

GUIDING PRINCIPLES OF THE NATIONAL STRATEGY OF GEORGIA ON ARTIFICIAL INTELLIGENCE

RESEARCH

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1. INTRODUCTION

1.1. General overview

In the 21st century a large body of data has been accumulated, respective algorithms were developed and computer-calculating capacities have increased as a result of the technological process. The given experience clearly illustrated the role and significance of technologies in everyday life of people, including, relationships between the citizen and the state. Digital platforms and means have become a certain type of guarantee for providing continuity of activities of all key directions.

Artificial intelligence has already become part of everyday life of our society. It is used by both public and private sectors. Technologies affect relations between the state and the citizen as well as implementation of human rights. Therefore, it is essential to put it within the strategic and legislative frames in order to properly introduce technological achievements and at the same time make sure that they are conscientiously carried out.

Therefore, approaches of various countries to regulating and introducing artificial intelligence have been investigated and studied. Besides, the group working on the document analyzed the view developed within the scope of international organizations. Special attention was paid to the documents adopted by the EU regarding introduction of artificial intelligence standards, especially, at the background of full EU integration being the foreign policy aim of Georgia. Approximation of the country's legislative space to the European legislation is an impartial part of the process as well as making the steps which will support digital transformation of Georgia following European norms.

At the moment Georgia possesses no experience of regulating similar technologies at the state level. Therefore, the aim of the document is to develop guiding principles and field approaches for adopting the national strategy of artificial intelligence.

1.2. Artificial Intelligence Potential

Artificial intelligence is simulation of intellectual people-like behavior by means of technologies. Machine learning, which involves methods of nerve networks and deep learning is the beginning of artificial intelligence progress. Machine learning algorithms improve their possibility to complete specific tasks on the basis of studying the data. This, in its respect, enables the computer to adapt to unplanned situations and disregard simple codifications by means of statistical rules. For example, driving a car in traffic or talking to a consumer to define his/her needs. Furthermore, the computer may find an innovative solution which people have not thought about before.

Therefore, artificial intelligence is the technology which may be used in any field from cancer diagnosis to urban planning or preventing fraud. It possesses the potential to offer us solutions which may be significantly better compared with existing approaches.

It is impossible to fully define the potential impact of artificial intelligence on the society, economy and governance. However, any country which will develop this technology will be able to create innovative possibilities to further simplify or improve a whole range of procedures in respect with all key directions. Societies, which are not able to adapt to it, will significantly lag behind the inevitable process of digital transformation.

1.3. Approaches to developing the national strategy

1. **Strengthening cooperative sharing:** It is essential to enhance cooperation between the public and private sectors and academic circles in order to enable introduction of AI efficiently in terms of key directions. This will also support development of the regulatory framework.
2. **Focus on priority sectors, including:** education, justice, foreign and security policy, agrarian sector, healthcare, public finance, tourism.
3. **AI distribution framework** – the following three key aspects constantly defining one another as a cycle are significant:
 - a) Problem definition – how the area of problems is identified and set in public administration, business and society for which AI may be the solution;
 - b) Testing and development – how much time is required for creating, testing and dividing into types artificial intelligence algorithms to solve this problem;
 - c) Scale/breadth – to what extent it is possible to make a product of tested solutions, grade them into the scale and ensure their constant development.
4. **A people-oriented approach** – First of all, benefit of AI should be directed towards citizens and business, which implies that AI should serve people's needs and not get developed only as technology.

Besides, proactivity towards risks and governance challenges is significant, which follows increased use of AI. Despite the fact that AI ensures forecasting in a whole range of issues, with the view to avoid weakening of public and institutional responsibilities and accountability, it is essential to develop protecting and control mechanisms.

Finally, it is essential to ensure readiness of the population and employees towards AI. At the society level it is necessary to raise awareness of the public towards AI so that to ensure citizens are ready for the technological change and they are involved in identifying the benefit and impact. At the level of employees, it is essential to prepare and train professional to ensure they adapt to new means of working by means of which it will be possible to simplify the working process.

2. PROTECTING HUMAN RIGHTS AND NORMS OF ETHIC IN THE PROCESS OF CREATING, INTRODUCING AND IMPLEMENTING AI

The European Commission developed the guiding document of ethical norms for artificial intelligence¹. As indicated in the introduction of the document, the aim of developing the book was to support reliable artificial intelligence. Such artificial intelligence implies three components:

1. **Compliance with law** – artificial intelligence should be created and implemented in accordance and following the requirements of all acting legislative acts and regulations;
2. **Ethics** - following ethical norms and values should be guaranteed;
3. **Sustainability** – it should be technically and socially properly running since artificial intelligence is able to cause unenvisaged damage despite the initial kind intention of its creation.

It is worth-noting that the book does not set principles for the component of law compliance since the mentioned belongs to the field of individual regulation of states taking into consideration their acting legislations.

Envisaging the speed of development of technologies, including, artificial intelligence, the EU considered it purposeful to develop a range of regulatory acts, including, those defining norms of ethics in order to avoid risks related with possibilities of artificial intelligence and make sure to direct these capabilities towards benefit as much as possible in the process of its creation and introduction. The key principle this document is based on is the idea of a person-oriented artificial intelligence which serves freedom of the human being and his/her prosperity.

Following norms of ethics in the process of creating and using artificial intelligence envisages the following: respecting decision-making by people, avoiding harm, justice and accountability. Besides, special attention should be attached to the rights of vulnerable groups, such as, children, persons with limited abilities as well as those who, due to a number of factors, are predominantly under the risk of unfavorable or exceptional conditions or find themselves in such conditions when they serve as a weak party in terms of access to power and/or information. For example, in respect with the employee-employer or consumer-business relations. Taking all this into consideration, application of artificial intelligence is accompanied by its own risks along with being beneficial for the individuals and the society and may have negative impact as well (for example, impact on law and order, democracy, distributive justice, etc.). Therefore, it is essential to implement respective measures to mitigate this impact, in accordance with proportionality of risks.

¹ ETHICS GUIDELINES FOR TRUSTWORTHY AI, INDEPENDENT HIGH-LEVEL EXPERT GROUP ON ARTIFICIAL INTELLIGENCE SET UP BY THE EUROPEAN COMMISSION ,
<<https://op.europa.eu/en/publication-detail/-/publication/d3988569-0434-11ea-8c1f-01aa75ed71a1> >

In order to introduce reliable AI, the manual sets seven key requirements:

1. The human agent and subordinated to his/her supervision;
2. Technically sustainable and safe;
3. Confidentiality and data management;
4. Transparency;
5. Diversity, non-discrimination, justice;
6. Focus on environmental and public prosperity;
7. Accountability.

In order to implement the above-stated requirements, both technical and non-technical methodology has to be discussed, research and innovation to assess the AI systems should be encouraged and results made public. Besides, new generation experts should regularly be trained regarding the issues of ethics of AI.

With the view to set realistic expectations, users should be provided with clear and obvious information about the AI system.

Also, the relationship of the consumer with such a system should be public and transparent. It should be possible to check and investigate AI systems, including, in special and critical situations. Apart from the above-mentioned, raising consumer awareness about AI and its credibility should be carried out constantly. Additionally, the issue that there can always be contradiction between various principles and requirements should always be taken into consideration and in order to overcome it and then make a respective decision, they should permanently be identified, assessed and documented.

Besides, the country which works on creating and introducing artificial intelligence should definitely possess mechanisms to assess this system, which should be directed towards specific cases in which the system is used. Also, such evaluations will never be comprehensive and it should be realized that in order to develop reliable artificial intelligence systems, it is necessary to constantly investigate respective requirements and make evaluative decisions for the purpose of constant improvement of the lifecycle of the systems of artificial intelligence and respective outcomes. User involvement in the given process is essential.

3. INTRODUCING ARTIFICIAL INTELLIGENCE IN THE FIELD OF EDUCATION

The educational sector is granted the leading role in implementing reforms or introducing innovations in any direction in the country. States which have achieved significant progress in terms of digital transformation and constantly demonstrate leading positions in UN ratings, underline the fact that representatives of the academic world used to have leading roles in the planning and implementation process of any reform.²

Therefore, in order to ensure successful implementation of digital transformation and introducing artificial intelligence, it is significant to ensure readiness of the educational sector to raise awareness and transferring knowledge about this issue in this respect. Also, in the process of teaching-learning and administration of processes it is necessary to introduce artificial intelligence and ensure its adaptation to the educational system.

It is worth-mentioning that according to the strategy document “United National Strategy of the Ministry of Education and Science of Georgia - 2022-2030” N446 approved by the Decree of August 31, 2022 of the government of Georgia, “the pandemic caused by COVID-19 accelerated the speed of digital transformation, which will significantly impact the development of economy and society. It is expected that rapid development of digital technologies and artificial intelligence along with automation of processes will increase the demand for technological, social, emotional and high cognitive skills while that on physical and basic cognitive ones will decrease. In this respect, following digital transformation, what remains as a challenge is strengthening ecosystems of digital education and science as such rather than only developing these skills and competencies.”³

In the modern world AI can bring about significant benefit to both students and teachers in the field of school education.

AI has the potential of significantly transforming the educational system by means of improving the learning outcomes of students and simplifying administrative tasks for teachers.

The vision of AI in the field of general education implies creating such an efficient environment fine-tuned to the needs of the student in which teachers and “machines” jointly try to offer students best ways of learning and improving their academic outcomes.

Individual needs-based learning, improving academic outcomes, simplifying administrative tasks and access to general education is the incomprehensive list of the potential benefit which the educational system of Georgia may get as a result of implementing AI in the educational process.

² See. Singapore AI strategy, the Estonian example, UN reports.

³ The strategy document, p.20

The third generation national curriculum is being actively introduced within the scope of the general education reform at the school level in Georgia. Its aim is to establish the person-oriented environment in schools which will give all adolescents necessary knowledge and the possibility to realize their own potential. To achieve these goals, several objectives have been set, including, integrating digital technologies in the process of teaching and learning. Within the scope of the reform the Georgian language webpage of electronic educational resources was created for I-VI grade school children named: “Make the learning process digital using AI” – <https://school.emis.ge/>, which fully complies with the program of I-VI grades and its aim is to increase involvement of school children into the learning process. In the process of creating the mentioned resources, AI in the mode of “Chatbot” was used.

To align the school curriculum with each student’s need is the task hard to accomplish. For AI nothing is impossible in this respect.

AI has the ability to adapt to the needs of the student. It can focus on such aspects of assessment on the basis of the student’s behavior and academic abilities which will help him/her to improve the learning outcomes. Educational instruments operating with AI are able to adapt to the students’ individual learning style, interests and speed, which ensures individual learning experience meeting unique needs of each student.

Besides, AI is able to provide the teacher with the knowledge about how students work and what progress and challenges they have. Possessing this information, the teacher is able to define the areas the students require additional help in.

Also, it is possible to ensure accessibility by using AI in the learning process. It can make education more accessible for the students who are facing geographical, economic or other types of barriers in the learning process. With the help of online teaching platforms and learning systems having AI, students are able to get quality education from any place at any time.

In terms of teacher support, AI may appear to be the best supporter to complete school administrative tasks. One of the key priorities of AI is the ability to quickly and precisely analyze a large body of data. Teachers can use this for their own benefit.

As a rule, teachers have to manage the learning environment along with a number of organizational and administrative objectives. They also attach significant time and effort to developing tests, assessing homework, compiling necessary documents, managing learning materials, etc. AI can carry out routine work and ensure teachers free out considerable amount of time for interacting with students.

Besides, it is worth-mentioning that AI in the educational field should not be regarded as the one replacing the teacher. Despite the fact that AI may serve as a valuable tool in the teaching and learning process, it is not able to change the social bond and relations between the teacher and the student. All-in-all, best learning experience for students implies combination of cooperation between AI and the teacher.

Teachers will always play a leading role in the educational sector but this role may change with technology development. In future there will be higher demand in society for the workforce with AI knowledge. In order to prepare and ensure quick transformation of students with respective competencies and provide their employment as well as promote career potential in the technology-oriented world, it is significant to make sure they possess respective knowledge to be able to work and use AI.

Programs are relatively traditional and AI is not integrated in respective educational courses. However, in countries, where AI is developing at fast speed, the labor market has demands for higher quality towards both vocational education instructors and alumni. Therefore, vocational education colleges should quickly realize AI trends and support its development by means of reforming vocational education, developing curricula focused on labor market requirements and introducing innovative technologies.

In vocational education AI can assist in such situations which require processing of a large body of data. For example, analyzing and processing information necessary for the labor market which will enable us to define the requirements of the qualifications framework. Besides, it helps vocational education teachers to reduce time and expenses of generating and providing learning content and accelerate assessment activities, which enables teachers to understand and realize activities of developmental assessment. Besides, vocational education programs, different from high education directions, are focused more on practical skills and competences. Therefore, it is significant to adapt the role and aims of vocational education in the framework of employment prospect and following introduction and application of artificial intelligence possibilities by the employment market, re-think and adapt the role and aims of vocational education.

Enhancing productivity of current processes and involvement of parties as well as providing assistance to the working personnel (both academic and administrative) while they carry out their day-to-day duties, can turn into the key purpose of AI in respect with high education as well. Using AI with this purpose makes its use attractive in high education, especially, taking into consideration the fact that both teaching-learning and education administration are gradually becoming dependent on internet and technologies.⁴

In general, the field of education and, respectively, that of high education may be divided into two large parts:

- The process of teaching and learning;
- Education administration by the state and educational establishments on the basis of regulations defined by it;
- Provided that technologies and AI are gradually becoming a significant part of the human's everyday life and there is practically no field of public administration or public life left in

⁴ The technological platform of education as the model of innovative teaching for universities: challenges and prospects, Maia Noniashvili's dissertation, BTU, Tbilisi, 2020

which they are not integrated, EU developed regulatory acts of using AI which define purposefulness and set certain restrictions in respect with its use.

European Union developed the Artificial Intelligence Act which defines that AI systems used in education, especially, with the view of connection with educational institutions or testing/checking the level of education of individuals, is considered to be of high risk provided that they define the level of education and professionalism of the individual thus affecting their ability to protect their own means of existence. When AI systems are not properly created and used, they can violate the right of the individual to education as well as protection from discrimination.⁵

AI has the potential to change existing approaches to teaching and learning in high education. For example, it is possible to integrate AI in hybrid training courses which serves as the mixture of face-to-face and student-oriented online lectures. Use of the mentioned model enables to improve the quality of teaching, develop an individual approach to every student, create the tutor-assistant who supports the student - available from any place and save the professor's time and energy used for such routine jobs which may be substituted by the use of the smart assistant. The hybrid makes learning individual, study resources become interesting and it uses the teacher as a motivator/facilitator rather than the person who simply transfers knowledge.⁶

According to the guide of the European Commission, which has been developed for the educational sector⁷, it is defined that AI may be used for the following aims:

1. **Learning** – Tutoring systems having intellect, dialogue-based tutoring systems, language learning applications;
2. **Student/pupil support** – investigating the learning environment, checking written tasks, AI-based cooperative learning;
3. **Teacher support** – assessing written tasks according to standard tests in accordance with standard rules, monitoring of students' forums and, respectively, monitoring their needs, assisting in the learning process through "Chatbots" and other systems to reply to standard questions, by means of identifying students' needs and capabilities, selecting study and pedagogical resources;
4. **System support** - investigating educational data for resource distribution (defining levels and dividing into study groups/classes, selecting teachers, defining study and other activity charts, identifying students' individual needs), and identifying specific needs of students) and identifying specific difficulties in the learning process, ensuring orientation services by means of educating students/pupils and analyzing information encompassing interests.

⁵ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL LAYING DOWN HARMONISED RULES ON ARTIFICIAL INTELLIGENCE (ARTIFICIAL INTELLIGENCE ACT) AND AMENDING CERTAIN UNION LEGISLATIVE ACTS, Recital 35, Brussels, 21.4.2021 COM(2021) 206 final 2021/0106 (COD)

⁶ ნონაშვილი, დისერტაცია, ბიზნესისა და ტექნოლოგიების უნივერსიტეტი, თბილისი, 2020

⁷ Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for Educators, 2022

In case of using AI in the educational field, the system and its application process should be based on the following principles:

1. People support and being under their control;
2. Transparency;
3. Diversity, non-discrimination and justice;
4. Compatibility between the social and environmental conditions;
5. Confidentiality and data management;
6. Technical strength and security;
7. Accountability.

Besides, the key cornerstone and purpose of using AI with any purpose should be its supplementary function, to make people's work lighter and optimize the process. For example, the AI laboratory has been established at the university of Michigan (University of Michigan., go.nmc.org/umail). The main function of the laboratory is to create supplementary technologies for people with physical and cognitive disorders. One of the projects of the laboratory is to create the computer interface which is automatically adaptable with the needs of people having the ability to see.⁸

AI is an inevitable future which serves as the tomorrow of the civilized world. Therefore, Georgia will definitely face this reality. That's why, it is significant for the country to have a respective strategy which will clearly identify the role of the educational sector and its involvement in developing and introducing AI, including, by means of training personnel with respective knowledge and skills. "High education should traditionally train students in fundamental sciences and math and, additionally, offer them such disciplines which will develop their creative skills (soft skills). Many universities are already offering AI and machine learning courses in this direction not only to students of computer sciences but also those of business since it is essential for business administration specialists and executives to understand AI possibilities, restrictions and ways of application in the business world."⁹ It is worth mentioning that general/secondary and vocational education levels are imposed with the same role. It is significant to ensure people's readiness for AI encounter and adaptation from school level education.

Therefore, the state should care about not only in respect with public administration of education and introducing AI technologies in the process of teaching and learning but also training individuals equipped with respective knowledge and skills. Besides, it is essential to involve academic field representatives and researchers at all stages. Namely, including academic field representatives and researchers in the process of developing the AI strategy, creating the action plan and implementing it.

⁸ Noniashvili, dissertation, BTU, Tbilisi, 2020

⁹ Ibid.

4. INTRODUCING AI IN THE JUSTICE, LEGISLATIVE AND JUDICIAL SYSTEMS

4.1. AI in the justice system

Introducing AI in the justice system should be regarded as one of the priorities of the country. It is directly linked with unified strategic approaches of establishing digital governance in the country.

As it is known, the 21st century is fairly regarded as the age of digital technologies.¹⁰ The so-called “fourth industrial revolution” put into the agenda transfer of public administration models to digital governance. “According to the Law of Georgia on Digital Governance Agency” (12.06.2020), digital governance implies “Carrying out public administration by using public administration information-communication technologies”.

Practical introduction and development of digital governance is carried out according to four key directions - G2C (Government-to Citizen); G2B (Government-to Business); G2G (Government-to-Government); G2E (Government-to-Employees).

Developing digital governance with this format is related to offering various online services to the public by the authorities, such as, online services of public registration, publishing online public information, online public opinion polls, active two-way interaction between public structures and users, existence of various online services, electronic voting format, etc. ¹¹.

In terms of digital governance, the main institution of the country is the Ministry of Justice of Georgia. On the one hand, LEPL “Digital Governance Agency” and, on the other hand, public and entrepreneurial registers, houses of justice, Agency of Developing Public Service, etc. are under its subordination.

Therefore, the Ministry of Justice of Georgia and LEPL Agency of Digital Governance are the main public structures responsible for developing digital governance, which manages the main state services platform significant for digital governance - www.my.gov.ge.

Accordingly, the Ministry of Justice should develop the ethical framework necessary for using AI technologies which is achieved by creating the center for regulating AI and ethics uniting experts aiming to solve legal and ethical issues, which will be related to regulating AI and implementing the strategy in order to protect human rights, rule of law, personal data.

¹⁰ Bisen, S. S., & Deshpande, Y. (2018). The Impact of the Internet in twenty-first century addictions: An overview. In Psychological, Social, and Cultural Aspects of Internet Addiction (pp. 1-19). IGI Global.

¹¹ See. Survey - Z. Gabisonia. “Electronic (distance) submission of founding documentation of entrepreneurial and non-entrepreneurial legal entities for registration (within the scope of digital governance)“. It was prepared within the scope of the winning grant project “Supporting introduction of innovative services within the system of the Ministry of Justice of Georgia ” (№10-001-2022), Tbilisi. 2023, p. 2 . Strengthening human rights protection and enhancing legal security”.

According to the action plan of the Ministry of Justice, the creation of Just App is planned, which is the same as the “digital house of justice”. The united state application (Just App) will be created which will unite electronic services. By means of Just App, the citizen will be able to receive public services remotely using one’s own mobile phone. Therefore, using AI within the scope of the mentioned application will support citizens to receive services faster thus saving human resource and time.

It is also important to introduce AI in the justice/court system and procuracy. Introducing it in the criminal law field should be made with the view to ensure investigative activities¹².

4.2. AI in the court system

Development of artificial intelligence systems in the modern world encompasses almost all fields of the human’s social life. Introducing AI into the court system is the most recent phenomenon and based on the specific nature of the country function creates a lot of anxiety among both lawyers and the whole public¹³. A logical question arises, how should the algorithm-based AI replace the judge and to what extent the decision made by it will be fair? It must be mentioned that there are specific facts of AI-made decisions. For example, in Estonia. But, this applies only to small-scale disputes and AI has not yet been applied for criminal law cases. Before disputes are resolved by AI, there are other significant bureaucratic pieces of work to be implemented in the court which can be simply regulated by the use of the system.

Numerous pieces of investigations proved that case load/amount of cases represents one of the key challenges. This does not imply making only one decision on current cases. Before final resolution of the dispute there are various technical parts on which a large volume of human resource is spent, which serves as the impeding factor for implementing fast and efficient justice.

Along with the increase of the amount of judges, introduction of AI should serve as the significant factor. Numerous technical actions are made at the stage of case preparation before making a decision where modern innovative technologies should be introduced. The amount of cases is increasing annually. Therefore, introduction of AI in the court system will lead to faster case review and justice will become more available and efficient. At the beginning it is possible to introduce Chatbots for searching for court practice.

Besides the area maintaining proceedings, it is also possible to introduce AI in respect with preparing the reply correspondence to the requested public information and generating statistics. Any individual who has the experience of working in the court proves that collecting and sharing data serves as one of the most routine and labor-intensive activities, which can simply be managed by using the technology developed on the base of AI¹⁴.

¹² See. IDFI survey – “Application of AI systems in Georgia - legislation and practice“, 2021, <https://idfi.ge/ge/artificial%20intelligence%20international%20tendencies%20and%20georgia>

¹³ HENRY ZWARTZ, AI is creeping into the world’s courts. Should we be concerned? (28 September 2022) <https://newsroom.unsw.edu.au/> Accessed 14th June 2023

¹⁴ University of Oslo, Faculty of Law, Artificial Intelligence in the judicial system, Maintaining the independency of the judiciary power in the development, implementation, and use of artificial intelligence, page 19

Overload of court authority is a significant challenge. By using AI it is possible to create the system in which potential parties will get specific pieces of advice regarding business based on the database. It should also be noted that so far advice will be of recommendation nature, the party will be permitted not to rely on the recommendation given by AI and make a decision regarding further steps on one's own. Possible effect will be as follows: on the basis of the given advice, people in frequent cases will no longer apply to court for dispute resolution and themselves decide how to solve the issue by negotiating with the party or applying any other method¹⁵.

One of the key priorities of using AI in court may be its consistency. AI is based on the algorithm which actually excludes making different decisions in case of identical disputes. In practice, there are frequent cases when judges have made different decisions regarding two identical cases, which eventually creates misunderstanding for the party and distrust towards the court. The mentioned issue especially applies to such disputes in which participation of the judge is more of a technical nature and long-term investigation of proof is not necessary. The Columbian judge has recently made a decision on such type of a dispute with the help of ChatGPT. It concerned the autistic young age person who, as AI proved, according to the legislation of Columbia, was released from the payment of necessary treatment¹⁶.

Despite the fact that AI is still at the development stage in the court system, it will get improved further and both the public and specific specialists will have to manage it. At the moment it is the fact that AI is not able to replace the human judge, especially, in the hard category of disputes but both judges and any other employee involved in the justice process are able to use it as a supplementary system. Besides, it is significant to ensure that application of AI in the court system does not violate human rights ensured by the constitution and international treaties¹⁷.

4.3. AI in the system of the Ministry of Internal Affairs

AI is becoming a significant instrument to fight against felony. Systems of AI to be used in fighting against crime are slowly but gradually introduced in law enforcement bodies throughout the world¹⁸. AI systems may assist enforcement bodies and the police in various ways. Within the scope defined by the law, it may be used for supervision, monitoring, photo and audio analytics, risk assessment, document production, etc.

¹⁵ Reiling, A. D. (Dory), Courts and Artificial Intelligence (November 24, 2020). A. D. (Dory) Reiling, 'Courts and Artificial Intelligence' (2020) 11(2) International Journal for Court Administration 8. DOI: <https://doi.org/10.36745/ijca.343>, Available at SSRN: <https://ssrn.com/abstract=3736411>

¹⁶ R. Sai Spandana, AI and the Law: A New Era in the Justice System? (25th February 2023) <https://www.scobserver.in/> Accessed 14th June 2023

¹⁷ Fuso Jovia Boahemaa, the impact of artificial intelligence on justice systems (Paper N 25 a.a. 2018/2019) Page 10

¹⁸ INTERPOL, UNICRI, Responsible AI Innovation in Law Enforcement AI Toolkit, Introduction to Responsible AI Innovation, Page 11

It must be mentioned that AI possesses the potential to assist law enforcement bodies to detect and prevent actually all types of crime.

AI-based face recognition is one of the most significant technologies of fighting against crime. With the help of this technology identification and detention of criminals is carried out in public spaces, such as, malls, airports, railway stations¹⁹.

Police activities both in Georgia and the whole world are followed by documents, i.e. paperwork. The mentioned activity requires much time, which may easily be used by the police officers for maintaining people's security on streets. With the help of AI, it is possible to collect documents automatically and the police officer will just how proper and correct collected documents are using minimum time. Besides the fact that the above-mentioned technology will minimize the time to be used by the individual, it will also let us avoid human errors made in the working process²⁰.

By means of the AI system it is also possible to analyze a large body of text and audio data. This technology can be used to identify, process and take out a significant piece of information from textual and voice material. With the help of the algorithm it is possible to identify such details as location, specific name and surname of the person, even forecasting further words in the text.

The system of AI can also be used for exchanging information rapidly among police departments. Printed documentation accumulated throughout years which is kept in the store rooms of police departments may be shared in the shortest timeframe with the help of technologies which will enable time-saving in the working process, more transparency and rapid spread of information.

AI may also be used in distance monitoring and inspecting. For example, with the help of drones it is quite possible to check the places where physical presence of the police officer may lead to high level of threat. Research has already been conducted in this respect at universities of Maryland and Zurich where special cameras and sensors were attached to drones which identify the items thrown to it and avoid them successfully²¹.

AI may be used for law enforcement bodies to create the texts with specific content or visual materials. Based on investigation aims, with the help of AI it is possible to create a computer profile which has its own data, photo, etc. This profile may be used for communicating with the criminal group with the view of its further exposure.

Based on the fact that fighting against criminals serves as the important challenge in the 21st century, AI-based technologies may play a significant role. Mentioned technologies may not only identify criminals but also forecast them. However, basic human rights should be protected and guaranteed in the given process. Also, it should be rational and transparent as much as possible.

¹⁹ INNEFU, How Artificial Intelligence In Policing Helps Crime Detection <https://www.innefu.com/> Accessed 14th June 2023

²⁰ How Will Artificial Intelligence Affect Policing and Law Enforcement? (March 23, 2023) <https://www.aipplusinfo.com/> Accessed 14th June 2023

²¹ Ibedim <https://www.aipplusinfo.com/> Accessed 14th June 2023

4.4. AI in Procuracy

Law enforcement bodies, including, procuracy, may fight against crime and make investigation more rapid and efficient using AI technology. For example, using artificial intelligence technology it is possible to identify criminals fastly, forecast behaviors deviated from the legislative norm, inspect and investigate the crime scene, monitor illegal monetary means, etc.²².

By means of refined AI technology it is possible to correlate with another crime and detect it by identifying the weapon, photo and audio material extracted from the crime scene with respective indication. With the help of AI today it is possible to track suspicious containers and transportation, which is frequently related to drug trafficking and illegal human trade, trafficking.

To better fight against and prevent crime, AI uses data which will help procuracy and legislative bodies to better analyze crime statistics, react to threats and forecast hot crime scenes.

This specific field of forecasting crime by means of AI technologies is largely dependent on the quality and genuinity of data entered into the system as well as respective algorithms in order to prevent biased and false outcomes.

Provided that AI systems are designed by the people, the risk of bias is extremely high which, eventually, leads to undesirable outcomes, such as, violating the right to private life, criminal responsibility and damaging personal reputation. It is vitally significant to develop the regulatory framework for regulating such type of technology²³.

Procuracy can use AI for making certain aspects of criminal justice automatic. For example, analyzing a large body of data. This will enable procuracy to quickly identify samples of criminal activity and develop more efficient strategies for crime prevention.

AI-based systems may be used to analyze proof and ensure a more precise forecast of the probability of repeating crime.

With the help of the AI algorithm, by the sound of the shot gun existing on the audio material it is also possible to identify how many potential criminals were present at the crime scene and what kind of a gun was shot. Technology also allows to create the algorithm which will process expert conclusions accumulated throughout years and with their help simulate and reconstruct the crime scene²⁴.

Using forecast algorithms which analyze human biographical data, including, age, sex, marital status, narcological and criminal history will be extremely useful in procuracy in order to determine who may commit a crime in future. On the basis of analyzing the given information, it will be possible for law enforcement bodies to react before the crime is committed.

²² Artificial Intelligence Adoption in Law enforcement <https://roxanne-euproject.org/> Accessed 15th June 2023

²³ Marcin Frąckiewicz, The Pros and Cons of Artificial Intelligence in Criminal Justice (11th May 2023) <https://ts2.space/> Accessed 15th June 2023

²⁴ Judge Herbert B. Dixon Jr, Artificial Intelligence: Benefits and Unknown Risks <https://www.americanbar.org/> Accessed 15th June 2023

5. INTRODUCING AI IN THE FIELD OF FOREIGN AND SECURITY POLICY IN GEORGIA

Rapid development of digital technologies and experience gained as a result of pandemic at the international and national levels clearly demonstrated the need of introducing AI in the process of foreign and security policy implementation. Following two new forms of modern diplomacy - digital and cyber²⁵, it is possible to state that developing the innovative diplomacy service of Georgia implies an even more significant identification of the role of information and communication technologies, namely, AI, especially, given the fact that according to the resolution of December 25, 2020 of the parliament of Georgia on Foreign Policy, for Georgia, as the regional hub to connect East and West, it is of priority to develop its role and function in respect with the digital field. According to the foreign policy strategy of Georgia, introduction of modern technologies and innovative programs will support development of electronic governance at the Ministry of Foreign Affairs, including, in terms of the system of managing high rank events.

Respective utilization of digital platforms and creating virtual embassies and consulates will give the Ministry of Foreign Affairs of Georgia the possibility to have its own representation in any country of the world. It is essential to introduce distance automated approaches among the representatives of presenting and residence states with the view of carrying out foreign policy aims and objectives. This is exactly the process in which the significant function of AI is identified, which implies the conception of developing digital cooperation and ensures continuous contact with the country of presence without taking into consideration the time factor. Besides, borders notwithstanding, with the help of AI it is possible to communicate virtually with various types of the audience and constantly provide information about priorities of Georgia's foreign policy, history and culture. This will support better introduction of Georgia's foreign policy agenda in the digital space to the wider audience and representing the country respectively with less expenses.

As for consular relations, it is possible to introduce the "Chatbot Consul" mechanism. Namely, taking into consideration specific nature of consular relations, it is possible to render continuous consular services in the online format and introduce automated approaches in the process of rendering consular services.

At the background of growing challenges and threats facing the security system, processing of big data should be carried out in a timely manner, which is an essential precondition for destructive actions. Security field analysts often find it difficult to quickly provide decision-makers with information about the development of events according to possible scenarios. Therefore, introducing AI in the field of security will support information processing using an automated approach in the short period of time and preparing respective conclusions. With the help of AI it is possible to identify in timely manner

²⁵ Khatuna Burkadze –"Drifting Towards Digital Foreign Policy", The Fletcher Forum of World Affairs, USA, Volume 45:2, 2021, pp.75-88.

characteristics of threats, detect them and define preventive and restricting mechanisms to overcome them proactively as well as instruments to efficiently respond to challenges.

6. INTRODUCING AI IN THE AGRARIAN FIELD

Development of the agricultural sector of Georgia is given significant importance for sustainable development of the country and growth of inclusive economy. Therefore, achieving social-political consensus on the basis of seeing the prospect, utilizing the existing potential and using them purposefully are vitally important for developing and implementing the policy focused on competitive production of the agri-sector and its digitalization.

Based on the forecast of UN Food and Agriculture Organization, World Farmers Organization (WFO), International Food Politics Research Institute (IFPRI) and Georgian Farmers' Association (GFA), balancing the growing trend of food use with its production dynamics is significant, which should comply with the sustainable development goals of integrating modern and digital technologies. Since 1983 defining food accessibility determined initiation of such programs in especially vulnerable countries, which were focused on the following:

1. Formulating and managing comprehensive food accessibility policy;
2. Establishing the legislative base of local food production and use;
3. The process of developing the policy and strategies of encouraging small and medium size farmer economies and food safety with the involvement of women farmers.

Despite exiting initiatives, COVID-19 pandemic and later on Russian-Georgian war completely changed the agenda of not only the agrarian sector but also the process of industrial manufacturing. Instead of having monopolist manufacturers the initiative stated at the Qatar economic forum accelerated the process of sectoral decentralization.

Agrisector is faced with numerous challenges these days. Various opinions and pieces of research exist about overcoming them in both political and academic settings which demonstrates that this issue is actual. In the whole world, including, Georgia, the issue of food safety and security is highly actual. To alleviate poverty and ensure food safety, economic growth of the agri-sector is 2-3 times efficient compared with other fields of economy. Therefore, developing agri-politics focused on the sector enhancement and ways of overcoming existing challenges is an essential component for getting out of the post-pandemic situation. Development of digital technologies and means of communication turned prospects of integrating digital technologies in the agri-sector and simplifying processes of planning agri-business by means of AI an inevitable necessity.

The issue of food safety in Georgia is further deteriorated by several key factors in the sector:

- No definition of a farmer;
- Small-scale land (land fragmentation) and natural (not market) economy;
- No elevators and silos (depositories);
- Difficulty to access financial capital;
- Non-prestigious status of field-specific education and shortage of specialists;
- Low dynamics of introducing modern technologies in the agrarian sector;
- Inflexibility and unavailability of agrarian insurance;
- Other social-economic challenges which are characteristic to the countries in the transition period.

Focusing on only physical and economic availability in the definition of food safety does not reflect the depth of the problem which in fact lies not only in vulnerability of availability but also such food characteristics as: quality, safety and tracking. Out of the mentioned components any may become the target of not only special services of hostile countries but also internal and external trade competitors. The demand on food safety is gradually increasing in Georgia. This is supported by the growing trend of the tourism sector which is reflected in the increase of the demand on local production. Creating the Georgian standard on the basis of private/personal initiative (Association of Georgian Farmers) and digitizing it demonstrates the importance of food safety and supports the development of the issue. Standard “Geo Gap” is adapted to local circumstances and legislation and developed on the basis of the international standard GLOBAL G.A.P.

AI actually possesses the potential to transform actually all working or business processes for the benefit of traditional approaches of management and is widely used in the agricultural sector. Namely, automated water systems, sensor appliances, self-driven tractors, etc.

As a result of empirical observation and expert opinion poll (at the level of the state, international donor organizations, sectoral and field-specific associations and independent experts), discussing the issue in the non-traditional paradigm has demonstrated prospects and opportunities of the sector.

Integrating AI into the process of primary production in the agricultural sector and planning direct practice (getting recommendations without laboratory tests of the soil/land) is the first precedent at not only local but also international levels. With the help of the above-mentioned technological provision it is possible to overcome one of the main challenges. Namely, reducing low-productivity index in the overall dynamic of the agricultural sector of Georgia. Forecast regarding the fact that consumption of food will increase up to 70% by 2050 to solve the challenge in the research process was defined by the possibility to integrate AI in the agrarian sector.

Key challenges of integrating AI in the agri-sector are:

1. “Having no historical data”. Having no records in primary production of data prevents collection of big data and decision-making based on this data with the view of both developing the sector and forecasting;
2. Having no state and international programs in respect with integrating modern and digital technologies in the agricultural sector;
3. Low level of trust towards modern and digital technologies (including, AI) among farmers;
4. Low level of business involvement in the issue of transferring modern and digital technologies in the agri-sector.

Today, based on agricultural-historical data and theoretical and technical assumptions, it is possible to use/integrate the put-together AI algorithm in the process of starting the agribusiness production cycle, namely, the first stage of planning at the regional as well as municipal and in some cases rural levels in Georgia (admittedly, there is a substantial difference of the soil and climate in Georgia not only at the municipal level). At this stage only 15 products are available in the system which serves as quite a limited indicator in respect with developing the sector and reducing AI margin of error. Therefore, it is essential to install agricultural-meteorological stations at the municipal level and collect data.

The issue of big data and processing it using AI in the process of developing the policy of managing food reserves and issuing in-depth recommendations is an inevitable necessity in the context of developing the sector.

Modern world countries as well as those having high technological approaches in the agricultural sector, are trying to increase productivity and manage food produce reserves by means of strengthening modern and digital technologies, i.e. “Agritech”. Therefore, it is essential to achieve the public-political consensus through developing/implementing the policy of digitalizing the agri-sector and initiating the “Agritech” strategy.

In case of imposed integration of AI in the agricultural sector, it will be possible to do the following along with activating the above-mentioned initiatives:

1. Collecting exact data about the land soil, climate, local production, import, export and other significant factors and creating the unified database;
2. Forecasting, planning and massive spread of respective recommendations based on big data by means of the AI algorithm;
3. Increasing the production coefficient and systematizing the agricultural sector;
4. Ensuring youth involvement;

5. Distributing resources properly and simplifying the agri-business administration.

7. INTRODUCING AI IN THE HEALTHCARE FIELD

Lack of availability of medical services serves as the main challenges in the Georgian healthcare system in villages and regions (due to asymmetric distribution of medical personnel and lack of doctors of certain fields in the system). To be more specific, in a whole number of regions non-existence of highly qualified specialists makes the population living in the periphery arrive to Tbilisi and other big cities to consult the doctor which is related to additional time and financial expenditures.

One of the key reasons of increasing healthcare expenditures is increased cases of chronic diseases, such as, diabetes, hypertension, cardio-vascular diseases. The country's primary healthcare system and the family doctor institution are not powerful which, respectively, does not ensure the patient's adequate therapeutic education and respective management of chronic diseases.

Therefore, the main aim to introduce AI in the healthcare field is to increase access to medical services for population living in regions and improving management of chronic diseases.

In order to achieve the given aim, it is necessary to expand the application of tele-medicine. Namely, introducing use of multi-functional machines/apparatuses of telemedicine in villages and regions in both in-patient and out-patient cases. Besides, it is necessary for emergency medical services to use tele-triage. Using telemedicine in primary healthcare leads to a positive outcome in different directions, its introduction enables reduction of the need for first aid, which, according to international data, reduces the amount of hospitalized cases and their expenditures by 30%.

Using AI for healthcare industry is beneficial in terms of several directions. 1. **Financial benefit** – the indicator of detecting fraud with the help of AI increases and managing suits/cases gets improved; 2. **Operational** – using AI assistants along with existing practices reduces time of doctors at the expense of automating various processes. Respectively, the time of communication of the doctor with the patient and satisfaction increase; 3. **Clinical** – treatment outcomes get improved and the amount of critical cases, such as, hospital infections, sepsis, rehospitalization, reduces. For example, sepsis is diagnosed on the basis of clear severe damage symptoms while with the help of AI it is possible to forecast the development of sepsis several hours before on the basis of routine vital data and patients' histories. By using AI, on the basis of analyzing patient data and histories, it is possible to prevent hospital infections. According to international data, the mentioned infections are the cause of 40 % of mortality of hospitalized patients. Diagnosis is traditionally made post-factum while by using AI it is possible to identify patients with high risk in advance, manage them in timely manner and provide respective treatment. In the above-mentioned cases, not only the clinical outcome and health condition of the patient gets improved but it also becomes possible to carry out the process cost-efficiently (avoid extra laboratory investigation, etc.).

In order to efficiently manage chronic diseases, patients' therapeutic education and self-control are key. Scientific research proves that AI-based chronic disease assistants, using various applications along with tele-medicine, improve health condition of patients with chronic diseases, treatment outcomes and quality of life. Namely, identifying the patient's motivation and self-control degree by means of AI. Respectively, the automatic functions of reminder and diverting to the necessary field specialist will support the patient's timely referral to the required specialist and improve treatment results.

Mentioned technologies make it possible to ensure coordinated operation of the multi-disciplinary team with the view of achieving the patient's best outcomes and creating the patient-oriented healthcare model. Besides, it is successfully used with the view of educating the patient and his/her family members (especially, parents of children with chronic diseases).

AI will be used in healthcare with the view of strengthening doctors, especially, in the field of primary healthcare. This will help doctors to manage a larger amount of patients and implement personalized approaches which itself reduced the risks of complications. AI will be used in analyzing radiological or other types of images and audio recordings (of heart tones and lung auscultation collected by means of the tele-medicine equipment) and forming the presumable diagnosis. This is significant not only personally for the patient but also the state which is given more opportunities to define the healthcare policy and strategy on the basis of constantly updated data and statistics.

Besides, it is worth-mentioning that AI technologies having especially high importance in the healthcare field are:

Machine learning – by doing so it is possible to create personalized treatment protocols for patients (by analyzing the patient's medical history, current symptoms and other factors, the GPT-based system may create an adapted treatment plan, which envisages specific needs and preferences of the patient). This may be especially beneficial for complicated patients or those with rare conditions who require a special course of treatment.

Physical robots – surgical robots which have been used since 2000 and support the field of surgery in respect with making exact and minimal invasive cuts, putting seams, better quality vision and flexibility.

Automation of robotic processes – in healthcare this technology is used for preliminary authorization, updating patients' medical histories and developing payment documents.

Natural language processing – is used for the purposes of decoding the conversation, analyzing the text, translating and other ones related with the language. In healthcare it is used for analyzing clinical documentation and published research as well as preparing radiological investigation reports, etc.

Rules-based expert system - throughout the last twenty years this technology has been widely used in healthcare with the view of gaining support of making clinical decisions.

8. INTRODUCING ARTIFICIAL INTELLIGENCE IN THE PUBLIC FINANCE SECTOR

Throughout recent years the issue of using AI in the public finance sector has been widely discussed. More specifically stated, with the view of improving efficiency, preciseness and transparency in financial transactions. Below are given several directions in which potential positive sides of AI are given in the finance sector.

Simplifying financial processes

AI technologies are able to significantly simplify financial processes in the public sector. Automation of routine tasks, such as, inserting data, processing invoices and salary management may reduce human error and free out precious time of professionals to enable them to focus on more complicated and strategic activities. AI-based program provision may analyze a large amount of financial data, identify significant information and create interesting reports to simplify and aid the decision-making process. As a result, financial planning may improve, the budget may be distributed efficiently and resources may be properly used in government entities.

Detecting fraud and improving its prevention

The public finance sector is vulnerable towards fraudulents actions, which cost governments and tax payers billions of dollars annually. AI is able to play a crucial role in identifying and preventing fraud by means of analyzing a large body of financial data through defining anomalies and doubtful actions. Machine-learning algorithms are able to constantly study from historical data to detect new fraudulent schemes and adapt in accordance with their models. By using the system of detecting fraudulent schemes working based on AI, governments can proactively detect and prevent actions, protect public means and retain public trust.

Improving revenue forecasting and tax compliance

Precise forecasting of revenues is essential for efficient financial planning and distribution of resources. AI algorithms may analyze economic indicators, historical data and demographic tendencies to more precisely forecast revenue flows. By identifying potential deficit of revenues or their surplus amount, governments can make informed judgements regarding tax policy, expenditure priorities and investment strategies. Besides, AI-based systems may support tax compliance by making tax declaration processing automatized, identifying potential discrepancies and marking suspicious activities, which will lead to the increase of tax collection and reduction of tax evasion.

Risk management and financial governance enhancement

Governments face numerous risks in managing public finance, including, economic fluctuations, market instability and compatibility. AI is able to assist in managing risks by means of making complicated financial data analysis and identifying potential risks and insecurity in real time. By monitoring and analysis of financial transactions, AI systems are able to detect violations and unusual samples which may indicate fraudulent actions or non-compliance. This enables public entities to take proactive measures to reduce risks, enhance financial governance and ensure compatibility with regulatory frameworks.

Improving citizen involvement and service provision:

AI instruments and platforms can enhance citizen involvement and improve provision of services in the public finance sector. “Chat bots” and virtual assistants can immediately respond to the questions of citizens regarding taxes, state subsidies and financial programs. Besides, AI-based analytics can ensure personalized financial advice and recommendations which gives citizens the possibility to make informed financial decisions. By using artificial intelligence governments may bring in more transparency, trust and availability into their financial operations.

Forecasted analytics for economic policy:

With the help of AI it is possible to forecast the issues related to economic policy. By analyzing various economic indicators, demographic data and market tendencies, AI helps policy makers to more efficiently envisage and cope with economic challenges, such as, inflation, unemployment and market fluctuations.

Improving public procurement:

AI is able to simplify and optimize processes of public procurement, which will lead to improved efficiency, saving of expenditures and reduction of corrupt risks. AI algorithms are able to analyze historical data of procurement, supplier compliance and market dynamics in order to provide recommendations about negotiations of selection, pricing and contracts. Systems operating with AI can also make monitoring of procurement transactions automatized in order to discover fraud or non-compliance with regulations.

Financial analytics in real time:

AI technologies are able to carry out financial analytics in real time which will enable governments to monitor and assess financial health of public establishments, programs and projects. AI algorithms are able to analyze financial data, compliance measurements and KPIs. This enables public servants to make decisions on the basis of data, define areas of improvement and ensure accountability and transparency of financial management.

9. INTRODUCING AI IN THE TOURISM FIELD

Development of AI made significant changes in the tourism sector as well. For Georgia, as the growing tourism country, using the full potential of AI possibilities gains special importance in respect with increasing awareness of Georgia and improving service quality.

The main agency responsible for developing tourism in the country, National Tourism Administration, should play the key role in supporting introduction and development of AI in the tourism field. At the moment, approximately 70 % of the budget of administration is spent on marketing of the country. In the circumstances of increased competition and limited resources, use of AI plays a crucial role in increasing the country's awareness. With its help it is possible to significantly optimize resources by means of better adapting marketing activities to the target audience. With the assistance of big data analytics (preferences of tourists, historical data of travelling and analyzing social media) it is possible to offer visitors personalized routes and recommendations. This will promote distribution of tourist flows in the country and reducing seasonality.

Besides, "Chatbot" and the function of the virtual assistant may be added to the main marketing platform of the country www.georgia.travel which will enable the tourist to save time and energy when planning the trip in Georgia and assist the administration to offer the tourist continuous service fit to his/her interests.

It is also possible to introduce the AI-based virtual tourist guide in tourist information centers throughout the country, which will provide visitors with detailed information about places or routes with the help of natural language processing (NLP) and tourist preferences analysis. By merging AR technologies and artificial intelligence it is also possible to reconstruct historical events and add interactive elements to information centers.

It is desirable for tourism administration to support introduction and development of AI-based application in tourism and hospitality industry together with other state entities (Georgian Innovation and Technologies Agency and "Make in Georgia") with the help of special grant programs. For example, in case of the hotel, AI can play a significant role in increasing operational efficiency by means of automation (check-in; check-out processes, components of cleaning and room service). Management of AI-based smart room systems (temperature, light, means of entertainment) with the help of the assistant or mobile applications is becoming popular day-by-day. AI also assists hotels to define the price-setting policy, adapt marketing campaigns to the specific consumer segment and managing revenues. The "Chatbot" enables the hotel to more rapidly and efficiently respond to the requirements of hotels 24/7 and by doing so increases their satisfaction and reduces employee workload.

Using artificial intelligence will lead to significant benefit for the field of aviation as well. By introducing the AI based technology of identifying and recognizing the face in Georgian airports it will be possible to quickly identify passengers. With the help of machine learning algorithms security personnel will identify threat-containing passengers (based on their behavior) and react rapidly and efficiently. AI can also be used in air navigation, planning routes and air space management.

10. OTHER COMPONENTS TO BE ENVISAGED IN THE STRATEGY.

The possibilities and the potential of AI is accompanied by certain challenges and risks which are to be studied and ways of overcoming them should be defined.

At the background of transforming the workforce and employment markets, change of employer requirements should be taken into consideration in the prism of skills and competences of employees as well as the readiness of consumers and the public to introduce and use AI (readiness implies both raising awareness about AI capabilities and development of respective competences and skills of consumers), financial and political readiness of the state in the process of creating, introducing and developing AI. The latter is especially significant since introducing digital AI requires respective financial resources.

Therefore, in the process of developing the strategy it is essential to implement an in-depth survey about the need, readiness and long-term perspective application of AI.

Respectively, AI should exactly define those steps and stages according to which AI will be introduced in various areas of state and public life.

Besides, it is essential and significant to cooperate with and share the experience of those countries which already have similar strategies and possess instruments and means of their implementation. Such cooperation will save a significant part of resources.

11. CONCLUSION

The document develops the field-specific approach to introducing artificial intelligence. To be more specific, the work clearly illustrates possibilities of AI according to a number of key and priority directions. It involves those productive initiatives and instruments which will promote proper use of I at the state level. Besides, the document is based on the conception of AI as the conception of introducing the supplementary system which should not contradict human rights and norms of ethics. It should serve as the supporting mechanism for the employee to carry out one's functions in a timely and efficient manner. The process of improving AI systems should fully correspond with interational standards of protecting human rights.

Besides, the document envisages challenges following artificial intelligence and in order to identify the ways of overcoming them focuses on the essentiality of developing respective strategic approaches. This should be based on international experience, flowing from the special nature of the digital world which is not limited by specific geographical and political borders. Therefore, this setting requires respective analysis of risks along with opportunities and defining legilstaive limits together with the strategic framework. The given process will support protection of AI systems and ensure evading their use for dishonest purposes.

Finally, guiding principles developed for the National Strategy of Georgia on Artificial Intelligence are significant not only in the context of introducing AI but also in respect with the country's digital policy definition and implementation. This is especially important since AI is considered as the efficient instrument to develop digital governance.

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