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## **Digital Logistics**

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Analyzing the speed of development of the modern world, we can see that logistics takes a leading place in comparison with other industries. Many other concepts from other fields of activity are connected to the definition of logistics, which contribute to successful logistics activities.

Currently, digital technologies are the main element of the success and competitiveness of companies because they affect the quality and speed of services provided. Digitalization is interesting to all industries, including logistics. The process of digitalization itself means the active use of innovative technologies aimed at processing, creating and exchanging information. Today, there are many digital technologies in the logistics service market that make it possible to optimize costs and increase the level of the company's logistics service. Innovations contribute to improving the efficiency of cargo transportation thanks to quick access to information about customers and carriers, goods and services. Digital technologies are necessary for cooperation with large customers who put forward special requirements for both transport companies and vehicles. This segment is constantly developing, and if the company does not have enough resources to realize digital technologies, then within a few years it will have to leave the market. Today, we can identify several factors that constrain the digitalization of the logistics industry: the understanding of transport companies that it is necessary to change; the readiness of transport companies to

change; financial capabilities; the size of the company; professional staff. Despite this, it is possible to predict that transport logistics will be a global intelligent system with new technologies soon [1].

One of such technologies used in logistics is blockchain. Blockchain is a way of storing information, which is a continuous chain of blocks. The main principle of the technology is the use of information blocks stored on the network. The information in the blocks is processed, verified and remains unchanged. Changes can be made to the data only with the consent of all involved participants. Transparency is achieved by hiding information from all third parties not involved in the process. Blockchain technology also makes it possible to conclude "smart contracts" meaning contracts, tracking and fulfillment of obligations which are checked by a computer program. Contracts become transparent and managed by all participants, and the information in them remains unchanged. Smart contracts make it possible to apply automatic dispute resolution. In this way, the organization implementing this technology expects not only to increase reliability and minimize errors in the process of cargo delivery but also to increase the efficiency of processes that are supported by the blockchain. Blockchain is a relatively new technology that can improve the quality of cargo transportation and customer satisfaction.

Another digital technology used in logistics is the Internet of Things. This technology is a network that connects various devices and objects over the Internet for data transmission. There are many different technologies for the convenience of process management (RFID tags, temperature, humidity and light sensors, GPS), but these technologies work separately from each other. The Internet of Things solves this problem by combining all these technologies and controlling the processes taking place in the warehouse, during

transportation, and so on. Currently, there are more and more reasons for the transformation of the logistics industry, relying on the Internet of Things technology. It happens due to the development of the mobile application market, the exploitation of user's devices by companies in the corporate IT system, the emergence and use of 5G networks working with big data. Moreover, consumers are increasingly demanding the introduction of innovative technologies and approaches, which contributes to the spread and more active implementation of the Internet of Things in logistics companies [2].

Artificial intelligence has already established itself as a convenient way to solve logistical problems. The development of digital technologies, the creation of mobile applications, ensuring cybersecurity using new technologies, training personnel in the digital economy – all this enables increasing the pace of digitalization.

#### References:

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