



VIII INTERNATIONAL FORUM
OF TECHNOLOGICAL DEVELOPMENT
TECHNOPROM 2021



**The 25-27th of August 2021
NOVOSIBIRSK, RUSSIA**

**VIII INTERNATIONAL FORUM
OF TECHNOLOGICAL DEVELOPMENT**

TECHNOPROM 2021
Event program

Wednesday, the 25th of August

8:30 – 9:30

REGISTRATION

9:30-11:45

Conference Room No. 1

Symposium The Value and Price of Science
The essence of modern science and its value for society

Session 1

The role and place of modern science, as well as the development of technologies based on it, is the essence of modern socio-economic dynamics. This topic is heard at various international forums, whether it concerns the pandemic, robotics or the digitalization of the economy. This issue is given great attention by modern states that are gaining economic power, such as China, India, and Scandinavian countries. Some ideas that were influential until recently, such as inclusive globalization and the post-industrial revolution, began to give way to new concepts of the role of high technologies or 'innovative' space flights.

Modern science has three basic parameters – fundamental, i.e. the desire to explore the deep, essential processes of nature, society and man; applied, i.e. there is a tendency to get quick benefits and results in the pragmatic world, research in this area is divided into scientific-applied and scientific-production (such as R&D); educational, i.e. in the modern world, with a new dangerous dependence on electronic information and manipulation by the 'fathers' of new gadgets, a topic emerges of liberation from this dependence of young people and introducing them to works of authentic art to form a genuine humanistic worldview.

In the modern context, which is competitive in nature, Russia needs to develop science and new technologies in all possible ways, while preventing the 'brain drain' to other countries, increasing the overall intellectual level and preventing a decrease in the level of education.

Discussion Questions:

1. What is the essence of modern science? What is the difference from the previous stages of its development?
2. Which sciences are crucial now – exact, natural, social or humanities? What are the vectors of their development and the degree of interaction?

3. Which countries and why are leading in fundamental science and R&D? Is their experience instrumental for Russia?

Moderator:

Vladimir Suprun, Ph.D., Director, Foundation for SocioPrognostic Research «Trends»

9:30-10:45

Conference Room No. 2

Digital technologies

A Man and the Digital State

Round table of the XII International Siberian Forum «Information Systems Industry»

Even though Russia is now in the fourth ten in terms of digitalization, its dynamics in certain sectors is high end. In particular, the state intends to digitalize the maximum number of services for citizens. But is a person just an object in this interaction?

Discussion Questions:

1. The services relevance in the near future in the digital public sector;
2. Accessibility and development of services for public within the framework of digitalization in socially important areas of the Russian Federation;
3. The willingness of society to participate in digital relations with the state;
4. Transfer of mass socially important services to an electronic format: new requirements, issues and ways to solve them;
5. Practices of digitalization in the sphere of social protection and social services for the population in the regions of Russia in terms of providing state and municipal services;
6. State services for citizens, implementation of complex services («super services»).

9:30-10:45
Conference Room No. 3

Green technologies for industry and quality life

Green technologies for Siberia: a dialogue between Russian and international businesses

Session

The green course and principally green carbon has become one of the development priorities for the EU. Green technologies are becoming a new competitive advantage, and international investors are paying more and more attention to the impact of projects on the environment when making decisions. Both energy producers and consumers are making commitments to reduce their carbon footprint. For Russia, on the one hand, this imposes certain restrictions both for the export of goods to the EU and in terms of border climate adjustments, and on the other, opens up new opportunities for exporting hydrogen from renewable sources to the EU. This applies to both large Russian energy companies and small and medium-sized businesses.

Discussion Questions:

- What advantages will the introduction of green technologies provide for the Siberian regions?
- What competitive advantages do investors who implement green technologies get in Siberia?
- How does the Novosibirsk Region support green projects and what developments are already in this direction?

9:30-10:45
Conference Room No. 4

Green technologies for industry and quality life

Regional carbon balance

Session

The main purpose of the discussion is to develop technological and economic models of transit to the «green» economy at the federal and regional levels,

to develop new proposals for state support of projects aimed at decarbonizing the economy.

Russian technologies of carbon absorption and storage:

The following issues and topics are expected to be discussed during the event:

- Work programs at carbon testing ground (7 regions),
- Approaches and methods of working with different types of ecosystems: forest, swamps, agriculture, sea shelf.
- Research design: duration, measurement requirements, data collection and analysis, model construction, expected outcomes.
- The required technological solutions to support the Carbon Testing Ground program work.
- International standards for implementing projects such as nature-based solutions. Examples of ongoing projects, the demand for such project's outcomes from exporting companies.
- Requirements for the new specialists training to ensure the implementation of the low-carbon development strategy in the Russian Federation.
- Review of existing interdisciplinary programs.

9:30-10:45
Conference Room No. 6

Special events

The prospects for the development of technopolis of the Russian Federation as territories of scientific and technological development

Strategic Session

Russian science plays an important role in ensuring the security of the country and the development of world science. The current stage is characterized by the presence of both competitive advantages of the Russian Federation and unresolved problems that

hinder the scientific and technological development of the country.

The technopolises of the Russian Federation are special territories that have a high scientific and technical potential, with a city-forming scientific and industrial complex, but do not have the authority to implement the state tasks assigned to them to ensure the achievement of the national goals of the Russian Federation.

To date, the efficiency of using the potential of technocities can be significantly increased through the implementation of a complex of institutional, regulatory, organizational and managerial factors.

Discussion Questions:

- The role of technopolises of the Russian Federation and other high-tech and innovative territories in the implementation of the priorities of scientific and technological development of Russia.
- Experience in creating and developing knowledge-intensive and innovative territories that combine science, education and industry.
- Experience, achievements, problems and prospects of development of Russian technopolises.
- Experience in implementing attractive scientific and scientific-technical projects on the territory of technopolises.
- The effectiveness of state support measures for technopolises.
- Development of a set of measures to attract human capital in the territory of science cities, including within the framework of the development of the urban environment;
- Experience of integrated development of the territory of technopolises;
- The results of the work of technopolises on the creation, development and implementation of projects using end-to-end technologies of the National Technological Initiative at the design and educational intensive "Archipelago 2021".

Speakers:

Grigory Trubnikov - Ph. D., Academician of the Russian Academy of Sciences, Director of the Joint Institute for Nuclear Research (JINR)

9:30-10:45
Conference Room No. 7

**Breakthrough technologies and
Megascience**

**The Comprehensive Scientific
and Technological Program
(CSTP) «Global Information
Satellite Systems» - the best
cooperation models between
universities, scientific
institutions and businesses
for a scientific and
technological breakthrough**

Round table

It's important to bring promising space products and integrated information services developed within the CSTP to the Russian and world markets. The program is designed to form a leading scientific and technical reserve, including new technologies, methods, digital models, innovative elements of space systems.

Discussion Questions:

1. The best practices and promising cooperation models of high-tech industrial companies in the space and defense industry with leading educational and scientific organizations, small technology companies with unique competencies in this field

9:30-10:45
Exhibition pavilion B

Educational track

**Competitive hackathon on
Aerospace research.
3D technologies Olympics**

10:45 – 11:00

COFFEE BREAK

11:00 – 12:00

THE FORUM AND EXHIBITION OPENING

12:00 -14:00
Plenary Hall

Green technologies for industry and quality life

Technological transformation as a basis for the transition to a «green» economy

Plenary session of the Forum

Climate change as an indicator of a significant human impact on the environment that brings the tasks of the climate neutrality of economy to the forefront of the global agenda. This creates a request to business and industry for a technological reboot of energy, transport, industrial production, and agriculture. Within the framework of international climate agreements, the Russian Federation prioritizes environmental development, which implies reducing emissions, recultivating polluted territories, and sequestering greenhouse gases. What will this trend mean for the country: a new burden on business or an incentive for the economy transformation? Is it possible to benefit from the environmental restrictions in the worldwide markets? What are the country's opportunities for significant technological re-equipment to achieve the goals of environmental friendliness? This plenary session is devoted to the search for tools of generating the scientific and technological agenda to ensure the climate neutrality of economy in conjunction with the state, business and society.

Discussion Questions:

1. The request for climate neutrality: a new burden on business or an incentive for economic transformation?
2. How to set up mechanisms for identifying and overcoming technological barriers on the way to a «green» economy?
3. Is it possible to benefit from the environmental restrictions in the worldwide markets?
4. Technological barriers to the implementation

of the environmental friendliness trend in energy, transport, industrial production, agriculture;

5. Incentives for the creation and implementation of «green» technologies;
6. The shortage of scholarly knowledge for making strategic decisions in the field of 'green' economy: methods for assessing environmental effects, investment priorities, inaccessible technologies.

Speakers:

Dmitry Chernyshenko - Deputy Prime Minister of the Russian Federation for Digital Economy and Innovation, Communications and Mass Media, Culture, Tourism and Sports

Andrey Travnikov - The Governor of the Novosibirsk Region, the Chairman of the Commission of the State Council of the Russian Federation in the direction of "Science"

14:00 – 15:00

LUNCH

15:00 – 16:15

Conference Room No.6

Special events

The development of technopolises - the territories with a high concentration of the scientific and innovative potential: the results of the Archipelago 2121

15:00 - 18:00

Conference Room No. 1

Symposium The Value and Price of Science

The price of science and its benefits for the public and business

Session 2

The role and place of modern science, as well as the development of technologies based on it, is the essence of modern socio-economic dynamics. This topic is heard at various international forums, whether it concerns the pandemic, robotics or the

digitalization of the economy. This topic is given great attention by modern states that are gaining economic power, such as China, India, and Scandinavian countries. Some ideas that were influential until recently, such as inclusive globalization and the post-industrial revolution, began to give way to new concepts of the role of high technologies or «innovative» space flights.

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In the modern world context, which is competitive in nature, Russia needs to develop science and new technologies in all possible ways, while preventing the 'brain drain' to other countries, increasing the overall intellectual level and preventing a decrease in the level of education.

Discussion Questions:

1. Which countries and why are leading in fundamental science and R&D? Is the experience of these countries instrumental for Russia?
2. To what extent and in what vectors does science in the XXI century impact the economy and the public life?
3. What are the costs and benefits of using science for the state and business?

Moderator:

Vladimir Suprun, Ph.D., Director, Foundation for SocioPrognostic Research «Trends»

15:00 - 16:15
Conference Room No. 2

Digital technologies

**Digital profile of the region.
Priorities of regional**

digitalization

Plenary session of the XII International Siberian Forum' Information Systems Industry'

In 2021, the regions were instructed to develop and approve strategies for the digital transformation of key sectors of economy, in the social sphere, and public administration. Based on the digital transformation strategies, the priorities of regional digitalization will be determined in the future and a digital profile of the region will be formed.

Discussion Questions:

1. Achieving the indicators of 'digital maturity';
2. Vulnerabilities of strategy implementation;
3. Creating a digital profile of the region;
4. Priorities of digital transformation in the regions.

15:00-16:15
Conference Room No. 3

Scientific and technological development program. National Technology Initiative

The new strategy of socio-economic development of the Russian Federation as a driver of breakthrough regional development projects

Discussion

In 2021, Strategic Initiatives for the Development of the Russian Federation have been developed and will be adopted for implementation. The basis of the strategy are new breakthrough projects for the development of the economy in various directions. This strategy is built on the principle: from actual problems to the opening of a "window of opportunity" to solve them using a client-centered approach.

Discussion Questions:

1. How to "decompose" the national development goals of the Russian Federation to the regional level?

15:00-17:45
Conference Room No. 4

2. How can the region participate in the implementation of "breakthrough" strategic development initiatives of the Russian Federation?
3. How to "reset" the regional portfolio and programs and form "breakthrough" client-centered development projects aimed at solving the problems and tasks of the consumer (society, business)?
4. How to "repack" the regional and municipal portfolio of projects and programs in accordance with the new strategic initiatives of the development of the Russian Federation and the client-centered approach?
5. How to attract extra-budgetary sources of financing for strategic projects?

Cooperation of science and industry. World-class scientific and educational centers

World-class research centers: from Industry 4.0 to Society 5.0

Round table

Presentation and discussion of topical issues of the activities of world-class scientific centers of various types will allow participants to demonstrate the results of scientific research and development that have a global scale and correspond to the world level, the real demand for scientific developments in the market in the context of increasing the innovativeness of the domestic economy, and will also allow the exchange of experience on issues of activity Centers.

Discussion questions:

- Discussion of mechanisms for the transfer of knowledge and technology from the research sphere to the real sector of the economy
- Preconditions for the emergence of human-centered technologies (from Industry 4.0 to Society 5.0)
- Global trends in the development of human-centered technologies
- The role of digital technologies during the COVID-19 pandemic. The emergence of the direction COVIDTech
- Man in the era of technological transformations. Key research areas within world-class research

centers

- Global Challenges of Agrobiological
- Discussion of topical issues of the current state of agriculture, including the issues of manufacturability of obtaining microbiological preparations
- Staffing for organic agriculture in Russia
- Global challenges facing world-class centers
- Potential of photonic technologies for solving global issues of human society.

15:00 – 16:15
Conference Room No. 5

Scientific and technological development program. National Technology Initiative.

Meeting of the Commission of the RF State Council in the field of science

Problem statement, identification of bottlenecks and discussion of proposals for improving the state policy and practice of private sector players in the Russian Federation for the purpose of radically increasing the scale and efficiency of commercial technology transfer in the domestic and global markets.

Speakers:

Andrey Travnikov - The Governor of the Novosibirsk Region, the Chairman of the Commission of the State Council of the Russian Federation in the direction of «Science»

15:00-16:15
Conference Room No. 6

Venture capital investments and technology transfer

Technobroker platforms and tools: on the way to efficiency

Professional agenda

The development of the technology transfer market requires its saturation with infrastructure and professional human resources in the field of search, identification and commercialization of intellectual

property. However, despite the attempts to create the necessary tools, the domestic innovation ecosystem cannot yet boast of developed and sufficiently effective tools that would provide fast and low-cost matching of technology developers and consumers.

Discussion Questions:

1. Databases and platforms to help a technology broker. What drives the market: a demand or an offer?
2. Technological crowdsourcing – in what cases and under what conditions is it effective?
3. Patent analytics to support a technobroker;
4. Tools to search for developers and technological projects created by Russian corporations: efficiency and prospects of sharing for other participants of the innovation ecosystem.

15:00-16:15
Conference Room No. 7

**Breakthrough technologies and
Megascience**

**SKIF synchrotron research
as a link in the innovation
chain of green technologies
in the
chemical/petrochemical
industry and energy**

Round table

The international synchrotron radiation centers pay great attention to the development of relationships with industrial users. There are impressive examples of effective cooperation that led to the emergence of new products and technologies. For example, at the specialized station for the automotive industry materials research at the Spring-8 Synchrotron Center (Japan), created and fully funded by the Japanese automobile giant Toyota, extensive research is being conducted on catalytic afterburners, chemical current sources for electric vehicles, and engineering composites.

In connection with the large-scale infrastructure project implementation in Russia to create a national network of unique research facilities of the Megascience class, the issue of working out a mechanism for the effective transfer of new scientific knowledge to the innovative technosphere is becoming particularly relevant.

Discussion Questions:

1. Success stories of synchrotron radiation sources and free electron lasers for solving problems in the field of catalysis, polymer science, chemical current sources, materials for hydrogen energy, etc.;
2. Special approaches to synchrotron research: combining different methods, operando mode, high-performance screening, artificial intelligence technologies for data collection and processing;
3. Possible forms of cooperation of industrial enterprises with synchrotron research centers: conducting research on request on a general basis, purchasing services for conducting research and analyzing results on a commercial basis, creating a specialized station for their own needs.

15:00-17:45
Hall No. 8 (Pitch Zone)

16:15 – 16:30

16:30-17:45
Plenary Hall

Special events

Pitch session of exhibiting companies

COFFEE BREAK

Venture capital investments and technology transfer

Commercial technology transfer: Russian practice in the face of global challenges

Plenary session of the Technology Transfer Forum

The intellectual property (IP) is one of the three main categories of exported products, along with goods, works and services. The global IP market is about 400 billion US dollars and continues to grow.

The average annual growth rate in 2010-2017 was 7%. In general, the export of services in the field of intellectual property grew significantly faster than the global GDP, which reflects the trend of increasing intellectualization of international trade.

At the same time, the Russian Federation as a licensor does not play a significant role in the global licensing market (about 0.25% of the global market, and a significant share is in the military-industrial complex).

Technology transfer is a multifactorial and complex economic process that requires an integrated approach in identifying ways of search, transfer and industrial development of R&D results.

It is impossible to work in global high-tech markets without a well-protected IP. This applies both to the sale of goods and/or services with a patent margin, and to the disposal of rights to the intellectual property through license agreements or contracts for the alienation of the exclusive right to patents.

Discussion Questions:

1. Russia on the landscape of global technology transfer markets;
2. Russian practice of commercial technology transfer in the face of global challenges;
3. State policy in the field of commercial technology transfer;
4. Value chains and cooperation in the world of commercial transfer;
5. Technology Scouting Market: Russia and the world;
6. The place and role of technological transfer in the development strategies of the Russian corporate sector;
7. Development of a system for creating a capitalized IP in the Russian scientific, higher education, and technological entrepreneurship sectors;

Bottlenecks and 'de-bottlenecking': conclusions for the state, business, transfer market professionals, knowledge generation systems.

information technologies, digital- and cryptocurrency

Strategic Session of the XII International Siberian Forum «Information Systems Industry»

The digital transformation over the past few years has already unrecognizably changed the sphere of providing traditional banking services and is currently focusing on the development of such areas as:

- mobile banking;
- online shopping;
- remote payment and work.

Discussion Questions:

1. To what extent are banks willing to the digitalization of traditional services, is there a demand for this;
2. What new things can financial institutions offer and what they can't offer consumers yet;
3. Is there a prospect of cryptocurrencies and blockchain widespreading? What is the horizon? What does hinder it?

Why Russian IT developers can't sell software worth \$1.

Cooperation of science and industry. World-class scientific and educational centers

World-class scientific and educational centers: operation formats, issues and prospects

Panel discussion

Currently, the world is going through the processes of the globalization increase, the transition to an innovative digital economy, and the strengthening of competitiveness, especially in the field of high technologies. In response to these challenges, at least 15 Research and Education Centers will be created by 2024 within the national 'Science' project,

16:30-17:45
Conference Room No. 3

in the subjects of the Russian Federation based on the universities and scientific institutions integration and their cooperation with organizations operating in the real sector of economy.

By the beginning of 2021, 10 RECs have already been selected, their initiators being 20 subjects of the Russian Federation. The need to create and develop RECs is justified by the possibility of generating more breakthrough scientific ideas within the centers and universities and bringing innovative ideas to the market with the help of interested enterprises. It is assumed that a number of developed ideas will be up to the world level.

'The formation of the world-class scientific and educational centers is a long-term agenda for the next 10 years and beyond. The 1-st year experience of the implementation shows that the effect of the REC participants work will be cumulative. It will increase the potential for accelerating technological changes and the development of human capital in the territories and, as a result, will form a stable framework for the spatial connectivity of our country,' - V. N. Falkov, Minister of Science and Higher Education of the Russian Federation, claims.

Discussion Questions:

1. Expectations and the first results from the created RECs. The cooperation formats being built between scientific and educational complexes and the real sector of economy;
2. Issues of implementing REC operational programs (attracting the real sector and large businesses to REC, budgetary and extra-budgetary financing, interregional cooperation, aligning project participants to the global agenda);
3. Outlook of REC operations.

16:30-17:45
Conference Room No. №6

**Cooperation of science and industry.
World-class scientific and educational
centers**

**International investments in
technological and
infrastructure projects**

Panel session

The Russian President Vladimir Putin instructed Prime Minister Mikhail Mishustin to keep under personal control the attraction of investment in the economy. "Investment development is the most important component for the development of the country," the President of the country said at a meeting with members of the government.

Discussion questions:

1. The Russian technology market and the global economy: trends and forecasts
2. International investments in knowledge-intensive industries in the context of the sanctions policy: risks and opportunities;
3. Banks, funds and corporations: who will win in the market of investments in technological projects.

16:30-17:45
Conference Room No. 7

**Breakthrough technologies and
Megascience**

SKIF SYNCHROTRON SOURCE AND NATIONAL BIOLOGICAL SAFETY

Round table

The structurally oriented design of pharmaceuticals is a outstanding trend in recent years in the pharmaceutical industry. If the structure of the target protein is known, then the task of searching for substances that modify its biological function (activating or inhibiting) can be solved by means of computer modeling (molecular docking), followed by effectiveness testing of the predicted leader

compounds by structural study of target protein complexes with a potential pharmaceutical product, which requires constant access to high-performance macromolecular crystallography stations on synchrotron radiation sources.

The effectiveness of this approach was very clearly manifested in the fight against the Covid-19 pandemic, when the structure decoding of the main protease of the coronavirus (at a synchrotron source in Shanghai, China) became the trigger for the appearance of antiviral vaccines in different countries of the world.

The creation of a synchrotron source of the 4+ generation - SKIF - in the technocity of Koltsovo within walking distance from the State Research Center of the World Bank «Vector» opens up unique opportunities on a global scale to develop technologies for accelerated development of vaccines and antiviral drugs based on complex synchrotron diagnostics.

Discussion Questions:

1. Synchrotron source capabilities in the field of biomedical and virological research: from foreign experience and trend analysis to Russia's own agenda;

Cooperation of science and industry.

17:45 – 18:00

COFFEE BREAK

18:00-19:15
Plenary Hall

Educational track

Opening of the Agency for Strategic Initiatives (ASI) Club in the Novosibirsk region, featuring the regional projects presentation and participation of ASI CEO S.V.Chupsheva.

The grand ceremony

The regional innovation ecosystem is formed from various forms of infrastructure, coordination of activities in the process of transition from an idea to scaling production or to mass distribution in society.

16:30-17:45
Conference Room No. №1

The clubs of the Agency for Strategic Initiatives are opened in the most interested regions.

Breakthrough technologies and Megascience

Creation of a national network of supercomputers and data processing centers

Round table

The addressing the challenges of the most important tasks of science and ensuring the technological development of the country today is possible only with the widespread use of supercomputer technologies, with the increase of supercomputer computing resources combined into a modern infrastructure. Similar supercomputer infrastructures are currently deployed in the United States, China, Japan, and the European Union. In Russia, the existing supercomputer centers are separate objects that are not connected to each other within a single infrastructure.

Taking into account the situation in Russia in the field of supercomputer resources and technologies, their importance for the development of the country, it is necessary to allocate supercomputer technologies as a special priority at the state level, which implies the implementation of a set of interrelated measures, aimed at their accelerated development in order to ensure a leading position in the global "digital economy" and the presence of the Russian Federation among the ten leading countries in the world in terms of research and development (Decree of the President of the Russian Federation "On national development Goals of the Russian Federation for the period up to 2030" dated July 21, 2020 No. 474). The basis of this set of measures for the development of supercomputer resources and technologies in Russia should be measures to create and ensure the functioning of a national network of supercomputers and data processing centers.

Discussion Questions:

1. Creation of a network of supercomputer centers and data processing centers in Russia;
2. Defining a list of big tasks and developing answers to big challenges;
3. Current issues of functioning of supercomputer centers and data processing centers;
4. Creating IT services for science, business and government;
5. Issues of cooperation between science, education and business;
6. Educational programs at universities and retraining programs.

18:00 – 19:15
Conference Room No. 2

Digital technologies

Turnkey import substitution: experience of transferring regional infrastructure to domestic solutions

Round table

18:00-19:15
Conference Room No. 3

Cooperation of science and industry. World-class scientific and educational centers

Prospective approaches to assessing the performance of world-class research and education centers

Round table

By the beginning of 2021, 10 RECs have been created, the initiators of which are 20 subjects of the Russian Federation. Thanks to the RECs work, high-tech workplaces appear, working processes are improved. During the RECs existence, several dozen studies have been conducted and their results have been tested in practice together with the business. New developments have already been introduced in industry, mechanical engineering, waste sorting, and the aviation industry, some of them have been scaled up.

Discussion Questions:

1. REC management systems;
2. Effective cooperation models between science, business and regional authorities;
3. Interregional cooperation practice;
4. The role of regional authorities in the REC implementation;

Human capital training within the REC operations.

18:00-19:15
Conference Room No. 4

Green technologies for industry and quality life

Impact of the Climate Agenda on the Technological Transformation of Russia

Panel discussion

It cannot be denied that the climate agenda has an impact on the entire course of human technological development. The obligations assumed under the Paris agreement are forcing 195 countries of the world, including Russia, to modernize existing production facilities in order to minimize CO2 emissions, as well as to take measures to increase the potential of ecosystems to absorb greenhouse gas emissions. On the other hand, the task is to concentrate efforts on energy transition, that is, on a phased reorientation from fossil fuels to other renewable sources of energy generation. In our panel discussion, we will consider in which sectors of the Russian economy are already undergoing technological transformation, and where they are still preparing to start the changes.

18:00-19:15
Conference Room No. 5

Venture capital investments and technology transfer

Business angel clubs: startup, steady, go!

Conference of the XV Siberian Venture Fair

Given the limitations in attracting venture capital from institutional investors of the venture capital market and taking into account the 'rules of the game' of working with development institutions,

companies at an early stage usually face the need to attract capital from private investors.

'Venture Barometer 2020' reports, that 46% of all surveyed investors in 2020 invested at the Seed stage. This is 13% higher than the last year indicator. One third of those who indicated Seed as the main stage for investment are "business angels". The early-stage private capital market is in the process of formation, the most professional part of investors are being united in networks and clubs, which allows for more effective risk assessment and syndicated transactions.

Discussion Questions:

1. What does ensure the success or failure of an investment?
2. How does the distribution of roles in the 'founders – investor' tandem look like?
3. To what extent were the business models offered by entrepreneurs relevant and capable of scaling?
4. How does their transformation take place during the period of working with the investor in the pre- and post-investment phase?
5. How are business angel clubs useful for a novice investor?
6. How can a startup be presented to the business angel club?
7. How do investors identify niches for investing?

What does an investor in your business pay attention to when making a decision about funds allocation?

18:00-19:15
Conference Room No. 6

Venture capital investments and technology transfer

Reducing R&D risks for industrial enterprises: what is the state ready to offer?

Round table of the Technology Transfer Forum

The experience of communicating with industrial enterprises, especially in conservative industries,

shows that the top management is largely not informed or does not have a clear idea of the full breadth of opportunities provided by the state to support research and development, including through providing co-financing for R&D, as well as the development of cooperation between educational organizations of higher education, state scientific institutions and organizations implementing complex projects to establish high-tech production.

Discussion Questions:

1. State Industry Information System (SIIS) - opportunities for state support of industry;
2. SIIS Support Navigator;
3. Support programs of the Ministry of Industry and Trade (Minpromtorg) of the Russian Federation;
4. Support program of the Ministry of Education and Science (Minobrnauki) of the Russian Federation (Government Order No. 218);
5. How to raise awareness of the industrial enterprises top management of the state support for R&D?
6. How to improve the quality of projects applying for state support of R&D?

What additional measures of state support for R&D are necessary for the industry?

18:00-19:15
Conference Room No. 7

**Breakthrough technologies and
Megascience**

**Comprehensive scientific and
technological program «Clean
Coal - green Kuzbass»:
projects, expected outcomes,
growth outlook**

Round table

The round table 'Comprehensive scientific and technological program 'Clean Coal - green Kuzbass': projects, expected outcomes, growth outlook' is dedicated to discussing the issues of increasing the coal mining efficiency through the introduction of high technologies and domestic products, including digital, through creation of unmanned coal mining technologies and coal transportation, providing a high level of industrial safety. It is also necessary to discuss the tasks of creating innovative production facilities for deep processing of coal and industrial waste, ensuring a high ecological level of coal mining, coal refining, capable of eliminating the consequences of the coal industry impact on the environment and reducing the risks of occupational diseases.

Discussion Questions:

1. The increase in the coal mining efficiency due to the introduction of high technologies and domestic products, including digital, the creation of unmanned technologies for coal mining and coal transportation, providing a high level of industrial safety;
2. The tasks of creating innovative production facilities for deep processing of coal and industrial waste, ensuring a high ecological level of coal mining and coal refining;

On eliminating the consequences of the coal industry impact on the environment.

18:00-19:15
Hall No. 8 (Pitch Zone)

Venture capital investments and technology transfer

Systematization of business processes

Workshop of the XV Siberian Venture Fair

Creating an investment-worthy and ready to scale

company inevitably implies passing the infancy stage, when after checking and confirming the hypothesis and testing channels, business processes should be effectively built that turn a startup into a well-functioning business machine, capable of rapid and effective growth.

Discussion Questions:

1. Systematization of business processes – how and where to start;
2. Regulations executed by employees;
3. Developing strategic planning skills in growing companies;

Check points.

Thursday, the 26th of August

9:30-12:15

Conference Room No. 1

Symposium The Value and price of science Science and morality

Session 3

The role and place of modern science, as well as the development of technologies based on it, is the essence of modern socio-economic dynamics. This topic is heard at various international forums, whether it concerns the pandemic, robotics or the digitalization of the economy. This topic is given great attention by modern states that are gaining economic power, such as China, India, and Scandinavian countries. Some ideas that were influential until recently, such as inclusive globalization and the post-industrial revolution, began to give way to new concepts of the role of high technologies or 'innovative' space flights. Modern science has three basic parameters – fundamental, i.e. the desire to explore the deep,

essential processes of nature, society and man; applied, i.e. there is a tendency to get quick benefits and results in the pragmatic world, research in this area is divided into scientific-applied and scientific-production (such as R&D); educational, i.e. in the modern world, with a new dangerous dependence on electronic information and manipulation by the 'fathers' of new gadgets, a topic emerges of liberation from this dependence of young people and introducing them to works of authentic art to form a genuine humanistic worldview.

In the modern world context, which is competitive in nature, Russia needs to develop science and new technologies in all possible ways, while preventing the 'brain drain' to other countries, increasing the overall intellectual level and preventing a decrease in the level of education.

9:30-10:45
Conference Room No. 2

Digital technologies

Information security, critical infrastructure facilities

Round table of the XII International Siberian Forum «Information Systems Industry»

In the context of the pandemic, the need for digital services that provide remote services and provide the possibility of remote work has increased. Against this background, the problem of information security has worsened, the number of cyber attacks has sharply increased. Taking into account the problems of financing, including measures in the field of information security, the issues of ensuring the CII security require special attention today.

Discussion Questions:

1. Information security of the CII. Current status and issues;
2. Issues of organizing the interaction of CII

subjects with significant objects with the GosSOPKA system;

3. Current trends in the development of systems for detecting and preventing computer attacks on information resources;
4. Trends in the development of CII information security, what should companies prepare for, what forms of support exist, and what are missing;

Russia is following the path of full import substitution in ensuring the CII facilities information security. What is behind this?

9:30-10:45
Conference Room No. 3

**Cooperation of science and industry.
World-class scientific and educational
centers**

Regional projects: problems, solutions and prospects for implementation

Discussion

National projects are implemented in Russia in accordance with the Decree of the President of the Russian Federation Vladimir Putin of the 7th of May, 2018 No. 204 "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024" and of the 21th of July, 2020 No. 474 "On national development goals of the Russian Federation for the period up to 2030".

National projects are aimed at ensuring the breakthrough scientific, technological and socio-economic development of Russia, increasing the population of the country, improving the standard of living, creating comfortable living conditions, conditions and opportunities for self-realization and the disclosure of each person's talent.

During the session, the participants will discuss the results of the three years 2019-2021 of the implementation of national projects in the subjects of the Russian Federation, as well as the main trends, problems and barriers that arise during their implementation.

9:30 - 10:45
Conference Room No. 4

Discussion Questions:

- features of project management, tools for managing project activities at the municipal level;
- integration of project management methodology into state programs at the municipal level,
- the procedure for financing, monitoring and control of regional and municipal projects;
- risks and barriers to the failure to achieve indicators and results, the development of budget funds until the end of 2021;
- key tasks for 2021-2024;
- the role of municipalities in the implementation of national projects;
- the role of regional project offices in the development of the competencies of the project management of municipalities;
- tasks and role of the subjects of the Russian Federation within the framework of the new system of management of state programs of the Russian Federation (pp No. 786 of 26.05.2021).

Green technologies for industry and quality life

Environment and public health

Strategic session

Environmental and the Russian population health are the priorities set out in the decrees of the President of the Russian Federation on the national development goals. The scientists argue, that the processes in cities, places of industrial facilities and transport accumulation have the greatest impact on the environmental and public health. The regional components of national environmental projects should be relevant to the regional specifics and be consistent with the strategies of industrial corporations operating in the regions of Russia.

Discussion Questions:

1. Regional priorities in the field of ecology and health
2. Mechanisms of national projects
3. Corporate strategies in the field of ecology

Request for technologies to implement strategies.

9:30-10:45
Conference Room No. 5

Venture capital investments and technology transfer

Investing in FoodTech: case studies

Conference of the XV Siberian Venture Fair

Although foodtech is digitizing one of the basic human needs, this industry began to develop seriously in Russia only 5 - 10 years ago and continues to grow rapidly. The volume of the global FoodTech market is estimated at \$191 billion, which exceeds the volumes of other promising technology markets. Besides, the FoodTech is developing dynamically: its volume is forecasted to double by 2025 compared to current indicators.

Currently, several new funds in the field of agrobiofoodtech are being formed in Russia, new market niches for local solutions are opening up, a number of large corporations are stepping up their activities to search for and integrate new technologies. A world-class national educational center is planned to be launched in the Novosibirsk Region.

Discussion Questions:

1. Peculiarities of scaling and business models
2. What project stages can expect to be funded?
3. Barriers to working with industrial enterprises
4. Experience of venture investments in companies of high-tech industry sectors
5. Promising sectors for investment
6. Where to look for investments? Who invests in the sector?

How not to lose time and manage to scale globally?

9:30-10:45
Conference Room No. 6

Venture capital investments and technology transfer

Patent landscapes: medium- and long-term focus

Workshop of the Technology Transfer Forum

Currently, more than 3 million patents are registered annually around the globe. At the same time, more than 70% of these patents have no commercial potential. That is why it has become especially important today to be able to filter out infoglut and leave what is really important with the help of a scientifically proven methodology for evaluating the quality of a patent. It is important to convey the highly specialized industry knowledge, that engineers and intellectual property specialists have, to the business, so that the decision-maker receives information that can be used for business decisions. Patent analytics allows companies to see the strength, quality and relative value of patents and patent portfolios and reveals the beliefs and intentions of market leaders, as well as technological trends.

Patent analytics tools help to:

- use intellectual property to develop a strategy,
- strengthen innovation,
- stay up to date with trends,
- find new players and partners,
- study companies and technologies,
- identify the most valuable patents and find those who are ready to license or buy them,
- make decisions and track results based on proven indicators – the strength of the patent portfolio and competitive analysis,
- evaluate the cost and risks of potential objects for acquisition and check their technological compatibility,
- identify the strengths and weaknesses of your company and competitors,
- determine the geography of the patenting strategy,
- improve the efficiency of the patent portfolio,
- identify disruptive technologies and promising startups before everyone talks about them.

Discussion Questions:

1. What are the distinguishing features of patent analytics as a tool for analysis and forecasting?
2. What is the strength of a patent and how to evaluate it?
3. How to find really valuable patents and evaluate the market power of the patent

owner?

4. Patent landscapes and their visualization: how to make the patent specialist understood?
5. Presentation of patent information in a visual form that is understandable for marketers and strategy specialists.
6. Impact on strategic decision-making: from opinions to facts.

Strategic management of intellectual property using PatentSight®.

9:30-10:45
Conference Room No. 7

**Breakthrough technologies and
Megascience**

Megascience installations for providing scientific and technological leadership

Round table

Megascience projects are natural centers for the development of world-class educational, scientific and technological clusters, which, in turn, become an 'incubator' of a new generation of top-level researchers and a catalyst for new world-class discoveries and new technologies creation. For the project to play such a role, it should be aimed at solving scientific and technological problems at the very forefront of modern science, be integrated into the world scientific agenda and provide unique opportunities for research.

The Super c-tau Factory, an electron-positron collider with a world-record performance, operating in the energy range from 3 to 7 gigaelectronvolt, is the case of such a project. The project is being developed jointly by the institutes of the Russian Academy of Sciences (Institute of Nuclear Physics of SB RAS, etc.), the state corporation Rosatom (All-Russian Scientific Research Institute of Experimental Physics), universities (MSU, NSU, etc.), as part of an international collaboration. The Super s-tau factory will be implemented within the framework of the National Center for Physics and

Mathematics (Sarov) and will become the 'anchor' project of this center.

Discussion Questions:

1. The role of Megascience in the development of science and technology in the country. Super S-Tau factory: project presentation, its role in the global context and in the context of the National Center for Physics and Mathematics project;
2. Opportunities for the country: scientific and technological achievements; human capital (a new generation of world-class scientists); creation/development of modern culture (scientific and technological); scientific diplomacy;

Technology transfer opportunities.

9:30-10:45
Hall No. 8 (Pitch Zone)

Venture capital investments and technology transfer

**A deal with intelligence:
creating a commercially viable
IP**

Round table of the Technology Transfer Forum

For the successful IP capitalization in the global market, systematic actions to improve competencies in the field of creating and effectively commercializing the IP, building an adequate IP management system is crucial.

The importance of creating and managing high-quality IP capable of commercialization is determined by their primary place in the life cycle of innovative products, because it is from it that the struggle for high – value-added markets begins (and first of all - the global markets).

Currently, the technology transfer by bringing the products of an innovative enterprise to the international market is associated with significant losses of time and money, including for attracting the necessary amount of investment, launching a technology startup based on the value capitalization model and bringing the enterprise to the international market.

With the current speed of technology development

in the world and fierce competition in the field of IP commercialization, intellectual property owned by a technology company (startup) may lose its relevance in a short time or be copied by a competitor from the global market, which has followed the second path of technology transfer – licensing, including the sale of patents/licenses or IP capitalization.

Discussion Questions:

1. Search for economic value. How to identify which part of the technology is the most valuable for the market and how to properly protect it?
2. How to communicate with lawyers and patent attorneys, ask the right questions and make effective decisions?
3. What documents should be provided to the investor and how to competently present technologies in order to license or sell them?

Building a core of the mass expert community in Russia that is able to solve the IP commercialization issues in the world market on a large scale and professionally, according to the result-based business model.

10:45 – 11:00

COFFEE BREAK

11:00-12:15
Plenary Hall

Digital technologies

Strategic session of IT technologies in medicine (New technological base of the healthcare system)

Plenary session of the XII International Siberian Forum «Information Systems Industry»

The President of the Russian Federation Vladimir Putin, in his annual address to the Federal Assembly of the Russian Federation, stated that 'building a healthcare system on a new technological base' is one of the main tasks for the country. In this regard, it is necessary to analyze the cumulative experience of the regional healthcare systems digitalization and evaluate the best practices of 'technical

11:00-12:15
Conference Room No. 2

re-equipment' of the healthcare sector in the regions of Russia (digital, technological and infrastructural).

Discussion Questions:

1. Model solutions for the healthcare sector digitalization and their effectiveness in the regions of Russia;
2. Applications and services for citizens, 'My health' super service;
3. Development and implementation of artificial intelligence technologies in the healthcare sector;

Polyclinic 2.0: introduction of technological solutions and improvement of the public healthcare.

Digital technologies

Digital transformation: the barrier-free feature

Round table of the XII International Siberian Forum «Information Systems Industry»

While a range of digital services is being formed both at the federal and regional levels, there is a need not only to train competent users from among people with various disabilities, but also to engage in the formation of an adaptive culture – a culture of formation and consumption without barriers - involving a wide range of specialists and organizations.

Discussion Questions:

1. The Internet as a tool for the social integration of a person with disabilities into modern society;
2. Multimodality of digital communication and the tasks of creating an extended cognitive environment;
3. Availability of relevant services for target groups of users: privacy and security;
4. The role of a modern library in creating an accessible information environment;
5. Web accessibility for users with various types of health disorders;

Language and communication on the Internet - myths and real issues of a user who has sensory

11:00-12:15
Conference Room No. 3

limitations.

**Cooperation of science and industry.
World-class scientific and educational
centers**

Ecosystem of DeepTech projects - how to build a chain of commercialization of deep technologies in the Russian Federation?

Panel discussion

There is a steady trend for the development of DeepTech projects in Russia and the world. For example, in the first half of 2020, the volume of private investment in digital solutions, which can be attributed to Deep Tech, amounted to 3.5 billion rubles, which is more than twice as much as in the same period of 2019."

At the same time, DeepTech projects have their own distinctive features: scientific and technological novelty, interdisciplinarity, the global nature of the problems being solved, the complexity of commercialization, which requires a significant amount of financial and time resources.

Discussion Questions:

1. The role of universities in the development of DeepTech projects;
2. Tools and features of DeepTech project commercialization;
3. The role of startup studios and venture funds in the ecosystem of DeepTech projects;

How to integrate into the ecosystem of DeepTech projects?

11:00-12:15
Conference Room No. 4

**Cooperation of science and industry.
World-class scientific and educational
centers**

Specialized scientific-training

center: as a tool to support gifted children

Round table

11:00-12:15

Conference Room No. 5

Venture capital investments and technology transfer

The venture market of the Russian Federation - the 21st century, year 21: new rules

Plenary Session of the XV Siberian Venture
Fair

The coming decade will force Russia to radically revise the model of social and economic development, to intensify the processes of structural adjustment in the economy. The changes in the Russian economy sectoral structure should be associated primarily with an increase in the share of high-tech and knowledge-intensive industries in GDP.

Venture capital is one of the serious tools for stimulating the development of knowledge-intensive industries.

The study by the Russian Venture Investment Association shows that the crisis of 2020 marked a decrease in the investment activity of institutional venture investors in Russia. At the same time, the volume of venture investments remained at the level of the previous year – the market reacted quite expectedly: in the context of macroeconomic uncertainty, investors began to show more interest in developed companies to the disadvantage of startups that are in the early stages of development. However, in general, the trends are similar to the global market: the decrease in the first quarter was replaced by an increase in both the number and volume of attracted investments starting from the second quarter. Moreover, it is important to note that the 4th quarter of 2020 saw almost the largest investment quarterly injections over the past three years.

The Russian venture investment market needs institutional reforms aimed at attracting additional

capital, increasing the competitiveness of venture funds, and creating an attractive and transparent investment ecosystem.

Discussion Questions:

1. What prevents the venture business from «reaching its design capacity?»
2. How can we stimulate the inflow of capital into the venture investment sector and increase the quality and scale of transactions flow for investors?
3. Changes in the outlook of the development institutions system
4. What legislative changes may affect the market development in 2021?
5. In which areas are investors looking for the most promising investment objects?
6. How can international experience help to create a working venture ecosystem?

Best practices in the development of venture investments in the regions.

11:00-12:15
Conference Room No. 6

Venture capital investments and technology transfer

Development of cross-innovations in industrial corporations

Round table of the Technology Transfer Forum

Creating conditions for cross-innovations in industrial corporations (enterprises) in order to ensure the advanced development of breakthrough technologies in the Russian economy. Creating an internal market for innovative technological solutions, as well as bringing Russian solutions to world markets.

If corporate (internal) innovations consist of using the existing resources and competencies of the company, then the potential of open (external) innovations consists in attracting the missing competencies and resources from other corporations. A 'culture of innovation' is born at the intersection of open and corporate innovations; its management and development requires the direct involvement of corporate directors for innovation,

human resources and strategy.

Discussion Questions:

1. Corporate Innovation vs Open Innovation: finding an intersection area for synergy
2. Corporate innovations: the practice of developing internal entrepreneurship in corporations (successful case studies);
3. The practice of reorganizing internal business processes and processes of innovative pilot solutions financing;
4. Development of joint research and innovation projects of corporations and other participants of the innovation market;

The development of various cooperation forms between corporations and universities in the field of innovation, building interuniversity associations for innovations in certain technological areas.

11:00-12:15
Conference Room No. 7

**Breakthrough technologies and
Megascience
Genetics and genetic
technologies**

Panel discussion

The development of genetic technologies is one of the priorities of the national project 'Science and Universities' and the federal program for the Genetic Technologies development for 2019-2027.

Discussion Questions:

1. Trends in the genetics development, big genetic data and its analysis;
2. Genetic technologies for industry, agriculture and medicine;
3. Training of specialists - human resources for genetics.

11:00-12:15
Hall No. 8 (Pitch Zone)

**Venture capital investments and technology
transfer**

**Technology licensing: how,
what and why?**

Workshop of the Technology Transfer Forum

License agreements are the main form of technology transfer. Technology licensing is one of the final stages of a successful technology transfer process. The advantage of the leader who has issued the relevant intellectual rights is the license fees from manufacturers using the technology.

Discussion Questions:

1. Types of license agreements;
2. Recommended structure of the license agreement;
3. How to draw up a license agreement correctly, what you need to pay attention to;

How to make a competent position for negotiations on license payments.

Digital technologies

Workshops from Yandex and Sbertech

XII International Siberian Forum «Information Systems Industry»

11:00-12:15
Hall No. 9 (atrium)

12:15 – 12:30

12:30-13:45
Plenary Hall

COFFEE BREAK

Special events

Regional healthcare development: challenges of the moment and new investment, organizational, technological solutions

Round table

Overcoming the challenges of the time, including the pandemic, requires key changes in the regional healthcare systems.

Modeling of an open dialogue of various healthcare industry representatives will allow for developing relevant solutions based on the cluster approach.

Discussion Questions:

1. Regional healthcare: lessons from 2020 and

- a look into the future;
- 2. Project financing and public private partnership mechanisms: best practices, trends and problems in the implementation of infrastructure projects in the healthcare sector;
- 3. Innovative IT solutions – a resource for improving the regional healthcare efficiency;

Modern medical and biotechnologies: what should the hospitals of the future look like?

12:30-13:45
Conference Room No. 1

Green technologies for industry and quality life

Problems of ash and slag waste formation and further use of ash and slag materials

Interregional meeting of the International Association of cooperation «Siberian Consortium»

During the period of coal-fired thermal power plants operation in the territory of the Siberian Federal District, more than 500.00 million tons of ash dump were accumulated. The average annual increase in their volume is more than 10 million tons. The area of ash dumps exceeds 10 thousand hectares and continues to increase annually, in some regions the existing ash dumps will last for less than 6 years. Part of the ash dumps is located within the boundaries of settlements, which causes significant social tension.

The Ministry of Energy of the Russian Federation, on the initiative and with the active participation of the International Association of cooperation, has developed a draft interdepartmental comprehensive plan for involving coal-fired thermal power plants in the economic turnover of ash and slag. At the stage of preparation for the Plan implementation, it is necessary to consider and discuss the tasks that need to be solved by the subjects of the Russian Federation – members of the Association, coal-fired generations, representatives of science and business.

The successful implementation of the Plan will allow

the introduction into economic circulation of ash and slag from coal-fired thermal power plants operating in the subjects of the Russian Federation – members of the Association, at a pace ahead of the planned indicators of the 'Energy Strategy of the Russian Federation for the period up to 2035'.

Discussion Questions:

1. The procedure for preparing, financing and co-financing pilot projects and programs of the 'Comprehensive Plan for increasing the utilization of solid fuel combustion products (ash and slag mixtures, fly ash, slags formed by burning solid fuel consisting of fossil fuels) at thermal power plants and boiler houses' (hereinafter referred to as the Plan), implemented on the territory of the regions - members of the Association;

On the interregional competence center in the field of solid fuel combustion products and subsurface use waste of hazard class V in economic activity, as a necessary condition for the proper preparation of pilot projects and programs of the Plan.

12:30-13:45
Conference Room No. 2

Digital technologies

**Digital creative industry,
animation, VR and AR**

Round table of the XII International Siberian Forum «Information Systems Industry»

The development of creative industries is a response to the new employment markets challenge, while improving the technologies of traditional industrial and rural production. The peculiarity of this market is the multi-component production of products, when dozens of people work on one product, while the organization of production itself requires an industrial solution, and the product is unique and not serial. The basis for the creative industries formation are the specially organized locations (creative clusters) and interaction chains (digital and managerial), as well as collective production centers with technological solutions and equipment.

The formation of the creative industry base directly affects the preservation of the population in the

territories, including in rural areas, the development of vocational education services, an increase in the production and export of products and technologies with high added value and, as a result, an increase in the GRP of the territory.

An indirect result of the creative economy development is an improvement in the quality of life under the influence of the requirements and consumption paradigm of specialists in creative industries, as well as the development of tourism.

The creative economy is an essential opportunity to preserve the population and strengthen human capital in the regions of Siberia and the Far East, the Urals and the northern territories of Russia.

At the country level, the branches of the creative economy solve the problems of spatial development with the formation of new points of economic growth and the demand for talents, the availability of education, the preservation and development of cultural heritage.

Digital technologies (mainly VR and AR) and technologies of talent capitalization play a leading role in the development of the creative economy.

Discussion Questions:

1. Organization of the creative industries production chains: cooperation, clusters, platform solutions, shared knowledge centers, management;
2. Creative clusters: values, solutions, technologies (eco-clusters, urban clusters, gastroclusters, art clusters). Successful cases of creative spaces activation: from the concept to the system formation;
3. Mechanisms for supporting creative industries in the practices of Russian regions;
4. Positioning of creative industries in the structure of the regional economy (Kaliningrad, St. Petersburg, Yekaterinburg, Murmansk, Kazan, Vladivostok). The impact of creative industries on the investment and social attractiveness of the territory;
5. Digital technologies in the creative economy: demand and opportunities to increase production;
6. The necessary educational environment: the experience of organizing network interaction in the new professions' creation;

7. Trends in the development of online education in terms of the creative economy
8. Intellectual property protection;

The labor market specifics in the creative economy.

12:30-13:45
Conference Room No. 3

Cooperation of science and industry. World-class scientific and educational centers

Modern technological export: opportunities and barriers

Panel session

The year 2020 has become a challenge for many entrepreneurs. The export activity in the conditions of closed borders has become especially difficult. In this regard, online trading is becoming more and more relevant. If online trade of consumer goods is quite common, the export of innovative products is associated with many specifics. The constantly changing international situation requires quick solutions. It is necessary to build a dialogue between the state and business, apply flexible approaches to conducting export activities, review training programs for novice exporters.

Discussion Questions:

1. Export with the closed borders;
2. Opportunities to digitalize the export of services;
3. Problems and prospects of online trade of innovative products;
4. New niches for innovative companies in Russia;
5. The role of the state in the high-tech export of Russian companies;

Adaptation of novice exporters training to changing market conditions.

12:30-13:45
Conference Room No. 4

Scientific and technological development program. National Technology Initiative Strategic session NTI centers: start selection programs 2021-2022

12:30-13:45
Conference Room No. 5

Venture capital investments and technology transfer

Youth technological entrepreneurship: drive VS competence. The ecosystem setup

Discussion of the XV Siberian Venture Fair

The youth agenda is a priority in state policy. The technological entrepreneur is the most important element of the innovation system.

Creating an ecosystem for the comprehensive development of students' technological entrepreneurship, solving the problem of the innovative projects shortage, improving the infrastructure that supports the creation and development of students' technological projects requires consolidation of efforts and dialogue on the part of the state, business and society.

Discussion Questions:

1. The environment for the students' technological entrepreneurship development;
2. Does energy and drive compensate for the lack of competencies?
3. When and where to attract investments?
4. How are business ideas born?
5. Programs to support the youth technological entrepreneurship
6. What skills should a 'young entrepreneur' have today?
7. The best international practices;
8. Developing an effective infrastructure to support and and grow the youth entrepreneurship;

Stratup studio model: how does it work?

12:30-13:45
Conference Room No. 6

Venture capital investments and technology transfer

Technology transfer centers. Reboot: business models, people, deals

Round table of the Technology Transfer Forum

In the beginning of 2021, the Government of the Russian Federation approved the strategic academic leadership program 'Priority-2030', which focuses domestic universities on increasing their contribution to achieving the national development goals of the Russian Federation for the period up to 2030. The two key priorities for universities selected for the Program are:

- research leadership – conducting breakthrough scientific research and creating high-tech products and technologies, building the human resources potential of the research and development sector;
- territorial and (or) industry leadership – socio-economic development of territories, strengthening of the human capital and scientific and technological potential of organizations in the real sector of the economy and the social sphere.

The interaction of the participating university with employers and their associations, as well as with organizations of the real sector of economy; modernization of the participating university management system, interaction of the consortium members - are among the Program criteria.

Thus, at the state level, the importance of strengthening the technologies transfer from Russian science to Russian business is once again emphasized, so that Russian research and development product can be increasingly used as a basis for creating high-tech goods and services that are competitive on the world market.

In this regard, the effectiveness of technology transfer centers as specialized structures within universities and scientific organizations aimed at integrating universities into cooperative chains for

creating new breakthrough technologies, involving scientists in solving real market problems and technological business requests, allowing universities to capitalize and monetize accumulated scientific achievements and outcomes, is of particular relevance.

Discussion Questions:

1. Maturity of business processes aimed at IP commercialization and transfer technologies at universities;
2. Structure and functions of the Technology Transfer Center;
3. How should the internal processes in the organization for the IP identification, disclosure and commercialization;
4. Development of cooperation with industrial partners;
5. Cooperation with regional innovation ecosystems and clusters;
6. Where and how can we attract external financing for the purposes of IP commercialization;

Formation of the university technology transfer centers network.

12:30-13:45
Conference Room No. 7

**Breakthrough technologies and
Megascience**

Synthetic biology - challenges and realities of the Russian Federation

Round table

At the moment, synthetic biology is a scientific and technological field, which breakthrough technologies are able to provide wide opportunities for medicine, veterinary medicine, agriculture and other industries, and the spheres of bioeconomics. At the same time, the latest technologies of synthetic biology, such as directed evolution of biomolecules, rational design of biomolecular nanoconstructions, introduction of new biochemical pathways into existing biosystems, mass editing of complex genomes to create new organisms in biotechnological, biomedical, and other applications, can lead to serious changes not only in

the areas of economy where they can be successfully used, but also in society and the environment.

Obviously, the promising technologies of synthetic biology open up new market opportunities, but a wide range of tasks available for solving within the framework of these methods requires the technological transformation participants to focus on areas and technologies that are relevant in the Russian Federation from the point of view of biosafety and ensuring technological superiority.

During the round table, it is planned to discuss current global trends and challenges facing domestic participants in the development and implementation of the synthetic biology breakthrough technologies, the need to coordinate approaches for the sustainable development of the industry in the Russian Federation in compliance with the principles and norms of biosafety, the use of synthetic biology technologies to solve problems of biotechnology, biomedicine, and agriculture.

Discussion Questions:

1. The status of developments in the field of synthetic biology in the Russian Federation and abroad;
2. Issues of ensuring the biosafety of the state and prospects for the development of the biotechnological sector;

Safe biological environment and ensuring a healthy lifestyle of citizens in the Russian Federation.

Venture capital investments and technology transfer

The legal aspects of the Investor-entrepreneur relationship

Discussion of the XV Siberian Venture Fair

Any startup sooner or later faces the question of where to get money for development. You can invest your own funds, ask FFF or find an investor.

The owner of the company immediately has a lot of questions: how to understand the model of relations registration, why a corporate agreement and a loan

12:30-13:45

Hall No. 8 (Pitch Zone)

agreement are needed and how not to lose control of your own company.

Discussion Questions:

1. Meeting of an investor and a startup, discussion of the investment terms;
2. Is it possible to negotiate without a lawyer?
3. Agreement of intent;
4. NDA;
5. due diligence. What does the investor look at and what should startups pay attention to before the due diligence?
6. Specifics of transactions related to the venture projects investment;

Crowdfunding in Russia within the framework of the investment platforms law.

12:30-13:45
Hall No. 9 (atrium)

Digital technologies

Workshop from RANEPA

XII International Siberian Forum «Information Systems Industry»

13:45-15:00

LUNCH

15:00-16:15
Plenary Hall

Digital technologies

Neural networks in medical diagnostics

Session

The coronavirus pandemic has exposed different problems in the healthcare institutes in every country of the world. Difficulties with scaling up mass screening using classical test systems, monthly queues for computed tomography even in large cities, the unreadiness of qualified personnel for an unprecedented traffic of infected people.

All these factors have accelerated the development of non-invasive screening methods for timely stopping the spread of viral infections, the use of machine learning technologies in analyzing the results of MRI and CT diagnostics, the rapid development of telemedicine and remote diagnostic doctors.

Gas analyzers are already being used to examine the patient's exhalation, and Sberbank's neural networks

analyze sounds and coughs to determine COVID-19 infected people in mass clusters.

Due to the complexity of the diagnosis and a huge amount of patient data (patient background, chronic diseases, heterogeneity of the studied groups), the need for the use of neural network technologies is undeniable. However, there are still no unified standardized tools that allow for timely non-invasive diagnostics, not only for the purpose of detecting waves of infectious diseases, but also for general preliminary diagnosis of all types of diseases.

Discussion Questions:

1. Existing systems that allow for non-invasive screening, accuracy and selectivity;
2. Non-invasive screening and telemedicine tools;
3. Problems of neural network training – what factors contribute to the error in training and what is their contribution;
4. Introduction of non-invasive screening systems in medical centers. Certification problems, legislative gaps;

The neural network versus the human doctor is a question of evaluating the diagnosis accuracy.

Scientific and technological development program. National Technology Initiative

Development and uptake of the territories of innovative and scientific and educational activities - SKIF, SmartCity-Novosibirsk - as part of the Naukopolis advanced economic growth zone of the Novosibirsk agglomeration for the long-term period (strategic master plans)

Round table

15:00-16:15
Conference Room No. 1

15:00-16:15
Conference Room No. 2

The territories designed in these projects are one of the key growth points of the Akademgorodok 2.0 project, they emphasize the scientific and innovative potential of the territory development using smart technologies and digitalization.

Discussion Questions:

1. International experience in creating new innovative cities;
2. Ways to implement the project;
3. Legislative initiative;

The project submission to the federal level as a «pilot regional project».

Digital technologies

Digital electrical grids

Round table of the XII International Siberian Forum «Information Systems Industry»

Transition to a new quality of electric grid management systems in the context of the energy facilities digital transition.

Discussion Questions:

1. A human in the dispatching control system, new competencies;
2. Automation of the RES operation modes control in normal and emergency modes;
3. Organization of special modes of equipment operation (resistive grounding of the neutral of 110/10 kV transformers);
4. Intelligent controls: reclosers on RP and TP 20-10-6 kV, technological connection of consumers;
5. Intelligent accounting and Automated information and measurement system of commercial electricity metering (Automated Power Consumption Information and Fiscal Metering System);
6. Existing regulatory restrictions of local electric grids and ways to remove them;

Existing technological problems and ways to solve them, including through stimulating domestic industry enterprises in the development and

15:00-16:15
Conference Room No. 4

production of new products. Taking into account the Russian specifics. Economic effects.

Breakthrough technologies and Megascience

Heat and mass transfer. Methods for improving the efficiency of cooling systems for high-temperature turbines of gas turbine engines.

Expert session

Gas turbines of the plant are widely used in power generation and in the engines of air and marine vehicles. Increasing the efficiency of the technologies used gives several direct effects for the country's economy: energy-saving, resource-saving and environmental.

Technological barriers in the field of improving the efficiency of gas turbine engines include the tasks of improving the creation of high-temperature turbines.

The round table will allow to hold a scientific and technological discussion on the issues of cooling methods of high-temperature gas turbine turbines, the development of new heat-resistant materials, as well as the development of digital technologies and mathematical modeling methods in the field of heat and mass transfer.

Discussion Questions:

1. Ways to improve the efficiency of cooling systems of high-temperature turbines of gas turbine engines;
2. Promising cooling systems for GTD blades;
3. Promising materials and coatings;
4. Directions of development of digital technologies, software and methods of mathematical modeling;
5. Existing scientific problems and limitations in the field of modeling of heat and mass transfer processes.

15:00-16:15
Conference Room No. 5

Venture capital investments and technology transfer

Investments in HardWare, Robotics, PromTech: case studies

Conference of the XV Siberian Venture Fair

According to the Russian venture market research conducted annually by RAVI, the traditional leader in terms of the volume and number of transactions was and, according to experts, will remain in the near future is the ICT sector: it combines a smaller investment cycle and an extraordinary demand in absolutely all areas of the economy.

At the same time, many experts note that in the near future we should expect an increase in investor interest in such sectors as HealthTech (including Biotech and Pharma), HardWare, DeepTech, robotics, smart buildings, VR, AI, the creation of new materials.

However, their specific business models do not always allow for getting large cost estimates in a short period of time, compared to software-oriented companies, marketplaces, etc. The situation in the Russian market is further complicated by a critically small number of strategic partners, a relatively low market volume, and a specific structure of the value chain and cooperation.

Holding a series of events dedicated to discussing the nuances and specifics of investing in high-tech industry sectors (for example, agricultural technologies, energy, new devices, production technologies, etc.) will increase the competence of innovative companies' representatives and increase the efficiency of investments.

Discussion Questions:

1. Specifics of scaling and business models;
2. How to maximize the cost growth?
3. Barriers to working with industrial enterprises;
4. Experience of venture investments in companies of high-tech industry sectors;

5. What project stages can expect to be funded?
6. Where to look for investments?
7. Who invests in the sector?
8. The main approaches to investing;
9. Rounds, tranches, budget: what is important to consider?

How not to lose time and manage to scale globally.

15:00-16:15
Conference Room No. 6

Venture capital investments and technology transfer

Open doors of corporations: URALCHEM

Corporations have a different understanding and willingness to interact with external developers, in terms of TRL as well. Corporations that are ready to work not at the procurement level, but already at the level of assistance in formulating a technological proposal taking into account their internal request, and are ready to go a certain way of adaptation when working with external scientific and technical teams, already create structures within themselves to adjust outsourced solutions and developments to their needs and do it in different ways: corporate accelerators, scientific and technical centers, internal structures.

The corporations find themselves in a special situation now, due to the changing global economy: the request window is expanding, as corporations are not just looking for products within the market, but also new requirements are emerging, such as providing technology for their new projects, in particular decarbonization.

The new conditions require long-term communication between scientific and technical developers and corporations. Corporations are beginning to discuss development prospects, which means that they are reaching the level of strategies, including marketing strategies, and through them move to new products that should appear. This, in turn, leads the bilateral discussion to technological barriers, including technologies that do not yet exist. A separate issue is the need for an effective

objective setting for new research, which should include determining the boundary conditions for the new technology performance, since without this it will be difficult to obtain commercially viable intellectual property that can act as a commodity on the international market as the output of the project.

Discussion Questions:

1. The share of corporate requests for the development of fundamentally new products and technologies in the total share of corporate requests for innovations;
2. Entry points to corporations for scientific and technical teams;
3. Corporate requirements for the extent of readiness of scientific and technical developments at the entrance;
4. Requirements for teams at the entrance;
5. Project completion procedures within the corporation;

Practical case studies: analysis of compliance with the entrance criteria to the corporate stack, recommendations on ways to increase compliance with the requirements of specific corporations.

15:00-16:15
Conference Room No. 7

Breakthrough technologies and Megascience

Advanced technologies for modeling and developing functional materials with specified properties

Round table

Technologies for modeling and developing new functional materials with specified properties are a set of methods that allow for predictable functional behavior of the material in various operating conditions throughout the entire life cycle (including disposal), taking into account the target characteristics of the product, cost requirements and physical, as well as functional properties of the material and product.

The creation of innovative functional materials requires fine tuning of the structure of such a material at the micro - and nanoscale, and often even at the level of individual molecules and atoms. Currently, a revolution is taking place in materials science: science and industry are facing the urgent tasks of accelerating the development and introduction of new materials to the market, the transition from the material selection to the development and specified properties, to new business models. There is a need to design the full life cycle of the material and structure, including minimizing the environmental impact and recycling.

Discussion Questions:

1. Technologies of modeling and development of functional materials with specified properties as an end-to-end technology for the STI markets;
2. Translation of the fundamental science outcomes into engineering applications;
3. Virtual factories of functional materials with the specified properties;
4. Training of leaders in the development of new technologies through the practice- and project-oriented educational programs;
5. Transfer of technologies for modeling, development and production of new functional materials through cooperation with industrial partners;
6. New business models of the materials and structures life cycle;
7. Organizational models for the development and implementation of new materials. International experience of consortia;

Problems and prospects of new materials introduction in key industries.

Hall No. 8 (Pitch Zone)

transfer

Startup and the global market: What? Where? When?

Discussion of the XV Siberian Venture Fair

The Russian direct and venture capital investment market is actively joining the global venture ecosystem, thereby developing the national culture of investment and innovative entrepreneurship.

For many companies, focusing only on the Russian market limits business development opportunities due to the volume of market niches and opportunities to attract investment. For successful development, it is immediately necessary to raise the question of when and how to enter foreign markets.

What opportunities, limitations, advantages can be found in the markets of Europe, the USA, Asia? What are the specifics of doing business in different countries? How to correctly assess the prospects for business development in the market of these countries? How to structure a business here and now?

Discussion Questions:

1. How can a startup scale up in other markets?
2. Specifics of business localization in Europe and Asia;
3. How to attract investment in technology projects abroad?
4. Startup and investor support programs in Europe and Asia;
5. Whether to enter the market on your own or with the support of consultants, mentors, programs?

Resources and budget when entering the foreign market.

Educational track

**Final hackathon on
Aerospace research**

BREAK

15:00-16:15
Hall No. 9 (atrium)

16:15-16:30

16:30-18:00
Plenary Hall

Educational track

The finals of the innovative management projects competition of Presidential management training program participants

The long-established competition of innovative projects has been held since 2007, graduates of the Presidential Program of various years from different regions participate in the competition. The competition was announced on June 10, the semi-final is planned for July 30, and on August 25-27, 2021 the finals will be held in three categories:

- Best Business Model/Organizational Innovation;
- Best new technology/new product;

The best innovation for society.

16:30-18:00
Conference Room No. 1

Special event

Expert Council Meeting of the MASS on Education

16:30-18:00
Conference Room No. 2

Educational track

Improving the quality of management training

Visiting extended meeting of the Expert Council of the Federal Commission for the Management Training Organization for the National Economy of the Russian Federation

Management training within the framework of the State Plan for managerial personnel training for the national economy of the Russian Federation is performed in accordance with modern development trends.

Discussion Questions:

1. Ethical standards of leadership as a long-term agenda for the business and

- management development;
2. Promising business models, individualization and personification of management approaches;

Current competencies in the era of platform technologies, new approaches in management training.

16:30-18:00
Conference Room No. 3

Digital technologies
Technologies of global superiority. Artificial intelligence is the basis of the digital transformation of the country's economy

Round table discussion

Artificial intelligence displaces a person in routine operations, helps to optimize technological and managerial processes. At the same time, AI can be used in cyber warfare and cyber defense. Russia has retained a reserve in fundamental science, and there is an opportunity to use this advantage for the development of AI technologies. The use of end-to-end technologies, which include AI, provides a breakthrough to the economies of countries, increases the competitiveness of companies. AI is used: in management (enterprises, budgets, complex projects), unmanned systems (cars, underwater vehicles, aircraft, swarm systems), in the banking and financial sector, medicine (data processing, personal medicine), digitalization of energy, predictive analytics, robotization of processes and production, in telecommunications, extractive industries ("smart" wells, "smart" mines, etc.), for cybersecurity.

Discussion Questions:

1. Will artificial intelligence allow us to make a breakthrough in the development of the Russian economy?
2. Unique AI technologies in Russia.
3. The place of man in the world of AI.
4. Will a person be the master of AI or will he

become a servant?

5. AI in critical infrastructures.

Ethical standards for AI.

16:30-18:00
Conference Room No. 4

**Breakthrough technologies and
Megascience**

Hydrogen fuel and fuel cells as promising energy sources

Technological foresight session

Transformation in the field of energy is prioritized by state strategies and programs. The use of "green" energy sources is an urgent task. The formation of energy sources based on the use of hydrogen fuel remains an important problem in the field of obtaining, storing, transporting and efficiently converting into electric energy.

The session is intended to continue the expert study of the technological development of the direction started at the VII International Technological Forum "Innovations. Technologies. Production" in the section "Solid oxide fuel cells".

Discussion Questions:

1. Why is hydrogen energy still not widely used, in particular in Russia?
2. What are the features of creating high-power fuel cell systems? Efficiency of hydrogen production from hydrocarbon fuels.
3. Safety and efficiency of hydrogen storage and transportation. New technologies and prospects.
4. Forecast of development, new technologies and applications of hydrogen application.

Limiting factors for the development of hydrogen-powered aircraft.

16:30-18:00
Conference Room No. 5

**Breakthrough technologies and
Megascience**

Experimental stations based on a synchrotron radiation

source: a testing ground for new engineering materials and materials processing technologies, and a forge of highly qualified engineering personnel with the innovative thinking

Round table

Synchrotron radiation is a convenient and powerful tool for studying the atomic structure of structural materials, as well as their evolution during the processing stages or exploitation of a product made of this material. Both the entire product can be studied (tomography) and local areas of micron and submicron size (welds, defects, cavities and microcracks of the structure). The technologically important processes can be monitored in real time, immediately tracking the structural response to changes in technological parameters.

The demand for advanced scientific research in purely applied fields remains at a fairly low level.

To build innovative chains - 'Technological request – Measurement at a synchrotron radiation source – New data on the material structure or the process mechanism – The next-generation material or technology' - an extensive professional discussion is necessary.

Discussion Questions:

1. The synchrotron radiation capabilities in monitoring and efficient optimization of technological processes for mechanical engineering: laser and electron beam welding, additive technologies, application of protective coatings;
2. The range of possibilities: from coherent imaging with nm-resolution to the transmission of large objects; research in extreme conditions;

The issues of modern technologies localization in scientific instrumentation and import substitution.

16:30-18:00
Conference Room No. 6

Green technologies for industry and quality life

«Green projects» as part of investment programs in the regional economy

Round table

The main purpose of the discussion is to develop effective management solutions for the implementation of sustainable development strategies for regional resource supply and mining enterprises, taking into account the need to protect the environment and social responsibility of business.

Questions for discussion:

1. Dynamics of emission levels: general situation in the Siberian Federal District.
2. How the requirements for environmental safety are changing.
3. Prospects for economic growth without increasing emissions.
4. Projects and prospects for their implementation.

16:30-18:00
Conference Room No. 7

Breakthrough technologies and Megascience

New prospects in international cooperation for space exploration

Strategic session

The General Director of the State Corporation "Roscosmos" D. O. Rogozin announced impressive plans for the development of outer space: the construction of a national space station; the creation of a lunar station jointly with China; the preparation and start of the exploration of Mars and other planets of the Solar system; the creation of new launch vehicles and satellites of a new generation; the use of the results of space activities for the development of breakthrough technologies and ensuring the growth of the

quality of life of people.

Participation in the implementation of these plans requires the creation of new materials and technologies and is one of the drivers of scientific and technological progress. The questions are of great interest to scientific organizations, universities, industrial enterprises and high-tech businesses.

Discussion Questions:

International cooperation in space exploration with an emphasis on joint space exploration plans of Russia and China.

The role of humans, robots and artificial intelligence in the exploration of outer space.

Participation in specific space exploration programs of scientific organizations, universities, industrial enterprises, and high-tech businesses.

New technological solutions.

The possibilities of using space developments for the economy of the country and regions.

16:30-18:00
Hall No. 8 (Pitch Zone)

Venture capital investments and technology transfer

Awarding of the winners of the XV Siberian Venture Fair

16:30-18:00
Hall No. 9 (atrium)

Educational track

The finals of the 3D technologies Academic Olympics

1. The current development stage of science, technology and economic sectors requires special competencies of digital scanning, modeling and confident capabilities in using additive technologies in practice;

The introduction of technologies in education

creates activity among students of educational organizations of various levels, accelerates the processes of introducing new modern educational technologies into the educational process, and also provides the necessary conditions for the integration of education, science, business and government, and the development of partnership relations.

Friday, the 27th of August

9:30-11:00
Plenary Hall

Educational track

**Investment pitching of
human-centered volunteer
teams of students and
schoolchildren «PhiTon»**

2021 has been declared the Year of Science and

Technology in Russia Within this context, the implementation of such national goals as creating opportunities for self-realization and development of talents and digital transformation comes to the fore. The main driving force of changes in this area is the strengthening entrepreneurial activity of technological enthusiasts from among students and schoolchildren, focused on the development of urgent solutions to existing problems of people.

In accordance with the Decree of the President of the Russian Federation No. 474 of 21.07.2020 'On the national development goals of the Russian Federation for the period up to 2030', the share of citizens engaged in volunteer activities or involved in the activities of volunteer organizations should increase to 15 percent in our country.

That is why the key actor of social and technological changes in the country will be the human-centered SSvolunteer teams of students and schoolchildren 'PhiTon', which will include children with developed digital competencies, emotional and social intelligence, together with citizens in difficult life situations, develop digital products aimed at solving the problems of disadvantaged population groups in the Novosibirsk region.

Discussion Questions:

1. The list of projects to be presented as part of the investment pitching will be fully formed by no later than June 30, 2021. The list of areas in which projects are being developed is: Smart City, means of technical rehabilitation, advanced production technologies, edtech, socialtech, etc.

Team projects are developed and implemented according to CDIO standards, team presentations are prepared in Business Model Canvas.

9:30-11:00
Conference Room No. 1

Educational track

Higher School Innovation Ecosystem – a new round of transformation

Discussion panel

Russian universities today, fiercely competing with the global educational leaders and facing the rapidly developing open online education and the labor market requirements that change several times during the student's studies at the university, are forced to transform themselves and change approaches to managing educational activities. The forms and models of teaching students are changing, the role of the teacher is significantly transformed, the university management system is changing. There is a need to reconfigure the entire operations of the university to a different ultimate result. In order to maintain its position in the Russian and global markets, the universities (as well as business) need comprehensive solutions for managing the educational process based on digital technologies.

Discussion Questions:

1. Is the ecosystem a new form of partnership? Which ecosystems are effective?
2. Solving new problems of the development of educational, entrepreneurial and research activities of universities through the ecosystem of higher education innovations;

The platform as an ecosystem of partnership between universities and new mechanisms of project activity.

9:30-11:00
Conference Room No. 2

Educational track

Human capital of the future: a partner network of industrial enterprises, scientific and educational organizations as a resource providing support and development of talents among children and youth in

the region

Conference

Working with talented and highly motivated children and young people is one of the modern educational process priorities. Taking care of talented children today is taking care of the development of science, culture, and social life in Russia and the region in the future. In this context, the problem of identifying, developing and supporting gifted children in various fields of activity is extremely urgent. It is talented children and young people who will provide the resource potential that will make a quantum leap in the economic and social sphere of the region.

Discussion Questions:

Cooperation with industrial partners and technology companies, scientific and educational organizations operating in the region, including through the network educational programs implementation, support and further development of children and youth who have shown outstanding abilities, organization of internships and practical training for them, as well as assistance in their employment after completion of vocational education.

09:30-11:00

Conference Room No. 3

Educational track

New trends in the development of additive technologies

Session of Technology development in Education

The signs of our time are the high speed of technology development, radical changes in the style and formats of life, production, and economy. The ability to identify trends in technologies and markets development, readiness for the timely introduction of new technologies ensures competitiveness and sustainability in future.

Modern trends of orientation towards individualization, personalization of interaction with consumers and partners demonstrate the potential of developing additive technologies and forming the

necessary competencies and methodological approaches in training.

Discussion Questions:

1. New trends in the development of additive technologies;
2. Additive technologies in different industries and markets;
3. Individualization and personalization of markets;
4. Creating materials with the specified properties;
5. The project 'Engineers of the future: 3D technologies in education – effective application of 3D technologies in the educational process';
6. Competencies in the mentoring format;

Project activity in the field of additive technologies.

09:30-11:00
Conference Room No. 4

Educational track

Youth entrepreneurship as creative energy management

Dialogue of the best practices

Youth entrepreneurship is becoming a trend, since in modern context, the society educates a large number of initiative people who strive to solve technological and social problems to improve the welfare of society. This is especially true for young people who want to realize themselves and be financially independent.

Youth entrepreneurship is becoming fashionable with the support of the state and business. Universities are becoming points of development of territories, they are expected to make a breakthrough.

Technological and/or social entrepreneurship?

Where do these two paths converge?

What is entrepreneurship?

What kind of ecosystem can form an entrepreneurial spirit?

Which ecosystem will help to form the economy of entrepreneurship?

Discussion Questions:

1. Youth entrepreneurship: myths and reality.
2. Who will teach you how to explore the trends of technology development?
3. Do we need to train entrepreneurs from school? Stories of success and failure;
4. Where are the 'students' startup factories', that are so much talked about? How to become an entrepreneur?
5. 'Startup as a diploma' - a fashion trend or 'the breeding ground of a successful business'?
6. Startup studios vs business incubators and accelerators;
7. Tools for supporting and developing youth projects;
8. Techno-entrepreneurship – management of creative energy, a segment of the real economy;

An ecosystem for generating ideas and managing creative potentia.

9:30-11:00
Conference Room No. 6

Educational track

The finals of the «Novosibirsk Student Council» competition

9:30-11:00
Room No. 9 (atrium)

Educational track

Artificial intelligence = machine learning

Lectures by famous scientists

11:00-11:15

COFFEE BREAK

11:30-13:00
Plenary Hall

Educational track

Dialogue with success - meeting of the Governor with graduates, with graduation ceremony

11:30-13:00
Conference Room No. 1

Educational track

World trends in design education of creative

industries

Creative debate

11:30-13:00

Conference Room No. 2

Educational track

Development of technological leaders within the Circle Movement of the NTI Contest

11:30-13:00

Conference Room No. 3

Educational track

Digital transformation of the social sphere: integration and collective intelligence of scientific, educational, social and economic policy

Open expert panel

2021 has been declared the Year of Science and Technology in Russia. Within this context, the implementation of such national goals as creating opportunities for self-realization and development of talents and digital transformation comes to the fore. The main driving force of changes in this area is the strengthening entrepreneurial activity of technological enthusiasts from among students and schoolchildren, focused on the development of urgent solutions to existing problems of people.

The key actor of social and technological changes in the country will be the human-centered volunteer teams of students and schoolchildren 'PhiTon', which will include children with developed digital competencies, emotional and social intelligence, together with citizens in difficult life situations, the digital products aimed at solving the problems of socially vulnerable categories of people in the Novosibirsk region.

Discussion Questions:

1. The main trends of the social sphere digital transformation;

Science, education, social policy and economics – integration and collective intelligence for expert

determination of the emerging future logic.

11:30-16:00

Conference Room No. 4

Special events

**International business
accelerator «Siberian
Leadership. International
cooperation The Cultural and
Technological Code. Growth
points».**

Plenary session

Within the cooperation with international partners, we have laid a strong foundation for long-term and trusting cooperation between the organizers and residents of the Program.

The fascination with local cultures is becoming more and more obvious in the world. This is a reaction to globalization, which carries with it some cultural averaging. We live in an information age, and locality should be integrated into the global process. It is this interaction that gives talented people the opportunity to declare their cultural and technological code to the whole world and capitalize on their talent.

We see a significant interest in the cultural and business space of Siberia. Unfortunately, the potential of international cooperation at the institutional and infrastructural level is not actually being realized in Novosibirsk.

Competitive advantages of institutional partnership for the development of economy and human potential:

- year-round business mobility, cooperation, sharing of experience;
- the ability to optimize costs for testing the export concept;
- access to the scientific, investment and business community;
- access to experts in the field of international law and finance;
- wide access to economic information and training;
- reducing business costs, administrative barriers;

- development of favorable conditions for entrepreneurial activity.

A case of an institutional partner:

Wuzhen innovation center of Shenzhen and Hongkong.

This center was founded by the People's government of the city of Shenzhen in August 2019 to attract foreign resources in the field of high tech on the basis of the Big Bay territory. The Wuzhen Innovation Center identifies the following promising areas for interaction: big data, cloud computing, artificial intelligence, intelligent manufacturing, mobile Internet, etc. It strives to grow the talents of the digital economy and create a platform for international cooperation in innovations to provide a better environment for the young talents and businesses development. In the future, the Wuzhen-Hongkong Innovation Center will combine Shenzhen-Hong Kong and international innovation resources, provide high-quality services for innovative entrepreneurs, and create an innovation and entrepreneurship center in Guangdong, Hong Kong and Macau.

In the future, the largest high-tech metropolis in the world will be created. Guangdong – Hong Kong – Macau Territory is quite capable of competing with the coastal area of New York and San Francisco in the United States, as well as with the Tokyo Bay area in Japan.

Discussion Questions:

1. Global concepts of international entrepreneurship;
2. Advantages of conducting foreign economic activity;
3. Opportunities of the International Business Acceleration program;
4. Presentation of successful practices for entering international markets during the pandemic;
5. Cases of domestic and foreign companies successfully developing international cooperation;

The cultural code. Specifics of doing business.

11:30-13:00
Hall No. 9 (atrium)

Educational track

Lectures by famous scientists. Post-silicon electronics

13:00-14:00

LUNCH

14:00-16:00
Plenary Hall

Educational track

Reboot algorithms: the fusion of man and technology

Plenary session

In the modern world of extreme changes, unpredictability and non-linearity of their consequences for people and economies, a special role is assigned to the productivity of science and the speed of advanced developments and technologies introduction that enrich human life in accordance with the environment and scientific and technological progress.

In 2020, during the pandemic, the tasks of biosafety and preserving public health provoked active attention to developing concepts of the ecosystem's biological mechanisms, technologies for life with programmed features, new algorithms for health management. On the other hand, there is an urgent and almost massive transition to the digital environment: the lifestyle of each person and communications are radically changing, the most successful businesses are built on cutting-edge technologies, and the economy efficiency depends on the speed of changes in production and society based on the most useful technologies that allow adapting and/or resisting the vagaries of the environment.

By 2021, the world community focus of attention is moving from transformation to the global restructuring of economies, industries, communications, taking into account the experience gained, new technologies and skills of rapid response to the current situation.

First of all, it is a reboot of the attitude to science and technology, a reassessment of their role in human life and in the economy, an understanding of the responsibility in choosing goals and priorities within the 'human – technology' system, readiness

and ability to act.

Discussion Questions:

1. What is the image of the future for humanity in the context of active introduction of innovative high-load technological systems into everyday life?
2. Is there a forecast of the technologies impact on human life, the development of businesses and the economy for the next 10 or 20 years?
3. Digitalization, biohacking, technologies of mobility in time and space... How will people and their relationships change when their fusion with technology becomes irrevocable?
4. What will a person take along into a new life? What life values need to be preserved in order to remain a Personality?
5. How can science and technology help a person?

Are there any new approaches to stimulating scientific thought to solve complex problems of the 'human – technology' ecosystem development and to reboot the future through scientific and technological progress?

14:00-16:00
Conference room no. 2

Educational track

Ecology of thought

Panel discussion

In the modern world, the issues of preserving the habitat at the level of 'whether or not humanity should be on the planet Earth', have become more acute. Looking at ourselves from the future allows us to realize possible development scenarios related primarily to the attitude of each person to himself, to his neighbors, to partners, to the environment. How to become eco-friendly, think planetary? How to educate a Person of the Future? What kind of a person is this and what kind of world will they live in?

Discussion Questions:

1. Awareness of responsibility for the planet biosystem destruction and readiness to join forces in the fight against environmental

problems;

2. The Future of the Earth and the Man of the Future, signs of a new thinking culture;
3. Behavioral psychology and key behavioral contradictions;

Mechanisms of human thinking and behavior transformation.

16:00-16:30

16:30-18:00
Plenary Hall

16:30-18:00
Conference Room No. 2

BREAK

Educational track

TechNet. Digital Reboot. Industry 5.0

Educational track

The economy of experiences. the formula of happiness

Panel discussion

The corporate culture of Japanese companies is reaching a new level of interaction between the employer and the employee, aimed at improving the efficiency of performance in the markets. The economy of Western countries is focused on creating favorable customer experience with a product, brand, or company. In a number of countries around the world, special structures are appearing in the public service that are responsible for the happiness of residents.

Russia and the regions are looking for their own way.

Discussion Questions:

1. Experience management technologies - marketing, art or game technologies?
2. Customer-orientation or human-centricity in innovation?
3. The formula of happiness: the consumer and/or the employee (Western or Eastern business philosophy)?
4. What is the most promising path for our

country?

What competencies are necessary for effective communication in the economy and in education?

16:30-18:00

Conference Room No. 3

Educational track

Digital Transformer Competencies

Panel discussion

The influence of technology on human decision-making is increasing. This requires the readiness and availability of key managerial competencies of the new format. Competencies for solving a set task or achieving a given performance result in the context of global digitalization of social and business processes must be formed in a creative environment and from the positions of new thinking, awareness of what is happening and possible consequences.

Discussion Questions:

1. Artificial intelligence – for good or for evil?
2. Will data become an important asset of government and business management?
3. Who will make decisions in 2050 - a machine or a human?
4. Where to start a digital transformation?
5. The strategy of small steps;
6. Digital transformer – who is it?
7. What competencies are required for such a specialist?
8. How is the readiness for innovation formed?

What should be the creative environment?