



HORIZON 2020

*Excellent Science
Global Challenges
Competitive Industries*

Open to the world!

Structure

1. What is Horizon 2020?
2. International cooperation in Horizon 2020
3. Cooperation with Russia in FP7
4. Horizon 2020 – what is in it for Russia?

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What is Horizon 2020?

- **Almost €80 billion (current prices) research and innovation funding programme (2014-2020)**
- **A core part of Europe 2020, Innovation Union & European Research Area:**
 - Responding to the economic crisis by investing in future jobs and growth
 - Addressing people's concerns about their livelihoods, safety and environment
 - Strengthening the EU's global position in research, innovation and technology

What's new?

- **A single programme** bringing together three separate programmes/initiatives*
- **Coupling research to innovation** – from research to retail, all forms of innovation
- **Focus on societal challenges** facing EU society, e.g. health, clean energy and transport
- **Simplified access**, for all companies, universities, institutes in all EU countries and beyond

* The 7th Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

Three priorities



Priority 1

Excellent science

Why:

- **World class science is the foundation of tomorrow's technologies, jobs and wellbeing**
- **Europe needs to develop, attract and retain research talent**
- **Researchers need access to the best infrastructures**

Funding (€ million, 2014-2020)

European Research Council (ERC) Frontier research by the best individual teams	13 095
Future and Emerging Technologies Collaborative research to open new fields of innovation	2 696
Marie Skłodowska-Curie actions (MSCA) Opportunities for training and career development	6 162
Research infrastructures (including e-infrastructure) Ensuring access to world-class facilities	2 488

Priority 2

Industrial leadership

Why:

- **Strategic investments in key technologies (e.g. advanced manufacturing, micro-electronics) underpin innovation across existing and emerging sectors**
- **Europe needs to attract more private investment in research and innovation**
- **Europe needs more innovative small and medium-sized enterprises (SMEs) to create growth and jobs**

Funding (€ million, 2014-2020)

Leadership in enabling and industrial technologies (LEITs) (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)	13 557
Access to risk finance Leveraging private finance and venture capital for research and innovation	2 842
Innovation in SMEs Fostering all forms of innovation in all types of SMEs	616 + complemented by expected 20% of budget of societal challenges + LEITs and 'Access to risk finance' with strong SME focus

Priority 3

Societal challenges

Why:

- **Concerns of citizens and society/EU policy objectives (climate, environment, energy, transport, etc) cannot be achieved without innovation**
- **Breakthrough solutions come from multi-disciplinary collaborations, including social sciences & humanities**
- **Promising solutions need to be tested, demonstrated and scaled up**

Funding (€ million, 2014-2020)

Health, demographic change and wellbeing	7 472
Food security, sustainable agriculture, marine and maritime research & the Bioeconomy	3 851
Secure, clean and efficient energy *	5 931
Smart, green and integrated transport	6 339
Climate action, resource efficiency and raw materials	3 081
Inclusive and reflective societies	1 309
Secure societies	1 695
<i>Science with and for society</i>	<i>462</i>
<i>Spreading excellence and widening participation</i>	<i>816</i>

* Additional funding for nuclear safety and security from the Euratom Treaty activities (2014-2018)

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International cooperation in Horizon 2020

- **International cooperation** = key cross-cutting priority of Horizon 2020, in particular to:
 - ✓ Strengthen the Union's excellence, as well as its economic competitiveness
 - ✓ Tackle global societal challenges
 - ✓ Support the Union's external policies
- **Basic approach provided by** Horizon 2020 Regulation and Rules for Participation
- **Strategy** for international cooperation (COM(2012) 497): enhancing and focusing international cooperation activities (in terms of areas and partners)

International cooperation in Horizon 2020

Most importantly:

Horizon 2020 is open to participation from across the world!

Clear ambition to substantially increase participation of international partners!

How?

- **General opening**
- **Targeted international cooperation actions** across Horizon 2020
- Supported by **horizontal international cooperation activities** (in Horizon 2020 Challenge 6: follow-up to Capacities INCO programme)

General opening

- Horizon 2020 is **open to participation** from across the world
- **Automatic funding:**
 - ✓ EU Member States (including overseas departments and overseas territories)
 - ✓ Associated Countries
 - ✓ exhaustive list of countries in annex to work programme (but: no longer BRIC + Mexico in this list!)
- For other countries, funding only in **exceptional cases:**
 - ✓ such funding is provided for in a bilateral scientific and technological agreement
 - ✓ funding for entities established in these countries are included in the call text
 - ✓ the Commission deems the participation of the entity essential for carrying out the project

Targeted actions

- Targeted international cooperation activities across Horizon 2020: **area for cooperation** and **partner** specified upfront
- Areas identified based on analysis of a set of criteria to ensure **common interest** and **mutual benefit**:
 - ✓ Research and innovation excellence
 - ✓ Framework conditions/access to markets
 - ✓ Contribution to international commitments
 - ✓ Frameworks to engage in cooperation and lessons learned
- **Differentiation by countries/regions**: enlargement/neighbourhood/EFTA, industrialised and emerging countries, developing countries
- International cooperation as part of **strategic planning** for each part of Horizon 2020
- Result: **roadmaps** for international cooperation with international partners (to be published soon)

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Participation in FP7: key figures (1)*

RUSSIAN FEDERATION

FP7 Collaboration Projects: **298**

Russian Participations: **486**

EU Contribution: **66,460,461 €**

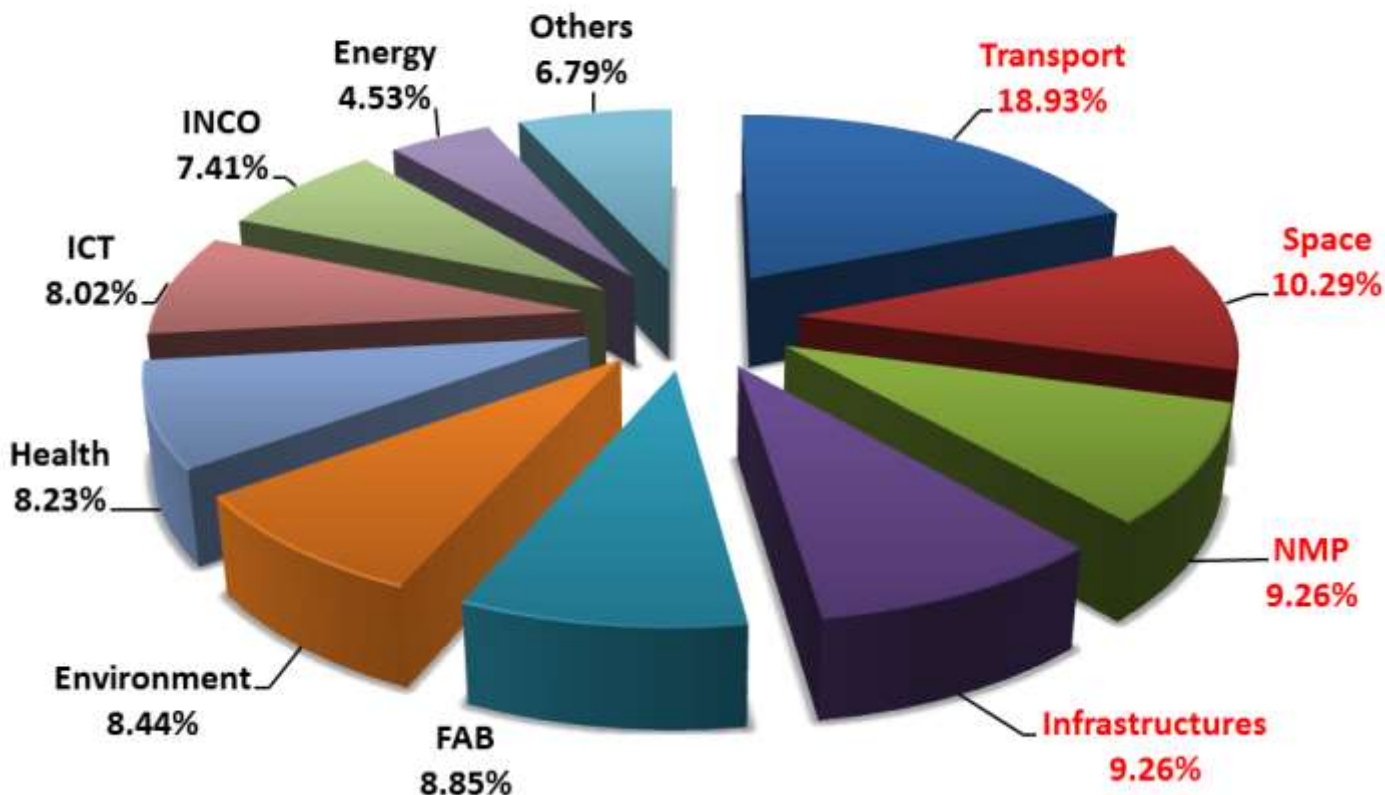
Applicants Success Rate: **22.85%**

*Excluding People and Ideas Specific Programmes

Participation in FP7: key figures (2)*

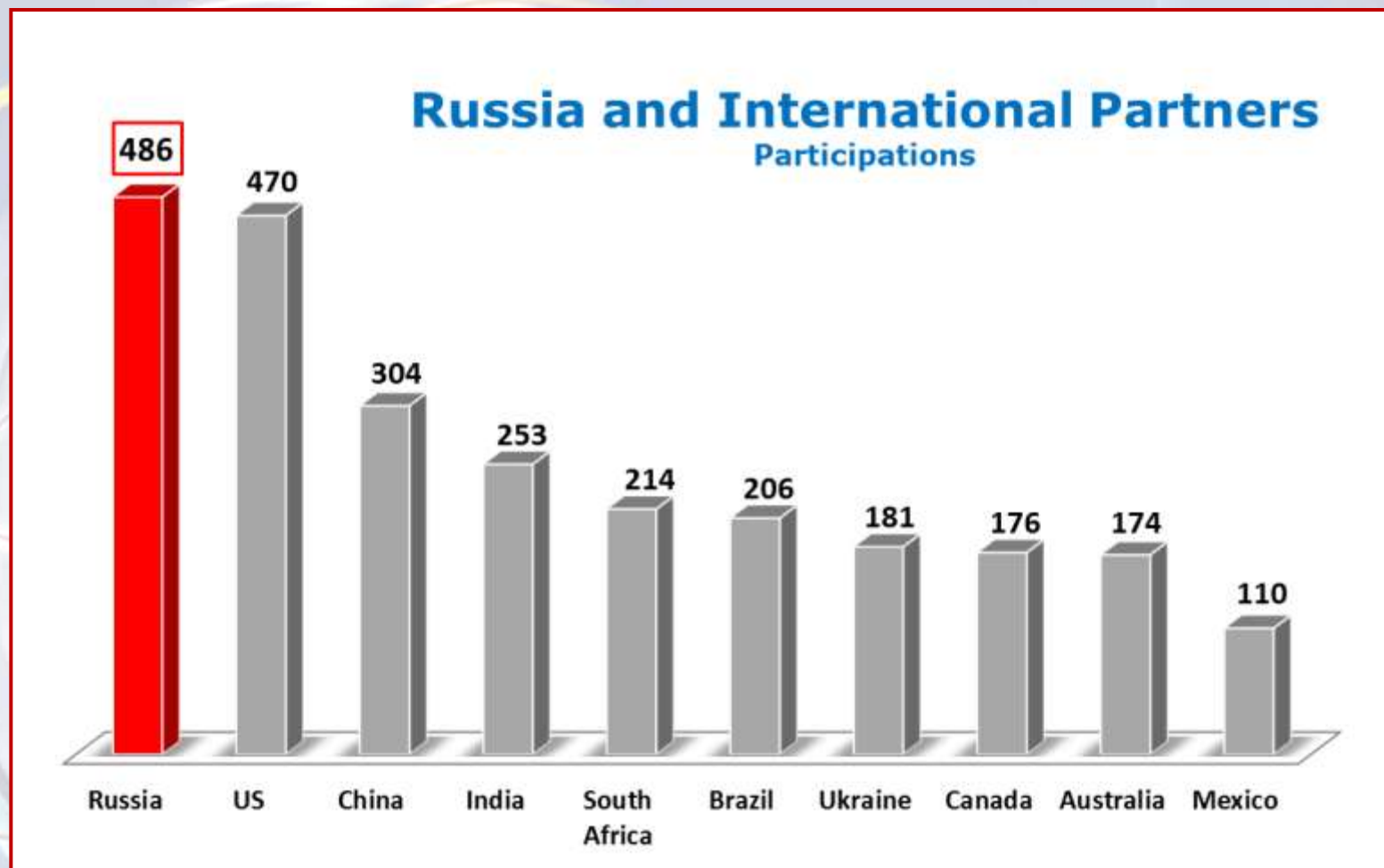
Participations from Russia

Distribution by Thematic Area



*Excluding People and Ideas Specific Programmes

Participation in FP7: key figures (3)*



*Excluding People and Ideas Specific Programmes

Participation in FP7: project examples

OPENAIR – Optimisation for low Environmental Noise impact AIRcraft

- ✓ Project Coordinator: **SNECMA SA (France)**
- ✓ Russian Partners:
 - **Joint Institute for High Temperatures – RAS**
 - **Andreyev Acoustics Institute**
 - **The Central Aerohydrodynamic Institute named after Prof. N.E. Zhukovsky**
- ✓ Project EU Contribution: **€ 18,273,829**
- ✓ Research Field: **Aerospace Technology – Environmental Protection**

DIABIMMUNE – Pathogenesis of type 1 Diabetes – Testing the hygiene hypothesis

- ✓ Project Coordinator: **Helsingin Yliopisto (Finland)**
- ✓ Russian Partners:
 - **Ministry of Health & Social Development (Karelian Republic of the Russian Fed.)**
 - **Petrozavodsk State University**
- ✓ Project EU Contribution: **€ 5,999,900**
- ✓ Research Field: **Biotechnology – Life Sciences – Medicine - Health**

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Horizon 2020 – What is in it for Russia?

1. All Calls for Proposals of Horizon 2020 are fully open to Russian participation in all fields and areas.
2. International participation - Horizon 2020 can connect the best teams and individual researchers from Russia with Europe's top researchers and innovators
3. Horizon 2020 helps to connect Russian scientists and universities with business and industry from around the world

Horizon 2020 – What is in it for Russia?

4. Horizon 2020 offers access to Europe's knowledge, access to data, access to infrastructures and access to world-leading scientific networks
5. Participation in Horizon 2020 provides opportunities to market one's ideas, know-how and technologies internationally
6. Russian scientists can be funded in the Marie Skłodowska Curie mobility programme and by the European Research Council (ERC)

Priorities for cooperation with Russia

- **Aeronautics**
- **ICT**
- **Energy**
- **Research infrastructures**
- **Bio-medical research**

WP2014-15: Open opportunities

- All research calls are open for Russian project partners.
- Horizon 2020 first calls were published on 11 December 2013.
- Please read the Work Programmes of the calls.
- Please apply as project participant in a research consortium,
 - or for a mobility grant to the Marie Skłodowska-Curie programme,
 - or a grant from the European Research Council.

WP2014-15: Calls that may be of particular interest to entities in Russia

Future and Emerging Technologies: HPC Core Technologies, Programming Environments and Algorithms for Extreme Parallelism and Extreme Data Applications

European research infrastructures:

- International Cooperation for Research Infrastructures
- Network of National Contact Points

Space: International Cooperation in Space Science

Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy: European polar research cooperation

Smart, Green and Integrated Transport: International Cooperation in Aeronautics

Europe in a Changing World:

- Enhancing and focusing research and innovation cooperation with the Union's key international partner countries
- Encouraging the research and innovation cooperation between the Union and selected regional partners

Euratom:

- *Tool for the Fast and Reliable Prediction of Severe Accident Progression and Anticipation of the Source Term of a Nuclear Accident*
- *Nuclear Developments and Interaction with Society*

ERA-NET instrument

ERA-NET instrument was first used under FP6 and continued through FP7.

The ERA-NET instrument under Horizon 2020 is designed to support public-public partnerships in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as topping up of single joint calls and of actions of a transnational nature.

From 2004 to 2012 over €2 billion of public funding were spent by programme managers and owners investing jointly in coordinated research across borders.

Ongoing ERA-NETs with Russian participation

- **ERA.Net RUS Plus** – strengthening STI links between Russia and the European Research Area: **Foundation for Assistance to Small Innovative Enterprises (FASIE)**; **Ministry of Education and Science, Russian Foundation for Basic Research (RFBR), Russian Foundation for Humanities, others tbc.**
- **BONUS** - Baltic Sea Science – Network of Funding Agencies: **RFBR** participates in the BONUS calls on the basis of a Memorandum of Cooperation.
- **ERA-IB 2** - the ERA-NET "Towards an ERA in Industrial Biotechnology" 2: *Russian funding partners since 2011: **FASIE.***
- **EuroTransBio** – an ERA-NET in Biotechnology: *Russian funding partner since 2012: **FASIE.***
- **ASPERA 2** – an ERA-NET on Astroparticle Physics: *Russian funding partner: **RFBR.***
- **EUPHRESCO 2** - European Phytosanitary Research Coordination II: *Russian partner: **All-Russian Plant Quarantine Centre (FGU VNIIKR).***

H2020 call for expression of interest for experts

Join the database of independent experts for European research and innovation.

The European Commission appoints independent experts to assist with research and innovation assignments including the evaluation of proposals, monitoring of projects, and evaluation of programmes, and design of policy.

Register online at:

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>



Gate2RuBIN project

The “Gate to Russian Business and Innovation Networks” project is aimed to assist to the development of business and technological co-operation between SMEs and R&D organisations of Russia and European Union, contributing to their competitiveness capacities.

The project consortium operates the Enterprise Europe Network Correspondence Centre in Russia.

The project provides 3 types of services:

- Information, feedback, business co-operation and internationalisation;
- Innovation, technology and knowledge transfer;
- Encouraging the participation of SMEs in the EU's Framework Programme.

Link: <http://www.gate2rubin.ru/>

Useful newsletters

- S&T Gate RUS.EU Newsletter:
<http://www.st-gaterus.eu/en/543.php>
- Russian NCP "Biotechnology" Newsletter:
<http://fp7-bio.ru/biotech/infoletters/>
- Russian NCP "Research Infrastructures" Newsletter:
<http://fp7-infra.misis.ru/newsletters/>
- Russian NCP "Mobility" Newsletter:
<http://fp7.hse.ru/mobility/bull>
- Voronezh Regional Information Centre for Scientific and Technological Cooperation with EU
http://www.ric.vsu.ru/ru/news/information_bulletin

Useful links

- Horizon 2020 official webpage:
<http://ec.europa.eu/programmes/horizon2020/>
- Participant Portal:
<http://ec.europa.eu/research/participants/portal/>
- European Commission – Research & Innovation:
<http://ec.europa.eu/research/index.cfm>
- Delegation of the European Union to the Russian Federation:
<http://www.EUinRussia.ru>
- EU-Russia Year of Science 2014:
<http://eu-russia-yearofscience.eu>
<http://godnauki-rossiya-ec.ru>



HORIZON 2020

**Thank you
for your attention!**