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Digital transformation of the economy and business

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Abstract: Starting as digitalization, the process of introducing digital technologies in various sectors of the economy has taken on a comprehensive scale. The "race of technological re-equipment" has already begun, and its main content is the digital transformation of business [1]. Platform solutions and networking principles of doing business are spreading. It both works and brings benefits to companies, radically transforming business processes, and forming entire ecosystems. World experts agree that only digital technologies in the coming years will be a driver of economic development in almost all spheres of human life, and the volume of the digital economy by 2023 will be 23 trillion dollars. Integration of technologies into the real world has led to the fact that they are so tightly integrated into the processes of production, doing business, training and public administration that further growth is impossible to imagine without "digital". And amid the COVID-19 pandemic, the rapid digital transformation of entire industries has become not just a necessity, but a measure to survive. Today we need to talk not about the digital transformation of the traditional economy, but about the formation of a new exponentially accelerating economy, the existence of which is impossible without digital technologies, a digital society and a system of global relations.

The purpose of this article is to identify the key processes of digital transformation as a complex dynamic environment with high uncertainty, which will allow companies to form an understanding of the modern economy and achieve exponential growth.

Key words: Digital economy, transformation, digital technologies, state, economy, innovations.

When we talk about the digital economy, we can distinguish three stages of its development (Fig. 1): automation, digitalization and digital transformation.

1. Automation of the transfer of existing processes to IT	2. Digitalization of the application of IT to the optimized process	3. Digital transformation with IT finds the best way to deliver a service by changing existing or introducing new business models
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Figure 1. Stages of the digital economy

Source: Compiled by the author on the basis of [2, 5–7]

Thus, the terms "digitalization" and "digital transformation" have significant differences. If we are talking about digitalization, then this process is actively underway and modern technologies are paving their way in existing business processes. When it comes to digital transformation, it's a challenge because it requires a company to think not only about technology, but also about how the company is wired, how it works, what culture the company has to support the transformation. The main challenge is that the entire chain of the production process in the company is visible, that the data in the production process is available for decision-making and that it is possible to optimize the system as a whole, and not its individual fragments. This is a new business growth strategy, the task of which is to understand your consumer. If this bot does not allow the company to work in a new way and does not give new knowledge, new ways of working, then this is digitalization. Digitalization is the first step towards transformation through learning, through overcoming mistakes.

According to a global study by Dell Technologies, during the global COVID-19 pandemic, 80% of companies around the world accelerated their digital transformation programs in 2021. And here it is important to know what exactly you need to focus on, what exactly digital transformation affects.

As the experience of the leading countries of the world shows, digital transformation affects the following transformations of the enterprise:

- business activities/ functions of enterprises: marketing, operations, human resources, administration, customer service, etc.;
- business processes: combining the management, optimization and automation of business processes into one whole is of paramount importance in digital transformation strategies;
- business models: how businesses function, from the go-to-market approach and value proposition to the ways in which an enterprise seeks to make money and effectively transforms its core business using new revenue streams and approaches;
- business ecosystems: networks of partners and stakeholders, as well as external factors affecting the business, such as regulatory legal frameworks and economic priorities;
- Business Asset Management: The emphasis is on traditional assets, but increasingly on less "tangible" assets such as information and consumers (improving the customer experience is the primary goal of many digital transformation "projects," and information is the lifeblood of business, evolution, and any human relationship). Both customers and information should be treated as real assets in all aspects;
- an organizational culture in which there should be a clear, customer-oriented, flexible and adaptive goal, which is achieved by acquiring core competencies in all areas such as digital maturity, leadership, intellectual work, etc. Culture also intersects with processes, business activities, collaboration and the IT side of digital transformation. Changes are needed to bring apps to market faster;
- Ecosystem models and partnerships, including the growth of entirely new approaches to the organization of the business ecosystem, leading to the emergence of new business models and sources of income. New business models will play a key role in the product-as-a-service economy and in achieving the success of digital transformation;

Therefore, it can be concluded that digital transformation is a systematic, long-term, non-instantaneous process affecting all aspects of the life of the organization, and it is extremely important to take into account this new trend, the most complex problems and obstacles that have arisen during its implementation.

Most countries in the world are following a similar path, here we do not stand out too much. The role of the state in this is fundamental. The state is a driver for the development of the digital economy, which should create a foundation, an environment, help society understand how to use technologies, and, if necessary, help create technologies to make the economy digital.

However, with all the active strategic and operational planning of digital transformation in our country (at all levels, from business to the state), key obstacles remain in its way:

- cybersecurity;
- lack of resources;
- difficulties in extracting information from the data;
- lack of competence;
- resistance to change;
- lack of a single digital transformation management body and digitalization strategy, etc.

Moreover, if we analyze the key obstacles of digital transformation, we can draw the following conclusions:

1. Insufficient elaboration of the term and its weak integration into the integral conceptual apparatus lead to negative consequences, with a weak definition of concepts, it is impossible to set goals for the digital economy, form indicators and monitor their implementation, and therefore, it is impossible to really control the effectiveness of spending budget funds. In the previous stages of automation and digitalization, this was of less importance, since the terms were embodied in practice within the closed circuit of a separate economic entity, i.e. within a separate corporate culture.

2. Internal resistance to change is generated by the absence of a strategic plan or its ignorance (misunderstanding).

3. Lack of competence, lack of qualified personnel indicate a low level of digital culture in the organization.

The impact of "digital" on economic and social processes in society is often complex and causes non-obvious consequences. In practical terms, ethics can be thought of as "safety": what basic principles should be followed to avoid big mistakes. Digital transformation requires a step-by-step approach with a clear roadmap that involves a wide variety of stakeholders and takes into account all the challenges and constraints. Digital transformation of the economy and digital transformation of modern society are interrelated and complementary processes on which the effectiveness of the development of the digital economy largely depends. The key task is to train leaders of digital transformation from among civil servants. This is necessary to strengthen the formal and functional units that will have to implement the national development goals of the Republic of Kazakhstan at all levels.

Conclusions:

1. Platform solutions and networking principles of doing business radically transform business processes and form entire ecosystems. Digital platforms play an increasingly prominent role in the economy of individual states and the whole world, open up new opportunities for effective interaction of various economic participants. Already today we can say that the economic structure is changing on a global scale.

2. The trend of the last few years is digital transformation. Getting used to the convenience of commercial services, people make requests for the quality and speed of public services. The solution is the digital transformation of public administration.

3. Digital transformation entails rethinking products and services as digital assets, generating new value from the relationship of tangible and digital assets through data and creating ecosystems that make this possible, which ultimately leads to fundamental changes in business and

organizational activities, processes, competencies and business models and, as a result, allows you to increase the productivity of the enterprise.

4. The new design paradigm allows you to take into account the maximum number of customer requirements at various stages of the development and production cycle. Thanks to the use of digital technologies and systems, modern advanced production is characterized by a reduced product life cycle time. The entire design process for the specified terms and at a given cost becomes much cheaper, its labor intensity is reduced, which allows you to reduce the cost of production and meet the needs of consumers in the shortest possible time.

5. Direct participation of the state in the development of the digital economy is necessary for several reasons: 1) a significant impact of platform solutions on certain segments of industries and on a number of sectors of the social sphere; 2) the need for a management system adequate to the challenges of digital transformation to prevent adverse events requiring "manual" intervention; 3) the risk of losing objective control over market segments, which will receive a high-tech business that has too large and valuable amounts of data and technology.

6. It is fundamentally important to train civil servants, whose task is to implement numerous tasks and achieve goals related to the implementation of the national project. First of all, it is necessary to train the leaders of digital transformation from among civil servants.

Today, in the context of the transition from the information age to the digital age, as the great classic Lewis Carroll noted, it is important: "To stay in place, you need to run with all your legs, and to move forward, you need to run twice as fast."

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Цифровая трансформация экономики: новые бизнес-модели, технологии и компетенций

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Аннотация:

Существует множество работ и статей про оцифровку предприятий и бизнесов. Однако, читая многие из них, у людей, не относящихся к экономической сфере, могут возникнуть вопросы. С помощью этой статьи я собираюсь упростить задачу для обывателей и тех, кто хочет больше узнать о понятии "цифровой трансформации".

Ключевые слова: цифровая трансформация, цифровизация, бизнес-модель, трансформация.

Итак, существуют такие понятия, как "оцифровка" и "цифровая трансформация".