

TO DIGITALIZE ENTERPRISE BUSINESS PROCESSES METHODOLOGICAL APPROACH

D. D. Suvanova
Researcher

Abstract

In this article, the classification of business processes from the point of view of digitization is carried out, the main tasks of digitization for each process and the systematization of the results expected from them, and the formation of the initial matrix of the introduction of digital technologies are discussed.

Keywords: business processes, digitization, digital technologies, classification, matrix.

Introduction

Today, the digital transformation of economic sectors has emerged as one of the decisive factors of the country's economic growth and competitiveness. This allows all enterprises to widely use innovative technologies to improve their operations and increase efficiency. Digital transformation also helps to create new jobs based on the use of information and knowledge, which is the main factor for the development of the economy and society as a whole, and to increase the volume of investments attracted to sectors that require knowledge and create high added value.

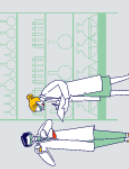
Digitization allows enterprises to create new markets, change relationships with customers and partners, i.e., to transform traditional business models by increasing efficiency, reducing costs, improving the quality of goods and services, increasing the speed of decision-making and flexibility to changing market conditions, and creating new opportunities for development and growth. will result in rendering.

The classic meaning of the concept of a business model is a schematic description of the logical coherence and sequence of how enterprises create value for consumers of products and services by turning their resources into final products [1,3,9,11].

It includes the basic elements of business, such as offering products or services, working with key partners and customers, identifying, attracting and retaining a target audience, costs and sources of income [4].

The concept of business processes is closely related to the concept of a business model, and business processes serve as the basis for creating and using a business model. Without clearly defined and structured processes, it is impossible to create an effective business model that satisfies customer needs and generates profit.

Business processes are a sequence of actions performed to achieve certain goals of the enterprise. They can include different stages from product or service development to its sale and customer service [2,5,6,8,].



If we look at the enterprise as a system, it is an open system that reflects its interaction with business partners and customers, and in the situational approach, it is understood as a system that is flexible to changes in the external environment of the enterprise. If we use a process approach, an enterprise can be viewed as a system of interrelated business operations[2].

Today, a process approach is widespread in digitization in terms of the enterprise's goals, tasks and the results achieved from their implementation. Because [2]:

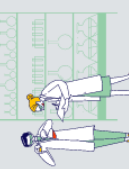
1. Entrepreneurial activity is subject to constant interaction and continuous communication between business processes;
2. Any operation carried out within the business process is inseparable from other economic operations, it acts as a certain element of the chain of economic operations;
3. More accurate distribution of tasks among employees of the enterprise;
4. Accurate formalization of business processes ultimately allows to achieve efficiency from the sale of goods.

The essence of digitalization of business processes is the use of digital technologies and tools to optimize and automate various aspects of business activity. It includes the use of information systems, artificial intelligence, data analysis, the Internet of Things, cloud computing, mobile technologies and other innovative solutions to increase business efficiency and competitiveness.

Digitization of business processes helps the enterprise to maintain competitiveness in the market, quickly respond to changes, improve the quality of products and services, reduce production costs, and also helps the enterprise to better understand its customers and provide them with customized products and services. This, in turn, leads to an increase in profits and an increase in the company's reputation in the market.

The need for digitalization of business processes can be explained by:

1. Changes in consumer choices and needs: With the increasing influence of digital technologies and the Internet on daily activities, consumers are more demanding and focus on quick and convenient access to goods and services. Digital transformation allows businesses to adapt to new customer needs and offer them personalized experiences for using products and services.
2. Globalization and competition: Digital transformation opens up opportunities for businesses to expand their markets and compete globally. By using digital technologies, it is possible to offer products at competitive prices by reducing production, distribution, sales and marketing costs.
3. Innovations and technologies: Digital transformation encourages enterprises to introduce new technologies and innovations to remain competitive in the market.
4. Business Process Optimization: Through automation, data analytics and other technologies, businesses can achieve business process optimization and cost reduction.



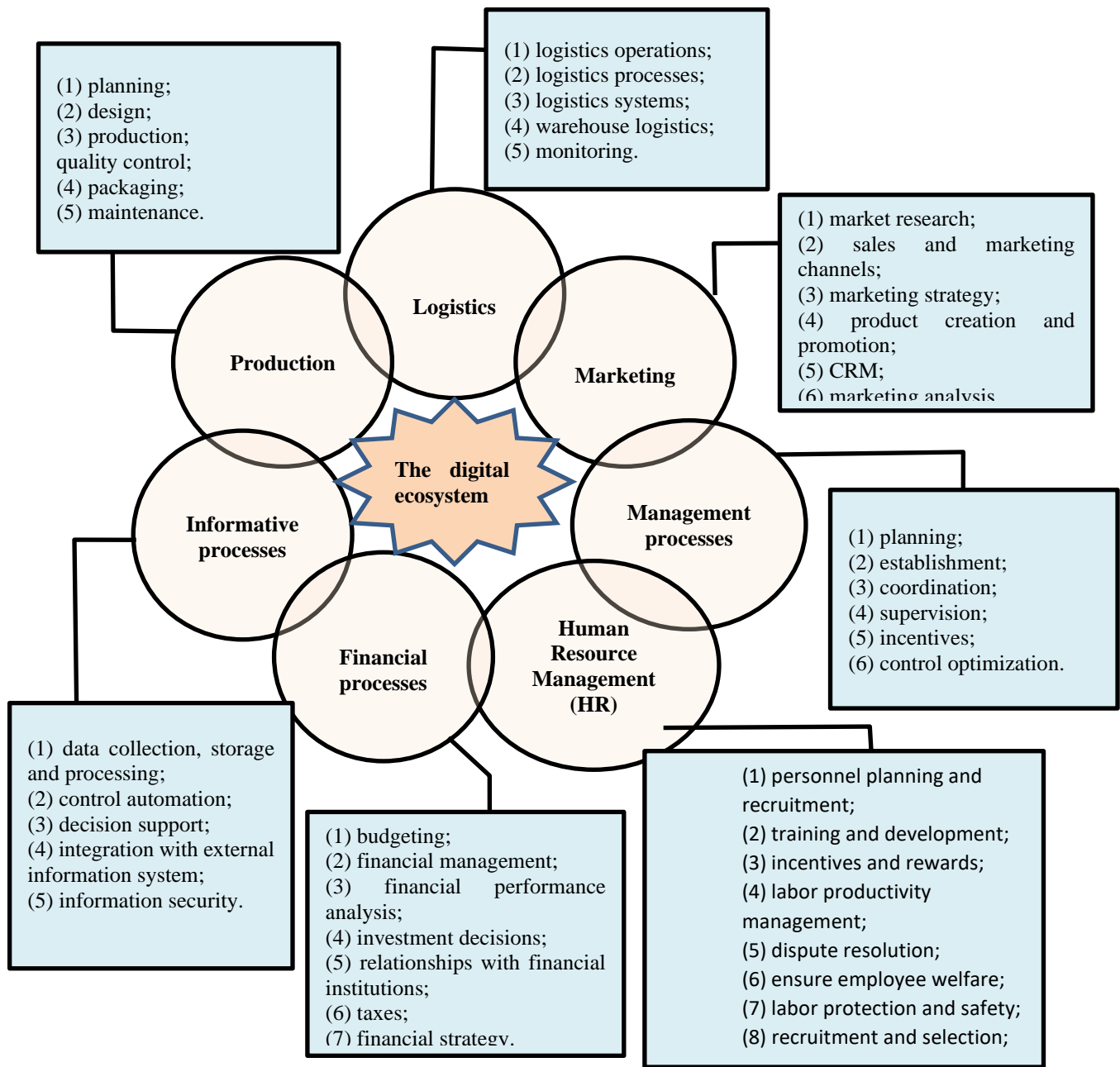
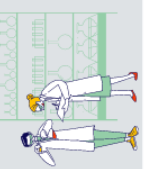


Figure 1. Business processes and directions of their digitization



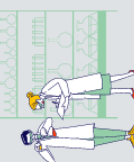
The classification of business processes presented in Figure 1 and the list of issues that should be digitized within them are of a recommendatory nature and can be changed based on the characteristics of the enterprise's activity and development stages. Digitization of these business processes is considered as the building blocks of digitization of the enterprise, summarized in a single digital ecosystem, and the interrelationship between them is taken into account.

Effective implementation of digital technologies that change the quantitative and qualitative indicators of business processes should consider the following factors affecting it.

1. Competitive environment: businesses are forced to constantly look for new ways to improve their products and services in order to remain competitive.
2. Technological innovation: The development of new technologies such as artificial intelligence, big data, internet of things and blockchain opens up vast opportunities for business.
3. Changes in consumer demand: consumers are becoming more demanding in the range, price and quality of goods and services, which encourages enterprises to adopt digital technologies.
4. Legislation and regulatory framework: governments of almost all countries of the world are actively improving the legal framework aimed at supporting the digital economy and protecting the rights of consumers in the digital environment.
5. Economic incentives: the state provides tax incentives and subsidies to enterprises implementing digital transformation.
6. Availability of data: the availability of large amounts of data allows businesses to analyze consumer behavior and make informed decisions about meeting their needs as fully as possible.
7. Education and skills: for the successful implementation of digital technologies, the employees of the enterprise must have the appropriate knowledge and skills.
8. Ecosystem of partners: the successful implementation of digital transformation depends on the establishment of mutually effective cooperation with other enterprises, suppliers of goods, educational institutions, scientific research centers and government agencies.
9. Information security and protection: Ensuring information security and protection is one of the decisive factors for success in the digital economy.
10. Adapt to changes: rapid changes in technology and business models require enterprises to quickly adapt to new conditions.

Improving the ease and efficiency of managing business processes directly depends on the digital technologies or their components used in them. Among the most used digital technologies today, the following can be included:

- cloud technologies - allow enterprises to store and process data on remote servers, which reduces hardware costs and increases flexibility.
- artificial intelligence (AI) – used in process automation, data analysis and decision-making.
- robotics (RPA) - by automating routine, repetitive tasks, it creates an opportunity to spend more time on more important tasks.
- big data (Big Data) – used to analyze and forecast consumer behavior, as well as optimize business processes.



- Internet of things (IoT) is a technology that allows devices and systems to communicate with each other remotely without human intervention.
- blockchain is a distributed ledger technology that ensures the security and transparency of transactions and consists of a chain of blocks.
- 5G is a new mobile communication standard that provides high data transfer rates.
- augmented and virtual reality (AR/VR) is a set of technologies that allow creating an interactive environment and improving user experience.

Therefore, digitization of business processes first of all implies the use of certain digital technologies to optimize each process. The choice of digital technologies depends on several factors:

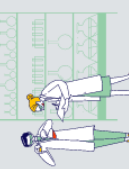
- business goals and objectives: attention is paid to what problems can be solved by optimizing business processes. This may include increasing labor productivity, product volume and income, reducing costs, improving product or service quality, etc.;
- the current situation in conducting business, that is, the analysis of the current state of business processes, their strengths and weaknesses, as well as possible optimization points;
- various existing digital technologies that help to optimize business processes, their functionality, price, ease of use, integration possibilities with existing systems and other aspects;
- based on the analysis of the data obtained from the analysis, test or pilot projects, it is possible to justify which technology to use to optimize business processes and compare them;
- the skills and qualifications of employees to implement and adapt the selected technology to business processes;
- continuous monitoring of the results of the introduction of digital technology and assessment of the degree to which it has increased the efficiency of business processes.

Choosing the right digital technology for business processes is a complex issue involving several steps. First of all, it is necessary to determine the goals and tasks of digitalization, as well as to study the existing technologies and their capabilities. Then it is necessary to determine which digital technologies will solve the problems most effectively. After that, it is necessary to conduct a comparative analysis of technologies and choose the most suitable one for a particular business process. Finally, it is necessary to implement the selected technology and test its performance.

Based on the business processes presented in Figure 1 and the digital technologies listed, it is possible to create a matrix of digitalization of business processes (Table 1).

Thus, the main goal of searching for and using effective means of digitalization of business processes is to increase the competitiveness of modern enterprises, and it is necessary to achieve the functioning of all business processes as a single mechanism in strict interconnection. Their effectiveness is constantly influenced by internal and external environmental factors. Such factors can have both positive and negative effects on the effectiveness of digitization.

In order to successfully implement digitalization, it is necessary to develop a plan or steps that will help the consistent introduction of digital technologies into business processes. This



ensures that errors are avoided and resources are used more efficiently. In addition, the correct identification of digitization steps in a logical sequence helps to control the process and evaluate the results at each step.

The stages of digitalization of business processes can be formulated as follows:

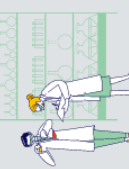
1. Identify opportunities for evaluation, optimization and improvement of current business processes.
2. Formation of the goals and tasks of digitization, determination of priority directions of development.

Table 1 Matrix of introduction of digital technologies to business processes

№	Digital Technologies	Manufacturing					Logistics					Marketing					Management					Processes Human Resource Management									Financial Processes						Information Processes																	
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	1	2	3	4	5										
1.	Cloud technologies	+	+	+	+		+	+	+	+		+	+	+	+		+	+	+	+	+		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					
2.	Artificial Intelligence (AI)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					
3.	Robotics (RPA)		+					+		+																																												
4.	Big data (Big Data)		+		+			+		+			+		+			+		+		+		+		+		+		+			+		+		+		+		+		+											
5.	Internet of Things (IoT)	+	+	+	+	+						+	+					+		+		+		+		+		+		+			+		+		+		+		+		+											
6.	Blockchain		+		+	+						+	+					+		+		+		+		+		+		+			+		+		+		+		+		+											
7.	5G		+		+	+						+	+					+		+		+		+		+		+		+			+		+		+		+		+		+											
8.	Augmented and Virtual Reality (AR/VR)		+		+	+						+	+					+		+		+		+		+		+		+			+		+		+		+		+		+											

3. Development of a digital transformation plan, including selection of digital technologies, resource assessment and implementation milestones.
4. Introduction of necessary digital technologies, adjustment of systems and interfaces, training of employees.
5. Monitoring the results of digitization, controlling the implementation of the plan and making corrections if necessary.
6. Determining the effectiveness of digitalization of business processes and developing recommendations for further development.

Effective use of digital technologies in the implementation of business processes, while bringing them to a qualitatively new level, allows for free interaction and preparedness-based management decisions at all levels of management. Also, in the process of improving and evaluating the quality of products and services, it eliminates the influence of the human factor and, most importantly, ensures the provision of guaranteed and high-quality products and services to customers in the required volume and at affordable prices.



References

1. Benoit S. et al. A triadic framework for collaborative consumption (CC): motives, activities and resources & capabilities of actors // *Journal of Business Research*. 2017. Vol. 79. P. 219-227. DOI: 10.1016
2. Elliott J.J. Design of a product-focused customer-oriented process // *Information and Software Technology*. 2010. No. 42 (14). P. 973-981.
3. Jacobides M. G., Cennamo C., Gawer A. Towards a Theory of Ecosystems // *Strategic Management Journal*. 2018. Vol. 39 (8). P. 2255-2276. DOI: 10.1002
4. Osterwalder A., Pigneur Y., Ticci L., (2017). Clarifying Business Model: Origin, Present and Future of The Concept. *Communication of the Association for Information Systems*.
5. Варзунов А. В. Анализ и управление бизнес-процессами. Учебное пособие / А. В. Варзунов, Е. К. Торосян, Л. П. Сажнева. – СПб: Университет ИТМО, 2016. – 112 с.
6. Виноградова А.В. Реинжиниринг бизнес-процессов в современном менеджменте. Донецк, 2005. 196 с. 8.
7. Глухов В.В., Сюняева Д.А. Особенности применения процессного подхода в управлении предприятием // *Научно-технические ведомости СПбГПУ. Экономические науки*. - 2018. - № 6-2. - С. 111-118.
8. Елиферов В.Г. Бизнес-процессы: регламентация и управление. М., 2013. 318 с.
9. Иванова И.А., Матвеева У.Ю. Приведение бизнеса к устойчивой бизнес модели // *ТДР*. 2022. №2. -С.120-121.
10. Ксенофонтова О.В., Козловская А.И. Применение цифровых технологий в управлении бизнес-процессами на промышленных предприятиях // *Инновации и инвестиции*. 2020. №6. –С.110-113.
11. Семёнов А.И., Губайдуллина А.Д. Цифровая трансформация бизнес-моделей организации // *Экономика строительства*. 2021. №2 (68). -С. 49-55.
12. Суюнов Д., Кенжабаев А., Рўзиев А. Электрон тижорат. Дарслик.-Т.:2023.-298 б.
13. Харрингтон Дж. Оптимизация бизнес-процессов: документирование, анализ, управление, оптимизация. СПб., 2002. 328 с.

