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DOI: https://doi.org/10.30525/978-9934-26-398-9-48

IMPROVEMENT OF LOGISTICS MANAGEMENT ON THE BASIS OF INFORMATION SECURITY

Information is an important component of logistics management, and its effective management is critical to the success of logistics operations. Using technology to collect, store, process and analyse data provides logistics teams with powerful tools to optimize their operations, improve efficiency and reduce costs. And since water transport is an extremely important component of logistics, the support of the information system for the use of waterways ensures effective coordination and management of transport, ensuring smooth and safe movement of goods, allows improving operations and developing the competitiveness of logistics infrastructure in Ukraine.

A logistics information system is an organized set of interrelated computer tools, various reference books and necessary programming tools, which provides a solution to functional tasks of managing material flows [1, p. 129].

The creation of a single information centre will make a significant contribution to the improvement of the entire transport process. Its implementation will be able to ensure prompt interaction between all participants of this process, including employees of ports and logistics companies, ship owners, ship crew, emergency and rescue services and shippers.

The main advantages of such a centre are quick access to relevant information for all participants and facilitation of communication between them. In particular, the shipper will be able to find out about the schedule of ships and port congestion, as well as contact the logistics company to place an order. Professional logisticians will be able to draw up an appropriate route in compliance with all conditions of transportation and find a carrier.

The ship’s crew will constantly receive the necessary information about the state of the inland waterways on the route and other important parameters, which guarantees the safety of navigation and timely arrival at the destination. Also, it will be possible to observe the movement of ships and their routing on the digital map online. This will enable all participants in the process to monitor and be aware of events, and to respond in time to possible troubles.

The term "information provision" means a set of a unified system of information classification and coding, schemes of information flows that circulate in the organization, unified documentation systems and methodology for building databases [2, p. 11]. The essence of information security in logistics is to provide accurate, timely and relevant data that the logistics team can use to monitor, control and optimize the activities of the supply chain. Therefore, the collected information should be comprehensive, covering all aspects of the logistics process, including inventory levels, order fulfilment, production flow, transportation and customer service, information about the current state of the logistics system, including personnel activities, and other aspects.

Then. the creation of an electronic database on cargo and its movement on inland waterways, and an electronic document flow system is the next important step for increasing the reliability of data exchange, simplifying the process of filing documents between various participants in the transport process, and overall increasing the efficiency of logistics in the country.

In particular, the electronic database will allow collecting and processing information about cargoes, their quantity and volume, quickly tracking the location of cargoes and their movement on inland waterways, and will greatly facilitate the process of controlling and monitoring the movement of cargoes. Another advantage of creating such a database is the possibility of optimizing logistics processes and reducing transportation costs. In addition, this system will help reduce the risk of delays and errors in the transportation of goods.

Also, the advantage of electronic document circulation is that it contributes to the reduction of paper work and ensures more accurate and faster data processing, makes remote information retrieval possible. This allows you to reduce data processing costs and increase the productivity of logistics companies and other enterprises. Understanding the advantages of electronic document flow, the Shipping Administration and the team of the Ministry of Reconstruction continue to try to provide more and more services and documents in electronic form. Thanks to this initiative, in the near future people will be able to register for an exam to obtain an international certificate for the right to operate a pleasure boat and use the service of verification of sailors’ qualification documents without leaving their

homes. This will greatly simplify the process of obtaining the necessary documents [3].

One of the main advantages of using information technology to improve the infrastructure of inland waterways is to improve the safety of transportation. By providing real-time data on vessel location, weather conditions and water levels, authorities can make appropriate decisions and prioritize maintenance work, allocating available resources more efficiently and preventing accidents.

Modern remote sensing and telemetry technologies, such as images from satellites and drones, can be used to provide operational information support. They can provide detailed and up-to-date information on the condition of inland waterways, identifying areas in need of maintenance and repair, and identifying potential hazards such as algal blooms, oil spills or debris.

For example, the system of automatic collection of information about the movement of ships on the inland waterways of Ukraine can be implemented thanks to the installation of smart buoys on the routes, which will allow monitoring the movement of ships and other environmental criteria in real time. This can be achieved through the implementation of a vessel traffic management system that integrates information from various sources such as radar, global positioning systems (GPS) and automatic identification systems (AIS) to provide a comprehensive picture of vessel traffic in a given area.

In countries that are not members of the European Union, projects aimed at improving the parameters of inland water transport are of great importance. However, such projects require significant investment in the development of this infrastructure. Ukraine is also no exception and already has plans for the development of inland water transport and sea transport. In general, the development of inland water transport can contribute to the creation of new jobs and the growth of the waterway industry in Ukraine. The sector can provide employment opportunities in areas such as shipbuilding, port operations and logistics.

Thus, information provision is one of the important factors that will allow to improve the infrastructure of inland waterways of Ukraine. By leveraging the capabilities of modern information technology, the government can provide numerous benefits, including improving the safety of inland waterway cargo transportation, ensuring the efficiency and sustainability of its water transport system, reducing transport costs and improving connectivity between regions, as well as attracting investment and contribute to the economic development of the industry. But in order to achieve the success of such initiatives, a comprehensive approach that integrates various technologies into a single management system is necessary. The use of the latest information technologies and automation of inland waterway management processes can become a key element of success and improve the

efficiency of water transport in Ukraine. This will enable our country to take its place among the leading countries in this field.

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