Opportunities for Science & Technology Cooperation between the European Union and Russia

Manuel Hallen S&T Counsellor Delegation of the European Union to Russia





EU-Russia S&T cooperation: Steering bodies Policy & scientific dialogue "top down"

- → Permanent Partnership Council (PPC ministerial level), four "common spaces" + road maps, one on Research, Education and Culture.
- → Joint EU-Russia S&T Cooperation Committee (S&T Agreement, EC Director-General level)
- → 12 Joint EU-Russia Thematic Working Groups in priority areas (EC Directorate level)

10 Joint EU-Russia Thematic Research Working Groups (under S&T Agreement)

- → Health
- → Food, Agriculture, Biotechnologies
- → Information & Communications Technologies
- → Nanotechnologies & New Materials
- → Non-nuclear Energy
- **→** Environment
- Aeronautics
- e-Infrastructures

New since July 2010:

- → Research Infrastructures
- Mobility / Marie-Curie



Russia in the EU Framework Programmes for RTD

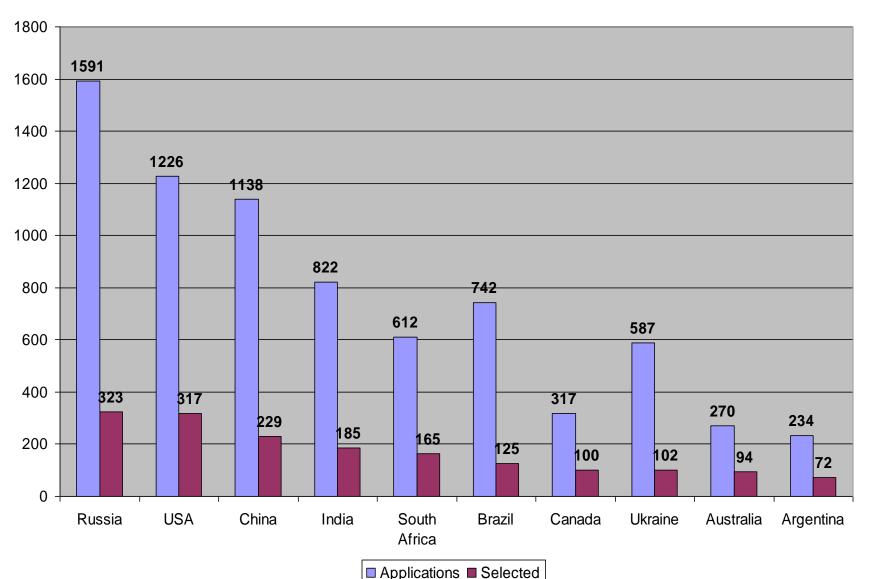
Framework Programme 6: 2002-2006

- Russia was the most successful "third-country" * : Scientists participate in 330 projects, incl. 60 Marie Curie fellowships, worth ~ € 2.8 billion
- Total EC contribution to Russian participants was
 ~ € 120 million (including INTAS)

^{*} Third country = neither EU Member State nor country associated with FP



Evaluation of Russian Participation in FP7:Applications Submitted and Retained Cooperation, Capacities and Euratom Programmes





Russia in the EU Framework Programmes for RTD

Framework Programme 7: 2007 – 2013

By 2010 (programme mid-term):

- Overall, Russia continues to be the most active "third country"
- → Russian scientists participate in ~300 projects, receiving > € 50 million
- → But: compared with FP6 proportionally lower EC contribution due to Russian co-funding of coordinated calls for proposals



EU - Russia S&T Cooperation Co-funded Coordinated Calls for Proposals in 7 Thematic Areas

- → 2007-2008: Energy and Food-Agriculture-Biotechnology
- → 2008-2009: Health and Nuclear Fission Energy and Nano-technologies & New Materials
- → <u>2009-2010</u>: Aeronautics
- → 2010-2011: ICT, Nano-technologies & New Materials



FP7 projects in support to enhancing EU-Russia S&T cooperation

- → Bilateral S&T Cooperation partnerships: ACCESSRU & BILAT-RUS
- → Coordination of national policies & funding programmes: ERA-Net.RUS
- → Bi-regional coordination of S&T Cooperation: IncoNet Eastern Europe & Central Asia (EECA)
- → Transnational cooperation among National Contact Points (NCP) for international cooperation: INCONTACT – One World



EU-RU S&T cooperation...

...also extends to **related areas** such as...

Higher Education:

- Russia's participation in the "Bologna process"
- *Erasmus Mundus* programme
- *Tempus* programme

Space (research):

European Commission - European Space Agency (ESA) - Roscosmos



...EU-RU S&T cooperation

- ...and also includes Russia's active participation in major European research infrastructures and facilities such as...
- → CERN European Organisation for Nuclear Research
- → XFEL European X-ray Free Electron Laser
- → FAIR Facility for Antiproton & Ion Research
- → GLORIAD Global Ring Network for Advanced Applications Development
- → **GÉANT** European Data Network for Research & Education

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EU-Russian S&T web portal

as central gateway to S&T cooperation

http://www.st-gaterus.eu





European R&D Framework Programmes (FPs)

FP is the financial instrument for the EU research strategy

- Largest publicly funded competitive R&D programme worldwide (annual budget in FP7 = € 7.2 billion)
- Basic rule of trans-national collaboration
- Thematic programmes in all technology areas
- Special programmes for researchers' mobility, research infrastructures, SMEs, capacity building
- A defined budget for a defined number of years and a set of priorities for scientific research
- A set of strategies and tools to implement them



Role of the European Framework Programmes for RTD

Objective: to strengthen the S&T basis, to increase the competitiveness of industry and to raise the international standing of Europe

By bringing down barriers

- between countries:
 - multinational consortia
 - researchers from any country in the world can participate
 - coordination among national funding programmes
- between different types of organizations: universities, research centres, SMEs, large companies, etc.
- between disciplines: increased focus on translational research
- and encourage mobility: Marie Curie fellowships available for researchers and for host institutes



International Cooperation in FP7

3 different avenues:

1. All activities open for International Cooperation

- → International Cooperation Partner Countries (ICPCs) can participate in projects and receive EC funding
- → Industrialised countries may be funded if their participation is seen as essential for the project or if provided for in the call
- → Minimum number of participants: 3 from MS/AC

2. Specific International Cooperation Actions

- → Address specific issues that partner countries face or have a global character, on the basis of mutual interest and benefit
- → Minimum number of participants: 2+2 (2 from MS/AC + 2 from ICPCs − in Russia = 2 regions / Oblasts)

3. Bilateral agreements for targeted co-funding

→ Individual agreements with specific countries e.g. Russia



FP7 2007 –2013 Specific Programmes

Cooperation - Collaborative research

Ideas – Frontier Research

People – Marie Curie Actions

Capacities - Research Capacity



JRC non-nuclear research

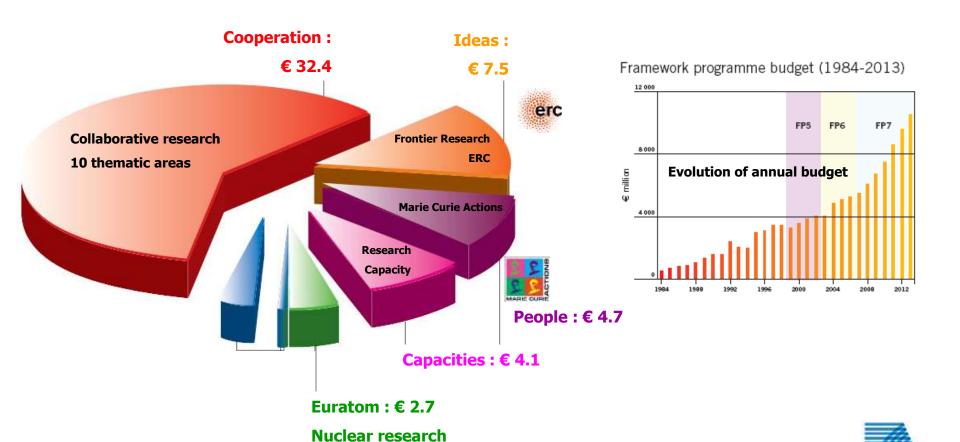
JRC nuclear research





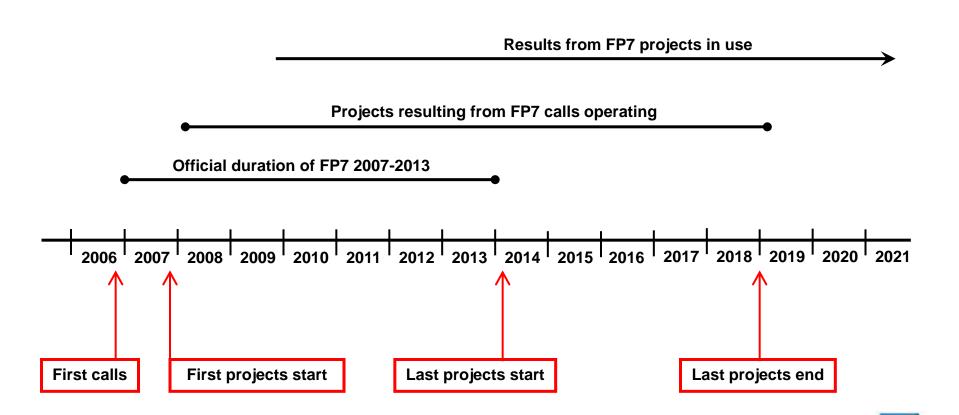
FP7 funding (2007-2013)

SEVENTH FRAMEWORK





Timeframe for FP7 projects





FP7 "Cooperation"



| Ihom | atic | Drin | rities: |
|------|------|------|---------|
| | all | riiu | IILIGS. |

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- 2. Food, agriculture & biotechnology
- 3. Information & communication technologies
- 4. Nanotechnologies & materials
- 5. Energy
- 6. Environment
- 7. Transport
- 8. Socio-economic sciences
- 9. Security & 10. Space

The EC currently manages only about 6% of total public R&D investment in the EU

EU countries invest about 2% of GDP in research

Billion Euro

6,0 1,9

9,1

3,5

2,2

1,9

4,1

0,6

2,9

Σ 32,3





FP7 "Ideas" – European Research Council (ERC)



- → To support investigator-driven frontier research over all areas of research
- By individual teams
- Excellence as sole criterion
- → Autonomous scientific governance
- → Simple, user-friendly delivery
- → Team Leader ("Principal Investigator") assembles his/her research group; freedom to choose the research topic. Individual teams to consist of researchers without "artificial" administrative constraints; thus members may be drawn from one or several legal entities, from within or across national boundaries, including 3rd countries





FP7 "People"



Marie Curie Actions- Fellowships, Grants, Awards

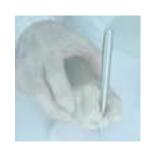
- Initial training (~40% budget)
 - → Initial Training Networks (ITN)*
- Life-long training and career development (~25-30% budget)
 - → Intra-European Fellowships (IEF)/ Career Integration Grants (CIG)
 - → Co-funding of regional/national/international programmes (COFUND)
- Industry dimension (~5-10% budget)
 - → Industry-Academia Partnerships and Pathways (IAPP)*
- International dimension (~25% budget)
 - → International Outgoing & Incoming Fellowships (IOF & IIF)
 - → International Staff Exchange Scheme (IRSES)
- Policy support actions (~1% budget)
 - → Mobility and career enhancement actions







FP7 "Capacities"



- → Research infrastructures
- → Research for the benefit of SMEs
- → Regions of Knowledge
- → Research Potential
- → Science in Society
- → Coherent development of policies
- → Activities of International Cooperation





EU-Russia Partnership for Modernisation

- Priority 3: « Enhancing cooperation in innovation, research and development, and space ».
- Work plan: (i) participation of parties in Russian and European scientific programmes, (ii) global research infrastructures, (iii) joint fundamental research programmes, (iv) nuclear research.
- Current S&T cooperation already covers the majority of R&D areas listed in the work plan, based on:
- S&T cooperation agreement since 1999, an important part in the overall EU-Russia relationship.
- More to be done on research for innovation.



EU-Russia Partnership for Modernisation

<u>in Europe :</u>

- Heart of <u>Europe 2020 Strategy</u> → <u>Innovation Union</u>, turning ideas into jobs, green growth and social progress
- An ageing population, strong competitive pressures from globalisation → future economic growth and jobs will increasingly have to come from innovation in products, services and business models.
- > 30 action points
 - to improve conditions and access to finance for research and innovation in Europe,
 - to ensure that innovative ideas can be turned into products and services that create growth and jobs.





The Innovation Union: aims



Adoption of Communication 6 October 2010

Support for research and innovation focussing on (limited number of) key societal challenges, including health and demographic change:

- Improving framework conditions for businesses to innovate, improving access to finance.
- Creating 'European Innovation Partnerships' between the EU and national levels to speed up the development and deployment of the technologies needed to meet the challenges identified.
- Increasing focus of research funding effort on support to innovative, high-tech SME, fund high-impact and demonstration-type projects.



Common Strategic Framework - Green Paper -

- Consulting on major improvements to future EU research and innovation funding
 - With a coherent set of funding instruments along the whole innovation chain (from basic research to market uptake)
 - And far reaching simplification of procedures and rules
- For the next EU Budget (to start in 2014)
- Seeking stakeholder views ahead of the Commission's formal proposals (deadline 20 May, conference 10 June, findings by end 2011)
 - On the proposed improvements
 - On the priorities of the Common Strategic Framework

http://ec.europa.eu/research/innovation-union/index_en.cfm



Scope of the Common Strategic Framework

Innovation Union

- Covering current funding for:
- The 7th Framework Programme (FP7) for research, technological development and demonstration
 - — € 55 billion (2007-13). 4 main programmes on Ideas, Cooperation, People and Capacities (plus Euratom, JRC).
- The Competitiveness and Innovation Framework Programme (CIP)
 - — € 3.6 billion (2007-13). 3 programmes on enterprise & innovation, intelligent energy, and ICT policy support.
- The European Institute for Innovation and Technology (EIT)
 - Autonomous EU body bringing together higher education, research and business to stimulate innovation in Knowledge and Innovation Communities. EU budget contribution of € 309 million (2007-13)
- And strengthening complementarities with the Structural Funds
 - € 86 billion allocated (2007-13) to R&D and innovation, entrepreneurship, ICT and human capital development



EU-Russia Partnership for Modernisation

in Russia

 "Innovative Russia – 2020", a draft Strategy for innovation development published on 31/12/2010 by the Russian Ministry of Economic Development

5 key tasks:

- Need for 'innovative man' people to become more receptive to innovation
- Need for innovative business
- Need for innovative state modernisation of state administration
- Need for effective science to be able to adapt to new world trends and needs of national economy and society, to effectively commercialise new technologies
- → Need to enhance international cooperation



European Research Information



- EU Research & Innovation http://ec.europa.eu/research
- Innovation Union
 http://ec.europa.eu/research/innovation-union/index_en.cfm
- Seventh Framework Programme http://ec.europa.eu/research/fp7
- Information on research programmes and projects

 http://cordis.europa.eu/

 Experts' registration in FP
 - **Experts' registration in FP**https://cordis.europa.eu/emmfp7/index.cfm