

# THE ROLE OF DIGITAL TRANSFORMATION IN THE MANAGEMENT OF THE ENTERPRISE

MYKOLIUK OKSANA<sup>1</sup>

BOBROVNYK VALENTYNA

<sup>1</sup> Khmelnytskyi National University, Ukraine

*The article examines the role of digital transformation processes and their impact on enterprise management. It is emphasized that the introduction of innovative technologies in the enterprise will open new opportunities for further effective development and implementation of positive changes. The need to optimize management processes in the enterprise by adapting them to the conditions of digitalization, which requires the use of qualitatively new approaches to digital transformation of economic entities. The essence and meaning of the terms "digitalization" and "digitalization" are revealed, the main goals and directions of digital development are defined. The importance of digitalization of the economy as an innovative dynamic process, which is based on the active introduction of innovations and information and communication technologies in the economic activity of enterprises, is substantiated. The main components of the digital economy (support infrastructure, e-business, e-commerce) are identified and their impact on innovative business development is studied. The classification of enterprises according to the level of digitalization is carried out and the necessity of their orientation in the direction of introduction of cyberphysical systems, the Internet of Things, big data, 3D-modeling and 3D-graphics into their own activity is substantiated. The state of digital transformation at domestic enterprises is analyzed, the ratio of the use of digital technologies in business activity is revealed. The main problems faced by enterprises on the way to the introduction of innovative technologies are identified. The presence of the necessary conditions for the implementation of the domestic digital breakthrough and technological transition of enterprises to a higher level has been determined. It is concluded that the digitalization of business is a condition for improving its competitive position in the market and the driving force of the country's economy and its investment attractiveness.*

*Keywords: enterprise management; digitalization; digital transformation; investment and innovation development; digital technologies; competitiveness.*

**Formulation of the problem.** The digital transformation taking place in society is an important step in the economic activity of the state and a significant impetus for the development of innovation processes and increasing the competitive advantages of business. Most global and national companies in the perspective of their operation, take into account the digital changes. Digital transformation processes, as well as global changes, contribute to investment and

innovation development, economic growth and the creation of a favorable specific environment for enterprises [1].

At the level of our state, digitalization (digitalization) is enshrined in laws and regulations. Thus, the Law of Ukraine «On the National Informatization Program» [2] provides for the introduction of a national informatization program that will create legal, organizational, scientific, technical, economic, financial, methodological and humanitarian principles for regulating the process of its formation and implementation. Fulfillment of the set tasks in this direction will contribute to the growth of the country's economy as a whole and will form a high level of competitiveness of domestic enterprises in the international market. Recently, the dynamics of domestic business development has seen positive changes in the direction of introduction and dissemination of Internet technologies, electronic document management, logistics and improvement of customer service [3-5]. It is increasingly difficult to imagine the functioning of enterprises without the use of modern information technology in order to improve both production activities and management component of the enterprise. That is why the issue of enterprise management in the context of globalization and their adaptation to the conditions of digitalization is very important.

Therefore, the focus on innovative development requires the management of enterprises to perform new, more complex tasks, the importance of which is associated with increased competitiveness in international and domestic markets. The introduction of innovative technologies opens new opportunities for further effective development and is an effective mechanism for implementing positive change.

Analysis of recent research and publications. Many works by both domestic and foreign authors are devoted to the issue of transformation and identification of the peculiarities of the impact of digitalization of the economy on the business sector: I.B Markovich, I.V Strutynska Chesnokova N.V, T.I Batrakova, A.V Kuznetsova . The authors study the problems of digital economy development and the current state of digitalization of the domestic economy. However, despite the numerous developments in this area, additional study is needed in the management of enterprises in the context of digitalization and global economic transformations, which will optimize, automate management processes, improve productivity based on new management decisions.

**Selection of previously unsolved parts of the overall problem.** Various aspects of the digital economy have been studied in the scientific literature, but in Ukraine these processes have not yet reached a full level in comparison with developed foreign countries. Digitalization requires the use of qualitatively new approaches that will be drivers of digital transformation in enterprises. Determining the role of digitalization in competition, outlining the prerequisites, opportunities, challenges and problems of digital development, substantiation of tasks for the introduction of modern digital technologies in enterprises has led to the relevance of the research topic.

**The purpose** of the article is to determine the impact of digitalization on the process of enterprise management, to identify the features of the use of digital technologies to increase its competitiveness.

**Presenting main material.** Digital technologies open new perspectives and opportunities for the development of the domestic economy and improving the quality of life. The rapid and profound consequences of the transition to digitalization will be possible only when digitalization becomes the basis of our society, business and government agencies. Digitalization is one of the main vectors of development of the Ukrainian economy in the coming decades. Ukraine's digital development is to create market incentives, motivations, demand and needs for the use of digital technologies, products and services among the Ukrainian sectors of industry, life, business and society for their efficiency, competitiveness and national development. Digitization involves the use of electronic-digital devices, tools, systems, as well as the establishment of electronic-communication exchange between them, which actually allows the integrated interaction of virtual and physical, ie creates cyberphysical space [6-7].

The term «digitalization» comes from the English word «digitalization», which translates as digitization. That is, literally in translation "digitalization" is the process of transferring information into digital form, converting paper books into electronic, photos into images on the screen [7]. «Digitalization» is recognized by scientists as a process of using, transferring and translating information into digital format; system of data collection, storage, analysis, application of artificial intelligence; transformation of digital technology penetration to optimize business processes. The concept of "digitalization" means the process of systematization,

use, processing of information in digital format, in order to improve customer service in the business environment [8].

Digitalization involves a set of tasks that will positively affect the economy, business, society and life of the country as a whole. The main goals and directions of digital development are as follows (Table 1).

Table 1

**Tasks and directions of digital development**

Завдання діджиталізації	Напрями цифрового розвитку
Economic growth and investment attraction	Bridging the «digital divide» through the development of digital infrastructures
Improving the competitiveness of economic sectors	Development of digital competencies
Creation of high-tech industries, technological and digital modernization of industry	Introduction of the concept of «digital» jobs
Access to the benefits and opportunities of the digital world for the population	Digitization in the real sector of the economy
Realization of human capital, development of digital industry and digital entrepreneurship	Implementation of digital transformation projects

Thus, the digitalization of the economy is an innovative dynamic process based on the active introduction of innovations and information and communication technologies in all economic activities and spheres of society, which increases the efficiency and competitiveness of enterprises, economy and living standards [2; 6; 8].

At the same time, the digital economy is the basis of the Fourth Industrial Revolution [4] and the third wave of globalization. A characteristic feature of the digital economy is its connection with the on-demand economy, which involves not selling goods and services, but gaining access to them just when it is needed. Orders are received online, and their execution is offline [5].

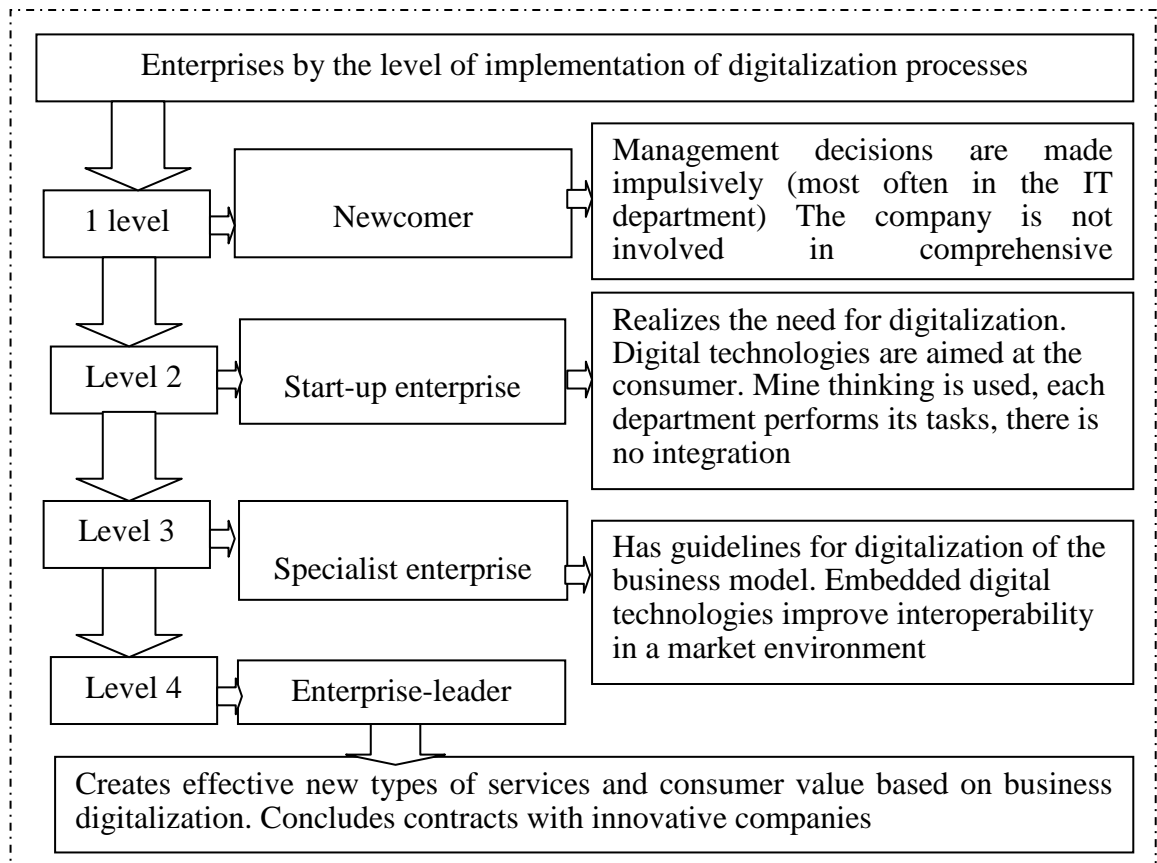
The International Organization for Economic Cooperation and Development (OECD) identifies three main components of the digital economy:

- support infrastructure (hardware and software, telecommunications, networks, etc.);

- e-business or e-business (conducting business and any other business processes through computer networks);

- e-commerce or e-commerce (distribution of goods via the Internet) [3; 8].

Studies have shown that on the basis of the introduction of digitalization in the activities of enterprises they can be classified according to certain levels (Fig. 1).



**Fig. 1. Classification of enterprises by level of digitalization**

Thus, modern enterprises today need to focus on the introduction of cyberphysical systems in their own activities, which will allow them to instantly receive and transmit information; to introduce the Internet of Things, which will contribute to the creation of a single information space within the enterprise, regardless of the level of management; introduce big data, which will increase the efficiency of analysis of data coming from the internal and external environment; use autonomous work, which will improve the process of customer service; design new services using 3D modeling and 3D graphics, which will reduce resource consumption.

Despite the above, the state of digital transformation in domestic enterprises can be described as follows [4]:

- more than 60% of companies already use digital technologies for customer needs;
- up to 20% are just starting to get acquainted with digital and take the first steps towards implementation;
- about 15% of companies attract and serve customers using digital technologies;
- only 3-4% of companies are fully digitalized.

Therefore, digital technologies must be accessible both in terms of organizational, technical access to relevant digital infrastructures, and in financial and economic terms, ie through the creation of conditions and incentives that will encourage business to digitize. Dissemination of the latest technologies and management systems will have a positive impact on the quality of production and provision of services, by providing information to all participants in market relations. At the same time, modern enterprises face a number of problems related to the technological equipment of networks, economic security, the optimality of management decisions to create a single digital infrastructure.

Note that Ukraine has all the necessary conditions for a digital breakthrough and technological transition to a higher level, namely [1; 5; 7-17]:

- ability to produce and use information and communication and digital technologies, availability of professional staff;
- access to appropriate equipment, technologies, dissemination of technologies in society and business;
- sufficient level of system integration of technological products and services, from design to complex implementations of various technologies, software and hardware;
- creative culture and ability to generate ideas.

Thus, the digitalization of business is the driving force behind its promotion. The main advantages of digitalization of enterprises are: automation of production and other internal processes of the enterprise, optimization and improvement of internal and external communications, reaching a new level of customer service, increasing competitive opportunities by optimizing the management process.

**Conclusions.** Thus, digitalization is one of the key factors in the development of the enterprise, which involves not only the introduction of innovative technologies, but also change management. As a result, there is a transformation of the specifics of the impact on both individual structural units of the enterprise and the management system of the enterprise as a whole. The digital transformation requires significant changes in the business and economic environment, which should be aimed at tracking global digital trends, opportunities for the introduction of innovative digital technologies, monitoring and assessing the stability of the enterprise.

Thus, the successful operation of the enterprise depends on a large number of factors, but the variability of the external environment requires constant compliance with all world trends and standards, providing competitive advantages that will stably support the business. The need for digital transformation is due to the desire to constantly improve processes, and on the part of enterprises - to improve their own competitive position in the market, which in turn has a positive impact on the country's economy and its investment attractiveness. The development of digital technologies is an important way to improve the business infrastructure, which affects and determines the pace of development of the enterprise and the country as a whole.

Prospects for further research are to study the development of industrial enterprises in the context of digitalization, as well as to identify factors influencing their innovative development.

#### **Literature**

1. Digital Agenda of Ukraine – 2020 («Digital Agenda» – 2020) / Conceptual principles (version 1.0). Priority areas, initiatives, projects of "digitalization" of Ukraine until 2020. URL: <https://ucci.org.ua/uploads/files/58e78ee3c3922.pdf>.
2. On approval of the Concept of development of the digital economy and society of Ukraine for 2018–2020 and approval of the action plan for its implementation: order of the Cabinet of Ministers of January 17, 2018 № 67-r. Government courier. 2018. № 88.
3. The Concept of a "Digital Economy". URL: <http://odec.org.uk/theconceptof-a-digital-economy/> / Title from the screen
4. Kraus N.M, Goloborodko O.P, Kraus K.M Digital economy: trends and prospects of avant-garde nature of development. URL: [http://www.economy.nayka.com.ua/pdf/1\\_2018/8.pdf](http://www.economy.nayka.com.ua/pdf/1_2018/8.pdf).
5. Digitalization of business: present and future. Collection of materials of the round table (Kyiv, January 28, 2021). K. : Hi-Tech Press, 2021. 88 p

6. Hudz OE Digital economy: changing values and guidelines of enterprise management. *Economy. Management. Business.* 2018. № 2 (24). Pp. 4-12.
7. Kolomiets GM, Glushach YS Digital economy: the controversy of content and impact on economic development. *Business Inform.* 2017. № 7. pp. 137–143.
8. Ligonenko L. Content and mechanism of formation of digitalization strategy in business organizations / L. Ligonenko, A. Khripko, A. Domansky // *International scientific journal "Internauka". Economic sciences.* Issue № 22 (62), 2 vols., 2018 pp. 21-24.
9. Burik ZM, Ogirko OI Information technologies for sustainable development in the context of the formation of a new scientific and technical paradigm. *International scientific journal «Internauka».* 2017. № 1 (2). Pp. 24–28. URL: [http://nbuv.gov.ua/UJRN/mnj\\_2017\\_1%282%29\\_\\_8](http://nbuv.gov.ua/UJRN/mnj_2017_1%282%29__8) (access date: 03.04.2021).
10. Kharchenko VV, Onishchuk VR On the issue of information support of the Department of Agrarian Entrepreneurship. URL: [irbis-nbuv.gov.ua](http://irbis-nbuv.gov.ua) (appeal date: 20.03.2021).
11. Petrenko SM Information support of internal control of economic systems: monograph / S.M. Petrenko Donetsk: DonNUET, 2007. – 290 p.
12. Skull AV, Panchenko OM, Ptitsina LA Information support in the management system of an industrial enterprise: a monograph. Zaporozhye: Zaporozhye National University, 2014. – 266 p.
13. Kuzmin OE Formation and use of information management system of economic development of the enterprise: monograph / O.Є. Kuzmin, NG Georgiadi. □ Lviv: Nat. Lviv Polytechnic University, 2006. – 368 p.
14. Chernoiivanova GS Information support in the management system of the innovative component of enterprises. *Scientific Bulletin of the International Humanities University. Series: Economics and Management.* 2018. Vip. 31. pp. 58-61
15. Fostolovich VA Information and analytical base in the integrated enterprise management system. *Problems of economic, accounting, control and analytical support of enterprise management: materials II All-Ukrainian. scientific-practical conf. young. scientists,* December 8, 2016 Vinnytsia. – Edelweiss and K. S.179-181.
16. Nesterenko SA, Martinova LV Information and analytical support of risk management of economic activity of enterprises of grain subcomplex // *Collection of scientific works of Tavriya State Agrotechnological University (economic sciences).* 2018. № 1 (36). Pp. 253-262
17. Pravdyuk AL, Prutskaya T. Yu., Pravdyuk MV Information support of business management on the basis of institutionalism: a monograph / AL Pravdyuk, T. Yu. Prutskaya, MV Pravdyuk / - Kyiv : Center for Educational Literature., 2019. - 360 p.