Development Of Digital Clusters In Modern Information Culture

Nina I. Larionova

Abstract: The impact of information culture on social policy is of particular interest. Municipal policy is always implemented through management and social planning, through a system of social programs and social events, which are fixed in the form of plans, decisions, laws and other legal acts. E-democracy, along with e-government, is fundamental for the information-based society. Both e-democracy and e-government are interrelated concepts. We are witnessing the phenomenon when people’s activities are becoming more digitized. The objective of the paper is to reflect on theoretical aspects of the information society and e-government. The essential constituent of the transition to an information society is ensuring guarantees of equal and regulated access to information in public access. This part should be determined by the legislative role of the government.

Index Terms: information-based society, public administration, public services, clusters, IT cluster, technoparks, analysis

1. INTRODUCTION

The IT cluster has quickly become popular among companies that do not have a hard peg to the office. Free environment and developed infrastructure have become attractive factors for companies developing technological projects. And they began to move to technoparks. The conditions were also appreciated by business representatives who began to rent offices and laboratories in technoparks. Thus, a nutritional environment began to take shape in which ideas are exchanged, the use of the capacities of other companies takes place, contracts are concluded and business strategies are worked out. A slightly different approach to the formation of an IT cluster was chosen in China. The Zhongguancun cluster was formed due to the administrative capabilities of the country based on a science campus. But China has managed to effectively use state opportunities, responding to market needs in a timely manner. Thanks to this, there are about 8,000 companies in the Chinese “silicon valley”, half of them in the high-tech industry. In Russia, there are also own clusters, however, they got accustomed in our country under the name of “technoparks”. But the idea of both territories is to create a nutrient medium in which high-tech projects could develop, and companies to commercialize their products. Information technologies have reached the pick in the development, they have become an integral part of our life; we live in the era of digitalization. We are witnessing a transition to an information society with the following characteristics:

- the development and advancing of a global information space with effective communication;
- the development of e-democracy and e-government;
- social networks.

In October 2010, the Government of the Russian Federation adopted the state program “Information Society 2011-2020”. The goal of the program is to improve the quality of life of citizens and the institutional environment for business development. “Information Society” is the first state program approved by the Government within the transition to the program budgeting. The first version of the program was approved by the Government Decree No 1815-r, dated October 20, 2010; a new version of the program was developed due to changes in approach to budgeting and long-term state programs. The state program covers all sectors and spheres of activity; it should increase transparency and manageability, as well as ensure the stability and competitiveness of the economy as a whole.

2. ANALYSIS AND DATA

The solution for the problem of monitoring the effectiveness of the process depends on how timely and adequate state control bodies will react to changes in the external environment and the needs of society [8]. The share of the digital economy in the GDP of developed countries from 2010 to 2016 increased from 4.3% to 5.5%, and in the GDP of developing countries from 3.6% to 4.9%. In the G-20 countries, this figure rose over five years from 4.1% to 5.3%. The world leader in the share of the digital economy in GDP is the United Kingdom - 12.4%. According to a study by analysts of International Data Corporation, published in 2016, total global costs of digital transformation technologies will grow by 16.8% annually and will reach $ 2.1 trillion by 2019. According to forecasts of consulting company Accenture, the use of digital technologies should add in 1.30 $ 1.36 trillion, or 2.3% of GDP in the total GDP of dozens of the world's leading economies. The GDP of developed countries will grow at the expense of the “digital economy” by 1.8%, and the GDP of developing countries - by 3.4%. The set of measures that contribute to the transition to the information society, and the process of transition itself we call digitalization of society. According to the definition of the Law of the Russian Federation No 24-FZ, dated February 20, 1995 “On Information, Digitalization and Protection of Information”, “digitalization is “the organizational socio-economic and scientific process of creating optimal conditions for meeting information needs and realizing the rights of citizens, bodies of state power, local self-government agencies, organizations, public associations on the basis of the formation and use of information resources”. In Russia, the share of the digital economy in GDP is 2.8%, or $ 75 billion (according to BCG). Most - 63 billion US dollars - accounted for the sphere of

- Nina I. LarionovaDoctor of Economic Sciences, Professor of the Department of Management and Law, Volga State University of Technology, Yoshkar-Ola, Russia E-mail - sangarmara@mail.ru
consumption (online commerce, services, online search and offline purchases). If in 2010 the share of online commerce in all sales was 1.7% (12 billion US dollars), then in 2016 it increased to 3.2% (43 billion US dollars). IT technology exports amounted to $7 billion. The intersectoral effect of digitalization has increased 5.5 times since 2010: from 5 to 27.7 trillion rubles. This effect was obtained from the introduction of electronic trading platforms, the growth of bank card transactions, the increase in ROPO segments and online advertising. At the same time, Russia is 5–8 years behind the leading countries of digitalization. If the current growth rate of the digital economy of Russia remains at the same level, then by 2020, due to the high speed of global changes and innovations, this gap will be 15–20 years. At the same time, in recent years, the state of infrastructure in Russia has improved, primarily in terms of the penetration of wired Internet (70.4% of the total population). There are also major advances in the availability of broadband and mobile Internet, in the distribution of smartphones. Today, the digital economy is named one of the priorities of the Strategy of Russia’s scientific and technological development. Full-fledged consistent digitalization of the Russian economy will become a platform for a qualitative change in its structure and long-term opportunities. Despite the fact that the law became invalid in 2006, due to the adoption of a new law regulating relations in the info sphere, the definition of digitalization is still relevant. The same law gives the definition for such term as information resources: information resources are “individual documents and individual document arrays, documents and arrays of documents in information systems (libraries, archives, funds, data banks, other information systems)”. In a broader sense, we can regard information, both recorded in a tangible medium, and reflected in public and individual consciousness, as information resources [1]. The process of digitalization of the society is global and it aims at formation of a single information space (info sphere). This process is accompanied by an avalanche-like accumulation of information resources. It is based on the use of new information technologies, and first of all on telecommunications. Digitalization has emerged because of a fundamental change in the role of information; it directly and indirectly affects the development of science, the productive forces and the social sphere of society [2]. The following drivers are fundamental in characterizing the process of digitalization of society:

- global nature and dimension;
- continuity;
- high rates;
- decentralization, objective independence and openness;
- complexity;
- unevenness.

The globalization of the process of digitalization becomes evident in the territorial all-embracing and involvement of the entire population of the developed countries. The dimension of this process is characterized by the introduction of new information technologies in all types of human life. Digitalization plays an integrative, creative role and potentially contributes to the creation of a single information space on a planetary scale [5]. Despite the new system-forming quality generated by the globalization and scale of digitalization, its development is evolutionary in character and relies on the previously achieved level, stipulated by the previous rates of computerization, accumulated information resources, human resources, etc. Despite the inertia, this continuity ensures the effective use of the acquired experience. The process of digitalization, if we evaluate the global trend, has a high rate of development. The global character of the digitalization process makes it objectively independent and open, which imposes responsibility on the state administration bodies as well as other public structures. Centralized management of this process is impossible in a democratic society. However, a carefully adjusted state policy is required for the optimal use of the enormous material resources necessary for the development of digitalization [3]. Decentralization of the development of digitalization excludes purely directive attempts to regulate it, but it encourages the market levers for its stimulation. The openness of this process should allow for using for the needs of digitalization the existing information infrastructure in the developed areas of application of information technologies (public administration, military defense, banking and financial spheres, as well as various federal, departmental and regional information systems, etc.). The problems of digitalization of education are multidimensional and ambiguous in view of their complexity. Assessments of these issues should take into account their impact on public and personal consciousness, which is directly related to national and information security. The development and increase of the level of digitalization is becoming the national priority, which should be adequately reflected in the state policy of the Russian Federation [4]. The current stage of digitalization of the society is associated with the widespread introduction of personal computers, including mobile, compact means of replication and storage of information, the widespread use of telecommunications, mobile communications and the Internet, the development of social networks. Each person is given the opportunity to switch to a fundamentally new technology of individual work, to access a whole range of different information resources. Personal computers and telecommunications shape the technical and technological basis of the information society, the gradual transition to which the most developed countries began in the early 1990s [6]. The standard of living achieved at the previous stages of the development of society should allow the population to purchase the appropriate means of information and communication technologies. Therefore, it is the standard of living of the population that affects the uneven transition to the information society in different countries. Mass adoption of new technologies requires a certain level of information culture of all members of society. The information culture is a set of qualities, characterizing the abilities and needs to employ accessible information opportunities for a systematic and conscious search for new knowledge, its interpretation, dissemination and the use in professional life as well as for self-development, taking into account the level of development of information and communication technologies and requirements of information security, ensuring the effective and safe use of information resources for the benefit of society and an individual. The government should take a more active position in solving the problem of providing the necessary level of information culture. It should organize and trigger informational training of end users, model an additional education system, and promptly assist the population in learning to use new technologies [7]. An important component of the transition to the information society is a guarantee for equal and standardized public access to information. This part should be determined by the legislative role of the government [5]. The level of commercialization of Russian technology...
parks is only 5%. However, here they are engaged in the
creation of navigation instruments, laser gyroscopes, and
lasers of various types, which are supplied to India, China, 
Israel, and Australia. Residents of IT-technology parks create
products for intelligent information processing and linguistics.
All this is achieved largely due to the fact that most start-ups
are based in technology parks. This is beneficial for several
reasons: In a technopark, you can find companies of a similar
sphere, thereby making the development of an idea a more
productive process. It is easy to find like-minded people or
narrow specialists, without which it is indispensable
manager. Many people find it difficult to keep pace with the rapid
development of technology, and the Internet; therefore, it will be
much easier to make their choice in favor of a personal visit, in
order to solve the issues that bother a person. On the second
place of the rating of refusals from using electronic portals are
people who do not have to send official application forms. It
happens that a person simply does not need to do this or even
does not have to deal with it. The third place of the rating take
people who do not have enough skills to handle with the portals
of state and municipal services. Sometimes this category includes
elderly people, since in most cases it is rather difficult for them to
learn how to use the Internet services. However, along with such
people there are also people of similar age who are self-
developing in the field of Internet technologies and use both
electronic portals and many other websites. Clusters open the
way to venture investors who are guided by the specifics of a
particular project. For startups open business incubators. You can
take advantage of the preferential conditions that are provided for
innovative teams. This also applies to preferential rentals, and a
reduced tax, and a set of necessary services. Technoparks today
is a territory that is open to the development of business, and
hence the economy of the country as a whole. While new
technology parks are being created, jobs will be opened in
various fields.

Figure axis labels are often a source of confusion.
A prerequisite for the digitalization of economic sectors is the
achievement of a high level of informatization and automation.
On this basis, the regions, in addition to programs and projects
in the field of the digital economy, also indicated programs and
projects in the field of developing information infrastructure
and introducing automated information systems. Based on the
results of the survey conducted from April 30, 2019 to May 17,
2019, responses were received from 79 subjects of the
Russian Federation:

- 34 regions, a regional digitalization program was
developed or is under development;
- 45 regions participating in the survey reported that
there was no regional digitalization program and
the development process had not begun.

Most of the regional projects in the field of the digital economy
are being implemented in areas similar to the federal projects
of the national program "Digital Economy":

- information security
- information infrastructure; digital technologies;
- regulatory regulation of the digital environment;
- personnel for the digital economy;
- digital government.

3 CONCLUSION
The demand for communication services is annually growing. The
number of mobile devices is increasing; one person can have
from one to three mobile phones, each of which has at least a
mobile connection. The population seeks not only to use
telephones, but also to use them in order to get this or that state
service. Modern gadgets make it easy to do so, and an Internet
service provider helps users by offering high-speed connection.
Russia has adopted a number of federal programs aiming at the
development of digitalization and information society. Thus,
the government program of the Russian Federation "Information
Society (2011-2020)" was adopted. The preference for a personal
visit remains the most problematic area in using the portals of
state and municipal services. Most people are used to visiting
such organizations, and to resolving their issues with the

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