



日露地域交流年 2020-2021
ГОД РОССИЙСКО-ЯПОНСКИХ
МЕЖРЕГИОНАЛЬНЫХ И
ПОБРАТНИМСКИХ ОБМЕНОВ 2020-2021

STS *forum* Russia-Japan Workshop Online 2020

TOWARD THE
POST-COVID-19 ERA

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-Toward the Post-COVID-19 Era-

Summary

November 17, 2020

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Organised by



Science and Technology in Society *forum* (STS *forum*)



Skolkovo Foundation



Skolkovo Institute of Science and Technology (Skoltech)



Japan External Trade Organization (JETRO)

Supported by



Embassy of Japan in Russia



Japan Association for Trade with Russia & NIS



Japanese Business Club



Ministry of Economic Development of the Russian Federation



Ministry of Industry and Trade Russia



Ministry of Science and Higher Education of the Russian Federation



Russian Venture Company



Agency for Strategic Initiatives

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Opening Address



Omi, Koji

Founder and Chairman, Science and Technology in Society *forum* (STS *forum*)
(Message delivered by **Fujiki, Kanji**, Executive Director, STS *forum*, on behalf of Omi, Koji)



Fursenko, Andrey

Aide to the President of Russia

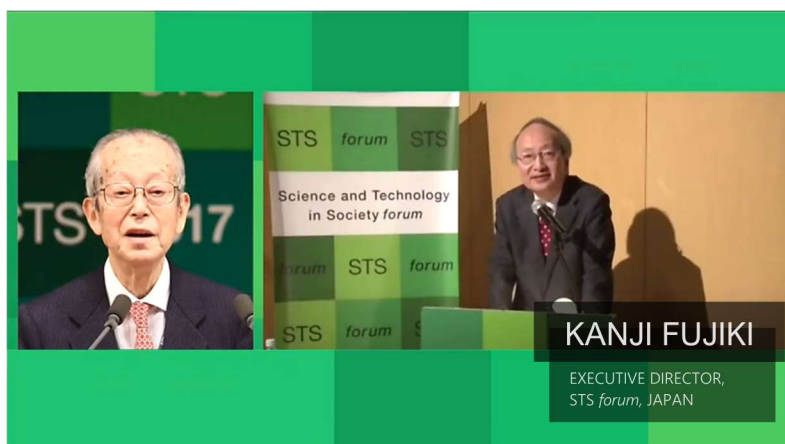


Kozuki, Toyohisa

Ambassador Extraordinary and Plenipotentiary of Japan to the Russian Federation

Mr. Kanji Fujiki delivered an opening remark on behalf of Mr. Koji Omi, Founder and Chairman of STS *forum*. He explained the background of STS *forum* highlighting that it has become the world's most influential platform in science and technology. STS *forum* does not only host the multilateral annual conference, but also bilateral workshops to tackle a variety of issues and facilitate cooperation and exchanges in science and technology.

Next, Mr. Fujiki explained the bilateral cooperation plan between Russia and Japan in eight areas including extending healthy longevity and creating vibrant cities. Science, technology, and innovation are indispensable elements of the eight areas. This workshop will contribute to advancing the cooperation between Russia and Japan, and the plan in the eight areas.



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Mr. Andrey Fursenko took the stage to give opening remarks. He explained that the world is facing daunting challenges which need new ideas and approaches to solve. Among the essential areas of cooperation, Mr. Fursenko highlighted environmental issues, energy, genetics, agriculture, and creation of infrastructure studies, in which Russia has launched research projects. Collaboration in

these areas between Russia and Japan would be efficient, increasing opportunities and results for the whole world.

Mr. Toyohisa Kozuki gave the final opening remark. Russia has consistently sent the highest number of participants to the STS forum. Cooperation in science and technology between Russia and Japan has produced concrete results including a portable laboratory used in the fight against COVID-19. The accumulation of the Russian-Japanese cooperation over several years has produced fruitful results which have been critical during this pandemic. This cooperation has great potential for the countries' relations and people from both countries have high expectations for further cooperation in science and technology.



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Keynote Speech



Dvorkovich, Arkady
Chairman, Skolkovo Foundation



Kuleshov, Alexander P.
President, Skolkovo Institute of Science and Technology



Mr. Arkady Dvorkovich touched on successful stories of Russia-Japan collaboration and explained that, even though next year will also be challenging, the Olympics in Japan should be a symbol of recovery, hope, and trust in the global society. Technological foresight is required to identify technologies that must be focused on during the coming years, such as online education, artificial intelligence (AI)-based telemedicine, automation of manufacturing and business processes, and new energy sources.

Prof. Alexander P. Kuleshov explained that the groundbreaking advances in science and technology will lead to dramatic social changes. AI, biotechnology, and new generations of communications are transforming the world. AI is a key driver which will change the world but also needs to be handled with caution, and he expressed his hope for STS forum to help solve AI issues.

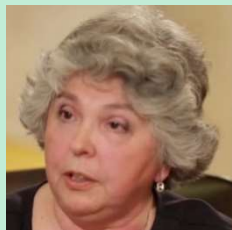


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Session 1:

Deepening Russia-Japan cooperation in science, technology and innovation



Co-Chairs

Ivanova, Natalya I.

Academician, Head of Science and Innovation Research, Primakov National Research Institute of World Economy and International Relations (IMEMO), Russian Academy of Sciences



Yamada, Kiyoshi

Chancellor, Tokai University



Speakers

Khlunov, Alexander

Director General, Russian Science Foundation



Hagiwara, Takahiro

Deputy Director-General, Industrial Science and Technology and Environment Bureau, Ministry of Economy, Trade and Industry (METI)



Galazhinskiy, Eduard V.

Rector, National Research Tomsk State University (TSU)

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Kajiwara, Susumu

Deputy Director-General, Science and Technology Policy Bureau,
Ministry of Education, Culture, Sports, Science and Technology (MEXT)



Popova, Natalia

First Deputy CEO of «Innopraktika», IT Ombudsman



Saeki, Koji

Senior Vice President, Japan Science and Technology Agency (JST)



Kolachevsky, Nikolai

Director of the Lebedev Physical Institute of the Russian Academy of Sciences

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This session was co-chaired by Prof. Natalya I. Ivanova and Prof. Kiyoshi Yamada. Prof. Ivanova first explained that this session will address cooperation between universities, research institutes, and policymakers. Prof. Ivanova then introduced the speakers of the session, and the speakers were invited to give remarks.



Prof. Kiyoshi Yamada spoke next. He commented on the status of university exchange referring to the relationship Tokai University has developed with Russia. Recently, intellectual exchange between Russian and Japanese Universities has shifted from individual activities to interuniversity cooperation. For example, the Association of Institutions of Higher Education of the Russian Federation and Japan was

established in order to systematically accelerate interuniversity exchange. The association aims to expand academic-level personnel exchanges between the two countries resulting in socioeconomic growth and development, and educational research programs based on social needs.

Mr. Alexander Khlunov touched on the partnership of the Russian Science Foundation with the Ministry of Agriculture, Forestry and Fisheries of Japan, and highlighted remarkable results of joint research projects in agricultural sciences. These funding efforts should lead to more robust Russian-Japanese collaborative research, and more collaboration and joint investment is desired. To combat COVID-19, Mr.



Khlunov welcomed Japanese scientists to experiment jointly with Russia. To conclude, he highlighted that the joint initiatives should not be limited to agriculture, health or interuniversity partnerships only. They should address all gaps that must be filled to make research support economic growth, and to enhance the quality of life.

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Mr. Takahiro Hagiwara shared ideas and initiatives of the Ministry of Economy, Trade and Industry, (METI) focusing on three areas of “digital,” “green,” and “healthcare” as the economic recovery plan for COVID-19. As for “green” which represents measures against climate change, Japan has declared carbon neutrality by 2050, aiming to take a leadership role toward achieving a “positive cycle of economic growth and environmental protection”

where international cooperation in R&D will be vital to promote innovation. Mr. Hagiwara also touched on the joint “digital” and “healthcare” projects between Russia and Japan including the manufacture of COVID-19 rapid testing kits.

Prof. Eduard V. Galazhinskiy spoke on how the pandemic changed education systems. Due to the pandemic, suddenly, the vast majority of students globally had to engage in some form of distance learning; both students and teachers had to adapt to the new educational environment; inequality in the access to education has become apparent; and young people lost their jobs and had to drop out of university due to lack of funds. It is critically important to spread new practices and technologies in higher education which can become more productive and resistant for the benefit of the Russian and Japanese economy and society.



Dr. Susumu Kajiwara explained that cooperative and collaborative efforts of countries around the world are essential to tackle issues that society faces today. Russia and Japan have been carrying out active research in science and technology between universities and research institutes such as in space exploration, nuclear energy, and ocean research. Dr. Kajiwara highlighted a memorandum between the Ministry of Education, Culture, Sports, Science and

Technology (MEXT) and the Ministry of Science and High Education of the Russian Federation signed for cooperation of joint research projects promoting bilateral joint research projects.

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Mrs. Natalia Popova explained that government support by direct and indirect means for tech companies is essential for Russia and would promote cooperation with Japan and other countries. She highlighted National Champions, a group of elite companies, which have a lot of areas for collaboration with Japan. Former Prime Minister Shinzo Abe presented eight crucial points of collaboration between Russia and Japan. Mrs.

Popova highlighted two of them which are fundamental expansion of exchange and cooperation between SMEs, and cooperation on cutting edge technologies.

Mr. Koji Saeki mentioned that it is important for Japan and Russia to collaborate on the Sustainable Development Goals (SDGs). JST is currently collaborating with Russia by promoting research projects in the fields of disaster prevention, conservation of genetic resources, and water circulation in the Arctic region. Several joint research projects have been conducted with the Ministry of Science and Higher Education of the Russian Federation, and the Russian Foundation for Basic Research. JST will continue to promote cooperation with Russia and contribute to global wellbeing.



Prof. Nikolai Kolachevsky highlighted efforts in physics which are valuable for interdisciplinary research. For example, methods developed in statistical physics which could be used in coding, neuroscience, computer science, and other non-physical research. He added that the use and implications of knowledge graphs can be expanded internationally and utilized together between Japan and Russia.

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Discussion



Prof. Ivanova asked Prof. Yamada to describe the difference between Russian, European, and American universities. Prof. Yamada answered that academic collaboration between Japan and Russia is relatively new, and mentioned that healthcare is a big interest between the two countries.

Prof. Ivanova then asked Mr. Khlunov about the changing of priorities in a science supporting agency. Mr. Khlunov explained that the Russian Science Foundation actively encourages international research cooperation and encourages researchers to collaborate based on the main principle of excellence. Priorities depend on the partners, but cutting edge research is at the center of the Russian Science Foundation's activities.

Prof. Ivanova presented a question to Mr. Hagiwara asking how the Ministry of Economy, Trade and Industry supports the bilateral cooperation among high tech companies. Mr. Hagiwara replied that, in order to promote cooperation among private companies, it is essential to provide opportunities to understand each other's strengths, needs, and demands. He also mentioned that the exchange of human resources between Japanese and Russian companies is important.

Prof. Ivanova then asked Prof. Galazhinskiy about the main challenges faced during the pandemic. Prof. Galazhinskiy answered that in the post-pandemic era, there will be a hybrid form of mobility involving a virtual environment. Students and professors will choose campuses that were able to cope with challenges better than others, such as a successful blend of distance and physical learning.

Prof. Ivanova asked Dr. Kajiware about the kind of interest he has in Arctic research. Dr. Kajiware responded that Arctic research is an important area between Russia and Japan. MEXT has been promoting a project with Russia on Arctic research, working to develop human resources through dispatching young researchers, and has launched a research project this year.

Prof. Ivanova presented a question to Mrs. Popova about international collaboration between Russian and Japanese high tech companies. Mrs. Popova replied that now is an important time to collaborate especially due to the pandemic's effect on the global economy. There have already been great opportunities of collaboration including the development of an anti-COVID drug.

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Prof. Ivanova requested Mr. Saeki to comment on any topic of his interest. Mr. Saeki commented on finding solutions to social challenges. Open fora to facilitate discussion, collaboration, and co-creation activities are vital to finding solutions to social challenges.

Prof. Ivanova asked Prof. Kolachevsky about potential areas of international cooperation. Prof. Kolachevsky pointed out two focuses: the existing project on the linear collider; and quantum computing, quantum communication and quantum sensing. He explained international cooperation in research on social relations specifically mentioning the movement of money between Japan, Russia, China, and so on.

Q&A

A participant asked about a program supported by MEXT involving universities and its support from the Russian side. Mr. Khlunov replied that research projects funded by RSF may include a mobility part and research work in foreign partners' universities or research centers. Dr. Kajiwarra added that student and researcher exchanges



between Russia and Japan are very important. Prof. Galazhinskiy added that such programs are important for universities and need support.

Prof. Yamada concluded his comments by saying that there is a lot of interest in the academic areas, encouraging young scientists. Japan would like to make its best effort to create opportunities for those scientists for the prosperity of Russia and Japan. Mrs. Popova concluded her comments by saying that there is interest in collaboration between companies but there is no platform for this collaboration. However, there are other mechanisms to offer collaboration.

Prof. Ivanova concluded the session by making final comments about the possibilities of future cooperation and thanking all speakers and guests.

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Session 2:

Focusing on societal needs for science, technology and innovation in Russia and Japan



Co-Chairs

Repik, Alexey

Chairman, All Russia Public Organization "Business Russia," Chairman of Russian Japanese Business Council, Founder of R-Pharm group



Hayashizaki, Yoshihide

Program Director, Preventive Medicine and Diagnosis Innovation Program, RIKEN



Speakers

Ishizuka, Hiroaki

Chairman, New Energy and Industrial Technology Development Organization (NEDO)



Kashin, Alexey

CEO, Chairman of the Board of Directors, InEnergy Group



Nobutani, Kazushige

President, Japan External Trade Organization (JETRO)

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Ivashchenko, Andrey

Chairman of the Board of Directors, ChemRar Group of Companies



Movsesyan, Oleg

CEO, Moscow State University Science Park (MSU Science Park)



Rybak, Konstantin

CEO, Ajinomoto-Genetika Research Institute

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This session was co-chaired by Mr. Alexey Repik and Prof. Yoshihide Hayashizaki. Mr. Repik introduced the speakers of this session. He then explained that with the state of society amid pandemic, it is clear that we need to rely on the fourth industrial revolution driven by AI, the Internet of Things (IoT), the next generations of high speed wireless networks, etc., to be able to survive. Mr. Repik then talked about important points to be considered in the transition to the post-pandemic era. First, innovation holds the key to emerging from a pandemic. Second, we must consider how to manage and develop innovation with a focus on sustainability. To realize this vision, risks (ethical, cultural, social, and political) that come with new technologies must be considered.



Prof. Hayashizaki then took the floor. He explained that RIKEN has been collaborating with Russian counterparts for the last six years. As a result of collaborations, joint ventures were established between Japan and Russia.

Mr. Hiroaki Ishizuka spoke on the importance of innovation in developing COVID-19 and climate change solutions. New combinations of technologies, companies, and people need to be established to generate innovation. The partnership of Russia and Japan has great potential to make such combinations. It is important for countries and industries to work together, share scientific findings, and create innovation in order to successfully realize a post-pandemic society and resolve climate change issues.



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Mr. Alexey Kashin spoke next. He talked about the extensive technological changes taking place which will lead to large-scale innovation and stimulation of economic growth. Russia is exploring the green energy market and is moving towards a low carbon economy. Industry 4.0 is ideal for developing a market of new and mobile energy sources, where Russia's advantages lie.

Mr. Kazushige Nobutani first talked about society's needs in the COVID-19 era and climate change. Now is a good time to collaborate with, invest in, and come to Japan because it is a good place to make progress on societal needs and climate change efforts.



Dr. Andrey Ivashchenko mentioned that the integration of Russian scientists and universities is not sufficient because the innovative process is not yet installed. Japan's experience in this area could help Russia because innovative industries in different areas have been created in Japan. Dr. Ivashchenko specifically

mentioned that there is a lot of room for cooperation in sharing experiences, innovation, and co-developing and co-marketing products. A few companies use fast-track regulations to bring new products to the market with good results. Russian has a lot of potential in this area and can share its innovation with Japan.

Mr. Oleg Movsesyan first talked about the transition from centralized infrastructure to ecosystems of science and innovation, and second, the development of digital infrastructure in the field of innovative ecosystems. The Moscow Innovation Cluster is willing to organize a partnership with Japanese entities, such as by helping Japanese companies get into the Russian market.



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Dr. Konstantin Rybak gave examples of successful cooperation between Japanese corporations and Russian research institutions, such as the cooperation between Ajinomoto and GosNII Genetika, that resulted in the foundation of the company Ajinomoto-Genetika Research Institute. The success of this long-term collaboration lies in finding a sustainable model for engagement of the creative potential of Russian scientists to the

continuous improvement of Ajinomoto biomanufacturing technology.

Discussion



Mr. Repik asked Prof. Hayashizaki what measures or strategies by governments, scientific circles, and the business community should be implemented to make health care systems of any country better prepared for such serious threats as a global pandemic, and what the role of international collaboration is in this field including Russian-Japanese collaboration. Prof. Hayashizaki answered that a lot has been learned from this pandemic

through the research and work taken to create solutions and a vaccine. International collaboration is important in terms of three points. First is sharing information. Second is working complementary depending on each country's advantages and disadvantages. Third is a fast regulation system.

Mr. Repik directed the next question to Mr. Ishizuka and asked about the key priorities for implementation of carbon neutrality strategies. Mr. Ishizuka answered that in order to reach carbon and greenhouse gas goals, energy transformation to renewable or nuclear energy, a resilient and robust electricity network, a supply chain of low cost carbon dioxide-free hydrogen, carbon recycling and CCUS, and decarbonization in agriculture, forestry, and fisheries are vital.

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Mr. Repik then asked Mr. Kashin how he can evaluate the current level of collaboration between Russian and Japanese companies for the newest technologies, which results we could expect, and what can be done to make it better and faster. Mr. Kashin answered that at the moment, there is no real technological cooperation for a new energy market. There is some collaboration between scientific groups but very basic. To establish a strategic operation, we have to start from scratch. However, we have great potential for cooperation in energy, hydrogen, and Industry 4.0.

Mr. Repik posed the next question to Mr. Nobutani about what could be the appeal of Russian startups in the innovation environment for Japanese industries. How can Russia's offer be made more valuable and interesting for Japan? Mr. Nobutani answered that Japan does not know the environment in Russia well. An important key is Japanese companies learning Russian technology.

Mr. Repik gave the floor to Mr. Movsesyan to comment. Mr. Movsesyan commented that in Moscow State University and other Moscow universities, there is a lot of potential for developing technology. However, results of university research are not technologies that could be used by companies. If technology is needed, cooperation with startups created by young researchers could be beneficial.

Mr. Repik then asked Dr. Ivashchenko about plans in the development of future drugs and possible collaboration with Japanese partners. Dr. Ivashchenko answered that collaboration with Japanese companies is possible with those who are willing to work with new Avifavir molecules which have good potential. There are also new innovative drugs for the flu, and with new molecules under patent protection, collaboration is possible.

Mr. Repik gave the last question to Dr. Rybak about the current Ajinomoto expectation of Ajinomoto-Genetika Research Institute (AGRI) and its advantage over other companies. Dr. Rybak replied that one of their big advantages over others is that it is a part of the Ajinomoto Group, not a stand-alone company. With the open innovation approach, AGRI is open for collaboration and can offer its experience in biotechnology.

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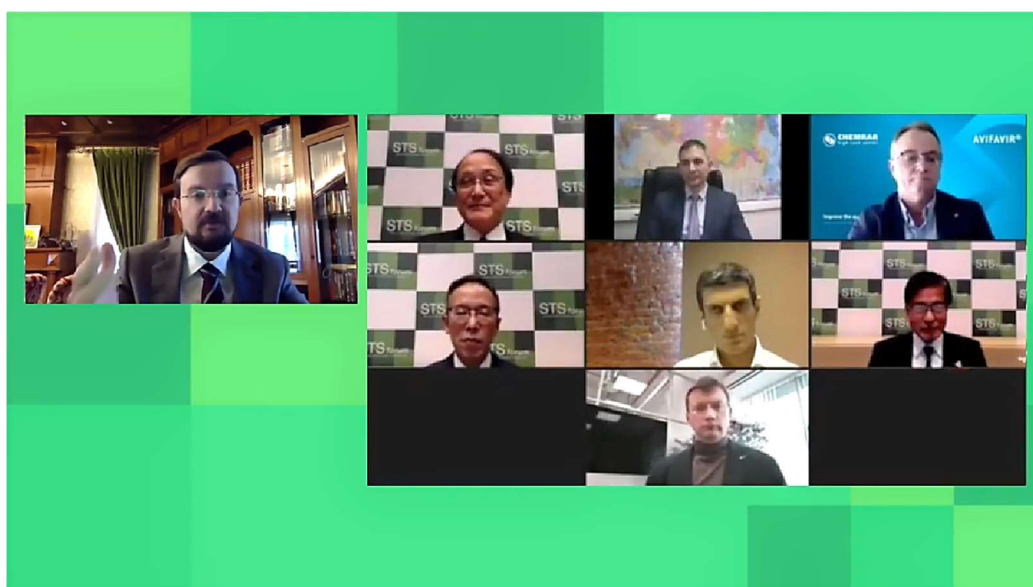
Q&A

Most of the questions asked were about how to improve interactions between Russia and Japan. For example, are there any social obstacles for foreign workers in Japan? Is there any chance for a Russian to develop a career in Japan? Could Russia also help to improve this cooperation? Prof. Hayashizaki commented that internationalization is increasing. Also, with the increase of non-Japanese workers in Japan, the use of English has increased.

Mr. Repik then asked the Russian speakers if there is such a problem as brain leakage. If yes, then how can it be prevented? Mr. Kashin said that brain leakage is global. If a way to attract the best people worldwide are utilized, then leakage occurs. International collaboration between businesses can help reduce brain leakage, but it cannot be prevented.

Dr. Ivashchenko also commented that brain leakage is an issue for Russia because a lot of young talent goes to western countries. To improve it, more attention needs to be paid to patent protection of new discoveries and inventions which young scientists create while working in laboratories of Russian universities.

Mr. Repik concluded the session by making some final comments and thanking all speakers and guests.



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Concluding Remarks



Ponomarev, Alexey

Senior Vice-President for Industrial Cooperation, Skolkovo Institute of Science and Technology



Adachi, Toshio

Advisor to the Chairman, Science and Technology in Society forum (STS forum)



Mr. Alexey Ponomarev gave the first closing remark. It is an important task for the STS community to transfer the understanding of new technology, and to propose rational solutions related to new challenges. This workshop is expected to expand the interaction of Russian academia and SMEs with Japanese industry, R&D, and universities. Also further collaborations are hoped to be made in high technology and energy.

Mr. Toshio Adachi gave the final closing remark. This workshop helped set expectations that Japan and Russia will work on global issues in the future, such as the current pandemic and climate change. This STS workshop should be used as a platform for active exchanges between our two countries in science, technology, and innovation.





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We look forward to seeing you again at the next STS forum Russia-Japan Workshop!