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Trends in the development of management and business technology in the formation of the modern Ukrainian economy

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Abstract: The relevance of the research lies in the fact that the formation of an industrial type of society, which is taking place at the current stage, involves a complex of changes in management and the emergence of new tools in the field of economic activity. The purpose of the research is the study of global and domestic directions of further development and analysis of the current state of directions in the outlined area. By the stated goal, the study's task is to systematize Ukraine's challenges and opportunities, which arise as a result of such changes, for representatives of the business community in the managerial aspect. General scientific and special methods of cognition were used to achieve the set goals and tasks of the research. The result of the research substantiation the proposition that the best results from the modernization of management activity can be traced in the production segment. At the current stage, the Ukrainian economy and representatives of the business community will be forced to radically revise their business processes due to changes in the conditions of the internal and external environment, for example, using a special reengineering technique. The introduction of innovations into the usual functionality of the company is connected with the development of market relations, the growth of competition, and open opportunities created based on the rapid improvement of computing machines and devices, as well as information and communication technologies. The conclusion of the study was the substantiation of the position that the decision-making on the reorganization of the management process taking into account the possibilities of digitalization should be made taking into account possible risks for personnel and the current situation on the market, the state of the management system and short-term and long-term development priorities of the enterprise, institution, organization.

Keywords: digital economy, management, transformation, scientific and technical progress, human resource.

Introduction

The world is experiencing processes of globalization and powerful scientific and technological progress, there are new information and communication technologies and innovations that are actively being introduced into all spheres of society. Simultaneously with these processes, there is a parallel change of the industrial paradigm and mastering of new approaches to the production process, which affects not only the process of production, and performance of works or services, but also directly management methodologies (Babenko et.al., 2020). The XXI century for the economies of the world and Ukraine formed such development trends as the introduction of green economy tools, the search for alternative means of production, as well as the digital transformation of the economy within the framework of management (Zelinska et.al., 2020). It covers both individual leading companies of developed countries and each activity, sector, or area of the economy (Yanovska et.al., 2019; Bezrukova et al., 2022). Innovative technologies not only provide a unified information field in the enterprise but also build a unified environment on a global scale. In the future, the development of architectural methods and standardization is expected, as overcoming the barriers of interoperability allows us to consider quality issues from the perspective of the economy, and their involvement in the process of cost minimization (Shmatkovska & Mostovenko, 2022). Digital transformation affects not only production but also the approach to staffing and interaction with human resources (Tanklevska et.al., 2021). There is a change in entrepreneurial values, from financial aspects to value and customer-oriented results, the economy of the modern world is a response to the processes of resource conservation and the realization of the concept of lean production, which requires the use of innovative solutions to remain competitive in the context of globalization.

Research Methodology

General and special methods of scientific knowledge were used in the research.

Research Results

Trends in the development of management and business technology in the formation of the modern Ukrainian economy, taking into account the introduction of innovative information and communication technologies in the sphere are diverse. Researchers identify four main areas that must be considered when planning the digital transformation of any organization: process transformation, business model transformation, subject matter transformation, and cultural and organizational transformation (Oleksenko, 2019). The benefit of a successful digital transformation lies in improving processes, facilitating collaboration, enhancing service capabilities, and leveraging the customer experience (Shiposha, 2020).

It is possible to highlight basic company leadership tools such as teamwork and transactional leadership among CEOs to improve the productivity of company processes, and methods of transformation through CEOs contributing innovative ideas and benchmarking similar practices. The conceptual model of digital leadership integrates authentic, transactional, and transformational leadership perspectives into a single leadership module that can be used to derive digital imperatives, which in turn paves the way for creating the most appropriate digital transformation.

Leadership and innovation management impact long-term competitive advantage and expose business process errors, with digital leadership having a much greater impact than innovation management. Digital leadership rests on three pillars: agile, leading transformation, and driving business momentum (Stukalo & Simakhova, 2021). At the same time, digital leaders combine two contradictory abilities: possessing a high rate of new value creation and having the ability to scale the organization's processes.

Today's leaders from a management perspective have the following successful traits: they are willing to take on new challenges of social, economic, and political realities, they have clear ideas for implementing innovative digital ideas and leveraging existing digital solutions, they reject traditional views of business constraints and are technology enthusiasts. The willingness of digital executives to challenge existing organizational models and practices is critical to a new corporate strategy.

Innovation and information and communication technology are actively being introduced into people's daily lives and are fundamentally changing them. Yes, augmented reality technology can radically change the decision-making process, and augmented reality allows the creation of visualizations through the collection of large amounts of data and the formation of clear and understandable realistic three-dimensional images. These two computer technologies, like mixed reality, are designed to provide ease of use.

Virtual reality offers a virtual environment in which the user can use a virtual reality headset to enter and interact with the virtual environment (Halkiv et al., 2020).

Although virtual reality had a problem with a lack of connection to the real world, augmented reality technology has eliminated this problem and introduced a new visualization technique that allows virtual content to be inserted into the real-world environment. The user can interact with the augmented world created with this technology. Regardless of the relevance of augmented reality, separating real and virtual worlds is a challenge. This challenge reduces the level of user immersion in the augmented reality setting. With the advent of mixed-reality environments, real-world objects can interact with virtual ones to provide the user with practical visualizations.

Regarding the adoption of these technologies in business processes, the coming years will see an increase in the use of mixed reality, as evidenced by the fact that the number of industry-specific mixed reality applications using off-the-shelf software to solve business problems in industries such as retail, education, manufacturing, and healthcare (Matyushok et al., 2021).

Blockchain technology also necessarily plays a role as part of the digital transformation of modern organizations as they move to hybrid cloud and pure-cloud programs. Business models built on centralized processes will be able to redefine existing business practices by moving beyond existing relationships. Blockchain has significant potential to lower transaction costs and transform the economy. So, it is important to be prepared for the prospect of blockchain as a new development environment.

All businesses, institutions, and organizations in which data is exchanged between multiple entities can benefit from blockchain technology, and its use can help bridge the gap between digital technology and financial services. In addition, blockchain technology can help Ukrainian logistics companies, for example, solve their most urgent tracking problems, from a vendor's order request to a customer's receipt of goods, that is, to track the full process of moving goods and the status of goods at every link. Sharing the right information, monitoring supply chain operations, strengthening relationship management and improving sustainability practices are among the management implications for the digital transformation of sustainable supply chain management. Implementing such a strategy will reduce enterprise tracking costs, prevent data manipulation and improve operational efficiency.

A digital twin as a virtual model can be used to perform simulations, investigate process performance problems and propose changes (Kravchenko, 2019). Digital twins can combine the Internet of Things, artificial intelligence, machine learning, and analytics with graphical and three-dimensional representations to create dynamic digital simulation models that can mimic the full performance of their physical counterparts. Digital twins can improve the accuracy of their simulations by incorporating and using past data and testing models virtually before use is much cheaper and faster (Libanova, 2019).

The creation and implementation of a digital twin will influence intelligent, service-oriented, and environmentally friendly manufacturing, and thus will be a prerequisite for the manufacturing industry of the future.

Machine control in neural networks is evolving rapidly for reasons: the amount of incoming data for processing is increasing; the computing power available is increasing; there are significant improvements in machine learning algorithms and more experience has been gained in building them. Big data has been used in the IT industry for quite some time, but there are problems in collecting and evaluating data because different types of data are stored by different companies in different formats. In addition, there is a shortage of skilled employees who can properly manage data analysis and learning objectives.

Businesses, institutions, and organizations in Ukraine need to focus on what new and existing competitors are doing to succeed in digital transformation and decide when to start the transition. From a technological and organizational point of view, digital transformation can be a heavy and dangerous measure for the management activities of an enterprise, which can simultaneously have a strategy to develop its real and digital business at the same time, so it is vital to maintain a connection between the two. Management should establish a direct link between digital transformation and business goals to manage long-term investments without losing short-term profits. Leading companies will use new digital technologies to unlock the creativity of their employees and generate innovations focused on results, not financial profits. The main problem for the management of companies in Ukraine in the future will be the difference in digital transformation strategies for different business sectors and within different business models.

Discussion

«Globalization 4.0 and the underlying technological innovations have been leading the world into a new phase of development – cyber-physical systems and talents – an era that has no historical precedent in terms of scale, speed, and depth of changes» (Amosha, Pidorycheva & Zemliankin, 2021). «In the digital age, the environment of organizations is changing faster and has become more volatile, uncertain, and complex than in the past» (Teichert, 2019). However, a difficult task is the transformation of management and business technology for developing and at this stage having an economy in transition, as Ukraine.

Management process in its essence is a process of organizing the movement of information flows. Information and communication technologies, the scope of which lies primarily in the information plane, provide an opportunity for its fundamental reorganization. At the same time, the implementation of such reorganization solely based on studying the theoretical possibilities of time and the budget economy is irrational, because it will not consider the existing institutional, infrastructural, and psychological conditions of the modern management process. In addition, the very strategy of transformation and change in management should also take into account the fact that “the current state of the global economy should be described as destabilized” (Diugowanets & Kurei, 2021).

It should be noted that the condition for the effective reorganization of the management process is the readiness of all participants of the management process for such reorganization (Teichert, 2019). In case of wrong interpretation of management initiatives on the reorganization of management process on the local level the expenses connected with reorganization can be higher than economic gain, and in some cases they can create a systemic threat from the point of view of enterprise, institution, and organization survival.

The economy of Ukraine, like any other country in the world, is closely related to other social, legal, and political phenomena that directly affect it. The peculiarity of the digital economy lies in the more compressed timing of changes in the economic environment and, consequently, the terms available to the management of the organization to carry out the transformation of the management process. This was relevant for the period 2020-2021, after the emergence and spread of the COVID-19 pandemic and the beginning of the more intensive implementation of digital technologies in management and economic activities. In this context, it is the most promising for the transformation of the management process through a forced experiment in the development of business schemes for a large proportion of organizations. “A key feature of the implementation of strategic management accounting in the process of systemic transformation of economic relations in the context of the digital economy is the general increase in opportunities for analytical assessment of business processes in all areas of the enterprise” (Shmatkovska & Mostoven, 2022; Kniazieva et. al., 2021).

The peculiarity of Ukrainian business is its dependence on institutional settings and traditions. In the management system, an important role is played by the human factor, the peculiarities of the perception of the personality of the manager, and the system of social relations. This circumstance is the reason that for a long time the process of restructuring enterprise management systems has been held back due to the unwillingness of business owners and managers to lose the positive impact of the human factor in the digital formalization of management processes. In addition, “exogenous factors influence the development of national economic systems, which are particularly significant in the context of the intensification of globalization processes” (Matyushok, Krasavina, Berezin & García, 2021).

«Ensuring the well-being of the population, stability, high-quality development of education, medicine, security, the social economy fulfills its tasks and meets the requirements and challenges of the times (Stukalo & Simakhova, 2021). In the period before the coronavirus pandemic, a contradictory situation emerged in Ukraine from the position of prerequisites for the adaptation of the management process in the conditions of digitalization. On the one hand, business customs and traditions hindered the modification of management systems, on the other hand, an objective managerial need for digital transformation emerged. The revealed contradiction resulted in the digital asymmetry of business in Ukraine, which also affected the efficiency of the digital adaptation of its management systems. This asymmetry can be most clearly illustrated by the example of the areas most involved in the processing

and managing information flows, such as the banking sector. The COVID-19 pandemic has forced companies to operate under the forced experiment of accelerated implementation of digital technologies in the organization of the management process in the context of the self-isolation of some employees.

Conclusions and Implications

Thus, the results of the study conclude that the improvement of the management process as part of its adaptation to the digitalization of the economy of Ukraine cannot be carried out on a single template because of the different levels of readiness of the internal environment of organizations for such a transformation. Factors that indicate both the readiness for the digital transformation of the management system of the organization and those that hinder its development were identified. For enterprises, institutions, and organizations in Ukraine the medium and low potential for transformation in the context of the introduction of the digital economy and the introduction of remote forms of work and with extensive use of information and communication technologies creates the following risks:

1. Risks of reducing employee productivity and the economic efficiency of the organization as a whole due to excessive time and a financial ban on the restructuring of economic and production processes to meet the requirements of the digital format;

2. Risks of decreased employee motivation and destruction of corporate culture, especially for teams consisting largely of members of the older generation;

3. Risks of voluntary dismissal of the most valuable employees who do not have the necessary digital competencies;

4. Risks of sabotage of digital forms of interaction and reporting by employees, especially in situations where the digital and legal competencies of management personnel are underdeveloped;

In the future, the solution to reduce the consequences of these risks for the management organization is seen in the organization of an internal corporate system to improve the digital literacy of employees.

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