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TRANSFORMATION OF APPROACHES TO PROCESSING LARGE VOLUMES OF ECONOMIC INFORMATION IN ECONOMIC MANAGEMENT INFORMATION SYSTEMS

The transformation of the country into a high-tech state requires the systematic introduction of innovations and digitalization in all spheres of the economy and management. The rapid growth of generated data volumes necessitates the need for new methods of their analysis. The use of scientifically based approaches to information processing allows optimizing business processes and forming long-term development strategies. At the same time, effective digitalization of the economy depends not only on modern technological support, but also on the training of qualified specialists who are able to set analytical tasks, apply the latest methodologies and correctly interpret the results obtained [1].

The key technological solution for working with digital data is the implementation of management information systems. Combining hardware, software and qualified personnel, they allow to assess the current situation, transform data and make informed decisions. The use of management information systems in business is based on automated information processing, economic and mathematical methods, which ensures the effective solution of production and economic tasks.

A wide range of information systems allows to select optimal solutions taking into account the specifics of the business and environmental factors in conditions of economic uncertainty [2]. Modern information systems contain modules for intelligent data processing, which provide managers with convenient access to accumulated information for solving analytical tasks. The implementation of information systems is due to the need to increase the efficiency of analysis and management, as well as minimize material, time and financial costs for data collection and processing.

The development of technologies creates an interrelationship: IT-methodologies optimize business processes, and the needs of the economy change the architecture of information systems. In contrast to approaches “from programmers” or “from management”, the market

economy requires their integration. Parallel analysis of business processes and information systems, together with consideration of the criteria for their implementation, allows for the harmonization of the organizational and information structure of the enterprise. In a harmonious system, the models of business processes and information systems should coincide as much as possible, which is achieved precisely by combining both methodologies. In the modern economy, this process is closely related to digital transformation, which is changing classic business models on a large scale. Enterprises are actively implementing platform solutions, e-commerce, cloud technologies and digital services, which allows them to expand sales markets, improve interaction with customers and optimize internal processes. The main advantage of digital technologies is the ability to quickly collect, process and analyze information to make informed management decisions.

Among the key technological trends in data analytics, the interconnected concepts of Big Data and Data Science are distinguished. Big data technologies are characterized by significant volumes, high processing speed and a variety of formats. They allow companies to store and process large amounts of information in accordance with current business needs. Solutions in this area are offered by leading companies Amazon, Google, Microsoft, providing both cloud services and local storage. At the same time, free tools are usually limited to storage functions, while paid ones offer advanced analytical tools that require a clear understanding of the tasks of a specific business model [3]. The implementation of such technologies is accompanied by a number of challenges. If structured economic information is easily stored in relational databases, then unstructured information (documents, media files, reviews), as well as data from devices (for example, scanners) require specialized storage and enhanced protection. In addition, the field of Data Science faces the problems of normalizing heterogeneous data and selecting machine learning algorithms based on mathematical models for accurate forecasting of economic, social and financial indicators. Working with Big Data is always a challenge that requires financial investments from businesses and a clear plan of action: from data collection and cleaning to their modeling. To do this, companies build an analytical ecosystem, distributing roles between specialists who must interact with each other in the field of economics, data analysts and programmers who create and maintain the information system.

Therefore, processing big data is a complex process that requires significant resources and a clear strategy from the enterprise regarding its

collection, storage, extraction, cleaning, normalization, as well as further modeling and forecasting. Scaling and processing of large data sets is possible only with a powerful technical base and full synchronization of the IT- infrastructure with the overall business strategy of the company.

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