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PROSPECTS OF TRANSPORT AND LOGISTICS SYSTEMS DEVELOPMENT IN UKRAINE

Today, the transport sector of Ukraine is a significant and important segment for the country's economy, because effective and coordinated work of the whole transport system is the driving force for the overall development of the country. However, the existing competition in the market of transport services requires more and more new approaches to the development of transport relations, the creation of new technologies and improving the quality of services.

The lack of centralized management does not allow for the integrated development of all modes of transport, as well as warehouse, terminal and other types of economy [5].

In the conditions of European integration, the most effective direction of the transport sector of Ukraine can be realized through the formation of transport and logistics system of the country, which ensures the interaction of all participants in the transport distribution process in the organizational-economic, technical, technological and information aspects during the movement of cargo flows, as well as to take a competitive position in international markets of transport and logistics services [2].

Nowadays, the market of transport and logistic services is actively developing. Formation of transport logistics systems helps to unite functional and providing subsystems, to integrate supply, production and sales, to accelerate the movement of material flows, to reduce logistics costs. Therefore, the development of transport and logistics business in Ukraine is one of the most important tasks of our time. In the conditions of market economy, the main goal is to minimize costs and get maximum benefit. And if the reduction of expenses of transport services is obviously expressed in the reduction of the transport component in the price of products, rationalization of the resources, obtaining additional income, then one of the most important goals of the application of logistics is to obtain commercial benefits through the development and organization of optimal delivery schemes by all means of transport [3].

For transport system of any state active participation in market globalization of transport services means:

– liberalization of all spheres of transport activities;

– unification and universalization of transport means, technologies, technical requirements, active development and modernization of transport infrastructure;

– growth of transparency of the transport services market, information openness, subordination of transport companies activity to the requirements of law and international agreements.

The following transport services are distinguished: public transport (mainline), which includes railway transport, water transport (sea and river transport), road, air and pipeline transport, and meets the needs of all sectors of the economy and population in the transportation of goods and passengers; intraproduction transport, refers to production enterprises as one of the parts of the enterprise.

Three areas of logistics have been formed: production logistics (micrologistics), transport logistics, logistics of goods movement (macrologistics). The study of the organization of movement of goods by transport not of common use, procurement and distribution is engaged in intraproduction logistics.

Transport logistics is a process of managing the flow of goods (passenger traffic) and related flows (information, financial, service, material, etc.). Logistics functions do not start at the departure station and do not end at the destination station. They begin with the definition of the offer necessary to master the specified volumes of transportation and continue at all stages of cargo service [4].

For today within the framework of transport logistics scientists allocate two main directions of its activity: logistics of cargo transportation and logistics of passenger transportation.

Corporate logistics is a set of principles and organizational management methods that ensure effective interaction between structural units and operating economies, while maintaining system stability and optimizing both internal and external inter-organizational relationships.

The main task of corporate logistics at the enterprise is to harmonize the work of the cargo and passenger sector with the provision of infrastructure farms in the reform division of organizational, technological, informational and financial aspects:

– conflict resolution of goals of various structural subdivisions;

– improvement and acceleration of information exchange between departments;

– improvement of coordination of activity of different subdivisions.

– availability and constant updating of information on general logistics costs and, as a consequence, reduction of the degree of their management;

– increase in the efficiency of enterprises' activity [6].

Practical implementation of logistics methodology is expressed through its functional levers. From the point of view of reforming and separation we can distinguish the following logistics functions: system-forming, integrating, regulating and effective. It is the integrative functions that provide the most significant value. This is due to the organizational delimitation, which causes the problem of coherent and effective work. It is a question of both internal and external integration.

In addition, a promising segment of the market of transport and logistics services for Ukraine may become a market for urgent delivery (just-in-time delivery). Acceleration of the development of transport and logistics systems can be achieved through: update of the material and technical transport base; strengthening informatization; qualitative improvement of transport, customs and logistics infrastructure of Ukraine; expansion of the internal market of transport and logistics services; increase of efficiency of transport transportation; improvement of customs-tariff and investment policy; coordinated interaction of all participants of a supply chains; joint development and implementation of an interstate programs of transport and logistics systems development.

The mentioned measures will contribute to acceleration of cargo delivery, increase of competitiveness of transit transportation routes, improvement of investment climate, as well as expansion of companies activity, providing integrated logistics services.

The state supports the sphere of logistics by adopting laws and programs of development of the national network of international transport corridors.

The Law of Ukraine "On complex program of approval of Ukraine as a transit state in 2005 - 2015" defines the following main directions: creation of legal basis for further development of transit transportations of cargoes; step-by-step transition to the principles of international transport and customs policy in the sphere of cargo transit; introduction of new technologies of organization of transportations and passing of cargoes through the state border of Ukraine; development of mixed (combined) transportations; provision of clear coordination of activity of all participants of transit of cargoes [7].

The priority directions of the domestic transport logistics development include the following: accelerated development of transport infrastructure; creation of the national network of international transport corridors in accordance with the international standards; integration into the transport systems of Europe and Asia, Baltic and Black Sea regions.

Purposeful integration of the transport complex of Ukraine into the European and world transport system through the development of international transport corridors can provide not only additional revenue to the budget, but also stimulate investment activity, attracting foreign capital, improving transport technologies, transport infrastructure in the country as a whole and the economic development of regions.

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ADAPTIVE METHOD OF UNMANNED AERIAL VEHICLES (UAV) DRIVING IN AN OBSCURE ENVIRONMENT

In our country, despite difficult economic and geopolitical conditions, the development of unmanned aerial vehicles (UAVs) is taking place as part of the development of domestic aviation. All over the world, this area is being actively developed, and it has definitely been supported by domestic researchers. Unmanned systems are being actively developed in the geodesic, agro-industrial and aerospace industries, used in everyday life and have many prospects for their practical application. Researcher`s interest in this area has made it possible to achieve certain results in a short time, but there are still many unresolved issues. One important area of research is the problem of adapting the autonomous UAV to the external environment. The task is much more complicated if the UAV flies at low altitudes above a complex terrain. In other words, the external environment is unknown or little known and can change dynamically. These are current scientific and practical challenges that need to be addressed.

Analysis of recent research and publications. In the literature, an unmanned aerial vehicle (abbreviated UAV) is used to identify aircraft intended for flight without a crew. Previously, these vehicles were united by the concept of unmanned aviation - aircraft whose controls (piloting) are performed without a pilot, with the help of various systems, radio (radar, television) transmit commands to autopilot. The elements of the control system are kept outside the