Seminar 9

Topic: Supply logistics. Specifics of purchasing logistics in wholesale and retail trade.

1. Supply: essence of the concept, purpose, tasks, functions, difference from procurement.
2. Supplier selection procedure: main and additional selection criteria, supplier evaluation methods.
3. The task of “make or buy” its implementation in practice.
4. Wholesale trade logistics: object, subject, functions, movement of material flow.
5. Tasks of wholesale trade logistics at macro and micro levels.
6. The essence of cross-docking in wholesale warehouses.
7. Features of logistics in retail trade.
8. Rapid response system in retail: essence, advantages, stages of implementation.
9. Efficiency of using logistics in trade.

1. Supply logistics is a functional area of logistics associated with planning, ordering and delivery of raw materials, semi-finished products and components for a manufacturing enterprise.

The goal of supply logistics is to meet production needs with the greatest possible economic efficiency.

The main tasks of supply logistics.

Task 1. Establishing a continuous incoming material flow to ensure the smooth operation of the enterprise. A shortage of raw materials, fuel and energy can lead to a stop in the production process, a decrease in production volumes, and failure to fulfill obligations to customers on time.

Task 2. Maintaining all types of stocks in raw material and semi-finished product warehouses at the standard level. If necessary, organizing "just in time" deliveries.

Task 3. Developing relationships with the enterprise's divisions that use production stocks. For example, information on raw material requirements comes to the supply department from the chief engineer and production sites. In addition, based on data from the supply service, the accounting department makes settlements with suppliers. Implementation of this task helps eliminate interfunctional conflicts at the enterprise.

Task 4. Finding reliable suppliers, working closely with them, and forming profitable relationships. For example, if an enterprise purchases software from a supplier who will

subsequently be unable to provide long-term maintenance (modification and updating), the initially favorable price will result in high costs for maintaining the entire information system.

Task 5. Support and improvement of the quality of purchased materials. The production of products or provision of services must be carried out with a certain level of quality, otherwise the finished product will not meet the accepted requirements and will not be able to ensure the competitiveness of the enterprise.

Task 6. Reaching an agreement with suppliers on the lowest total purchase price for raw materials, semi-finished products and components while maintaining the proper level of quality, quantity and delivery conditions.

Task 7. Control over all expenses in the supply sphere. Allows to identify inefficient logistics operations that require additional time for their implementation (for example, additional storage in a warehouse, quality control). Elimination of the reasons that caused the inefficiency of operations allows to increase the competitiveness of the enterprise as a whole.

Task 8. Ensuring a uniform flow of raw materials necessary for the production of products and provision of services in order to meet our obligations to suppliers.

Thus, the implementation of supply logistics tasks helps to increase the reliability of the micrologistics system, improve relationships with suppliers and customers, as well as between the functional divisions of the enterprise.

In specialized literature and in commercial practice, the term "supply" is often identified with the term "purchase". In a general sense, the term "purchase" characterizes the process of purchase, i.e., the awareness of the need to purchase, price negotiations, as well as other conditions related to the delivery and payment of goods.

The term "supply" has a broader meaning. It is a complex function that includes various types of acquisitions (purchase, rent, lease, contract work) and related operations, i.e. selecting suppliers, negotiating terms of the transaction, agreeing on delivery terms, monitoring supplier performance, warehousing and receiving goods received from suppliers. As a rule, the supply service does not independently carry out the movement of materials, but organizes it.

From an organizational point of view, supply departments are created in manufacturing enterprises, since internal consumption and transformation of incoming material flow is carried out, and purchasing departments are created in trading enterprises, where the resale of goods is carried out.

The use of logistics in supply allows us to respond to changes in sales of finished products, change the range of manufactured goods according to consumer wishes, and manage material flows in the process of providing the enterprise with raw materials and semi-finished products.

In supply, profit is not created, but capital savings are formed and costs are reduced by improving the management of incoming material flow and part of the internal material flow. Of decisive importance is the acquisition of materials at reasonable prices, reduction of expenses for procurement, delivery, storage and formation of optimal production stocks.

To carry out the function of providing production with raw materials and supplies, a supply service is created at the enterprise.

Supply service employees perform the following functions: select suppliers; conclude contracts and monitor their implementation; take measures in case of violation of delivery conditions.

Supply operations at the enterprise are carried out in the following sequence: selection of supply sources and suppliers; negotiations on delivery terms; conclusion of a supply or purchase and sale agreement; organization of delivery; acceptance of goods from suppliers by quantity and quality; transport and warehouse operations.

When solving supply problems directly at the enterprise, the following basic procedures are carried out: analysis of the enterprise's need for material resources and determination of requirements for them; calculation of the procurement budget.

Supply operations are carried out, depending on the existing organizational structure of the enterprise, either by one or several divisions (functional and product specialization, respectively).

In the supply department, there are two types of specialists: ordinary and leading specialists. An ordinary supply specialist performs the following functions: concluding a contract; monitoring the execution of a contract; organizing the delivery of raw materials; organizing warehousing.

The lead specialist in the supply service is engaged in analytical work and solves the following tasks: determining the feasibility of purchasing components or their own production - the task of "make or buy"; receiving and evaluating proposals from suppliers; searching for the necessary components; selecting suppliers; choosing a mode of transport or a combination of modes of transport in multimodal transportation; inventory management and regulation.

At the same time, the logistics service itself in the organization should not be directly involved in the supply of material resources. It should determine the optimal performance indicators of the enterprise's logistics system, including the supply system.

The efficiency of supply results is determined by the following indicators: reduction in the amount of raw material costs achieved through the efforts of the buyer and supplier; percentage of suppliers delivering products on time (by type of raw material); savings in raw

material costs; percentage of defective products; percentage of overdue orders; average delivery time.

Supply of manufacturing enterprises is one of the basic functions of logistics and is its first subsystem, the main goal of which is to provide the manufacturing enterprise with material resources and services.

The purpose of supply in a generalized form is to ensure that the organization provides a reliable supply of raw materials, materials and semi-finished products of the appropriate quality, in the required volume, at the right time, with a high level of service and at an acceptable price.

In specialized literature and in commercial practice, the term “supply” is often identified with the term “purchase”.

In a general sense, the term “purchase” describes the process of buying, that is, the recognition of the need to purchase a product, negotiations on price, as well as other terms related to the delivery and payment of the product.

The term "supply" has a broader meaning than the term "purchasing". It is a complex function that includes various types of acquisitions (purchase, rent, lease, contract work) and related operations, i.e. determining material needs, selecting suppliers, negotiating, agreeing on delivery terms, monitoring supplier performance, accepting raw materials and warehousing. As a rule, the supply service does not independently handle the movement of materials, but organizes it.

From an organizational point of view, supply departments are created in manufacturing enterprises, since internal consumption and transformation of incoming material flow is carried out, and purchasing departments function in wholesale and retail trade.

Supply operations at the enterprise are carried out in the following sequence: determining the needs of production areas for raw materials, materials and semi-finished products; selecting supply sources and suppliers; negotiating the terms of supply; concluding a supply or purchase and sale agreement; organizing delivery; accepting raw materials and components at the enterprise in terms of quantity and quality; transport and warehouse operations.

The supply function is carried out, depending on the existing organizational structure of the enterprise, either by one or several divisions.

The supply department distinguishes between ordinary and leading specialists. An ordinary supply specialist performs the following types of work: concluding a purchase and sale or supply agreement; monitoring the execution of the agreement; organizing delivery; organizing warehousing.

The leading specialist is engaged in analytical work and solves the following tasks: determining the feasibility of purchasing components or their own production (the task of "make

or buy"); searching for the necessary components or types of raw materials; receiving and evaluating proposals from suppliers; selecting suppliers; choosing a mode of transport or a combination of modes of transport in intermodal transportation; assessing the risks of adverse events; developing measures to prevent logistical risks in the supply process.

When solving supply problems at an enterprise, the following basic procedures are performed: analysis of the enterprise's need for material resources and determination of requirements for them; calculation of the procurement budget.

The efficiency of supply results is determined by the following indicators: reduction of costs for purchasing raw materials, achieved through the efforts of the supplier and the buyer; the percentage of suppliers that deliver on time (by type of raw materials); reduction of the percentage of defective products and the percentage of overdue orders; reduction of the average delivery time.

Thus, the implementation of the supply function involves timely provision of the enterprise with everything necessary for the production process. The use of the logistics concept in supply involves considering incoming raw materials, components and semi-finished products as material flows. Consequently, the goal of supply logistics is reliable, high-quality and comprehensive satisfaction of the enterprise's needs for material and technical resources.

The task of choosing a supplier

Selecting a supplier is one of the most important tasks in ensuring the efficiency of supply logistics. The main stages of its solution are: collecting information about suppliers; analyzing the information received based on the supplier selection criteria; making a decision on choosing a supplier.

There are two possible directions for choosing a supplier.

Direction 1. Selection from among companies that have already worked with the enterprise and with which business relations have already been established. This facilitates the selection, since the supply department has the necessary information.

Direction 2. Selecting a new supplier based on the results of the search and analysis of the relevant market. When selecting a new supplier, a search for potential suppliers is initially performed, and then they are compared with each other. The main and additional features are identified, by which suppliers are assessed.

Main features:

- ✓ price of the supplied products;
- ✓ quality of supplied products;
- ✓ delivery times or reliability.

Additional signs for choosing suppliers are as follows.

Sign 1. Results of work under concluded contracts, i.e. the supplier's compliance with obligations regarding delivery times, range, completeness, quality and delivered products.

Sign 2. Flexible pricing policy, i.e. the presence of a system of cumulative discounts depending on the volume of the purchased lot, special price lists for regular customers.

Sign 3. The supplier has the ability to ensure delivery of products using its own resources.

Feature 4. Possibility of receiving goods in installments, without prepayment or with deferred payment.

Sign 5. Deadlines for completing current and emergency orders.

Sign 6. The supplier's prospects – the pace of its development, expansion of its product range.

Various methods are used to evaluate suppliers.

Method 1. Point method – the most significant criteria of suppliers, the point system and maximum score, as well as the significance of criteria in fractions of a unit are determined. The higher the score, the more preferable the supplier.

Method 2. "Ideal supplier" – the indicators of the ideal supplier are determined, and then all suppliers are compared with the ideal.

Method 3. Prioritization. Based on the results of the suppliers' work, their actual assessment is carried out. For this purpose, the most important assessment criteria are selected.

Method 4. Method of expert assessments or questionnaire survey (Delphi method).

Method 5. Hierarchy Analysis Method. The weight coefficient of each evaluation criterion (price, distance, lot size, etc.) is determined. Then a pairwise comparison of the indicators of each supplier is carried out. As a result, a global rating is calculated and the supplier with the highest rating is selected. Logistics does not replace supply. The use of logistics methodology in supply allows increasing the efficiency of the manufacturing enterprise at the stage of incoming material flow and the initial part of the internal material flow, as well as improving the interaction of the supply department with other divisions of the enterprise.

When selecting a supplier, potential suppliers are initially searched for and then compared. The main and additional features are identified, by which suppliers are evaluated.

Main features : price of supplied products; quality of supplied products; delivery times.

In some cases, suppliers, in order to confirm that the quality of goods meets the established requirements of standards, voluntarily provide buyers with certificates of conformity, which can be used instead of incoming inspection.

Additional features :

- ✓ results of work under already concluded contracts, i.e. the supplier’s compliance with obligations regarding delivery times, range, completeness, quality and quantity of supplied products;
- ✓ flexibility of pricing policy, i.e. the presence of a system of cumulative discounts based on the volume of purchased products, special price lists for regular customers;
- ✓ the supplier's ability to ensure delivery of products on its own;
- ✓ the possibility of receiving goods in installments, without prepayment or with deferred payment;
- ✓ deadlines for completing current and emergency orders;
- ✓ organization of quality management at the supplier;
- ✓ the supplier's prospects - the pace of its development, expansion of its product range.

Various methods are used to evaluate suppliers.

- ✓ point method: the most significant supplier criteria, the point system and maximum score, as well as the significance of the criteria in fractions of a unit are determined. The higher the score, the more preferable the supplier is;
- ✓ "ideal supplier": the ideal supplier indicator is determined and then all suppliers are compared with the ideal;
- ✓ prioritization: based on the results of the suppliers' work, their actual assessment is carried out. For this purpose, the most important assessment criteria are selected;
- ✓ method of expert assessments or questionnaire survey. Another form of supplier selection is written negotiations, or business correspondence.

Written negotiations can be organized in two ways. In the first way, the initiative to enter into negotiations comes from the seller, in the second way – from the buyer.

According to their functional purpose, there are three types of commercial correspondence:

- ✓ request – response to a request;
- ✓ proposal (offer) – response to an offer (acceptance);
- ✓ complaint (claim) – response to a complaint (claim).

An inquiry is a commercial document that represents an appeal from a buyer to a seller, or an importer to an exporter, with a request to provide detailed information about the goods and to send proposals for the supply of the goods.

The request specifies the name of the product and the conditions under which the partner would like to receive the product, such as the quantity and quality of the product, its model, brand, price, delivery time, and payment terms. A request of this type is included in the group of contract documents and is used in preparation for concluding contracts.

The response to the request must be given, as a rule, within 10 days, in which the necessary information is provided, in particular: acceptance of the question for consideration; clarification of the possibility of supplying the goods; refusal to supply the goods; change in the terms of supply; promise to send offers for the supply of the goods.

If the seller can immediately satisfy the buyer's request and supply the goods he is interested in, he sends him an offer, that is, a statement of the desire to conclude a transaction indicating its specific conditions.

An offer is a formal proposal to enter into a commercial transaction, containing all the essential terms of the agreement: product range, quantity, prices, terms, and responsibility of the parties.

Offers can be firm and free. A firm offer is sent to only one buyer with an indication of the offer validity period, during which the seller cannot change its terms. A free offer does not include any obligations of the seller towards the buyer. It can be sent to an unlimited number of potential consumers.

The offer may be sent to the buyer either as a response to a request or on the initiative of the seller. In this case, as a rule, the name of the offered goods, quantity, quality, price, delivery time, payment terms, type of packaging and other conditions depending on the nature of the goods are indicated.

When responding to an offer, if the buyer agrees to all of its terms, he confirms acceptance of the offer to the seller, and then the transaction is considered concluded. Acceptance of the offer is a specific order or conclusion of an agreement (contract).

If the buyer does not agree with the terms of the offer or if he is not interested in purchasing the offered goods, he rejects it in writing.

If the buyer does not agree with any of the terms of the offer, he informs the seller about it, and correspondence or negotiations are established between them until a full agreement is reached on all the main elements of the transaction.

Thus:

1. Supply logistics is a functional area of logistics associated with planning, ordering, delivery of raw materials, materials, semi-finished products, components for a manufacturing enterprise, and ensuring control over delivery.

2. The use of logistics in supply allows us to respond to changes in sales of finished products, change the range of manufactured goods depending on consumer needs, and manage material flows in the process of providing the enterprise with raw materials and semi-finished products.

3. Supply planning is a process during which the list of necessary goods, their quantity, the time when they will be needed, the capabilities of suppliers, the required area of own warehouses, procurement costs, the possibility of organizing the production of some parts at your own enterprise are determined.

4. When determining the need for materials, the following basic methods are used: deterministic, stochastic, heuristic, as well as specialized ones: the Kanban method, the system of planning material needs depending on levels, the just-in-time method, the request system, the electronic information method of communication between the client and the supplier. The choice of method depends on the characteristics of the material resources, the conditions of their consumption and the availability of relevant data for making the necessary calculations.

5. Selecting a supplier is one of the most important tasks of an enterprise. Suppliers are evaluated and selected using various methods - the point method, the "ideal supplier", the "priority setting" method, the expert assessment method, and the hierarchy analysis method. The selection of a supplier is significantly influenced by the results of work on already concluded contracts, on the basis of which the supplier's rating is calculated.

3. The task of "make or buy"

The "what to buy" problem is to make one of two alternative decisions: to make the component ourselves (if this is possible in principle) or to buy it from another manufacturer. This problem is solved mainly for manufacturing enterprises. In a modified form, this problem can also be considered in other areas within the framework of contract logistics (third-party logistics). In English-language literature, this problem is called the *Make-or-Buy Problem* , or, in short, the MOB problem, the solution of which depends on a number of external factors, as well as on the conditions at the enterprise itself.

In a broader sense, *the task of the MOB* is to justify the decision on the degree of use of own means of production in the production process. Decisions are made both on the use of own means of labor (own transport, warehouses, machinery, equipment), and on the use of own objects of labor, i.e., blanks, semi-finished products, and components manufactured by own efforts. Alternative solutions are hired transport, equipment leasing, warehouse rental, and also the purchase of semi-finished products or components.

A significant external factor from the point of view of this course is the degree of development of logistics in the economy. Independent production of components reduces the

dependence of the enterprise on fluctuations in the market situation. The enterprise can function stably regardless of the situation on the market (naturally, within certain limits). At the same time, high quality and low cost of components are more likely to be provided by a manufacturer that specializes in their production. Therefore, by abandoning its own production and deciding to purchase components from a specialized supplier, the enterprise gets the opportunity to improve quality and reduce cost, but in doing so it becomes dependent on the surrounding economic environment. The risk of losses due to increased dependence will be lower, the higher the reliability of supplies and the more developed the logistics links in the economy. Thus, the higher the degree of development of logistics in society, the "more calmly" the enterprise abandons its own production of components and shifts this task to a specialized manufacturer.

Regardless of the external environment, factors may act at the enterprises themselves that cause them to abandon their own production. The decision in favor of purchasing components and, accordingly, against their own production should be made if:

- ✓ the need for the component product is low;
- ✓ there is a lack of capacity to produce components;
- ✓ there are no personnel with the necessary qualifications.

A decision against procurement and in favor of in-house production is made when:

- ✓ the demand for components is stable and quite high;
- ✓ the component can be manufactured using existing equipment.

4. Features of material flow management in wholesale trade

Wholesale trade logistics is part of the distribution system of finished products in the sphere of commodity circulation. When managing logistics processes in wholesale trade, the optimization of goods movement is carried out at the stage of material flow from manufacturing enterprises to retail trade enterprises. At the same time, all participants in the logistics process must take into account the interests of end consumers.

In the sphere of commodity circulation, the subjects of the logistics process are: sales divisions of manufacturing enterprises; large and small wholesale intermediaries; retail trade enterprises; logistics intermediaries and providers. With the help of these participants, the movement of the total material flow from producers to households or institutions is carried out.

The object of research in wholesale trade logistics is the material flow and accompanying financial, information and service flows at the stages of goods movement from manufacturing enterprises to the retail trade network.

The subject of the research is the optimization of the movement of material flows at the macro and micro levels in the sphere of wholesale trade.

The movement of the total material flow in the sphere of commodity circulation can be divided into the following phases.

Phase 1. Movement of material flows from manufacturing enterprises to large wholesale trade enterprises, as well as the transfer of accompanying information and financial flows.

Phase 2. Receipt of material flow by large wholesale trading enterprises, its processing and intermediate storage, receipt of orders from customers and transfer of goods to small wholesale intermediaries in exchange for financial flows.

Phase 3. Receipt of material flow by small wholesale trade enterprises, its processing and intermediate storage, receipt of orders from the retail trade network, delivery or issuance of assembled batches of goods to retailers.

Phase 4. Processing of consignments by the retailer, sale and, in some cases, delivery of goods to end consumers.

The presented classification is theoretical in nature, since in real conditions the boundaries between these phases are “blurred” due to the fact that the manufacturer can ship goods directly to retail outlets or sell to end consumers through its own retail network.

In general, the sphere of commodity circulation is represented by trade and service enterprises, interconnected by material, information and financial flows. Particular attention in wholesale trade should be paid to return material flows, the need to reduce their size at all stages of commodity circulation.

The functions of wholesale trade logistics are as follows: planning, organizing and managing transport processes in the logistics system of the commodity circulation sphere; managing commodity stocks at all stages of commodity movement; receiving a delivery order and its efficient processing by commercial intermediaries; completing, packing and performing a number of other logistics operations when preparing consignments for shipment; organizing rational shipment; managing the delivery of goods from the supplier to the intermediate consumer; planning, organizing and managing logistics services.

Cargo handling activities at wholesale trade enterprises require significant costs for their implementation. The main part of these costs is related to the implementation of such logistic functions and operations as: warehousing; transportation and forwarding; collection, storage, processing and issuance of information on orders, stocks, deliveries.

The fundamental difference between wholesale logistics and traditional methods of purchasing and selling goods is the following: subordination of the process of managing material

and information flows to the goals and objectives of marketing; systemic interconnection of all functions at the enterprise and within the supply chain.

5. Tasks of wholesale trade logistics

The tasks of wholesale trade logistics are solved at the level of individual enterprises and at the macro level (the sphere of commodity circulation).

At the level of a wholesale trade enterprise (micro level), logisticians solve the following tasks: planning the process of selling goods; organizing the receipt and processing of orders; choosing the location of a warehouse in the serviced territory; choosing the type of container; making a decision on the assembly of consignments of goods, as well as performing other operations immediately preceding shipment; organizing the shipment of goods; monitoring transportation; organizing post-sales service.

At the macro level, the tasks of logistics in wholesale trade include: choosing a scheme for distributing the material flow between participants in the movement of goods; determining the optimal number of warehouses in the serviced territory; monitoring all links in the cargo movement system.

The main indicator of successful activity of a wholesale trade enterprise is the profit received. The main areas of activity for increasing profits by reducing costs in wholesale trade are considered to be the following activities: creation of a single transport and warehouse system (fast delivery to the consumer); economic unification of purchases and sales of goods; development of optimal schemes for warehousing and replenishment of stocks.

When solving a certain problem, an enterprise may face the problem of decreasing profits, which arises due to the lack of consideration of all factors affecting the income of a trading enterprise. Therefore, for successful commercial activity, the enterprise's specialists must answer the following three questions.

Question 1. To what extent are the costs associated with the reduction of product distribution time offset by the increase in revenue from the increased sales volume due to improved customer service quality.

Question 2. Can a company allow a decrease in the level of customer service while simultaneously increasing the volume of deliveries?

Question 3. How expedient is it to store goods with a wholesaler who is located next to a manufacturing plant or directly at the sales market.

When choosing the optimal distribution scheme, the wholesaler must consider the entire logistics chain to the end consumer. That is, take into account the minimum delivery times, the maximum level of service, obtaining maximum profit and ensuring minimum costs for distribution.

6. Cross-docking technology in wholesale warehouses

Cross-docking (from English cross-docking - from cross - going directly and dock - berth, docking, connection *)* . This is the movement of cargo through a warehouse directly, without actually placing it in storage. Sometimes cross-docking is understood as direct reloading of goods between vehicles.

The idea of cross-docking emerged in the early 90s of the 20th century. This technology is a process within the supply chain, during which the delivery of goods to the warehouse of the intermediary from the manufacturer and the issuance of goods to the recipient (store) are so coordinated in time and volume that it is possible to avoid the process of placing batches of goods in the storage area.

An important difference between cross-docking and traditional warehousing is that it is a set of operations with orders, not with goods. The order for the store is completed not at the intermediary's warehouse, but by the manufacturer of the goods upon shipment. As a result, the batch of goods arrives at the warehouse of the commercial intermediary immediately before shipment to retail outlets, which ensures the minimum period of stay of the goods in the warehouse. Instead of placing the pallet in the intermediary's warehouse, it is immediately transferred to the final recipient (retail trade enterprise).

In the process of cross-docking, close information interaction is carried out among all partners performing this process, which ensures effective planning, management and control of the entire supply chain.

Cross-docking is used when intermediate storage of goods in a central warehouse entails high costs or expenses for storing perishable products. The advantages of cross-docking are as follows: reduced storage costs; reduced number of stages of goods movement; reduction of warehouse space and reduced costs for warehouse rent and personnel labor.

Along with the positive aspects of cross-docking, there are the following limitations:

- ✓ the goods passing through the warehouse must be well predictable in terms of the “arrival-departure” dynamics, and consumer demand for a particular product must be constantly analyzed;
- ✓ incoming goods must be immediately ready for shipment or require minor additional operations;
- ✓ Clear organization of traffic is required, including in the adjacent territory of the warehouse

There are two known forms of cross-docking: one-stage and two-stage.

One-stage cross-docking. The sender carries out the commissioning of goods, focusing on the final recipient (stores). In this form, the created cargo units, without undergoing any changes, pass through several cross-docking points and reach the consumer of the material flow. One-stage cross-docking is used when the buyer places an order with its receipt at the warehouse of the intermediary, and the supplier-manufacturer marks the cargo units accordingly, that is, indicates a specific recipient (retail outlet). Two-stage cross-docking. The sender carries out the commissioning, focusing on the cross-docking point (commercial intermediary). In this case, the created cargo units are sent to the warehouse of the intermediary without any changes. And here the secondary commissioning is carried out with a focus on the recipient of the goods batch. This form of cross-docking is practiced when the order is placed for several retail outlets or when the manufacturer specifies the cross-docking point as the recipient.

Thus, logistics in wholesale trade logistics methods are used both at the level of a wholesale trade enterprise and in the process of interaction between commercial entities in the sphere of commodity circulation.

7. Basics of logistics in retail

Retail trade enterprises currently use various methods of demand forecasting, product selection, and inventory control. To improve the efficiency of inventory control, scanning devices are used, which reduce the time it takes for the buyer to pay for goods and increase the throughput of retail enterprises.

Logistics solutions are formed already at the design stage of stores, the premises of which must meet the requirements of end-to-end technological processes.

Taking into account the organization of end-to-end technological processes, the following are designed: convenience of customer movement around the store; optimal dimensions of retail, warehouse, utility rooms and technological zones; width of doorways; height and area of unloading ramps; modern layout of sales areas. All components of the store's production capacity (premises, technological equipment, personnel, information, goods and returnable containers) must be linked into a single system, which in turn is integrated into the overall system of goods movement.

The use of logistics in retail trade involves building a consistent, coordinated scheme that allows for a timely response to changes in consumer demand and the maximum implementation of the strengths of a retail enterprise. The tasks of logistics include analyzing the movement of customer flows in a store, monitoring demand and competition.

8. Rapid response system in retail

The relevance of logistics in the retail sector is determined by the following factors: competition among retail operators is growing, in a number of cities we can already talk about

the physical saturation of the market with large stores and shopping centers; new retail formats are emerging - up to attempts to create supra-format structures that combine the advantages of several retail formats. This leads to the fact that all retail operators, regardless of the market segment, pay attention to logistics in its broad sense and, in particular, inventory management, warehousing, transportation, and outsourcing issues.

One of the major trends in modern supply chain relationships linking manufacturers, wholesalers and retailers is the increasing control of retailers over the entire supply chain.

Retailers are increasing their influence by moving a larger portion of their supplies through distribution centers. In addition, the introduction of private labels allows retailers to influence raw material suppliers.

The process of increasing retailers' control over supply chains is caused by the fact that the volume of retailers' sales and the use of modern information technologies for storing and processing information allow them to know and influence the needs of consumers much better than the marketers of the manufacturing enterprises. As a result, retailers win over the manufacturers in the struggle for a share of the total profit created in the entire supply chain. The emergence of new information technologies accelerates the process of introducing rapid response systems into the retail trade.

The essence of this system is as follows. After a certain number of units of goods are sold by stores, and the information about this is passed through a scanning device and entered into the information system of a retail outlet or network, the data is sent to the system of replenishment of stocks and re-registration of orders from suppliers.

This is followed by a rapid response to the demand that has arisen. The transfer of information about the demand for goods to the main suppliers leads to the subsequent integration of production and the sphere of commodity circulation.

The benefits of a quick response system for a retailer include: reduced logistics costs; reduced inventory levels; faster material flow; customer satisfaction; increased sales volumes; and increased competitive advantages.

Benefits of a rapid response system for a supplier: reduced logistics costs; more predictable production cycles; increased order frequency; closer relationships with retailers; the ability to track retail sales volumes for each item, hence better forecasting; increased competitive advantage.

Stages of implementation of the rapid response system.

Stage 1. Implementation of basic technologies of the rapid response system: use of scanners to collect data on all warehouse accounting units; use of bar codes; application of electronic data interchange devices.

Stage 2. Reorganization of internal processes of the supplier and the consumer enterprise: use of electronic communications for replenishment of stocks; presence of small stock volumes in the system; processing of orders for small batches of goods; implementation of an automatic stock replenishment program; organization of delivery using just-in-time technology; marking of containers or pallets during loading; notification of stores about the upcoming delivery of shipped finished goods.

Stage 3. Supply chain management based on cooperation between participants in the movement of goods, i.e. joint use of sales volume data in real time.

Thus, in order to increase the economic efficiency of logistics operations, most retailers come to the need for closer cooperation with their suppliers. The introduction of the concept of supply chain management and rapid response systems by manufacturers and retailers allows them to manage supply chains as a single entity and effectively coordinate joint logistics activities.

9. Efficiency of using logistics in trade

World and domestic experience shows that the application of the logistics concept allows to significantly increase the efficiency of trade. The efficiency of the application of logistics in trade is manifested in the following components.

Component 1. Reduction of stocks in supply chains due to: redistribution of stocks between wholesale and retail trade and concentration of stocks in the wholesale link; application of modern technologies for stock control; high degree of coordination of stock distribution participants in matters of timely stock replenishment.

Both current and safety stocks are reduced. Current stocks are reduced by using just-in-time technology and by creating optimal batch sizes. Safety stocks are reduced by concentrating them in a single distribution center.

Component 2. Maximum use of areas and volumes of wholesale and retail enterprises. For example, optimization of the distribution chain allows for a significant change in the structure of store areas in favor of increasing the share of retail space. This can be achieved by sharply reducing the total amount of stock and moving a significant portion of it from stores to the wholesale link, as well as moving some of the preparatory operations, such as packaging, labeling, and pricing, to earlier stages of the distribution chain.

Component 3. Acceleration of capital turnover. Achieved by monitoring the execution time of end-to-end processes of placing and fulfilling orders.

Component 4. Reduction of transportation costs due to high coordination of participants in the movement of goods during delivery of goods.

Component 5. Reduction of logistics costs associated with cargo handling, including manual labor costs. The choice of methods for reducing logistics costs is made taking into account such factors as: complexity of the logistics system of the retail trade network; product differentiation (assortment, packaging, requirements for the transportation mode); transportation volumes; planning period; number of types of transport used; operating mode of transport companies.

The total effect of using logistics in retail trade, as a rule, exceeds the sum of the effects of improving the listed components. This is explained by the emergence of the ability of logistic-organized systems to ensure the delivery of the required cargo, of the required quality, in the required quantity, at the required time, to the required place with minimal costs and to the required consumer.