About logistics management concept of a construction company

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Abstract. A construction company management improving urgency is determined by the need to solve the complex problems of providing the construction process with materials and other resources to raise its material capacity. The article describes different approaches to logistics management definition, as well as its goals, structural elements and their interrelationship.

Introduction
Running of the companies in dynamic economic processes conditions in Russia is difficult, therefore, they should quickly and adequately respond to all the changes in the external environment to maintain and expand their market positions. Implementation of the management up-to-date methods would ensure the sustainable company’s development and consolidate its position in the market. Logistics management concept is one of these methods.

Analysis of the Recent Research and Publications
A lot of domestic and foreign scientists researched the implementing issues and logistics systems efficient use. Various theoretical aspects of this issue are revealed in scientific papers of Jang H., Russell J., Seong J. [1], Furian N., Neubacher D., Santner P., O’Sullivan M. [2], Janné M. [3], Bowersox D., Closs D., Cooper M. [4], Johnson J., Wood D., Wordlow D., Murfimle P. [5], Coyle J., Bardi J., Langley J. [6], Zaburannaya L.V. [7], Melnik A.V. [8], Larina G. G. [9] and others.

Purpose and Objectives of the Article
The purpose of the article is to theoretically substantiate the advantages of using the logistics management concept of a company given the impact of current socioeconomic internal and external factors. Research objectives are: to analyze the reasons that cause difficulties of implementation of the new management methods; to identify and reveal the scientific approaches essence to the logistics management; to systematize and characterize the logistics management subsystems; to clarify the logistics management principles.

Results
Modern developmental stage of the Russian economy and the need to create intellectual society in conditions of integration, informatization and globalization of world business processes demand significant changes in business management at all the hierarchy levels, based on innovation and the country economy sustainable development investment model. Taking this into account, the innovative management model introduction becomes crucial. It can provide a new impetus for the economy development, improve management mechanisms and ensure efficiency of each business entity [7].

Continuous organizational and technical restructuring is needed for the effective functioning of the companies and for gaining their competitive advantages in the market. It will allow bringing the level of actually-existing production closer to its optimal plan that meets achieved level of expertise, engineering, technology and production management. Restructuring like that is impossible without continuous and flexible adaptation of a company to the changing market conditions, unstable tax legislation and methods of state regulation. Basic approach to the development of such a model is the logistics concept, which is impossible without transformation of existing management system and development of progressive methods of entrepreneurship management, based on logistics.

Logistics system is defined as a relatively stable complex of structural units of a company, as well as suppliers, consumers and intermediates that are interconnected by main and accompanying flows and are united by unified management for implementation of the strategic logistics plan. Search for innovative models of development of a company management (logistics approach is one of them), is the important condition for achieving sustainable competitiveness in the market.

The major Russian economy entry premise into the logistics management sphere has specificity, caused by temporary factors associated with the transitional nature of the Russian economic system, as well as longer and constantly influencing factors, in particular such as geographical location and size of the country; types, quantity, quality and accessibility of natural resources; availability of intellectual potential and qualified labor force; size, specialization and distribution of industrial complexes and centers within the country; level of integration into the world economic area [9].

The logistics management main provisions implementation difficulties at the Russian enterprises are primarily caused by the instability of the country's economy, and the most important problems, associated with the efficient use of logistics in domestic business, in the scientists' view [9], can be classified into objective and subjective. The objective reasons are: the imperfection of the methodological basis for implementation of logistics into the real sector of the Russian economy; uncertainty of limits of use of logistics in existing business systems; unstable legal framework of business structures, as well as imperfect tax system; lack of adequate structuring of business systems, that is necessary for the implementation of logistics; significant moral and physical depreciation of equipment; poorly developed transport infrastructure, that doesn’t meet modern requirements; low level of development of physical facilities of warehousing; insufficient development and use of modern electronic communications systems.

Subjective reasons are the lack of qualified specialists in logistics and potential lack of reluctance of managers to change established stereotypes of work in the context of low legal and managerial culture. Heads of supply, delivery and sales departments, who’ve got used to undertake their traditional functions, hinder the implementation of the through scheme of materials management of a company, because logistics objectives don’t coincide with those of other separate functional entities.

A separate company, optimized from the logistics point of view, might be a suboptimal link in general logistics chain because the logistics approach means inclusion of an enterprise and related suppliers, intermediates and customers in this chain. Coordination of work of the logistics chain, composed of various companies, is effective when using methods of logistics management. Organization of logistics in a company, in logistics systems and logistics chains is a significant factor of organizational support of efficient logistics management of a company.

According to the traditional management approach each link of the logistics chain has its own management system, focused on the objectives and effectiveness criteria. Output material flow of each previous link of the logistics chain, formed under the influence of management system of this
link taking into account its goals and criteria, is the input to the next link. Resulting material flow of the entire logistics chain is the output flow of its last link. Its parameters are obtained as a result of independent management actions that are carried out sequentially in each link of the logistics chain. So, they are spontaneous from the point of view of common management goals.

According to the logistics approach, management actions from the integrated logistics management system are added to the new object - end-to-end material flow. These actions are formed on the basis of common goals and effectiveness criteria of the logistics chain. Logistics approach to management of a company is aimed to rationalize flow processes within the managed system from the standpoint of unity and integration of separate parts and is carried out at the technical, technological, economic, methodological levels, and time and cost minimization is achieved through the optimization of management of the end-to-end material, information and financial flows. Logistic management, therefore, means targeted influence on the logistics flows to synchronize their interaction and to achieve a synergistic effect.

Logistics management is a process of strategy development, planning, management and control the movement and storage of raw materials, materials, production supplies, goods as well as accumulation of information from the point of origin to the point of use (consumption) for effective adaptation and customer satisfaction [8].

Logistics management is a targeted impact on the space-time balancing of business processes, associated with the formation of flows of tangible and intangible assets to achieve synergy effect, that’s reflected in the net cash flow of a company [7]. Logistics management could be considered as a closed managerial cycle, which is constantly repeated. Logistics management as a cyclical process is considered from the structural, process and functional approaches, which are closely related.

Logistics concept proclaims the need to identify individual customer needs and respond to them by allocating available resources for their satisfaction. The basic idea is that the most successful companies are those, whose productive actions in combination allow meeting customer expectations [8]. Since logistics responds to customers requests, concerning time and place availability of products and related services, it can be argued that logistics management is the customer service management.

Having analyzed the existing approaches to definition of the term “logistics management”, it’s possible to formulate a comprehensive definition of it. Logistics management is an approach to organizing of company activities, based on principles of logistics and characterized by systemic complexity of management of inventory, financial and information flows to achieve a synergy effect in meeting the needs of a company and consumers with minimal resources and time. The fundamental difference of logistics approach to management from the traditional one is highlighting the unified management function of previously isolated material flows.

The logistics management special characteristics are: the main form of the logistics management is the influence of relevant subjects of management (managers) on their object (logistics system); its a type of activity; it’s performed continuously in time and space; it’s implemented as a process, that has clear structural and logical sequence of stages; it always has certain objectives and it’s always characterized by a certain result, obtained in conditions of risk and uncertainty [9]. Functional areas of modern logistics management are: procurement logistics; production logistics; distribution logistics; transport logistics; stock logistics; warehousing logistics; service logistics; information logistics [8].

The logistics management common goal is to realize and harmonize the economic interests of direct and indirect participants of business processes by the efficient resources use in the current economic conditions and the logistics infrastructure development level, taking into account the current legislation.

Despite the diversity and the logistics management objectives’ breadth, the common goals for all the logistics system participants should be determined [10, 11]. Among them the main goals are: improving of the resources and products physical movement processes in all structures; harmonizing of strategic, tactical and operational logistic goals with common goals and strategies of companies or
other logistic chain participants; focusing of integrated activities of all the logistics chain participants on the effective customer service on the basis of “high benefit - permissible costs” principle.

In the company logistics management process the subsystems of supply, warehousing, transportation, production and distribution are identified (Figure 1). The supply subsystem is focused on the work improvement by choosing competent suppliers; optimization of the procurement process; development of the procurement management process; use of standard working techniques; market research; development of procurement strategy and tactics. The warehousing subsystem provides the improvement of warehousing processes through the introduction of warehouse technologies, improvement the quality of warehouse services, their standardization and rational disposition.

Figure 1. Model of a Company Logistics Management Concept

The transportation subsystem provides the development of rational supply schemes, transport rout planning, optimal vehicle loading, unity of transportation process with production and warehousing processes, transportation accounting.

The production subsystem implements methods of inventory management, production planning, production supply, material flow accounting, manufacturing compliance, improvement of product quality.

The sales subsystem is focused on systematic market research, acceleration of order processing, increasing the level of logistics service, reduction of complaints, fines.

Among the principles of the logistics management the following should be highlighted:
- systemics and complexity, which mean that all material flows should be managed to achieve consistency of separate stages of all business processes to optimize the entire logistics system.
- coordination of criteria for evaluating the performance of individual links of logistics chain at the micro- and macro logical levels;
- cost accounting management of material and related information, financial and service flows of the entire logistics chain;
- active use of information technologies and modern methods of modeling in management of logistics systems, etc.

Summary
Considering specifics of the construction industry, implementation of the principles of logistics management in a construction company enables it to increase the competitiveness of construction products due to:
- optimization of the material and labor costs of production;
- the current assets acceleration turnover;
- complete customer satisfaction in high-quality construction objects and order cycle time.

This effect could be achieved by: significant reduction of reservation of material resources in production as a result of optimization of the supply scheme (meeting delivery deadlines of structures and materials with technological cycle); reduction of manufacturing cycle time; implementation of automated technologies with advanced materials and structures for reduction of waste and construction quality assurance. That’s precisely the construction industry with its high material capacity where optimization of material management based on the logistics management concept is the most effective.

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