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APPLICATION OF CLOUD TECHNOLOGIES FOR ENTERPRISE RESOURCE MANAGEMENT AND PLANNING

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Abstract. *The article analyzes the impact of Enterprise Resource Planning (ERP) systems on improving the efficiency of business process management in the context of the digital transformation of the economy. It discusses the features of using different ERP solution models (local, cloud, hybrid) and characterizes their role in ensuring the adaptability of enterprises to changes in the external environment. Based on a comparative analysis of the development of the global and Ukrainian ERP system markets, a trend towards an increasing demand for cloud solutions integrated with artificial intelligence, Internet of Things and blockchain technologies has been identified. Special attention is paid to the issue of replacing Russian software products in the Ukrainian context and the formation of a secure information infrastructure under conditions of military aggression. The research results substantiate the need for a strategic approach to the selection of ERP systems as one of the key factors in enhancing the competitiveness, financial stability and innovative development of enterprises.*

Keywords: *ERP systems; digital business transformation; cloud technologies; business process automation; artificial intelligence; Internet of Things (IoT); enterprise resource management; information security; business process integration; innovative technologies.*

As a result of the digital transformation of the global economy and the rapid advancement of cloud technologies, the implementation of Enterprise Resource Planning (ERP) systems is becoming increasingly essential for ensuring business adaptability and competitiveness. For Ukrainian enterprises, the need for reliable information infrastructure is particularly urgent due to the ongoing war and the associated threats to data security,

operational continuity, and economic stability.

The purpose of the article is to explore the current state of the ERP systems market with a focus on the shift toward cloud-based solutions, the integration of artificial intelligence and the specific challenges faced by Ukrainian companies during wartime.

The research methodology is based on structural-functional and comparative analysis, empirical generalization, synthesis of statistical reports, as well as a review of domestic and international ERP implementation practices. A classification of ERP system types is presented and their functional, economic and strategic effectiveness is evaluated.

The scientific novelty of the study lies in identifying promising directions for the development of ERP systems in Ukraine, including the transition to secure cloud-based platforms and the adaptation of global best practices in the context of domestic economic and security challenges.

The results of the research show a significant increase in the adoption of cloud ERP worldwide, with over 78% of enterprises choosing such solutions in 2024. Integration with AI technologies enhances automation, forecasting, and decision-making processes. For Ukraine, the refusal to use software products from the aggressor state is a key aspect of national digital security. Despite this, over 75% of Ukrainian companies still rely on outdated systems of Russian origin.

The article outlines leading global and Ukrainian ERP systems, including Odoo and IT-Enterprise, which offer scalable and secure solutions for various industries. It also highlights government initiatives such as the “Enemy Software” project aimed at facilitating the transition to safe technologies.

The study concludes that ERP systems will play a central role in digital business development, especially under crisis conditions. The implementation of cloud ERP solutions with integrated AI, IoT and blockchain technologies offers a path to greater transparency, efficiency and resilience in enterprise management.

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