

## CENTER AS A TOOL FOR LOGISTICS ACTIVITIES IN SUPPORT OF THE COMPANY ON THE EXAMPLE OF SME'S ENTERPRISE X

Grabara J., Bajdor P., Okwiet B. \*

**Abstract:** Costs are in all aspects of each company. Some of the most noticeable costs of business are the costs associated with storage, transportation and distribution the products of the company. In this case a significant impact on reducing these costs is to use the services of logistics centers, specializing in trading all kinds of goods. The purpose of this article is to show how the transfer of logistical supplies from the distribution center logistics contributes to a significant reduction in costs incurred by the company and streamline its operation.

**Key words:** distribution centre, enterprise, SME.

### Introduction

In business, there is a clear link between the storage and transport. In order to minimize transport, the number of deliveries should be increased, which in turn entails the need to increase the number of means of transport. To make transport fulfill its task properly, the process of transportation should be fast, flexible and precise. Because of the cost, it is necessary to keep an eye on the means of transport, that are they best loaded and avoid any kind of empty trips, which generate an entirely unnecessary costs. All of these activities for individual companies can be extremely difficult, time consuming and costly, and above all require certain specific conditions, such as having a huge warehouse, when company is unable to have it. The logistics centers, having adequate storage space and the number of transportation modes, is able to meet all logistical tasks - from supply logistics to the logistics of distribution.

### Logistics Center and the essence of its actions

The emergence of logistic centers arose from the needs of the market economy and its principles to cooperate with foreign countries. Currently, international co-operation is associated with economic integration and can reach a global dimension. Economic integration is particularly noticeable in the European Union countries and the rules and regulations of the community greatly contribute to the integration both in industry and geography. The effect of increasing size, up to a global level, will reduce the number of suppliers and freight forwarders and logistics companies closer with the companies (clients)[5].

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There are many reasons why the logistics centers were built, but the main causes of logistics centers usually are classified as [10]:

- storage of stocks of finished goods that are produced with long production cycles. Long product life cycles affect the reduction in production costs such as by reducing the time taken to prepare the machines for production,
- storage of inventory to meet demand for the level which may be greater than the productive capacity of the company.
- storage of inventory to meet demand which occurs seasonally,
- storage of inventory in order to improve the quality of customer service, i.e. immediate replacement under warranty,
- reduce transport costs by fully loading the means of transport,

The main task of logistics centers operating in the area of the market economy is the availability of specific tangible goods ,in sufficient quantity, at the desired location at the right time and at the lowest possible cost [12]. The emergence of logistic centers concentration was determined by specific situations, which can include [4]:

- disposal of carrying out the functions of logistics industry and distribution to foreign providers of logistics services (one of the major causes of distribution centers).
- changing the mode of transport (eg, rail, train, car, etc.)
- massive change in the form of goods (eg containers, pallets, etc.)
- changing the size and structure of the orders (usually combine small orders into larger)
- changing the owners of cargo,
- delaying the time of customs clearance of cargo operations,
- changes in rate of delivery and consumption or production of large-scale

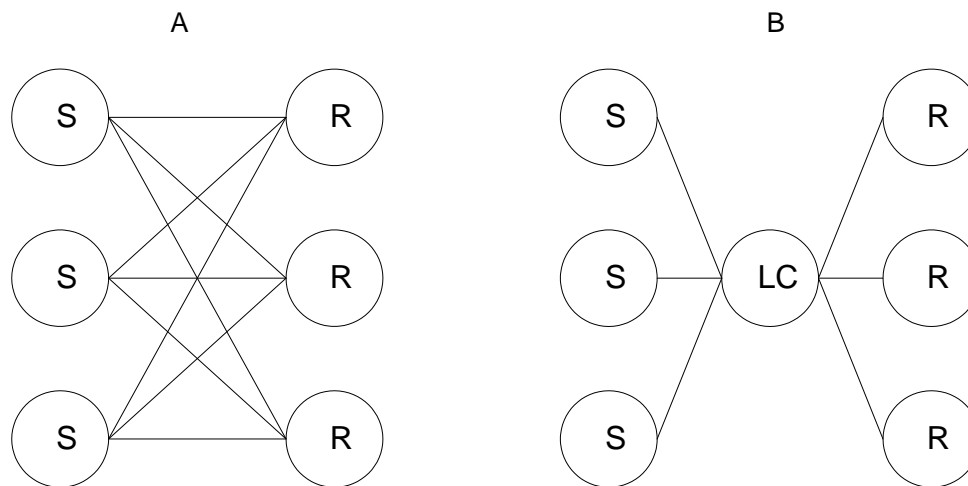
Logistics centers were created in response to the ever-increasing globalization of the market economy and the development of logistics, both in industry and commerce. They are a response to the growing needs for the provision of logistics services, from procurement to distribution, but without the production process. At present, logistic centers are the very important elements in the modern economy and information society.

As an independent entity, a logistics center has [4]:

- a separate site affiliated with the network of roads and telecommunication network,
- infrastructure, such as internal roads, squares, car parks, buildings,
- technological equipment for the handling, storage and transport and IT equipment,
- qualified personnel
- organization of the corresponding logistic tasks.

As is apparent from the drawings (A and B), the main purpose of logistics centre is to organize the stream flow of goods. Figure A shows the movement of goods

without the logistics centers, while Figure B - including logistics centers. In the absence of logistics centers (figure A) roads between suppliers and customers are crossed which can cause that traffic between these two entities has increased – and cause a significant increase in the cost of transport resources and distribution. In cases where both parties benefit from logistics centers (Figure B), can be observed a significant streamlining the flow of goods, better use of transport and thereby substantially reduce the cost of distribution.



**Figure 1. Diagrams the flow of goods between traders S (supplier) and R (the recipient), LC (logistics centre)**

*Source: Author's elaboration based on K. Richtera, Tarkowskiego J., „Znaczenie centrów logistycznych dla nowoczesnego gospodarowania”, Springer Verlag, Berlin 1996*

Their main advantage is that they allow the coordination of the movement of raw materials and finished products directly to consumers thereby contributing to significant cost reductions. The factors determining the formation of logistics centers primarily include [11]:

- distribution logistics is perceived as a marketing strategy,
- continually seeking ways to minimize the costs incurred by the company,
- increase the efficiency, effectiveness and productivity,
- key services offered by the logistics center are: supply services, transportation, unloading, contemplation, loading and distribution.

#### **Types and functions of logistics centers.**

The most common criterions by the logistical centers are discriminated by operating radius and impact [1]:

- international logistics centers - have the highest degree of organizational and functional development. They are characterized by: a radius of about 500 - 800km, the surface of land 100-150 ha, developed logistics infrastructure, a full computer system and the service developed logistics services;
- regional logistics centers - an intermediate link in the logistics channel. They are characterized by: the radius of cooperation around 50-80km, well-developed infrastructure and logistics system;
- local logistics centers - are the lowest level of organization in the system of logistics centers. They are characterized by: operating radius of some 5-8km and limited logistics infrastructure.

Another criterion to be applied to logistics centers, it is a breakdown due to the nature of its services [9]:

- freight center - serves as a central point for the reception, sorting and distributing products
- centre for transport - is the connecting point for short-range transport of long-distance transport,
- distribution center - where the goods are separated and then prepared for distribution (including the provision of transport services, storage and handling)
- city-logistic (urban centers, logistics) - the concept is an element of urban logistics, which in turn is a tool for solving problems in the functioning of highly urbanized areas and relies on a holistic account of freight traffic in cities, its aim is to reduce congestion in urban centers, while maintaining the same level of supply and efficiency of transport,
- transshipment centre - where it makes the handling of goods from one mode of transport to another.

Apart from the above logistic centers, market centers are also being a combination of several logistics and in some cases all of the above types of logistic centers. But the basic condition for the existence of such a logistics center is a demand for the services it offers.

The logistics centers' functions are always subordinated to the task of logistics and must satisfy the condition of availability of certain goods in sufficient quantity at the right time and place. For most functions performed logistic centers are included in these functions (both main and auxiliary) [3]:

- trans-shipment of cargo transfer from multiple suppliers,
- storage of cargo from multiple vendors and intended for several audiences,
- chapter and completing cargoes destined for multiple recipients,
- transportation, especially to consumers,
- treatment of materials,
- packing, which results in transport units and storage,
- corrective services,
- acceptance of returns and complaints,

- cleaning containers, etc.

Each LC, however, generally provides a set of standard services, is different and is impossible to develop the typical tasks of the logistics for a number of LC. Logistical challenge is the synthesis of LC function.

### **Characteristics of SMEs as a business person seeking the services of a logistics center**

There is no unique definition of small and medium-sized enterprises. The definition [6] differs from country to country, depending on the purpose of its usage, the economic development level and the application of different criteria regarding employment and investment capital. However, the most common definitional basis used is employment. The enterprises differ in their levels of capitalization, sales and employment. Accordingly, the definitions employing the measures of size (number of employees, turnover, profitability, net worth, tec.) when applied at a single sector may provoke the classification of all its enterprises as small, while the same definitions when applied to another sector result in a different way. Using the concept of small and medium enterprises, generally takes into account companies that [7]:

- have relatively little capital and employ a small number of employees;
- have a small market share, and often the owner is the manager (or group of persons), which eliminates complex administrative and bureaucratic structures;
- are financially and legally independent from the other operators.

Given the ambiguity of these characteristics describe the size of the enterprise, in practice, most quantitative criteria are used, ie the average number of employees, the average size of income and the value of fixed assets. As defined by the EU, enterprises:

A small company is the operator, in which: employs fewer than 50 employees and annual net revenue from the sale of goods, products and services and financial transactions may not exceed the equivalent in PLN 7 million or total assets of its balance sheet at the end of the previous financial year should not exceed 5 million Euros.

Medium-sized enterprise is a company, in which: are employed on average less than 250 employees and annual net revenue from the sale of goods, products and services and financial transactions may not exceed 40 million or total assets of its balance sheet at the end of the previous financial year should not exceed 27 million Euro [2].

Depending on the size and profile of the business may greater or lesser extent, use the services of a logistics center. But the company which seeks to develop by increasing the product offer and the number of clients should bear in mind that logistics centers offer services which can improve significantly contribute to reductions in the costs incurred by the company in the supply and distribution.

### **Characteristics of company X and the benefits which relate to work with a logistics center**

Company X was established in 1998 with its headquarters in London, it also has offices in Madrid and Milan. Company X deals with importing fashion goods (female, male and children) as well as shoes and accessories of all kinds in bulk and then the goods are shipped to retail customers located throughout Europe and Russia. Clothes and shoes are manufactured in factories located in the U.S., just in California, part of the footwear is also produced in Italy. However, components, mainly in the form of jewelry and handbags are manufactured by the factories located in China. After manufacture, the goods are transported to Europe as a means of transport are used in aircraft (the goods in the U.S.) and ships (goods from China).

At the beginning all goods went to the warehouse, located next to the headquarters in London and from there, using trucks, transported to final customers. But over time, with the development of the company and increase the number of its customers, the magazine in London was too small, additional reached difficulty moving around the city, as London is a city with a very big traffic. The introduction of fees for entry into the city has really improved the traffic but, also, imposed additional costs on the company, because the fee for entry to the city center is 8 pounds per day for each vehicle. Given that the magazine during the day can leave even more than 20 trucks not to mention the trucks importing goods, these costs were very high. Therefore, a few years ago, the company has decided to initiate cooperation with the logistics center located in Belgium.

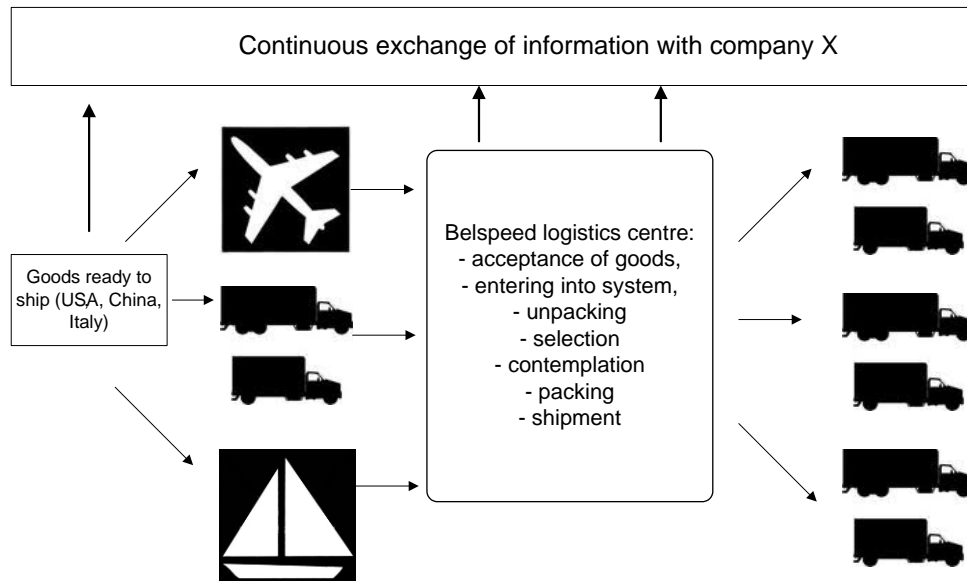
Belspeed Logistics Center was founded over 25 years ago and is a leading logistics centre for the operation of enterprises operating in the clothing market. It has a storage space with a total area of 50 thousands square meters, employs over 120 employees and provides services in:

- import - deliveries from factories located in different parts of the world,
- storage - storage, control and inventory management,
- sorting and packing,
- support for stocks subject to customs procedures,
- distribution in the countries of the EU and outside EU.

Currently, all goods shipped to the company X goes to LC Belspeed where are extracted, entered into the system, then carefully separated, prepared for shipment and finally shipped.

Once the finished products are ready for shipment, factories inform the company of scheduled deliveries, and the company gives to know the logistics center of planned deliveries. In the case of the USA or Italy, means of transport do not change, it is always a plane (USA) and trucks (Italy). In the case of products originating from China, depending on the time remaining until the delivery of products to final consumers, goods are shipped by air or sea. All the information's connected with the scheduled deliveries are transmitted to the

logistics centre - means of transport, estimated time of arrival at the warehouse, the size of delivery and numbers of products.



**Figure 2. Cooperation scheme between company X and Belspeed logistics Centre**

*Source: Author's elaborations based on company's materials*

Upon arrival at the logistics center, Belspeed gives the company know that the goods have been received and scheduled time to enter data into the system. Then, the supplies are unpacked and using scanners entered into computer system which is used by both company X and logistics center. After entering the entire supply to the system, a report is created containing the product codes, the number of total and information about discrepancies'. On the basis of this report, the company creates a list of products divided into a single delivery and sends it to the logistics center in order to develop appropriate packages. After the contemplation and packaging, logistics center sends another report to the company which provides information on the size of individual supply and time of their shipment. This report is then compared with the list of companies and if everything is correct, the company sends the green light to send the goods. At the end of each day, the logistics center created another report with the list of goods that have left the logistics centre on that day. Based on this report, the company checks whether a supply has reached the final recipient and in case of delay or loss of shipment, the company contacts the shipper in order to locate the package or give reasons for the delay.

Cooperation between Belspeed logistics center and company X, has been delivering the first tangible benefits, which primarily include:

- large storage area for the company' x exclusive use,



- specifically targeted to employees who deal solely in goods belonging to the enterprise,
  - significant improvement of the process handling of goods, ranging from the acceptance of delivery until the preparation of individual shipments to final recipients,
  - increasing the efficiency of space loading trucks,
  - substantially reduce the cost of transportation - warehouse is located in Belgium, in the middle of Europe, the company at this point does not bear the costs associated with fee for entry into the city and ferry tickets,
  - having issues with the head of the transport of goods, the company can focus on other areas of its activities, for example, are collaborating with more manufacturers, the introduction of new brands to offer or attract new customers.
- Use the services of a logistics center has improved all the logistics processes occurring in the enterprise, starting from the logistics of supply until the logistics of distribution, logistics of production, in turn, does not occur in this case above.

### Summary

With the development of market economy and the increasing number of enterprises, increasing the demand for logistic centers. Its work focused mainly on meeting the needs of logistics companies make that demand for their services still growing. Due to logistics centers, supply chain companies is significantly improved resulting in a reduction of logistics costs incurred by the company. Today, logistics is one of the most important points that occur in a market economy. The company uses the services of a logistics center to accelerating the movement of goods along with a reduction in the cost of shipping. A company with distribution, in order to develop, can, in these days, choose a great tool, complex commodity handlers, which is a logistics center.

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**CENTRUM JAKO NARZĄDZIE WSPOMAGAJĄCE FIRME  
WYKORZYSTYWANE W LOGISTYCE NA PRZYKŁADZIE  
PRZEDSIĘBIORSTWA X NALEŻĄCEGO DO KATEGORII MŚP**

**Streszczenie:** Każde przedsiębiorstwo ponosi jakieś koszty. Najbardziej zauważalnymi kosztami ponoszonymi przez przedsiębiorstwa są koszty związane z przechowywaniem, transportem oraz dystrybucją produktów. W tym przypadku znaczący wpływ na redukcję powyższych kosztów mają usługi centrów logistycznych specjalizujących się w handlu różnymi typami towarów. Celem tego artykułu jest zaprezentowanie jak przeniesienie dóbr logistycznych z logistycznego centrum dystrybucji przyczynia się do znaczącej redukcji kosztów ponoszonych przez przedsiębiorstwa i zwiększać efektywność ich operacji.

**以sme's企业为例解析物流中心作为工具在物流活动中的支持作用**

**摘要:** 物流中心的应用以及对货品的细化对削减成本有着显著的效果。本文旨在说明将后勤物资转移至物流配送中心对于削减成本简化公司架构带来的积极影响。