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FORMATION OF THE ORGANIZATIONAL AND MOTIVATIONAL SUPPORT FOR MANAGEMENT OF THE ENTERPRISE FLOW PROCESSES BASED ON THE LOGISTICS APPROACH

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The organizational and motivational support for the management of enterprise flow processes has been studied with the indication of the formalization of the distribution of the administrative functions to be performed. The hypothesis of the study lies in the use of the logistics integrated properties to improve the adaptation characteristics and optimize the ability to manage the flow processes. Based on the developed and presented in the literature theoretical principles of organization of management of enterprise flow processes, the mechanism of the flow process management has been presented as a structured hierarchical system of interests, rules and regulations of the participants in the logistics chain. The specific features and characteristics of the mechanism of management of the enterprise flow processes have been determined. The need for applying the logistics approach as an effective tool for simultaneous functioning of the organizational structures of the participants in the logistics chain has been reasoned. The specific formation of the organizational and motivational support for management of the enterprise flow processes has been described to show that it is carried out by providing the available links with additional functions of the targeted nature and does not require changes in the number of the staff in the organizational system. The content of the strategic planning tasks of the enterprise logistics system development has been characrerized. The sequence of formation of the organizational and motivational support for regulation of the flow processes including the individual and general parameters of the aggregate material, financial and information flows has been developed and presented. The relation between the means and tools for achieving the objectives of the participants in the logistics cycle has been shown. A sequence of efforts on the regulation of the basic parameters of the organizational structure of the logistics system has been proposed and a clear interdependence between the regulation components has been established. The sequence of the distribution of management responsibility according to the results of the work included in the logistics processes has been shown.

Keywords: flow processes, logistics approach, organizational support, motivational support.

ФОРМУВАННЯ ОРГАНІЗАЦІЙНО-МОТИВАЦІЙНОГО ЗАБЕЗПЕЧЕННЯ УПРАВЛІННЯ ПОТОКОВИМИ ПРОЦЕСАМИ ПІДПРИЄМСТВА НА ОСНОВІ ЛОГІСТИЧНОГО ПІДХОДУ

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Розглянуто формування організаційного-мотиваційного забезпечення управління потоковими процесами підприємства із зазначенням формалізації розподілу виконання управлінських функцій. Гіпотеза дослідження полягає у використанні інтегральних властивостей логістики для зростання адаптаційних характеристик і оптимізаційної здатності управління потоковими процесами. Виходячи з розроблених та поданих у літературі теоретичних положень із організації управління потоковими процесами підприємства наведено структурування

механізму управління потоковими процесами як упорядкованої ієрархічної системи інтересів, правил і норм учасників логістичного ланцюга. Визначено специфічні властивості й ознаки механізму управління потоковими процесами підприємства. Обґрунтовано необхідність у застосуванні логістичного підходу як ефективного інструмента синхронного функціонування організаційних структур учасників логістичного ланцюга. Показано, що специфіку формування організаційно-мотиваційного забезпечення управління потоковими процесами підприємства здійснено шляхом надання наявним ланкам додаткових функцій цільового характеру і вона не потребує зміни чисельності персоналу в діючій оргсистемі. Дана характеристика змісту завдань стратегічного планування розвитку логістичної системи підприємства. Розроблено і наведено послідовність формування організаційно-мотиваційного забезпечення регулювання потокових процесів, що враховує індивідуальні й загальні параметри сукупності матеріальних, фінансових та інформаційних потоків. Показано взаємозв'язок між засобами та інструментарієм досягнення цілей учасників логістичного циклу. Запропоновано послідовність виконання робіт із регламентації основних параметрів організаційної структури логістичної системи та встановлено чіткий взаємозв'язок між складовими частинами комплексу регламентації. Наведено послідовність розподілу управлінської відповідальності за результатами робіт, що входять до складу логістичних процесів.

Ключові слова: потокові процеси, логістичний підхід, організаційне забезпечення, мотиваційне забезпечення.

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ФОРМИРОВАНИЕ ОРГАНИЗАЦИОННО-МОТИВАЦИОННОГО ОБЕСПЕЧЕНИЯ УПРАВЛЕНИЯ ПОТОКОВЫМИ ПРОЦЕССАМИ ПРЕДПРИЯТИЯ НА ОСНОВЕ ЛОГИСТИЧЕСКОГО ПОДХОДА

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Рассмотрено формирование организационно-мотивационного обеспечения управления потоковыми процессами предприятия с указанием формализации распределения выполнения управленческих функций. Гипотеза исследования заключается в использовании интегральных свойств логистики для роста адаптационных характеристик и оптимизационной способности управления потоковыми процессами. Исходя из разработанных и представленных в литературе теоретических положений по организации управления потоковыми процессами предприятия представлено структурирование механизма управления потоковыми процессами как упорядоченной иерархической системы интересов, правил и норм участников логистической цепи. Определены специфические свойства и признаки механизма управления потоковыми процессами предприятия. Обоснована необходимость в применении логистического подхода как эффективного инструмента синхронного функционирования организационных структур участников логистической цепи. Показано, что специфика формирования организационно-мотивационного обеспечения управления потоковыми процессами предприятия осуществляется путем придания имеющимся звеньям дополнительных функций целевого характера и не требует изменения численности персонала в действующей оргсистеме. Дана характеристика содержания задач стратегического планирования развития логистической системы предприятия. Разработана и представлена последовательность формирования организационно-мотивационного обеспечения регулирования потоковых процессов, учитывающая индивидуальные и общие параметры совокупности материальных, финансовых и информационных потоков. Показаны взаимосвязи между средствами и инструментарием достижения целей участников логистического цикла. Предложена последовательность выполнения работ по регламентации основных параметров организационной структуры логистической системы и установлена четкая взаимосвязь между составляющими комплекса регламентации. Пред-

ставлена последовательность распределения управленческой ответственности по результатам работ, входящих в состав логистических процессов.

Ключевые слова: потоковые процессы, логистический подход, организационное обеспечение, мотивационное обеспечение.

The reduction of the GDP (in 2014 the GDP fall was 6.8 % as a whole, in the fourth quarter it was 14.8 %), the decline in the scope of industrial production (in 2014 the industrial production index was 89.9 %, and in engineering it was 79.4 %) and the loss of activity of enterprises (the net loss of large and medium industrial enterprises amounted to 87.7 billion UAH in January – September 2014; while unprofitable machine building enterprices made 40.1 %) are typical features of the current state of the national economic system. The issues of business management improvement and involvement of more advanced approaches in management practices to meet the consumer demand while minimizing the costs of the market consumer value have become urgent in the face of the negative factor threats. It is only possible if all the enterprise processes are subordinate to the realization of the enterprise potential and meeting the effective demand with a corresponding reorientation of management to the logistics approach.

The general issues of construction and improvement of the enterprise management system are represented in many works of the domestic scholars (A. Voronkova, M. Kyzym, G. Kozachenko, R. Lepa, B. Pastukhova, V. Ponomarenko, O. Pushkar) and foreign scientists (I. Ansoff, Argyris, R. L. Daft, P. Drucker, B. Mylner, H. Mintzberg, E. Smirnov, J. Stock, S. Young). These works are mainly focused on the functional paradigm and a limited orientation to the flow and other processes. The development of this paradigm requires more attention to specific aspects of the company activity taking into account marketing, innovation and logistics management.

Extensive use of the logistics approach resulted in a number of studies that highlight the logistics methodology (B. Anikin, A. Gadzhinskiy, M. Gordon, V. Sergeev, A. Semenenko, M. Oklander), the logistics management (M. Doronin, P. Larina, J. F. Magee, A. Trydid, L. Frolova, J. Heskett, N. Chukhrai, L. Shemayeva) and the role of enterprise flow processes (D. J. Bowersox, A. Butrin, J. Becker, M. Grigorak, V. Yeliferov, O. Zborowskaya, E. Krykavskiy, I. Popovichenko, V. Repin). In addition, there are a number of standards which define a common basis for applying the process approach to the quality management (ISO 9000), typical processes of the life cycle systems (ISO 15288), inspection regulations (ISO 15504) and the models of evaluation of the process maturity (Capability Maturity Model, CMM). Under the conditions of the growth of dynamic economic environment the use of both the aforementioned standards and current developments in the sphere of logistics management is complicated by the objective need to adapt the typical descriptions of the processes to the conditions of a particular situation. This problem of increasing adaptability and optimization capacity of the enterprise flow processes requires appropriate scientific and methodological study to find a solution.

Both the tools and procedures for management of flow processes of industrial enterprises and the organizational support for the development and implementation of the management actions require relevant changes. This requirement is urgent in the case of a wide use of the integration tendencies and the current process within the framework of interaction of several enterprises. The concept of supply chain management (Supply Chain Management, SCM) implies a study of such flows, the special features of which are highlighted in the works of D. Ivanov, D. Kostoglodov, M. Christopherson, L. Myrotin, A. Nekrasov, E. Nichols, R. Handfield, D. Shapiro and other scientists and economists. The relevance of this kind of developments regarding the management of flow processes at the level of interaction of enterprises is confirmed by the need for prompt management decision making and promotion of industrial and financial cooperation of enterprises declared in the Concept "The state Target Economic Program of Industrial Development for the period till 2020". The available studies are primarily focused on discovering the course of flow processes and, therefore, require further development aimed at the optimization of the process mangement with a view to providing coincidence of the interests of all the participants in the supply chains.

Thus, the relevance and practical importance of the management of flow processes for domestic and industrial enterprises and the need for the development of the current methodological support for such management have stipulated the choice of the topic, setting the goal and objectives of the study.

The goal of the study is the process of formation of organizational and motivational support for the management of enterprise flow processes on the basis of the logistics approach.

To address this goal the following methods have been used in the study: the abstract-logical, structural and logical analysis – to substantiate the properties and characteristics of the mechanism of management of enterprise flow processes; the functional modelling – to show the loop control flow processes of the enterprise; the graphic method – for visual presentation of the research results.

A compulsory prerequisit for the logistics approach, to be implemented which provides for the need to form special features and characteristics of the mechanism of management of the flow processes (Fig. 1), is the appropriate organizational training and ensuring a smooth integration of the relevant procedures, regimes and regulations into the enterprise organizational structure, and formation of a favorable attitude to solving this problem with the personnel to be involved in the implementation of the logistics and related administrative functions.

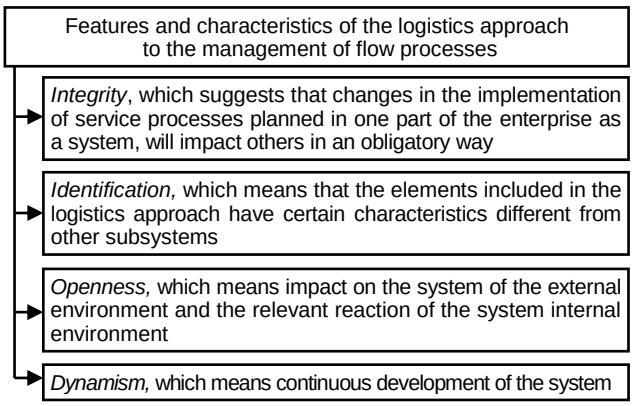

Fig. 1. **Special features and characteristics of the mechanism of management of the enterprise flow processes** (on the basis of [1; 4; 6])

The organization of management is considered in the economic literature [1] as a component part of the management system, which ensures the impact on factors which influence the result of activity of the managed object. The organization of the logistics approach means a series of ways to ensure a full development of the enterprise on the basis of implementation of the principles of logistics in the activity of its functional units [2]. However, in this case there may be disputes ("conflict of interest") [3], on the one hand, among the functional units of the company, and on the other hand – between the enterprise and suppliers and consumers. Ensuring coherence of different units in the aspect of through management of flow processes is an important task of the logistics approach [4].

Formation of the logistics approach will provide a comprehensive, synchronized functioning of structures and their elements, firstly, according to a particular space and time of the functional purpose and goals, and secondly, on the basis of the organizational-economic, and organizational-technological conditions and principles, thirdly, taking into account the properties and areas of their appropriate development. The aforementioned parameters in the process of functioning of the implemented logistics approach may be subjected to new influences of the environment and quite possible disturbance in the domestic environment. Thus, optimization and adaptive properties of the logistics approach will be displayed through a flexible system, the basis of which is the organizational structure of management (OSM). In the process of the OSM construction, which contributes to the efficiency of the logistics approach, the methods presented in Fig. 2 should be used [5 – 7]. The specificity of the OSM construction determines the feasibility of searching for the used combinations and modifications and the development of new, more methodical positions, more appropriate to the stages of solving the problems of organization of the management on the basis of logistics. It does not imply a radical modification of the existing OSM, it is not only limited to the creation of a new functional unit (position) but provides additional functions of the targeted nature to the available links and does not require a significant change in the number of the staff in the current OSM.

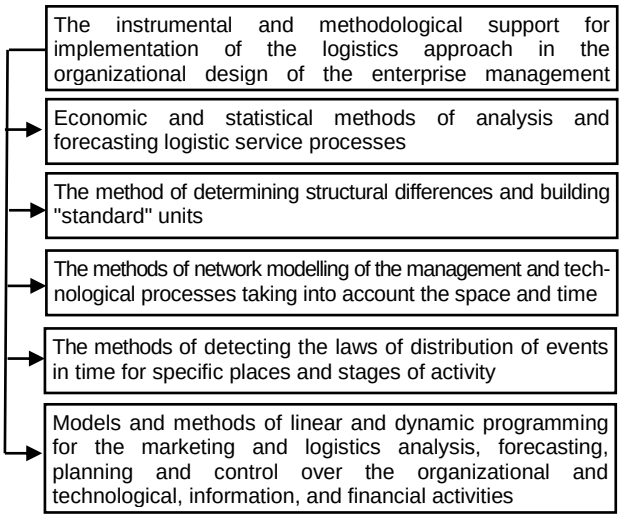

Fig. 2. **The components of the instrumental and methodological support for the implementation of the logistics approach** (on the basis of [1; 4 – 6])

It is highly important that the implementation processes are provided with appropriate social and psychological training, and the motivation of the transfer to the logistics-oriented management is additionally reasoned. The new management procedure based on the logistics concept should be imposed on a well-prepared environment of the enterprise. The more loyalty shown by the groups of enterprise workers, the more efficient and requiring less time the implementation and adaptation of the new procedure for the order-oriented logistics management will be. Of course, the processes of implementation and adaptation can require some not very important adjustments to the new management system. They will be taken into account immediately, but the adjustments themselves will be integrated in the structure without disturbing the operation of its blocks.

The OSM construction, including the choice of its specific sub-systems, elements and their relations, is based on the deductive approach which allows taking into consideration the whole system of the objectives of the logistics system (hereinafter – LS), as well as the full range of ways of the future development of its structure. The generalized representation of the sequence of formation of the organizational support for management of the enterprise flow processes on the basis of the logistics approach is shown in Fig. 3 [8; 9].

Thus, the sequence of the organizational support for the enterprise flow process management (Fig. 3) makes it possible to provide a cyclic continuing process of enterprise self-adjustment, self-improvement and development as a logistics system.

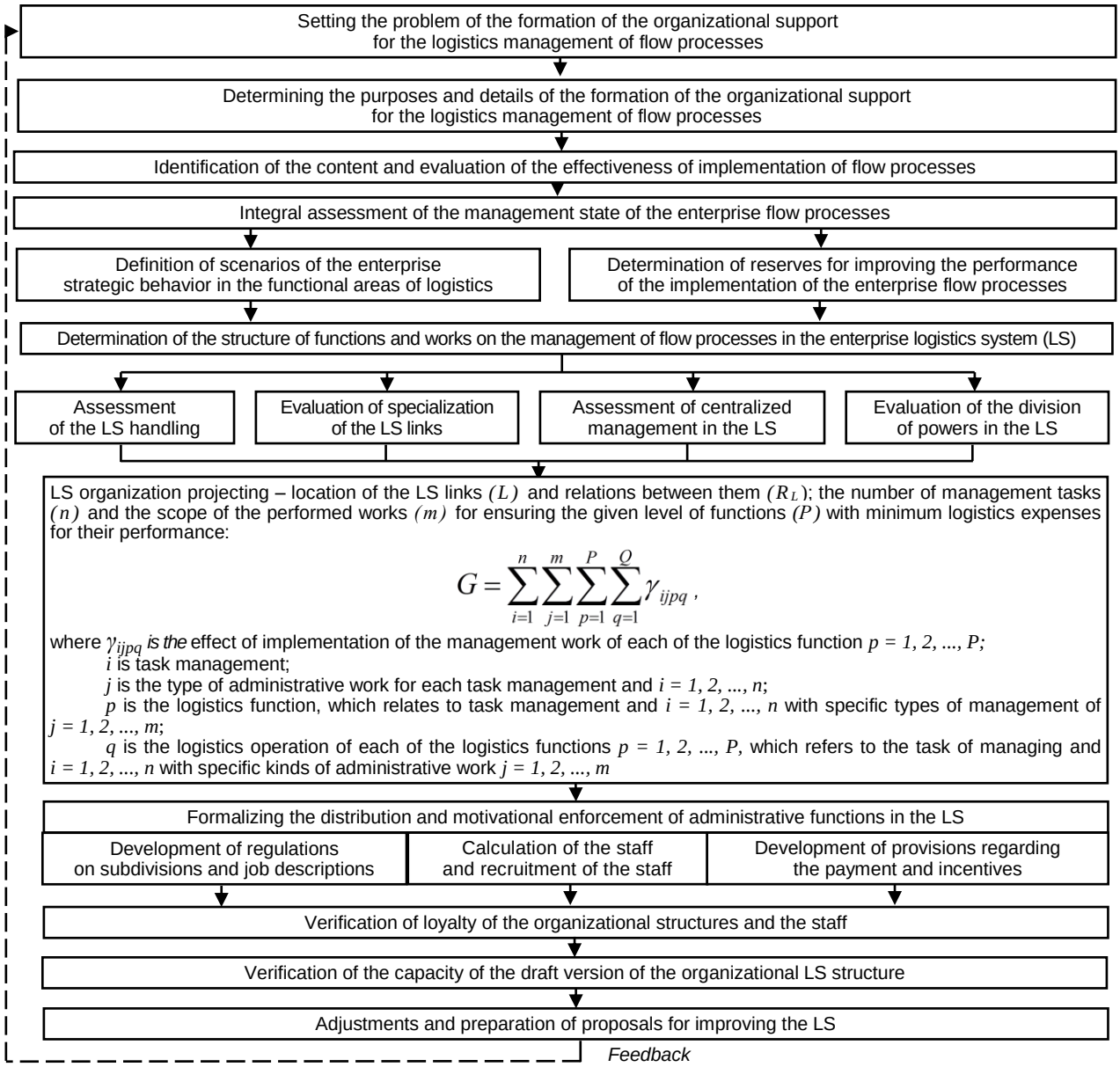

Fig. 3. **The sequence of the formation of the organizational support for management of the enterprise flow processes on the basis of the logistics approach** (developed by the author)

Let's consider setting the objectives of optimization of the LS organizational structure of the enterprise. For this purpose let's define a set of the input data. A great number of possible links of the logistics system of the enterprise are taken with $L = \{L^i\}$, $i = 1, 2, ..., n$ and relations between them that are given in the form of a graph $R_L = \{L^i, (L^i, L^{i'})\}$, $i, i' = 1, 2, ..., n$... The top of the graph represents the links of the logistics system, and the arcs are relations between them.

1. Let's represent the performed LS functions of the enterprise in the form of a set of tasks performed by the links of the logistics system, $N = \{N^i\}$, $i = 1, 2, ..., N^i$, each of which can consist of P^j management works performed according to each logistics function $S = \{S^j\}$, $j = 1, 2, ..., m$... .

2. Let's represent the relations between the task and management works in the form of a graph $G^N = \{N^{pj}, (N^{pj}, N^{'pj})\}$, $N^{pj}, N^{'pj} \in N$. The arcs of the graph $(N^{pj}, N^{'pj})$ characterize the ways of movement, existing between the resolved tasks and their management works and meet the areas of the material, information and financial flows.

3. Let's take a minimum of logistics costs in all the performed logistical functions S at a given level of the product quality for the optimization criterion (the target function). Then the task of the synthesis of the optimal organizational structure LS will mean finding its links (L) and relations between them (R_L); a great number of tasks of the logistics management (N) and the number of the performed works (P^j) for ensuring the given level of functions (S) with minimum logistics costs (I^S) for their performance. Then:

$$\sum_{i=1}^{n}\sum_{N_i=1}^{N_i}\sum_{j=1}^{m}\sum_{P_j=1}^{P_i}\gamma_{P_j} = \begin{cases} S \geq S_{n.t}, \text{where } S = \prod_{k=1}^{k} S_k^v, \sum_{j=1}^{m} V_j = 1 \\ \min I_S \in I_S, \text{where } I_S = \sum_{S_k=1}^{S_k} I_{S_k} \end{cases}, \quad (1)$$

if $N^i \in N$; $L^i \in L$; $R_{Li} \in R_L$; $G_{Ni} \in G^N$,

where γ_{P_j} is the effect from the implementation of the management work of each logistical function $j = 1, 2, ..., m$;

S_k^v is the level of *k-th* logistic function with *v-th* share in the total volume of the manufactured products;

I^{S_k} is the logistics costs for the performance pursuant to S_k logistics functions.

Maximization of the targeted function at the expense of minimizing the logistics costs involves determining the optimal number of LS links, their solved problems and the number of operations carried out for each of the functions:

$$S = \min \sum_{i=1}^{n} \sum_{j=1}^{m} I_{ij} , \quad (2)$$

where I_{ij} is the logistic costs for the *i-th* number of links in the logistic system of the enterprise that perform *j-th* number of logistics functions.

The main stages of the strategic planning of functioning of the enterprise logistics system will be as follows: determination of the specific objectives of development of the enterprise logistics system and the scope of its activities; development of the strategy; implementation of strategic measures. The first stage is the determination of the objectives of functioning of the logistics system. Specific functions and tasks of the links of the logistics system and the time period needed to implement them will be developed on this basis [10]. These tasks, on the one hand, are to be simplified, and, on the other hand, they should be realistic and not contradictory to the fundamental objectives of the development of the logistics system as a whole.

The sphere of activities of the logistics system, that is the areas of development as a whole and its individual types for the next 5 – 10 years will be determined at the second stage. Determination of the sphere of activities of the enterprise logistics system is directly related to the third stage – the development of specific measures of the enterprise strategic development, based on the forecasting of the results which perform the correction of the objectives of the logistics system development, and then the review of the activities (tasks) in the links of the system, etc.

The cycle is repeated till the moment of finding the optimal set of objectives (formation of the optimal level of production and providing the service in the case of minimization of the financial resources needed for its implementation) and objectives of the enterprise logistics system that ensure implementation with a fairly high probability.

The fourth stage of the task of the strategic planning of the logistics system means applying the developed measures to specific links of the logistics system and determining target indicators for their operational management.

In the case of apllying strategic measures to the logistics system of the enterprise it is necessary to carry out the periodic control over the course and results of their implementation (fifth stage) to identify critical deviations in time and to adequately respond to them. Thus, the strategic planning of the development of the enterprise logistics system will help perform the following tasks (Table 1).

Table 1

Characteristics of the content of the strategic planning objectives of the enterprise logistics system development (on the basis of 4; 8 – 9)

The objectives of the strategic planning	The performance result
Sampling, analysis and processing of the information about functioning of the enterprise, necessary for determining the strategic objectives of the logistics system development and making strategic decisions	The massive of the input data for analysis and modelling
Simulation modelling of possible strategic decisions on the enterprise logistics system development and analysis of possible results	A simulation model of the LS functioning
Forecasting of the market development of these products and services and the behavior of enterprises of this sector in the market	The market forecast and logistics needs
Planning the enterprise LS need for the material, financial and information resources that ensure elimination of possible contradictions between the operational objectives and strategic goals	The forecast of the resource needs
Formation of the long-term plan (program) of the enterprise development	The perspective plan
Control over the implementation of strategic plans of the enterprise development with their subsequent corrections if necessary	The system of the control indicators

That is, the result of the application of the logistics approach to the management is a properly modelled logistics chain that takes into account the objectives of the servicing systems, the company's own LS and the systems that are serviced.

The starting point of the logistics chain modelling is the description of the elements and structures. The logistics chain consists of a number of manufacturing enterprises $B = \{B_\mu, \mu \in M\}$, suppliers of raw and other materials, warehouses, and transport companies, etc. Within the framework of the logistics chain a number of operations $E = \{E_j, j \in L\}$ can be carried out. To correlate the elements B and E, let's introduce the concept of the *key competence*. The key competence will mean a pair (B_μ, E_j), that is if μ-enterprise can fulfill a j-operation, it has $k_{\mu j}$ competence. Each competence is characterized by such features as the available production capacities $x_{\mu j}(t)$ at each of the time intervals t, the cost of the work performance $c_{\mu j}$, reliability $q_{\mu j}$. The logistics chain can be represented in the general theory of graphs as a directed (oriented) graph, in which the tops are the competence units of the enterprises and technological links between the competence units are marked with arcs. Due to the fact that the elements of the graph are active, act for the aforementioned purpose, autonomous and are characterized by available communication with other agents, it is reasonable to take into consideration the description of the graph elements in the form of active elements in terms of multi-agent

systems. For formal submission of agents, as a rule, three main functions are used: the production function, the profit function and the function of the offer. Agents have their own local targets. In particular, each enterprise according to each of its competences aims, firstly, at maximizing the capacity utilization:

$$x_{\mu j}(t) - \tau_j^{\nu}\left(\lambda_{\nu j}^{\mu}\right) \rightarrow \min, \quad \lambda_{\nu j}^{\mu} \in \Delta, \ \lambda_{\nu j}^{\mu} \in \{0; 1\}, \qquad (3)$$

and, secondly, at increasing the maximum level of profit:

$$p_j^{\nu} - c_{\mu j}\left(\lambda_{\nu j}^{\mu}\right) \rightarrow \max, \qquad (4)$$

where τ_j^{ν} is the required time for the work performance;

p_j^{ν} is the proposed price for the work performance;

$\lambda_{\nu j}^{\mu}$ is the version of using the resources by the agent;

B_{μ}, Δ is the number of alternative versions of using the resources.

For a number of orders the two-criteria profit function will be formulated as follows:

$$J_1^{\mu} = \sum_{j=1}^{L} x_{\mu j}(t) - \sum_{j=1}^{I}\sum_{\nu=1}^{N} \tau_j^{\nu}\left(\lambda_{\nu j}^{\mu}\right) \rightarrow \min \qquad (5)$$

$$J_2^{\mu} = \sum_{j=1}^{I}\sum_{\nu=1}^{N} p_j^{\nu} - \sum_{j=1}^{I}\sum_{\nu=1}^{N} c_{\mu j}^{\nu}\left(\lambda_{\nu j}^{\mu}\right) \rightarrow \max \qquad (6)$$

To account for the so-called "non-rigid" factors such as the enterprise's reputation, the level of trust, the reliability of the supplier, it has been offered to take in consideration the function of the agent's reputation:

$$\varphi_{\mu j} = f\left(W_{\mu j}, V_j\right), \qquad (7)$$

where $W_{\mu j}$ is the knowledge of the agent B_{μ}, competence $k_{\mu j}$;

V_j is the importance of work E_j.

Thus, the function of the offer of the agent B_{μ} competence $k_{\mu j}$ can be formulated as follows:

$$BF_{\mu j} = f\left(x_{\mu j}(t), c_{\mu j}, q_{\mu j}, r_{\mu j}\right). \qquad (8)$$

For the final choice made by the customer, the order A will be formed. To describe the product, a multi-level specification will be used. For each position of the specification (raw materials, materials, parts, components, finished products), a sub-order A_{ν} will be formed. The fulfillment of the order A will consist in the fulfillment of ν-sub-orders. Thus, to fulfill the order *A* in accordance with the specification, a number of $A = \{A_{\nu}, \nu \in N\}$ sub-orders (a great number of sub-orders and orders of the customer are marked in a similar way for the purpose of unambiguous correlation of each ν-sub-order to a particular customer's order) will be formed. For each ν-sub-order the technology of its execution D_{ν} is known, which represents an ordered sequence of technological operations:

$$E_j \ (j = 1, 2, \ldots, j_{\nu}) \qquad (9)$$

where j_{ν} is the number of operations necessary for the execution of ν-sub-order.

The regular time for fulfillment $t_{\nu} > 0$, value c_{ν} and critical starting lines r_{ν} and termination t_{ν} will comply with each ν-sub-order. The ordered set of technologies D_{ν} represents a technological plan for the A order. Sub-orders can be executed in a parallel structure in accordance with the specifications and restrictions in critical terms. The *A* order will be fulfilled according to the customer's requirements, which include the desired delivery date T_{end}^{α}, the maximum allowable cost of the order C^{α}, as well as a number of additional parameters (the place of delivery, the volume of the batch, the risk of shortage, etc.). An important feature of the supply chains is their multi-structuring. The supply chain is not limited to a set of the organizational elements. Analyzing the supply chain it is necessary to consider the full range of the structures formed in it – organizational, functional, information, product, technological, topological and financial structures. All these structures are closely interrelated and rapidly changing.

The system of management of the industrial enterprise includes several subsystems: the planning subsystem (strategic and current), the management sub-system of the marketing and sales activity, the subsystem of management of finances, etc. In practice, very often there is a situation where many of the aforementioned subsystems have been developed at the enterprise fairly well: there is documentation, there are relevant specialists, and software has been installed, and so on [11]. As a rule, the worst things regard the consolidation of all these subsystems into the general management system. The top-level management of the enterprise will be responsible for this consolidation, but it is most probable that the regulatory documentation has been developed the least. Implementation of the logistics approach allows you to create a system of logistics-oriented management (hereinafter – LOM system) that provides managers with those means of management that can combine the existing subsystems and remove barriers among the departments on the issue of the effective movement of the flow processes. It is proposed that the implementation of the LOM system provides for the implementation of the following stages (Fig. 4).

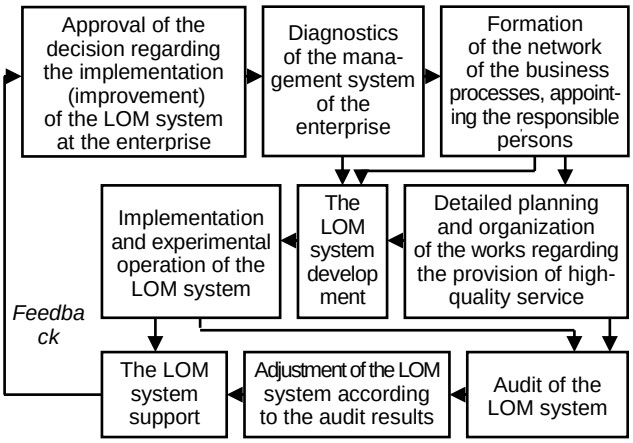

Fig. 4. **The stages of the LOM implementation at the enterprise** (developed by the author)

The offered sequence of the LOM introduction makes it possible to regulate the procedure for the work performance (Fig. 5) with regulation of the basic parameters of the logistics system organizational structure and establish a clear link between the components of the set of regulation of the logistics systems organizational structure parameters (Fig. 6).

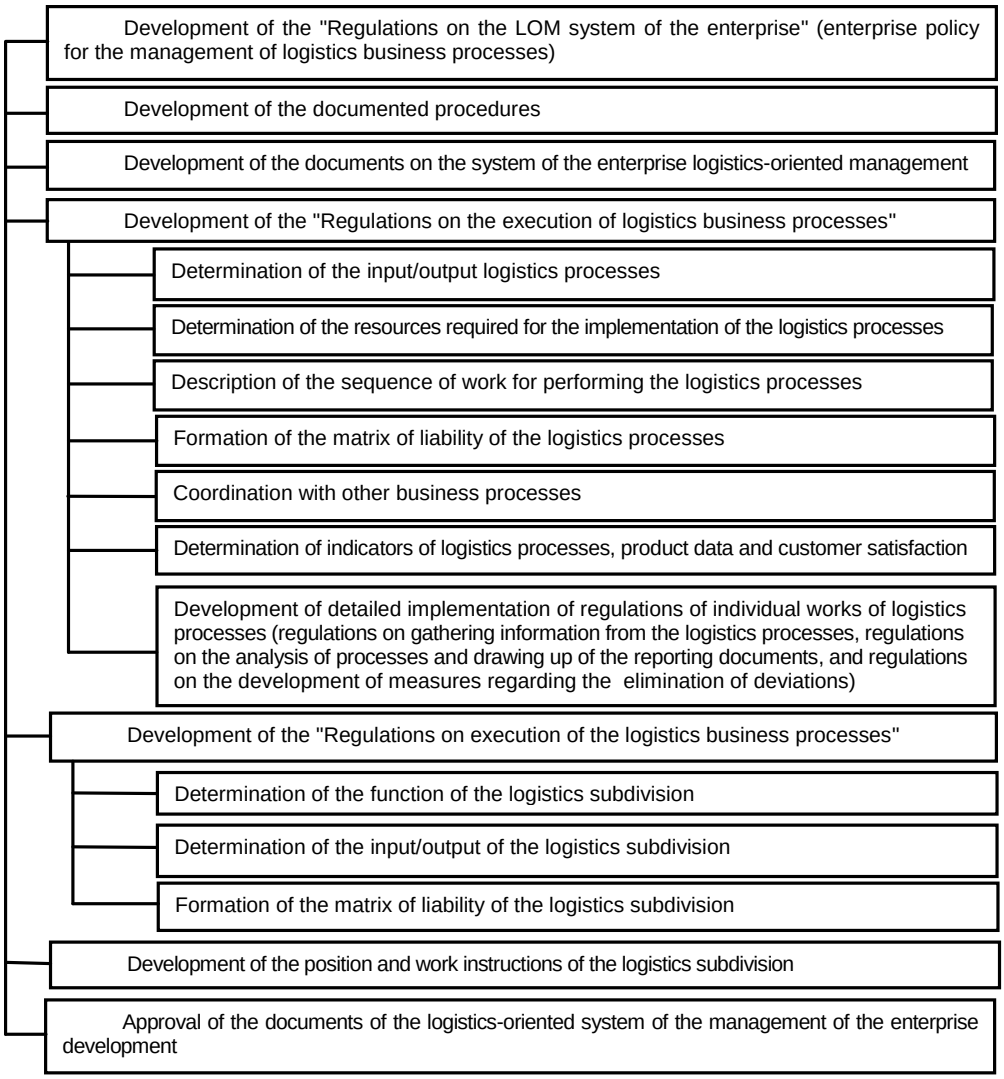

Fig. 5. **The procedure for the work performance on the regulation of the basic parameters of the logistics system organizational structure** (on the basis of [3; 5])

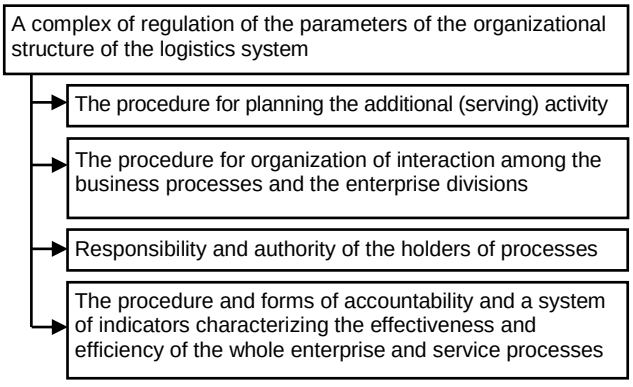

Fig. 6. **The components of the complex of regulation of the parameters of the logistics system organizational structure** (on the basis of [3; 5])

Implementation of the LOM system at the enterprise primarily means the execution of the order of the work according to the description and regulation of the logistics business processes within the framework of which the responsibility is distributed according to the results of the works that are a part of these processes (Fig. 7).

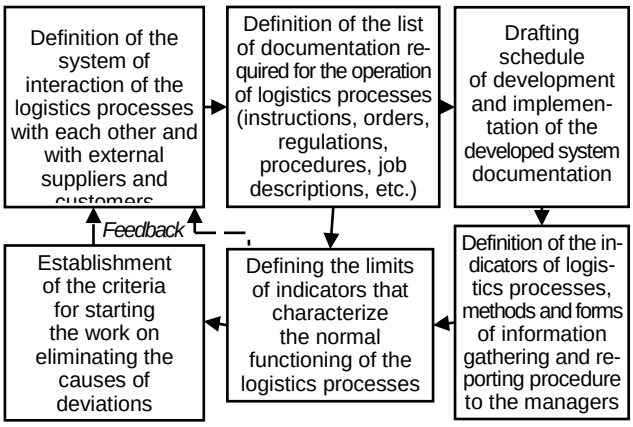

Fig. 7. **The sequence of distribution of the management responsibility according to the results of the works that are a part of the logistics processes** (on the basis of [2 – 4])

It should be emphasized that a special place in the distribution of the management responsibility according to the results of the work belongs to the costs. But, of course, the real model of the cost allocation at the enterprise is more complex than its process representation.

Thus, the formation of the organizational and motivational support for the enterprise flow process management based on the logistics approach has been highlighted to include: the identification of the enterprise logistics business processes (LBP) network; regulation of the logistics business processes (and relations of the input/output processes on the customer – supplier principle with an appropriate level of specification); the development and implementation of the system of indicators for the logistics business process management; provision of the process owners' work (through regulation of the managers' activity, planning improvement, reporting based on the performance indicators etc.); the development and implementation of the personnel motivation system to provide an impetus for steady LBP improvement.

The distinction of the proposed organizational support for the enterprise flow process management based on the logistics approach consists in the fact that the division of responsibility for the performance of functions and jobs takes into account the variability of the logistics process constituents within the available organizational structure of the enterprise and the formation of a motivational system providing economic behavior of personnel aiming to meet potential additional resource needs of the enterprise required to remove probable deviation of the operational tasks from the enterprise development strategic indicators.

The research findings make a basis for the formation of the organizational and motivational support for enterprise flow process management and provide for regulation of the main parameters of the enterprise organizational structure as a logistics system. The area for futher research is the identification of indicators and criteria for management efficiency evaluation at every stage of the value creation chain which have not been properly developed yet.

References: 1. Поповиченко І. В. Підвищення ефективності діяльності будівельного підприємства на основі вдосконалення логістичного менеджменту: монографія / І. В. Поповиченко. – Дніпропетровськ : ПДАБА, Видавництво ПП Федорченко О. О. "Литограф", 2012. – 302 с. 2. Zinkovsky M. Problems and terms of the implementation of optimal flow processes management / M. Zinkovsky, I. Dzebko // Економіка розвитку. – 2012. – № 2 (62). – С. 57–60. 3. Бродецкий Г. Л. Моделирование логистических систем. Оптимальные решения в условиях риска / Г. Л. Бродецкий. – М. : Вершина, 2006. – 376 с. 4. Зборовська О. М. Системне управління потоковими процесами промислового підприємства на основі логістичного підходу : монографія / О. М. Зборовська. – Дніпропетровськ : Дніпропетровський університет імені Альфреда Нобеля, 2011. – 312 с. 5. Бьерн А. Бизнес-процессы. Инструменты совершенствования / А. Бьерн ; пер. с англ. – М. : РИА "Стандарты и качество", 2003. – 272 с. 6. Barratt M. Qualitative case studies in operations management: Trends, research outcomes and future research implications / M. Barratt, T. Y. Choi, M. Li // Journal of Operations Management. – 2011. – Vol. 42, No. 4. – P. 329–342. 7. Ivert L. K. When should advanced planning and scheduling systems be used in sales and operations planning? / L. K. Ivert, P. Jonsson // International Journal of Operations & Production Management. – 2014. – Vol. 34, Issue 10. – P. 1338–1362. 8. Affonso R. Sales and operations planning: the supply chain pillar, R. Affonso, F. Marcotte and B. Grabot // Production Planning and Control. – 2008. – Vol. 19, No. 2. – P. 132–141. 9. Qrunfleh S. Lean and agile supply chain strategies and supply chain responsiveness: the role of strategic supplier partnership and postponement / S. Qrunfleh, M. Tarafdar // Supply Chain Management: An International Journal. – 2013. – Vol. 18, Issue 6. – P. 571–582. 10. Пилипенко А. А. Формування обліково-аналітичного забезпечення управління витратами підприємств та їх об'єднань: монографія / А. А. Пилипенко, І. П. Дзьобко, О. В. Писарчук ; за заг. ред. докт. екон. наук, доцента Пилипенка А. А. – Х. : Вид. ХНЕУ, 2011. – 344 с. 11. Performance-Based Logistics and Interfirm Team Processes: An Empirical Investigation / W. S. Randall, T. G. Hawkins, J. J. Haynie et al. // Journal of Business Logistics. – Vol. 36, Issue 2. – P. 212–230.

References: 1. Popovychenko I. V. *Pidvyshchennia efektyvnosti diialnosti budivelnoho pidpryiemstva na osnovi vdoskonalennia lohistychnoho menedzhmentu : monohrafija* [The increase in the efficiency of activity of construction companies on the basis of improvement of logistics management : monograph] / I. V. Popovychenko. – Dnipropetrovsk : PDABA, Vydavnytstvo PP Fedorchenko O. O. "Lytohraf", 2012. – 302 p. 2. Zinkovsky M. Problems and terms of the implementation of optimal flow processes management / M. Zinkovsky, I. Dzebko // Економіка розвитку. – 2012. – No. 2 (62). – P. 57–60. 3. Brodetskiy G. L. *Modelirovanie logisticheskikh sistem. Optimalnye resheniya v usloviyakh riska* [Simulation of logistics systems. The optimum decision under the conditions of risk] / G. L. Brodetskiy. – M. : Vershina, 2006. – 376 p. 4. Zborovska O. M. *Systemne upravlinnia potokovymy protsesamy promyslovoho pidpryiemstva na osnovi lohistychnoho pidkhodu : monohrafiia* [System management of flow processes of an industrial enterprise on the basis of the logistics approach : monograph] / O. M. Zborovska. – Dnipropetrovsk : Dnipropetrovskyi universytet imeni Alfreda Nobelia, 2011. – 312 p. 5. Bern A. *Biznes-protsessy. Instrumenty sovershenstvovaniya* [Business processes. Tools of improvement] / A. Bern ; per. s angl. – M. : RIA "Standarty i kachestvo", 2003. – 272 p. 6. Barratt M. Qualitative case studies in operations management: Trends, research outcomes and future research implications / M. Barratt, T. Y. Choi, M. Li // Journal of Operations Management. – 2011. – Vol. 42, No. 4. – P. 329–342. 7. Ivert L. K. When should advanced planning and scheduling systems be used in sales and operations planning? / L. K. Ivert, P. Jonsson // International Journal of Operations & Production Management. – 2014. – Vol. 34, Issue 10. – P. 1338–1362. 8. Affonso R. Sales and operations planning: the supply chain pillar, R. Affonso, F. Marcotte and B. Grabot // Production Planning and Control. – 2008. – Vol. 19, No. 2. – P. 132–141. 9. Qrunfleh S. Lean and agile supply chain strategies and supply chain responsiveness: the role of strategic supplier partnership and postponement / S. Qrunfleh, M. Tarafdar // Supply Chain Management: An International Journal. – 2013. – Vol. 18, Issue 6. – P. 571–582. 10. Pylypenko A. A. *Formuvannia oblikovo-analitychnoho zabezpechennia upravlinnia vytratamy pidpryiemstv ta yikh obiednan : monohrafiia* [Formation of accounting and analytical support for cost management of enterprises and their associations : monograph] / A. A. Pylypenko, I. P. Dzobko, O. V. Pysarchuk ; za zah. red. dokt. ekon. nauk, dotsenta Pylypenka A. A. – Kh. : Vyd. KhNEU, 2011. – 344 p. 11. Performance-Based Logistics and Interfirm Team Processes: An Empirical Investigation / W. S. Randall, T. G. Hawkins, J. J. Haynie et al. // Journal of Business Logistics. – Vol. 36, Issue 2. – P. 212–230.

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