**A biweekly newsletter on AI and autonomy developments in Russia**

*CNA Russia Studies Program*

# HIGHLIGHTS OF ISSUE 39

- The Russian government has shut down the Subcommittee on AI within the Government Commission on Digital Development.

- A combat version of Oralan-10 drone introduced in Ukraine conflict and Ratnik's future uncertain despite leadership goals.

- The Competence Center of the National Technology Initiative at MIPT published an almanac, stating that the Russian AI market increased 28 percent in volume at the end of 2021, to amount to 550 billion rubles.

- Russia continues to develop new technology- and AI-centered educational programs at universities across the country.

- Numerous measures by the Biden administration exacerbate brain drain from Russia, as US Visa requirements for tech professionals lessen.

# THIS WEEK'S CONTENTS

# GOVERNANCE AND LEGISLATION

## RUSSIAN GOVERNMENT SHUTS DOWN THE SUBCOMMITTEE ON AI

**An article on May 14 reported that the Russian government has decided to abolish the Subcommittee on Artificial Intelligence within the Government Commission on Digital Development.** The subcommittee was created in 2019 to use information technologies to improve the quality of life and conditions for doing business in Russia. The numerous acts and regulations related to the subcommittee have become invalid upon the subcommittee's deletion.

Source: Victoria Kolganova, "The Government of the Russian Federation abolished the subcommittee on artificial intelligence" [Правительство РФ упразднило подкомиссию по искусственному интеллекту], *Kommersant*, May 14, 2022, https://www.kommersant.ru/doc/5354537.

## MINISTRY OF DIGITAL DEVELOPMENTS DEVELOPS A NATIONAL DATA "LAKE"

**The Ministry of Digital Development has begun to develop a national "lake" of data, named Gosdata.hub, intended to unite the flow of impersonal data of government agencies.** The project will combine depersonalized data of authorities at all levels and will allow the formation of advanced analytics available to contributors. The National Data Lake anonymizes and systematizes the storage and processing of data for government analytical services, simplifies and streamlines the preparation of reports for government agencies and budgetary organizations, all thanks to the automated generation of documents according to specified algorithms. Data exchange will be two-way: anonymized data from state datasets can also be used by businesses to develop their own solutions. This dual purpose function will allow businesses to develop their own, similar solutions to data streamlining and management.

Gosdata.hub will have three stages of development. First it will require the automatic integration of government data reporting. This depersonalized data will be used to analyze the state of the Russian economy and social sphere and in the long-term, will be available to public and private businesses with AI implementation. The main platform for the implementation of the national "lake" of data will be FGAU Research Institute "Voskhod". The project is planned to occur between 2022 and 2024 and will be put on trial by 2023.

Source: "The Ministry of Digital Development has begun the development of the national "lake" of data "Gosdata.hub,"" [Минцифры начало разработку национального "озера" данных "ГосДата.хаб"], *Tass.ru*, May 11, 2022, https://tass.ru/ekonomika/14597375.

## PUTIN REQUESTS WORK QUOTE FROM SIRIUS UNIVERSITY OF SCIENCE AND TECHNOLOGY TO ACCOUNT FOR GAPS IN CAPABILITY

**At a recent Board of Trustees of the Talent and Success Foundation meeting, Putin was made aware of Russia's shortcomings in solving technical and scientific problems on its own.** Maxim Fedorov, rector of the Sirius University of Science and Technology made it known that the foundation often must turn to partners to solve equipment and technological issues. In response, President Putin requested that Fedorov and the foundation make a formal request of necessary technologies, including scope of work and funding for the creation of a computing power base at the Sirius educational center to ensure Russia's independent capabilities on this issue.

Source: "Putin instructed to formulate requests for the formation of a computing power base in Sirius" [Путин поручил сформулировать запросы по созданию базы вычислительных мощностей в "Сириусе"], *Tass.ru*, May 11, 2022, https://tass.ru/obschestvo/14598325.

## THE CLUB OF STRATEGIC INITIATIVES EVALUATES AI PROPOSALS FOR SOCIETAL IMPROVEMENT

**The Club of Strategic Initiatives held a gathering with the participation of regional authorities, public representatives from the Agency for Strategic Initiatives, and the broader agency team.** This meeting was convened to create a discussion platform to review and select six initiative submissions previously turned in to the Strong Ideas for a New Time forum. The article explained that select initiatives best fitted for each territory will be selected and refined with the assistance of experts and regional authorities. The most successful selected initiatives are meant to be effective and have significant potential for development regionally and at a national level.

Among identified successful projects are a multifunctional center for industry in Moscow designed to respond in a single window mode to requests of reps of Moscow industry; a unified veterinary information center to improve the quality of vet care; and a unified system for managing the transportation of land passenger transport. Meetings like this are to be held on a regular basis to continuously evaluate proposals and identify more specifically the opportunities and necessary support desired by the community. The collection of applications ended May 20 and all selected applicants will be able to receive professional feedback and potential implementation of their ideas.

Source: Alexandra Raevskaya, "Promising ideas for the development of the country were discussed at the Moscow Club of Strategic Initiatives" [В московском Клубе стратегических инициатив обсудили перспективные идеи для развития страны], *asi.ru*, May 5, 2022, https://asi.ru/news/187887/.

## A STUDY ON ENSURING ETHICAL AI IN RUSSIA

**The Russian Higher School of Economics released an article depicting the first stage of its research under the project "Ethical Expertise in the Field of Artificial Intelligence," initiated**

**by the Center for AI within HSE.** The article discusses progress and difficulties in developing "ethical" AI in Russia and the disparities between the legal regulatory framework and AI innovation, and the abuses that accompany the widespread use of AI for society and individuals.

The task of the study is to "propose a new special ethical methodology for assessing non-obvious personal and socially significant risks of implementing AI" and to develop a common language for professional discussion and codes for converting key concepts necessary to build a single dialogue space.

A significant area of such aspects of the interaction between a machine and a person do not fit into the field of law. The research team established that there is a need for an adapted language of "legal, social and political rhetoric." To designate specific areas of AI that have problematic ethical potential, a code of ethics was signed in October 2021 and developed by the Center of Expertise for the implementation of the federal project "Artificial Intelligence." It is a universal document in the field of development, and application of AI delineates human-oriented and humanistic approaches to the development of AI tech and for the code to serve as instrument of "soft" regulation. Thus far, more than 50 organizations in Russia have signed it and have begun to implement its provisions.

Source: Ugleva Anastasia Valerievna, "The role of ethics in AI" [Роль этики в сфере ИИ], *HSE.ru,* May 4, 2022, https://cs.hse.ru/aicenter/news/610630193.html.

# MILITARY AND SECURITY

### RUSSIAN MILITARY INTRODUCES COMBAT ORLAN-10 DRONE VERSION IN UKRAINE

**Over the past three months, Russia's Orlan-10 UAV has been one of the most visible military drones in the Ukraine war, flying ISR and target acquisition missions**. It is reportedly the most numerous of the 2,000+ pre-February 2022 UAVs in the Russian drone fleet, numbering at least in the many hundreds. In May 2022, the Russian military introduced the Orlan-10 combat version that carries four high-explosive fragmentation shells under its wings to target Ukrainian military vehicles, mortars, and soldiers. The official MOD video that unveiled this drone claimed that the munitions can be attached to the UAV in minutes, converting this ISR platform into a combat drone with a range of around 120 km. Russia first unveiled this Orlan-10 version during Zapad-2021 exercises with Belarus, when modified Orlans flew missions with the Forpost-R combat version, along with Orion and Lastochka combat drones.

While this Orlan-10 version increases the number of drones capable of flying combat missions in the Russian military, the actual ground-attack efficacy of this UAV is unknown, considering that Orlan-10 would have to drop the munitions in mid flight, the way a manned aircraft does. At this point in the war, ground targets were struck by both sides' drones with guided munitions, or from a quadrocopter, which can approach the target directly from above for greater accuracy.

Nonetheless, it is likely that the Russian military will start fielding more Orlan-10 combat versions for combat in Ukraine.

Sources: Makism Nizkodubov, Alisa Krause, ""The enemy is afraid of us": how Russian Pantsirs and Orlans instill fear in the Ukrainian armed forces during a special operation" («Противник нас боится»: как российские «Панцири» и «Орланы» наводят страх на ВСУ в ходе спецоперации), RedStar.ru, May 13, 2022, https://tvzvezda.ru/news/202251339-gTytu.html; Inohodets and Forpost combat drones are used in Zapad-2021 exercises for the first time (На учениях «Запад-2021» впервые применили ударные БПЛА «Иноходец» и «Форпост»), Vedomosti.ru, Sept. 13, 2021, https://www.vedomosti.ru/technology /news/2021/09/13/886473-na-ucheniyah-zapad-2021-vpervie-primenili-udarnie-bespilotniki-inohodets-i-forpost.

## RUSSIA'S RATNIK COMBAT SYSTEM TURNS 10 YEARS OLD

**Russia's *Nezavisimoe Voennoe Obozrenie* (*NVO-Independent Military Review*), one of Russia's key online publications about military and security developments, published an overview of the Ratnik soldier combat system, since its inception 10 years ago.** Ratnik includes different types of soldier gear in a single package, such as firearms, body armor, and optical, communication, or navigation devices, comprising a total of 65 elements for warfighter protection, control, life support, and energy supply for more effective combat operations. This equipment was developed at the Central Research Institute of Precision Engineering, which is part of the Rostec state corporation, along with 50 industrial enterprises across the Russian defense sector. Ratnik gear entered service in 2015, and today is present in Russia's Ground Forces, Airborne Forces, Marines, and Special Forces.

At this point, the Russian military is using the second generation of Ratnik gear, with the third and subsequent generations on the Rostec drawing board, as the company seeks to design soldier equipment for future military challenges. This future design, tentatively dubbed Sotnik, is supposed to incorporate mini- and micro-UAVs, wearable robotic systems, exoskeletons, and artificial intelligence elements. Many of these plans were discussed in detail prior to Russia's February 2022 invasion of Ukraine, a war that has showcased a lack of preparedness as well as a lack of key equipment and capabilities. It is not known how future generations of Ratnik will be affected by global high-tech and IT sanctions, which may have long-term consequences for the Russian defense sector.

Source: Stanislav Streltsov, "Greeted according to a dress code, escorted out by IQ" [По дресс-коду встречают, по ай-кью провожают], NVO.Ng.ru, May 12, 2022, https://nvo.ng.ru/armament/2022-05-12/6_1188_iq.html.

## ERA TECHNOPOLIS MAINTAINS KEY PLACE IN MOD'S MILITARY R&D ECOSYSTEM

**In April 2022, MOD's ERA Technopolis took place in several events that showcased Russian defense-oriented high-tech and advanced technology developments.** On April 21, 2022, ERA hosted the "Innovation Day of the Russian Ministry of Defense" exhibition, an annual event that,

this year, drew 200 participants from 50 military, government, and academic organizations across country. ERA showcased over 70 projects and developments in artificial intelligence, medicine, robotics, and information technology. During the exhibition, participants discussed research and development of domestic IT technologies, artificial muscles, 6G, metauniverses, and neural interfaces. During April 25-29, 2022, ERA researchers and developers took part in the annual "Russian High Technologies Week–2022," a government project that brings together several exhibitions, forums, and conferences in information technology and telecommunications. ERA efforts in artificial intelligence, medicine, information, and cybersecurity were demonstrated during that time. According to ERA, most of the exhibits presented were already tested for further implementation in the Russian armed forces. Specifically, ERA's Machine Learning Center—an institution launched recently to introduce weapons with elements of artificial intelligence into the Russian military—showcased its achievements in neural networks development.

In issue 37 of *AI and Autonomy in Russia*, CNA wrote about the MOD agreement on the ERA's development of artificial intelligence technologies for the Russian armed forces, placing the technopolis at the center of Russian military high-tech development efforts. The ERA Technopolis was created in 2018 by order of the Russian president to develop innovative military technologies, to cooperate with the public and private sectors on joint high-tech development, and to prepare young military officers and civilian employees for work in military-industrial enterprises and research institutions.

Sources: "Overview of achievements" [Смотр достижений], RedStar.ru, Apr. 25, 2022, http://redstar.ru/smotr-dostizhenij/ ; Grigory Egorov, "Era of high technologies" [ЭРА высоких технологий], RedStar.ru, Apr. 29, 2022, http://redstar.ru/era-vysokih-tehnologij/; CNA Russia Studies Program, *Artificial Intelligence and Autonomy in Russia*, no. 37 (May 2, 2022), CNA.org, https://www.cna.org/our-media /newsletters/ai-and-autonomy-in-russia.

## RUSSIAN MOD DISPLAYS COMBAT GROUND VEHICLES DURING MAY 9 PARADES ACROSS THE COUNTRY

**Russia's May 9 Victory Day parade remains one of the key national events that commemorates the Soviet Union's victory over Nazi Germany in May 1945.** For the past several years, Russian military has showcased its unmanned and autonomous vehicles and systems during the main parade in Moscow, and in many smaller parades across Russian cities that take place on the same day. This year, the MOD displayed the Uran-9 combat unmanned ground vehicle (UGV) during the Moscow parade, as it has done in the past. While Uran-9 was the only unmanned systems featured in that main parade, a smaller event in Rostov-on-Don featured the Uran-6 demining UGV.

While the Russian military is eager to showcase its new and advanced system on parades, according to social media there are only a few instances so far of Uran-6 UGV use in Ukraine to clear mines and unexploded ordnance, and no evidence of Uran-9 combat UGV use in Ukraine. While the introduction of this technology dates to 2018, when the Russian military tested Uran-9 and subsequently used the Uran-6 in Syria, the MOD has not developed a concept to date that

would integrate these vehicles in combined operations. In fact, the MOD announced in 2021 that it would test a unit of 20 Uran-9 UGVs, a plan that may have been derailed by the Russian invasion of Ukraine and allocation of resources to that war. Uran-6 is used sparingly in areas that were already cleared of adversary presence, given that the vehicle operator has to remain in close proximity for operation. At the same time, the Russian MOD maintains focus on the introduction of unmanned and autonomous systems in combat, a concept that is supposed to safeguard soldier lives and make mission more effective. For more on how such plans are discussed and implemented across the Russian military, see the report *AI and Autonomy in Russia*.

Sources: "Russia's Victory Day parade," YouTube.com, May 9, 2022, https://www.youtube.com /watch?v=czKIvFGMJPU; "2500 people took part in a Rostov-on-Don military parade" [В военном параде в Ростове-на-Дону приняли участие около 2,5 тысячи человек], Ria.ru, May 9, 2022, https://ria.ru/20220509/parad-1787614444.html; "Uran-6 use in Donbas," accessed May 10, 2022, at https://t.me/milinfolive/80873; "Russian Army to set up first military unit armed with strike robots," Tass.com, Apr. 9, 2021, https://tass.com/defense/1276039; Jeffrey Edmonds et al., *Artificial Intelligence and Autonomy in Russia,* CNA.org, May 12, 2021, https://www.cna.org/reports/2021/05/ai-and-autonomy-in-russia.

# MARKETS AND PRIVATE SECTOR

## NEW GRANT FOR TECH STARTUPS OPENS

**A new grant designed to support IT startups in Russia is now open for application and will run until mid June.** The project, which is part of the "Rise – from Startup to IPO" federal project based in the Economic Development and Innovative Economy state program, involves a competitive application process that can unlock up to 250 million rubles in funding. The grants are expected to consist of a total of 10 billion rubles in outlay through to 2024. Focus areas for grant applications include a list of 17 "priority areas," including internet-of-things applications, AI, quantum computing, 5G mobile networks, advanced space systems, decarbonization technology, distributed intelligent systems, energy sources, genetic technologies, and other advanced technological sectors.

Source: "Russian technology companies can receive grant support up to 10 billion rubles" [Российские технологические компании могут получить грантовую поддержку до 10 млрд рублей], *CNews*, May 13, 2022, https://www.cnews.ru/news/line/2022-05-13_rossijskie_tehnologicheskie.

## TECH COMPETITION FOR MEDICAL DIAGNOSTIC SYSTEMS OPENED

**A 200-million-ruble prize fund is open for competitive applicants to the "AI'm Doctor" tech competition held by the National Technology Initiative Platform.** The competition seeks to incentivize AI system developers to produce a reliable medical decision support system able to aid in making final clinical diagnoses. The goal of such systems is to "help doctors more quickly

and accurately identify diseases and complications after them." The competition is set to run through 2024 and is open to all entrants.

Source: "Russia will choose the best AI system for diagnosis" [В России выберут лучшую ИИ-систему для постановки диагноза], TASS, May 11, 2022, https://nauka.tass.ru/nauka/14592405.

## PROVINCIAL RUSSIAN LABOR MARKET ANALYZED FOR UNFILLED PROFESSIONAL GAPS

**A research project at Perm Polytechnic University analyzed the labor market in Perm province using an AI-based neural network approach.** The project focused on identifying gaps in the market where an insufficient supply of professionals was particularly damaging to the broader market's health. The study authors noted that "[the study] revealed an acute shortage of competent specialists in the field of information and communication technologies, which, along with migration processes, leads to a high level of unemployment. In addition, we have a large shortage of specialists in all areas where programming skills are required." These findings have been integrated into plans at state-sponsored employment centers, especially in light of the Russian government's renewed efforts to halt potential "brain drain" effects from emigration in the wake of the war with Ukraine.

Source: "In Russia, scarce professions are identified [В России определили дефицитные профессии], *Ferra.ru*, May 10, 2022, https://www.ferra.ru/news/computers/v-rossii-opredelili-deficitnye-professii-10-05-2022.htm.

## SAFETY MANAGEMENT SYSTEM FOR METRO ESCALATORS USES NEURAL NETWORKS

**Russian scientists at the St. Petersburg Federal Research Center and St. Petersburg Electrotechnical University (LETI) have developed a new safety management system for Metro escalators using AI processes in the form of streaming recurrent neural networks.** The program analyzes data from video cameras, microphones, and sensors in real time to assess the potential for a dangerous situation and can actively seek countermeasures to prevent them, such as shutting off escalator movement. At present, special duty officers are stationed at the escalators, but according to Metro, the monotonous nature of the work can dull their attention and lead to poor reaction time in the case of an actual emergency. According to the researchers, "Tests of the system have shown that it detects dangerous situations 3.5 times faster than a typical escalator attendant." The researchers noted that while they relied on Russian AI technology in general, some equipment and software from the West was required during the development phase. At present the system is not planned to be deployed on scale at subway facilities in Russia, but the development is a useful proof-of-concept that can be quickly introduced in the medium term.

Source: Denis Gritsenko, "Regular ascent: the neural network can replace those on duty at the metro escalators" [Подъем нормальный: нейросеть может заменить дежурных у эскалаторов метро],

*Izvestiya,* May 10, 2022, https://iz.ru/1324634/denis-gritcenko/podem-normalnyi-neiroset-mozhet-zamenit-dezhurnykh-u-eskalatorov-metro.

## RUSSIAN AI MARKET REACHES 550 BILLION RUBLE VALUATION

**According to the Artificial Intelligence Almanac published by the Competence Center of the National Technology Initiative at MIPT, the Russian AI market value increased 28% in volume at the end of 2021.** This amounted to a total value of 550 billion rubles. According to the report, Yandex and VK were the total market leaders, with roughly 100 companies occupying over 98% of the market value. These market dominant firms amount to roughly one-quarter of the total number of AI companies in Russia. The report also notes that due to the 'Artificial Intelligence' federal project, state funding for AI has nearly doubled. Meanwhile, the venture capital market grew by 170%. According to the report, over 60% of the market is in data analysis, with a strong 30% in natural language processing products.

Source: "The Market Of Artificial Intelligence In Russia Reached 550 Billion Rubles" [Рынок Искусственного Интеллекта В России Достиг 550 Млрд Рублей], Telesputnik, May 6, 2022, https://telesputnik.ru/materials/trends/news/rynok-iskusstvennogo-intellekta-v-rossii-dostig-550-mlrd-rubley/.

## NEW INTERNET-OF-THINGS BLUETOOTH SENSORS ANNOUNCED

**The state corporation Rostec and the IT company Tesla Smart have announced a new product line of wireless Bluetooth sensors with long-lasting (10 year) battery lives designed for interlinked smart home and internet-of-things (IoT) devices.** The sensors rely on "Bluetooth Low Energy" technology, and are designed to "measure temperature, humidity, illumination, and magnetic field" from which data can be used for monitoring systems. According to Arkady Orlov, the general director of Ryazan Plant of Metal-Ceramic Instruments, which manufactures the new sensors, there is "a wide range of applications for new sensors—in warehouses with special storage conditions, in industrial refrigeration equipment, in greenhouses and in smart home systems. The sensors have a Bluetooth Long Range mode. This allows you to use them at a distance of more than a kilometer from the Bluetooth station. The products are compact and easily attached to surfaces and operate in the industrial range from -55 to +85 °C."

Source: "Rostec announced the creation of wireless Bluetooth sensors for the Internet of things" [«Ростех» сообщил о создании беспроводных Bluetooth-датчиков для интернета вещей], RT, Apr. 29, 2022, https://russian.rt.com/science/news/996962-rosteh-internet-veschei.

## NEW "TECHNOPARK" ANNOUNCED IN AMUR REGION

**The regional government of the Amur province has announced a new manufacturing-focused technology hub to coordinate innovation in the region.** The new 'technopark' will seek to incubate and support information, agricultural, and biological tech industries, with special aid to stimulate local high-tech production and manufacturing capabilities. IT, AI, space, and gas chemistry are particular focuses, according to the regional government. The hub is likely to include

special tax and other legal benefits to members of the technopark, although these have not yet been announced.

Sources: "Technopark to be opened in the Amur Region to support manufacturers of innovative products" [В Приамурье откроют технопарк для поддержки производителей инновационной продукции] TASS, May 3, 2022, https://tass.ru/ekonomika/14537389; "A technopark will be created in the Amur region to support local high-tech production" ["В Приамурье создадут технопарк для поддержки местного высокотехнологичного производства"], *Amurskaya Pravda,* May 3, 2022, https://ampravda.ru/2022/05/03/0112372.html.

## RUSSIAN SUBSTITUTE FOR AMERICAN-MADE MACHINE DATA PROCESSING SOFTWARE DEVELOPED

**The Russian IT company ISGNeuro, through its WDC-Platform machine learning project, has developed an import-substitution compliant software package for machine data processing, which replaces "Splunk," a widely used US-based analogue.** Splunk has been absent from the Russian market since 2019, when it exited the Russian market and suspended sales and services to Russian clients. Yet Splunk continued to provide technical support for already purchased products until the new round of wartime sanctions. WDC-Platform produced the "Antisplank" (i.e., "Anti-Splunk") package that will allow for a full transition to domestically produced software.

According to descriptions by Vladimir Statut, the head of innovation at ISGNeuro, a subset of WDC-Platform, Antisplank "makes it possible to connect any type of event sources at minimal cost, collect data, ensure its quality, and analyze it using machine learning algorithms built into the platform." In addition, he says that "by using a simple data query language that is backwards compatible with the one used in Splunk, there will be little to no retraining of IT specialists."

Source: "In Russia, they created a replacement for American software for processing machine data" [В России создали замену американскому ПО по обработке машинных данных], 1Prime.ru, Apr. 21, 2022, https://1prime.ru/telecommunications_and_technologies/20220421/836717304.html.

# HUMAN CAPITAL

## AI HACKATHONS AND EVENTS

**Recent news articles reported on several AI-related hackathons and training events, the most notable of which are mentioned below:**

- According to a D-Russia article, a Russia-wide undersea robotics competition was held in Vladivostok May 6-7. Twenty-eight teams, with participants from grades 1 to 11, took part in the finals. The winners will represent Russia at the International underwater robotics competition in June-August 2022. The competition was organized by the Center for Robotics, the Center for the Development of Robotics, and the Maritime State University.

- The first of eight district hackathons planned for 2022 as part of the Digital Breakthrough (formerly "116 Hackathons") series are being held in Khabarovsk (May 27-29) and Nizhny Novgorod (June 3-5). Winners from these district hackathons, who already won at the regional level, will go on to compete in one of three national-level competitions, the first of which will be held in Moscow on June 25-July 25. The organizers are expecting more than 7,500 participants, combined, for this year's schedule of AI events.

- According to an April 26 *Regnum* article, two conferences—"Start in medicine" and "Kurchatov project—from knowledge to practice, from practice to result"—were recently held in Moscow for pre-professional students. Students presented their designs, including a solar-powered drone and a neuro-alarm clock, to a panel of judges.

Sources: "The winners of the All-Russian competition in underwater robotics in Vladivostok have been named" [Названы победители Всероссийских соревнований по подводной робототехнике во Владивостоке], D-Russia, May 13, 2022, https://d-russia.ru/nazvany-pobediteli-vserossijskih-sorevnovanij-po-podvodnoj-robototehnike-vo-vladivostoke.html; "A competition dedicated to artificial intelligence has been launched in Russia" [В России запущен конкурс, посвященный искусственному интеллекту], Content-Review.Ru, May 3, 2022, https://www.content-review.com/articles/55515/; "Moscow schoolchildren created a neuro-alarm clock and a solar-powered drone" [Московские школьники создали нейробудильник и дрон на солнечных батареях], Regnum, Apr. 26, 2022, https://rg.ru/2022/04/26/reg-cfo/moskovskie-shkolniki-sozdali-nejrobudilnik-i-dron-na-solnechnyh-batareiah.html?utm_source=yxnews&utm_medium=desktop&utm_referrer=https%3A%2F%2Fyandex.ru%2Fnews%2Fsearch%3Ftext%3D.

## NEW AI EDUCATION PROGRAMS

**Recent news articles reported on several new AI educational programs, summaries of which are listed below;**

- According to a May 11 press release, St. Petersburg's ITMO University is launching a new master's program in industrial AI with Gazprom Neft's Science and Technology Center. The two-year program, beginning in September 2022, is designed to allow students with varied industrial backgrounds (such as geology, oil, and engineering) to bring AI solutions to their various fields.

- According to a May 3 TASS article, the Altai region is training engineers in artificial intelligence for the first time. At the request of local businesses requiring such expertise, Altai State Technical University (ASTU) will train engineers in AI programming, computer vision, neural networks, and basic programming languages. ASTU is the largest technical university in the Altai Territory and one of the top 100 universities in the country.

- According to a May 13 press release, the Higher School of Economics (HSE) business incubator, the AFK Sistema conglomerate, the Moscow Institute of Electronics and Mathematics (MIEM), and the National Technical Initiative Circle Movement are jointly holding a 12-week accelerator program for young professionals who are developing

robotics startups. The accelerator program provides participants with guidance from technical and business experts. It also assists in attracting grant funding.

Sources: "ITMO Launches New Master's Program in Industrial AI," *ITMO News,* May 11, 2022, https://news.itmo.ru/en/education/trend/news/12569/; "Altai Territory to train engineers to work with artificial intelligence systems" [В Алтайском крае будут готовить инженеров для работы с системами искусственного интеллекта], TASS, May 3, 2022, https://tass.ru/obschestvo/14541185; "New Educational Robotics Accelerator of the HSE Business Incubator Opens Recruitment" [Новый акселератор образовательной робототехники Бизнес-инкубатора ВШЭ открывает набор], National Research University Higher School of Economics, May 13, 2022, https://www.hse.ru/news/620046716.html.

## NUMBER OF STATE-FUNDED UNIVERSITY SLOTS FOR DIGITAL ECONOMY IN 2023-2024 REMAINS HIGH

**According to a May 6 D-Russia article, 160,361 state-funded "budget" slots have been allocated for personnel trained in digital economy for the 2033-2034 academic year**. This number of slots is similar to the the number available in the previous academic year but is double the number available in 2021. According to Deputy Prime Minister Chernyshenko, this year, priority in the distribution of budget places is given to regional universities (112,993), and the emphasis is on specializations which will ensure the fastest import substitution. According to the report, in the 2023-2024 academic year, universities will also have new areas of training. Among them are "Digital and additive technologies in mechanical engineering" and "Laser technologies."

Source: "Over 160,000 budget places allocated for training for digital economy in 2023/2024 academic year – Deputy Prime Minister" [На подготовку кадров для цифровой экономики в 2023/2024 учебном году выделено более 160 тыс бюджетных мест – зампред правительства], D-Russia, May 6, 2022, https://d-russia.ru/na-podgotovku-kadrov-dlja-cifrovoj-jekonomiki-v-2023-2024-uchebnom-godu-vydeleno-bolee-160-tys-bjudzhetnyh-mest-zampred-pravitelstva.html.

## NEW AI LABORATORIES TO APPEAR AT SUSU

**According to a May 16 TASS article, new laboratories for multiscale multiphysics modeling and computer vision and hearing will soon appear at South Ural State University (SUSU).** According to the article, this initiative, within the framework of the Priority 2030 program, is part of a strategic project aimed at ensuring digital transformation and increasing the competitiveness of metallurgical and machine-building enterprises in the Urals and throughout Russia. One of the university's current projects is to increase production efficiency by several tens of millions of rubles per year by reducing unscheduled downtime of mills.

Source: "Laboratories for Multiscale Modeling and Computer Vision to Appear at SUSU" [Лаборатории многомасштабного моделирования и компьютерного зрения появятся в ЮУрГУ], TASS, May 16, 2022, https://tass.ru/novosti-partnerov/14608767?utm_source=google.com&utm_medium=organic&utm_campaign=google.com&utm_referrer=google.com.

# INTERNATIONAL COLLABORATION

## US PLAN FOR RUSSIAN TECH IMMIGRATION ASSESSED

**After the Russian invasion of Ukraine, tens of thousands of Russian scientists and engineers left the country.** Many have sought temporary breaks in other countries, such as Georgia, while weighing their options. Those who cannot find permanent residences and work are likely to return to Russia. In a sign that Russia fears a brain drain from the war, the government, in March 2022, exempted young workers in the technology sector from compulsory military service, gave them preferential mortgage rates, and liberalized information technology.

Russia has been suffering from a brain drain for at least a century, partly because it produces outstanding university graduates but does not have an economy strong enough to put their skills into practice. According to a study by Russia's Higher School of Economics, 60-75 percent of graduate students of the academic track of leading universities leave Russia. In the advanced fields of natural and technical sciences, this share reaches 80 percent. The US and other countries have long benefited from Russian immigrants, including some of those countries that are now independent states. Around 2010, the brain drain began to subside as the Russian economy started to perform well. Some Russians even returned home. But the invasion of Ukraine seems to have pulled the plug out of the drain again. Most expats today go to neighboring countries, including Turkey, Armenia, Georgia, Kazakhstan, and the Baltic states.

It is hard to get into the US, especially because there are not enough visas. In March, the Department of Homeland Security granted Ukrainians temporary protected status for 18 months, allowing them to stay and work in the US without a visa, but did not do so for Russians. Recently, however, the Biden administration asked Congress to suspend for four years the requirement that Russian scientists applying for H1-B visas have a sponsoring employer. This measure will only apply to Russian citizens who hold a master's or doctoral degree in science or technology such as artificial intelligence, nuclear engineering, and quantum physics. They will have to pass an aptitude test. There are no limits on the number of people entering on these visas. This measure will expire in four years unless Congress subsequently renews it.

The program is already being advertised on social media. Those wishing to receive a US Green Card for Scientists are invited to take a free 10-minute test, the results of which give the host an understanding of the merits and degree of talent of the applicant. An applicant's portfolio can include awards and diplomas, membership in professional associations, scientific publications, and letters of recommendation from influential colleagues. Even proof of higher income compared to the industry average is suitable.

Experts predict that if the measure becomes law, Putin will be unhappy at the prospect of losing so much talent. Gleb Yushin, professor of engineering and materials at the Georgia Institute of Technology—who received a bachelor's degree in physics from the Polytechnic Institute in St. Petersburg, Russia, and who co-founded Sila Nanotechnologies, a US company now valued at

more than $3 billion—praised the United States' initiative to simplify the procedure for obtaining permanent residence for Russian scientists and engineers:

> I think this is an important strategic move in favor of the United States and the weakening of Putin's authoritarian regime. The smartest and most creative scientists and engineers cannot thrive in a country that severely restricts their freedom and values natural resources more than people's ability to innovate. It will be difficult for Putin to oppose this measure because the travel ban will destroy his support and reputation. This will make everyone want to leave even more. The truth is that many talented, hard-working people are eager to emigrate but feel that no one will accept them, especially now. Scientists and engineers want to maximize their positive impact, and they know they have a much better chance of doing so from outside.

Brian Taylor, professor of political science at Syracuse University, agrees with Yoshin. "Some experts have estimated that hundreds of thousands of Russians have already left, including tens of thousands in the IT sector. If Russians with the right education can immigrate to the United States without even finding a job sponsor, this will seem like an attractive option to many." The actions of the Biden administration regarding immigration could have a strategic effect by contradict Russia's message that the whole world is against Russians.

Sources: Maria Fedorova, "Putin will not like the US immigration plan to attract Russian scientists" [Путину не понравится иммиграционный план США по привлечению российских ученых], Autospynews, May 2, 2022, https://bit.ly/3sNlBzY; Dmitry Manylov, "How the Ministry of Education and Science is responding to the US 'Visa Lure'" [Чем Минобрнауки отвечает на американскую «Визовую приманку»], Forpost, May 13, 2022, https://forpost-sz.ru/geo/nedra/2022-05-13/chem-minobrnauki-otvechaet-na-amerikanskuyu-vizovuyu-primanku; "What will the departure of educated people from Russia lead to?" [К чему приведет отъезд образованных людей из России], *Aussiedlerbote*, May 4, 2022, https://aussiedlerbote.de/2022/05/k-chemu-privedet-otezd-obrazovannyx-lyudej-iz-rossii/.

## RUSSIAN TECH COMPANIES LOOKING FOR HELP FROM CHINA TO OVERCOME SANCTIONS

**Large state-owned companies in Russia are actively looking for manufacturers of individual electronic components in China to avoid US sanctions and current problems with buying finished electronic goods directly from factories.** They are negotiating with Chinese manufacturers to purchase components directly. In particular, the state corporation Rostec and several other large state-owned companies that have factories and assembly capacities in Russia are interested in such solutions because they now lack the necessary components for the production of electronics.

Industry representatives believe that manufacturers in China can supply memory modules and motherboards as separate orders, although it is generally more profitable for them to sell the final products. However, the sale of server and network equipment with American technologies to state-owned companies is prohibited in Russia. To get around these restrictions, state-owned

companies are planning or have already begun purchasing individual components from China to continue assembling servers and telecommunications equipment in Russia. Lenovo, Huawei, and ZTE can act as suppliers of the necessary spare parts and electronics.

Arseniy Brykin, the head of the Basis consortium, told *Vedomosti* that all ready-made solutions from Chinese manufacturers of user, server, and infrastructure equipment somehow contain American intellectual property. In this situation, the equipment is subject to secondary sanctions, and Russian companies that fall under US restrictions cannot purchase it. But the purchase of individual components from China that are not subject to restrictions makes it possible to both continue assembly in Russia and maintain the performance of already purchased equipment.

Alexander Sysoev, head of Infrastructure Solutions at Krok, told the newspaper that before the US imposed export sanctions, foreign manufacturers generally did not conduct commercial activities in Russia directly, but instead worked through Russian distribution companies. However, now Russian IT companies cannot offer customers equipment of Chinese origin: manufacturers have suspended all new orders for finished products. For example, Huawei fulfills its obligations under contracts concluded before March 26, 2022, but has suspended new contracts.

Ivan Pokrovsky, the executive director of the Association of Russian Developers and Manufacturers of Electronics believes that the decision to purchase individual components "may be short-sighted. If earlier commercial distributors were engaged in purchases, now legal entities affiliated with Russian state-owned companies will appear in contracts, and this may lead to additional sanctions against them." In addition, this measure will not completely solve the problem, since Chinese companies do not produce a full line of components. Furthermore, according to Sysoev, the sale of components not related to the production of IT equipment directly in China for Russian customers is unprofitable and may not work. "Even if we imagine that a certain organization wants to assemble a computing complex on its own from individual components, no one can guarantee that this system will work and work without failures."

In the meantime, Russia and China are continuing to negotiate new cooperation projects. A new initiative is being negotiated between the Technopolis Moscow SEZ and the large special technological zone of China Jiangbei Xinqu in the field of microelectronics, information technology, and biomedicine.

The next stage of the talks will involve the selection of Chinese enterprises that are ready to supply the necessary products to Russia, as well as companies interested in investing in the infrastructure of the Moscow SEZ. The Chinese side, in turn, is showing great interest in bilateral personnel exchange and joint organization of incubators and accelerators. In addition, the parties are discussing the signing of a framework cooperation agreement for long-term and sustainable cooperation, including in the field of science and technology.

OTZ "Jiangbei Xinqu" is located in a new area of Nanjing near Shanghai. It includes research parks and 35 institutes, 12 higher education institutions, and more than 6,000 resident companies. Its focus is the development of microelectronics, artificial intelligence, cloud computing and big data, medicine and biotechnology, information technology, and new materials. Projects with a total

investment of more than 1.2 trillion rubles are being implemented here. They include the scientific and technical innovation base "City of Chips" and the Chinese Industrial Park of the Mobile Internet of Things.

The Technopolis Moscow Special Economic Zone, subordinated to the Department of Investment and Industrial Policy of Moscow, includes five sites with a total area of 223.3 hectares. One of them is located in Pechatniki, and four more (Alabushevo, Mikron, MIET, and Angstrem) are in Zelenograd. For residents, special support measures are assumed—for example, they are exempted from paying property, transport, and land taxes, as well as customs duties. The income tax rate for such enterprises is only 2 percent. There are also benefits for the lease of land allocated for the construction of an enterprise, and upon completion, it is possible to buy out a leased land plot for 1 percent of the assessed value.

Sources: "Russian state-owned companies have figured out how to circumvent sanctions with the help of components from China" [Российские госкомпании придумали, как обойти санкции с помощью компонентов из Китая], Cnews, May 13, 2022, https://www.cnews.ru/news/top/2022-05-13_rossijskie_goskompanii_pridumali; "SEZ "Technopolis "Moscow"" expands cooperation with Chinese partners" [ОЭЗ «Технополис "Москва"» расширяет сотрудничество с китайскими партнерами], Cnews, May 11, 2022, https://www.cnews.ru/news/line/2022-05-11_oez_tehnopolis_moskva.

## CHINESE HACKER GROUPS TARGETING RUSSIAN TECHNOLOGY

**According to the Google Threat Analysis Group (TAG), hacker groups that are theoretically linked to the Chinese authorities and military have recently made Russia their main target.** Hackers from the Curious Gorge and Bronze President groups have been attacking the networks of Russian government agencies, military contractors, and logistics and manufacturing companies. Even the Russian Foreign Ministry has been attacked. While the reasons for their sudden interest in Russia remain unknown, before Russia's invasion of Ukraine they operated mainly in Asian countries.

According to Google TAG, Curious Gorge has strong ties with the People's Liberation Army China Strategic Support Force (PLA SSO), which is the part of the PLA that has responsibility for cyber operations. The Chinese threat to Russian networks is currently not limited to Curious Gorge. According to ZDnet, at the end of April 2022 the Bronze President group also chose Russia as its target. This group goes by several names in reports from various cybersecurity companies, including Mustang Panda, TA416, and RedDelta, and has been active since at least 2018.

According to information security firm Secureworks, Bronze President is either "sponsored by, or at least tolerated by, the Chinese government" and "seems to be changing its goals in response to the political situation in Europe and what is happening in Ukraine." A few weeks ago, its hackers were working primarily in Southeast Asia, but now they prefer Russia and some European countries. The researchers say, "This suggests that attackers have received updated tasks that reflect the changing intelligence gathering requirements of the People's Republic of China." Secureworks experts suggest that Russia's coming to the attention of Bronze President may

indicate "an attempt by China to introduce modern malware into the computer systems of Russian officials."

They discovered and analyzed the malicious executable file Blagoveshchensk—i.e., Blagoveshchensk Border Detachment.exe distributed by the group, which was disguised as a PDF file and encrypted. Inside it was the PlugX malware loader. When run, the file displays a decoy document written in English, which describes the situation with refugees and EU sanctions. While the user who launched the file is reading the document, PlugX malware is being downloaded in the background. PlugX is a remote access Trojan used to steal files, execute remote commands, install backdoors, and deploy additional malware. Bronze President's tools also include Cobalt Strike, China Chopper, RCSession, and ORat malware.

According to CNews, attacks by hackers from Bronze President and Curious Gorge on Russian networks are the third major confirmation that China may be interested in distancing itself from Russia, although without officially turning its back. First, in March 2022, Xiaomi, Oppo, and Huawei halved the supply of their smartphones to Russia. These are some of the largest players in the Russian mobile device market. They cited logistical problems as the reason for the limitation of shipments. Meanwhile, other Chinese companies, such as the AliExpress store, have continued to work and deliver goods to Russia with no complaints about the break in supply chains. Second, in April 2022, Huawei, China's largest tech company, removed apps from Russian banks that are under European and US sanctions from its AppGallery store, without providing a clear explanation for this action.

Source: "Chinese hackers without explanation attacked Russian government agencies, defense industry and state-owned companies" [Китайские хакеры без объяснения причин обрушились на российские госструктуры, оборонку и госкомпании], CNews, May 4, 2022, https://safe.cnews.ru/news/top/2022-05-04_kitaj_bez_obyasneniya_prichin.

## YANDEX WILL NOT MOVE ITS HEADQUARTERS OUT OF RUSSIA

**According to the company's press service, Yandex has no plans to move its headquarters from Moscow to Tel Aviv or to move employees from Russia there.** The company explained that they continue to hire employees for some of the vacancies, including in Israel, while some of the vacancies allow for the possibility of relocation. "We also want to help employees who work remotely receive their salary in a way that is convenient for them," Yandex added.

The press service noted that the Yandex office in Tel Aviv has been operating for many years, and its employees are developing Yango (the international division of Yandex.Taxi), unmanned technologies, educational projects, and other services. Earlier, the Israeli economic newspaper *Calcalist* reported on Yandex's alleged plans to relocate. The publication claimed that Arkady Volozh, CEO of the Yandex group of companies, intended to take "hundreds of developers and engineers" to Tel Aviv, and had sent a letter about this to Israeli prime minister Naftali Bennett, as well as to some members of the Israeli Cabinet.

Source: "Yandex has no plans to move its headquarters to Israel" ["Яндекс" не планирует переносить штаб-квартиру в Израиль], TASS, May 16, 2022, https://tass.ru/ekonomika/14632803.

## JAPAN EXPANDS SANCTIONS ON HIGH TECH

**Japan is expanding the list of goods and technologies whose export to Russia is prohibited because of Russia's invasion of Ukraine.** New items on the list include 3D printers and quantum computing equipment, electronic and atomic force microscopes, and oil-refining catalysts. The expanded ban has already been approved by the government and came into force on May 20.

Japan had previously imposed several packages of sanctions on Russia because of the situation around Ukraine. Personal sanctions targeted the country's leadership, officials, and business people. The list of goods and technologies prohibited for export has more than 300 entries, including semiconductors, equipment for maritime and aviation security, telecommunications equipment, military products (including weapons), software, and oil-refining equipment. In addition, Japan froze the assets of Otkritie Bank, Novikombank, Sovcombank, VTB, Rossiya Bank, Promsvyazbank, and VEB.RF, and blacklisted more than 700 nationals of Russia, Belarus, and the people's republics of Donetsk and Lugansk (DPR, LPR), as well as over 200 Russian companies and organizations.

Source: "Japan to prohibit exports of high-tech equipment to Russia," TASS, May 13, 2022, https://tass.com/economy/1450329.

## CONFERENCE ON IMPORT SUBSTITUTION IN THE TECHNOLOGY SECTOR IDENTIFIES PRIORITIES

**TAAdviser has announced a conference on "IT Import Substitution in New Conditions."** For Russia, the new sanctions are a significant incentive to accelerate the process of import substitution in all sectors of the Russian economy. Under these conditions, import substitution mechanisms in IT are expected to play a special role, because of the growing significance of this sector in the overall economy. The upcoming conference will focus on the following topics:

- Assessing the impact of IT sanctions on the efficiency and development of information systems of enterprises and how they might respond.

- Responding to foreign sanctions as an element of risk management: an integrated approach to risk assessment, priorities and mutual influence of risks, formation of a strategy for effectively minimizing the consequences of realized risks.

- Modernization of IT systems as a task of digital transformation in the context of sanctions restrictions. Adjusting the digital transformation strategy, taking into account the use of new IT tools: minimizing business risks while maintaining key development goals and parameters.

- An integrated approach to the migration of IT systems based on domestic solutions: not replacing foreign products but transferring information systems to a new level of functionality, efficiency, and security.

- Analysis of products from the registers of domestic software, domestic electronics, in terms of the completeness of the technological stack for digital support of business tasks of enterprises and organizations.

- Tools for transparent migration to domestic products: platforms, virtualization, cloud services, etc. Implementation of the principle of platform independence when designing a corporate software migration plan.

- Experience of successful migration to domestic solutions at the level of OS, DBMS, middleware, process control systems. Specificity of migration of CII enterprises.

- Information security audit and information security monitoring in the face of growing threats. Protection against targeted and DDoS attacks. Risks and protection against cyber-sabotage of industrial enterprises.

- Issues of reliable protection of company information assets from external attacks and internal leaks.

- Effective migration scenarios to new solutions. Application of best practices recommended by domestic vendors. Ways to minimize the implementation time of pilot projects and transition to the phase of commercial operation.

- Government support for domestic IT companies. Proposals of IT companies to simplify the import substitution of enterprises in the new conditions.

Source: "IT import substitution in new conditions 2022" [Импортозамещение ИТ в новых условиях 2022], TAdviser, May 18, 2022, https://bit.ly/38yQGRe.

## PROPOSED CASPIAN ECOLOGICAL SCIENCE CENTER TO INCLUDE AI RESEARCH

**The Russian Academy of Sciences has proposed the establishment of a scientific center with the participation of the Caspian littoral countries for joint research and monitoring of the ecological state of the Caspian Sea.** This was announced by Anton Varfolomeev, the head of the Department of International Cooperation of the Russian Academy of Sciences, at the International Assembly "Caspian Dialogue," which took place recently in Moscow. Varfolomeev said:

> We propose to work out the issue of creating a scientific center in the Caspian Sea in a five-sided format with the participation of all the Caspian states. On the basis of the center, it will be possible to conduct joint research, including in such areas as biosafety, biomedicine and artificial intelligence, as well as monitoring the ecological state of the Caspian Sea, studying its mineral and biological resources....In particular, the idea of creating a center was discussed with the

Iranian delegation, at the moment we will continue to discuss this idea with the Ambassador Extraordinary and Plenipotentiary of the Republic of Iran in Moscow.

Varfolomeev also noted that such a center could become a platform for major international scientific events.

Source: "The Russian Academy of Sciences proposes to create a scientific center on the Caspian Sea" [В РАН предложили создать научный центр на Каспийском море], TASS, May 11, 2022, https://nauka.tass.ru/nauka/14595205.

## RUSSIA AND BRAZIL EXPAND THEIR COOPERATION IN ECOLOGICAL MODELING

**The Russian Ministry of Education and Science has declared Brazil to be one of Russia's most important partners in the field of science and education.** For several decades, the two countries have been developing bilateral scientific and technical cooperation in such fields as space, artificial intelligence, astronomy, biotechnology, and alternative energy. Cooperation is also expanding within the framework of the initiative "Advanced Network of Global Research Infrastructures of the BRICS Countries." As part of this initiative, the first meeting of the Steering Committee of the BRICS Network of Technology Transfer Centers was held online on April 26–27, 2022, chaired by Brazil.

One of the most significant joint scientific projects between Russia and Brazil is aimed at studying hydrophysical and biogeochemical processes of various scales occurring in the estuarine zone of the Amazon, the largest river in the world. Researchers from the two countries are studying the processes of distribution of plumes (desalinated water mass formed in the river as a result of mixing of river flow) of these rivers, as well as mixing in them, using data from field expeditionary measurements, numerical modeling, and satellite monitoring.

As part of the project, scientists compare them with similar processes in the estuarine zones of large Arctic rivers in Siberia— the Ob, Yenisei, and Lena. In this part of the project, they are studying key dynamic processes (mesoscale eddies, tides, internal waves, frontal mixing, convection) in large river plumes, comparing the hydrophysical characteristics of the equatorial Amazon plume with those of the Ob, Yenisei, and Lena. According to Petr Zavyalov, the deputy director of the Shirshov Institute of Oceanology of the Russian Academy of Sciences, the implementation of this project will provide significant scientific results aimed at preserving a favorable environment and ensuring environmental safety in the estuarine areas of the ocean.

Source: "Scientists from Russia and Brazil are working to improve the environment in the Amazon and Siberia" [Ученые из РФ и Бразилии работают над улучшением экологии в Амазонии и Сибири], TV BRICS, May 2, 2022, https://tvbrics.com/news/uchenye-iz-rf-i-brazilii-rabotayut-nad-uluchsheniem-ekologii-v-amazonii-i-sibiri/.

# SPOTLIGHT

## RUSSIAN MOD AND CIVILIAN SECTORS SEEK COOPERATION ON AI

Russian MOD representatives discussed artificial intelligence developments with their civilian counterparts during the "Russian High Technologies Week – 2022," a government project that brings together several exhibitions, forums, and conferences on information technology and telecommunications. During one discussion session, "Artificial Intelligence—a new basis for the security of the state's critical infrastructure," participants from across the defense, industry, and academia discussed the need to combine the efforts of leading domestic scientists and organizations in information and telecommunications technologies.

The event was moderated by Major General Alexander Osadchuk, head of the MOD's Main Directorate for Innovative Development. During the event, the participants exchanged views on promising trends in information technology, telecommunications, and artificial intelligence technologies development to deal with the global sanctions imposed on Russia in the wake of its February 2022 invasion of Ukraine.  One of the conference proposals involved unification of Russian IT market participants on a single research and development platform. According to the Russian defense establishment, one such proposed platform is the ERA Technopolis, a key part of the MOD's research and development ecosystem that already hosts representative offices of the country's leading defense enterprises, research organizations, and universities.

The event participants also exchanged views on problems and issues related to the development of artificial intelligence technologies. Alexey Mokhnatkin, deputy general director of Modul enterprise, informed participants about the uneven implementation of the AI across the country, and noted the importance of concentrating efforts on AI public and state regulation. Sergey Nakvasin, deputy head of the Russian government's analytical center, spoke about the development of soft regulation of AI technologies in order to maintain a balance of safety and effectiveness of AI in digital economy systems. He noted the development, together with the Russian Ministry of Defense, of a draft agreement to accelerate the pace of socio-economic development, increase environmental security, counter external threats, and improve the ethical aspects of AI use, to be signed at the Army International Military-Technical Forum in August 2022.

As the event participants noted, there is a need to combine disparate efforts in AI research and development, and to create state institutions to support AI as quickly as possible. They also noted the need to provide mechanisms for the diversification and transfer of intelligent technologies, and for the development of domestic software and hardware-component bases. In the final part of the session, emphasis was placed on discussing the possibility of creating a national neural network platform as a set of interrelated organizational, technical, and regulatory measures. The participants expressed hope that soon, a trusted artificial intelligence platform will provide a unified national approach to the development and promotion of secure solutions based on intelligent technologies. CNA wrote earlier about the impact of global sanctions on the Russian high-tech and AI developments, noting that the domestic economy would have to deal with

significant fall-out after many international companies and organizations left the Russian Federation in the wake of February 2022 invasion of Ukraine.

Source: Andrey Gavrilenko, "In the interests of national development" [В интересах развития страны], RedStar.ru, May 13, 2022, http://redstar.ru/v-interesah-razvitiya-strany/; Dmitry Gorenburg et al., *A Technological Divorce: The impact of sanctions and the end of cooperation on Russia's technology and AI sector,* CNA.org, Apr. 2022, https://www.cna.org/reports/2022/04/a-technological-divorce.

This report, the thirty-ninth in a series of biweekly updates, is part of an effort by CNA to provide timely, accurate, and relevant information and analysis of the field of civilian and military artificial intelligence (AI) in Russia and, in particular, how Russia is applying AI to its military capabilities. It relies on Russian-language open-source material.

Approved by May 2022:     Michael Kofman, Research Program Director
                          Russia Studies Program / Strategy, Policy, Plans and Programs Division

CNA is a nonprofit research and analysis organization dedicated to the safety and security of the nation. It operates the Center for Naval Analyses—the only federally funded research and development center serving the Department of the Navy—as well as the Institute for Public Research. CNA is dedicated to developing actionable solutions to complex problems of national importance.

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