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DIGITAL TRANSFORMATION AS A TOOL FOR EFFICIENT MANAGEMENT: A CASE STUDY IN BUSINESS PROCESS MANAGEMENT

Successful digital transformation is essential for modern enterprises, directly influencing their competitiveness and long-term sustainability. Managing business processes effectively in this context requires a balance between innovation and practicality, ensuring transparency and stakeholder involvement in decision-making. The aim of this article is to define optimal strategies and tools for managing business processes through successful digital transformation. Digitalization not only enhances operational efficiency but also strengthens competitiveness and long-term sustainability. In this context, businesses must balance innovation with pragmatism while ensuring transparency and stakeholder engagement in decision-making. A significant challenge lies in forecasting the expected impact of digital initiatives and evaluating their feasibility, particularly in relation to democratic values and social equity.

To achieve this goal, appropriate research methods have been selected. This study employs a combination of qualitative and quantitative approaches to analyse digital transformation trends and their effects on business process management. A systematic review of current digitalization strategies is conducted, focusing on best practices for implementation. Predictive modelling and data analytics are used to assess the potential outcomes of digital initiatives, while case studies illustrate successful transformations across various industries. Additionally, a stakeholder analysis framework is applied to evaluate engagement levels and decision-making inclusivity.

The findings of this analysis indicate that enterprises adopting a structured approach to digital transformation experience improved operational efficiency, enhanced adaptability to market changes, and increased stakeholder participation. The research highlights key factors influencing digitalization success, including organizational readiness, technology integration, and strategic alignment with industry priorities. Moreover, predictive monitoring of business processes enables companies to filter and prioritize digital initiatives that align with sustainable growth objectives.

In conclusion, effective business process management in the digital era requires a comprehensive strategy that integrates innovation, transparency, and stakeholder engagement. Organizations should foster initiatives that promote broader access to information and participatory decision-making. Strategic planning should be informed by predictive assessments of digital transformation impacts, ensuring alignment with industry needs and long-term business objectives. Ultimately, a well-defined digitalization strategy enhances competitiveness while upholding principles of social responsibility and inclusive economic development.

Key words: digitalization, business efficiency, entrepreneurship, information accessibility, internet tools.

JEL Classification: L21.

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Introduction. Determining optimal strategies and tools for managing business processes based on successful digital transformation is a pressing task for modern enterprises, as their competitiveness and long-term success depend on it. In the process of digitalization, commercial entities need to find a balance between innovative and pragmatic approaches to development. One of the key tasks is to forecast the expected impact of digitalization and compare different innovative initiatives. Important areas of development for management systems include fostering innovative initiatives, predictive monitoring of commercial activities, assessing factors of digital transformation that impact the competitiveness of business processes, and developing strategic plans focused on industry priorities and consumer needs.

Digital transformation has been widely discussed in academic research as a key factor in improving business process management (BPM) and enhancing organizational efficiency. Various scholars have contributed to understanding the impact of digital technologies on business operations and strategies.

Among the key contributions of scholars, the following can be highlighted:

– Hammer and Champy (1990) introduced the concept of business process reengineering, which focuses on redesigning core processes for better productivity and quality. Instead of making small, incremental changes, they emphasized the need for fundamental rethinking and restructuring to achieve dramatic improvements in productivity, cost reduction, and quality. Their research argued that many traditional business processes were outdated, inefficient, and filled with redundancies, leading to slow decision-making and wasted resources (Hammer, M., & Champy, J., 1990).

BPR focuses on eliminating unnecessary steps, automating repetitive tasks, and streamlining workflows to ensure faster and more effective operations. A key aspect of this approach is using modern digital technologies, such as enterprise resource planning (ERP) systems and artificial intelligence (AI), to integrate different business functions and enhance overall efficiency. By shifting from a functional (department-based) structure to a process-oriented approach, organizations can break down silos and create seamless, end-to-end workflows.

Ultimately, according to scholars, BPR aims to make businesses more agile, customer-focused, and competitive in a rapidly changing market.

– T. H. Davenport (2018) explored the role of technologies such as AI, Machine Learning, and Robotic Process Automation in optimizing business processes and reducing operational costs. His research highlights the significant role of advanced technologies like Artificial Intelligence (AI), Machine Learning (ML), and Robotic Process Automation (RPA) in transforming business processes. He emphasizes that these technologies can automate repetitive and time-consuming tasks, leading to increased efficiency and reduced operational costs (Davenport, T., 2018). Davenport notes that AI and ML can enhance decision-making by providing deeper insights through data analysis and predictive modelling. Additionally, RPA enables the automation of rule-based processes, freeing up human resources to focus on more strategic tasks. He also points out that the integration of these technologies facilitates better customer experiences by enabling faster responses and personalized services. Davenport concludes that organizations embracing these technologies can achieve a competitive edge by optimizing processes, improving scalability, and driving innovation.

– Bharadwaj et al. (2013) examined how digital business strategies directly influence organizational performance, improving operational efficiency and customer engagement and has significantly contributed to the field of digital business strategy through several key works. Bharadwaj and colleagues argue for a fusion between IT strategy and business strategy, termed digital business strategy. They identify four key themes: scope, scale, speed, and sources of value creation and capture in digital business strategy. Through his works, Bharadwaj has advanced the understanding of how digital business strategies influence organizational performance, emphasizing the importance of integrating IT capabilities with business objectives to achieve competitive advantage (Bharadwaj, A., 2013).

G. Vial (2019) pointed out that digital transformation enhances business agility and resilience, enabling organizations to adapt quickly to market changes. His research emphasizes that adopting digital technologies allows organizations to be more flexible, enabling them to quickly adjust to market fluctuations and unforeseen disruptions. By leveraging digital tools, companies can streamline operations, improve decision-making processes, and respond to customer needs with greater speed and precision. Vial also underscores the importance of fostering a digital culture within organizations to ensure that employees are equipped to navigate technological changes effectively. His work also discusses how digital transformation supports innovation, helping companies maintain a competitive edge by continuously adapting to new market trends (Vial, G., 2019). Ultimately, Vial's study provides a framework for businesses looking to remain sustainable and responsive, positioning digital transformation as a key driver of long-term success and growth.

In the Ukrainian scientific field, it is appropriate to note V. Martyniuk et al. (2020) who analysed the digital transformation efforts of Ukrainian enterprises, highlighting progress in adopting digital tools despite regulatory and economic challenges (Martyniuk, V., etc., 2020). Next presented authors use various research methods, which allow obtaining a more objective and comprehensive result, in particular Ludovic H., Dluhopolskyi O., Kniaz S., Podolchak N., Muravska Y., Martyniuk B., Monastyrnaya I., Gwenola Y., Yannou B., Petit G., Nastos P. T., Slaviuk R. A., Sidiropoulos P., Tarquis A. M., Rusyn-Hrynyk R. R., Faraslis I. N., Mitrakopoulos K., Blanta A., Spiliotopoulos M., Sakellariou S. S. Kniaz et al. (2021) in his scientific works, explores various aspects of economics, particularly the transfer of innovations, creative solutions, trade, and entrepreneurship. Specifically, they analyse the process

of digitalization, defining it as the use, systematization, and processing of incoming information in digital format to improve customer service in the business environment.

Ukraine Association reported that the Ukrainian IT sector plays a vital role in developing digital solutions for industries such as finance, healthcare, and retail. Tools like cloud technologies, CRM, and ERP systems are increasingly used to improve BPM. The literature shows that digital transformation is a crucial tool for enhancing business processes and organizational performance. However, barriers such as resistance to change and insufficient digital infrastructure remain significant challenges. In the Ukrainian context, while progress has been made, further investment in digital skills and infrastructure is necessary for sustainable growth. Considering the peculiarities of business process management in the context of successful digitalization as a management object, and based on a critical analysis of the literature, there is a problem of the lack of a clear definition of the components of digital transformation and criteria for their classification. Given that, the goal of this study is to analyse the factors influencing the effectiveness of business process digitalization in the Ukrainian business environment, as well as to develop recommendations for improving the digital transformation process.

Materials and Methods. The study of digital transformation as a tool for effective management in business processes was conducted based on the application of several methodological approaches, allowing for a comprehensive assessment of the impact of digital technologies on enterprise management processes.

Comparative Analysis Method. The study of state policies in the field of digital transformation and e-governance, alongside the analysis of legislation regulating the use of digital technologies in business processes, highlights the critical role of digital tools in modern entrepreneurship. By assessing the compliance of national legislation with international e-business standards, it becomes evident that digital transformation serves not only as a mechanism for technological advancement but also as a catalyst for strengthening business efficiency.

By examining the number of businesses connected to the internet in various sectors from 2018 to 2023 (Table 1), the research highlights trends and fluctuations in digital adoption. Table 2 presents the share of enterprises purchasing cloud computing services over the years. The comparative method underscores the varying pace of technology adoption across different business sectors, with notable gaps in enterprise resource planning (ERP) systems and customer relationship management (CRM) tools. This comparison allows the identification of sectors that are lagging in terms of digital maturity, suggesting areas where increased focus or investment could lead to more efficient business operations. By comparing sectors' digital readiness, the method uncovers weaknesses in the system – such as the underuse of CRM and ERP systems – and stresses the importance of further digitalization in enhancing business processes. The comparative approach also draws attention to the sectors with the greatest potential for growth in digitalization, such as security software and ERP systems, while noting the decline in CRM system implementation, which warrants further exploration.

A comparative analysis was used to assess the level of digitalisation of enterprises across different economic sectors. For this purpose, the following indicators are applied: percentage of enterprises with Internet access (2018–2023); share of enterprises using cloud computing; use of ERP and CRM systems. The analysis of the data allowed to identify trends and fluctuations in the use of digital technologies, as well as gaps in the digital maturity of sectors, and to propose measures to address them.

Data Collection and Analysis. The collection and analysis of quantitative data on the use of digital technologies in business processes plays a pivotal role in understanding the impact of digital transformation on entrepreneurship. By assessing the effectiveness of implemented digital solutions through indicators such as productivity, quality, and accessibility, it becomes clear how these technologies contribute to more efficient, transparent, and accountable business operations. The effectiveness of the implemented digital solutions was assessed based on such indicators as productivity, quality and accessibility, and conclusions were drawn on the contribution of digital technologies to improving the efficiency, transparency and accountability of business processes.

Method is helpful in analysis the number of enterprises with internet access in various industries (food production, wood products, wholesale trade, retail trade, etc.) is collected for the years 2018, 2019, 2021, 2022, and 2023. This data is analysed to observe the trends in the number of enterprises connected to the internet across different sectors over time. The analysis identifies a general decline in the number of connected businesses, highlighting the potential impact of external factors like the ongoing military conflict, economic crises, and changes in market behaviour. The data regarding the percentage of enterprises

purchasing cloud computing services, such as email services, office software, enterprise database hosting, and security software, is analysed to examine the uptake of cloud computing services over time. The analysis reveals a relatively stable but low percentage of enterprises using cloud services, indicating that many businesses are hesitant to fully embrace cloud technologies, possibly due to concerns over data security or the high cost of transitioning to cloud-based systems. The analysis also identifies underuse in certain areas like ERP and CRM systems, pointing to potential weaknesses in business management.

Moreover, identifying correlations between the level of digital transformation and business performance indices provides valuable insights into the relationship between technology adoption and business success.

Data Visualization. The presentation of information in graphical form, such as tables or diagrams, plays a crucial role in enhancing the understanding and analysis of data related to digital transformation. By visually presenting key indicators of digital adoption, such as the use of internet tools by enterprises or the share of entities involved in digitalization, the process becomes more accessible for decision-makers, researchers, and business stakeholders.

The data in Tables provides a clear, structured visual representation of the number of enterprises connected to the internet across various industries over several years. displays the percentage of enterprises purchasing various cloud computing services (e.g., email services, office software, ERP systems, security software) over time. By presenting the data in a table format, it becomes easier to see the trends in cloud service adoption for each category. The tables allow readers to compare easily the number of connected enterprises year by year and sector by sector.

The visualization of Figure 1 helps to assess the adoption and integration of online communication tools across businesses. By presenting the data in a graphic format, the figure makes it easy for readers to grasp the extent to which businesses rely on these tools for maintaining operations under challenging conditions, such as military risks or limited mobility.

In each of these instances, data visualization methods help present complex information in an intuitive format that allows for easy comparison, trend identification, and decision-making. The visual nature of these tools enhances understanding and communication, especially for those who may find numerical data in tables or raw forms difficult to interpret.

Through this approach, the analysis of data on digital technologies in the business sector can be effectively communicated, allowing for a clearer interpretation of the impact these technologies have on business performance. In particular, focusing on the use of digital tools in business process management helps identify areas where digital transformation improves efficiency, transparency, and responsiveness, which are fundamental to successful entrepreneurship.

Assessing which business processes are the most time-consuming, inefficient, or problematic has allowed us to identify where digital technologies can bring the greatest benefits. For example, in the fields of trade and logistics, automation of processes through IT solutions helps reduce costs and increase the speed of customer service. The collected statistical data on the use of digital tools in various industries (such as cloud services, enterprise management software, and online communication tools) has enabled to build a clear picture of which technologies are already used in individual sectors and which still require development. Industries with significant opportunities for improving efficiency through digital technologies are the most susceptible to digital transformation. For example, in the industrial sector, where production process automation systems (IoT, robotics) are already being implemented, digitalization can reduce energy costs, improve product quality, and shorten production times.

Considering trends in both international business and the domestic economy is also an important factor. For instance, the development of e-commerce and online trading has become a crucial direction for enterprises, especially during periods of global economic changes or restrictions, such as military conflicts or pandemics. The assessment of factors inhibiting digital transformation, such as insufficient digital literacy, high switching costs, or inadequate infrastructure, has helped identify priority areas for overcoming these barriers. For example, investments in improving internet connectivity and employee training are essential conditions for successful digital transformation.

Thus, the area's most susceptible to the introduction of digital technologies were identified through a comprehensive analysis of existing business needs, opportunities for efficiency improvements, current trends, and barriers, as well as data on ongoing digitalization initiatives across various sectors.

In conclusion, the use of digital technologies in managing business processes within enterprises represents a key instrument for strengthening business management. Using data visualization and

analysis, it became possible to assess the effectiveness of digital solutions and their contribution to key values such as transparency, accessibility, and stakeholder engagement-elements essential for the success of a business.

The proposed research methods will allow for a comprehensive and objective analysis of the impact of digital transformation on business management.

Results and Discussion. Digitalization in Ukraine is a complex and multifaceted process that encompasses various areas of society and the economy. On one hand, there are significant achievements: the development of electronic services, an increase in internet users, and the emergence of new tech startups. On the other hand, challenges remain, including unequal access to the internet, insufficient digital literacy, and the need to adapt legislation to new realities.

Among the priority directions of the 2024 Work Plan of the Ministry of Digital Transformation of Ukraine were the following:

– development of the National Informatization Program;
– creation of conditions for the sustainable development of the electronic communications sector;
– development of the IT industry and digital economy;
– advancement of digital technologies in security, cybersecurity, robotics, and automation.

The National Informatization Program is a large-scale state project aimed at integrating information technologies into all spheres of life and the economy. Its implementation requires comprehensive measures and solving complex tasks. (Kniaz, S. etc., 2021) Despite its challenges, the program is crucial for the country's development, offering opportunities for economic growth, improving citizens' quality of life, and strengthening Ukraine's position on the global stage.

It's vital to integrate various state information systems, ensure their interoperability, and simplify citizen and business access to state services via the internet. For this purpose, it is necessary to provide access to high-speed Internet, especially for businesses. In their activities, businesses, particularly large enterprises, often integrate their processes with government registries and electronic document management systems. These enterprises generate large amounts of data that can be utilized for analysis, forecasting, and decision-making at both company and state levels.

In the modern world, speeding up interactions between business environment stakeholders provides competitive advantages. Reliable and fast internet supports the development of logistics, payment systems, electronic identification, online banking, and mobile applications with open APIs for integration with other services. Manufacturing enterprises are particularly interested in adopting automation systems and using IoT to manage production processes, as this helps businesses remain agile and responsive to consumer needs. Finally, Table 1 illustrates the indicators of integration of certain companies into the online space in 2018–2023. Information for 2024 is not available.

Table 1

List of enterprises with Internet access by type of activity in 2018, 2019, 2021–2023

Types of Activity	Number of enterprises, units				
	2018	2019	2021	2022	2023
Total	43,303	43,785	44,508	42,785	34,204
Including:					
Manufacture of food products, beverages, and tobacco products	2,071	2,046	2,065	2,051	1,722
Manufacture of wood products, paper, and printing activities	1,264	1,305	1,352	1,311	940
Wholesale trade, except trade in motor vehicles	7,156	7,177	7,112	6,902	5,824
Retail trade, except trade in motor vehicles	2,498	2,425	2,403	2,253	1,905
Transportation, warehousing, postal and courier activities	3,462	3,553	3,590	3,422	3,185
Information and telecommunications	1,949	1,946	1,971	1,935	1,466
Publishing activities; production of films, videos, and television programs, sound recording publishing; activities in radio and television broadcasting	711	661	650	641	367
Scientific research and development	303	302	301	297	199
Advertising activities and market research; other professional, scientific, and technical activities	547	556	545	534	347
Activities in administrative and support services	2,958	3,024	3,149	3,068	2,340

Source: developed by the author based on data from State Statistics Service of Ukraine (n.d.)

According to the data provided, there was a general tendency to reduce the number of companies connected to the network in Ukraine from 2018 to 2023. This decline could be attributed to several factors, including the military conflict, economic crisis, increased competition, changes in legislation, and other external and internal factors. Notably, there was a steady reduction in the number of enterprises across various industries, such as food production, wood and paper manufacturing, and others. This could indicate a shift in business activity towards more digital technologies, the closure of traditional production lines, the growth of online trading, and changes in consumer behaviour. However, these trends could also reflect negative factors such as high energy costs and supply chain disruptions. The reduction in the number of enterprises in most sectors was a concerning signal. To counteract this trend, it is necessary to implement measures to support businesses, create a favourable investment climate, digitize operational cycles, and encourage innovation.

During periods of economic instability and limited resources, digitalization has become not just a trend but a necessity for business survival and development. Given the current economic challenges Ukraine faces, digital transformation is essential for maintaining business operations and achieving growth. Due to a shortage of qualified workers and personnel, many routine operations, such as processing orders and maintaining records, have been automated using software. This automation allows businesses to reduce their dependency on human resources and enable employees to focus on more creative tasks. The inability to maintain personal contacts due to air disturbances, limited mobility across the country, and the loss of established business communications has led to the widespread use of digital tools such as e-mail, messengers, and video conferences. These tools significantly simplify communication between employees, partners, and clients, regardless of their geographical location, and help maintain business processes at an appropriate level.

In 2023, according to the results of Visit Ukraine research, the IT sector accounted for 4.9% of Ukraine's GDP (National informatization program, 2025). However, the volume of computer services decreased by 8.4% compared to 2022, amounting to $5 billion, showing a drop of $460 million during the first nine months of 2023. Creating and adapting software for the Ukrainian market is helping implement Industry 4.0 technologies, including the use of robots, sensors, and artificial intelligence to automate production processes, control product quality, and optimize logistics. By strategically implementing these technologies, Ukraine can modernize its manufacturing sectors, enhance competitiveness, and move toward becoming a leader in Industry 4.0 technologies in the region. In the trade sector, the development of e-commerce, online stores, mobile applications for purchases, and personalized customer offers has ensured the proper functioning of most business processes involved in trade, even amid ongoing challenges.

Considering these facts, businesses must demonstrate their involvement in using internet services. The analysis of the factors listed in Table 2 will help assess the digital maturity level of enterprises, identify weaknesses, determine directions for further digitization of business processes, compare the selected company with competitors, and develop a strategy for digital transformation of operational cycles. Enterprises should be supported in upgrading their IT infrastructure to ensure they can leverage digital tools effectively, especially in terms of computing power and storage solutions. By addressing gaps, businesses can enhance their digital maturity, streamline operations, and remain competitive in an increasingly digitalized economy.

The percentage of enterprises purchasing cloud computing services has remained relatively stable, indicating that many businesses have not fully embraced cloud-based solutions. This may be due to concerns over data security, cost, or a lack of awareness. However, this presents a significant opportunity for growth in cloud adoption, which is essential for improving flexibility, scalability, and collaboration.

The use of email services had steadily increased, rising from 5.2% in 2018 to 6.1% in 2022. This reflects the growing reliance on digital communication tools in business. However, this figure remains relatively low, highlighting a potential area for improvement, particularly given the increasing trend towards remote work and digital communication across various industries.

There was a notable increase in the use of security software in 2022 (4.0%), indicating a growing awareness of the need for robust cybersecurity measures. However, this adoption remains limited, which could expose businesses to risks in increasingly digital environments. A significant drop in the purchase of computing power (from 3.5% in 2021 to 1.5% in 2022) suggests that businesses may not be investing adequately in infrastructure to support digital solutions and data-intensive applications. This could hinder their ability to scale and optimize operations effectively.

Table 2

The share of enterprises purchasing cloud computing services (by type of service) out of the total number of enterprises, %

Digitalization Tool	2018	2019	2021	2022
The share of enterprises purchasing cloud computing services as a percentage of the total number of enterprises:	9.8	10.3	10.2	9.8
Email services	5.2	5.9	6.6	6.1
Office software	4.3	4.8	4.6	4.7
Enterprise database hosting	3.4	4.0	4.2	4.0
File storage	3.6	4.2	5.3	4.6
Application software for accounting and finance	5.3	5.9	5.5	5.1
CRM (Customer Relationship Management) software for managing customer information	2.5	2.9	2.8	1.8
ERP (Enterprise Resource Planning) software for resource management	…	…	…	0.8
Computing power for running software used by the enterprise	3.1	3.5	3.5	1.5
Security software	…	…	…	4.0
Computing platform providing a hosted environment for application development, testing, or deployment	…	…	…	1.1

Source: developed by the author based on data from State Statistics Service of Ukraine (n.d.)

While the use of office software has shown slight growth, file storage adoption peaked in 2021 (5.3%) before decreasing to 4.6% in 2022. This suggests that businesses are utilizing basic digital tools but may be lagging in adopting more advanced, integrated solutions. Expanding the use of collaborative tools and cloud-based storage systems could enhance productivity and improve data accessibility.

CRM software adoption has decreased from 2.9% in 2019 to 1.8% in 2022, signalling underutilization of customer relationship management tools. This decline could limit companies' ability to optimize customer engagement and retention. Likewise, the adoption of ERP systems was nearly non-existent until 2022 (0.8%), reflecting a significant lag in adopting comprehensive resource management tools. Both CRM and ERP systems are crucial for streamlining operations and gaining real-time insights into business performance.

Why are CRM and ERP systems crucial for businesses? First, they allow companies to get a complete overview of customer interactions and manage resources more effectively. Second, CRM and ERP contribute to the automation of routine processes, freeing up employees' time to focus on strategic business process tasks. Thirdly, thanks to powerful analytical functions, these Internet tools provide valuable data for making informed decisions. Thus, the use of CRM and ERP helps optimize the business operating cycle and creates competitive advantages in the market. Digital solutions can automate operational cycles, optimize resource management, and create competitive advantages in today's dynamic environment.

So, and ERP systems offer several advantages that can significantly improve business operations, efficiency, and decision-making. Table 3 provides the key benefits of each.

In addition, finding themselves in extremely difficult conditions, since the beginning of 2022, Ukrainian enterprises have increasingly relied on online communication tools via the Internet as a key component for managing business processes. The situation has accelerated the adoption of digital tools, as they ensure fast interaction between employees, partners, and customers while contributing to a more efficient organization of business processes. The diagram in Figure 1 allows an indirect assessment of the level of online communication via the Internet.

In the context of globalization, the growth of remote work and the need for flexibility in business make online communication tools indispensable. This is especially true for Ukraine, where businesses have to operate under conditions of instability, military risks, and the need to save resources. Many online communication tools, such as Microsoft Teams, Slack, or Zoom, easily integrate with other management systems (CRM, ERP, etc.). This integration helps automate business processes, increase productivity and task accuracy, and ensure seamless communication between employees, customers, and partners, regardless of their location.

The overall picture shows that online events conducted in real-time via the Internet are becoming an important element of business processes in Ukraine. However, the presence of regulations and documents on security demonstrates the inconsistency of approaches: although many enterprises use modern Internet

tools, only a part of them formalizes operational cycles and implements security standards. This indicates the need to increase the awareness of business entities about the importance of regulation and cybersecurity for the effective and secure use of digital tools.

For Ukrainian enterprises, the use of online communication tools is not just a way to stay connected, but a strategic necessity. This allows optimizing business processes, increasing efficiency, and ensuring business stability even in difficult conditions, while opening up new opportunities for development at the local and international levels.

Discussion. The research on digital transformation and its impact on business processes has provided valuable insights into how enterprises, particularly within the Ukrainian context, adapt to and manage business processes through technological advancements. The findings of this study underscore the various approaches to digital transformation, emphasizing the adoption of digital tools such as enterprise resource planning (ERP), customer relationship management (CRM) systems, and cloud computing services.

One of the central themes of this study is the profound influence of digital transformation on business process management (BPM). Hammer and Champy's seminal work on Business Process Reengineering (BPR) underscores those digital technologies, such as ERP systems and artificial intelligence (AI), facilitate the streamlining of business operations and the elimination of redundancies. Their argument that rethinking and restructuring business processes leads to productivity improvements aligns with the results of this study, where the application of digital tools has been shown to enhance transparency, decision-making, and operational efficiency. However, while BPR advocates for a fundamental restructuring of business processes, this research suggests a more gradual implementation of digital tools, noting that many Ukrainian enterprises face barriers such as limited digital infrastructure and resistance to change. These challenges have impeded the widespread adoption of advanced technologies like AI and machine learning, which Hammer and Champy consider critical for long-term

Table 3

Analysis of the benefits of CRM and ERP systems

Advantages	CRM (Customer Relationship Management)	ERP (Enterprise Resource Planning)
Primary Goal	Improving customer interactions and managing customer relationships	Optimizing internal business processes and resource management
Customer Management	Centralized management of customer data and interactions	Not focused on customer management, but integration with CRM is possible
Sales Improvement	Tools to improve targeting, personalization, and sales effectiveness	Indirect impact through optimizing processes that can enhance sales efficiency
Customer Retention	Tracking interactions, personalized offers to retain customers	Not a primary focus, but improving business processes can aid in customer retention
Collaboration Between Departments	Facilitates interaction between marketing, sales, and customer service departments	Eases collaboration across all departments (finance, HR, warehouse, production, etc.)
Marketing Automation	Automates marketing campaigns, customer segmentation	Automates internal business processes (finance, supply chain, production)
Reporting and Analytics	Detailed analytics on customer behaviour, marketing campaign effectiveness	Real-time analytics for decision-making in finance, inventory, production, and other departments
Financial Management	Limited unless integrated with financial systems	Comprehensive support for financial management, including accounting, reporting, and budgeting
Supply Chain Management	Minimal role unless integrated with ERP system	Includes inventory management, purchasing, and demand forecasting
Scalability and Flexibility	Scalable for various customer interaction needs	Easily scalable for new business needs, such as new locations or products
Compliance	Focused on ensuring customer interaction standards are met	Ensures compliance with financial and other regulatory requirements
Implementation Cost	Generally cheaper and simpler to implement compared to ERP	Higher implementation costs as it covers all business processes

Source: developed by the author

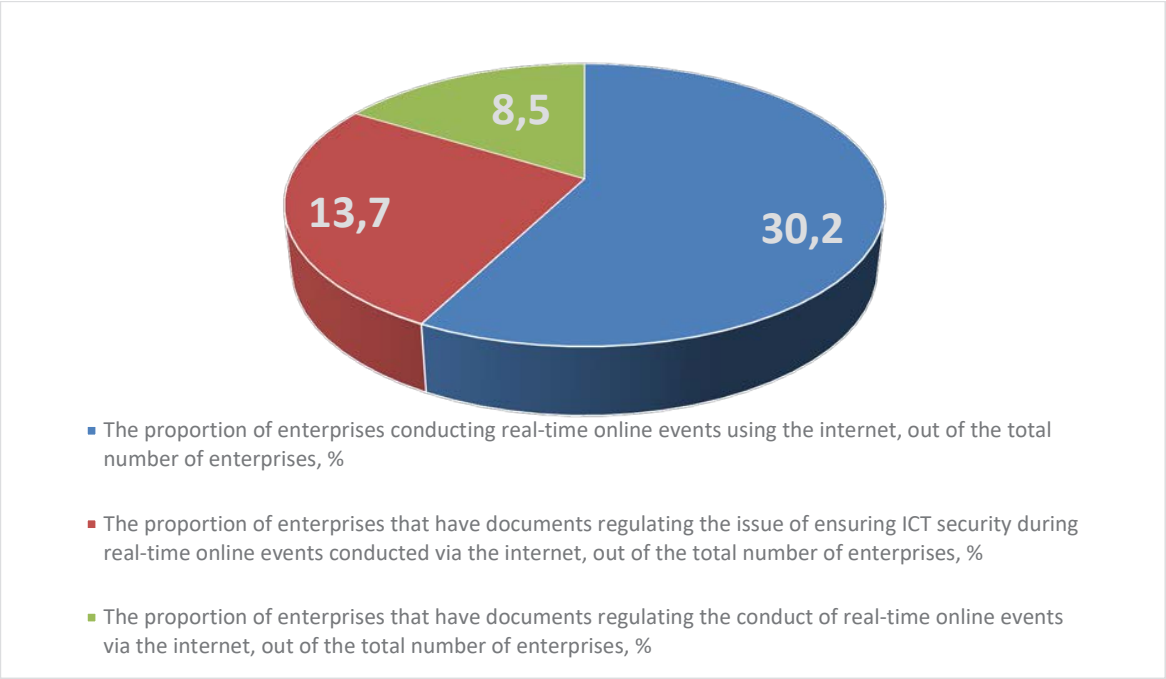

Figure 1. Use of online communication tools via the Internet in 2023

Source: developed by the author based on data from State Statistics Service of Ukraine (n.d.)

success. In contrast, this study reveals that Ukrainian businesses often encounter difficulties in integrating such technologies due to economic instability and regulatory obstacles. These discrepancies highlight the importance of contextual factors in determining the extent to which digital transformation can achieve its intended outcomes.

Davenport's exploration of the role of AI, machine learning, and robotic process automation (RPA) in optimizing business processes aligns with the findings of this study regarding the potential of digital tools to reduce operational costs and enhance efficiency. Davenport argues that AI and RPA automate repetitive tasks, allowing human resources to focus on more strategic functions. This observation mirrors the study's finding that cloud-based solutions and digital tools have automated internal processes, thereby improving overall efficiency. However, the data from this study also revealed significant gaps in the adoption of these technologies within certain sectors, particularly in Ukraine. For instance, the analysis showed a lower uptake of ERP and CRM systems compared to other digital tools. This discrepancy may be attributed to the high costs associated with implementing these systems and concerns over data security-issues that Davenport's research does not fully address. While the study confirms Davenport's assertion that digital tools can optimize operations, it also emphasizes the challenges faced by emerging markets, where financial and infrastructural limitations complicate the integration of AI and automation technologies.

Martyniuk and other Ukrainian scholars have highlighted the barriers to digital transformation faced by local businesses, particularly regulatory challenges and limited infrastructure. These findings resonate with the results of this study, which indicate that while there has been progress in digital adoption, especially in sectors such as finance and retail, significant gaps remain. The research highlights that many Ukrainian enterprises have been slow to adopt digital technologies like ERP and CRM systems, despite their proven effectiveness in enhancing BPM.

Bharadwaj et al. introduced the concept of digital business strategy, which emphasizes the integration of IT capabilities with business strategy to improve organizational performance. Their research supports the findings of this study, particularly the idea that aligning digital transformation with business goals is essential for gaining competitive advantages. In line with Bharadwaj's framework, this study underscores the necessity for businesses to develop strategic plans that not only incorporate technological advancements but also align with consumer needs and industry priorities. However, while Bharadwaj advocates for a more holistic integration of digital strategy within business operations, the study on Ukrainian enterprises reveals that many businesses still lack a coherent digital strategy or adequate investment in digital

skills and infrastructure. This gap suggests that, despite growing awareness of the importance of digital transformation, the integration of IT capabilities with broader business objectives remains an emerging practice in many regions. The slower pace of digitalization in Ukrainian businesses reflects a broader challenge in developing a cohesive digital strategy, as noted in previous research.

The study also identifies that external factor, such as ongoing conflict and economic crises, have contributed to the stagnation of the digitalization process. This finding aligns with research by Ludovic H. and others, who found that external economic pressures often hinder the adoption of new technologies, especially in countries with underdeveloped digital infrastructure. The comparative analysis in this study highlights the importance of supporting digitalization through targeted policies and investments in infrastructure and digital skills – an imperative emphasized by both Ukrainian and international scholars.

This comparative analysis has demonstrated that the findings of this study largely align with existing research on digital transformation and business process management. The integration of digital technologies, such as AI, ERP, and CRM systems, has been shown to enhance business efficiency, reduce costs, and improve decision-making. However, barriers to full digital adoption persist, particularly in emerging markets like Ukraine, where external factors such as political instability and insufficient infrastructure complicate the digitalization process. Moving forward, it will be crucial for businesses and policymakers to address these barriers and foster the strategic integration of digital tools to fully unlock the potential of digital transformation in business.

Conclusions. Digitalization in Ukraine is an important factor in the development of the modern economy and business, as well as in solving numerous social and economic problems. Digital transformation covers a wide range of areas, from the informatization of public services to the application of innovative technologies in industry and trade. The implementation of plans such as the National Informatization Program contributes to the integration of various systems and the creation of conditions for the sustainable development of the digital economy.

This research aimed to explore the role of digitalization in the Ukrainian economy and businesses, particularly in the context of its adoption and implementation. The study analysed various aspects of digital transformation, including the use of online tools, cloud technologies, and systems like CRM and ERP. The research highlighted the challenges that Ukrainian businesses face, such as limited internet access, low digital literacy, and incomplete adoption of digital tools. It also examined the role of digitalization in ensuring business survival during economic instability and military risks, emphasizing the necessity of digital tools for operational efficiency and competitiveness.

However, significant challenges persist, such as uneven internet access, low digital literacy, and limited cloud technology adoption. The insufficient implementation of CRM and ERP systems highlights the incomplete digitalization of Ukrainian businesses. This, in turn, reduces the efficiency of company management and does not allow them to use all the advantages provided by modern digital technologies.

In conditions of economic instability and military risks, digitalization becomes a necessity for business survival. Many enterprises already use online communication tools, which allow them to automate operational cycles, optimize resource management, and improve interaction with customers and partners. The findings of the research underscore the crucial importance of digitalization for the continued development of the Ukrainian economy, especially given the challenges of the ongoing crisis and economic instability. The study revealed that, despite the progress in digital adoption, significant gaps remain, particularly in the implementation of CRM and ERP systems. These gaps hinder the efficiency of business management and prevent enterprises from fully leveraging the potential of modern digital technologies. The research also identified the need for a comprehensive approach to digital transformation that includes improving digital literacy, enhancing infrastructure, and promoting investment in new technologies. These results contribute to the growing understanding of digital transformation in Ukraine and provide valuable insights for business leaders and policymakers.

We conclude that it is necessary to raise awareness among entrepreneurs about the importance of online tools for increasing competitiveness and supporting businesses in times of instability. Successful digital transformation requires a comprehensive approach, including improving infrastructure, increasing the level of digital literacy of the population, and stimulating investment in the latest technologies.

For the further development of the digital economy in Ukraine, it is important to continue the integration of international standards and develop national digital tools that will ensure the sustainable development and competitiveness of the country in the global business environment. Future research in this field should

focus on addressing the gaps in digital tool adoption among Ukrainian enterprises, particularly ERP and CRM systems. In-depth studies should be conducted on the barriers to digital adoption, including the impact of economic instability, regulatory constraints, and cultural resistance to change. Additionally, exploring the role of emerging technologies such as AI and machine learning in optimizing business processes within the Ukrainian context could provide valuable insights. Further investigation into the effectiveness of government initiatives and international collaborations aimed at boosting digital transformation is also essential for ensuring long-term progress.

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ЦИФРОВА ТРАНСФОРМАЦІЯ ЯК ІНСТРУМЕНТ ЕФЕКТИВНОГО УПРАВЛІННЯ: ПРИКЛАД З УПРАВЛІННЯ БІЗНЕС-ПРОЦЕСАМИ

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Успішна цифрова трансформація є важливою для сучасних підприємств, безпосередньо впливаючи на їх конкурентоспроможність і довгострокову стійкість. Ефективне управління бізнес-процесами в цьому контексті потребує балансу між інноваційністю та практичністю, забезпеченням прозорості та участі зацікавлених сторін у прийнятті рішень.

Метою цієї статті є визначення оптимальних стратегій та інструментів для управління бізнес-процесами шляхом успішної цифрової трансформації. Цифровізація не тільки підвищує операційну ефективність, але й зміцнює конкурентоспроможність і довгострокову стійкість. У цьому контексті підприємства повинні збалансувати інновації з прагматизмом, одночасно забезпечуючи прозорість і залучення зацікавлених сторін до прийняття рішень. Значна проблема полягає в прогнозуванні очікуваного впливу цифрових ініціатив та оцінці їх здійсненності, особливо щодо демократичних цінностей і соціальної справедливості.

Для досягнення поставленої мети підібрано відповідні методи дослідження. У цьому дослідженні використовується поєднання якісних і кількісних підходів для аналізу тенденцій цифрової трансформації та їх впливу на управління бізнес-процесами. Проводиться систематичний огляд поточних стратегій цифровізації, зосереджуючись на передових практиках впровадження. Прогнозне моделювання та аналітика даних використовуються для оцінки потенційних результатів цифрових ініціатив, а тематичні дослідження ілюструють успішні трансформації в різних галузях. Крім того, для оцінки рівнів залученості та інклюзивності прийняття рішень застосовується структура аналізу зацікавлених сторін.

Результати цього аналізу свідчать про те, що підприємства, які застосовують структурований підхід до цифрової трансформації, покращують операційну ефективність, покращують адаптивність до ринкових змін і розширюють участь зацікавлених сторін. Дослідження висвітлює ключові фактори, що впливають

на успіх цифровізації, включаючи організаційну готовність, інтеграцію технологій і стратегічне узгодження з пріоритетами галузі. Крім того, прогнозний моніторинг бізнес-процесів дозволяє компаніям фільтрувати та визначати пріоритети цифрових ініціатив, які відповідають цілям сталого зростання.

Підсумовуючи, ефективне управління бізнес-процесами в цифрову епоху потребує комплексної стратегії, яка об'єднує інновації, прозорість і залучення зацікавлених сторін. Організації повинні сприяти ініціативам, які сприяють ширшому доступу до інформації та спільному прийняттю рішень. Стратегічне планування має ґрунтуватися на прогнозних оцінках наслідків цифрової трансформації, забезпечуючи узгодження з потребами галузі та довгостроковими бізнес-цілями. Зрештою, чітко визначена стратегія цифровізації підвищує конкурентоспроможність, дотримуючись принципів соціальної відповідальності та інклюзивного економічного розвитку.

Ключові слова: цифровізація, ефективність бізнесу, підприємництво, інформаційна доступність, інтернет-засоби.