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RESEARCH ARTICLE

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INTEGRATION OF DIGITAL SOLUTIONS INTO ENTERPRISE PROCESSES AS A FACTOR IN STRENGTHENING COMPETITIVE ADVANTAGES

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ABSTRACT

The competitiveness of modern enterprises is increasingly shaped by the digitalization of business processes and the integration of advanced information technologies. This study aimed to analyze digital management tools and assess their impact on the efficiency and adaptive potential of Ukrainian enterprises during 2023–2025. The research applied analytical and economic methods, comparative analysis, systematization, generalization and synthesis, as well as classification and correlation approaches. The information base included data on the digital transformation of Ukrainian enterprises and performance indicators related to ERP and CRM systems, digital platforms, IoT, blockchain, artificial intelligence, cloud solutions, and Big Data applications. The findings demonstrate a strong positive relationship between the level of digitalization and enterprise performance. The adoption of integrated digital platforms for coordinating production, financial, marketing, and logistics processes enhances transparency, accelerates analytics, supports faster managerial decision-making, and reduces operational costs. Digital tools also contribute to higher organizational flexibility and the development of innovative staff competencies. Enterprises with more advanced digital transformation show higher productivity, better service quality, and more effective customer interaction. Case examples from leading Ukrainian companies confirm that digitalization improves logistics efficiency, processing speed, and financial outcomes. Overall, digital transformation functions as a strategic driver of sustainable competitiveness and adaptive capacity.



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I. INTRODUCTION

In the context of the transformational dynamics of the national economy, which is being formed under the influence of global crisis phenomena, pandemic challenges and the consequences of martial law, the problem of increasing the efficiency of enterprise functioning through the introduction of innovative approaches to business process management is becoming particularly relevant. The combination of modern socio-economic challenges – disruption of logistics chains, reduction of industrial production, restrictions on investment activity and a decline in the level of well-being of the population – determines the need to rethink traditional methods of conducting economic activity and transition to digitally oriented development models [1-3]. The Strategy of Digital Transformation of the Social Sphere adopted by the Government of Ukraine emphasizes that digitalization processes should be considered not only as a technological trend but as a key component of sustainable social and economic modernization [3]. In such conditions, the digitalization of business processes appears not only as a technical or technological direction of enterprise modernization but as a comprehensive strategic tool for ensuring its competitiveness, sustainability and adaptability to a changing market environment [4].

The Strategy for the Development of the Electronic Communications Sector of Ukraine – 2030 highlights the necessity of developing digital infrastructure and ensuring interoperability of information systems as crucial factors for improving management efficiency and service quality [4]. These strategic priorities coincide with the global trend toward smart management systems, digital platforms and data-based decision-making. At the enterprise level, digital transformation involves not only automation but also a fundamental rethinking of organizational culture, communication channels and management logic. According to [5], the success of digital transformation depends on the integration of innovative technologies with management functions and the ability of enterprises to effectively use digital tools for data analysis, resource optimization and stakeholder interaction. The use of digital technologies in the management system is aimed at achieving synergy between the innovative potential of the enterprise, its resource base and managerial competence, which makes it possible to increase the efficiency of decision-making and ensures the transparency of organizational processes [5], [6]. Trends in digitalization, green transformation, platform economy and innovative business models in tourism (AI, big data, digital twin) create the prerequisites for a more flexible response to crises and unforeseen challenges, as confirmed by research in the field of hotel business and tourism enterprises and in the field of digital transformation of tourism. Enterprises that implement digital tools are able to adapt faster to market changes, optimize logistics, personnel management and interaction with customers, which directly affects their competitiveness. The purpose of the research is a comprehensive analysis of the role of digital accounting tools based on the application of artificial intelligence technologies in ensuring effective anti-crisis management of enterprises in the European Union. The research is aimed at identifying mechanisms for increasing the competitiveness of enterprises by integrating intelligent digital systems into business processes, assessing their impact on management decision-making and resource optimization in unstable economic conditions. The objects of the research are digital accounting and management systems of enterprises in the EU countries that implement artificial intelligence technologies for automation and analytics of business processes.

II. MATERIALS AND METHODS

The set of methods to assess the impact of digitalization of business processes on the adaptive potential and competitiveness of Ukrainian enterprises was applied in the research. The analytical and economic method was used to study the theoretical and methodological foundations of digital transformation of business processes and their impact on management efficiency. The comparative analysis method allowed for assessing the economic indicators of enterprises before and after the implementation of digital technologies, as well as to compare the practices of Ukrainian companies with international trends. The methods of generalization, systematization and synthesis were used to study the relationships between digitalization of processes and strategic advantages of enterprises. Classifications and groupings were used to structure business processes by functional categories and determine the stages of digital transformation. The research was conducted on Ukrainian enterprises from various sectors of the economy, including retail, agro-industrial complex, logistics, mechanical engineering and energy. The information base of the research was corporate reports and internal statistics of enterprises, data on the use of digital platforms and technologies (ERP, CRM, RPA, blockchain, IoT, Big Data, AI), business process efficiency indicators and financial results for the period 2023–2025, as well as publications of scientific and analytical sources on global trends in digital transformation. The research was conducted by assessing the impact of digital technologies on productivity, management efficiency, cost optimization, adaptation to market changes and strategic competitiveness of enterprises.

III. LITERATURE REVIEW

III.1. KEY TRANSFORMATIONS OF BUSINESS PROCESS DIGITALIZATION AS A STRATEGIC TOOL FOR ENTERPRISE COMPETITIVENESS

The issue of digitalization of business processes in the management system of modern enterprises has become one of the leading areas of economic science in recent years, which is due to the global digital transformation of the economy, the need to integrate innovations into business processes and increase the competitiveness of enterprises. Digitalization is considered not only as a modernization of technical infrastructure or automation of individual management functions, but as a strategic factor in the transformation of management models, business processes and corporate culture [1], [2], [7]. Studies show that the digitalization of management processes ensures the integration of strategic planning, financial management, logistics, HR and marketing, increasing flexibility, analytical transparency and efficiency of decision-making [8], [9]. The use of digital tools allows you to optimize internal business processes, reduce costs, increase forecasting accuracy and the effectiveness of management decisions [10-12]. A key element of digital transformation is the information and communication infrastructure, which forms the basis of the digital competence and intellectual capital of the enterprise. By [13] emphasize that ICTs ensure the integration of management, production and communication processes, increase the coherence of actions of all departments and contribute to making informed decisions based on data. Digital technologies support key management functions – planning, organization, motivation and control – at a new level. Raicheva and Gorbanova [14] prove that the integration of digital platforms allows for automating the processes of data collection and processing, reducing the level of uncertainty and increasing the accuracy of strategic and operational planning. A single digital space of the enterprise provides fast communication, effective coordination of actions and systematic monitoring of performance results. The institutionalization of digital processes involves the formation of a corporate culture focused on innovation and continuous improvement of digital competencies of personnel [13]. The digitalization of management changes the traditional management logic: analytical foresight becomes key, and flexibility and speed of decision-making replace stability. The development of concepts for enterprise digitalization has become the subject of numerous scientific studies [6]. They prove that strategic digitalization encompasses not only the modernization of individual processes, but also the development of new business models, digital integration into global economic ecosystems, and the formation of digital value of the enterprise. The transition to a digital development model involves the implementation of interrelated strategic directions. Firstly, the formation of a business strategy based on digital technologies and data and the integration of digital tools into all key business processes.

Secondly, investments in research projects and own technological developments ensure the technological independence of the enterprise. Thirdly, the development of partnerships with technology companies, startups and research centers contributes to the inclusion of the enterprise in global digital ecosystems. At the same time, ERP and CRM systems, artificial intelligence platforms, and block chain technologies are shaping a new quality of corporate governance, where decisions are based on deep data analysis, and personnel actions become transparent and measurable [6], [11], [15]. The practical effectiveness of digitalization is confirmed by examples of Ukrainian companies: automation of purchases and sales in the Faino Market and Aurora chains reduced order processing time, optimized logistics, and increased customer satisfaction [16], and MHP [17] demonstrates the effectiveness of digital management of production processes and resources. Thus, the digitalization of business processes acts as a strategic tool for increasing the competitiveness of enterprises, ensuring the integration of management and production functions, developing corporate culture, increasing the accuracy and efficiency of decision-making, and promoting sustainable development in a rapidly changing market environment.

IV. RESULTS

IV.1. DIGITALIZATION OF BUSINESS PROCESSES AS A FACTOR IN FORMING THE ADAPTIVE POTENTIAL OF UKRAINIAN ENTERPRISES

Modern economic realities in Ukraine, characterized by a high level of uncertainty, inflationary fluctuations, disruption of logistics chains, rising energy costs and the consequences of the military conflict, pose the task for business entities not only to ensure current operational stability, but also to create conditions for long-term adaptation; in this context, the digitalization of business processes appears as a key resource for the formation of the adaptive potential of the enterprise, since it allows for the integration of intelligent accounting, management, analytics and control systems and thereby creates the prerequisites for building a modern model of digital management [1], [8]. The introduction of digital technologies allows an enterprise to respond quickly to changes in the external environment, optimize costs and increase transparency of operations, while strengthening risk management tools, which directly increases the overall adaptability of the organization [2], [10]. The integration of technologies such as artificial intelligence, machine learning, block chain and cloud services provides automation of analytical functions and forecasting of market trends based on big data, which transforms decision-making from an intuitive to an information-based process, and therefore digitalization creates an environment of dynamic adaptation, where management actions become measurable and strategically oriented [12], [13]. In addition to technological changes, digital transformation involves restructuring organizational architecture, changing business models and corporate culture, which, in interaction with technological infrastructure, changes the ways of communicating with customers, partners and employees; it is through this synergy that companies move from vertically hierarchical structures to network forms of organization that are able to adapt faster to external challenges [6]. Automation of routine operations frees up human resources for creative and analytical tasks, which increases the intellectual potential of the enterprise and its innovative activity, which, in turn, strengthens the competitive position and quality of corporate governance [9], [18]. Since digital platforms allow the integration of financial, production, marketing and logistics processes into a single information ecosystem, enterprises with limited resources are able to increase productivity without a proportional increase in costs, which is especially important in conditions of a war economy and transitional shocks. In order to systematize the objects of digital transformation, it is advisable to distinguish the categories of business processes that are subject to digitalization; Table 1 shows their classification and functional role, which allows us to consider digitalization as a set of interconnected elements of organizational activity.

Table 1: Categories of business processes in the context of digitalization.

Categories of business processes	Description and functional role
Customer interaction	Customer Relationship Management (CRM), Marketing, After-Sales Service
Sales	Calls, communications, sales automation, digital channels, AI support
Service provision / production	Creation and provision of products or services, production or service management
Finance and accounting	Accounting, financial management, taxes; digital platforms for accounting/finance
Quality control	Monitoring the quality of products or services, feedback systems, claims management
Business support	Human resources management (HR), procurement, IT infrastructure, service support.
Information processing	Data collection, processing, storage and transmission, transaction and order management

Source: Authors, (2026).

Given the expected effects of digitalization, Table 2 summarizes the main benefits of its implementation; this generalized picture demonstrates the relationship between technological implementations and economic results, emphasizing that the benefits of digitalization are manifested in both internal efficiency and customer value.

Table 2: Main effects of digitalization of business processes.

The effect of digitalization	Description and meaning
Productivity improvement	Automating routine tasks reduces human errors and increases work efficiency
Quality improvement	Digital control and monitoring tools ensure consistent quality of products and services
Accelerated decision-making	Instant access to summarized data ensures quick and informed management decisions
Adaptation to customer needs	Analytics and personalization allow you to better respond to individual customer expectations
Cost reduction	Process optimization and paperless workflow reduce operating costs
Flexibility and innovation	The ability to quickly test and implement new solutions increases competitiveness
Improving interaction	Digital channels and integrated platforms improve coordination between departments

Source: Authors, (2026).

The analysis of the data presented in Table 2 shows that the digitalization of business processes is a complex factor in the modernization of business activities, which covers all levels of management – from operational to strategic. In the modern economic environment, digital transformation is not just a technical update, but a systemic restructuring of management structures aimed at increasing the efficiency, adaptability and competitive potential of the organization. Practical examples of Ukrainian enterprises confirm these conclusions: the implemented digital tools (electronic document management, ERP systems, IoT monitoring, Scan&Go, etc.) have led to a reduction in transaction times, reduced logistics costs and increased process accuracy, but at the same time they also highlight risks – technical failures in integrated systems can cause significant financial losses if there are no mechanisms for backup and operational recovery of processes [19]. Since digitalization is a multi-stage process, Table 3 systematizes the stages of transformation; understanding the logical sequence of work allows you to effectively plan resources and avoid gaps between technical integration and organizational readiness.

Table 3: Stages of digital transformation of business processes.

Transformation stage	Main tasks and results
Analysis of the current state	Identifying problem areas, assessing the effectiveness of existing processes
Planning and prioritization	Defining digitalization goals, developing a strategy, choosing technologies
Design and integration	Development and testing of systems (CRM, ERP, RPA, accounting and financial platforms), integration into business processes
Implementation	Gradual introduction of digital processes, staff training, user support
Monitoring and optimization	Constant monitor performance, analyze data and make adjustments
Scaling	Expanding digital solutions to other divisions, searching for new areas of application
Continuous improvement	Formation of a culture of innovation, regular updating of technologies and methods

Source: Authors, (2026).

The analysis of the stages given in Table 3 demonstrates that the digital transformation of business processes is systemic and sequential in nature, where the success of implementation is determined by the interconnection and mutual reinforcement of individual phases. Analysis of the current state ensures the identification of weaknesses and forms the basis for strategic planning, which determines priorities and technological solutions. Design and integration are aimed at creating functional systems and their implementation in business processes, and the implementation stage involves the practical application of solutions, staff training and user support. Monitoring and optimization provide constant monitoring of efficiency, data analysis and making necessary adjustments, which forms a feedback mechanism. Scaling allows digital solutions to be extended to other departments and expand the scope of application, and continuous improvement creates a culture of innovation, ensuring regular updates of technologies and methodologies. Taken together, the stages form a cyclical and iterative process, where each phase reinforces the next, and the results of monitoring and performance evaluation constantly influence planning and implementation, ensuring adaptability and flexibility of organizational structures. Particular attention should be paid to the practical content of digital solutions, in particular to specific software platforms that integrate key business processes; Table 4 provides examples of modern software solutions, common or adapted for the Ukrainian market, illustrating different approaches to localization, integration and specialization of functionality.

Table 4: Examples of modern software solutions in Ukraine \by main business processes.

Business process	Platform	Manufacturer/country	Key feature	Integration with AI/BI
Customer Engagement/CRM	SalesDrive	Ukraine	CRM system for online stores: applications, telephony, chats	Integration with sales analytics and phone/chat
	Perfectum CRM+ERP	Ukraine	CRM+ERP “in a box” for all company processes	Support for analytics modules, extensions, AI module
	OneBox OS	Ukraine	Cloud ERP/CRM platform for small/medium businesses	BI tools, integration layers
Sales	KeyCRM	Ukraine	CRM system with integration with online store, logistics	Sales channel analytics support
Service provision / production	BAS ERP	Ukraine/ERP class	Comprehensive ERP system for medium/large businesses	BI support / integration with CRM and other systems
	UGLA ERP	Ukraine	ERP solution for production / service with localization	Integration with CRM, BI reporting
Finance and accounting	ISpro	Ukraine	Accounting system, tax and payroll accounting	Financial flow analysis support
	Self-ERP Bundle	Ukraine	Accounting module packages with localization	Integration with banking channels, financial analytics
Business support (HR, IT)	ERP Online	Ukraine	HR/Payroll platform for automation of HR processes	HR data analytics, BI reporting
	WorkTime UA	Ukraine	Timekeeping system, personnel management	Personnel performance analytics, BI

Information processing	PowerBI Ukraine	Ukraine (localization)	BI tool for summarizing data from different systems	AI functions, integration with multiple data sources
	DataLake UA	Ukraine	DataLake/ETL platform for business analytics	Designed for big data analytics, AI modules
Quality control / feedback	FeedbackCRM	Ukraine	Module for collecting customer feedback and NPS ratings	Integration with CRM/ERP, BI reporting
	SurveyPro UA	Ukraine	Customer survey and satisfaction analytics system	Response analytics, integration with reports

Source: Authors, (2026).

Data analysis in Table 4 shows that the choice of software platforms should be based on the criteria of compatibility with existing systems, the level of localization under national legislation and the ability to integrate with intelligent services. Particular attention should be paid to ensuring data backup and recovery to support the continuity of business processes. Customer relationship management (CRM) platforms provide integration of marketing, sales automation and loyalty modules, increasing the efficiency of interaction with the audience. Sales automation through integration of CRM with call processing systems and AI-assistants allows you to optimize leads, communication scripts and analytics of product sales channels. ERP systems for production and service processes provide management of the operational links of the enterprise and integration with CRM and financial modules, increasing the efficiency of service provision and production. Localized accounting solutions and modules for D365/Business Central or Self-ERP guarantee full accounting support, tax and payroll calculation, as well as integration with banking channels. Quality control modules and feedback systems allow you to quickly collect customer feedback, track service KPIs, and maintain service standards. HR and Payroll solutions automate personnel accounting, working time monitoring and staff development, ensuring compliance with labor legislation. Information processing tools, including BI platforms, integration layers and Data Lake/ETL, help to generalize data from different systems for analytics and informed management decision-making. Financial and accounting processes are of particular importance, as they are a key element in assessing the effectiveness of investments in digitalization and interaction with operational and customer processes. Examples of Ukrainian enterprises confirm the practical effectiveness of digitalization. The supermarket chain “Varus” reduced customer service time at the checkout by up to 35% thanks to Scan&Go technology, and the loyalty program “Vlasnyi Rahunok” allows you to personalize offers for over 13 million participants [20]. The company “Aurora” reduced the time for signing contracts from several days to three minutes through electronic document management and WMS integration, which reduced logistics costs by 12% per year [21]. SE “Electron” used an ERP system to manage production and financial processes, which ensured an increase in productivity by 15–20%, and IoT equipment monitoring reduced production line downtime by 18%. One of the key effects of digitalization is increasing the flexibility of production processes by proactively changing product characteristics depending on demand, seasonality and market trends. Integration of information at all stages of the product life cycle allows you to optimize resource use, reduce production costs and improve product quality.

For example, the company “Myronivskiy Hliboproduct” (MHP), having implemented the ERP SAP system, was able to reduce production planning time by 25% and reduce raw material inventories by 18%, which directly affected profitability and reduced operating costs [17]. At the same time, digital transformation ensures increased efficiency in making management decisions through analytical tools of business intelligence (BI), accounting automation and control of key performance indicators (KPI). The example of “Nova Poshta” demonstrates that the implementation of a digital platform for managing logistics flows allowed to reduce the processing time of shipments by 30%, and the accuracy of tracking parcels increased to 98%, which directly affected the increase in customer loyalty and increased transportation volumes [22]. At the same time, there are risks associated with the high dependence of production and management processes on digital technologies. Failures in the operation of integrated systems can lead to significant economic losses, which is especially relevant for enterprises of the agro-industrial complex and mechanical engineering, where production disruptions directly affect product supply and financial results [2], [7]. For example, in 2024, a temporary failure in the ERP system of one of the large metallurgical enterprises caused a production delay of 2 days and a loss of profit of about 12 million UAH [23]. In modern conditions, enterprises are forced to adapt their business models and integrate information systems into production and management processes. Standard or template solutions do not always correspond to the specifics of the enterprise, which emphasizes the need to develop individual digital strategies [6], [9]. An important aspect is the assessment of the material and technical potential and the level of personnel training. For example, the company “Foxtrot”, having implemented an electronic warehouse inventory management system and personnel training in 2023, achieved a reduction in logistics costs by 22% and an increase in turnover by 15% during the year [24], [25]. At the same time, digitalization not only optimizes production and management processes but also directly affects the financial results of the enterprise, contributing to increasing its competitiveness. From a logical and methodological point of view, the implementation of digital technologies should be based on the approach “from customer to finance”: marketing and interaction with customers generate demand, sales transform demand into operations, operations and production form a cash flow that is recorded by accounting; only with the full digital integration of these links is the desired multiplicative effect of increasing the adaptive potential of the enterprise achieved.

IV.2 DIGITAL TRANSFORMATION OF UKRAINIAN ENTERPRISES IN THE CONTEXT OF GLOBAL TECHNOLOGICAL TRENDS

The modern digital economy is being shaped by a new generation of business management concepts that integrate artificial intelligence, robotics, drones, 3D printing, the Internet of Things (IoT), blockchain, and augmented and virtual reality technologies [2], [7]. The implementation of these technologies provides a strategic competitive advantage by increasing the efficiency of production and management processes, optimizing resources, and reducing operational risks [12], [18]. Considering the functional classification of technologies, they can be divided into three groups:

1. Input data – IoT, drones, sensor systems for collecting information from production processes;
2. Data processing – artificial intelligence, blockchain, analytical platforms for processing large amounts of data;
3. Output data – robotics, 3D printing, augmented and virtual reality for product visualization and implementation [14], [19].

In practice, the application of these technologies in Ukraine demonstrates a tangible effect. For example:

- “Kyivkhlb” LLC integrated IoT systems to monitor energy consumption and equipment status. The results showed a 14% reduction in electricity costs, a 20% reduction in downtime, and a 10% increase in line productivity compared to 2023 [26].
- “Zaporizhzhia Titanium-Magnesium Combine” implemented blockchain to manage raw material supply and product quality control. This allowed for a 22% reduction in order processing time, a 30% reduction in transaction registration errors, and increased supply chain transparency [23].
- “DTEK” uses drones and IoT to monitor energy infrastructure and optimize production processes. Thanks to digital monitoring, equipment failure rates have been reduced by 18%, repair efficiency has been increased, and energy losses have been reduced by 10% [27].

Distributed reputation platforms are increasingly being used to build business reputation and increase trust among partners. For example, VeChain is used by Ukrainian food industry enterprises to track products at all stages of the supply chain, and Ethereum allows you to automate financial transactions and data management, reducing administrative costs by 20–25% [28], [29]. In order to increase the efficiency of business processes, Ukrainian enterprises use various international digital platforms that ensure transparency, automation, and security of management and production operations (Table 5).

Table 5: International digital platforms used for the digitalization of business processes of Ukrainian enterprises.

Platform	2023	2024	2025
VeChain	16.6 billion connected devices	17.08 billion	19.08 billion
Ethereum	\$276 billion capitalization	\$319 billion	\$408 billion
IOTA	15% annual growth	13% growth	13% growth
Cardano	1 300 projects	1 300 projects	1 300 projects
Tezos	2.4... million transactions/month	4,0 million	4,0 million

Source: [28], [30-33].

The analysis of the data presented in Table 4 indicates a steady growth in the use of digital platforms, in particular in the direction of the Internet of Things (IoT), blockchain technologies and smart contracts. Thus, the indicators of the VeChain platform, which is focused on the transparency of supply chains and digital identification of products, demonstrate a dynamic growth in the number of connected devices - from 16.6 billion in 2023 to 19.08 billion in 2025 (+15%), which reflects the global trend towards the expansion of IoT infrastructure and the integration of this technology into the production systems of Ukrainian companies. This contributes to increasing the efficiency of resource management and control of logistics processes. The Ethereum block chain platform has shown rapid growth in market capitalization – from \$276 billion in 2023 to \$408 billion in 2025, an increase of over 47%. This indicates not only the stabilization of the crypto ecosystem after the global fluctuations of 2021–2022 but also the expansion of smart contract practices in business, in particular by Ukrainian enterprises that use Ethereum to automate financial transactions and document management. The IOTA platform, which specializes in communication between IoT devices via *Tangle* technology, is demonstrating stable annual growth (13–15%), which reflects its strengthening in industrial segments, in particular in energy, mechanical engineering and logistics. For Ukrainian manufacturing enterprises, IOTA is of particular importance in the field of monitoring production equipment, optimizing energy costs and predicting technical failures. As for Cardano, during 2023–2025, a stable number of projects (over 1,300) is observed, which indicates a mature ecosystem with a high level of standardization and security. At the same time, Cardano is actively used by Ukrainian IT companies in the field of digital identification, data management and implementation of social initiatives, in particular in cooperation with state institutions within the framework of e-governance. The Tezos platform, which ensures the updateability of smart contracts and low energy consumption, has demonstrated a significant increase in transaction activity – from 2.4 million transactions per month in 2023 to 4.0 million in 2024–2025, which indicates an increase in demand for sustainable and adaptive solutions in the financial sector and the field of asset tokenization. Thus, the analysis confirms that Ukrainian enterprises are integrating into the global digital space, choosing platforms with a high level of security, scalability and compatibility with national business systems. Trends for 2023–2025 demonstrate a gradual transition from experimental to systemic use of digital technologies, which forms the basis for intellectualizing business processes, reducing transaction costs and increasing competitiveness at the international level.

V. DISCUSSIONS

According to the results of the study of Ukrainian enterprises in the context of global digital transformation, it is worth highlighting several groups of companies depending on the level of implementation of digital technologies and the efficiency of business process management.

Group I. Enterprises with a high level of digitalization and stable operational efficiency: “Varus”, “Aurora”, “Myronivskyi Hliboproduct” (MHP). These enterprises demonstrate the integration of ERP, CRM and IoT systems into production and management processes, which ensures high transparency of operations, cost reduction and prompt decision-making. For example, the “Varus” chain reduced customer service time at the checkout by 35% thanks to Scan&Go, and the “Vlasny Rahunok” loyalty program covers more than 13 million participants.

Group II. Enterprises with a moderate level of digitalization and average management efficiency: “Kyivkhlіb”, “Zaporizhzhia Titanium-Magnesium Combine”, “DTEK”. These companies are actively implementing IoT, drones, analytical platforms and blockchain, but the integration of systems into business processes needs to be improved. For example, “Kyivkhlіb” reduced electricity costs by 14%, and “DTEK” increased the efficiency of repair work by 18%.

Group III. Enterprises with a lower level of digitalization and limited management efficiency: small or medium-sized companies that use partial digital tools without integration into business processes. Limited implementation of technologies reduces management flexibility, increases the risks of operational failures and limits competitiveness.

Analysis of the current state of digitalization of business processes in Ukraine allows us to identify a number of problem areas that affect the efficiency of enterprises: limited integration of digital platforms with corporate management systems, uneven development of IT infrastructure and human resources, high dependence of strategies on short-term management decisions, insufficient funding for digital initiatives in small and medium-sized businesses, and the lack of a unified national digitalization strategy. The implementation of digital platforms such as VeChain, Ethereum, IOTA, Cardano and Tezos contributes to the transparency of processes, resource optimization, automation of financial transactions and reduction of transaction costs by 20–25%. Data for 2023–2025 indicate a stable growth in the use of IoT, blockchain and smart contracts technologies, which creates the prerequisites for the intellectualization of business processes and increases the competitiveness of Ukrainian enterprises at the global level. Thanks to digitalization, companies gain strategic advantages: increased productivity, reduced costs, improved interaction between departments, adaptation to customer needs, accelerated decision-making and development of innovative potential. The examples of “MHP”, “Foxtrot” and “Nova Poshta” demonstrate the specific effect of digitalization: reduced planning time, reduced logistics costs, increased productivity and customer service levels.

VI. CONCLUSIONS

Analysis of the digitalization of business processes of Ukrainian enterprises shows that the introduction of modern information technologies is becoming a key factor in the formation of the adaptive potential of organizations. Digital platforms, integrated management, analytics and automation systems allow enterprises to quickly respond to changes in the external environment, increase the efficiency of management and production processes, optimize costs and strengthen quality control of products and services. Integration of artificial intelligence, machine learning, blockchain and IoT technologies ensures information-based decision-making, increases labor productivity, contributes to the development of innovative potential and competitive advantages. Digital transformation encompasses all key business processes – from customer engagement and sales to manufacturing, finance, HR and quality control – creating a single information ecosystem where data becomes the basis for strategic management. The sequential implementation of the stages of digital transformation, including analysis of the current state, planning, design, implementation, monitoring, scaling and continuous improvement, ensures the efficiency and flexibility of organizational structures, allowing enterprises to withstand external shocks and adapt to market changes. Practical examples of Ukrainian enterprises demonstrate specific economic and operational benefits from digitalization: reduced service time, increased productivity and accuracy of processes, optimization of logistical and financial flows, reduced costs and increased customer loyalty. At the same time, digital transformation requires attention to risk management, cybersecurity, data redundancy and staff training. The introduction of global technologies – IoT, blockchain, drones, robotics, 3D printing and platforms for analytics and data management – ensures Ukrainian enterprises’ integration into the global digital space, promotes the intellectualization of business processes, increases the transparency and efficiency of operations and creates the basis for sustainable growth of competitiveness at the international level. Thus, the digitalization of business processes acts as a strategic tool for adapting, developing and increasing the competitive potential of Ukrainian enterprises in the modern conditions of the global digital economy.

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