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The Current Situation of Uzbekistan's Digital Economy and China-Uzbekistan Digital Economy Cooperation

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Abstract :- With the rise of the digital economy, the world today is experiencing truly revolutionary changes related to new technologies. These new technologies are changing industries and production systems, increasing productivity and generating new business models. In this regard, the acceleration of economic development and international competitiveness, as well as Uzbekistan's integration into the world economy, will largely depend on the development of the digital economy. The digital economy helps reduce the cost of providing services, provides access to exports through e-commerce and has a positive impact on investment inflows and overall economic activity. This article analyzes the reasons for the slow development of the digital economy in the Republic of Uzbekistan and discusses the corresponding measures taken by the government to solve existing problems. In addition, this article introduces the cooperation between China and Uzbekistan in the field of digital economy and China's assistance to Uzbekistan's digital development.

Keywords:- *Digital Economy, Uzbekistan, Economic Development, Measures, Strategies.*

I. INTRODUCTION

Nowadays many developed countries are implementing digitalization in all industries, developing and approving targeted legislative acts and programs that will become a springboard for the development of the digital economy. With the help of the digital economy, opportunities will open up for creating new innovative models of production, trade, healthcare, education, the economy and the whole society. The digitalization of the country's economy will lead to an increase in productivity and market competitiveness. Therefore, the formation and development of the digital economy in the Republic of Uzbekistan will provide an opportunity for a big breakthrough in the growth of labor productivity.

The development of digitalization implies the existence and effective functioning of institutions that create conditions and stimulate the introduction of information technologies in various segments of the economy. It is no secret that effectively functioning institutions form the conditions for economic growth and a high-quality institutional environment are an imperative for socio-economic development in general. Currently, the most pressing problem is related to the legal regulation of digitalization processes with the legitimization of new financial instruments used in collective financing and investment. The starting step towards the formation, implementation and development of digitalization as a new innovative component of the economy was the adoption of the Decree of the President of the Republic of Uzbekistan "On the State Program for the Implementation of the Action Strategy in five priority areas of development of the Republic of Uzbekistan in 2017-2021". Further, the Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated July 3, 2018 № PP-3832 "On measures to develop the digital economy in the Republic of Uzbekistan" was adopted. In fact, this document is a comprehensive strategy for the development of information technologies in the country for the next decade. Today, information and telecommunication systems are an important attribute of human life. The rapid evolution of information and communication technologies increases the possibility of new products, innovative technology and those technologies in all sectors of the economy of the Republic of Uzbekistan.[1]

II. THE CURRENT SITUATION OF UZBEKISTAN'S DIGITAL ECONOMIC DEVELOPMENT

The degree of development of a country's digital economy is directly related to the level of development of information and exchange technology (ICT). It is usually measured by a variety of indicators: the proportion of the digital economy in GDP, the amount of investment in the ICT industry, the speed of the Internet, its coverage of the country's territory, and the availability of population. The level of development of e-commerce, the share of public services in the e-government system, and the provision of organizations with ICT experts. [3] In addition, international rating indicators to assess the country's information technology development are also very important. For many of these indicators, Uzbekistan has made significant progress since 2016. Therefore, the total added value created by the service industry in the field of ”information and communication“ has doubled since 2016, from 4.4 to 8.8 trillion sum, and the volume of services in the ”information and communication" economic activity type has tripled, from 6.3 to 12.9 trillion sum [Figure 1].

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Fig 1. Dynamics of growth in the volume of services in the field of "information and communication" in the GVA from 2016 to 2020 (trillion soums）[1]

The development of the ICT industry has benefited from the increase in fixed asset investment in the “information and communication” activity type, which has increased four-fold from 2016 to 2020, from 1.2 to 4.8 trillion sum [5] , including outbound investment and loans, which increased by 2.5 times from 0.8 to 2 trillion sum [Table 1].

Table 1. Changes in the amount of investment in fixed assets and the types of "information and communication" activities from 2016 to 2020 (trillion soums)

	2016	**2017**	**2018**	**2019**	**2020**
Investments in fixed assets by type of activity "Information and communication"	1,2	1,9	0,9	2,1	4,8
Foreign investments and loans by type of activity "Information and communication activities"	0,8	1,5	0,5	1,2	2,0

Telecommunications infrastructure is developing dynamically. The length of the laid fiber-optic communication lines has increased almost 3.8 times - from 179,000 kilometers to 686,000 kilometers; by the end of 2021, their length is planned to be almost doubled - up to 118,600 kilometers. The number of mobile base stations increased 1.8 times (from 177,000 to 317,000) and in 2020 alone more than 5,600 new mobile telephone stations were installed and opened [Table 2].

The expansion of the network of mobile base stations has created conditions for the provision of mobile communication services to 98% of the country's population (extended coverage), of which high-speed communication reaches 90%.

The expansion of the network of mobile communication stations is due to the installation of new stations to ensure the operation of the 3G/4G network. A project to install 15 fifth-generation 5G base stations has also been implemented in Tashkent.

In order to create its own production base and import substitution with the help of the Republic of Korea, an 11 million USD plant was built in the Jizzakh Free Economic Zone for the production of optical cables with a capacity of 50,000 kilometers per year, which will ensure domestic demand and supply of exported cable products.

Table 2. Trends in the development of telecommunications infrastructure[2]

	2016	**2017**	**2018**	**2019**	**2020**
The total length of optical fiber communication lines (thousand kilometers)	17,9	20,3	26,6	36,6	68,6
Number of mobile communication base stations (thousand units)	17,7	20,0	24,1	26,1	31,7

Since 2016, the number of mobile users has increased by 20% to 25.4 million, and the number of Internet users has almost doubled to 22.5 million.

Table 3. Dynamics of the growth indicators of the number of users (million people)[3]

	2016	**2017**	**2918**	**2019**	**2020**
Mobile users	20,6	21,4	22,8	23,6	25,4
Internet users	12,1	14,7	20,0	22,0	22,5

The number of broadband Internet access ports installed is increasing every year, which provides users with a continuous connection to it to transmit and receive information at high speed.

[1] Source: Goskomstat data
[2] Source: mitc.uz
[3] Source: mitc.uz

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III. UZBEKISTAN IS IN THE PROCESS OF AN INTERNATIONAL INDEX AND RESEARCH TO ASSESS THE COUNTRY'S READINESS FOR DIGITAL TRANSFORMATION

It is worth noting that Uzbekistan has achieved success in international ratings evaluating the development of information technologies in the country. In these ratings and the position they occupy, an index is indicated, which also takes into account several parameters reflecting the state of development of the field.

The Telecommunications Infrastructure Index (TII) is formed on the basis of the following indicators for every 100 inhabitants of the country: the number of Internet users and fixed telephone lines, as well as the number of users of mobile communications, wireless broadband and fixed broadband networks. Since 2016, Uzbekistan's index indicators have increased from 0.246 to 0.474 [Figure 2].

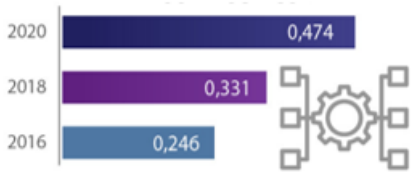

Fig 2. Telecommunications Infrastructure Index[4]

The ICT Development Index (IDI) was compiled by the International Telecommunication Union in 176 countries around the world at the end of 2017. The IDI index is composed of 11 statistical indicators, which reflect the availability of ICT, the degree of its use, and the actual skills of the population in using ICT. A new IDI compilation method is currently being developed. In the latest IDI index ranking, Uzbekistan has risen by 8 places from 2016 and ranks 95th among 176 countries in the world (index 4.9).

The Global Cyber Security Index is also compiled by the International Telecommunication Union to assess the level of government commitment in five areas: legal measures, technical measures, organizational measures, capacity development, and international cooperation. Since 2016, Uzbekistan's index in this rating has increased from 0.1471 to 0.666, and it has risen from 93rd to 52nd among 175 countries [Figure 3].

Fig 3. Global Network Security Index

The Mobile Communications Index is compiled by the International Association of Mobile Operators which also includes all mobile operators in Uzbekistan. The index reflects the development and level of use of the mobile Internet. The index measures the performance of more than 170 countries/regions in terms of the main drivers of mobile Internet adoption: infrastructure, accessibility, consumer readiness, content, and services [Figure 4].

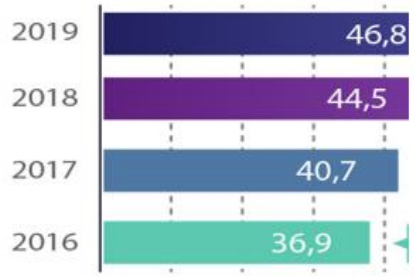

Fig 4. Mobile communication Index[5]

The index helps the mobile industry determine the focus of its efforts to promote wider adoption of the mobile Internet. In the past four years, Uzbekistan's performance in the index has improved from 36.9 to 46.8, which is close to the global average of 50.

The E-government Development Index (EGDI) is compiled by the Department of Economic and Social Affairs of the United Nations Secretariat based on the indicators of three sub-indexes: online public service development, telecommunications infrastructure, and human capital development. According to the indicators of the index, since 2016, Uzbekistan's index has increased from 0.54 to 0.67, ranking 87th out of 193 states.

In order to create conditions for citizens to obtain public services in electronic format, Uzbekistan launched a new version of the unified portal for Interactive Public Services in 2017 (unified portal,EPIGU-my.gov.uz), this is a single electronic platform that provides citizens and entrepreneurs with access to public services and necessary information for them. At present, the types of services provided by EPIGU have reached more than 300 in 20 regions.

[4] Source: CERR

[5] Source：GSMA Mobile Connectivity Index

In the future, it is planned to increase the share of public services provided in electronic form to 60% by 2022, to 80% by 2025, and to 50th in the e-government Development Index rating by 2025.

IV. PROBLEMS IN UZBEKISTAN'S DIGITAL ECONOMY

It should be pointed out that the problems faced by Uzbekistan's digital economy development are similar to the general problems faced by developing countries.[7]

One of the main problems is the weak telecommunications infrastructure and communications. The base station density in the Republic remains low (1 base station per 1600 inhabitants) due to low investment in ICT. Serving the ICT needs of 643 inhabitants, in Russia - 235 inhabitants. This has resulted in poor internet and mobile services slowing the growth of the digital economy and widening the digital divide. The average internet speed in Uzbekistan in 2019 was roughly twice as low compared to the CIS average.

Another problem with the introduction of the digital economy in Uzbekistan is the lack of digital skills, which can be a serious obstacle to digital transformation. Uzbekistan, one of the few developing countries, has an absolute adult literacy rate (100% in 2016) compared to other countries with similar levels of GDP per capita. On the other hand, in developing countries, digital literacy levels remain low despite high adult literacy rates. Perhaps this can be explained by the low usage and penetration of ICT in schools. This is also supported by labour market trends - according to a recent survey assessing the skills gap in the labour market in Uzbekistan, 68% of companies surveyed cited the importance of IT and computer skills as one of the key reasons for hiring new candidates.[8]

Digital trade is developing at a slower pace in Uzbekistan due to the country’s weak digital infrastructure and lack of digital skills. For example, the presidential decree of the Republic of Uzbekistan states that the level of online commerce and trade platforms in the republic is insufficient. Although existing payment systems (Click, Payme, M-bank, Upay, Humo, Oson, etc.) allow online payments for mobile communications, internet, government services, taxes, etc., only 46% of account holders or in Receive digital payments in 2018.

Nonetheless, the average payment amount per card through the terminal has increased significantly over the past 13 years – from 207,000 soums to 2.7 million soums. In 2018, the total terminal payment amounted to 53 trillion, and despite the adoption of the Law on Electronic Digital Signatures by the Supreme Council in 2005, which became the basis for legal Internet transactions, the lack of regulation remains a major obstacle to the development of e-commerce in the Republic of Uzbekistan. Currently, a draft amendment and supplement to the Electronic Commerce Law, which introduces improved provisions in the field of electronic commerce, has been published on the website (regal.gov.uz) discussing the draft regulatory law. In 2017, Uzbekistan started the road to an e-government system by developing a public service portal. In 2018, various government agencies provided 127 online services, with 3.2 million applications. However, out of 32 million, the number of users is only 57,700. Starting in 2019, the cost of obtaining government services online is reduced by 10%.

The third problem of the digitization of the economy of the Republic of Uzbekistan is the overestimation of Internet costs, insufficient Internet coverage and low international bandwidth as a result of the monopoly of the telecommunications industry. The market form of the telecommunications industry in developing countries is often oligopoly or even monopoly. In Uzbekistan and other CIS countries, the telecommunications industry is largely confined to one leading company with specific powers and resources.

Uzpak, a subsidiary of state-owned fixed-line operator Uztelecom, was granted exclusive access to Uzbekistan's international gateway infrastructure 15 years ago by the government for national security reasons. After that, carriers and internet service providers were banned from creating their own international infrastructure. Until now, they had to buy an international internet connection from Uztelecom. The limited bandwidth and high prices set by Uztelecom for international communications have limited the growth of the industry as most of the internet content consumed locally is generated abroad. Despite Uztelecom increasing international bandwidth and reducing international prices (in 2009, operators paid $1,510 per Mbit/s for international IP transport, compared to $31 per Mbit/s in mid-2018), Uzbekistan's international connections and National operators resell to their subscribers at the price paid for international communications, resulting in high internet costs relative to average household income.

Uzbekistan has many problems in domestic connectivity, and the high cost of domestic transit and international broadband brings difficulties to the profitability of regional expansion. In principle, there is no restriction and prohibition on ISPs to implement network infrastructure at the local level, but as the construction of regional broadband networks is very expensive, only two operators currently have regional long-distance broadband networks - Uztelecom and East Telecom. The regional network of the Joint Stock Company "Uztelecom" has the widest coverage and competence at the regional and regional level.

The duopoly of long-distance communications resulted in high transportation costs for the intranet. It is most difficult for operators to serve remote and hard-to-reach areas or areas with low population density. Since some ISPs serve in rural areas, they need to use the network infrastructure of Uzonline (uztelecom's retail operator) to provide internet services to end users. Since Uztelecom has the most extensive network,

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most operators provide services through its network infrastructure, and since Uztelecom is an operator, it is required by legislation to provide access to its network, provided there is reserved bandwidth. In practice, this access is criticized because it is provided under opaque conditions. The need for operators to implement repetitive "last mile" infrastructure is not optimal from a resource efficiency perspective as it is very expensive and time consuming. It can also take up to three months just to get a license.

A sound legal environment goes hand in hand with the high penetration of the mobile and broadband markets; limits monopoly or collusive pricing; ensures that market participants and consumers are properly protected; establishes an independent regulator for the sector; and fosters a vibrant competition market.

Significant long-term investments are also required. Experience has shown that, under the right conditions, the ICT sector is particularly suitable for private sector investment. However, the initial cost of implementing broadband infrastructure is high, and the amount of time it takes for the project to generate profitable cash flow requires significant long-term investment. Countries can attract such capital by taking concrete steps to reform and provide an enabling legal environment and a regulatory framework that promotes the effective implementation and use of digital infrastructure.

After analyzing the above issues, we can say that an important step towards the digital economy will be the abolition of the state's monopoly on international gateways, which is planned to be implemented in Uzbekistan in 2020. Liberalization of the telecommunications sector will enable Uzbekistan to provide its citizens with safe and accessible internet services and benefit from the digital economy.

V. PROSPECTS FOR THE DEVELOPMENT OF DIGITAL ECONOMY IN UZBEKISTAN

➢ *Development prospect planning of digital economy*

The government is aware of the problems that hinder the development of the digital economy in the Republic of Uzbekistan, so the government is taking some measures to solve these problems. At present, the development of the digital industry has become one of the most important directions of the country's domestic policy.[9]

In the project addressing the development of the digital economy, the Cabinet of Ministers of the Republic of Uzbekistan identified the following areas of development:

- Identify national and economic institutions, local self-government bodies, programming and electronic implementation of services, based on the necessary information systems and sources;
- Create favorable conditions for attracting foreign investment through the establishment of technology markets and technology parks based on the digital economy, information technology markets, including terms of public-private partnerships;
- Coordinate modern telecommunication infrastructure, develop communication technologies and networks, and introduce modern telecommunication services;
- Development of the digital economy by introducing electronic services in public administration and the economy, developing e-commerce markets and software;
- Development of proposals for the development of the national part of the Internet, organization of digital media content, logistical and economic support;
- Development of "smart systems" for managing urban and regional infrastructure, transport logistics, security and smart cities;
- Improve the system for training qualified personnel.

Furthermore, the Digital Trust Fund was created for the development of the digital economy in the country. Refers to the development of the most promising and strategically important projects for the development of the digital economy, as well as the introduction of blockchain technology, education and training[10]. Before 2030, it is planned to implement measures to develop the concept of "Digital Uzbekistan".[11] This concept defines the main lines of the national strategy "Digital Uzbekistan-2030" and its development goals, as well as its priority areas and implementation mechanisms [Table 6].

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Table 6. Target indicators of the "Digital Uzbekistan-2030" Strategy

№	Indicator name	Unit of measure	Current status	2022	2025	2030
1	Length of optical fiber communication lines in the Republic of Uzbekistan	thousand kilometers	41	70	120	250
2	The level of high-speed Internet coverage in the republic	percentage	67	74	85	100
3	The level of availability of social facilities for high-speed Internet.	percentage	45	100	100	100
4	The level of availability of home broadband Internet access.	percentage	67	74	85	100
5	Use broadband mobile networks to provide the level of settlements	percentage	78	100	100	100
6	Indicators of the effectiveness of e-government development in the international rating of the "E-Government Development Index"	Score (between 0-1)	0,66	0,70	0,75	0,86
7	The share of e-government services provided through the Unified interactive portal for public services relative to the public services provided by the public service center	percentage	34	60	70	90
8	Compared with e-government services on a single public service interactive portal, the share of e-government services that can be received through mobile devices	percentage	5	30	42	60
9	Share of transaction services provided through a unified interactive portal for public services	percentage	25	45	60	75
10	Share of large enterprise entities that have implemented enterprise resource management systems (ERP)	percentage	20	40	65	100
11	Number of users of online banking services (legal entities and individuals)	million units	10	15	17	20
12	The number of start-up projects included in the Incubation and Acceleration plan of the software and information technology park	indivual	50	250	700	2 300
13	Admission quota for talent training in the field of information technology in higher and secondary vocational education institutions	thousand	7	12	15	20

In the near future, the goal is to double the share of digital services in the country's GDP.[12]

Over the next two years, it plans to attract around $2.5 billion for digital infrastructure development. There are plans to launch three large new data centers in the cities of Tashkent (expanded by 5 PB to 10 PB), Bukhara and Kokand (by 50 PB each), and further expand the fixed telecommunication network and the modern mobile communication network. Therefore, households in every settlement can access the Internet at a speed of at least 10 Mbit/s.

Combined with the experience of fighting the epidemic in 2021, it is planned to expand digitalization in the field of health care, complete the introduction of regional electronic polyclinics and telemedicine systems. The digital transformation of the banking industry will continue, including automated management systems and financial technology. In terms of agricultural digitalization, it will attract more than 600 million US dollars to introduce modern agricultural technologies and innovative solutions.

- *The development of human capital and the formation of digital skills.*

With the development of digital infrastructure, a key factor for the success of the digitalization process is the availability of a sufficient number of highly qualified personnel and a flexible training system with the corresponding capabilities to develop and implement digital technologies. Digitization has changed the labor market to a great extent. As information technology spreads across all areas of life, digital skills are becoming a key requirement for employers. This will lead to a massive shift in the need for specialists, as many processes that were not affected by previous phases of digital technology implementation can be automated in the near future. Even now, the development of technology, the digital transformation of countries and businesses, and the increasing competition for jobs have led employees to change their professional activities many times

in their lives, acquiring new competencies and skills. To keep up with the demands of the labor market, a person must acquire new knowledge faster than before. The concept of a profession is shifting, as the set of competencies that an employee with training in a particular profession or specialty should possess is no longer fixed, changing as new technologies develop and their application across industries. There is a need to review training and retrofit approaches to educational models. Key challenges facing education today include creating educational content that meets the demands of a dynamically changing labor market and human needs, and reducing costs through the use of technology. The most pressing tasks facing education systems are continuous or lifelong learning, distance learning, blended learning (learning using all possible channels of communication), project-based learning, "self-learning" organizations, etc.

It should be noted that the state is currently not the only provider of digital skills training. Employers and companies at the national and regional levels have a corresponding role in developing skills in digital technologies and are equally interested in fundamentally changing the status quo in education and professional development. An important aspect of the digital skills development of the population is reducing the "digital gap" in terms of region, age and gender.

Currently, there are more than 120 universities in Uzbekistan, each of which is introducing digital learning modules and opening incubation centers. Through the information technology education development plan, it aims to create a new vertical education system. In 2020, the Million Programmer Program will be launched, providing free programming skills training opportunities and training more than 130,000 audiences.[13]

All over the country, training IT centers are being established, of which more than 100 have been opened and more than 85,000 students have been trained. In 2021, 200 more such centers are planned to be opened.

For IT companies, until 2028, benefits are provided according to extraterritorial principles (benefits for IT parks: 7.5% income tax, 0% corporate and social taxes, 0% customs duties on imported goods and services).

VI. PROPOSALS FOR COOPERATION IN THE DIGITAL ECONOMY BETWEEN CHINA AND UZBEKISTAN

- *China dominates Uzbekistan's digital infrastructure*

The interaction between the People's Republic of China and the Republic of Uzbekistan in the field of digitalization has broad prospects. The pandemic has wreaked havoc on the global economy, affecting global production and supply chains. On the other hand, Covid-19 has provided a strong impetus for the digitization of all areas of public life and international trade.[14] High technology, innovation and artificial intelligence are becoming key factors in determining the pace of development, prosperity and prosperity.[16]

When it comes to digitalization, it is important to study foreign experiences. It is worth mentioning China here: after all, this country has huge financial and human resources and claims to be a leader in technology due to its active promotion of modern technology in daily life.

On June 21, 2019, the Ministry of Information Technology and Communication Development of Uzbekistan signed an agreement with CITIC Group and Henan Kstar Group to implement the "Safe City" Uzbekistan project. The project's goal is to take Uzbekistan's surveillance system to a new level with long-term impact. The Chinese company Huawei has become a major player in this project, which plays an indispensable role in promoting "advanced technologies and innovative solutions"!

The agreement involves a $300 million investment from Chinese state-owned investment company CITIC Group. It operates in the field of Photonics Henan Costar Group, which manufactures and supplies optical and electromechanical products such as urban surveillance systems. The company will create a surveillance system for Uzbekistan. In turn, Huawei will integrate monitoring systems, provide analytical support and manage the information in these systems.

The announced investment is part of a $1 billion deal signed by President Shavkat Mirziyoyev during a trip to China in April, where he attended the second Belt and Road Forum.[18] Tashkent signed an agreement with Huawei and CITIC Guoan Information Technology on the development of digital infrastructure in Uzbekistan through "Safe City" and "Smart City" projects. These investments will provide substantial funding for Uzbekistan. When the project is completed, digital infrastructure will be the second largest Chinese investment in Uzbekistan, after the $2 billion China National Oil and Gas Corporation (2012) gas project, which will transport gas between Turkmen and Uzbekistan to China.

The billion-dollar agreement will also cover projects beyond the city's surveillance system, including the development of e-government, information technology and telemedicine. Huawei and Tashkent also agreed to explore the possibility of introducing 5G technology in partnership with Uzbekistan's two state-owned phone companies.

Huge Chinese investment in Uzbekistan's digital infrastructure has long-term implications on multiple levels. Enhanced surveillance and video surveillance technology will expand the capabilities of law enforcement agencies and help control the level of police response to various incidents. The system being created will help increase accountability for security services and enhance the safety of the population. Uzbekistan is considered an important market for Huawei in Central Asia, and if successful, the project will be a testament to the company's capabilities.

➢ *Huawei plans to build a solid ICT foundation for Uzbekistan's digital economy*

Huawei has many years of experience in operating Uzbekistan in Uzbekistan, and is committed to building basic ICT infrastructure: helping operators create high-quality networks, providing enterprises with advanced digital methods, and seeking mutually beneficial cooperation with local partners to achieve contribute to this goal. Development of the digital economy in Uzbekistan.

In April 2019, Uzbekistan President Shavkat Mirziyoyev visited Huawei's research center in Beijing. Accompanied by Huawei founder and CEO Ren Zhengfei, the president gave a speech on Huawei's technological progress in ICT and its applications: 5G technology, "safe city", "smart city", cloud technology, terminal operation.

China's experience shows that basic ICT infrastructure is essential for the rapid development of the digital economy. If we talk about the fact that 4G networks have changed lives, then 5G will change society. High-speed data transfer will allow you to enjoy your digital life: HD video and virtual reality. Higher power will make it possible to connect a large number of devices, create the Internet of Things, and activate smart cities and intelligent transportation systems. Low latency will allow telemedicine and self-driving cars to function properly.

High-quality 4G networks are the foundation of 5G development. In order to deepen the understanding of 5G network, China Unicom, T-Mobile, Verizon, Vodafone, Telenor and other operators have alternately accelerated the transition from 2/3G network to 4G, and 16 operators plan to shut down 2G network in 2025. Uzbekistan now needs to lay the groundwork and build a high-quality 5G-enabled 4G network. Huawei is actively involved in the planning and development of Uzbekistan's 5G network infrastructure.

Open collaboration is key to achieving the Sustainable Development Goals. Therefore, Huawei is firmly committed to mutually beneficial cooperation, and actively maintains contact with customers, competent authorities and industry organizations to jointly create a more tolerant, flexible, and advanced industrial ecology.

As an intermediary and participant in Uzbekistan's digital economy, Huawei expressed its willingness to work with Uzbekistan to build high-quality basic ICT infrastructure, stimulate the digital transformation of operators and various industries, and develop vigorously. In this regard, the company made proposals for the digitization of Uzbekistan:

Phase 1 Laying the groundwork (2020):
• Education: distance learning, digital library
• Transport: digital railway
• Public Safety: Broadband, Smart Video Coverage
• Cloud Technology: (Video Cloud)
• National Broadband: (Backbone, Metro, Access, LTE)

Phase 2 Expansion (2021-2023):
• e-health: e-hospital, telemedicine
• Public Administration: E-Government, Smart Taxation
• Public Safety: Special Services Big Data
• Big data platform: (collection, storage, analysis, data exchange)
• Data Center: (National Data Center, Operator Data Center)

Phase 3 Deep Integration (2024-2026):
• Other industries: Smart Manufacturing
• Energy: Smart Management for the Oil and Gas Industry
• Internet of Things: Electricity, Water, Transportation

In general, taking into account the above factors, the interaction between our countries in the field of digitization has great prospects. Uzbekistan is ready to cooperate closely with China in this regard on a bilateral basis and in the form of multilateral mechanisms including the Shanghai Cooperation Organization and "Central Asia-China". To date, common priority areas have been identified, and their implementation at the current stage requires enhanced practical interaction between the relevant ministries and departments of the two countries.

VII. CONCLUSIONS AND RECOMMENDATIONS

At the end of this article, we would like to point out that foreign experience shows that the digital economy develops synchronously in multiple fields and cannot be built by a few enterprises, even if they have special power and resources. Therefore, the main body in the digital economy should be played by private enterprises with strong entrepreneurial spirit and innovation consciousness, and the state should create infrastructure and conditions for private enterprises.

We believe that countries can stimulate the digitization of economic processes by:

- Acting as an organizer of a common technology platform that unites various organizations, or as a regulator to guide the development of requirements for the use of certain technological solutions, whose widespread distribution is not synchronized with the process of introducing standard technological solutions across the economy is not possible;
- Continuously improve the existing regulatory framework for the development of the digital economy, take into account the opinions of users, developers and service providers in a dialogue manner, and encounter new types of legal objects and subjects of information in practice. a relationship that requires legal registration;
- Stimulate and encourage the introduction of information systems, electronic services in organizations, and introduce tax incentives for the development of digital technologies and cross-border online commerce;
- Train the required number of IT specialists and programmers themselves, as well as qualified users capable of working with constantly updated digital technologies;

- Ensure security from cyber threats and assure all entities involved in the digital economy in some way that the data they collect, store and use is safe from possible criminal conduct;
- Expand international cooperation to create attractive conditions for the inflow and introduction of advanced information technologies in all areas of economic activity.

According to the theory of K-cycles (Kondratyev), mankind has passed the fifth technological stage characterized by the development of electronics, robotics, computing, lasers and communication technologies and is approaching the sixth stage, which will be based on NBIC - fusion or nano, biological , the unification and synergistic enhancement of technological achievements of information and cognition (cognitive). In this regard, in order to keep pace with technological developments, one must not only be a consumer of innovative products produced in other countries, but also have to create these products or participate in the international chains of cooperation in their production.

At the same time, the development of domestic ICT, including affordable high-speed internet, should keep pace with the interests of businesses to introduce digital technologies into various production processes to improve labor productivity, reduce costs, as well as increase output and profits.

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