European Union

HORIZON 2020

R&I Programme

New opportunities for EU-Korea cooperation

13 July, 2018

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1. EU & Horizon 2020
Research and innovation is a growing priority for the EU

Annual budget (in billion €)

- FP2 (1987-1991): 1,4
- FP6 (2002-2006): 4,4
- FP7 (2007-2013): 7,2
policy priorities set by European Commissioner Moedas

Open Innovation, Open Science and Open to the World

Open Science
- Open Access
- Open Data and European Open Science Cloud
- Research Integrity
- Inclusiveness & Citizen Science

Open Innovation
- European Innovation Council
- Venture capital funds of funds
- Pro innovation Regulatory Environment
- Boosting Private Investment
- Maximizing Impact of EU funding

Open to the World
- Leading & working with multilateral initiatives & international organisations
- Better framework conditions for research and innovation cooperation
- Science diplomacy and synergies with the EU’s external policies
What is Horizon 2020?

✓ The biggest Research- and Innovation-funding programme ever: nearly €77 billion / 7 years (2014-20)
  • The only part of the EU budget to increase (30% more than 2007-13)
✓ The most open programme in the World!
  • International cooperation at its core
✓ 'From lab to market'
  • Basic and applied research, technology development and integration, testing and validation, demonstration and piloting
  • Innovation-driven Public-Private Partnerships
  • SME measures: collaborative projects, new SME instrument, Eurostars etc.
  • Access to finance: debt and equity instruments
✓ 'Challenge-based' ≠ 'discipline-based'
✓ Simple: faster, less red tape
Three Main Priorities

€24 billion

- European Research Council (€13,095mil)
- Future and Emerging Technologies (€2,696mil)
- Marie Skłodowska-Curie actions (€6,162mil)
- Research infrastructures (€2,488mil)
- Leadership in enabling and industrial technologies (€13,577mil)
- Access to risk finance (€2,842mil)
- Innovation in SMEs (€616mil + complemented by 20% of budget of 'Societal challenges' and 'Access to risk finance' with strong SME focus)
- European Institute of Innovation and Technology (EIT)
- Joint Research Centre (JRC)

€17 billion

€29 billion

- Health, demographic change and wellbeing (€7,472mil)
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the Bioeconomy (€3,851mil)
- Secure, clean and efficient energy (€5,931mil)
- Smart, green and integrated transport (€6,339mil)
- Climate action, environment, resource efficiency and raw material (€3,081mil)
- Inclusive, innovative and reflective societies (€1,310mil)
- Secure societies (€1,695mil)
- Science with and for society (€462mil)
- Spreading excellence and widening participation (€816mil)
But Not Only About Money!

- Value of EU programmes much more than cash value!
- Deep relationships, collaboration – goes on even after the grant period!
- Working with the best brains – in the EU and internationally
- EU-based international companies (including Korean) have understood!
- Key role for industry – Public Private Partnerships
More Information:

- Participant Portal
  [http://ec.europa.eu/research/participants/portal/](http://ec.europa.eu/research/participants/portal/)

- Horizon 2020 National Contact Points

- Research Enquiry Service
2. EU-Korea S&T Cooperation Framework
"South Korea – A Strategic Partner of the EU"

✓ **Framework Agreement (2010)**
✓ Free Trade Agreement (2011)
✓ Crisis Management Agreement (2014)

✓ **Agreement for Scientific and Technological Cooperation (2007)**
✓ ITER Int'l Agreement + fusion energy + fission research (2006)
✓ ERC Implementing Arrangement (2013)
✓ Joint Declaration in ICT and 5G (2014)
✓ Agreement on a Civil Global Navigation Satellite System (2016)

✓ **EU-Korea Joint S&T Cooperation Committee**
Framework conditions for EU-Korea R&I cooperation

✓ Commitments to programmatic cooperation
  • Joint, coordinated and twinning calls
  • Cooperation through global multilateral initiatives: Health/Bio

✓ Co-funding mechanism
  • South Korean Ministries offer co-funding for South Korean participants in Horizon 2020 projects
  • Covers all thematic areas of Horizon 2020

✓ Mobility of researchers
  • Implementing Arrangement for South Korean researchers to join the teams of European Research Council Principal Investigators
  • Continued promotion of Marie Skłodowska-Curie Actions
Framework conditions for EU-Korea R&I cooperation

✓ Partnering and guidance
  • Organising R&I Days and other matchmaking events
  • Horizon 2020 National Contact Points
  • Booklet with EU and Member States activities with Korea

✓ Institutional-level cooperation
  • Korea Atomic Energy Research Institute (KAERI) – JRC neutron laboratory
  • Korea Research Institute of Standards and Science (KRISS) – JRC in nanosafety
  • Korean Construction Engineering Development Collaboratory Management Institute (KOCED) – JRC in resilience and protection of civil engineering structures and critical infrastructures against natural hazards and extreme events

✓ Creating a level playing field
  • Legal and administrative issues
  • Monitoring cooperation intensity
Priority areas of future cooperation

- **ICT**: 5G technologies and systems, Internet of Things, Cloud computing, AI
- **Nanotechnology**: Nano safety, Nanoelectronics
- **Health and biomedical challenges**: Globid-R (infectious disease), IRDiRC (rare diseases) / JPIAMR (antimicrobial resistance),
- **Energy**: Carbon Capture Storage / Clean energy innovation
- **Satellite Navigation**: GNSS
- **Automated road transport**
- **Innovation for disaster-resilient societies**
- **Climate Action and cryosphere research**
Korean Participation in Horizon 2020

Participants in Specific Research Fields

KR: Participations in Horizon 2020
Korean Participation in Horizon2020

**Organisation Types**
- University: 45%
- Gov't Research Organisation: 26%
- Business: 15%
- Public Research Organisation: 8%
- Non-profit organisations: 6%

**Cooperation Actions**
- Research & Innovation Actions: 30%
- Mobility (MSCA): 13%
- Innovation Actions: 8%
- Coordination & Support Actions: 2%
- European Research Council: 47%
Korean Participation in Horizon 2020

Korea-ERC Special Programme – Researchers' exchange

No. of Korean Researchers joining in ERC Team

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Researchers</th>
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<tbody>
<tr>
<td>2014</td>
<td>31</td>
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<tr>
<td>2015</td>
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<td>30</td>
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### EU-Korea Research & Innovation Day

- **Date**: Wednesday, 12 September, 2018  
- **Venue**: Lotte Hotel Seoul (TBD)  
- **Organiser**: EU Delegation to Korea, NRF  
- **Sponsor**: European Commission, Ministry of Science, ICT and Technology  
- **Programme**:
  - **[Morning Session]** EU and Member States' STI Policies
  - **[Afternoon1]** Key programmes of the EU  
  - **[Afternoon2]** NCP workshop in 6 areas

- **ICT, Nanotechnology, Energy, Health, Transport**
- **EUREKA/EUROSTAR2 programme for SMEs**
Thank you for your attention!

Find out more: www.ec.europa.eu/horizon2020