

CAN ARTIFICIAL INTELLIGENCE CHANGE OUR LIVES, AND HOW?

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Assistant Professor, GTU***Chikovani E.***Doctor of Business Administration***Sharashidze L.***Senior Visiting Lecturer, Batumi Shota Rustaveli State University*<https://doi.org/10.5281/zenodo.17608958>**Abstract**

Information and communication technologies (ICT) are a rapidly developing and growing field, which, in the era of the Fourth Industrial Revolution, digital transformation plays a special role in shaping the global agenda, world economic events, social development, public administration, and management. For a modern person, regardless of their interests or work style, adapting to the digital world and acquiring and improving skills for it is a vital factor. Do we need to use technologies in the process of implementing public governance? The answer to this is unequivocal: modern challenges require making modern decisions by maximizing the use of existing opportunities. The public sector of any developed country, in the process of digital transformation, should actively learn about and explore new technologies, modern innovative achievements, and strive to use these technological innovations to increase the efficiency, effectiveness, accountability, and openness of the public sector, and offer user-oriented, reliable, and trustworthy services to the information society.

Keywords: Artificial intelligence, digital governance, digital transformation, innovative achievements.

Introduction

Modern challenges require the maximum use of existing capabilities to make modern solutions. The public sector of any developed country in the process of digital transformation should actively familiarize itself with and explore new technologies, modern innovative achievements, and try to use these technological innovations to increase the effectiveness, efficiency, accountability, and openness of the public sector and offer user-oriented, reliable, and trustworthy services to the information society.

“Digital” is not only a term denoting technology, but also defines what ICT can do through technological transformation of socio-economic processes and various fields. “Digital transformation” implies new ways of solving problems, creating unique experiences, and improving business processes.

Today, there are already technological solutions that will completely change our lives. What are these technologies? Eight technological solutions have been recognized globally in this way, among which artificial intelligence (hereinafter referred to as “AI”) takes the lead. In the modern world, interest in artificial intelligence is growing rapidly. International news media outlets devote a considerable amount of space to the topic of artificial intelligence. Leading world politicians and researchers are increasingly discussing AI and its implications for humanity's future in their debates. Over the past five years, scientists, researchers, activists, and policymakers have become increasingly interested in artificial intelligence technology.

This article aims to provide the reader with information about the main aspects of artificial intelligence, not only as a technological solution, but also as a completely different methodology for

developing business/public administration processes, a modern tool for decision-making, management, and supervision.

Discussion

Artificial intelligence is a product of the digital transformation, the fourth industrial revolution. Artificial intelligence is a field of computer science, a specialized and advanced type of ICT, that performs intellectual actions typically characteristic of humans. Automated decision-making processes/systems that imitate, predict, and/or replace human behavior. The Council of Europe defines artificial intelligence as: “a set of sciences, theories, and technologies that aim to reproduce human cognitive abilities by a machine. Given the current level of development, artificial intelligence means delegating complex intellectual tasks that humans should perform to a machine.”

1. According to the definition developed by the European Commission High-Level Expert Group (AI HLEG), “Artificial Intelligence characterizes systems that, by analyzing the environment, exhibit intelligent behavior and, with a certain level of independence, perform actions to achieve specific goals.

2. Human-like abilities characteristic of artificial intelligence are: perception, argumentation, reasoning/evaluation, and action, with the exclusion of the human factor/with minimal interaction.

When defining artificial intelligence, several concepts are distinguished: narrow, general, and super artificial intelligence. Examples of narrow artificial intelligence are the most widespread today - these are technological solutions created for specific tasks, to perform single tasks. Nowadays, the development of artificial intelligence and its prosperous future are inconceivable without human efforts and intervention. In conditions of general artificial intelligence, the

capabilities of humans and technology are equalized. We can consider unmanned control systems as such a case. Artificial superintelligence is still only an imaginary product. This is the scenario in which artificial intelligence will surpass human capabilities. And will be able to act/make decisions better, more correctly, and faster than they do, whether computer capabilities have equaled human capabilities or not, whether they have surpassed human thinking. These issues remain the subject of ongoing research and evaluation. Using artificial intelligence, a person should be able to solve difficult, complex problems in the shortest possible time and with maximum accuracy, as well as fully delegate simple tasks.

Artificial intelligence, by collecting, processing, and analyzing a large amount of digital information, helps us find the desired information as quickly as possible, without human effort, and based on objective criteria. It also analyzes similar data and makes the most rational decision statistically.

Two main characteristics define Artificial Intelligence:

- **Autonomy:** the ability to perform tasks in a complex environment, in the presence of many variables, without constant control/supervision by the user.
- **Adaptability:** the ability to (self)learn and improve results based on experience.

The existence of appropriate prerequisites is required for the implementation of artificial intelligence in any country. Firstly, it is essential to have a highly developed ICT infrastructure and widespread use of digital governance, ensuring the proper functioning of interoperable databases and information systems, which unconditionally guarantee data quality, integrity, and accessibility. Additionally, sound and documented business processes must be employed in both departmental and inter-organizational transactions. Databases must be digitized and accessible, and the information and data within them must be complete, accurate, and up-to-date. The information/data in the databases must be complete, correct, and up-to-date.

By utilizing prerequisites, creating enabling tools and frameworks, and leveraging artificial intelligence, successfully implemented initiatives will yield economic growth, enhanced social well-being, improved public services, and effective public administration.

There is a growing global trend in the use of artificial intelligence in the public sector. In several countries, specialized public structures have already been established to develop this direction. For example, the United Kingdom and the United Arab Emirates, where, respectively, the Artificial Intelligence Service and the Ministry of Artificial Intelligence have been established.

The use of artificial intelligence enhances the process of providing public services, improving the quality of services (government-to-government (G2G), government-to-business (G2B), and government-to-citizen (G2C) services). With artificial intelligence technological solutions, the provision of public services

is improved, citizen involvement in the decision-making process increases, and ultimately, we achieve a more responsible, accountable, transparent, and efficient public sector.

Developed countries are most actively using artificial intelligence in the following areas:

- Improving governance processes and public sector activities using algorithms; Modernizing public policy;
- Automating business processes in public agencies, updating document management and case management systems;
- Stimulating innovative projects in the public sector;
- Providing state e-services and enhancing citizen engagement, including offering proactive and personalized services.

Artificial intelligence is most actively used to solve the following public tasks:

- **Enforcement:** enforcing legislative and regulatory requirements, monitoring, and inspection.
- **Public policy research, analysis, monitoring:** based on evidence and data
- **Decision-making process support.** Analysis/argumentation based on existing cases (Case-based Reasoning), making new decisions based on existing data and previous cases.
- **Public services and engagement:** improving the delivery of public services focused on citizens and business entities, personalizing services, understanding the meaning of information using logical-deductive methods, and simplifying the search for such information; finding and offering personalized public services tailored to the priorities and needs of citizens.
- **Subsidization, granting social assistance:** identifying specific target groups eligible for social assistance.
- **Internal document circulation systems:** supporting organizational management systems (human resources, procurement, ICT systems).

In the modern world, both developed and powerful economies, as well as developing and resource-poor states, are recognizing the potential of modern data-based technologies and actively utilizing artificial intelligence to automate public tasks, make informed decisions, and improve citizens' experiences of interacting with public institutions. Artificial intelligence offers the public sector several significant opportunities, including:

- **Efficiency:** Doing more and more important things: new opportunities, increased capabilities, concentration of human resources from bureaucracy to highly intellectual work, and reduction of the risk of human errors.
- **Optimization:** Doing better: reducing costs, maximizing human and time resources, speed, quality, flexibility, exercising public authority at a high level of quality, quickly and cheaply. Repetitive and laborious tasks that can be monotonous and boring for people are delegated to technology.
- **Increased value:** Renewed business models: engagement, creativity, innovation.

Let's examine the essential decisions, legal frameworks, and strategic approaches proposed by various international authors.

The European Union: The world community and global leaders recognize that a country developed with artificial intelligence enjoys a significant competitive advantage in the international arena. The European Union states that it has no competitors today in the implementation of human-oriented artificial intelligence, which supports human rights and freedoms, the rule of law, and the principles of democracy. The use of artificial intelligence is subject to the requirements of the international legal framework. In this regard, the European Union, along with other global players, plays a leading role. Various institutions within the European Union, including the European Commission, unequivocally support the use of artificial intelligence and encourage its large-scale implementation, providing financial support for this endeavor.

The **USA** remains the largest, most extensive, and influential research hub in the field of AI. Approximately 3,000 students study and research artificial intelligence annually, with over 1,400 startups, and 7 of the world's 10 largest AI companies operating in this field. All this, with many years of collaborative experience of the above-mentioned research centers, universities, companies, and public structures, clearly establishes the USA as a global leader in AI.

China: China is a serious competitor to the USA for world leadership in artificial intelligence. By 2030, it aims to achieve global dominance through its strategic plan, recognizing artificial intelligence as a key strategic advantage in the knowledge economy. China is the only country that measures the development of artificial intelligence using macroeconomic indicators.

South Korea is focused on finding and retraining AI talents, strengthening the research component, and collaborating on projects between the science and economic sectors.

EU Member States and the UK: The EU Member States have developed the most comprehensive strategies for the development, regulation, and management of AI; almost all EU Member States have established a strategic framework and action plan for the development of AI.

France's AI Strategy: The primary emphasis is on research and the creation of targeted groups that will study specific issues and prepare recommendations.

Germany: Germany has created a fairly comprehensive legal framework on responsibilities, rights, and accountability when using AI (especially in the case of self-driving cars). For example, discrimination against citizens during an incident is prohibited. Germany has an Ethics Commission for Self-driving Vehicles, which issues guidelines. A national commission has also been established to examine the social implications of algorithmic decision-making.

UK: The UK House of Lords and the Office of the Information Commissioner are actively working on AI

issues. The House of Lords focuses on the perception of AI algorithms, while the Data Protection Commissioner conducts research and develops recommendations for establishing a regulatory and legal framework. Additionally, the UK plans to invest significantly in AI within the educational sector.

Finland has also established a high-level expert group on AI, whose purpose is to study the conditions for developing an innovative AI market within the country.

Denmark: Denmark views AI in the context of the country's "digital growth and development." Encouraging data openness, easing regulations, creating a flexible legal environment, and strengthening cybersecurity are the country's approaches to AI development.

Sweden: Sweden's AI strategy focuses on four main areas: education and training, research, innovation and application, and frameworks and infrastructure.

Italy: The main public policy document on AI, "Artificial Intelligence at the Service of the People," encourages the public sector to use AI.

Spain: The Spanish government is examining the economic sectors in which AI can be applied, the potential social impact on the labor market, and the empowerment of individuals through this technology.

Artificial Intelligence and Georgia

In Georgia, examples of artificial intelligence can be found in both the public and private sectors. Although the issues of their functioning and development are addressed within a narrow organizational context, the compatibility of these private cases would be required for any of these applications. Several examples of the use of artificial intelligence in the public sector are publicly available; these are:

- A risk management system to be used when implementing customs control over goods declared on the customs territory of Georgia through the automated customs data system "ASYCUDA". During the customs clearance process, if the data of the declared goods matches the risk criteria, the appropriate corridor and customs clearance procedure are determined for the declaration registered in the system. The Revenue Service intends to utilize chatbots in the tax and customs consultation process. Also important is the system for automatically refunding VAT excess.

- The campaign of the National Tourism Administration of the Ministry of Economy and Sustainable Development to analyze the impressions expressed by tourists about Georgia on social media using artificial intelligence.

- Analytical software for recognizing faces of individuals and recognizing the state license plate of a vehicle by the Ministry of Internal Affairs of Georgia.

Modern technologies, including artificial intelligence, cannot become a positive influence and a prerequisite for public welfare if the state does not ensure the implementation of digital transformation reforms with high ethical principles, maintain a balance of conflicting interests, involve all stakeholders, taking into account best practices and international regulatory

standards, transparent procedures, and a transparent management system.

Services supported by artificial intelligence can bring numerous benefits to humanity. With the large-scale adoption of this technology in the public and private sectors of Georgia, we can expect to see a proven indicator of effectiveness, efficiency, resource conservation, and high productivity. For this, along with technological readiness, it is crucial to establish a supportive framework and gain the public's trust.

The Georgian public sector should actively promote the use of modern technologies, including artificial intelligence, both within its own institutions and on a national scale. Georgia should utilize the benefits of artificial intelligence in a timely and effective manner, so as not to significantly lag behind the economic and social transformation inspired by this technology, and not lose the benefits provided by this process.

Conclusion

Today, there are already technological solutions that will completely change our lives. What are these technologies? Eight technological solutions have been recognized in this way worldwide, among which artificial intelligence (hereinafter referred to as "AI") takes the lead. We believe that

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The implementation of artificial intelligence in any country requires the existence of appropriate prerequisites. Firstly, it is essential to have a highly developed ICT infrastructure and widespread adoption of digital governance, ensuring the proper functioning of interoperable databases and information systems. This guarantees the quality, integrity, and availability of data, as well as the use of sound and documented business processes.

In Georgia, modern technologies, including artificial intelligence, cannot become a positive

influence and a prerequisite for public welfare if the state does not ensure the implementation of digital transformation reforms with high ethical principles, maintain a balance of conflicting interests, involve all stakeholders, taking into account best practices and international regulatory standards, transparent procedures, and a transparent management system.

Services supported by artificial intelligence can bring numerous benefits to humanity. With the large-scale adoption of this technology in the public and private sectors of Georgia, we can expect to see a proven indicator of efficiency, effectiveness, resource conservation, and high productivity.

The public sector in Georgia should actively promote the use of modern technologies, including artificial intelligence, both within its own institutions and on a national scale. Georgia should use all the benefits that accompany the introduction of artificial intelligence in a timely and effective manner.

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