Digital Management System in a Business Environment

Mariana Veresklia †, Nataliia Mykhalitska ††, Olha Trut †††, Svitlana Honchar ††††, Stanislav Larin †††††

† Lviv State University of Internal Affairs, Ukraine
†† Lviv State University of Internal Affairs, Ukraine
††† Lviv University of Trade and Economics, Ukraine
†††† Lviv Polytechnic National University, Ukraine
††††† UNIVERSITY OF EDUCATIONAL MANAGEMENT of National Academy of Educational Sciences of Ukraine, Ukraine

Abstract
In modern business conditions, the improvement of business processes cannot do without digitalization. Digital technologies allow businesses to conquer markets, quickly introduce new technologies not only into production processes, but also at all levels of economic activity. The rapid pace of development of information, communication and economic spheres determine the relevance of the research topic and the goals that digital management solves. Today, the use of digital equipment and platforms makes it possible to form the basis for the formation of competitive business advantages, minimize costs, and most importantly, respond in time to changes in both the internal and external environment..Thus, the main task of the study is to analyze the digital management system in a business environment. As a result of the study, current trends and prerequisites for digital management system in a business environment were investigated.

Keywords: *digitalization, digital econimy, digital technologies, digital management, management programs.*

1. Introduction

The issues of digital management research are widely described in foreign literature, and especially in popular science, which is actually a litmus test for the development of scientific progress. In particular, Kevin Kelly believes that the information industry is capable of significantly transforming our lives, and in the near future many old professions will disappear. Under these conditions, new professions will appear that will shape the direction of society. In turn, Catherine Hales determines that the use of information technology has already caused drastic changes in the worldview, which will lead to people's awareness of themselves as individuals and as a species as a whole. In the work of Martin Ford, it is noted that artificial intelligence can compete with human capabilities and intelligence, and therefore the author believes that machines will be able to replace many people and live their own social lives. Tim O'Reilly is the founder of the educational process and the company of the same name, O'Reilly Media. He believes that digitalization will lead to the fact that companies will be able to make real technological breakthroughs and produce new products [1].

Each enterprise has its own organizational and management structure, as well as the structure of economic processes in general. Today, there is no single correct concept of digitization of management, but there are proven technologies that successfully show themselves in the field of control, monitoring and data analysis. However, the complete digitalization of management processes is impossible in practice, and the reason for this is not only the lack of technologies and specialists that will allow the formation of such management programs, but also the too changeable environment, which is practically impossible to adapt to.

Today, in the conditions of the technological revolution, there is a rapid increase in the number of managers capable of forming automated production processes. They carry out the so-called management revolution, which leads to the emergence of a new class of creative management using digital technologies.

Digital management is based on the principles of technological development, the development of science, technology and creative approaches to the organization of economic processes, which are often called breakthrough technologies [2]. As a result of the introduction of such technologies, the innovative development of science, education and research projects is formed, which are based on the development of the technical sphere of production,

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the introduction of intellectual resources as the main component of the development of economic processes. According to such principles, social structures and relations in society are changing, which require appropriate digital development.

Digital management is formed on the basis of the knowledge society and the so-called "smart society", the informational use of components that are used in the field of providing digital services to the population. In turn, informational digital development of the enterprise is based on information resources.

The value of information digital management lies in its focus on digitalization, which is determined by the efforts, abilities, qualifications, and competencies of specialists who will solve complex issues of computerization. All this is possible thanks to the creation of new specialists who will become part of the digital society. The formation of a digital society is aimed at the development of intellectual and creative activity of people and the deployment of intercultural contacts and business forms of sociality. The main determining factors are [3]:

1) theoretical knowledge, which becomes the organizing base of society;
2) the cybernetic basis, which determines the criteria for the development of digitalization. It is no coincidence that digital management is based on digitalization mechanisms as the main factor of intellectual potential.

2. Methodology

For a more detailed study of the development of a digital management system in a business environment, the following methods were used: induction and deduction, comparison and systematization; synthesis and analysis; abstract-logical - for theoretical generalizations and conclusions of the study.

3. Research Results and Discussions

The development of digital management should be supported by an educational program that should be implemented at all levels of public service and local government. Considering that with the development of digital technologies there will be a reduction in jobs, it will be necessary to create social ties that will ensure the development of the creative potential of the population, which as a result will improve approaches to doing business, which will be focused not so much on business as on the development of society. generally. This is the main task of the digital generation, or the generation that was born after 1995 [4]. These young people have always spent time at the computer, since childhood, these children have been accompanied by unsurprising digital technologies. Therefore, this generation cannot be surprised either by the presence of cryptocurrencies or technologies such as blockchain, these people have a sense of the global nature of projects, the equality of all people among themselves. It is this generation that is ready to create new solutions that will be aimed at improving business processes to solve the problems of globalization and social inequality.

Operating with an unlimited amount of information allows using digital technologies not to save large amounts of data, because they can be viewed on a computer or by phone.

The influence of technology on the management of an organization has been studied for a long time. Obviously, numerous technological innovations will require modification of the management system. It should be assumed that the automation of technological and managerial processes will be carried out progressively, but with a tendency to accelerate. Already in the near future, many companies will have to implement several waves of projects on new business process reengineering. This creates a demand for business analysts who are able to create and administer complex changing management systems [6].

As a result of transformations, the control system from a black box finally turns into a "microcircuit". The Internet of Things, wireless sensors, which are widely implemented as part of the Industry 4.0 concept, imply an increase in the transparency of business processes. Already at the present time, the use of ERP systems expands the possibilities of management, simplifies the creation, management and accounting of the results of the work of teams from employees of the company's departments and external sources, and allows planning organizational changes [7].

The use of big data and the development of information systems make it possible to track not only the sequence, speed, quality of operations, but also to calculate and budget the costs of low-level operations. This implies a qualitatively different level of available information that allows you to get the exact cost of a specific order for a specific client. Constant changes affecting many aspects of business determine the importance of developing an entrepreneurial spirit in the culture and business management system. Bringing new products and services to market, starting, launching and debugging new processes and information systems requires entrepreneurial rather than just executive competence. The role of the entrepreneur is to take responsibility for the most difficult and risky period of transition, combining the opportunities available in the internal and external environment of the organization.

The organization of operational collaborative decision-making allows you to quickly exchange information, e-mail, create the possibility of video communication, conferences, teamwork and meetings to create documents or business processes in real time, which allows you to speed up traditional communication processes. This is especially important for enterprises with a complex organizational structure and consisting of several departments [8].

Conducting meetings and negotiations online allows you to quickly solve current problems with the participation of the entire management, which will allow you to work more consistently in accordance with the overall strategy of the enterprise. The speed and timeliness of response to current problems will increase: the electronic diary will remind you of existing meetings and planned events. Table 1 shows the main advantages of the active use of digital management in the system of modern business conditions.

Table 1: The main advantages of the active use of digital management in the system of modern business conditions.

№	***The main advantages of the active use of digital management***
1	emergence of economic and social effect from digital technologies for business and society; improving the quality of life, primarily through improved
2	meeting specific, already known, and new needs of people;
3	growth in the productivity of all social labor due to its increase at the level of individual industries and companies;
4	the emergence of new business models and new forms of business, allowing to increase the profitability and competitiveness of activities;
5	increasing the transparency of economic transactions and ensuring

The prevalence of gadgets, the simultaneous processing of a large amount of information, the habit of constantly talking on the phone or tablet relaxes people, scatters their attention. During communication and conferences, quite often decisions or tasks become fuzzy, in contrast to traditional written appeals. If these tasks are not solved, this will lead to the fact that the generation of creative managers will not be able to work for the result [9].

Many experts in the field of economics and enterprise management idealize the concept of digital management, believing that it is enough to introduce computerization into an enterprise and everything will work out on its own. Over the years, society has

gone through many stages of automation of economic activity and the economy. Attempts were made to automate business, to use digital technologies for decision-making, and it all started with the introduction of computers into accounting and management processes.

As a result, we can conclude that automation processes not only improve work, but also simplify it or allow it to perform a decision support function. They provide the collection and pre-processing of data necessary for a person to make a decision. At the same time, economic activity requires flexibility in relation to changes in market conditions, and it is practically impossible to achieve it in an automated mode, since it is impossible to predict the occurrence of certain events, and even more so to predict them ahead to draw up an algorithm for strategic actions [10].

The main problems are that the software is still not sufficiently developed. On the other hand, there are no adequate models and software used by all enterprises, which means that each business uses its own automation systems. As a result, in order to exchange certain electronic documents, a number of new interoperability problems arise, which, as a result, only complicate the negotiation and solving of current problems. The development of automated processes should take place in the direction of combining existing programs, and not creating their own unique products.

Given the existing problems, it can be noted that today the process of digitalization of management cannot be fully implemented without the involvement of personnel. The digitalization of today is aimed at helping managers, but not at full automation of management. The development of such programs, if it occurs, is tailored to the specifics of the business processes of the enterprise that initiates the creation of such automated programs.

In general, to ensure control processes in automatic or semi-automatic mode, two conditions must be met [11]:

1. the software must be able to calculate deviations from the normal indicators of processes at the proper level;

2) the software must be able to generate managerial responses that allow processes to return to a normal trajectory.

If the second condition is not met, then the first condition is met, that is, the possibility of returning the implementation of processes to a semi-automatic mode. If the first condition is not met, the control process is completely dependent on the person and cannot be automated.

Today's software solutions, as a rule, cannot do this. The complexity of implementing the concept of digital management in many cases is due to well-automated material production processes. As soon as human participation becomes necessary, the process becomes practically unmanageable using an automated method, it needs constant improvements and, as a result, constant human intervention in the software and hardware of automated management. This requires the constant involvement of a large number of specialists involved in the creation of such automated processes: from production technologists to programmers who describe management decision-making algorithms in program code [12].

Consider what needs to be done to ensure the full digitalization of management processes. In our opinion, first of all, it is necessary to determine the algorithm of the management process at all stages of economic activity. Management must be well calculated and constantly follow established patterns. This applies to the entire set of management activities, but above all, the calculation of decisions. In addition, decisions should be made taking into account the development strategy of the enterprise. Deviating from the topic, it can be noted that the calculation of planned information that corresponds to the strategy and plan of the enterprise is quite real in enterprises with the same type of operations and clearly standardized business processes, but is not often used in large enterprises due to the insufficient development of management tools at all levels. More commonly, either semi-automatic or fully manual process control systems are used.

Let us find out under what conditions it is possible to determine whether it is possible to draw up an algorithm for the digitalization of business process management.

To begin with, knowledge and use of the necessary set of phase variables or parameters that uniquely determine the state of the object of the social system are required. Secondly, it is necessary to formally assess the activities of a person and a team, to determine their impact on the state of the system. Thirdly, mandatory procedures for calculating managerial actions are required, including

the calculation of decisions - reactions to certain events [13]. All this, of course, requires special competencies of managers. The construction of algorithms does not arise by itself, it is based on a preliminary theoretical and methodological assessment of the organization of work for previous periods, therefore its compilation requires a detailed analysis of the management system, the influence of the external and internal environment, possible decision-making options depending on changes in the internal or external environment. Thus, the main causal relationships that form the current business model are determined. An adequate methodological base forms an adequate model of digital management, and the theoretical part builds a methodological basis for activities. Scientific and educational organizations, as well as the experience of foreign countries in software development, can play a very important role in this work [14].

The main tasks necessary for the development of a unified enterprise management algorithm in the context of the use of digital management (Tab.2).

Table 2: The main tasks necessary for the development of a unified enterprise management algorithm in the context of the use of digital management

№	*The main tasks*
1	rethink, revise and adjust the terminological apparatus and reduce it to the only one used within the enterprise in order to reduce the number of misunderstandings
2	to develop and improve theoretical materials of a normative nature, allowing to exclude an ambiguous attitude to a particular process, event, situation
3	to continue work on the formation and improvement of mathematical models that adequately reflect the process of the enterprise's functioning in an active environment, the process of the emergence of financial, material flows and cash
4	to form a business model that operates in an active environment under the influence of the variable parameters of the system and the external environment, determine the state of the enterprise in order to design a further development plan

Digitalization penetrates into all spheres of human life, the functioning of the organization and the state. Leaders of organizations do not always understand the need to implement digital technologies, especially in the case when the organization is already showing good results. On the other hand, in conditions when the entire external environment begins to transform, no one will be able to stay away from the ongoing processes. Either you adapt to the new conditions of interaction with suppliers, buyers, the state, or you begin to lose your positions. The introduction of digital technologies requires continuous development of the company's personnel, as well as significant investments. Perhaps it would be appropriate to recall the well-known phrase here: "We must run in order to stay in place." [15].

New companies based on the principles of digitalization, using digital business models, products and services, often change entire industries and areas of life. Usually, digitalization allows you to be more efficient, more convenient for the end customer, and also offers a more affordable product by reducing costs. Management of an organization in the context of digitalization consists primarily in the use of new digital business processes, the participants of which can be dispersed around the world, increasing their efficiency through smarter and more efficient management, taking into account a large amount of data. In general, strategic planning is still carried out by company managers, but the transfer of the decision-making process at lower levels of management to digital systems is an undeniable trend now. As for the performers, and not managers, it is expected that workers of mass professions will be reduced, and the most talented and competent employees will remain in the price, as, indeed, now.

4. Conclusions

The need for digital management is felt more and more every day. This is due to the fact that today's managers are becoming a generation of people who, almost from early childhood, get used to using digital technologies that allow them to conveniently process information, communicate freely without geographical restrictions and quickly respond to any changes. This generation of creative managers seeks to apply these principles to business processes, which in turn will lead not only to the improvement of

business processes, but also to the solution of a number of national and global problems.

Today, the main problems of digital management are that it is not sufficiently automated and developed to function independently, without the participation of managers. In addition, any changes in digitalization algorithms require the involvement of a large number of specialists, which makes the automation process even more difficult than business processes without their participation. The insufficient level of qualification and the insufficient number of specialists who can solve these problems quickly do not allow creating perfect business management software shells.

The paper defines the tasks that should be solved in order to create a unified system for automating business processes, as well as parameters that allow compiling business management digitalization algorithms.

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