

# A new model for the development of the Russian economy in conditions of digital transformation

## El modelo nuevo del desarrollo de la economía rusa en las condiciones de la transformación digital

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### Abstract

Based on a study of the theoretical and methodological foundations of the digital transformation of the economies of developed countries, it is concluded that it is necessary to develop a new model for the Russian economy development. Its essence is the effective implementation of foreign and domestic digital technologies capable of fundamentally changing the usual business models. It will allow Russia launch a large-scale systemic program for the development of the economy of a new technological generation, the so-called digital economy.

**key words:** digital transformation, digital economy.

### Resumen

Sobre la base del estudio de los fundamentos teóricos y metodológicos de la transformación digital de las economías de los países desarrollados, se llega a la conclusión de que es necesario desarrollar un modelo nuevo del desarrollo de la economía rusa, cuya esencia es la introducción efectiva de tecnologías digitales extranjeras y nacionales que sean capaces de cambiar fundamentalmente los modelos comerciales habituales, lo que permitirá a Rusia lanzar un programa sistémico a gran escala para el desarrollo de la economía de una nueva generación tecnológica, la llamada economía digital.

**Palabras clave:** transformación digital, economía digital.

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## 1. Introduction

The world is being constantly and comprehensively updated today. It is being updated primarily in technical terms due to digital technologies (DT). Therefore the world is becoming more and more technical.. The relevance of the problems associated with the introduction of DT and formation of the digital economy on their basis,

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attracted the natural interest of scientists to them. We can say that digital technologies are the new oil now: their value just grows over time. It's time to attract business partners (including those involved in finance, HR, engineering and product development strategies) to create a new model of the Russian economic development. Most studies in the field of digital economy (DE) describe the analysis of the problems of digital transformation of the economy, the establishment of new forms of government and the reorganization of forms of joint activities of business entities. Nowadays, more and more works identify the national specifics of business in the DE context in connection with the modification of basic production relations (property relations, as well as relations that arise between people in the process of production, exchange, distribution and consumption of various material and spiritual goods) in the digital economic environment. Undoubtedly, the study of these problems will make it possible to substantiate basic essential characteristics of the modern digital economic transformation, to model and predict its further development, as well as to determine social parameters of this development.

Integrated digital technologies embedded in the reproduction process enable companies to achieve greater benefits at lower cost, identify and analyze valuable information, plan strategies, predict results and collaborate as part of common experience. When we talk about digital transformation, it is not about a digit as such, but about new technologies that transform the economy as a result of using a digital representation of information. Digital transformation requires changes in people, machines and business processes, with all the ensuing consequences. It also "requires constant monitoring and intervention of the management". (Davenport Thomas, 2019)

Digital information becomes the source material for making various strategic decisions, expanding international economic relations and attracting foreign capital, improving management efficiency at both macro, meso and micro level and, ultimately, ensuring openness of the economy through the growth of an integrated information space. Namely, in this regard, the problem of digital transformation of the real economy arises, which covers the entire system of economic relations, i.e. a network of interconnected economic activities. "Due to the fact that digital objects can be copied many times, it is good to make a digital image; this can be implemented across the country, groups of countries and the entire planet". (Samarin, 2019)

If there is a gap (turbulence) between the phases of reproduction, then digital technologies are able to eliminate it, since they can be used to quickly and competently make accurate decisions in a changing environment, both in the internal and external business environment.

However, the digital transformation has not yet affected the lives of most of the world's population. Only about 15 percent of the world's inhabitants can afford to pay for broadband Internet access.

Experts in the artificial intelligence (AI) promise to provide the machine with the ability to think analytically applying achievements in the field of computer science, robotics and mathematics. Although so far scientists have not been able to fully implement the potential of artificial intelligence, this technology can have a significant impact on human life in the coming years. In the near future, advances in the AI will allow scientists to travel far beyond what we have now and to explore more universes outside our solar system. Today, NASA is already using unmanned shuttles to study distant galaxies, and it will take years for a human to reach them. Unmanned vehicles also allow researchers to study and photograph Mars, since its adverse conditions make it impossible for a human to stay there. These smart vehicles can easily find obstacles and safe ways to get around them. AI technology will also help scientists respond more quickly to emergency situations during manned flights. For example, it takes about 11 minutes for a radio message from Mars to reach Earth. Therefore, instead of waiting for a consultation with scientists from the earth, astronauts will work with on-board software to identify and resolve the problem.

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## 2. Methodology

### 2.1. Digital Transformation in the Context of Managerial Changes in the Economy

Digital transformation is the development and implementation of new business models, as well as the optimization of operational activities through the introduction of digital technologies for managing the company and production processes based on data. Advanced technologies such as advanced business analytics, process automation and robotics, artificial intelligence, cloud technologies and "smart" control and management systems are used to digitally transform individual areas or the entire business. With the digital transformation of the economy, "big data" is becoming a form of capital. The formation, accumulation and use of this kind of capital require close cooperation, or the so-called collaboration of state and business, state and civil society, and business and civil society. "The better developed the collaboration system that forms the network environment, the higher the innovative potential of the system and the better its competitive position." (Nosova, et al., (2018) With successful cooperation in the field of digital transformation, a unique network effect of innovative synergy (in-line innovations) arises which causes:

- continuous productivity growth;
- continuous creation of a new product or technology (by complementary combining assets in various combinations);
- dynamic stability in conditions of uncertainty (self-adaptation to external changes);
- collaborative governance as a new way of consensus of business entities;
- avoiding technological "traps" (innovation lock-ins): every third player adjusts the trajectories of the other two, directing them towards continuous updates.

It is important to keep in mind that in conditions of the digital transformation, those countries and economic entities that both have access to big data, and their effective processing technologies, get economic advantages. Qualitative growth of the economy is possible with the availability of technologies that make it possible to accurately assess the current state of markets and industries, as well as effectively forecast their development and respond quickly to changes in the national and world markets. In particular, the following questions must be answered in a timely manner:

1. What will be the next change?
2. Who will win, who will lose, who will pay?
3. How will the flow of changes change itself?

At the level of industrial enterprises and at the state level, the main management principles are the following:

- receiving data in real time;
- managing economic processes based on automated analysis of big data;
- high speed of decision making, changing rules in real time – instant response to changes and interactivity of the environment;
- targeting a specific user, as the user is getting closer thanks to mobile devices and the Internet of Things;
- one-touch solutions;
- the digital ecosystem is understood as the center of synergy between the state, business and citizens.

The key success factors in the digital transformation are not so much technology as the new technology and data management models that allow quick response and modeling of future challenges and problems for states, business and civil society.

Obviously, the digital transformation system must have a single coordination body and a single digital transformation methodology as guarantors that all parts of the system (for example, departments of the enterprise) follow a common methodology and common standards, taking into account the specifics of each subdivision. So coordination is extremely important. For example, in a small European country (less than 10 million people), it was found that each ministry understands the digital transformation of the country in its own way and implements it in different ways. In countries with a federal structure, the degree of such chaos is growing quadratically, since each subject of the federation also does digital transformation in different ways (although all money comes from one pocket). Thus, the problem of digital transformation is a guarantee of coordination of its implementation. The more different aspects of the digital transformation are coordinated together (architectural, technological, design, legislative, industry, moral, production, etc.), the better. In a complex system (for example, the size of the country) there must be a coordination group and separate groups of the digital transformation of each subsystem which digital transformation is implemented for. It is very important to disclose the interaction of the proposal from the Global Bank for Digital Transformation and several Regional Centers for Digital Transformation, and demand from the digital transformation coordination group and the Ministries (digital transformation group).

The expected results from creating solutions to such a problem are

- accelerating the digital transformation,
- making the digital transformation cheaper,
- improving the digital transformation quality, and
- reducing the digital transformation risks.

The main stakeholders in the digital transformation are citizens, society, business, local governments and the state.

## 2.2. Model of the Digital Transformation

On December 1, 2016, the President of Russia, V.V. Putin, in his Address to the Federal Assembly, proposed "... to launch a large-scale system program for the development of the economy of a new technological generation, the so-called digital economy. In its implementation..... rely specifically on Russian companies, scientific, research and engineering centers of the country" (Address of the President of the Russian Federation, V.V. Putin, to the Federal Assembly of the Russian Federation of December 1, 2016 , 2019). Currently, Russia is experiencing a peak in research into problems associated with building the digital economy. There are many definitions of the concept of the digital economy. In this regard, there is a search for the correct DE definition. In particular, the following seven DE definitions (Seven definitions of the digital economy, 2019) plus the eighth definition are proposed (Decree of the President of the Russian Federation of May 9, 2017 N 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030" , 2019). See Table 1.

**Table 1**  
Definitions of the digital economy

№	Definition	Source
2.	"A system of economic, social and cultural relations based on the use of digital information and communication technologies"	World Bank
3.	"An economy primarily driven by the digital technology, especially electronic transactions using the Internet"	Oxford dictionary
4.	"Doing business in markets that rely on the Internet and/or the World Wide Web"	BCS, UK
5.	"Digital markets that facilitate the trade in goods and services via e-commerce on the Internet"	OECD
6.	"An economy capable of providing high-quality ICT infrastructure and mobilizing ICT opportunities for the benefit of consumers, business and the state"	Economist Magazine Research Center and IBM
7.	"Digital equipment manufacturing, publishing, media production and programming"	UK government
8.	The "digital economy" means the "economic activity where the key factor in production is digital data, processing of large volumes and the use of analysis results which, compared with traditional forms of economy, can significantly increase the efficiency of various types of industries, technologies, equipment, storage, sales, delivery of goods and services."	Russian government

Note. Compiled by the authors.

All the above definitions allow us to better understand the essence of the DE. But, of course, the main purpose of the study of definitions is not to identify or develop a better definition of the CE, but to develop a mechanism for implementing the digital economy. And to develop numerical criteria that characterize the degree of its development.

The digital economy model vector should aim to ensure competitive customer service, attract talented employees, accelerate market entry, protect and manage data and be prepared to respond to rapidly changing market conditions and operational requirements. This, on the one hand, will ensure the digital sovereignty of the country, and on the other hand, it will make it possible to use digital assets as an operational base for expanding international economic relations, attracting foreign capital, increasing the efficiency of public administration, and, ultimately, ensuring raising the level of life of the population.

What elements form the DE? First of all, these are elements that are completely new types of economic activity that did not exist before the emergence of the DT. For example, these are platform companies. See Fig. 1.

**Figure 1**  
Digital platforms

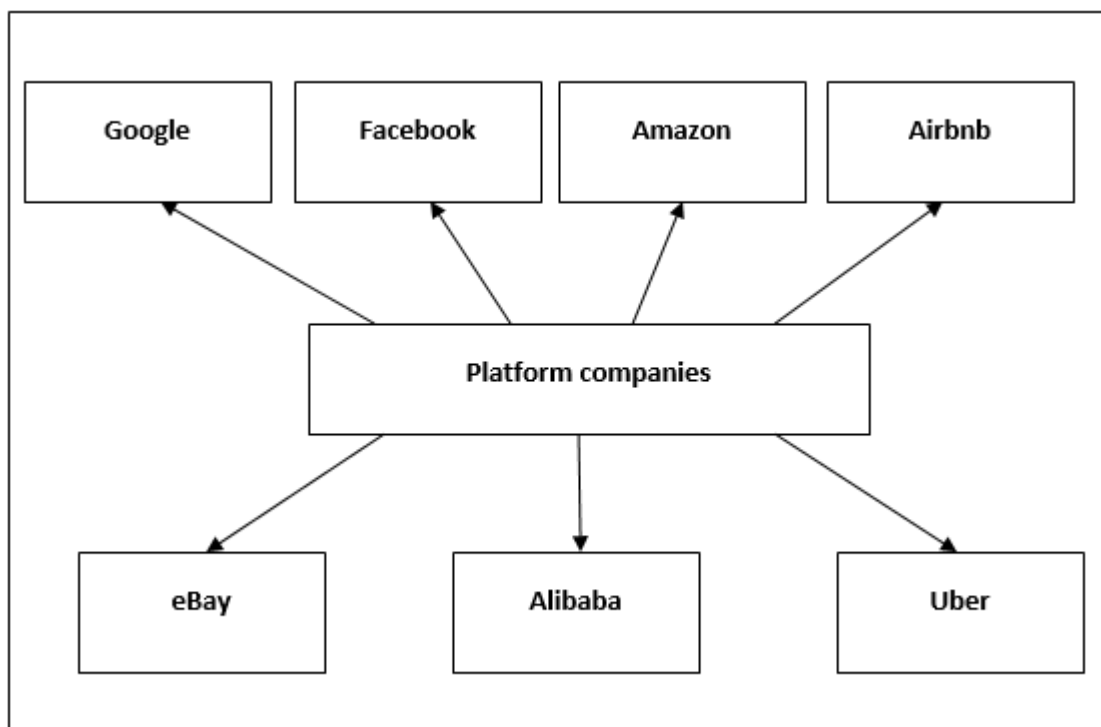


Figure 1 shows digital platforms based on the DT and digital business models that make up the DE foundation. Essentially these are platform companies that are nothing more than a digital sector where digital technologies are directly created. The digital sector contributes to the digital transformation of the economy. This definition reveals the main activities of the digital sector:

- 1) production of computers, electronic and optical equipment;
- 2) telecommunications;
- 3) development and release of software, consulting activities associated with computers, and related activities;
- 4) activities in the field of digital services.

Therefore, the "digital sector" is formed in the market economy - this is the production of digital products and services by companies. Digital services, like the electric power industry, transport, create universal conditions for all economic activities at the macro level. The DE includes all types of macroeconomic activity using digital technologies.

To understand the features of the digital transformation in the broadest sense of the word, we propose to consider its impact on the economic development (Decree of the President of the Russian Federation of May 9, 2017 N 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030" , 2019). See Table 2

**Table 2**  
 Characteristics of the digital transformation from a standpoint  
 of influence on the socio-economic development of the country

No	The digital transformation provides
1	the growth of the digital services (finance, telecommunications, social networks, advertising, media), which move from the category of related services to services vital for a person;
2	increased competition (due to the cross-border nature of the DT) and, as a result, increased opposition to globalist and isolationist sentiments in society
3	the increased transparency of managing the activities of economic entities and authorities (due to the unique opportunities of processing digital information – contextual search, big data analysis, etc.)
4	a wider and more individualized range of goods and services ("long tail economy" – due to a decrease in the cost of storing information and a more efficient collection of information about customer requirements)
5	the increased use of a variety of network services (social networks, blogs, instant messengers, etc.)
6	the growing share of self-servicing in the economy (Internet banking, online shopping, bots-consultants, video surveillance, electronic hotel booking, tickets, etc.);

Note. Compiled by the authors.

It is clear that such results of the digital transformation are completely and instantly almost impossible to get, so the digital transformation will be different in each country. The essence of evaluating the rate of the digital transformation is that "digital business helps reduce the time needed to meet consumer needs and increase the scale of rather individual than mass production" (Digital Economy, 2019).

The areas of the digital transformation include:

- adopting innovations
- data handling
- partnerships and collaborations
- customer experience
- value management
- HR strategy and digital culture.

The proposed areas of the digital transformation contribute to a high level of development of the digital economy. Therefore, it is no coincidence that the digital transformation provides the global economic superiority of the country that implements it. This is reliable. In essence, the era of the digital transformation of the sixth technological order is coming now.

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### 3. Materials and methods

The analysis of Russian and foreign practice, as well as theoretical studies, shows that digital transformation is based on the digital platforms that integrate economic, social and technological processes forming digital ecosystems. In this regard, a new institution is emerging in the economy, a new category of business models, whose role in progressive economic development is growing significantly, but the mechanisms of their functioning, management methods, network interaction with other economic entities, as well as many other issues remain insufficiently studied, which in practice holds back the digital transformation of companies.

The analysis of the possibilities of introducing modern digital technologies into an existing business required:

- studying strategic priorities of the company and key business processes
- auditing the existing IT infrastructure
- preparing a roadmap for the digital transformation and recommendations for its implementation

The study of the digital transformation was based on analysis methods – logical, factorial, comparative, strategic and organizational-structural modeling of the digital economy. The empirical and information base of the study was made up of the published results of research institutions and rating agencies, information provided by periodical business and scientific publications, including in the resources of the global information network Internet, As well as a survey materials performed by independent analytical organizations, legislative and regulatory acts, governing entrepreneurial, innovative and scientific-technical activities in the Russian Federation, studies of the international organizations, own applied research of authors.

Given that the digital transformation is an economic activity that involves the introduction of digital technologies in all industries and fields of activity, as well as the transfer of business processes to the digital space, we proposed highlighting the main tasks in the analysis of its development:

- 1) forming a sustainable digital ecosystem for business entities,
- 2) stimulating the introduction of digital processes in priority sectors of the economy and infrastructure,
- 3) risk management, and
- 4) improving the efficiency of public administration through the digital transformation of processes.

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## 4. Result

### 4.1. A strategy of the model for the development of the russian economy in conditions of the digital transformation

The most rational step for the development of the digital transformation in Russia is the creation of a number of industrial digital platforms managed by relevant ministries or state corporations that will focus efforts in key areas: transport, telecommunications, energy, data processing. Such platforms will create the necessary infrastructural basis for the fastest possible development of the digital transformation and the distribution of related technologies, and in the future, will allow building a single digital space that unites all industries and branches. Such an approach will contribute to a significant increase in the transparency, manageability and flexibility of the country's economy. The main vector of strategic development of the digital transformation in Russia is the use of new opening opportunities:

- competing in new areas
- attracting investments
- promoting the interests of Russia abroad
- consolidating the population
- involving the population in management
- improving management effectiveness
- promoting new domestic technologies

Russia first of all needs to develop its own industry of the digital technologies. Otherwise, the Russian economy may be completely “occupied” by foreign digital products. In this regard, Russia as a whole should form an innovative situation in solving the problems of digitalization of national business, which makes it possible to “focus on reducing average costs by reducing the cost of market transactions when concluding contracts for the production and sale of a product as a result of their movement from the market system to the functioning of the firm itself and thus maximizes profit.” (Nosova, et al, (2019). Russian ICT industry should be redirected from the creation of numerous ersatz products that copy outdated global developments to the innovative development



of the industry. Apparently, Western strategists of confrontation with Russia just counted on it when they restricted our country's access to modern technologies. In this case, an adequate strategy of confrontation should not be import substitution, but the export of unique developments in the field of the DT having no analogues in the world. The use of ersatz copies of Western developments in public administration is fraught with a decrease in the efficiency of management, which is still too non-technological in Russia.

Given the experience of the global economy, it is necessary to move on to a new generation of productive capital. It must carry the DT achievements. The widespread DT introduction makes business and government management at all levels transparent. All this increases information leakage risk and requires an increase in the level of protection, the allocation of additional investments in cybersecurity. "Today, the main task of Russia is not to engage in discussion, but to develop, discuss and approve a specific strategy for creating the so-called information (digital) infrastructure, the implementation of which should be based on Russian companies, research and engineering centers of the country." (Nosova et al., (2018).

Thanks to the digital transformation, Russia must overcome economic threats such as

- the occupation of the Russian market by Western companies
- information wars and manipulations
- activation of protest moods
- the growth of fraud and deception of the population
- information leakage
- sabotage in production

To overcome these threats, the country needs the transition to Industry 4.0. According to V.V. Putin, "we need specialists who are able to work in advanced industries, create or use breakthrough technical solutions..." (Nosova, et al, The Strategy of the Digital Transformation of the Russian Economy in the XXI Century, (2019). The possibilities of Russia's digital transformation will not be visible in the world if the state does not purposefully support human resources update, help improve people's competencies.

Effective and safe development of the digital transformation is possible only with adequate development of human capital in Russia

The main indicator for assessing the effectiveness of the implementation and development of the DE in Russia should be the growth of labor productivity. Such setting of the issue requires a deep study of the factors of productivity growth. So, Russia and Japan "intend to develop cooperation and exchange experience in the field of labor productivity, including the exchange of information about enterprises with high labor productivity indicators." (Address of the President of Russia to the Federal Assembly of February 20, 2019, 2019)

Hence, the state shall support the development of digital technologies according to plan, with the development of legislation, with the formation of sales markets, with support at international trading platforms. In a digital business model, the core are those factors that have never been considered growth factors. First of all, this is openness, fairness towards entrepreneurs, respectfulness, certainly simplicity of procedures. Such a model will eliminate the archaic and redundant control and supervisory functions. So, considering that all the developed countries of the world every year tighten the rules for protecting their manufacturer in key sectors, Russia has to develop its own enterprises that make modern technological products. And if here is no such enterprises, the entire digitalization of the economy will make the country dependent on import of digital technologies from abroad.

In general, the digital transformation of the Russian economy is aimed at solving such problems as:

- improving the competitiveness of enterprises and organizations, the industry, improving the quality of life of the population in their home regions;
- developing the digital infrastructure; "the future digital infrastructure of Russia will be based on meeting the urgent and future needs of society in the high-tech areas of human activity, as well as business processes." (Russia and Japan will cooperate in the digital economy, 2019);
- attracting investment and labor force skilled in the digital sector to the regions;
- ensuring effective support for the activities of enterprises from the consolidated budget of the Russian Federation and development institutions, as well as extra-budgetary sources;
- forming and developing effective mechanisms of public-private partnership;
- developing digital international cooperation and integration.

Today, there is virtually no part of human activity where the AI would not bring fundamentally new opportunities.

#### **4.2. The impact of the artificial intelligence on the formation of a new model of the economic development in Russia**

The President of the Russian Federation, Vladimir Putin, approved a national strategy for the development of the artificial intelligence until 2030. By 2024, the growth of the global economy due to the introduction of new technologies will be at least \$1 trillion, and if Russia does not sufficiently develop the artificial intelligence, it will slow down its economic development (Nosova, et al ( 2019). Let's consider this issue.

The problem of the impending era of the "artificial intelligence" (AI) in the near future will become a priority in solving the strategic development of both every company and the entire Russian economy as a whole. Influenced by the AI introduction, all economic activity switches to the digital format. Currently, making the market economy efficient requires a multiplicative effect from the digitization of all its spheres. In this regard, it is especially important to actively develop and constantly improve the artificial intelligence market. The AI market is beginning to take priority in the activities of modern business, especially in connection with the production and use of robotics. In modern Russia, however, there is a low level of digitalization of industrial business. In practical terms, we cannot talk about the modern national digital business at the level of world standards. In this regard, there are a number of factors holding back AI growth in Russia.

So, the main barriers to the AI growth in Russia are the unproductive relationship between digital science and national business, as well as personnel capable of developing and implementing the AI in the economy. Practice shows that the Russian economy exhibits steady immunity to both the AI and also to other digital innovations. It is known that Russian enterprises are not sufficiently involved in the digital research and development of foreign companies. All this holds back the AI growth and, accordingly, the digital transformation. To overcome this condition, it is necessary to actively make contacts with global science in the mode of the AI formation and development.

It is extremely important to emphasize that the AI development is directly related to the growth of digital business sourced by the values of intellectual capital. It is correctly stated that the accent of modern economy of Russia should be the process of reproduction of intellectual capital. We have all preconditions for the achievement of this goal. We should understand that the future belongs to intellectual capital, its reproduction is a factor of a strong leap in the AI development in the Russian economy. Today, in Russia, it is necessary to set and solve large-scale tasks in the development of science and education which our leadership in the global economy really depends on. It is difficult, but necessary. Currently, we need to actively move on to the development of robotics.

Russian economy at this stage must reduce its lag in terms of AI development behind the developed countries of the world via accelerated growth of scientific research potential, creation of favorable conditions for the inventive activity, widespread participation in the international innovation division of labor. Maximization of the effects of AI requires government involvement. This requires the Russian government to work with a wide range of stakeholders, citizens, technology companies, educational institutions and entrepreneurs. Country leaders and governments face with the task of creating a favorable environment for the R&D in AI mode. In this aspect, AI can be a separate product that industrial companies will offer to the market. It will make it possible to substantially increase the economic effectiveness of the activity of Russian companies, to accelerate entering of new products to the market, and also to switch to the trade in their life cycle. Russian companies, both private and state, should create a favorable digital infrastructure (Nosova, Makar, Chapluk, Medvedeva, & Semenova, 2018) and institutions which will stimulate the development of digital entrepreneurship in the AI creation. In particular, the State Corporation Rosatom is pretending to become one of the key participants in the programme for the AI development and a leader in the related markets. In order to keep up with the AI development from developed countries, Russia needs to adopt new trends in economic development and become leader in the digital transformation (The President of the Russian Federation, Vladimir Putin, approved a national strategy for the development of the artificial intelligence until 2030, 2019). That requires active cooperation with international organizations and analytical centers in the theoretical and practical fields. The financial sector of Russia was the first to begin applying robotization.

However, today, only 4% of Russian companies use the AI in their work. If the company does not live outside of the AI, then it lives in the past. Our "childhood without the AI" is over. All of our present and future decisions must be switched to "clouds", or the AI. At the end of 2018, the actual share of the Russian Federation in the global AI market in 2018 was 0.2%, then potentially it can increase to 1.7% by 2024. In addition, the AI share in Russia's GDP will be 0.8% in 2024 and 3.6% in 2030 (Nosova, Askerov, Rabadanov, Dubanevich, & Voronina, 2019). The authors of the roadmap explain the great influence of the AI and neurotechnologies on the economic development by an increase in the production and sale of goods and services related to the AI, and an increase in productivity in various sectors of the economy. In addition, technological development will have a high level of influence on technological leadership, economic development and social progress. No one denies that the basis for the AI growth is the growth of knowledge which carrier is a highly educated person. Knowledge provides the growth of technological progress which changes people's lives, improves the quality of life, but does not make life easier, since the spread of the AI leads to an increase in illegal actions - cyber fraud (its scope only grows every year). As you know: "The Internet is widely used to propagate extremist ideas and movements." (The artificial intelligence market in Russia may grow to 160 billion rubles by 2024, 2019).

In general, from the foregoing it follows that despite the disadvantages, the digital transformation of the Russian economy is a promising area of research. Thanks to the digital transformation, Russia can move away from gas and oil dependence and achieve exclusive positions in the system of international economic relations.

Today, an innovative atmosphere is being created in Russia in solving the problems of the digital transformation of the national economy. It is based on the national project "The Digital Economy of the Russian Federation." (Cyber fraud in Russia over 6 years increased 6 times, 2019). Now it is important to ensure the solution of the tasks stated in the national project (National project "The Digital Economy", 2019) and to reach a new level of the digital transformation of the Russian economy. Missing them, our country can be left without positive processes.

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## 5. Conclusions

The digital transformation is the mass introduction of digital technologies in the business process resulting insignificantly increased production efficiency, reduced costs, the manufactured product becomes "smart", communication with the customer becomes as fast and individual as possible. The main assets of the company are now not machines, but big data and people able to effectively manage this data.

At present, in Russia, along with the traditional principles of doing business, the digital transformation is beginning to take priority in the system of economic relations.

In Russian companies as a whole, an idea has formed about what the digital transformation of a business is, and they consider its implementation to be one of the strategic goals of their organization for the future. Companies are starting to transform the business, and they plan to transform the entire work of the enterprise, not any particular business functions and directions. The main problems on the way of the digital transformation are in the organizational, as well as the lack of specialists with the necessary qualifications, which can be considered both a "technical" problem and an organizational one. In general, the digital transformation implementation mechanism identified creates a new base for further research and solving practical problems in the development of the Russian economy for the future, in particular, increasing its competitiveness through more active use of the AI.

Creating of an AI industry will, first and foremost, create a globally competitive high-tech industry, accelerate the digital economy development, stimulate the development of information and telecommunication infrastructure for working with big volumes of data, and increase the share of domestic software and solutions in the domestic market (including in government bodies). The AI development will also significantly improve the situation with healthcare and education.

The digital transformation cannot be stopped. Today, the digital transformation should take on the mission of the "core" in the scenario to bring the Russian economy to a level that corresponds to the status of a leading world power of the XXI century.

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## Bibliographic references

*Address of the President of Russia to the Federal Assembly of February 20, 2019.* (10 May 2019). (In Russian). Retrieved from: Ria.ru: <https://ria.ru/20190220/1551106999.html>

*Address of the President of the Russian Federation, V.V. Putin, to the Federal Assembly of the Russian Federation of December 1, 2016.* (15 April 2019). (In Russian). Retrieved from: Garant: <http://base.garant.ru/71552000/#ixzz62ittQqyv>

*Cyber fraud in Russia over 6 years increased 6 times.* (4 October 2019). (In Russian). Retrieved from: Zrd.spb.ru: <https://www.zrd.spb.ru/news/2017-03/news-1254.html>

Davenport Thomas, W. G. (2019, May 17). *Digital Failure.* (In Russian). Retrieved from Harvard Business Review Russia: <https://www.hbr-russia.ru/innovatsii/trendy/html>

*Decree of the President of the Russian Federation of May 9, 2017 N 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030".* (4 October 2019). (In Russian). Retrieved from: Garant.ru: <http://www.garant.ru/hotlaw/federal/1110145/>

- Digital Economy*. (4 October 2019). (In Russian). Retrieved from: School-science.ru: <https://school-science.ru/4/14/1451>
- National project "The Digital Economy"*. (25 October 2019). (In Russian). Retrieved from: Strategy24.ru: <https://strategy24.ru/management/projects/natsional-nyy-proyekt-tsfrova-ekonomika>
- Nosova, S. S., Askerov, P. F., Rabadanov, E. R, Dubanevich, L.E. & Voronina, V.N. (2019). The Role of Digital Infrastructure in the Digital Transformation of the Modern Russian Economy. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Volume 8(Issue 7), 2314.
- Nosova, S. S., Kolodnyaya, G. V., Bondarev, S. A., Verigo, S. A., & Kudryashov, A. B. (2019). Digital Business as a Driver of Economic Growth in Russia. *Revista ESPACIOS*, Vol. 40 (Nº24), 25. Retrieved from: <http://www.revistaespacios.com/a19v40n24/a19v40n24p25.pdf>
- Nosova, S. S., Makar, S. V., Chapluk, V. Z., Medvedeva, A. M., & Semenova, A. N. (2018). Collaborative Nature of Innovative. *Revista ESPACIOS*, Vol. 39 (Number 41), 32. Retrieved from: <http://www.revistaespacios.com/a18v39n41/a18v39n41p32.pdf>
- Nosova, S.S., Meshkov, S.A., StroeV, P.V. & Meshkova, G.V. (2018). Digital Technologies as A New Vector The Growth of Innovativeness and Competitiveness of Industrial Enterprise. *International Journal of Civil Engineering and Technology (IJCIET)* Vol. 9. Issue 6, 1411–1422.
- Nosova, S.S., Kolodnyaya, G. V., Novikova N.N, Medvedeva, A. M. & Makarenko A. (2019). The Strategy of the Digital Transformation of the Russian Economy in the XXI Century. *International Journal of Civil Engineering and Technology (IJCIET)*. Vol. 10, Issue 02, 1638–1648.
- Russia and Japan will cooperate in the digital economy*. (4 October 2019). (In Russian). Retrieved from: Tass.ru: <https://tass.ru/ekonomika/4540041>
- Samarin, A. (15 April 2019). *The main secret of the digital economy*. (In Russian). Retrieved from: <http://egovtm.blogspot.com/2017/05/blog-post.html>
- Seven definitions of the digital economy*. (4 October 2019). (In Russian). Retrieved from: crn.ru: <https://www.crn.ru/news/detail.php?ID=116780>
- The artificial intelligence market in Russia may grow to 160 billion rubles by 2024*. (4 October 2019). (In Russian). Retrieved from: Ria.ru: [https://ria-stk.ru/news/index.php?ELEMENT\\_ID=182499](https://ria-stk.ru/news/index.php?ELEMENT_ID=182499)
- The President of the Russian Federation, Vladimir Putin, approved a national strategy for the development of the artificial intelligence until 2030*. (4 October 2019). (In Russian). Retrieved from: Rbc.ru: [https://www.rbc.ru/technology\\_and\\_media](https://www.rbc.ru/technology_and_media)