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LOGISTIC APPROACH TO MANAGING A REGIONAL WAREHOUSE OF AN ENTERPRISE

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In this paper, we consider a logistic approach to the management of the regional warehouse. A sequence of warehouse operations is also presented, at the expense of which the capital turnover accelerates, respectively, an increase in profits received per unit of time, as well as a reduction in production costs.

Keywords: *logistics, logistic approach, warehousing, regional warehouse, warehouse operations.*

The logistic approach to the management of the regional warehouse activities involves the organization of all activities in such a way as to ensure maximum efficiency of the warehouse at the lowest cost and the required quality of customer service. The policy of enterprises aimed at obtaining income from logistics activities, as a rule, leads to an increase in profits.

In the areas of production and handling, the application of logistics allows you to:

1. Reduce stocks on the entire path of movement of the material flow.
2. Reduce the time of passage of goods through the logistics chain.
3. Reduce shipping costs.
4. Reduce the cost of manual labor and the corresponding costs of cargo operations.

In general, a regional warehouse is a link in the enterprise's logistics system and combines many of the components of this system: storage, distribution of production products, ensuring smoothing of inconsistencies between the pace and nature of the receipt of these products, on the one hand, and consumption, on the other.

The concept of material flow is key to logistics. Material flows can flow between different enterprises or within an enterprise. When moving material flows in logistics systems, warehousing plays an important role. The warehouse processes at least three types of input, output and internal material flows. Input stream means unloading vehicles, checking the quantity and quality of the arrived cargo. Output necessitates the loading of transport. Internal flow involves the movement of cargo within the warehouse [1, p. 116].

With a logistic approach to the management of the regional warehouse, it is necessary to carefully plan all warehouse operations.

The technology of loading (unloading) works depends on the nature of the cargo, on the type of vehicle. It is important to provide this stage with appropriate means of mechanization, which include loaders, manipulators, cranes, hoists and other mechanisms. Reducing the cost of manual labor for cargo operations results in:

- to a significant reduction in the execution time of loading and unloading and storage operations, which reduces the lead time and the overall duration of the logistic cycle;
- reduction of the relevant costs of operations with cargo, including through the use of similar means of mechanization, the same packaging, the use of similar technological methods of cargo handling at all levels of the logistics chain.

The next operation is the acceptance of the cargo in terms of quantity and quality - during the acceptance process, the actual parameters of the arrived cargo are checked against the data of the shipping documents. Accuracy and speed at this stage will be able to increase the use of modern technology. For example: in determining the quality of food products, it can be modern gadgets such as a dosimeter, hygrometer, etc., and when accepting cargo by quantity and further accounting, RFID technology has been well recommended. Acceptance at all stages of the movement of the material flow from the primary source of raw materials to the final consumer, allows you to constantly update information about its quantitative and qualitative composition [2].

Then the cargo moves to the storage area. When placing goods must take into account the frequency of their orders. So, goods with a high frequency of orders must be placed near the shipping zone; with medium frequency - in the middle of the warehouse; with low frequency - far from the shipping area. In these zones, goods must be placed depending on their size (small, medium, large), which significantly reduces the labor costs for the selection of goods in the preparation of orders. Products with a limited shelf life must be stored

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separately, which will not “forget” about the shelf life of the product and implement it in a timely manner. At this stage, modern accounting systems such as ERP and WMS have proven themselves well.

Depending on the type of stored products, technical equipment is selected, on which the cargo is stored and the form of its placement in the warehouse space. The choice is influenced by: warehouse space, warehouse height, used commodity carrier, volume of delivery lots, features of cargo commissioning, free access to goods, storage conditions for goods, breadth of product range, ease of maintenance and capital costs [3, p. 461].

The placement of technological equipment should ensure maximum utilization of the area and height of the warehouse.

The main types of storage are:

- warehousing in a stack in blocks;
- storage in the shelf racks up to six meters
- storage in the shelf high-rise racks;
- storage in walk-through (entry) racks;
- warehousing in mobile racks;
- storage in elevator racks.

The use of various types of storage provides several advantages:

- high degree of used area and volume;
- free access to the product;
- ensuring structural changes in stocks;
- ease of maintenance;
- the possibility of high-altitude storage;
- the possibility of automated control;
- fulfillment of the FIFO principle (the “first in, first out” load);
- low investment and construction costs;
- low operating costs and maintenance costs.

In modern warehouses, various types of warehousing are most often combined, especially in wholesale warehouses. This is due to the variety of stored products with various specific features.

The next operation is a complete set of orders. As in previous operations, the greatest efficiency can be achieved here using modern technologies, for example, Pick-By-Light, mine-type automatic machines, conveyor lines, carousel systems for picking.

Selection in picking zones can be done using various technologies. In some zones, mine-type automata are installed for small piece goods in standard packaging. The performance of these machines can reach up to 12,000 units per hour, moreover, this equipment provides maximum accuracy in the selection of orders with a minimum time for their execution. In other zones, you can use the carousel systems commissioning orders for the selection of a wide range of products. The advantages of using these systems are:

- minimizing the time spent searching for goods;
- saving of storage space up to 60%; cargo protection from unauthorized access.

In the third zones, you can install equipment for Pick-By-Light technology for fast and medium-needed goods. Thus, the use of the latest technologies in the field of order picking allows you to significantly increase warehouse productivity, improve the quality of the set, reduce the time spent on order picking, which will lead to more complete and timely customer service.

The loading operation is different from the unloading operation, primarily because in this case it is necessary to take into account the technical characteristics of the vehicle and, above all, its carrying capacity and body volume. Logistic approach is the optimal selection of vehicles.

In addition to general warehouse operations, regional warehouses organize the delivery of products to retail outlets in the region. At this stage it is important to accurately calculate the route of traffic. According to various estimates, the cost of operations using vehicles ranges from 30% to 50% of the total logistics costs. Therefore, reducing transportation costs is an important reserve for reducing the cost of production.

The costs associated with storage, transportation and other operations that promote the material flow account for about 70% of the final cost of the product. The time spent on these operations is about 95% of the total time it takes to move goods from the primary source of raw materials to the final consumer.

Proper management in the warehouse has a significant impact on the competitiveness of the company, on the development of service, cost optimization, and hence on the efficiency of the enterprise as a whole [4,

p. 116]. Therefore, a logistic approach in organizing the sale of products in general and in organizing the activities of a regional warehouse, in particular, allows accelerating the capital turnover of enterprises, respectively, increasing profits per unit of time, and also reducing production costs.

In this way, the logistic approach to managing a regional warehouse is based on managing the entire warehousing process within one organizational and management system of an enterprise.

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