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USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR OPTIMIZING ENTERPRISE LOGISTICS PROCESSES

The rapid development of digital technologies, the growing volume of logistics data, and the increasing complexity of supply chains necessitate the search for new approaches to improving the efficiency of enterprise logistics management. One of the most promising directions is the application of artificial intelligence (AI) technologies, which enable automated data processing, support managerial decision-making, predict changes, and optimize logistics operations. The purpose of this study is to develop methodological approaches to the application of artificial intelligence technologies for optimizing enterprise logistics processes and to formulate practical recommendations for evaluating their effectiveness. The research employs the methods of analysis and synthesis, systematization, comparative analysis, graphical modeling, the process approach, and the generalization of scientific and practical findings. An architecture for applying artificial intelligence technologies in enterprise logistics management is proposed, illustrating the relationship between data sources, analytical models, logistics processes, performance indicators, and managerial decision-making. The study systematizes the application of artificial intelligence technologies in transportation logistics, warehouse logistics, inventory management, demand forecasting, shipment monitoring, and logistics customer service. A system of performance indicators for evaluating the effectiveness of artificial intelligence technologies is developed, covering operational, economic, and organizational aspects of enterprise logistics activities. In addition, an evaluation algorithm is proposed, integrating the definition of evaluation objectives, the development of a performance indicator system, primary data collection, analysis of the obtained results, and managerial decision-making. Furthermore, a roadmap for implementing artificial intelligence technologies is developed, defining the sequence of implementation stages, required resources, responsible units, expected outcomes, and key performance indicators.

Keywords: digital transformation; supply chains; transportation logistics; warehouse logistics; inventory management; demand forecasting; enterprise digitalization; managerial decision-making.