

## THE NEW ECONOMY AFTER THE PANDEMIC: SOCIETY 5.0

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***Abstract:** The COVID-19 pandemic has highlighted the urgent need for digital technology for the survival of the global economy. The tense epidemiological situation and the self-isolation regime have demonstrated the share of the human factor in the use of technology. The article discusses the main technologies of Society 5.0 - artificial intelligence, big data and cloud solutions.*

***Key words:** COVID-19, digital technology, artificial intelligence.*

## НОВАТА ИКОНОМИКА СЛЕД ПАНДЕМИЯТА: ОБЩЕСТВО 5.0

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***Резюме:** Пандемията COVID-19 подчерта спешната нужда от цифрови технологии за оцеляване на глобалната икономика. Напрегнатата епидемиологична ситуация и режимът на самоизолация демонстрират дела на човешкия фактор в използването на технологиите. Статията разглежда основните технологии на Society 5.0 – изкуствен интелект, големи данни и облачни решения.*

***Ключови думи:** COVID-19, цифрова технология, изкуствен интелект.*

## **1.INTRODUCTION**

Digitalization has embraced the entire world community. Many countries have begun to promote emerging technologies, and competition in the field of innovation has become a key sign of the development of the global market.

The COVID-19 pandemic has proven the importance of digitalization in addressing economic and social challenges. The tense epidemiological situation, the death of people from the consequences of coronavirus infection have proven the importance of the humanistic aspect of the technological development of society. The idea of solving pressing problems through the widespread use of advanced digital technologies led to the formation of a paradigm about the "new society", society 5.0.

## **2.THE CONCEPT OF SOCIETY 5.0**

Society 5.0 (Society 5.0 or Super Smart Society) is a socio-economic and cultural development strategy based on the use of digital technologies in all spheres of life. This term was put forward in Japan back in 2016 as a development strategy for the country, but acquired particular importance after the COVID-19 pandemic.

If Societies 1.0 and 2.0 were associated with the development of agriculture, Society 3.0 - with industrial production, Society 4.0 - with universal computerization, then Society 5.0 is not limited to production, it uses digitalization to solve social problems (Society 5.0).

All countries have accumulated a lot of social problems, such as population aging, lack of resources, environmental pollution, terrorism and extremism, etc. Concept 5.0. – this is the creation of a society where everyone will be comfortable, where everyone will participate in solving the problems of society. The Company's 5.0 strategy should encourage large companies to create socially-oriented technologies.

The main idea of the strategy is to solve social problems by integrating the digital environment and physical space to improve human living standards. Innovations in such a society are convenient and safe, they make people's lives comfortable and fulfilling. According to the Society 5.0 strategy, advanced technologies, having penetrated into all spheres of life, should lead to the emergence of new forms and types of business and thereby contribute to economic recovery and an increase in the quality of life of people.

The Society 5.0 concept differs in the following:

1. A high degree of fusion of cyberspace and physical space.
2. Provision of goods and services that can meet the current and potential needs of the population, regardless of region, age, gender, language or any other restriction.
3. Ensuring sustainable economic growth and solving social problems.
4. The main goal of the new society is to make human life as comfortable, high-quality and safe as possible (Общество 5.0).

The concept is based on the humanistic component of new technologies to solve complex social problems.

### **3. TECHNOLOGICAL CHALLENGES**

The key technologies of Society 5.0 are artificial intelligence, big data and cloud solutions. According to analysts at Gartner. Their role has grown significantly since the pandemic. By the end of 2024, according to the company's forecast, 75% of enterprises will use artificial intelligence (AI) technologies, and, above all, in robotic systems.

Robots help optimize movement and minimize human contact. For example, courier robots that deliver orders can be integrated into life support systems and building management (office, hospital, hotel).

In China, during the pandemic, robots began to be actively used in medicine. In order to exclude contacts of medical personnel with patients, the existing industrial and household models were urgently adapted for new tasks.

As a result, robots have emerged that transport drugs, medical supplies and other light loads inside hospitals. They are equipped with a control module, video cameras and all the necessary sensors for autonomous movement. They have a connection to the hospital's network, receive a task and report on its implementation remotely.

Robots began to be used that disinfect and clean the premises and the adjacent territory of the hospital.

And another type that is in demand during a pandemic is patrol robots with video cameras covering the entire surrounding space, equipped with temperature sensors, gas leak sensors, etc.

All robots are connected to a digital platform, can work in an autonomous mode of movement, and there is also the possibility of connecting a human operator to them for remote control. Broadcast of the movement of robots occurs through HD-video cameras, which stream to the control platform at a speed of 20-30 Mbit / s. All types of robots require hospitals to have high-speed internet access.

Another innovation inherent in Society 5.0, which was used in China during the pandemic, is autonomous temperature measurement systems controlled by AI. Such systems automatically detect the temperature and, through the facial recognition system in the cloud, issue the necessary prescriptions to medical workers (Акулинин, И.). Thus, the pandemic has put society face to face with

common human problems, has become a trigger for the active use of modern digital technologies for the benefit of people.

Another factor demonstrating the transformation towards Society 5.0 has been the rapid development of cloud computing. According to the report on the analysis of network traffic, conducted from February 1 to April 19, 2020, the percentage of cloud traffic in the total volume of global Internet traffic increased from 1.26% to 1.83%, that is, by 45%.

The increased interest in cloud computing amid the pandemic contributed to market growth: in mid-August 2020, the total assets of the three largest exchange-traded funds in this sector reached \$ 6 billion, having increased by more than \$ 2 billion since the beginning of the year. The move to cloud computing not only helps companies recover from the pandemic, but also lays the foundation for further growth.

#### **4. NEW POLICY DECISIONS**

The European Commission has outlined the main technological priorities of the digital economy program after the pandemic. These are: support for AI (5 billion euros), quantum technologies (2 billion euros) and 5G (5 billion euros). Already in 2020, the number of AI research has grown by 34% compared to 2019 (CovidTech).

There has been an increase in investment in cloud technologies. Infrastructure and cloud investments ranked third in importance during the COVID-19 pandemic, according to a survey by Harvey Nash and KPMG. At the same time, the number of IT leaders actively considering the possibility of using distributed cloud technologies almost doubled (from 11% to 21%) (Forbes Kazakhstan 1.12.2020). In Russia, according to IDC data for 2020, the cloud services market exceeded \$ 1 billion.

A rethinking of attitudes towards AI technologies began. The federal project "Artificial Intelligence" has been launched in the country. 4.1 billion rubles will be allocated to finance the project in 2021, 6.5 billion rubles in 2022, and 5.9 billion rubles in 2023. Medicine, speech recognition, security are named as key areas of research in the field of AI applications ([www.gazeta.ru](http://www.gazeta.ru)).

Nevertheless, Russia lags behind European countries in the development of the Society 5.0 concept. The state can accelerate digital transformation by supporting the development of the IT market through grants and benefits, tax breaks, advertising about the benefits of robotic systems, their usability and safety, etc.

## **5.CONCLUSION**

To summarize, it should be said that the coronavirus pandemic has accelerated the understanding of the importance of a humanistic approach in creating and using innovations.

The transition from Society 4.0 to Society 5.0 will require: change the mindset of citizens, form a clear national strategy and provide government support for the initiative, revise the outdated regulatory framework, accumulate a serious backlog of knowledge, train qualified personnel, and gain the approval of the whole society.

Only when the benefits of technology are understood and outweigh their complexity, the digital transformation process will be faster and more efficient.

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