

# The role of the Internet and international Internet-related public policy in mitigating the impact of COVID-19 and possible future pandemics

The COVID-19 coronavirus pandemic, which led to the social distance and isolation regime in many countries, had a great influence on the daily lives of people and contributed to the emergence and introduction of new ICT services at the global level.

IT companies were among the first who proposed the decisions in this new situation for the whole world. In early April 2020, the World Health Organization (WHO) stated that: "This pandemic has triggered an unprecedented demand for digital health technology solutions and has revealed successful solutions such as for population screening, tracking the infection, prioritizing the use and allocation of resources, and designing targeted responses". The pandemic has become a real catalyst for the development of communication services, digital tools for digital business and education, diagnostic systems, health monitoring and the provision of first medical care using telemedicine tools. As a result, AntiCOVID products and solutions began to combine the term "COVID-Tech".

COVID-Tech	
Existing (before COVID age) solutions received significant development	New solutions against pandemic and its consequences
<ul> <li>solutions for safely remote work;</li> <li>solutions for collective online work;</li> <li>online learning applications;</li> <li>telemedicine solutions for remote health monitoring;</li> <li>thermal imaging systems;</li> <li>etc.</li> </ul>	<ul> <li>Solutions for COVID-19 diagnosis and screenings</li> <li>Wearable-devices for detecting disease carriers</li> <li>information systems for monitoring dissemination of diseases and analytics tools;</li> </ul>



<ul> <li>video analytics system for control of the wearing means of individual protection and social distance;</li> <li>GIS systems to monitor the quarantine violators</li> <li>E-Government services associated with the provision of targeted assistance to the victim - individuals and business community</li> <li>etc.</li> </ul>	 · · · · · · · · · · · · · · · · · · ·
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"Best practice" in use of ICT solutions based on the Internet can be submitted to solutions in several areas.

## **Internet access**

In 2020, 26.6K social organizations in Russia received access to the network; - these are educational and medical organizations, government bodies and local selfgovernment, etc. This program of connection to the Internet contributes development of telecommunication infrastructure in general in remote and small settlements. Communication nodes are created, the capabilities of which allow connecting to high-speed Internet access all households of settlement.

# COVID-19 diagnosis and screening - for medical institutions and population

In order to help medical institutions with the diagnosis of COVID-19 and the pneumonia caused by the virus, Russian developers of Artificial Intelligence solutions actively started to develop medical services. Proposed technology was extremely effective when conducting and interpreting the results of the tests.

At the end of April 2020, the AI-Coronavirus detection system based on results of Computer tomography was integrated into the information system of Moscow Unified X-ray Information Center. It reduced the load on medical staff involved in diagnostic, in two weeks in Moscow there was thus 30 thousand



tomograms were processed. During the month, it was possible to collect the largest in the world database of tomograms of patients with confirmed COVID-19.

The company "Intellogic", which initially worked in the analysis of medical images, adapted to the identification of pneumonia and coronavirus in their product "<u>Botkin.AI</u>".

In order to reduce the risks of infection, several home testing services for coronavirus were launched in Russia. Major Russian IT market players, for example Sberbank (together with DocDoc service) and Yandex, provided this opportunity. In addition, Sberbank in cooperation with companies Artezio and Socymedica have developed <u>online questionnaires</u> that allow users to suspect the possibility of coronavirus infection.

# Data Platforms, Analytics and Knowledge Base

The COVID-19 pandemic forced the company not only to look for specific technological solutions, but also to actively collect and analyze information associated with the disease and a pandemic. In this area, major companies have an obvious advantage: opportunities to get new dates based on existing data arrays (example with analysis of tomograms above).

Collaboration between large corporations and COVID-Tech companies can be very efficient. VEB.RF in cooperation with the service "Doctor near you" launched <u>telemedicine platform to support population</u>. Sberbank launched based on the DocDoc online medical platform <u>service to support seniors</u> during COVID-19 pandemic.

Analytical companies were involved to tracing the spread of the pandemic. The company "Handysoft", for example, prepared <u>dashboards</u> with detailed current coronavirus data. "AT Consulting East" has developed the IT system intended for regional operational AntiCOVID headquarters to prevent and control the spread of viral infection.

Finally, with the help of Yandex DataLens technology, <u>data dashboard</u> from three sources was collected: statistics of Rospotrebnadzor in Russia, similar data on



the world from the University of Jones Hopkins, as well as the self-insulation index according to the Yandex services.

# **Control Safety and distance**

Yandex and 2GIS - companies that represent the largest Russian mapping services - launched <u>interactive maps of disease distribution</u>, and Yandex also began to track the self-insulation index and provide information on the fullness of stores by people.

The developers of intellectual video analytics actively work to the fight against the spread of the pandemic. Company "Third opinion" has introduced an intellectual system of visibility in Medsi clinic. The system with the consent of the patients controls their physical activity, checks the presence of protective suits on the medical staff, and also collects remotely and transmits the necessary statistics for nurses. The VissionLabs presented a complex Thermo for the personal identification and remote temperature measurement.

Since one of the signs of COVID-19 is temperature, some companies presented the development in the area of its contactless measurement. Pilot information developed by holding "Schwab" was launched at the Leningradskaya railway station in Moscow.

Company RST-Invent adapted to the technology of radio frequency labels (RFID) to identify personnel in special antivirus equipment and monitoring the use of personal protective equipment.

## Information support - for the population, medics and business

Russian government launched the website "<u>стопкоронавирус.рф</u>" (stopcornavirus), which presents operational and detailed data related to COVID-19 pandemic. From major IT corporations, a platform for supporting citizens and business called "<u>#better at home</u>" opened by Mail.Ru Group.

A lot of work was carried out to improve the provision of public services in a digital format. Due to the increase in demand for digital public services in a pandemic, the necessary work was done on the modernization and expansion of the



<u>State Service "Gosuslugi"</u> portal infrastructure. Thanks to all launched services during the pandemic period, the number of appeals to the portal in the first months of the pandemic increased three times from the average norm and reached about 9 million people daily.

During the pandemic period, special attention is paid to medics. Rambler Group launched a social support platform for medical support "Help doctors", which allows you to remotely assist doctors, including transferring funds to help them. Mail.Ru Group undertook to scale to the entire country of the "<u>Botkin.AI</u>" medical image analysis system, which reduces the burden on the medical staff.

Chat bots are made in a separate subcategory as a relatively new tool for supporting the population and business. In particular, Chat bot at Moscow' official website "<u>mos.ru</u>" was finalized, which during the pandemic period allows not only to receive up-to-date information, but also helps to receive and check the electronic pass.

Developer of voice artificial intelligence "Dasha.AI adapted its business solution and enterprises to reduce the risk of infection of employees who work under quarantine. A virtual assistant may independently call employees, learn about their health and make recommendations depending on the answers. Finally, the Voice Assistant Voximplant, created based on the technology of synthesis and uses speech recognition of Yandex informs the population the Moscow Region.

## **Smart equipment - for medical institutions and public areas**

Russian company that came to the international list of AI Venture Labs, - the developer of robots Promobot, which presented a <u>robot to combat COVID-19</u>. With the help of embedded equipment, it is able to conduct a medical survey, collect history, analyze, issue research results.

Sberbank managed to develop own <u>robot disinfector</u>, which, with the help of embedded ultraviolet lamps, can disinfect the room. The company proposes to use it in public institutions and transport.



BM Group introduced a <u>pandemic prevention kiosk</u>. Among its functions, temperature measurement with an IR sensor, issuing masks, antiseptics, air purification. The company assumes that such devices installed in offices and public places will provide a high level of antivirus security.

Taking into account the international nature of ITU activities, we would like to focus on the service tracking of cross-border trips "<u>Travel without COVID-19</u>".

In accordance with the orders of the Government of the Russian Federation of January 26, 2021 No. 140-p, dated February 26, 2021 No. 485-p citizens of States members of <u>Eurasian Economic Union (EAEU)</u> can travel to Russian Federation through the Republic of Armenia and The Republic of Belarus in a simplified manner using a special mobile application "Traveling without COVID-19" (Application). The app makes it easy for residents of the EAEU states to move between countries, while ensuring compliance with the current requirements.

In addition to the information on the EAEU epidemiological rules and norms, the "Traveling without COVID-19" platform contains a list of verified laboratories. The application allows users to store test results and QR codes for travelling abroad. The functionality of the application allows persons responsible for sanitary and epidemiological control; check the test results at the entrance to the country visually on the color of the QR code of the test (green - negative result, a red - positive result) and using the standard QR codes reader on any smartphone. For all States using the mobile application "Traveling without COVID-19" applies a unified interaction scheme. The laboratory contributes the result of the coronavirus test to its own results accounting system or the software product provided by Digital Initiatives Foundation of Eurasian Development Bank. In Russian Federation, service transfers the results of coronavirus test into a single repository of Reference Center research and to Rospotrebnadzor.





Application "Traveling without COVID-19", screen with a list of laboratories in different countries.

Mobile application receives references to test results from a single repository of Rospotrebnadzor. During the QR-code control, the response about the authenticity of the coronavirus test result is obtained in real time by checking the test service in a single storage of the reference center of Rospotrebnadzor.

In airports, 141 mobile devices working under Aurora OS ensure the readings coronavirus test result in the form of QR codes for the detection a new coronavirus infection. Currently, from the beginning of the work, the total number of QR codes scans is 399 452 including 107 101 QR-codes provided by "Traveling without COVID 19" applications.





Application "Traveling without COVID-19", the application requires a passport scan to confirm the identity. Screen for obtaining a QR code testing on COVID19.

As of 02.08.2021, 680 000 test results were obtained by residents of EAEU member States using the Application when travel between States, in accordance with the national regulation of the country of departure and the country of arrival. As of 02.08.2021, 582 000 copies of Application are installed on the smartphones.

Geography of laboratories connected to the Application:

- 1. Republic of Armenia: 62 laboratories.
- 2. Republic of Belarus: 67 laboratories.
- 3. Kyrgyz Republic: 160 laboratories.
- 4. Republic of Kazakhstan: 520 laboratories.
- 5. Republic of Tajikistan: 80 laboratories.
- 6. Republic of Uzbekistan: 90 laboratories.



7. Russian Federation: 1080 laboratories.

Scaling and expanding the geography of laboratories to other countries are directly related to the conditions for recognizing the results of coronavirus test and restrictions in traveling rules by states potentially interesting in using of Application. In addition, there are challenges of global coordination of security issues and reliable user' authentication. In this regard, we would like to recommend ITU to consider the possibility of acting as a Global platform and coordinator of international authentication system and the Global cyber security center, and for this purpose organize the development of international public policies related to these aspects within the Union.

In this regard, we would like to stress that the increasing threats in the field of authentication and security are not the only ones. The outbreak of COVID-19 forced humanity to face previously unknown challenges, which strengthened our dependence on digitalization processes, as well as from widespread ICT. First, these are issues related to security on the Internet, the protection of personal data, the spread of fake information on the Internet. In addition, here the question rightly arises whether the existing ICT international regulatory system is capable of ensuring the safe and reliable operation of Internet services. We are convinced that it should be significantly finalized and based on the principles of mutual trust and guarantee security subject to the fundamental freedoms of a person with equal rights of states on the management of critical Internet resources. For today, there are no international regulatory documents devoted to ensuring the protection of personal data on the Internet, compliance with human rights and measures to combat fake news (primarily about the coronavirus).

We offer ITU to become a coordinating body and organize preparation of international legal acts under the auspices of the UN.

At the same time, it necessary to create effective international interaction mechanisms within ITU, allowing developing countries to access advanced digital



solutions and technologies, technical assistance to implement them and strengthen personnel potential.

For its part, we ready to share our experience, advanced digital solutions both within international associations, forums and policy platforms, and based on bilateral cooperation.