asset at the extraction of raw materials, to manufacture distribution, use, maintenance and lastly its subsequent disposal. All transport costs incurred in the asset's existence are also included. Therefore, the sum of the above costs is what is known as LCCA of an asset.

An example of LCCA in practice can be that of, two given freight trucks made by different companies. Truck A is an Isuzu while truck B is a TATA model. The market also known as initial price of these two trucks is very different, TATA is cheaper than Isuzu. When it comes to the maintainability of these trucks, TATA model tends to have high cost of maintenance than Isuzu. Therefore this high maintenance cost plus the initial cost when put under LCCA makes TATA model to be unreliable as compared to Isuzu. In the light of this example it is evident that the calculation of LCCA is based on two crucial costs i. e the buying (initial) cost and the maintenance (operation) costs. However there are many other costs which are incorporated into these two major categories these categories are often ignored due to their unpredictability in nature, in most cases they are estimated and put into the above two divisions of costs. These costs includes, energy and fuel costs, labor costs, transportation costs, losses incurred, improvisation costs, relocation costs, inspection, use and disposal costs among many others. (www.fhwa.dot.gov/infrastructure/asstmgmt/lcca.htm)

LCCA as an economic tool has the following benefits :(i) helps in decision making to reduce maintenance costs, (ii) facilitates option assessment when buying new assets, (iii) acts as a feed back into future purchasing of assets and also modifications, and (iv) facilitates comparison between two assets' actual costs. Therefore, the chief benefit of LCCA is that any cost that follows after an asset has been acquired such as maintenance, operation, and disposal are catered for during decision-making process. This has helped to bring in a theme of change as opposed to the previous cases whereby the

up-front costs of products were considered at the expense of the long term costs (<http://www.fhwa.dot.gov/infrastructure/asstmgmt/rc2101.cfm>).

Various system approaches to the computation of LCCA exist. These includes, (I) deterministic, (ii) probabilistic, (iii) consequential modeling, and (IV) attribution modeling. The choice of whichever approach depends on the LCCA of asset in question. However, the first two approaches are commonly used, in deterministic approach existing data of the real costs involved in the life of an asset is heavily relied upon whereas in probabilistic approach, predictions are made as to the possible costs to be incurred during the life of an asset. The main difference here is the way they address the different costs associated with LCCA. Traditionally deterministic approach has been widely used due to its flexibility and straightforward nature, it can be done with a mere calculator. Its main shortcomings are that it fails to address the concurrent differences in multiple costs and does not show the uncertainty associated with LCCA estimates. Probabilistic approach on the other hand is widely used nowadays due to its predictable nature. it is characterized by probability dynamics that shows the range of likely costs and their occurrence likelihood. This approach has also been made popular due to the increase in computer processing capabilities

LCCA as a long process as got a number of steps to be followed for a reliable results, these steps follows one another respectfully, starting from (I) establishment of alternatives, (ii) determining the life of an asset,(iii) costs estimating, (iv) real computation of LCC, and(v) analyzing the results. These steps act as a guide to a final LCCA result, which encompasses the three

aspects of asset viability, reliability, maintainability, and supportability. LCCA is further subjected to a system of other tests to give out a comprehensive result. Firstly is a project appraisal that is a broad based assessment tool, which aims at considering the benefits, and both the direct and indirect costs of an asset. The life cycle costs and benefits of each option of an asset are analyzed in detail. This is done by first converting these costs and benefits using discount rates into present-value costs and benefits. The resultant figure is known as, benefit-cost ratio for each option. Here the highest benefit ratio is chosen as the preferred option, which offers reliability, maintainability and supportability. Sadly, majority asset acquisitions have been based on the low buying prices. Such acquisitions never put into consideration the aspects of reliability, maintainability and supportability and therefore the initial saving in most cases results to increased expenditure as efforts to repair the assets are made regularly. By employing the tenets of LCCA then, decisions based on short-term costs are rendered obsolete and long term benefits – cost ratio formulae carries the day.

Another aspect of LCCA is asset management, demands that the decisions about the maintenance and operation of an asset, be done, its effects evaluated so that the reliability, and supportability of the assets' remaining life can be gauged. It is known that annual overhaul maintenance services may lengthen or improve the reliability of an asset. However, the overall life cycle costs of an asset can also be influenced by such things as, (i) effective monitoring techniques, (ii) relevant intervention services, (iii) site conditions, (iv) historic performance of the asset. The maintenance costs of an asset are known to surpass the initial cost of the same asset because with

maintenance the asset life exceeds the manufacturer's target. Therefore, the asset management demands that the due process of managing (maintaining) be approached in a proactive, proper and informed assessment manner so that the life of an asset can be doubled, and thus supportability and reliability are guaranteed.

A life cycle cost is often referred to as total cost of ownership (TCO) in IT hardware and software acquisition context. TCO is not a new name as such, because research shows that a group known as Gartner used it in 1987 (<http://amt-gartner.com/tco/moreabouttco.htm>). A TCO assessment insightfully offers a fine statement detailing the cost of purchase (initial cost) and all other costs incurred in the use and maintenance of the asset. These other costs as explained above may cover the following production aspects; (i) training support staff and users of the asset costs, (ii) cost related to failure, (iii) diminishing performances costs due to delays, (iv) disaster preparedness costs, (v) development costs, and (vi) quality assurance costs among others.

TCO can be used to give out an economic value of an investment when computed together with other financial analysis techniques e. g. return on investment (ROI). TCO also are used in the automobile industry. As in the example above on the purchase of freight, trucks when there is more than one option available. TCO dictates the initial cost and the eventual costs of the life of the vehicles. TCO also can be used in determining the viability of any intensive investment.

The above approaches of LCCA, narrows down the whole process to three main core elements of investment or asset viability. These elements are none other than reliability, maintainability and supportability, which reinforces one another. Whereas reliability is the ability of a system to perform and maintain its core functions in both normal and abnormal circumstances, maintainability is the relative ease and economy of time and resources with which an item can be retained or restored to. Supportability on the other hand is the aspect of maximizing the benefits a customer gets during the asset ownership period, which can only be achieved through the formation of support organization whose main duty is to solve customers' problems fast and cheaply. The three elements when considered, guarantees a low TCO, and higher Total value of ownership to the customer. The sum of the life cycle costs of an asset therefore can be said to be economically viable if it meets the reliability, maintainability and supportability concepts. The higher the benefits- cost ratio, the higher the reliability, maintainability and supportability of a given asset, and vice versa. LCCA can be applied in almost all the aspects of human life, and therefore is a very important tool which be put into regular practice to help cut down unnecessary wastages. LCCA is an important tool especially in this era of abnormal inflation rates, high costs of living and increasing poverty level. Therefore, when used with its sister system, life cycle analysis (LCA) vices like environmental pollution and energy crisis among many others can be avoided. At the same time, a keen pursuit of these two systems will diversify the economic opportunities and therefore adding more value to the lives of the world's impoverished, and economically disadvantaged masses.

References:

1) More about LCCA, available at;

www.fhwa.dot.gov/infrastructure/asstmgmt/lcca.htm, accessed on May 5, 2008

2) More about logistics, available at;

([http://www.alaa.org/tc/sl/indexfiles/SLTCpage0009.htm\(spacelog\)](http://www.alaa.org/tc/sl/indexfiles/SLTCpage0009.htm(spacelog))) ,
accessed on May 5, 2008

3) More about FedEx, available at;

<http://www.fundinguniverse.com/company-histories/FedEx-Corporation-Company-History.htm>, accessed on May 5, 2008