



European Union HORIZON 2020 R&I Programme

New opportunities for EU-Korea cooperation



13 July, 2018

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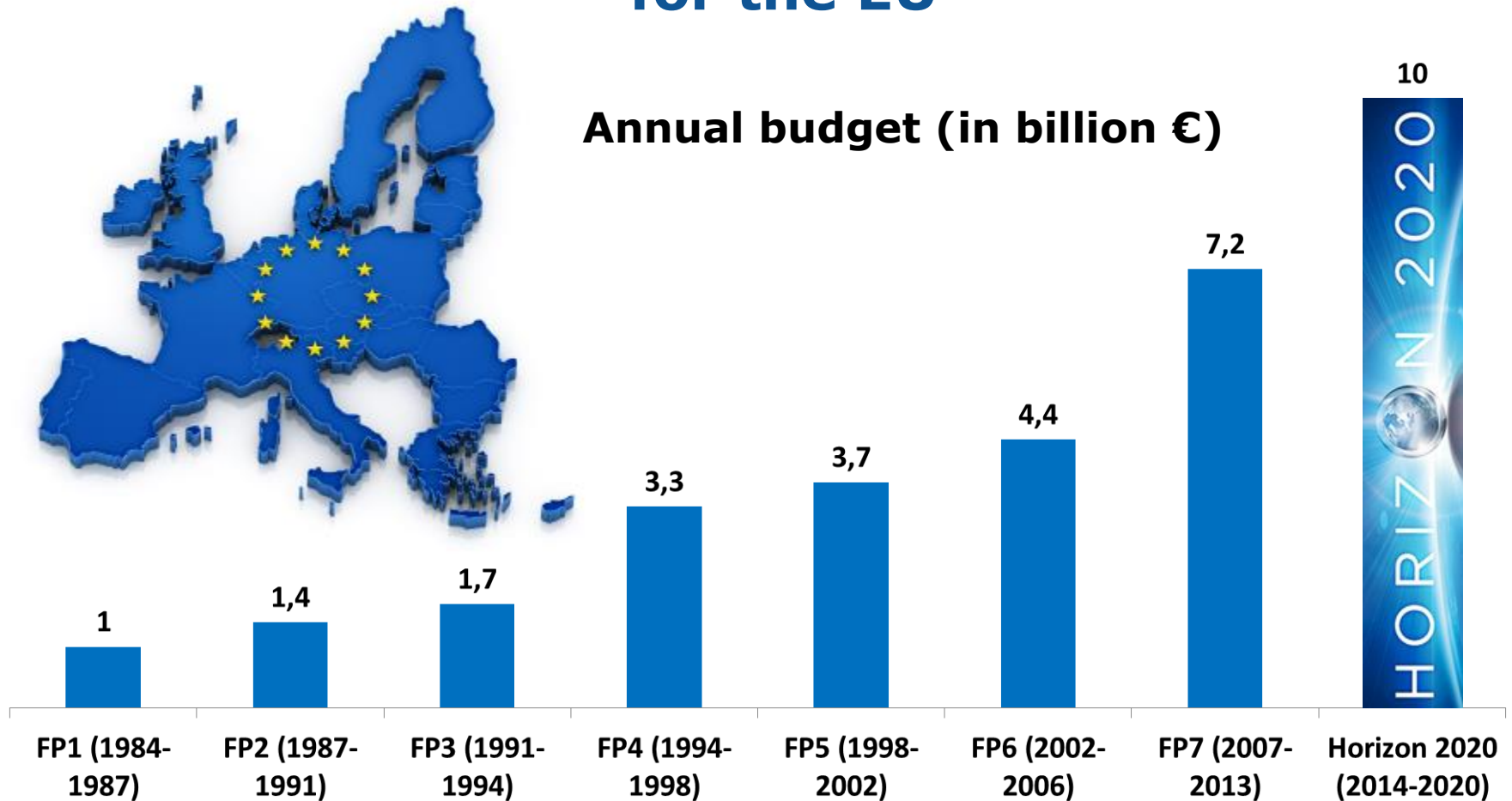
Policy Officer in Science, Technology and Innovation

Delegation of the EU to the RoK



1. EU & Horizon2020

Research and innovation is a growing priority for the EU



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

Excellent Science

- European Research Council (€13,095mil)
- Future and Emerging Technologies (€2,696mil)
- Marie Skłodowska-Curie actions (€6,162mil)
- Research infrastructures (€2,488mil)

€29 billion

Societal Challenges

- 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)

Industrial Leadership

- 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)

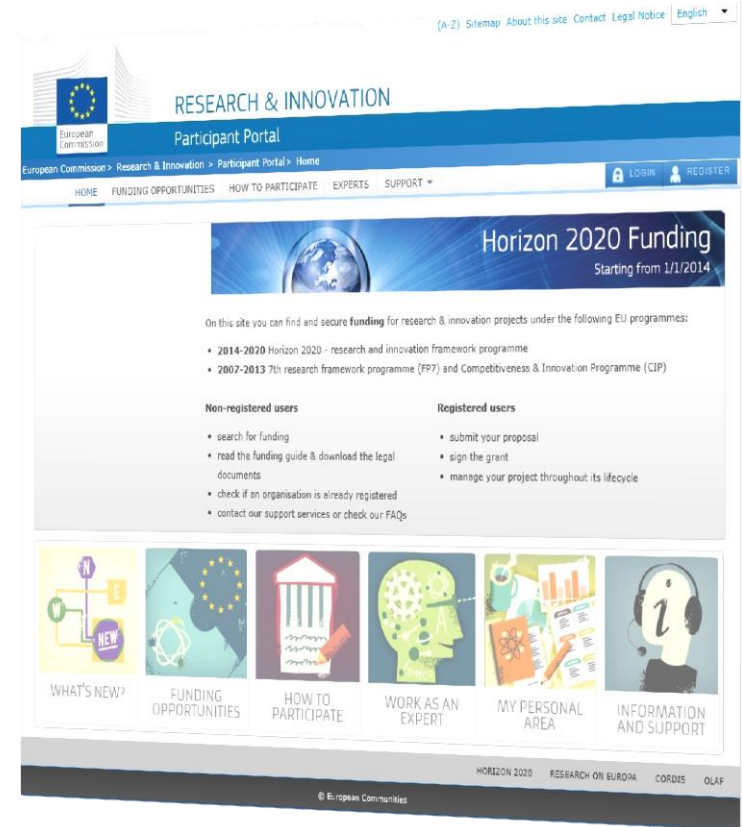
€17 billion

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/>
- ✓ **Horizon 2020 National Contact Points**
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html
- ✓ **Research Enquiry Service**
<http://ec.europa.eu/research/index.cfm?pg=enquiries>





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**
: meeting every two years (2007, 2009, 2011, 2013, 2015, 2017...)

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

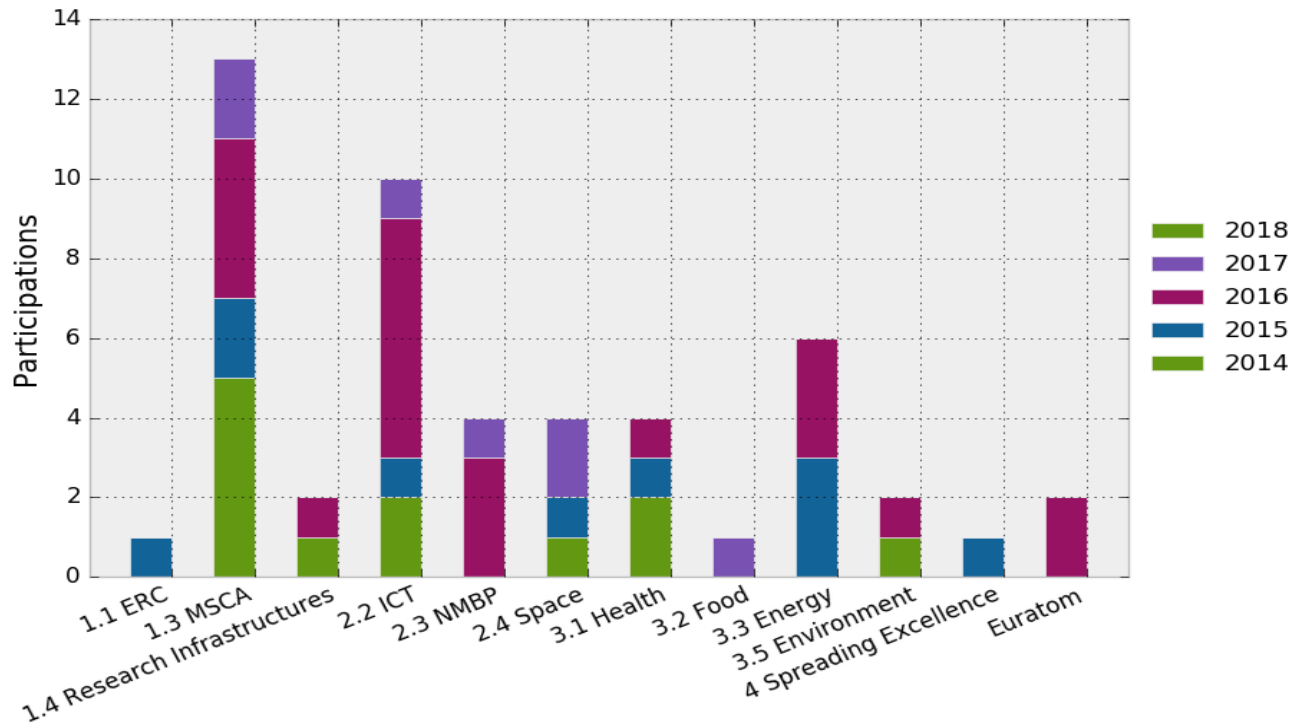
Priority areas of future cooperation

- ✓ **ICT:** 5G technologies and systems, Internet of Things, Cloud computing, AI
- ✓ **Nanotechnology:** Nano safety, Nanoelectronics
- ✓ **Health and biomedical challenges:** Glp1d-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 Horizon2020

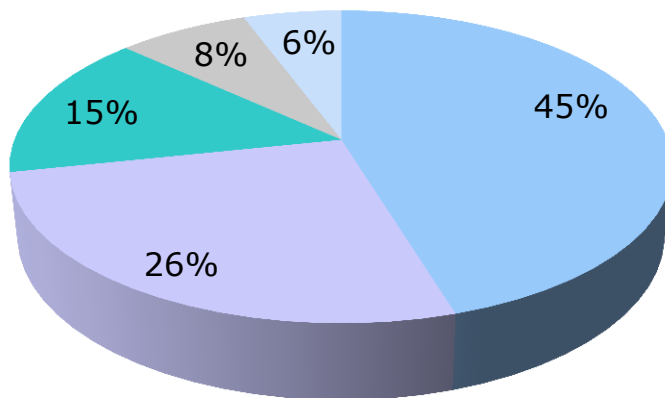
Participants in Specific Research Fields

KR: Participations in Horizon 2020



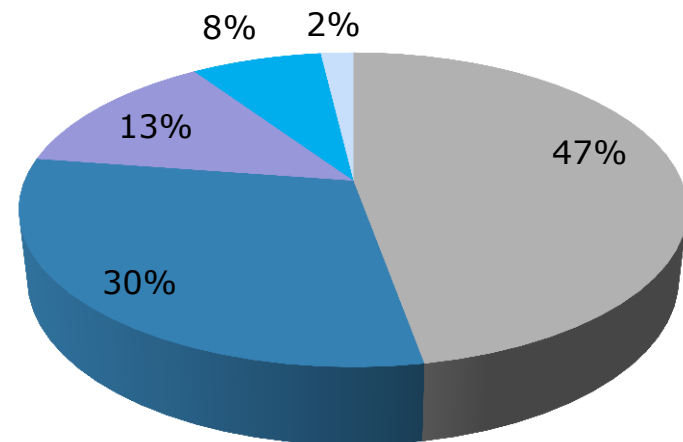
Korean Participation in Horizon2020

Organisation Types



- University
- Gov't Research Organisation
- Business
- Public Research Organisation
- Non-profit organisations

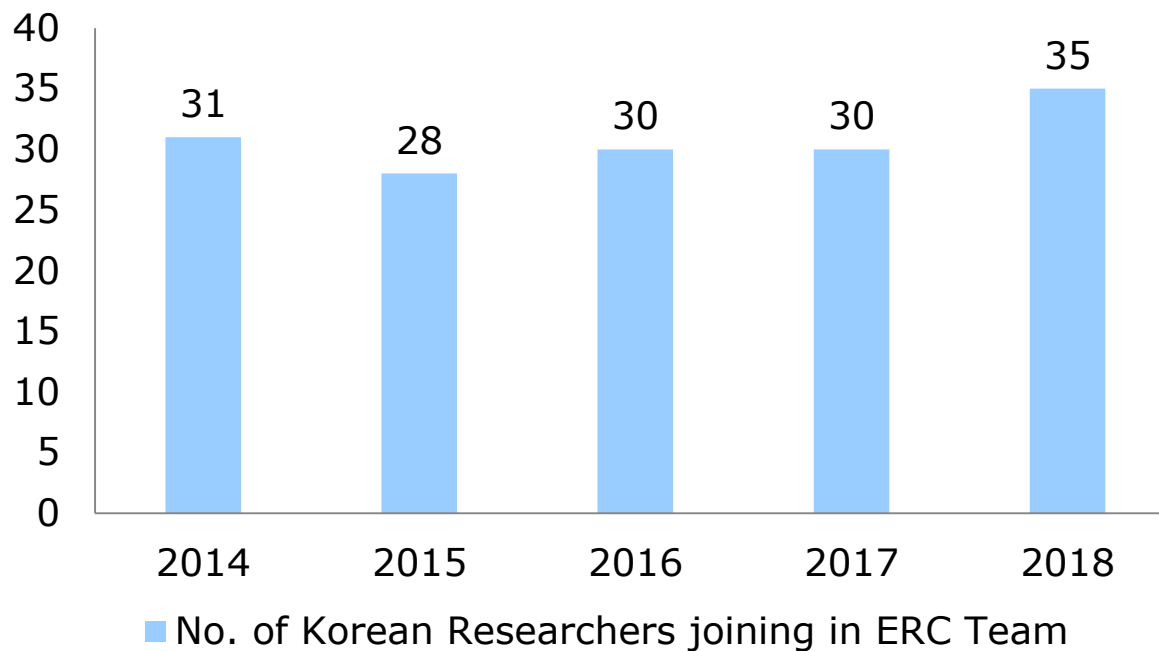
Cooperation Actions



- Research & Innovation Actions
- Mobility (MSCA)
- Innovation Actions
- Coordination & Support Actions
- European Research Council

Korean Participation in Horizon2020

Korea-ERC Special Programme – Researchers' exchange



EU-Korea Research & Innovation Day

- ✓ **Date** Wednesday, 12 September, 2018
- ✓ **Venue** Lotte Hotel Seoul (TBD)
- ✓ **Organisator** 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**





HORIZON 2020

**Thank you
for your attention!**

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

HORIZON 2020