

THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF PRODUCTION LOGISTIC MANAGEMENT

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Introduction. The activities of any enterprise can be characterized as a constantly repeating process, so logistic management can be considered as a closed management cycle, which is also constantly repeated. As a cyclic process, logistic management is considered from the positions of structural, process and functional approaches that are closely linked [2]. Logistic management is organically linked to the theory and practice of marketing and management, that is, linking the production and sale of goods with real solvent demand for buyers, stimulating implementation by advertising goods, flexible prices and trade margins (discounts), finding new areas of activity to obtain income, etc. Dialectical interaction and interpenetration of logistics, marketing and management are given in aggregate economic effect [3].

The logistic concept proclaims the need to identify individual needs of consumers and respond to them, directing existing resources to their full satisfaction. The fundamental idea is that those companies achieve the greatest success, all productive actions in combination allow to justify expectations of consumers [2]. Since logistics provides consumer requests related to the time and place of availability of products, as well as to accompanying services, it can be argued that logistics management is to manage consumer service [6].

Analysis of recent researches and publications. Studying the logistic management is the comprehensive task as there are many factors influencing the logistic processes and activities. Nevertheless, the problem is not new, and for a long time it has been attracting the attention of a large number of scientists, both foreign and domestic.

Problems of logistic management and its impact on the activities of the enterprise are quite popular among scientists. Most of the considered works are devoted to the theoretical concepts of the emergence and development of logistic management, as well as its features depending on the scope. For example, the work by V. V. Hlazun devoted to the features of logistic management of agrarian enterprises [4]. Scientists substantiated and detailed the model of organization of agribusiness system and identified the place of logistic management in it.

N. V. Ivasyshyn and A. O. Palchenko, in addition to the substantiation of the essence of logistic management, was allocated directions of its influence on the functioning of the logistic system of the enterprise [6]. Interesting in terms of the topics of the study is to separate scientists of communication between competitive positions of enterprises with logistic management in the aspect of the implementation of the corporate strategy of a modern enterprise. O. P. Hlybko concentrated on the study of the essence of the concept of "logistic management" through the prism of the thoughts of domestic scientists.

L. S. Holovkova and A. E. Holovkova, analyzing the place of logistic management in the corporation management system, came to the conclusion that "logistics is an inherent active integrating potential capable of combining and improve interaction between such basic functional areas such as supply, marketing, transportation, sale, and between subsidiaries, corporations and its structural subdivisions" [5].

Despite such a significant number of works and attention scientists to issues in logistical management, require a more detailed analysis of the direction of influencing the enterprise with the allocation of basic principles of effective management.

The aim of the article is to develop approaches to determining the theoretical and methodological foundations of production logistic management.

Basic material and results. Given the fact that logistic activity takes place in a very dynamic environment the state of the logistic system should be constantly monitored, analyzed and evaluated. The

research is devoted to an important and at the same time complicated issue – the process of designing systems of logistics as an important component of the operation of the enterprise.

This problem is not fully understood both at the theoretical level and in the field of practical application of design principles. The purpose of scientific research is to determine the essence, tasks and features of the processes of designing logistic systems. The essence of the concepts of “project” and “design” is considered in the article.

The main tasks of designing logistic systems are determined and possible conditions of their implementation are given. The study found the most important factors determining the success of the project on design of logistic systems. A system of branch logistic functions is proposed. The factors that determine the success of logistics systems implementation are systematized. On the basis of the research, general recommendations for the design of logistics systems at any type of enterprise are generated.

The list of solutions that are accepted in the process of designing logistics systems are proposed. Stages and steps in the design of logistics systems are identified according to the tasks of designing logistic systems. Research results have shown that designing logistics’ systems should take into account the possible risks of implementing a solution and calculate with the help of mathematical models, possible benefits and losses for the enterprise. In addition recommendations to boost the efficiency of designing logistic systems have been distinguished [1–4].

A demanding market and growing competition mean that enterprises need to look for new solutions in the manufacturing process, adapting to customer requirements through systematic product improvement and after-sales service. Measures to improve should be characterized by efficiency, that is, achievement of results, not worse than competitors, but with less costs. Exactly because of this reason entrepreneurs seek to achieve new management and information technology solutions, as well as in other interdisciplinary areas such as telecommunications, automation, robotics, flexible manufacturing systems, materials science and microelectronics. The constituent increase in the efficiency of the enterprise is the development of a logistic system that requires careful preparation. Above all, the key to the efficient operation of logistic systems is the high level of their design.

Implementation of logistic systems and their impact on the functioning of enterprises is considered in the works by: Hemamala et al. [10], Ballou [3], Kuhn and Schmidt [12], Multaharju and Hallikas [15], Göpfert and Wellbrock [8], Han [9] and others.

In modern conditions of functioning of enterprises, aspects related to optimization of their activities play an important role. The introduction of logistic systems in a market economy is an important factor in the development of entrepreneurship. When designing and refining logistic systems, it is necessary to have a sufficient level of data, the accounting of which, as well as collection and processing, must be continuous.

In a broad scientific sense, logistics is considered as the implementation of basic and supportive logistics functions through logistics processes and operations that are associated with changing the parameters of space (location), time, form and properties of logistics (material, information, financial, service) flows from optimal cost of resources. In a narrow practical sense, the enterprise logistic activity covers a complex of processes of supplying material resources, supporting production procedures, inventory formation, warehousing, transportation and sale of finished products.

Logistic management of the enterprise is aimed at optimizing the utilization of production capacity, reducing costs and inventories at all stages of the extended reproduction cycle, accelerating working capital turnover, ensuring the reliable fulfillment of contractual obligations for the supply of finished products and complete satisfaction of consumers in the quality of products and services. This type of management is associated with some difficulties, due to the peculiarities of organization and logistics in enterprises: the diversity, interconnection and interdependence of logistics processes in the enterprise; implementation of logistic processes by different functional units of the enterprise; combination of organizational, economic, technological, technical and legal aspects in logistic activity; significant dependence of the enterprise logistic activity on interaction with the external microenvironment (suppliers, intermediaries, consumers); lack of a clear system for collecting and analyzing information about the organization, efficiency and bottlenecks of the enterprise logistics system.

Making effective management decisions in these circumstances requires the identification, analysis, evaluation and forecasting of logistics problems of the enterprise, most of which are poorly structured or mixed, containing qualitative and quantitative indicators of logistic activities.

Cost-effective organization and management of material flows in a changing market environment should use the basic logistics principles: unidirectional; flexibility; synchronization; optimization; integration of process flows.

The organization and operational management of material flows has a leading role in the operational management of the organization, in the timely delivery of products and especially in order to increase production efficiency associated with the use of production resources in time and space [14].

The logistic capacity planning algorithm is based on an iterative approach – steps 6 and 7 are repeated until a decision is found. This adjustment is performed until the plan receives a significant level of logistics capacity. In the general approach, the process of logistic capacity planning is considered as a set of the following stages: demand is forecasted and other relevant information is investigated on the basis of this the required logistical capacity is determined; the actual logistic capacity is calculated; the difference between the actual and required logistic capacity is determined; alternative plans are offered, which allow to eliminate a certain difference; plan options are compared and the best one is determined; the best plan is implemented and the obtained results are controlled.

Logistic management of the enterprise must meet a number of requirements shown in table 1.

Table 1

Requirements for logistic management of the enterprise

Requirements	Characteristic
Ensuring rhythmic, coordinated work of all stages of production on a single schedule and uniform output.	Rhythmic work means the optimal (purposeful, in accordance with the laws of the production process) organization in time and space of single, partial and private processes into a single continuous production process, which ensures timely release of each product in the prescribed amounts with minimal production costs.
Ensuring the continuity of production processes.	The continuity of the production process has two contradictory aspects: the continuity of the movement of objects of labor and the continuity of the loading of jobs. The question is which continuity of the production process to prefer in certain conditions.
Ensuring the reliability of planned calculations and the minimum complexity of planned work	It is assumed that within each stage of production, the structure of labor-intensive manufacturing of the product over time does not change. In fact, it changes very significantly. Thus, the preparatory operations are absent at the end of each stage of manufacture of the product, and the final – at the beginning. In the end, the imperfection of the calendar-planned calculations of production at the enterprise leads to known shortcomings: the constant shortage of parts, unforeseen "bottlenecks", the division of labor instead of planning, irregular work, to significant non-production losses of working time.
Ensuring sufficient flexibility and maneuverability in achieving the goal in the event of various force majeure circumstances	In the conditions of imperfect planning at the level of shops and production sites to ensure the implementation of production plans of the organization, all line managers and dispatchers of shops and plant management have to pay much attention to production regulation and redistribution of work to reduce production costs and working time.
Ensuring continuity of planning	Each production unit receives a plan (tasks by volume, nomenclature and deadline), is provided with appropriate resources and aims to achieve the planned end results. To increase the level of planning continuity, management must learn not only to develop monthly plans-schedules of production tasks at each site, but also to be able to keep the production process within the plan-schedule under the influence of various disturbances and restrictions.
Ensuring compliance of the operational production management system (OPM) with the type and nature of specific production	There are developed standard OUV systems. Each of them corresponds to the type and nature of production, but the difficulty of their observance is that the company usually operates different types of production. Even in separate shops it is possible to allocate production with signs of mass, unit and serial production. In market conditions, the need to increase production efficiency necessarily requires an increase in the scientific level of management, automation, its functions, the use of modern mathematical apparatus, computer technology, the creation of integrated enterprise management systems (ISMS).

Source: [1–7].

One of the key points of logistic management of a production organization is the planning of logistics capacity. Adherence to the planning algorithm is an integral part of the successful operation of the production enterprise [5–8].

Strategic approaches to inventory management will be determined, first of all, by the laws of production and final consumption of raw materials and finished products, as well as the processes of replenishment of stocks, their consumption, movement and storage. Inventories are an important element of logistics management as they directly affect:

- forecasting and planning of production activities of the business entity;
- organization of the production process and quality assurance of works;
- support of reliable operation of equipment and its preventive repair [16].

The next, no less important element of the logistics management of the production enterprise are inventories. The great variety of real types of stocks requires strategic planning and coordination of actions for inventory management of the production enterprise.

Inventories of the enterprise are intended for the following purposes:

- formation of a certain independence of the production activity of the business entity from the state of the market of material resources;
- accounting for changes in demand for finished products and their smoothing;
- protection of the business entity from changes in the period of supply of material resources;
- use of advantages of the economic size of the order for purchase of material resources. In fact, the accumulation of stocks at the enterprise should be subject to the principles of logistics: obtaining the necessary material values in the required quantity and quality, in the right place, with minimal costs and the right consumer [23].

If we consider the relationship between enterprise management and logistic management, it is necessary to emphasize the subordinate role of logistic management in relation to the main goal of the organization (accelerated movement of logistics flows).

The main objectives of logistic management of supply, sales and production management are given in table 2.

Table 2

The main objectives of logistic management

Functional industries	Purposes
Supply management	supply of materials (parts) in accordance with the agreement and terms
	minimization of transport costs from storage of materials to the first workplace
	reducing the volume of purchased parts
Sales management	warehousing of finished products in intermediate warehouses with the lowest costs
	management of production orders in accordance with production requirements
Production management	order management in accordance with production requirements
	minimization of work in progress
	reducing the depth of manufacture

Source: [1–4].

The goals that determine the individual parameters of these industries are subordinated to the goals of functional industries. Logistic management optimizes logistic solutions for options between conflicting goals based on the criterion of minimum integrated costs of the organization [16].

The main approaches to the formation of logistic management of the enterprise as an integrated logistic system are to implement certain stages.

According to different functional branches of logistic management, there are internal, external and integrated micro-logistic systems.

External micro-logistic systems deal with issues related to the management and optimization of material and related flows from their sources to destinations outside the production cycle. Such systems include logistic systems for sales and supply of industrial enterprises. The links of these systems are divisions that perform various logistic operations for transportation, warehousing, storage, cargo processing, which together with the distribution network of suppliers constitute an external logistic system. The main task of logistic management in such systems is the coordination of logistic functions and coordination of the goals of suppliers, intermediaries and consumers [15].

The purpose of in-house micro-logistic systems is to optimize the management of material flows in the production system. To manage the system means to ensure purposeful development in changing conditions. The main purpose of the production system is production. Production includes direct technological processes and ancillary operations that are related to the manufacture of products.

In a production system, the planning and control subsystem is a system that provides a subsystem that processes and performs productive work directly related to the conversion of inputs into outputs. The planning and control subsystem receives information that comes from the subsystem that processes and issues a decision on how this productive system should work [17].

Management should be aimed at solving a wide range of problems, which include:

- production capacity planning;
- location of enterprises;
- planning of the business entity and work areas;
- scheduling;
- selection of equipment, its operation, current and overhaul replacement;
- material resources;
- technological process design and control over its implementation;
- working methods;
- inventory management;
- quality control, etc.

In general, the essence of operations management is:

- development and implementation of the general strategy and directions of operational activity of the organization;
- development and implementation of an operating system that includes the development of the production process, decisions on the location of production facilities, design of the organization;
- planning and control of the current functioning of the system [21].
- Thus, the production system can be represented as a system of "cost – conversion – output".
- It meets the criteria of planning, analysis and control, which ensures consistent management of the enterprise. The main tasks solved by in-house logistics for the production system:
 - reduction of stocks of material resources and work in progress;
 - accelerating the turnover of working capital of the firm;
 - reducing the duration of the production period;
 - control and management of the level of stocks of material resources;
 - optimization of technological transport.

All activities of the organization are a complex system consisting of a network of subordinate subsystems.

The structure of the system may include units of the second, third (and so on) levels.

Logistics management by its nature is a set of technical, technological, informational and socio-economic elements.

Direct, feedback between them forms a complex system of relationships [16].

Under such conditions, the position of the organization in the market is determined by the presence of its own institution of management, which would ensure compliance with production, economic and commercial activities to market demand and prospects for its development. Today it is possible to achieve by integrating the functions of logistics, production and marketing.

That is, there is a need to form a coordination center that would manage the integration of numerous material, information, labor and financial flows.

Such a center is the logistic department at the enterprise, aimed at identifying, calculating, optimizing and planning flow processes at all levels [17].

By organizing the movement of materials, information, personnel and finances into a single process, the center achieves a reduction in disruptions and costs of production, economic and commercial activities.

The logistic department of the organization, combining in one management complex issues of logistics, sales and transport of goods, acquires significance that is not inferior to production. This allows:

- to achieve a significant r-Integrated management of the logistic system of the enterprise in order to streamline flow processes seduction i-Integrated management of the logistic system of the enterprise in order to streamline flow processes total costs for the manufacture and sale of products;
- increase the company's ability to quickly adapt to consumer market demands;

– to expand and strengthen guarantees of service of products which are at consumers [19].

The logistics structure of the organization must perform the following mandatory functions listed in the table 3.

Table 3

Functions of the logistic structure of the enterprise

Functions of the logistics structure of the enterprise	Formation and development of the logistics system in accordance with its conceptual principles and provisions
	Development and implementation of logistics strategy in accordance with the market strategy of the enterprise
	Integrated management of the logistics system of the enterprise in order to streamline flow processes
	Coordination of interconnected functions of enterprise management
	Solving problems of specifics of the enterprise

Source: developed by the author.

The issue of principle and management is important in determining the approaches to the organization of logistics in the business entity. Management, in turn, is centralized and decentralized, which depends on the size of the entity, the scale of its activities, the concept of management, the economy, the market situation, the level of intra-system and intersystem integration, and so on.

Centralization of logistic management involves the presence of a logistics service directly subordinate to the top management of the enterprise [14].

The advantages of this approach in logistic management include the ability to attract highly efficient information systems. This radically changes the relationship between the functional units of the entity.

Decentralized logistic management, on the contrary, assumes that all issues related to logistics are resolved at the level of individual units of the enterprise [17].

This approach is more acceptable for large enterprises, where there are some problems with the manageability of its centralized organizational structure. Thus, with a fairly diversified production structure the organization is considered the most rational to leave the distribution function for a certain independent unit that provides operational customer service.

To achieve a high level of coordination of logistic activities within the enterprise use the following management strategies:

- optimization of the existing logistics system;
- search for new modern methods of coordination in the existing logistics system;
- reorganization of logistic management services [17].

Therefore, the goal set by the company in organizing its logistic activities to achieve the greatest coordination of the flow of goods and services should be in the interests of both suppliers and consumers.

Currently, the world's most popular is a mixed, diversified economy, in which government regulation and regulated market mechanisms for private enterprise coexist. Mainly through the tax system and administrative action in the core, basic sectors of the economy, as well as in the social sphere.

For the successful functioning of the economy in regulated market relations, those areas of knowledge that deal with market problems, as well as the problems of product movement from producers to consumers are important. These areas of knowledge include logistics and marketing [16].

The main goal of managing the logistic system of the enterprise is to achieve a high level of its system characteristics: viability, innovation, integration, reliability and adaptability by improving the application characteristics that reflect the quantitative parameters of the components of the logistics system, organization of its functioning and contribution.

The quantitative parameters of the components of the logistic system reflect the capacities and technical characteristics of the logistic assets of the enterprise, which include warehouses, transport, equipment (technological, lifting and transport, equipment for identification and determination of weight of goods), logistic information systems and stocks.

Characteristics of the organization of functioning of the logistic system describe its goals and objectives, logistics strategy, enterprise logistic management system and its organizational structure, characterize the logistics technologies used in the areas of supply, production and distribution, personnel potential of logistics units and their organizational culture.

This can be explained by the fact that in market conditions the leading place belongs to economic management methods, which focus the activities of business entities to meet market demand for goods and

services. Moreover, all parts of the logistics chain, from the production of raw materials, including their processing and manufacture of products suitable to meet market demand, and ending with the sale and after-sales service of these products, should focus on the needs of end users.

The economic methods of logistic management in a saturated market should include marketing, analysis and planning, commercial calculation, market pricing, accounting standards and more. Economic management methods are a set of tools and instruments that purposefully influence the creation of conditions for the functioning and development of entrepreneurship.

The levers of the economic mechanism correspond to the socio-economic nature of the enterprise and are one of the factors in the development of production and exchange on a market basis. Therefore, it is especially important to study the new that is introduced in practice in the context of commercial calculation as an important method of management. According to the definition by N. H. Chumachenko, it synthesizes both management functions and economic levers and tools that are aimed at comparing costs and results and ensuring the profitability of production.

According to the results of scientific research by L. V. Frolova, the greatest attention in logistic management is used by economic methods, because logistic relations are the main component of market relations, and they are based on the needs of consumers. Economic methods of managing logistic processes and flows of enterprises are carried out using special levers of tools used by company owners.

The specific set and essence of economic levers and tools of logistic management is determined by the specifics of the logistic system, which is the company.

Economic methods of logistic management can be grouped according to the following features, which are given in table 4.

Table 4

Classification of economic methods of logistic management

Signs of logistic management	Economic methods
Compliance with logistic management functions	monitoring; planning; forecasting; analysis; control.
Market mechanisms of management	marketing; market pricing; exchange equivalence; competition; commercial calculation; focus on meeting the effective demand for goods; services and labor resources.
Quantitative estimates	provide economic and statistical methods; economic and mathematical modeling; functional-cost analysis; methods of assessing the level of service; inventory control and management; system analysis; cybernetics; operations research; prognosis; qualimetry; risk management, activity optimization.

Source: [6].

In general, it is expected that on the basis of logistical approaches, economic methods should be embodied in the practice of production structures of producers and industrial consumers, also in the system of commercial intermediaries and enterprises. These methods ensure the economic interest of economic entities in improving the efficiency of the final results of economic activity through savings and profits from logistics operations and services [18].

Another group of tasks to improve material flows relates to the interaction of commercial intermediaries with each other, with other members in the commodity market and transport companies, the

development and improvement of the efficiency of the warehousing system. The solution of these problems is also greatly facilitated by logistical forms and methods of management.

The economic mechanism of functioning and development of enterprises involves the use of the method of commercial calculation. Based on the global economic policy and goals of the enterprise, in particular in the field of profitability of production and sales, distribution of investments and location of production; financing and crediting; development of technology, personnel policy, policy of acquisition of new enterprises and capital structure, etc. [14].

The adoption of centralized decisions on these issues is combined with a differentiated approach to individual units depending on the nature and content of their activities, the territorial location of enterprises and the degree of participation in the overall production and marketing activities of the enterprise.

In the calculation of commercial use using economic levers and tools such as policies in the field of pricing, production costs, financing and lending. This policy is aimed at obtaining a sustainable profit, which is the ultimate goal of commercial calculation [22].

Identifying the internal relationships of various elements of the economic mechanism of functioning and development of logistics implies the need to consider them in the process of centralized management. This is due to the fact that they are defined and established on the basis of policies developed and implemented at the highest level of enterprise management.

In general, the methodology of logistic management is formed on the basis of integration of scientific approaches and practices of implementation of principles and procedures of production marketing management, delivery logistics and strategy of use of supply objects [14].

The results of the enterprise logistic activity are influenced by a large number of various external and internal factors, which require their constant monitoring and evaluation in order to adjust the goals and objectives, to better adapt to the changing conditions of activity. In the analysis of the environment, more attention should be paid to the factors of the so-called working environment, that is, to those market participants, with whom the enterprise directly interacts in the course of its business activities, forming supply chains. There are the following groups of factors influencing the enterprise logistic activity.

To analyze these factors, models of estimating the factor impact of the external and internal environment are formed, during which all factors influencing the enterprise logistic activity are determined, and the degree of their influence due to their quantification, and also the risks of changing their magnitude are evaluated. The results of logistic activities are evaluated using a scorecard that contains key and local indicators with their subordination and differentiation, which provides a comprehensive evaluation of various aspects, types and characteristics of the enterprise logistics system, taking into account their mutual impact and achievement of goals.

Thus, economic methods of logistic management realize the material interests of human participation in production processes through the use of commodity-money relations.

Realization of separate logistic purposes can be provided by system of branch logistic functions, namely:

- planning of the production program;
- planning of the production process;
- planning of the use of power;
- planning of material flow;
- internal production transportation;
- production control;
- operational management of production;
- ecology of production processes;
- packaging.

Logistics activity takes place in a very dynamic environment, so the state of the logistic system should be constantly monitored, analyzed and evaluated. The goal of improving the logistics system of the company is to increase the efficiency of logistic processes and improve the company's image on the market. The effect of optimizing a logistics system can be as follows: limiting the number of objects, for example, by consolidating them, changing their location or expanding the system by increasing the number of exploited distribution objects. The main criterion for change is to increase the efficiency of the logistics system and minimize overall logistic costs while maintaining the desired level of customer service.

Specialists in logistics seek to ensure the integration of logistics, transport and transmission of information on the movement of goods into a single system, which should increase the efficiency of work in each of these areas separately and intersectoral efficiency in general.

The main cost savings are formed by reducing the volume of inventories of material resources, and time savings – by increasing the speed of delivery [13].

Economic methods must be used to solve important logistical problems or possibly approach this solution.

Logistics can solve a number of problems in the field of circulation, the most important of these problems are:

- determination of the system of optimal proportions between the volumes of production, warehousing and transportation;
- reduction of costs from avalanche-like growth of losses at failures and downtimes;
- establishing a rational level of cooperation in the system of actual production, storage and transportation;
- formation of a rational structure of management information flows without delay in relation to the production process [19].

The formation of such flow processes, flows and systems requires the development and adoption of logistics decisions aimed at ensuring the efficient operation and development of the logistics system of the enterprise in the macro-logistics environment [14].

Economic methods of logistics management are based on monitoring, marketing, commercial calculation, market conditions, competition for markets, etc.

Logistics management is impossible without methods of quality assessment based on the opinions of the jury, experts, consumer expectations, as well as informal approaches that involve the use of the following methods of information: verbal – receiving and transmitting information through negotiations, radio, television, Internet or direct communication with people; written – through newspapers, magazines, reports, etc., obtaining information through economic intelligence [12].

The deep roots of economic competition as a mechanism of market equilibrium have its origins in the material needs and interests of man. Intertwined and colliding, economic interests, and these are the perceived needs of a particular person, highlight the full range of economic relations and the mechanism that balances them – the market. It is in a market-competitive environment that economic interests are formed into a market component of social necessity. Logistics methods are a reliable tool for increasing competitiveness in commodity markets [14].

Industrial and trade enterprises, territorial-industrial complex, set of production and infrastructural elements, as well as connections at different levels (local, regional, state) can act in the system of coordination of interests of economic entities of logistics.

Conclusions. Thus, in conditions of fierce competition, the efficiency of the logistic network is not just a requirement, the implementation of which leads to success. It is a necessary condition for the survival of the enterprise. Effective competitive logistic network management solutions help build adaptive logistic networks by providing enterprises with planning and implementation tools that manage enterprise operations and state-of-the-art technologies for organizing and coordinating collaboration to expand these operations beyond the enterprise.

As a result of the implementation of this solution, businesses gain measurable and significant benefits by reducing costs, increasing the level of service and productivity, which ultimately leads to higher profitability of the company, increasing competitiveness.

The modern organization and operational management of production (material flows) must meet certain requirements, namely:

- providing rhythmic, coordinated work of all production units on a single schedule and even output;
- ensuring maximum continuity of production processes;
- ensuring the maximum reliability of planned calculations and the minimal complexity of planned work.

A prerequisite for optimizing the logistic system is the availability of a diagnostic system that would provide the enterprise management apparatus with the necessary data on the state of the subject, which would be the basis for decision making and forecasting for the future. The diagnosis of the operating system will have the effect of detecting its defects. Designing logistic systems should take into account the possible risks of implementing a solution and calculate with the help of mathematical models, possible benefits and losses for the enterprise.

In order to increase the efficiency from the practical results of designing logistic systems, the following recommendations should be distinguished:

1. Intelligent demarcation and correct decomposition of project objectives.

2. When designing a logistic system of an enterprise it is recommended to use information technologies that would allow visualization of the future logistic model for all its participants.
3. Development of an integrated diagnostic system for defects in the functioning of the logistic system.

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Амеліна Ірина Володимирівна, кандидат економічних наук, доцент. Національний університет «Полтавська політехніка імені Юрія Кондратюка». **Теоретичні й методологічні основи виробничого логістичного менеджменту.** Розглянуто поняття виробничого логістичного менеджменту як комплексної та комплементарної категорії, зміст якої постійно збагачується. Показано роль виробничого логістичного менеджменту в розвитку діяльності підприємства. Обґрунтовано необхідність вивчення економічно ефективної організації й управління матеріальними потоками в умовах змінного ринкового середовища з використанням основних логістичних принципів. Доведено, що організації та оперативному управлінню матеріальними потоками належить провідна роль в оперативному управлінні організацією, в своєчасній поставці продукції, особливо з метою підвищення ефективності виробництва, пов'язаного з використанням виробничих ресурсів у часі й просторі. Обґрунтовано, що одним із ключових моментів логістичного менеджменту виробничого організації є планування логістичних потужностей. Проаналізовано співвідношення менеджменту підприємства та логістичного менеджменту і підкреслено підпорядковану роль логістичного менеджменту відносно головної мети організації (прискорення руху логістичних потоків). Визначено основні цілі логістичного управління постачанням, збутом та виробництвом. Логістичний менеджмент оптимізує логістичні рішення стосовно варіантів між конфліктуючими цілями на основі критерію мінімуму інтегральних витрат підприємства. Логістичний менеджмент за своєю природою є сукупністю технічних, технологічних, інформаційних і соціально-економічних елементів. Прямі та зворотні зв'язки між ними утворюють складну систему взаємовідносин. Доведено, що виникає потреба у формуванні координаційного центру, який би управляв процесами інтеграції численних матеріальних, інформаційних, трудових і фінансових потоків. Таким центром запропоновано стати підрозділу логістики на підприємстві, діяльність якого спрямована на виявлення, розрахунки, оптимізацію та планування потокових процесів на всіх рівнях. Організуючи рух матеріалів, інформації, кадрів і фінансів у єдиний процес, центр досягає зниження перебоїв та витрат виробничо-господарської й комерційної діяльності. Логістичний підрозділ підприємства, об'єднуючи в один управлінський комплекс питання матеріально-технічного забезпечення, збуту і транспортного переміщення товарів, набуває значущості, що не поступається виробництву.

Ключові слова: логістика, менеджмент, логістичний менеджмент, фінансовий механізм, логістична структура, принципи, логістична діяльність.

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Amelina I. V., PhD (Economics), Associate Professor. National University “Yuri Kondratyuk Poltava Polytechnic”. **Theoretical and Methodological Foundations of Production Logistic Management.** The article deals with the concept of production logistic management as a comprehensive and complementary category, the content of which is constantly enriched. The role of production logistic management for the development of enterprise activity is shown. The necessity of studying the cost-effective organization and management of material flows in a variable market environment should be based on the main principles of logistics. It is proved that organizations and operational management of material flows include a leading role in operational management of the organization, in the timely delivery of products and especially for

increasing the efficiency of production associated with the use of production resources in time and space. It is substantiated that one of the key points of logistical management of the production organization is the planning of logistic capacities. The ratio of management of enterprise and logistic management are analyzed. It is emphasized the subordinate role of logistic management relative to the main goal of the organization (accelerating the movement of logistic streams). The main objectives of logistic supply, sales and production management are determined. Logistic management optimizes logistic decisions regarding the options between conflicting purposes based on the criterion of minimizing the integral expenses of the enterprise. Logistic management by its nature is a set of technical, technological, informational and socio-economic elements. Direct and backwards connections between them form a complex system of relations. The article proved that there is a need for the formation of a coordination center, which would manage the processes of integration of numerous material, information, labor and financial flows. Such a center is proposed to become a division of logistics in an enterprise aimed at detecting, calculations, optimization and planning of streaming processes at all levels. By organizing the movement of materials, information, frames and finances in a single process, the center reaches a decrease in the interruptions and expenses of production and economic and commercial activity. The logistic division of the enterprise, combining in one management complex of material and technical support, sales and transportation of goods, acquires significance that is not inferior to production.

Key words: logistics, management, logistic management, financial mechanism, logistic structure, principles, logistic activity.