



DEVELOPMENT OF THE DIGITAL ECONOMY IN UZBEKISTAN

Olimova Lola Erkinovna - Teacher

Melieva Shakhribonu Omonovna - Teacher

Samarkand State Institute of Architecture and Construction

Article history:	Abstract:
Received: 7 th September 2022 Accepted: 7 th October 2022 Published: 11 th November 2022	This article talks about the development of the digital economy in Uzbekistan. The development of scientific thought, the introduction of digital technologies and artificial intelligence has led to fundamental changes in economic relations. The formation of the digital economy is a priority direction of the state policy of most economically developed countries, including Uzbekistan.
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Today, the role of the digital economy in the world and its development trends are increasing. For example, in 1992, the change in data rate was 100 gigabytes per day of global internet protocol (IP)-based traffic, while in 2019 this figure exceeded 89,000 gigabytes per second. Considering that these data refer to the initial stages of the development of the digital economy, it is not difficult to imagine the pace of its development. Global IP traffic is predicted to reach 150,700 Gb/s by 2022, driven by an increase in the number of new users on the Internet and further expansion of the Internet.

On a global scale, the two countries are leaders in the geography of the development of the digital economy. These are the US and China. These countries account for 75 percent of all blockchain patents, 50 percent of the value of the Internet of Things, and more than 75 percent of the global open cloud computing market. In particular, they control 90 percent of the market capitalization of the 70 largest digital platforms in the world.

According to the Decree of the President of the Republic of Uzbekistan "On measures for the widespread introduction of the digital economy and e-government" dated April 28, 2020 PP-4699, by 2023 it is planned to double the share of the digital economy in GDP. The economic development strategy is based on such factors as the development of industry, e-commerce, services and agriculture, the strengthening of entrepreneurship, the provision of financial resources.

The digital economy refers to such a system of economic, social and cultural relations, the basis of which is the widespread use of digital technologies. There are many definitions of the digital economy.

Digital economy:

- formation of business models and alignment of business processes based on the possibilities of digital technologies (ICT and the Internet) and the exchange of big data (BIG DATA);

- this is a set of relations that develop in the processes of production, distribution, exchange and consumption, based on online technologies (ICT and the Internet) and aimed at the qualitative satisfaction of the needs for life's goods.

By 2025, the world's digital economy will reach \$23 trillion. USD USA. Its share in world GDP will increase from the current 17.1% to 24.3%. There will be 100 billion connections in the world to stimulate digital transformation in public utilities, industry and agriculture, transport, finance, etc. The number of enterprises using cloud technologies will be 85%, artificial intelligence - 86%, digital big data - 80%.

In Uzbekistan, the development of the Digital Economy is one of the priorities of the state economic policy. The proof of this statement is the Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated July 3, 2018 No. PP-3822 "On measures to develop the digital economy in the Republic of Uzbekistan", which states: "The state is taking large-scale measures to develop the digital sector of the economy, introducing electronic document management systems, developing electronic payments and improving the legal base in the field of e-commerce. [one].

The digital economy, functioning on information technology platforms, is developing at an intensive speed, which necessitates the creation of new models and technologies for such platforms. These are End-to-End (Complex) Technologies of the Digital Economy:

1. Big Data technologies;
2. Internet of things technology (IoT - Internet of Things);
3. Mobile technologies;
4. Cloud technologies (Cloud computing);
5. Technologies of virtual (VR - virtual reality) and augmented reality (AR - augmental reality);
6. Neurotechnologies and artificial intelligence (AI);



7. Digital platforms;
8. Quantum technologies;
9. Robotics;
10. Blockchain and cryptocurrency technologies;
11. Crowdsourcing and crowdfunding.

Blockchain technologies (distributed data registry technologies), artificial intelligence, the use of the capabilities of supercomputers, as well as activities on crypto assets are one of the directions for the development of the digital economy in many countries of the world [3]. In the Republic of Uzbekistan, the national strategy "Digital Uzbekistan" - 2030 has been developed and is being actively implemented, where the task is set: in 2030, the share of the digital economy in the republic's GDP should be 30%.

The program for the development of agriculture until 2030, as well as the digital program "Smart Agriculture", are being intensively developed and implemented. However, the process of forming a digital economy is not always smooth and lightning fast. To date, the following problems have been identified in the implementation of the national strategy "**Digital Uzbekistan"-2030:**

- equipping the regions of Uzbekistan with fiber-optic systems is still insufficient;
- the speed and percentage of wireless broadband Internet coverage are low;
- difficult access to the basic network infrastructure in remote areas of the country;
- despite the active training of specialists in the ICT industry, there is a shortage of highly qualified personnel;
- the processes of effective development of the digital economy require constant modernization of the technical and technological platforms [2].

To eliminate these problems as soon as possible and achieve the set goals, a national program and a roadmap for the digital economy until 2030 have been developed.

Despite the difficulties of introducing modern innovative solutions, at present the following main technologies can be distinguished, which have arisen since the beginning of the period of formation of the digital economy.

The technology of "big data", which allows you to analyze and process a large amount of data of different formats at the extreme limit of practicality.

Big data includes most data flows over 100 GB per day. Its most common definition is a set of information that is larger than the hard drive of a single personal device and cannot be processed by classical tools used for smaller volumes. On the other hand, BIG DATA is a variety of tools, approaches and methods for processing both structured and unstructured data in order to use them for specific tasks and goals.

It should be noted that in the World the volume of all data is increasing exponentially: in 2011 the volume of generated information reached 1.8 zettabytes, in 2012 - 2.8 zettabytes. In 2020, this figure will reach 40 zettabytes. In 2020, the size of the BIG DATA market in monetary terms will be about \$70 billion [5].

The introduction of blockchain technology (chain of blocks) in the industries and spheres of the national economy of the Republic of Uzbekistan was discussed at the ICT SUMMIT in May 2019. In particular, such questions were raised as the place and role of this technology in achieving market reforms, the main goals of development and economic competitiveness, the development of digital archives, in particular in investment activities, in trade, on the exchange of crypto-assets.

On November 12, 2018, for the first time in Uzbekistan, the first pilot implementation of blockchain technology took place. The implementation was carried out as part of a joint project between the Uzbek Digital Trust Fund for Supporting the Development of the Digital Economy and the Russian company Blockchain Industrial Alliance. This technology has been introduced into the field of the automated system of registers for the State Center for Expertise and standardization of medicines, medical devices and medical equipment [10].

This technology allows you to store and process data that is available to any medical institution that has access rights. Over time, this system will allow doctors, drug and medical device suppliers, and patients to receive various types of information 24 hours a day, 7 days a week.

Thus, the technology of "blockchain" includes the registration of various transactions, confirmation of the identity of the person performing this or that operation, the conclusion of counterparties.

The next technology that is currently widely used is the artificial intelligence system (Artificial intelligence, AI) [3]. Artificial intelligence is understood as a modern scientific technology for creating intelligent machines, software systems capable of processing text in natural language, performing machine learning, operating expert systems, making recommendations, and working at the level of virtual agents.

The introduction of digital technologies over a long period has led to fundamental changes and determined the trajectories of the development of the economy and society as a whole. The formation and formation of the digital economy is one of the priority areas for most countries. In recent years, there has been an upsurge in the wave of transformation of business models and the social sphere, caused by the creation of a new generation of digital technologies,



which, due to the scale and depth of influence, have been called "end-to-end". Such technologies include artificial intelligence (AI), robotics, the Internet of Things, wireless communication technologies and a number of others. According to experts, the introduction of end-to-end technologies can increase labor productivity by 40%. In the short term, the effective application of new digital technologies will determine the level of international competitiveness of both individual companies and countries as a whole, as well as form the infrastructure and legal environment for digitalization (digital law).

Undoubtedly, the vector of creation and implementation of digital technologies in many developed countries, including Uzbekistan, has recently acquired the status of the main direction of national development at the state and corporate levels. The current stage of digitalization of the economy gives rise to fundamentally new technological and organizational and managerial challenges and threats, requires the creation of a theoretical foundation, the formation of a conceptual and categorical apparatus and operational systems of definitions and definitions of new key concepts, as well as a full-fledged legal framework and legislative regulation mechanisms, which, in our opinion, hinders the development of the digital economy and the realization of opportunities to achieve the expected positive effects. All of the above substantiates the relevance of the chosen topic and also allows you to form the purpose of the study.

At a new level of development of digital technologies, one of the main risks and threats is a powerful increase in the quantity, quality and diversity of relationships between companies, socio-economic systems, social platforms and people. This growth is accompanied by exponential dynamics in the number of transactions and the volume of data, knowledge and information, which leads to an even more complex integration of economic and social opportunities, the consequences of which humanity has yet to assess. These serious consequences and transformations require from society and each individual person new competencies, abilities and skills, as well as the adaptability of the application of new technologies in the phenomenon of everyday life. Today, the processes of forming educational programs that meet global trends in the socio-economic and political life of society, as well as the personalization of individual learning trajectories that allow for a high level of "digital literacy" are of particular importance.

The society is on the verge of realizing the growing dangers of the emergence of negative consequences of the digitalization of the economy, in particular, the reduction or complete abandonment of traditional types of markets, the displacement of a

number of professions by automated or robotic systems, the growth of cybercrime, the decrease in the protection of human rights in the digital space, the risk of leakage of digital user data, a low level of citizens' trust in the digital environment, etc. The solution to these problems is, first of all, in the field of legal regulation of the digital economy.

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