Introduction of Digital Economy in Our Country and Its Prospects

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Abstract. **This article has developed scientific proposals and recommendations regarding the importance of introducing digital technologies into the economy, its tasks in the economy, the work that needs to be done to develop the economy of our country in the future.**

Keywords: Digital economy, digital technologies, modern models, technological infrastructure, digital processes.

1. INTRODUCTION

In today's conditions of expansion of international relations, the process of informatization is taking an increasingly important place in the development of society. Information technologies, their level of development and application in practice are becoming the most important factors that ensure high rates of development of the country and increase the efficiency of its integration into the world economy.

In the economy, information technology is effective processing, sorting and selection of information, implementation of the most effective process of interaction between people and computer technology, meeting the need for information, as well as operational interaction is necessary for At the same time, information technology serves as an effective tool for making important economic decisions and participates in the process of effective management in any field of human activity. Modern models of information technologies provide additional opportunities for accurate calculation of economically important results and making correct and reasonable management decisions based on them, as well as forecasting them. Also, these models allow calculating the overall economic efficiency, risks and flexibility of the system indicators.

So, the digital economy is an economy based on information and communication technologies. The digital economy is sometimes called the internet economy or the web economy.

According to the recognition of most researchers, the concept of digital / electronic economy, which appeared in the last decade of the 20th century, was proposed by the American computer scientist Nicholas Negroponte in 1995 in his work called "Being Digital". Nicolas Negroponte introduced the concept of digital/electronic economy as a transition from the movement of atoms to the movement of bits. Regards the notions of weight, raw materials, and transportation as disadvantages of the past, and contrasts concepts such as masslessness and virtuality of goods.

Other researchers have suggested that the term "digital economy" was first coined by Canadian scientist Don Tap Scott in 1994 in his book The Digital Economy: Promise and Peril in the Age of Networked Intelligence. D. Tap Scott based his work on the impact of information technologies on the development of economically developed countries, public administration and business.

In 1999, Neal Lane, the assistant to the President of the United States for science and technology, in his article entitled "Development of digital technologies in the 21st century", also justified the connection of the digital economy with the Internet network and, as a result, the development of electronic commerce.

The factors driving the development of the digital economy in the 21st century are pocket computers, mobile phones, digital cameras, satellite navigation, embedded sensors, cloud computing, and others. However, the digital economy refers to the digitization of almost all aspects of business communication, not just online processes and operations.

The digital economy includes the following main components:

- Technological infrastructure - hardware, software and communication networks;
- Digital processes - processes that ensure successful business;
- E-commerce sale of goods via the Internet.

Digital technologies are widely implemented in the digital economy. We will get acquainted with some of them below.

Cloud computing (Cloud computing) is a resource from which the user can work remotely through the Internet. This means that for calculations and data processing, you will not use the power of your computer, but the service of third parties.

So, cloud computing is usually understood as providing the user with computer resources and power in the form of an internet service.

Big data (Big data) is a term applied to large volumes of data (usually at the level of terabytes, exabytes and petabytes). It should be possible to collect, distribute, change, analyze, store and visualize this data using existing and emerging technologies. The reason for the rapid increase in the amount of data is the technological progress observed in recent years and the increase in the number of data created by the computing machine as a result of this.

Virtual reality (VR) is a world created by technical means that affects a person through sight, hearing and other senses. Real-time computer synthesis of virtual reality features and reactions is performed to create a believable set of reality sensations.

Augmented Reality (AR) is the result of introducing any sensory information into the visual field in order to supplement the information about the environment and change the perception of the environment.

Artificial Intelligence is a field of computer science that develops intelligent computer systems, that is, systems with abilities that we traditionally associate with the human mind.

A robot (from Czech "robot" - forced labor) is a cybernetic system that can perform operations related to the physical and mental activity of a person. The robot includes a programmable control system that controls the mechanical structure, as well as connects the robot to the external environment (equipment and user) [1].

Robotics is an applied science that deals with the creation of automated technical systems and is the most important technical basis for the development of production.

3D technology is a technology that creates three-dimensional voluminous objects. These technology devices include 3D printers, 3D scanners, and 3D displays.

2. RESULTS

The Internet of Things (IT) is a technology in which countless "things" connected to the Internet communicates with other things using IT programs. Internet-connected devices use built-in sensors to collect data, and in some cases affect them. IT-connected devices and machines can improve our work and our lives.

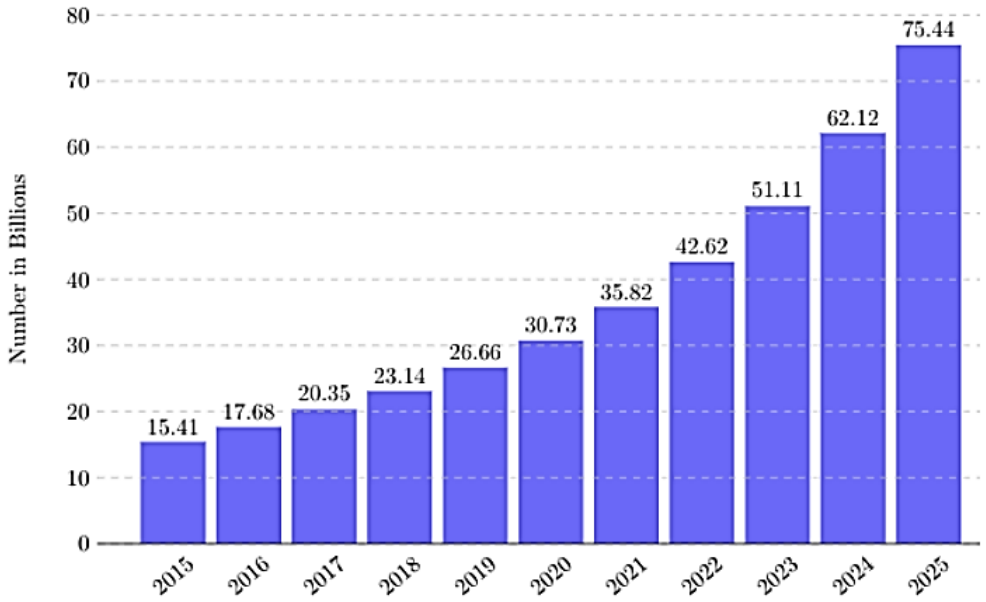

Fig. 1. IT: Number of devices worldwide from 2015 to 2025 [2]

In the conditions of the digital economy, the following opportunities are formed:

- Information will become the main resource and this resource will be available for unlimited use;
- There will be unlimited trading spaces on the Internet;
- small companies will also have the opportunity to successfully compete;
- The scope of operations is limited only by the size of the Internet.

In the first 10 years of the 1990s, the basis of the development of the digital economy was formed by e-commerce and service enterprises, but now it has covered almost all areas of life: education, healthcare, online banking, etc.

Digitization of documents and the emergence of electronic signatures allowed the emergence of "Electronic State" and "Electronic Government", which expands and accelerates the list of services to citizens. Today, different technologies are combined, the level of services is becoming more complex, and completely new approaches are being created in production processes and environmental management.

During the last decade of development, technological advances have occurred in other areas of human activity, and the "key technologies of the digital economy" - the Internet and mobile communication - have changed and continue to change [3].

The digital economy makes it possible to collect, use and analyze large amounts of data (digital data).

According to Cisco, the volume of Internet traffic has increased significantly over the past two decades. From 1992 to 2017, daily capacity grew from 100 GB to 45,000+ GB, and the world's IP traffic is expected to triple by 2022 [4].

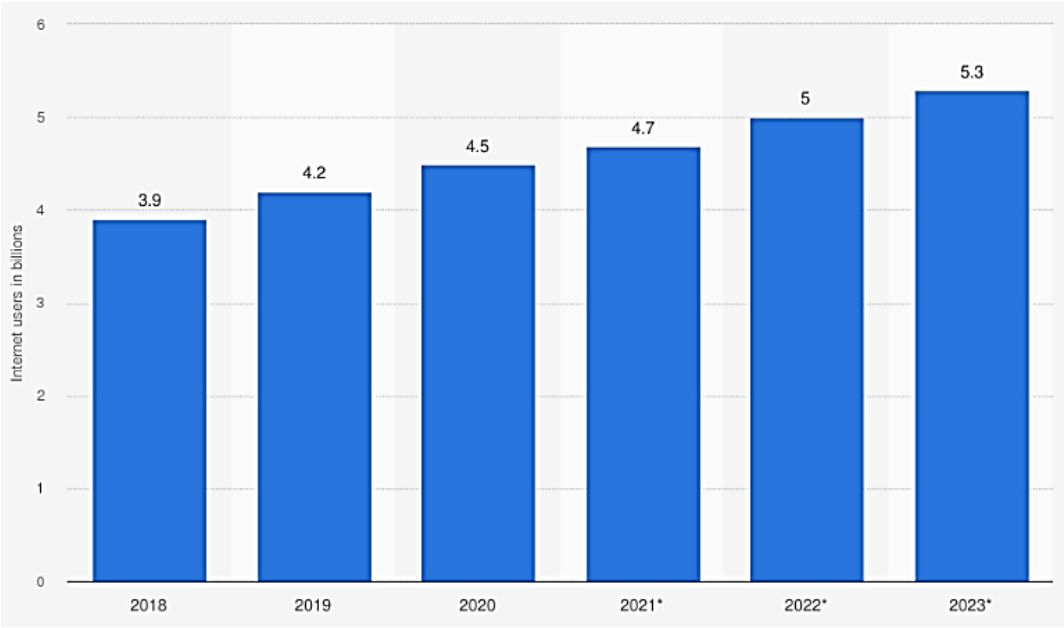

Fig. 2. Internet user growth worldwide from 2018 to 2023 (in billions) [5]

Digital platforms act as a mechanism for both parties to interact online on the Internet.

The growing development of the digital economy and digital platforms, which are its basis, will cause fundamental changes in many sectors of the economy. As a result, the increasing interest in this direction, the increasing influence of companies operating in the field of digital technologies on the economy, and most importantly, the competition issues, which are the foundation of the development of the market economy, require taking into account. The place of the national economy in the world is determined by its level of competitiveness. There is no doubt that the increasing level of competitiveness of the national economy will increase the economic potential of the country, serve to increase the living standards and improve the quality of the population.

DESI (Digital Economy and Society Index) - the digital economy and society index is a composite index that summarizes relevant indicators of digital technology indicators in Europe and analyzes the effectiveness of EU member states in the field of digital competitiveness. The DESI index covers five main areas: communication, human capital, Internet access, digital integration and digital public services [6].

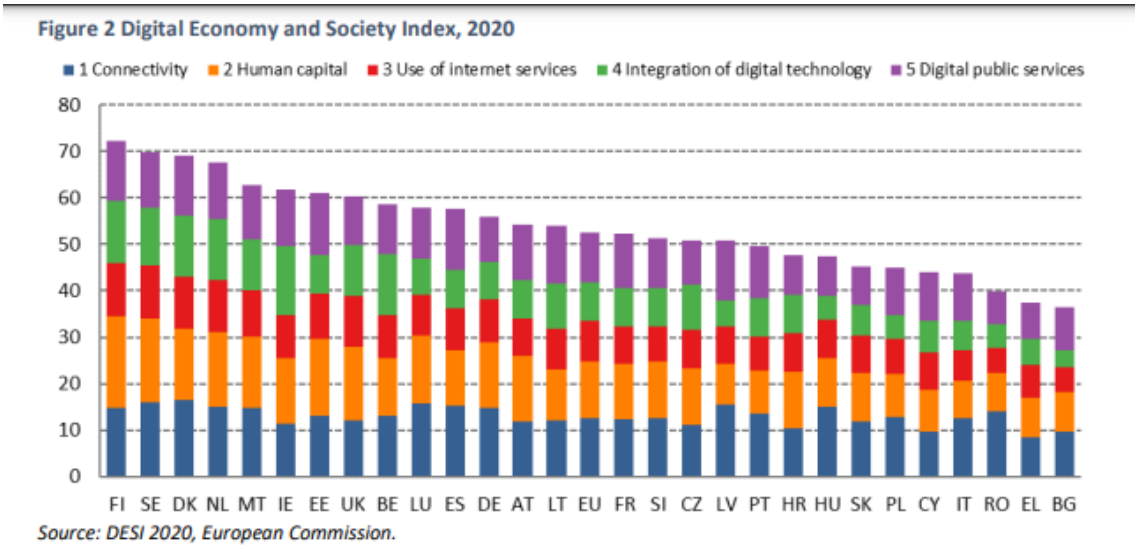

Fig. 3. Use of digital technologies in European countries, DESI 2020

According to the statistical collection "Digital Economy Indicator 2021", as of 2021, the United States was recognized as the most digitally competitive country in the world. The digital competitiveness rating is aimed at analyzing the country's ability to master digital technologies and introduce these technologies within enterprises and state organizations. Most of the Scandinavian countries ranked high on the list, with Denmark, Sweden, Norway and Finland rounding out the top ten.

Table 1. World digital competitiveness ranking, 2022 (top 10) [7]

2022 COMPETITIVENESS RANKING

		Score	
01	Denmark	100.00	↗ 3
02	USA	99.81	↙ 1
03	Sweden	99.81	-
04	Singapore	99.48	↗ 1
05	Switzerland	98.23	↗ 1
06	Netherlands	97.85	↗ 1
07	Finland	96.60	↗ 4
08	Korea Rep.	95.20	↗ 4
09	Hong Kong SAR	94.36	↙ 7
10	Canada	94.15	↗ 3

In the context of the increasing importance of digital technologies, their widespread implementation and the development of the digital economy have become a serious vital issue for every country nowadays.

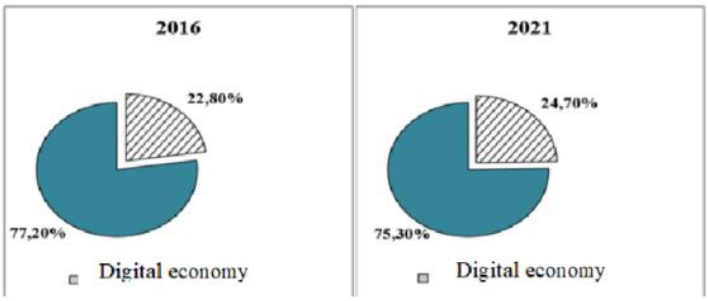

Fig. 4. The share of the digital economy in the gross domestic product of the countries of the world [8]

Due to the fact that the digital economy and the effective technologies related to it have entered our lives, the leadership of the Republic of Uzbekistan has also made several important decisions in order to further accelerate the development of the state and society. For example, the President of the Republic of Uzbekistan in his Address to the Oliy Majlis on December 28, 2018, on the most important priority tasks for 2019, Sh. Mirziyoyev also mentioned the following regarding the development of the digital economy in our country: "We need to develop the "National Concept of Digital Economy", which envisages the renewal of all sectors of the economy based on digital technologies. On this basis, we need to implement the "Digital Uzbekistan-2030" program. "The digital economy allows to increase the gross domestic product by at least 30%, and to reduce corruption sharply" [9].

In addition, regarding the implementation of the Decree of the President of the Republic of Uzbekistan dated February 19, 2018 No. DP-5349 "On measures to further develop the field of information technologies and communications", as well as creating conditions for the rapid development of modern information technologies in the state management system of the digital economy in the Republic of Uzbekistan , and in order to ensure information security, the Cabinet of Ministers adopted the Decision "On additional measures to introduce and further develop the digital economy in the Republic of Uzbekistan" on August 31, 2018, which defines the goals and objectives of the digital economy, and DP-3832 of the President of the Republic of Uzbekistan 03.07. The decisions of 2018 "On measures to develop the digital economy in the Republic of Uzbekistan" can be included among these measures. According to this decision, the following are the most important tasks for the further development of the digital economy:

- introduction and development of activities in the field of crypto-assets circulation, including mining, smart contract, consulting, emission, exchange, storage, distribution, management, insurance, crowd-funding (collective financing), as well as block chain technologies to diversify investment and entrepreneurship;
- Training of qualified personnel with practical work skills in the field of production and use of block chain technologies;
- To ensure close cooperation of state bodies and business entities in the field of introducing innovative ideas, technologies and developments for the further development of the digital economy;
- Comprehensive development of cooperation with international and foreign organizations in the field of crypto-assets and block chain technologies, and attraction of highly qualified foreign experts working in the field of production;
- Creation of a legal framework for the introduction of block chain technologies, taking into account foreign experience.

In order to implement consistent measures for the development of the digital economy, electronic commerce systems are being gradually introduced in state bodies and other organizations for the exchange of electronic documents and the provision of services to individuals and legal entities. In the Address of the President of the Republic of Uzbekistan to the Oliy Majlis on important priorities for 2019, he emphasized the importance of the digital economy in today's economic and social life: "We need to develop a national concept of the Digital Economy, which involves updating all sectors of the economy on the basis of digital technologies. On this basis, we need to implement the "Digital Uzbekistan - 2030" program. The digital economy allows to increase the gross domestic product by at least 30%, and to reduce corruption sharply. Analyzes conducted by reputable international organizations also confirm this" [10].

In the Republic of Uzbekistan, in order to ensure the rapid digital development of the country, eliminate the

digital divide in the regions, create a necessary environment for the development of innovative products, create a digital economy based on information, increase the efficiency of public administration, and provide convenient public services to the population and business entities. The Decree of the President of the Republic of Uzbekistan "On approval of the Digital Uzbekistan - 2030 strategy and measures for its effective implementation" (DP-6079, 05.10.2020) was adopted [11].

Step-by-step provision of coverage of the territory of the Republic with opportunities to connect to the global Internet network at the level of developed countries;

- Expanding the scope of personnel training and training qualified programmers and engineers and technicians with in-depth knowledge in these areas, teaching modern information technologies that fully meet international standards at all stages of the educational system, including with our foreign partners successful implementation of the "1 million programmers" project together;
- To strengthen the scientific-theoretical base in the field of digital economy and to support scientific activities in this field with the purposeful use of the funds of the "Digital Trust" fund;
- Holding seminars, courses and other events in educational institutions in order to promote and expand "digital literacy" among the broad strata of the population, to involve them in mastering information technologies;
- To strengthen the regulatory and legal framework in the field of digital economy and to improve the legal documents, as well as to create the legal basis for the concept of "startup", its activities, and their financing through venture funds;
- To organize a labor market that meets the requirements of the digital economy and to increase its mobility, to improve the qualifications of specialists for the rapid assimilation of new technologies;
- Strengthening international cooperation in the field of digital economy, implementation of joint projects with leading international technological companies, including the establishment of modern research and production laboratories for innovative developments.

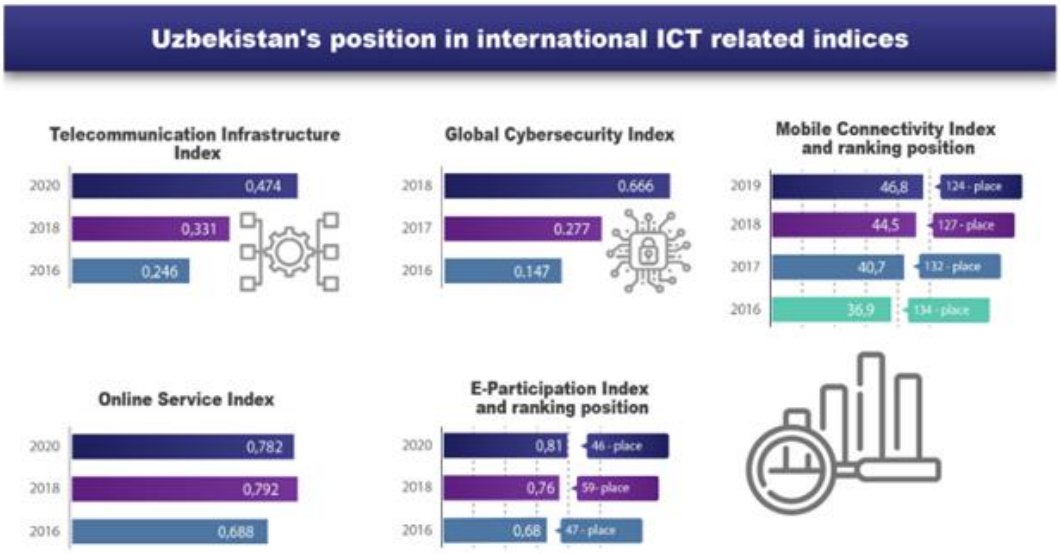

Fig. 5. Development of the digital economy in Uzbekistan during 2016-2020 [12]

3. CONCLUSION

International experience shows that today digital technologies are rapidly developing mainly in the scientific community and the private sector. Therefore, the state should create a favorable ecosystem by supporting innovative projects and IT companies in these areas.

The new economy provides manufacturers with optimal methods of organizing effective marketing campaigns in business, obtaining maximum profit at minimum cost, and successfully selling goods and services. Quality service and comfort is provided to consumers, buyers and clients. These opportunities are wider than ordering lunch on the

Internet, calling a taxi through a mobile application, sending money to a distant relative, and include cross-border business cooperation, e-commerce space, remote office, etc. Also, the state should support modern methods of digital education in the field of supporting the innovative and digital ecosystem, develop norms for effective regulation of innovative services, help in the development of new markets, and take measures to reduce risks arising from the deepening of technological processes.

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