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Contribution by the Russian Federation

to the CSTD 2024-2025 priority theme on "Diversifying economies in a world of accelerated digitalization"

PRIORITY THEME 1: Diversifying economies in a world of accelerated digitalization

1. **What are the specific challenges your economy is facing to develop or adapt frontier technologies and AI?**

The National Strategy for AI Development 2030, approved by the Presidental Decree № 490 on October 10, 2019, (version dated February 15, 2024) «On the Development of Artificial Intelligent in the Russian Federation», addresses the challenges of developing and rapidly implementing AI technologies in Russia. This Strategy is a key document that determines the direction of AI developmet in the country.

The following factors present challenges for the development of AI in Russia:

a) a lack of computing power and a low level of development of national AI technologies, including software and hardware complexes as well as an electronic component base;

b) a low level of implementation AI technologies in governance;

c) the requirement in high-quality personnel and innovations in AI technologies;

d) a lack of human resources to provide widespread implementation of AI technologies;

e) need to increase financial support for actors, involved in AI activities. A low-level of private investment for their development. This is also neccesary at the stages of venture financing, concept development, research, testing and the exploitation of AI technologies;

f) legislative barriers that make it difficult to implement AI technology in a particular area of of economy, including a lack of methodology for supplying AI systems with reliable data;

g) need to ensure the security of personal data and other confidential information, as well as objects of intellectual property in the context of creating and training AI models;

h) a limit of access to AI technologies due to unfair competition from unfriendly states and taking unilateral restrictions;

i) the emergence of new types of threats to information security in the context of of creation, development and implementation of AI technologies, that differs from other aspects of implementation the information and communication technology ;

j) additional international restrictions present a challenge to the sustainable development of AI in Russia, for instance, those imposed by actors from unfriedly states.

2. **Can you provide successful examples of AI and other frontier technologies uptake in your country?**

The successful implementation of AI technology is mainly seen in municipal services

and healthcare. The following examples are presented below :

a) The Smart transportation system for traffic management in Moscow. Its implementation can reduce trafic congestions by 50% and the number of accidents by 30%.

b) The Smart Driver Condition Monitoring System. The system utilizes more than 60 data points on the face to monitor driver conditions. Totaly the neural network uses more than 10 parameters to assess the diver's state, including the freaquency of blinking, position and turning of the head, general facial expressions and other features. Once fatigue or sleepiness is detected the system alerts the driver of a dangerous situation to prevent an accident. Simultaneously, the system transmits the information to 24/7 data acquisition center for further analysis.

The implementation of the system can reduce the number of passengers accidents in public transportation by 26%, reduce expenses related to repair and downtime of transportation by 65%, and reduce the number of accidents caused by the human factor by 85%.

c) The unified Smart Monitoring System for Security. The implementation of the system can integrate existing video monitoring sources into a unified platform that simultaneously provides the ability to conect algorithms for video analysis from various developers. The system aims to monitor and investigate criminal activity though the use of face recognition technology, and to search for traffic and pedestrians movements.

As a result of implementation the system, wanted individuals have been located and apprehended, including in 45 cases in the federal investigation; the system has an accuracy rate of at least 70% in identifying individuals and vehicles through photo searches.

d) The «Smart Schedule» System for Educational Institutions. The system assists with creating a schedule that takes into account the demands of educational programs and the requirements of students. It optimizes the utilization of classroom resources and teaching personnel based on accessible data. This considerably enhances the efficacy of the educational process and provides a comfortable environment for studying and teaching within an educational institution. The system utilizes data from the regional education information system as its source of data when arranging the schedule.

The implementation of the system has provided a reduction in labor costs by 13.3 thousand man-days per year, as well as financial savings of 15 million rubles per year (based on the average salary in the region).

e) The System for improving the effeciecy of medical examination of the population. The medical information system is integrated with the Webiomed medical decision support

system for automatic analysis of electronic medical records. Webiomed accepts data in a depersonalized form, then verifies and analyses the information. The system identifies potential risks and signs of possible diseases, and forms personal recommendations for the doctor and patient based on a database of clinical protocols.

The implementation of the system has reduced the processing time of medical data by 10 times, as well as increased the accuracy of identifying high-risk patients by 7 times.

f) Electronic services for interaction with medical institutions and with Multifunctional Centers (MFCs).

3. Has your country put in place inclusive policies for innovation and economic diversification specifically tailored to diffusion of digital technologies and AI?

The policy of rapid implementation of digital technologies and AI in the economy and social sphere has been consistently realised in Russia. In this regard, the relevant legislative frameworks have been adjusted, other regulatory measures have been developed, and experimental legislative regimes have been launched.

The Federal project «Artificial Intelligence» is implemented at the government level as a practical instrument for regulating the implementation of the provisions of the National Strategy for AI Development 2030. It defines the range of measures and the responsible organizations for the development of the AI ecosystem in the country. Regulatory frameworks for technological development are also supplemented by the decrees of the President and orders the Government of the Russian Federation.

In addition, the country is developing an ethical framework of AI. In 2021, the Code of Ethics in the sphere of AI was adopted at the national level, promoting a human-centric and responsible approach to the development and implementation of AI. More than 390 organizations (including 28 from abroad) have already joined the Code.

Experimental legal regimes (EPR) help to expand the scope of AI applications. This mechanism allows testing advanced technologies in a certain area in accordance with special regulatory standards. Currently, 14 EPRs have been approved in the field of operation of unmanned aircraft systems and unmanned vehicles, as well as in the field of healthcare.

4. Do you have examples of policy instruments in place to favour the diffusion of frontier technologies in the economy and targeting specific sectors?

Decrees of the President of the Russian Federation should, first and foremost, be considered as the political instruments for disseminating of frontier technologies. The

following tasks of the decrees emphasize the dissemination of AI among various sectors of the economy and relevant parties:

to ensure that the National projects and the Governmental programme of the Russian Federation are amended to provide for implementation of AI technologies in every sector of the economy and social sphere;

to establish neccessery requirements for enhancing the efficiency of activities of economic entieties and for their necessery use of up-to-date technologies by them, including AI technologies, while providing subsidies from the federal budget;

to ensure the development of large generative models and their implementation into key sectors of the economy, providing a mechanism for the application of these models by organizations operating in these sectors to improve labor efficiency;

to ensure with the participation of state-owned corporations and institutions the adjustment of their digital transformation policies in oder to rapidly implement of AI technologies in their activities;

to ensure implementation of measures aimed at transitioning the system of government at the federal and regional levels to a model of governance based on automated data collection and analysis utilizing information platforms;

to ensure adoption of the most effective practices in the implementation of AI technologies within the constituent territories of the Russian Federation.

5. Has your country put in place mechanisms to strengthen industrial capabilities through partnerships among different stakeholders (e.g., university-industry, or private-public)?

A unified ecosystem of collaboration in the field of AI has been established in Russia, covering the entire range of AI technology development, from basic research through to final implementation in the economy.

For instance, based on leading educational institutions and scientific organizations in Russia, there are 12 AI research centers that receive support from the Government of the Russian Federation. These centers are engaged in fundamental research tasks such as training neural networks with less data, improving the speed of machine learning calculations, and developing new learning methods. Additionally, they collaborate with 40 Russian industrial companies to implement applied projects in industry.

There is also the AI Alliance Russia, which comprises 11 major compainies that launch their own innovations and actively implement them. The government works closely with these leading organizations, through government agreements, in order to create a

favorable environment and stimulate mechanisms for accelerated technological development.

In various regions of Russia, technoparks and innovation clusters are being established and actively developed. These are platforms for collaboration between universities, research institutions, startups, and large corporations. An example of this is Innopolis, which is a special economic zone in the Republic of Tatarstan that hosts several technoparks.

Every year, various events are organized for representation of technology companies, universities, scientific institutions, and governmental authorities. These events provide an opportunity for participants to exchange experiences, showcase new developments, and establish connections between business and academia. Among these events, the following stand out: the St. Petersburg International Economic Forum (SPIEF) and the Easter Economic Forum (EEF), the International Russia EXPO, the Design and Education Intensive «Archipelag», the Young Scientists Congress and others.

6. **How can international cooperation support the uptake of new technologies and the development of technological capabilities in your country and ensure that industrial policies will benefit all and do not worsen inequality?**

Russia is steadily strengthening its position both at the international level and with international organizations that establish policies and standards in sphere of AI, including the UN, the G20, the Shanghai Cooperation Organization, the Eurasian Economic Union (EAEU) and others.

The implementation of the National AI strategy 2030 aimes to promote the development of international scientific and technological cooperation with relevant parties, establish open data repositories, expand international cooperation in the sphere of education related to AI technologies and develop joint programs for higher education and advanced vocational training with foreign partners.

One of the tracks focuses on the international cooperation in the sphere of legislative, ethical and technical regulations. It is envisaged that the continuation of sharing experience on establishing national AI policies with other countries as well as the development of a unified system of ethical priciples in AI will take place.

7. **What can do the UN CSTD to support an economic transformation that enhances your country productive capabilities and foster an inclusive digital transformation?**

The CSTD should seek a solution within the UN system regarding the unacceptable imposition of restrictions on cooperation in the sphere of AI, as well as ensuring the delivery

of relevant technologies and components for its development. It is also necessary to ensure adjustment of constructive partnerships among all stakeholders in order to overcome the digital divide and provide equal and ensure non-discriminatory access to AI technologies for all states.

It is essential to depoliticize activities and promote the scientific diplomacy and ongoing cooperation in order to find joint solutions to global challengies. At the same time, the discrimination against scientists on the basis of their nationality, race, religious beliefs or political views is unacceptable.

In order to ensure unhindered international cooperation in the sphere of AI, the CSTD can facilitate information exchange among countries on up-to-date solutions in ICT and AI technologies, promote at the international level the values and principles of providing equal rights and opportunities for the development and implementation AI technologies. Additionally the CSTD can support policy and standards among stakeholders, ensuring equal access for developers and consumers of AI technologies to markets and resources.

The CSTD can provide technical expertise and consultations for the development and implementation of the national strategies for digital transformation and innovation growth, as well as facilitate the establishment of a legislative framework to support digital initiatives. The CSTD also can assist in development of politicy measures and asses needs in terms of relevant infrastructure. In addition, CSTD can facilitate the organisation of scientific research in the sphere of the ICT, AI and other key technologies.