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THE DEVELOPMENT OF WAREHOUSE LOGISTICS IN THE CONDITIONS OF DIGITALIZATION

Hezam Nawaf Abdullah Yahya

e-mail: nawaf.abdullah.yahya.hezam@nure.ua

Науковий керівник – к.е.н., доц. Пономарьов С.В.

Харківський національний університет радіоелектроніки, каф. ЕК
м. Харків, Україна

The rapid development of digital technologies significantly transforms logistics systems, particularly warehouse logistics which plays a crucial role in supply chain efficiency. Digital tools such as warehouse management systems, automation, and data analytics allow companies to optimize inventory management, reduce operational costs, and improve service quality. The research analyzes the main directions of warehouse logistics development under digitalization and highlights modern technological solutions that enhance operational efficiency.

In the current conditions of the development of the world economy, logistics successfully plays a key role in ensuring the effective functioning of enterprises. The growth of e-commerce, the requirements of globalization of markets and consumers for the speed of delivery of goods necessitate the improvement of warehouse processes. That is why the development of warehouse logistics in the conditions of digitalization is becoming one of the priority areas of development of logistics management.

Warehouse logistics covers a complex of operations related to the receipt, placement, storage, assembly and shipment of goods. Effective organization of warehouse processes allows you to optimize the use of warehouse space, reduce storage costs and ensure rapid order fulfillment. In modern conditions, traditional approaches to warehouse management are gradually being replaced by digital technologies.

One of the key tools for digitalizing warehouse logistics is Warehouse Management System (WMS). They allow you to automate most warehouse operations, ensure accurate accounting of goods and increase the speed of order processing. The use of barcoding and RFID technologies helps to increase the accuracy of product identification and reduce the number of errors in warehouse operations [1].

Digitalization of warehouse logistics facilitates the integration of warehouse systems with other enterprise information systems, including enterprise resource planning (ERP) and transportation management systems (TMS). This ensures synchronization of logistics operations, increases transparency of goods movement, and improves coordination between supply chain participants.

An important direction of development of warehouse logistics is the use of Internet of Things (IoT) technologies. Thanks to the use of sensors and connected

devices, enterprises can track the movement of goods in real time, control their storage conditions and promptly respond to any deviations. This is especially important for the storage of products that require compliance with a certain temperature regime or other special conditions [2].

In modern conditions, the use of cloud technologies in logistics also plays an important role. Cloud platforms allow you to store large amounts of information, provide access to data from anywhere, and simplify interaction between different divisions of the enterprise. This helps increase the flexibility of logistics systems and allows you to quickly adapt to changes in the market environment.

In addition to technological changes, the digitalization of warehouse logistics also involves a transformation of approaches to managing logistics processes. Companies are increasingly using data analytics systems and demand forecasting tools, which allows them to optimize inventory levels and minimize storage costs. Thanks to the use of data analysis algorithms, managers can make more informed management decisions [3].

Thus, digitalization is a powerful factor in the development of warehouse logistics. It contributes to increasing the efficiency of material flow management, optimizing the use of warehouse resources and improving the quality of logistics services. In the future, further development of digital technologies, in particular artificial intelligence, automation and integrated information systems, will contribute to the formation of more flexible, efficient and innovative logistics systems.

Список використаних джерел

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