

## **Prospects for the Use of Digital Technologies in Public Services in Russia**

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### **Abstract**

Nowadays there is a widespread and gradual introduction of information and communication technologies (ICT) into the system of public administration in the Russian Federation. They are significantly changing all social relations. The formation of a new, information society is taking place. On the one hand, the use of ICT can achieve significant savings in time when receiving a public service from the authorities; on the other hand, the culture of receiving electronic public services by both business sector organizations and the population has not been formed yet. A significant problem is the formation of the regulatory framework and infrastructure through which the provision of electronic public services is carried out. All this is a serious systemic problem that does not contribute to the dynamic formation of the e-government system in Russia.

**Keywords:** Information and communication technologies, Public services, E-government, Software, Regulatory framework.

### **Introduction**

Information and communication technologies (ICT) is understood as a concept describing various devices, methods, mechanisms, algorithms for information processing. The main component of ICT is a computer with appropriate software. They are necessary to save time, money, speed up data processing, increase the validity of management decisions. ICTs are universal and are becoming increasingly simple and easy to use for people and businesses. Their main feature is that they help people collect and process information [6-11]. The use of ICT is of great importance for increasing the efficiency and effectiveness of the work of civil servants. Therefore, the informatization of public services is one of the most important tasks for both the state and society now. Government agencies must use the latest information and communication technologies that contribute to an objective assessment of the processes and phenomena occurring in society [12-16]. This is also necessary for taking adequate measures,

first of all on the emerging socio-economic relations. Information and communication technologies help public authorities to interact closely with the population, organizations, business entities, the benefit for citizens and legal entities is that they get access to various documents and necessary information. Interaction of state bodies with the population, legal entities with the use of ICT is called “e-government”.

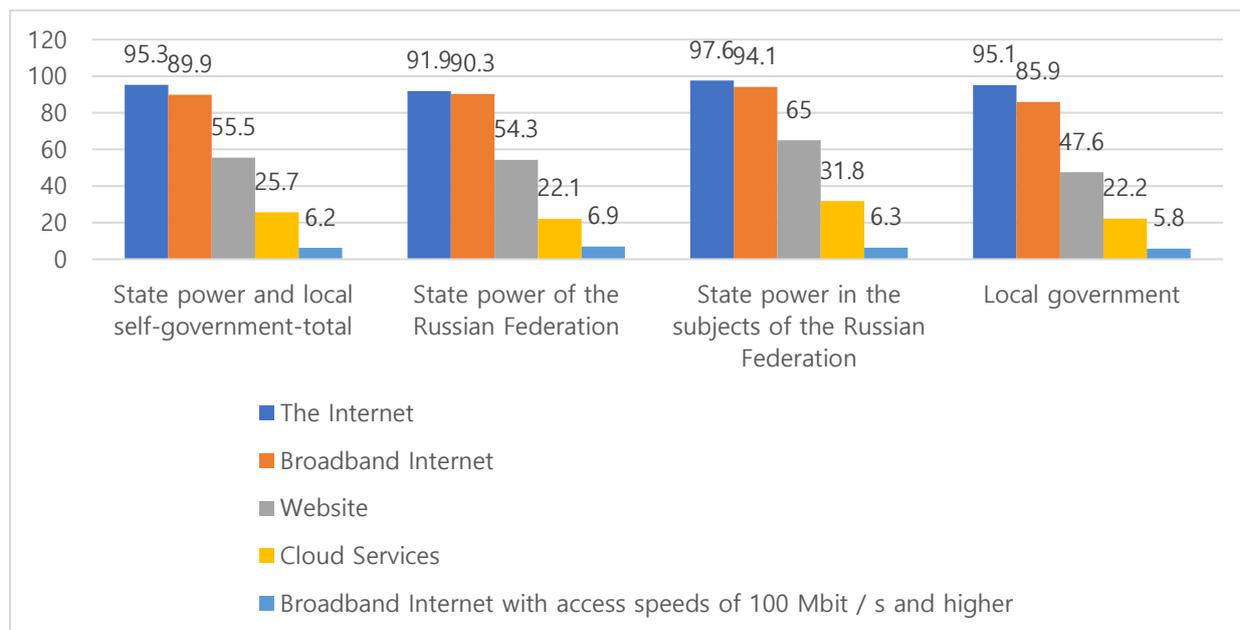
## Materials And Methods

In the work we used system, comparative, monographic, and other methods of research. Published works of universities, statistical materials at the federal and regional levels were used as materials.

## Results

E-government is a convenient and effective way to connect citizens with the state. The implementation of e-government increases the efficiency and effectiveness of government administration, reduces the risk of corruption, reduces bureaucratic barriers, and significantly reduces public expenditures [17-20].

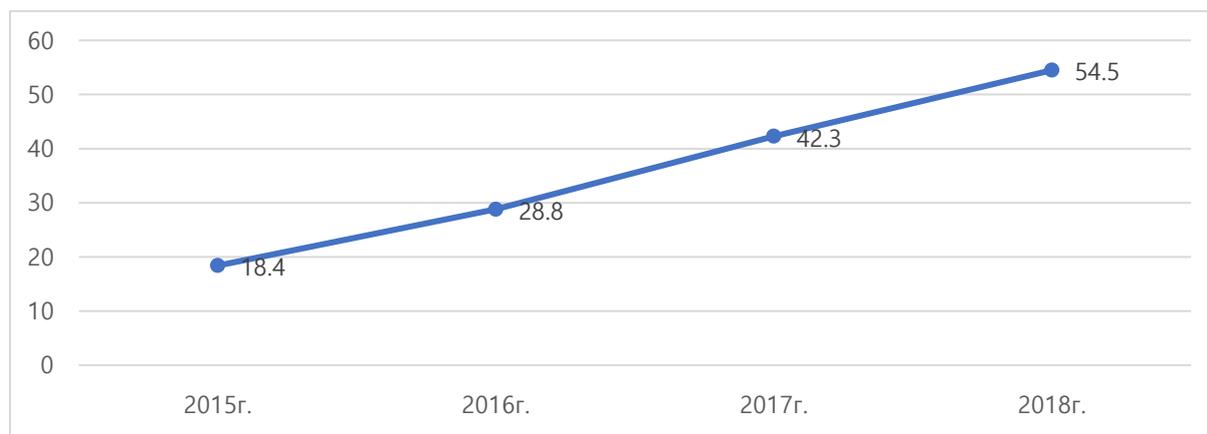
At the same time, the use of digital technologies in public services is largely reduced to the use of the Internet and broadband Internet. 91.9% of the total number of public authorities use the Internet, in the subjects of the Russian Federation this figure is 97.6%, and in local government 95.1% (Figure 1). Only 55.5% of public authorities use websites. For the average Internet user, this makes it difficult to find the necessary information about the functions of agencies and the services they provide. Ultimately, this has a negative impact on the efficiency of the use of budgetary funds allocated for the maintenance of the authorities. For various reasons, Russian government bodies use cloud services very little. Thus, 22.1% of the total number of Russian government bodies use this service. In Russian subjects, 31.8% of the authorities use cloud technology. And only 22.2% of local governments use cloud technology.



**Figure 1.** The use of information and communication technologies in the authorities: 2018 (as a percentage of the total number of state and local authorities) [5].

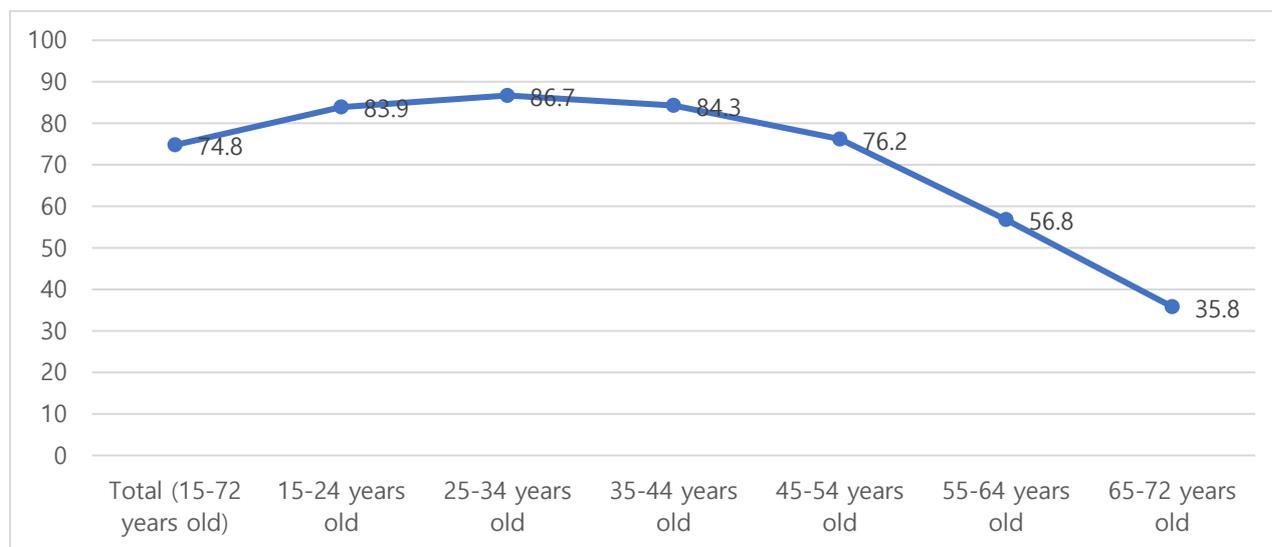
According to the Ministry of Communications and Mass Media of the Russian Federation, about 2 thousand types of public services can be received via the Internet. At the same time, the current e-government system has already provided access to 340 of the most demanded public services.

The share of the population receiving state and municipal services in electronic form increases every year. In 2015, only 18.4% of the population aged 15 to 72 received state and municipal services in electronic form. In 2016 the share of the population receiving such services increased by 10.4%, and by 2018 it doubled compared to 2016 and amounted to 54.5%. The reason for such growth is, among other things, the time savings associated with the receiving the state and municipal services by citizens of the Russian Federation.

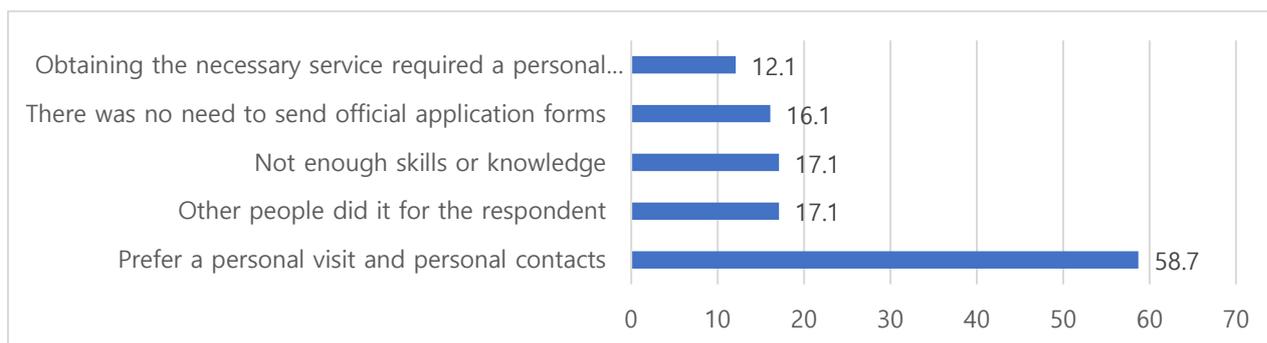


**Figure 2.** Receiving the state and municipal services in electronic form (as a percentage of the total population aged 15-72 years) [5].

The rarest recipients of state and municipal services are Russian citizens aged 55 to 72 (figure 3). This is largely due to the traditionally established habit of communicating in person with representatives of the authorities - 58.3% (figure 4), and not at all to the lack of skills in using information systems - 17.1%, as well as the difficulty of working with websites providing state and municipal services to the population.



**Figure 3.** Receiving the state and municipal services in electronic form by age groups: 2018 [5].



**Figure 4.** Reasons for the population's refusal to receive state and municipal services in electronic form: 2018 (as a percentage of the population aged 15-72 years who have not used the Internet to obtain state and municipal services in the last 12 months) [5].

16.1% of respondents did not need to send official requests to the authorities, and 12.1% of respondents had to come personally to provide a public service and to provide the necessary paper forms.

Undoubtedly, in 2019-2021, the share of the population who used the services of public authorities will increase due to the measures taken to restrain the pandemic. However, the very conceptual approaches to the provision of public services, as well as the formation of e-government in the Russian Federation deserve close attention and criticism from the public. It should be understood that this is an objective process, aimed primarily at creating a more comfortable environment for citizens of the Russian Federation, who will be provided with public and municipal services.

State authorities of the Russian Federation pay considerable attention to the provision of services for business. 69.4% of business sector organizations interact with the authorities through online communication to send completed forms of documents, 68.9% to download official forms, 60.2% to obtain information from the websites of state bodies, and 26.0% to participate in public procurement (Table 1). The share of organizations interacting with the authorities significantly differs both by types of services provided and by sectors of the economy. The most demanded service provided by the authorities is the sending of completed forms. This service is used from 64.5 to 80.6% of organizations in the entrepreneurial sector. The downloading of official forms is on second place. This service is used from 63.8 to 79.3% of organizations. Getting information from the sites of public authorities is on the third place. This service is used from 55.7 to 67.8% of organizations. The organization of services for participation in public procurement is on the fourth place. This service is used from 14.5% to 35.5% of organizations of the business sector.

The provision of public services in electronic form in Russia is only gaining momentum. According to the subindex of e-government development in 2018, Russia was 32<sup>nd</sup> in the world out of 192. First place went to Denmark, second to Australia, third to the Republic of Korea, fourth to Great Britain, and fifth to Sweden. The U.S. was on the 11<sup>th</sup> place, Germany was 12<sup>th</sup>, and China was 65<sup>th</sup>.

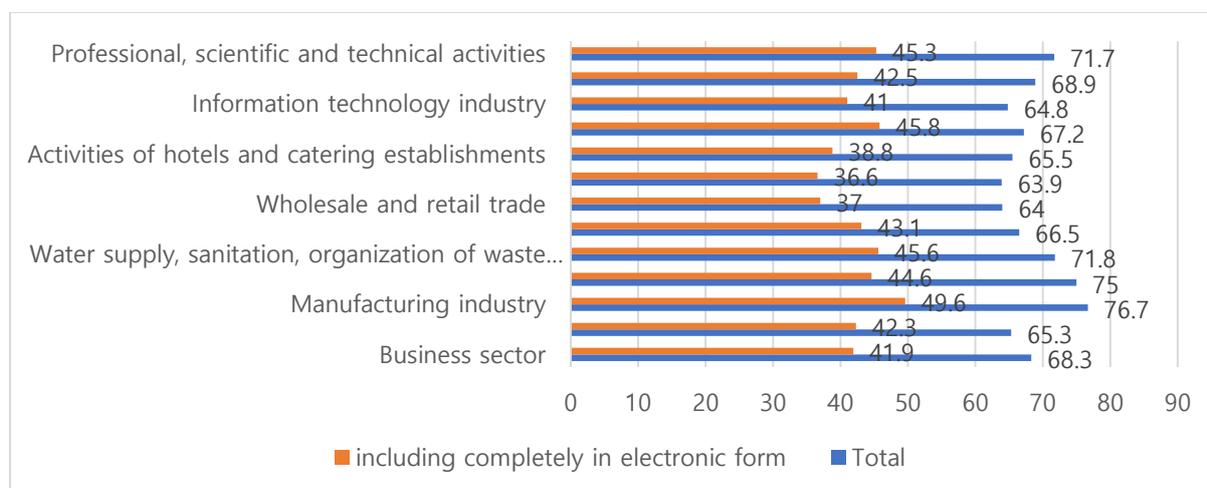
According to the available data, the share of public services provided to business sector organizations in the Russian Federation differs depending on the type of activity and does not exceed 49.6% in the manufacturing industry (Figure 5). This indicates that the process of formation of the system of rendering public services by the authorities, formation of e-

government, and creation of a culture of using electronic public services is gaining momentum.

**Table 1** Online interaction of business with the authorities: 2018 (as a percentage of the total number of organizations of the business sector).

	<b>Sending Completed Forms</b>	<b>Downloading Official Forms</b>	<b>Obtaining Information from the State Bodies Websites</b>	<b>Participation in Public Procurement</b>
Business sector	69.4	68.9	60.2	26.0
Mining operations	67.2	66.0	57.7	13.1
Manufacturing industry	80.6	79.3	66.5	24.7
Energy supply	71.1	72.0	67.8	35.5
Water supply, sanitation, organization of waste collection and disposal	74.3	74.1	61.5	44.6
Construction	67.1	66.7	54.8	28.1
Wholesale and retail trade	64.6	63.8	57.5	14.5
Transportation and storage	64.5	65.4	55.7	24.1
Activities of hotels and catering establishments	66.8	65.7	56.3	32.8
Telecommunications	68.9	69.3	63.0	40.3
Information technology industry	70.1	71.2	65.4	26.4
Real estate transactions	69.3	68.5	58.3	28.4
Professional, scientific and technical activities	73.5	73.2	62.8	34.3

It is necessary to consider how citizens feel about e-government and the implementation of its capabilities in the Russian Federation. To answer this question, let us turn to the results of the First All-Russian sociological survey on the need to develop e-government in the country, conducted in February 2017 by RCSPPO (All-Russian Center for the Study of Public Opinion). A total of 3,200 people from 146 settlements in 42 regions of the Russian Federation took part in the survey.



**Figure 5.** Receiving the public services by organizations in electronic form: 2018 (as a percentage of the total number of organizations in the business sector) [5].

The survey results show:

1. The most in-demand spheres in which e-government must necessarily be present are: housing and utilities (71% of those surveyed), health care (58%), social security for citizens (50%), security and law enforcement issues (46%), employment (42%), education (42%) and 6% of respondents said that e-government does not solve problems.
2. 51% of Russians have heard the term “e-government” for the first time, but 36% of survey participants support its idea.
3. The strongest side of electronic government services is considered by survey participants to be the absence of queues (41%), reduction of time to obtain public services (28%) and lack of contact with officials (10%). The survey indicates that there were good results during the existence of e-government [2].

Now it is important to increase this dynamic. The survey shows that not all citizens use and not all are aware of the existence of e-government, especially elderly citizens, and to cope with this, it is necessary to popularize e-government and teach the basics of its use to the older generation. Based on all this we can conclude that the development of information and communication technologies is currently becoming the most important factor in improving the quality of life of citizens. Their widespread dissemination and application is qualitatively transforming all spheres of life in our society.

According to the 1993 Constitution, the Russian Federation is a social state whose policy is aimed at creating conditions for a decent life and the free development of man (Article 7).

The status of the state as a social state implies the timely provision of quality educational, medical, cultural, legal and other state and municipal services to the population.

Federal Law No. 210-FZ of July 27, 2010 “On the Organization of the Provision of State (Municipal) Services” defines a public service as an activity for the implementation of the functions of a federal executive body, a state extra-budgetary fund, an executive body of state power of a constituent entity of the Russian Federation, as well as a local self-government body in the exercise of certain state powers transferred by federal laws and laws of constituent entities of the Russian Federation (bodies providing public services), which is carried out at the request of applicants within the limits established by the regulatory legal acts of the Russian Federation and the regulatory legal acts of the subjects of the Russian Federation of the powers of bodies providing public services.

Article 4 of the Federal Law lists the basic principles of providing state and municipal services, among which the following appear to be the most significant within the framework of this work:

transparency of the activities of the bodies that provide public services and the bodies that provide municipal services, as well as organizations involved in the provision of public and municipal services;

accessibility of applying for state and municipal services and the provision of state and municipal services, including for persons with disabilities;

opportunity to receive state and municipal services in electronic form, if it is not prohibited by law, as well as in other forms provided by the legislation of the Russian Federation, at the choice of the applicant.

Implementing the above principles, the provision of state and municipal services in electronic form is carried out using information and telecommunication technologies, including the use of a single portal of state and municipal services and (or) regional portals of state and municipal services, as well as using a universal electronic card, including the implementation of electronic interaction between state bodies, local governments, organizations and applicants within the framework of such provision [1].

Order No. 2516-r of December 25, 2013 of the Government of the Russian Federation approved the Concept for the Development of Mechanisms for Providing State and Municipal Services in Electronic Form.

The measures envisaged by the Concept are aimed at increasing the efficiency of activities for the formation of e-government in the Russian Federation and assumes an increase in the share of citizens who use the mechanism of receiving services in electronic form to 70%, increasing the level of satisfaction of citizens of the Russian Federation to 90% of the quality of services.

In addition, one of the stated goals is to minimize the time and financial costs of citizens associated with obtaining services. An applicant should receive services with minimal time costs, including the cost of preparing documents, registration on portals, training in new technologies, visiting bodies (organizations) that provide services, waiting in a queue, waiting for the result of services, as well as with minimal financial costs, including both the cost of paying state fees and associated unofficial costs (contact to intermediaries, purchase of software, consultation, etc.).

When receiving public services, citizens enter into direct interaction with public authorities and, in turn, assess the efficiency of the entire state apparatus in terms of the quality and accessibility of the received services [3].

Information and telecommunication technologies are one of the most dynamically developing segments of the Russian economy. In 2018, against the background of a 2.7% increase in GDP, the ICT industry demonstrated a high rate of value-added growth (28%). Currently, ICT accounts for about 3.7% of the country's GDP (the share of ICT in the GDP of the most developed countries is currently between 8 and 12%). The ICT industry does not require significant investments in fixed assets. The average age of employees at companies in the industry does not exceed 30 years. In the next 10 years, the information technology industry in Russia is expected to grow rapidly.

The introduction of information technology has a significant impact on labor productivity. Industries that use information technology intensively are growing 1.7 times faster than the average economy. For example, customer service via the Internet allows an average bank to reduce labor costs by 8-9 times compared with traditional service. Information technology significantly reduces the labor intensity of managing traffic, retail, and logistics. Studies show that the maximum growth of gross domestic product per capita in a number of developed countries is due to the introduction of information technology in the economy [2].

In the report of the UN General Assembly of May 16, 2015, access to the information and telecommunications network “Internet” is referred to basic (or essential) human rights, and the restriction of access to citizens under the age of 18 is recognized as a violation of basic human rights. The role of ICT in the system of public administration, the state policy with regard to creating conditions and designating priorities for the development of the Russian IT industry will largely determine its appearance in the future until 2025. The state plays an important role in the development of the information technology industry. According to the World Economic Forum “Global Competitiveness Index 2016-2017” ratings, Russia is moving steadily upwards and ranks 43<sup>rd</sup>. Some countries actively developing information technology are ahead of Russia in a number of specific indicators. For example, Russia ranks 53<sup>rd</sup> in the use of information technology (the United States – 18<sup>th</sup>, Germany – 9<sup>th</sup>, Australia – 23<sup>rd</sup>). In terms of state purchases of high-tech products Russia ranks 68<sup>th</sup> (the USA – 11<sup>th</sup>, Germany – 6<sup>th</sup>, Australia – 63<sup>rd</sup>). In the 2017 International Telecommunication Union (ITU) rating of the use of information and communication technologies, Russia ranked 43<sup>rd</sup> out of 175 countries. For ten years of this rating, Russia has been steadily entering the top 50 countries for the development of ICT systems, steadily moving up from 50 (in 2007) to 43 (in 2017).

Information technology makes it possible to improve the quality of public services. In general, ICT will increase productivity in the economy and more effectively utilize the potential of remote areas. For Russia, it also means the possibility of applying new forms of work organization, including the distribution of tasks between teams and out-of-office work, and enterprise management using enterprise resource planning (ERP) systems, electronic accounting and document management, and decision support systems.

According to the Strategy of IT industry development in the Russian Federation for 2014 - 2020 and for the period until 2025, approved by the Russian Government as of November 1, 2013 № 2036-r, in the accelerated version of its implementation the growth of the Russian IT industry is projected at 130% by 2020 (against the 2012 level), in the basic variant - at 51% by 2020 (against the 2012 level). The most important areas of information and communication technology development are broadband Internet access. In 2017, mobile broadband networks covered 84% of the world’s population and provided Internet access to 47.1% of the world’s population. According to the International Telecommunication Union, 82.2% of U.S. households and 86.6% of Canadian households have broadband access to the Internet.

## **Conclusions And Recommendations**

The Trend Towards The Use Of Electronic Government Services And The Formation Of E-Government Will Have A Significant Impact On The Development Of Icts. The Development Of The Information Technology Sector In Russia In The Field Of Electronic Government Services Takes Place Against The Background Of:

Insufficient Dissemination Of Information And Communication Technologies In The Socio-Economic Sphere And Public Administration;;

Disproportions In The Level Of Availability Of Information Technologies;

Weak Development Of National Production Of Telecommunication, Computer Equipment And Basic Software That Meet Modern World Standards;

Structural And Technological Backwardness Of The Electronic Industry;

Inconsistencies In The System Of Training Specialists In The Field Of ICT With International Standards;

Personnel Shortages;

Insufficient Level Of Training Of Specialists;

Insufficient Number Of World-Class Research In The Field Of Information Technology Being Conducted In The Country;

Historical Lag In Certain Areas;

Insufficient Demand For Information Technology On The Part Of The State;

Insufficient Level Of Coordination Between Public Authorities And Development Institutions On The Development Of Information Technologies.

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