



Opening new horizons

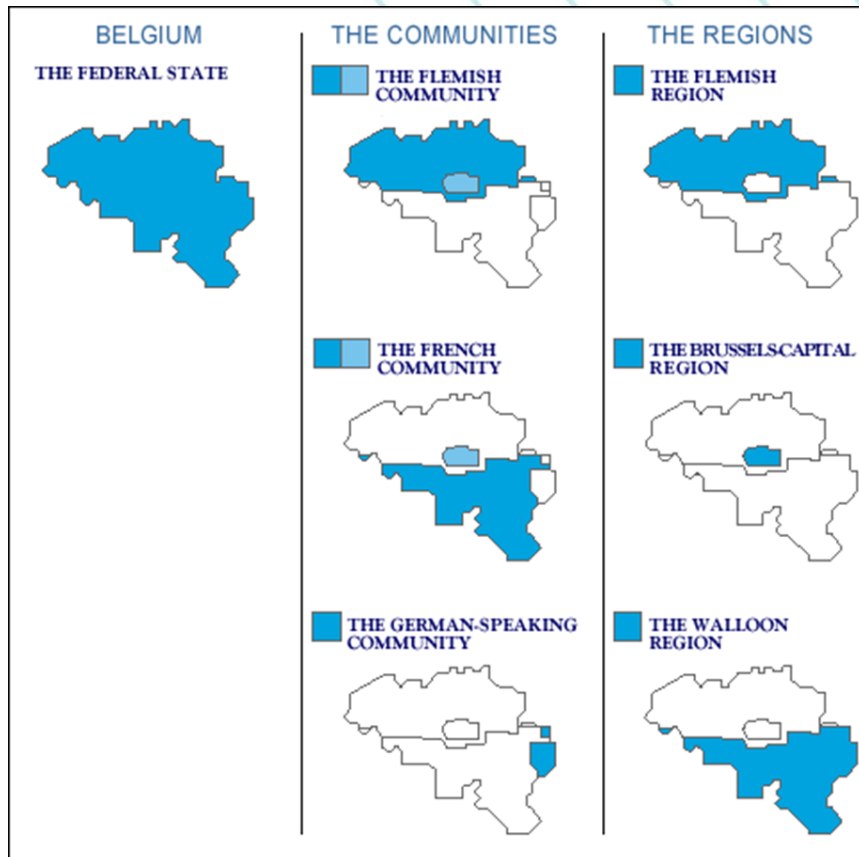
Research Foundation - Flanders

31 March 2016

dr. Hans Willems
Director Research Affairs

dr.ir. Isabelle Verbaeys
Head International Affairs

Belgian Science and Innovation Policy



Primary responsibility of Communities/Regions

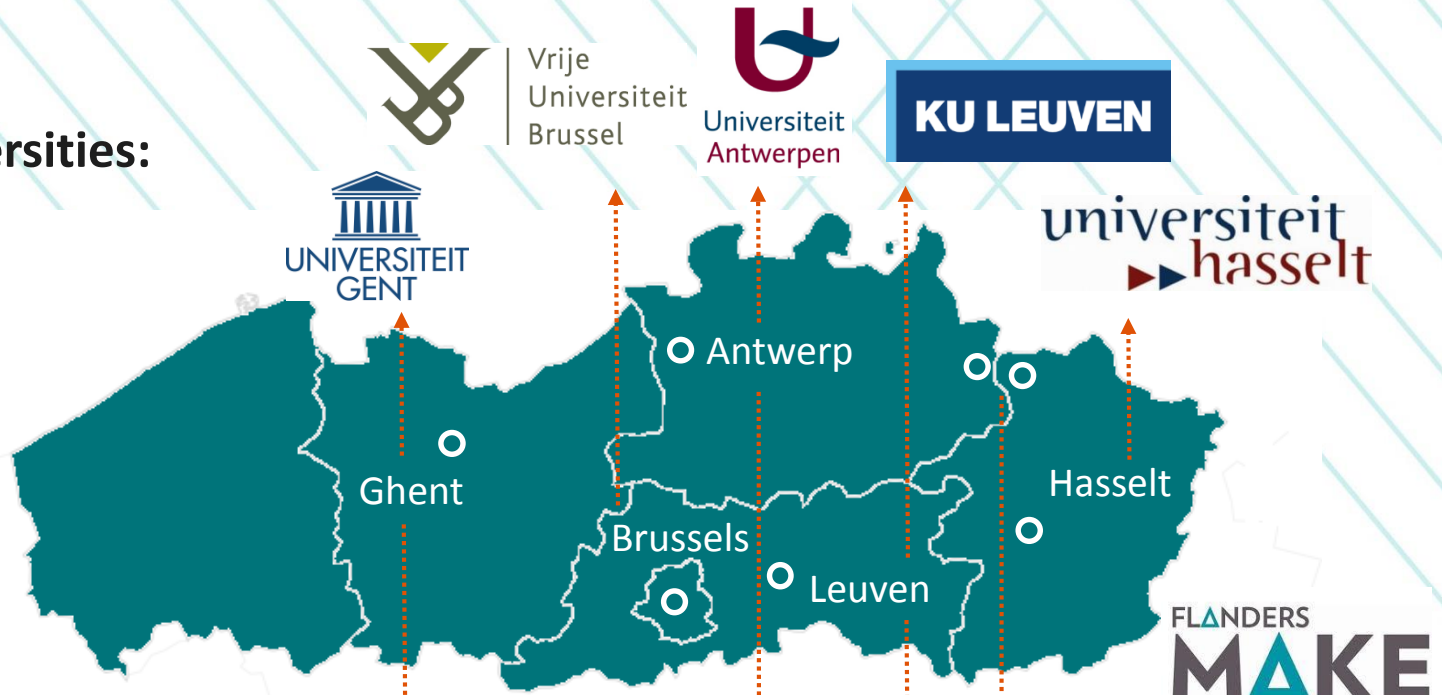
Communities: Education and basic research

Regions: Economy and applied research

Federal: Thematic programs including marine, space, and polar research (e.g. Station on Antarctica), federal scientific institutions

Main Research Performing Centers

World-Class Universities:

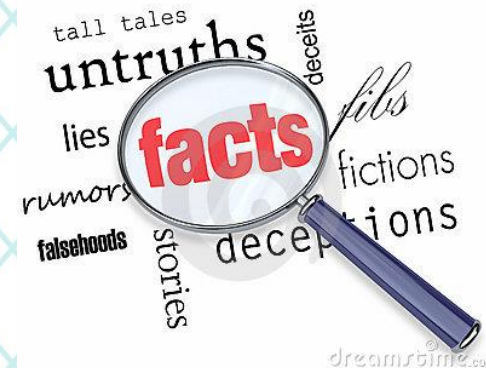


Leading Strategic Research Centers:



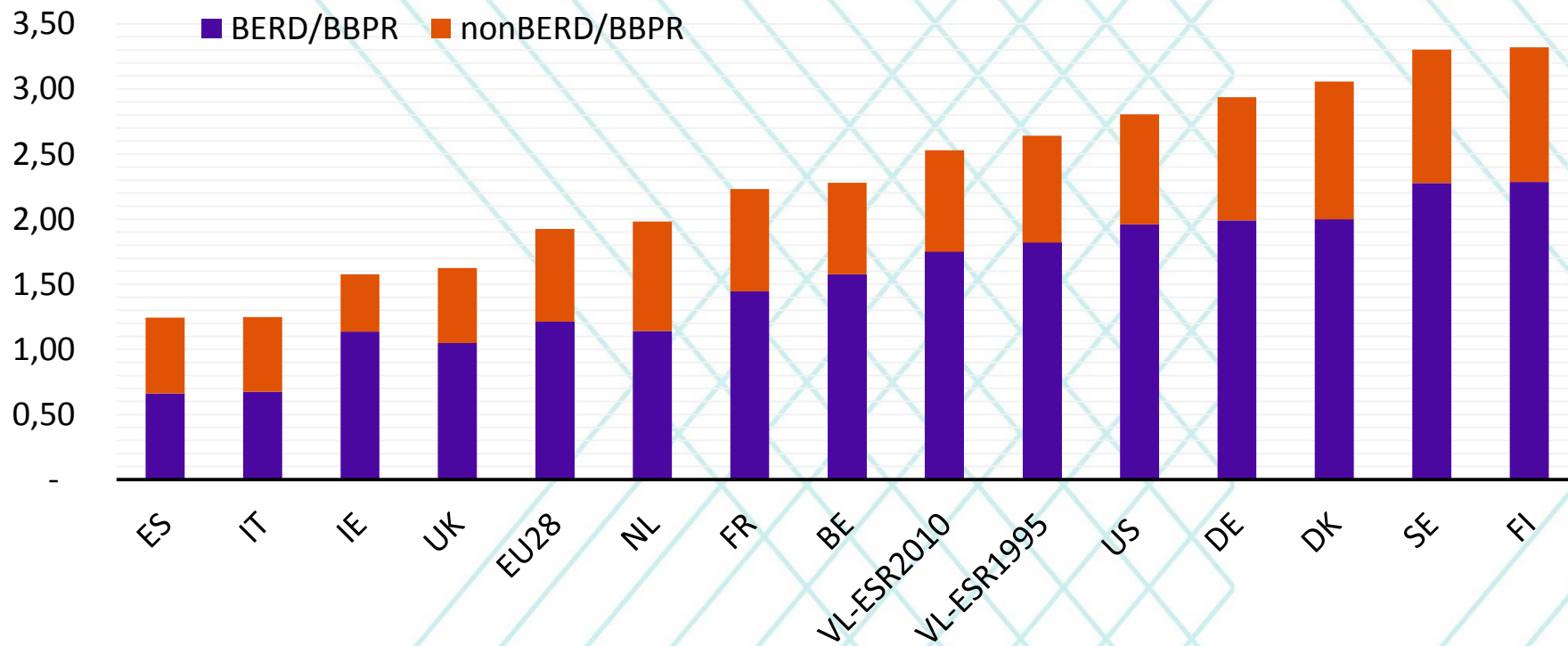
Facts about Flanders

- Population: ca. 6.410.705 (on 01/01/2014)
- Number of R&D personnel (2013): \pm 41.806 (or 0,65% population – 1,41% working force)
- Number of scientific papers: \pm 1% world, or 22,19/10.000 inhabitants
- Number of EPO-patent applications (2011): 230,5/million inhabitants
- R&D-investments: \pm 2,58 % GDP (2013)



3% norm

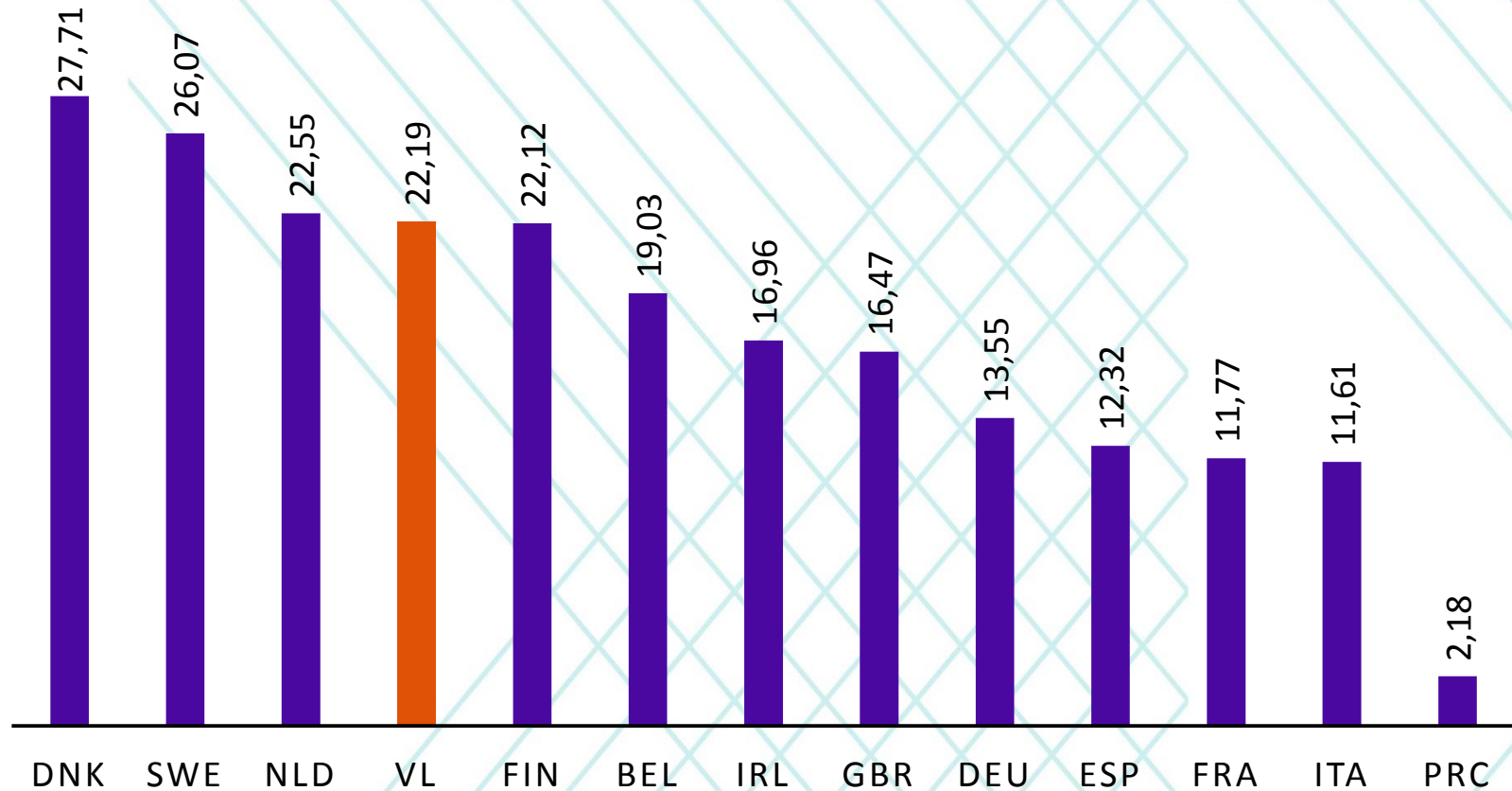
R&D-intensity (GERD as % GDP): $\pm 2.58\%$ GDP (2013)



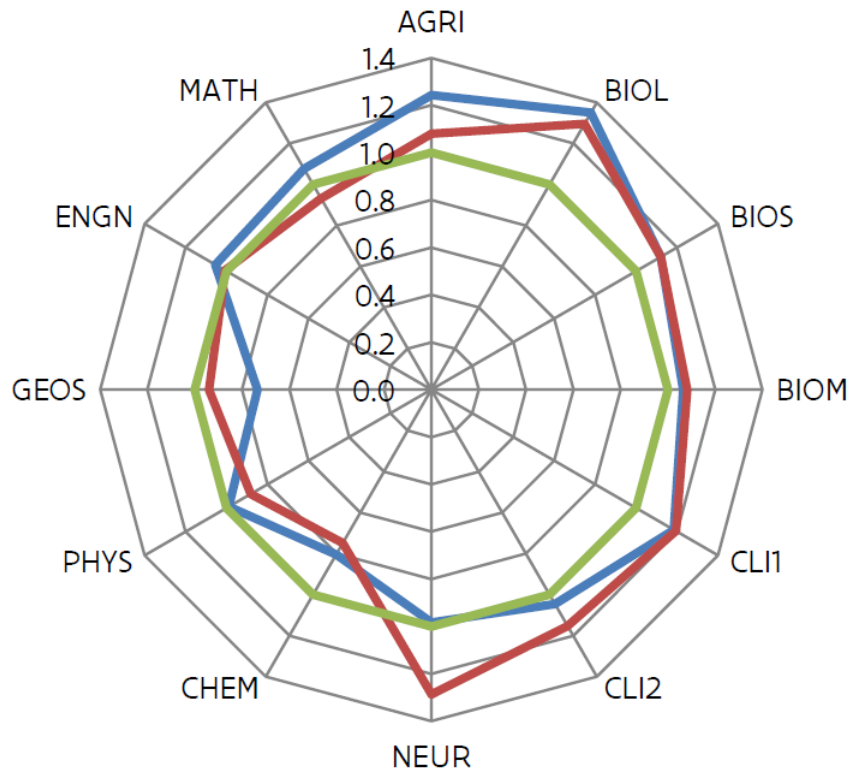
Government Budget Appropriations or Outlays on R&D (GBAORD) in %GDP (2013)



Publication Output per 10.000 Inhabitants



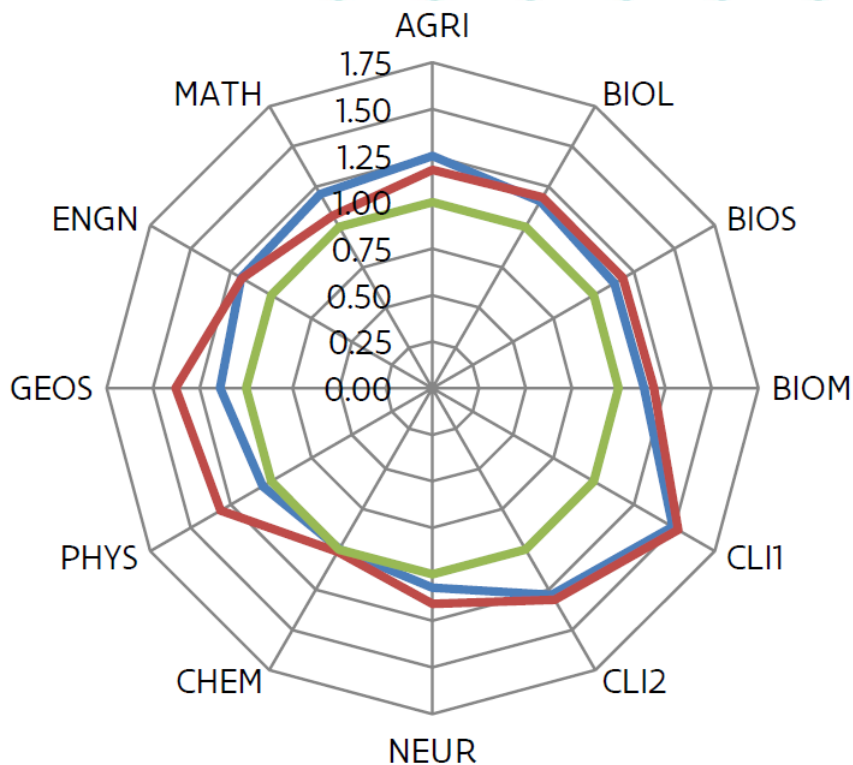
Flemish Publication Output



AGRI = Agronomy and Environmental Sciences
 BIOL = Biology (at the organism and the supra-organism level)
 BIOS = Life Sciences (general, cellular and subcellular biology, genetics)
 BIOM = Biomedical Research
 CLI1 = Clinical and Experimental Medicine (general and internal medicine)
 CLI2 = Experimental Medicine II (non-internal)
 NEUROS = Neurosciences
 CHEM = Chemistry
 PHYS = Physics
 GEOS = Earth and Space Sciences
 ENGN = Engineering
 MATH = Mathematics

— 2002-2007
 — 2008-2013
 — World Standard

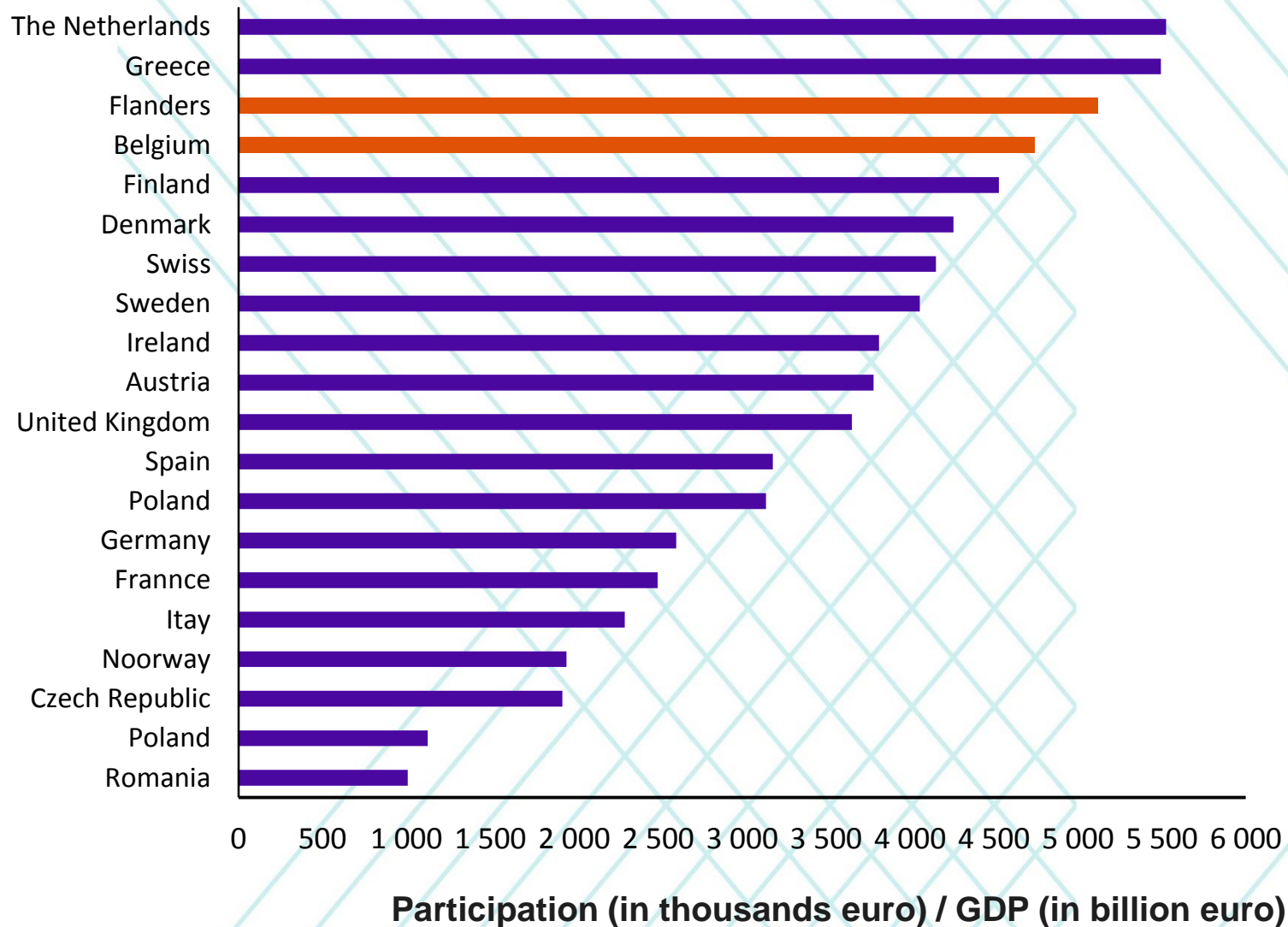
Citation Frequency



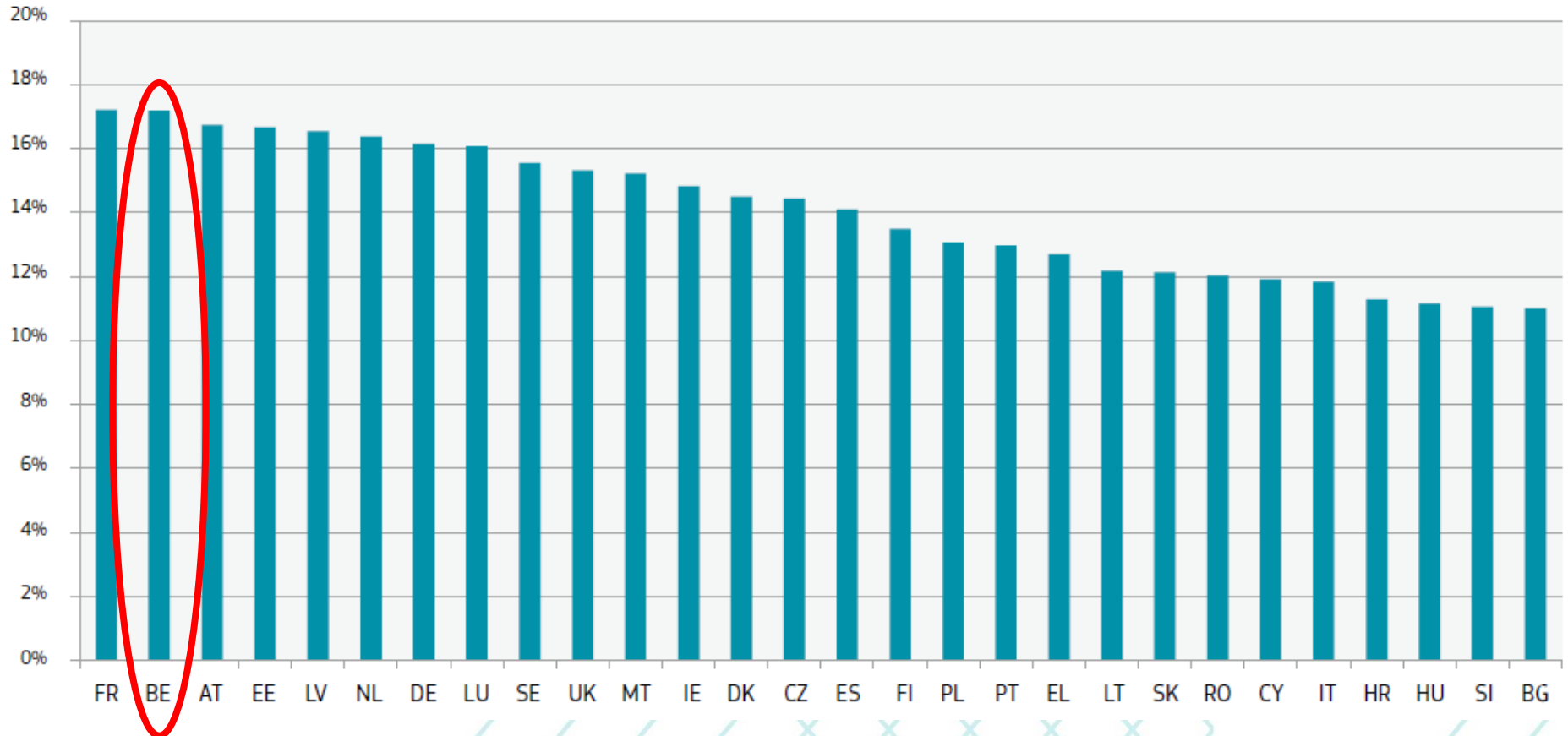
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Flemish Participation in FP7 (per GDP)



Success Rates for Applications to Horizon 2020 per EU Member State





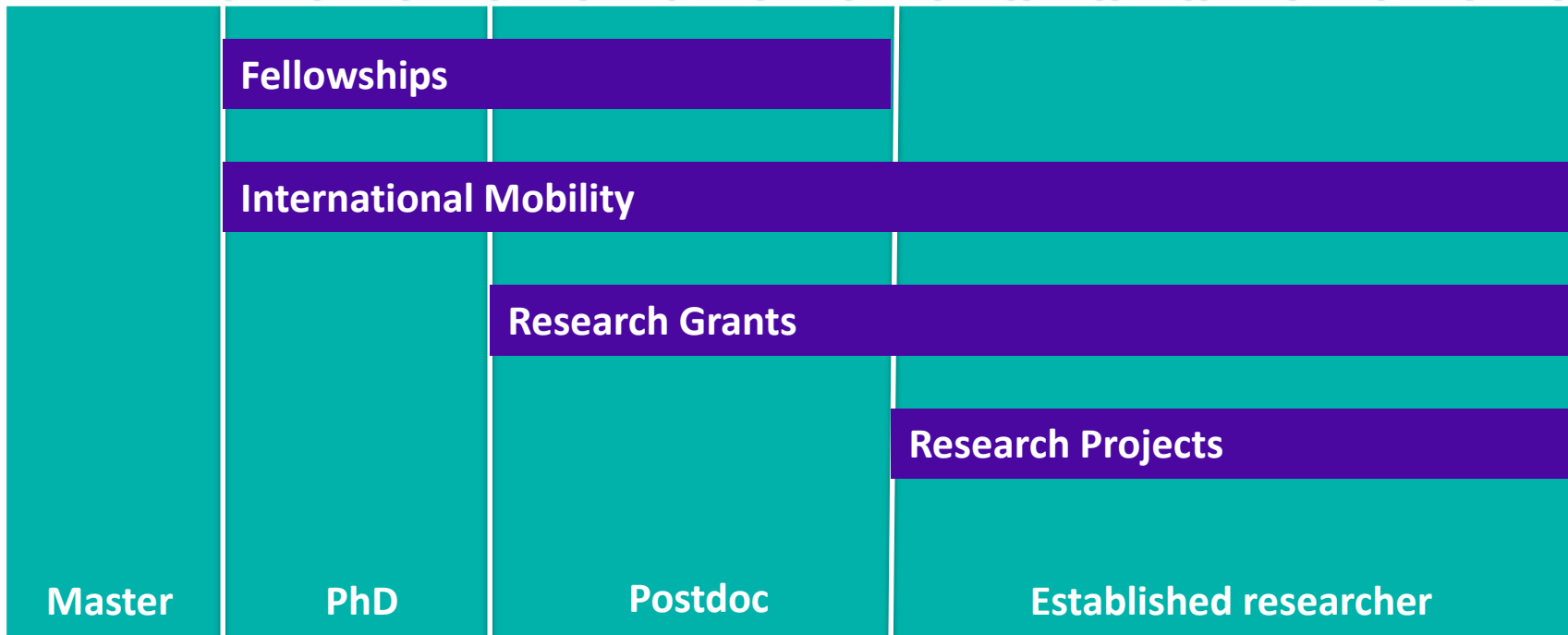
HR EXCELLENCE IN RESEARCH



Research Foundation – Flanders (FWO)

www.fwo.be

Main FWO Funding Schemes

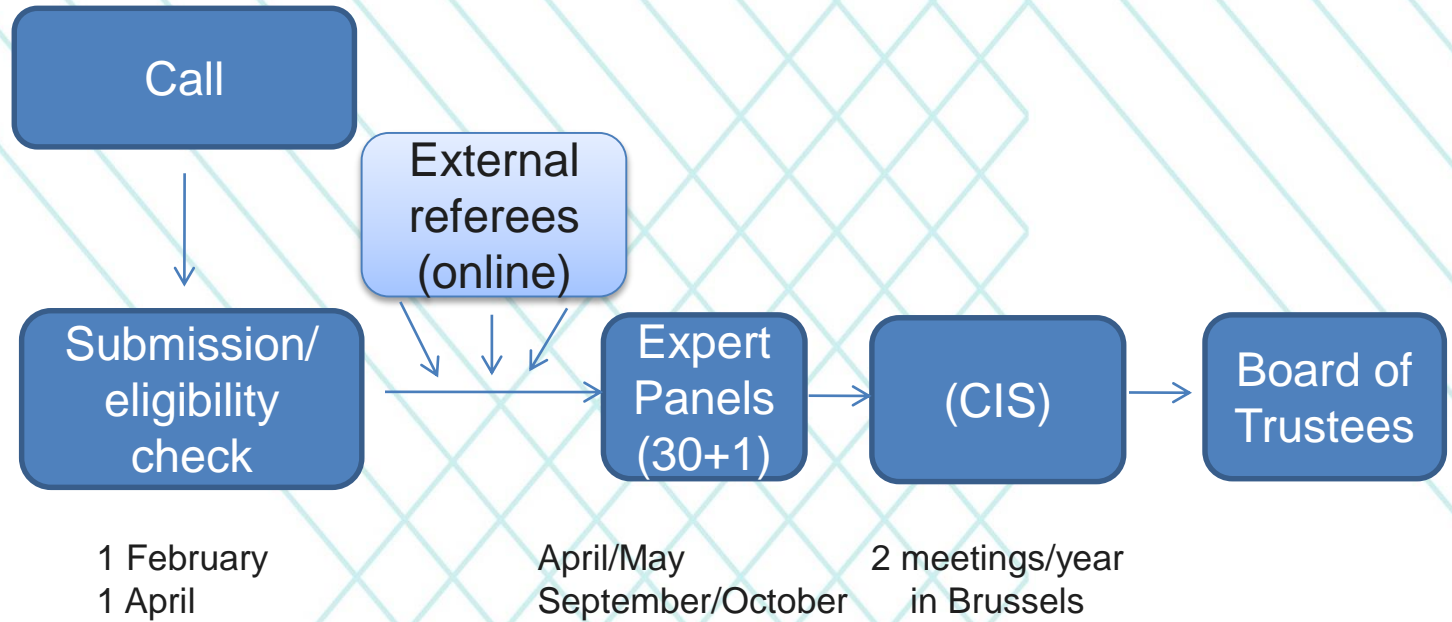


Funding Schemes of FWO

- Funding for individual researchers
 - Pre- and postdoctoral fellowships including SB, bench fees and research grants
- Funding for research teams
 - Research projects including SBO and TBM, Big Science, Bilateral agreements, ...
- Infrastructure
 - Large and medium scale research infrastructure, Flemish Supercomputer Centre, ESFRI
- Supporting mobility, international contacts and collaborations
 - Travel grants, sabbatical leaves, scientific research communities, organisation of conferences in Belgium, international coordination actions, collaboration agreements, ...
- Attracting excellent researchers, active abroad, to Flanders
 - Odysseus, [PEGASUS]²
- Awarding scientific prizes

The Application Procedure

**FWO E-Portal
(www.fwo.be)**



Duration workflow fellowships: < 5 months

Duration workflow projects: < 7 months

Evaluation Procedure

- Excellence as main criteria
- International peer review
- Severe regulations to avoid Col
- Feedback procedure
- Evaluation panels:
 - 30 discipline-specific Expert Panels
 - + 1 Interdisciplinary Panel
 - International Collaboration Committee (CIWC)
 - Panel for International Collaboration (CIS)



Research Foundation – Flanders

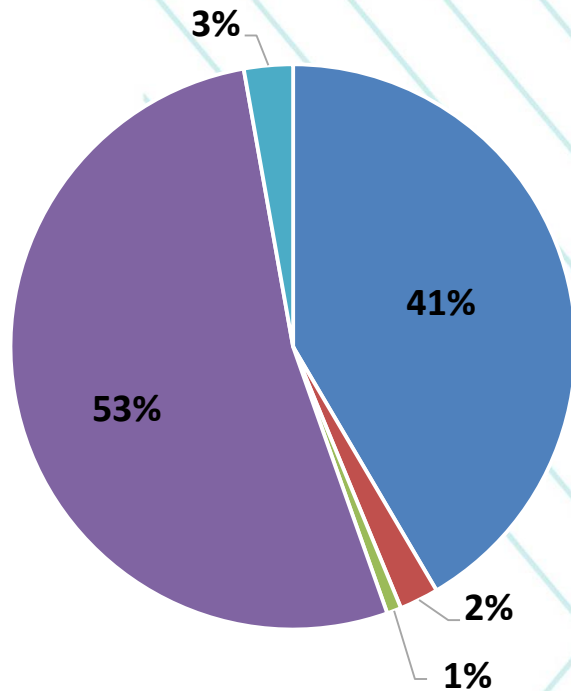
In 2015 FWO invested:

- 220 million EUR
- Approx. 1.700 individual fellowships
- Over 1.360 projects

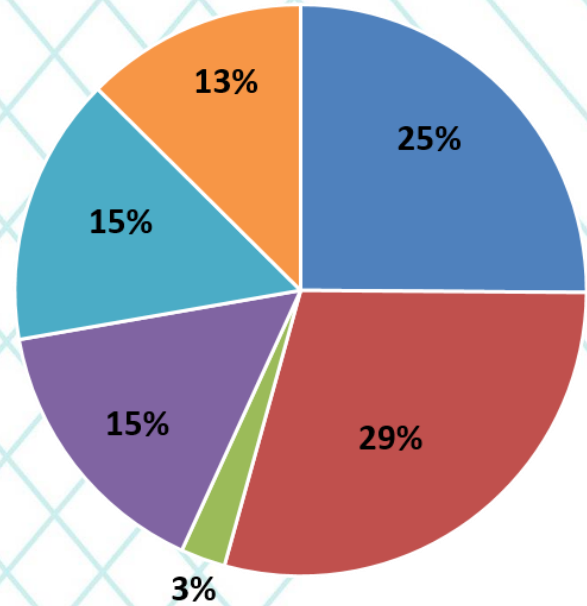
Budget 2016: 320 million EUR

- Basic Research: fellowships, projects, mobility, ...
- Strategic research (SBO/TBM/SB): 200 fellowships + projects
- Infrastructure

Budget Allocation 2015



- Fellowships
- International contacts
- Research grants
- Research projects
- Administrative management



- Science & Technology
- Interdisciplinary
- Social Sciences
- Medical Sciences
- Humanities
- Biological Sciences

Why internationalisation?

- Improving Flemish research community's international character (ERC prerequisite)
- Placing Flemish research in a broader perspective
- Coping with Flanders' "smallness"
- Guarding our research quality through international evaluation and peer review
- Collaboration with other funding agencies

FWO Stimulates Internationalisation

- Wide range of funding opportunities to support and stimulate international mobility
- International peer review
- Open recruitment: European degree for predocs, no nationality restriction for postdocs
- Member of Science Europe / ESF/ Global Research Council
- NCP Horizon 2020 – Excellent Science, JRC, Societal challenge 6, ...

International Mobility Funding Opportunities

- Participation in international conferences
- Short and long stays abroad
- Organising international conferences
- Sabbatical leaves
- Scientific research networks
- Long list of exchange and cooperation agreements with different countries

Big Science

LARGE INTERNATIONAL RESEARCH FACILITIES

Programme to support research at large, **international research facilities**. In 2012, 6 projects have obtained funding: CERN-CMS, CERN-ISOLDE, ESRF-DUBBLE, Icecube, Spiral II and the Mercator Telescope.



Brain gain programme of the FWO to attract promising postdocs and top researchers to Flanders. To date, 59 researchers have received an Odysseus grant, which covers start up funding for 5 years.



Programme of the FWO in cooperation with **MSCA COFUND** to attract excellent postdoctoral researchers to Flanders and increase **international mobility** of researchers in Flanders

BILATERAL AGREEMENTS

Agreements with several foreign institutions for joint funding of **research and exchange projects**

ODYSSEUS

- **Attracting Top Scientists to Flanders - Universities suggest candidates**
- **Start-up funding to develop a research group or to set up a research line at a Flemish university**

Group I

- Internationally recognized leading researchers
- Budget: between € 400.000 and € 1.500.000 per year (max. 5 years)
- Permanent position at a university in the Flemish Community

Group II

- Researchers with the potential to grow to a leading position
- Budget: between € 100.000 and € 200.000 per year (max. 5 years)
- Postdoctoral fellowship at a university in the Flemish Community

calls
for

[PEGASUS]²

Research Foundation - Flanders

Marie Skłodowska-Curie fellows

more information: www.fwo.be

APPLICATION

DEADLINE

01/05/2016

INCOMING

= 3 years

postdoctoral fellowship

- from abroad to Flanders

OUTGOING

= 3 years

postdoctoral fellowship

- from Flanders 2 years abroad
- 1 return year to Flanders

[PEGASUS]² Marie Skłodowska Curie Fellowships

Prestigious Horizon2020 COFUNDED postdoctoral funding scheme

EU COFUND budget: € 6.372.000

3-year **INCOMING** fellowships:

- To attract excellent postdoctoral researchers to the Flemish Community
- To improve Flemish research and to stimulate internationalization of research

Fellowship/employment contract with attractive salary

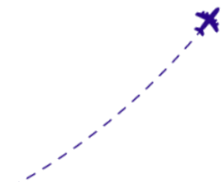
Full social security and occupational accident insurance, travel and repatriation insurance

Annual bench fee of €4.000 for research, training and research-related travel costs.

Mobility allowance and one-time return trip from/to Brussels

Career support at the Flemish host university and participation in training activities

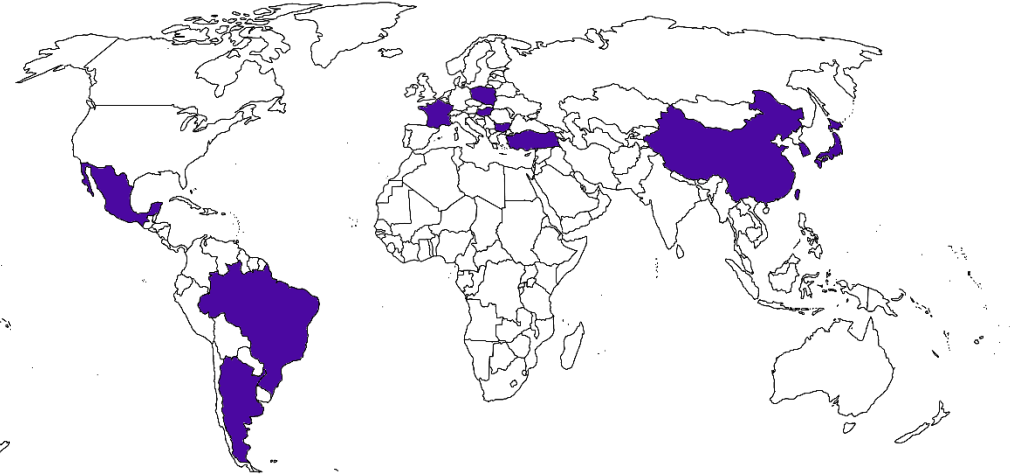
3-year **OUTGOING** fellowships: (first 2 years abroad – third return year)

- To boost the career of postdoctoral researchers in Flanders by gaining international research experience
 - To anchor the gained knowledge and expertise in Flanders
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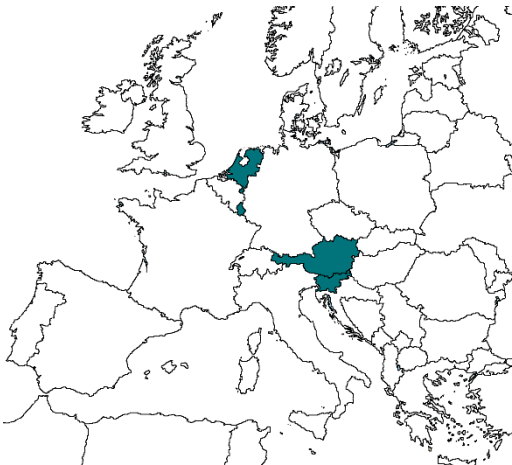
Bilateral Agreements



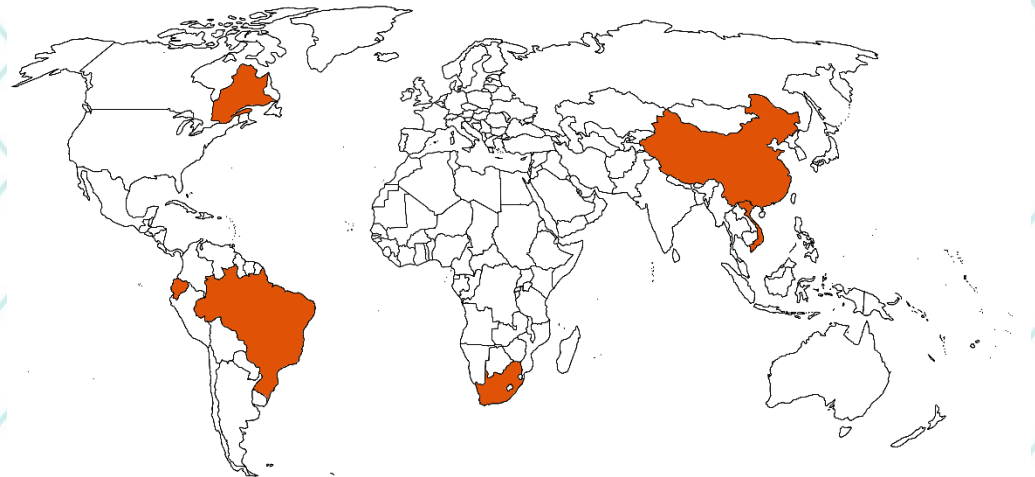
Exchange Agreements



Scientific Cooperations



Lead Agency Procedures



Bilateral Research Cooperations

Scientific Exchange and Cooperation Agreements

- Phased approach
- Establish concrete partnership between countries
- Exchange of best practices
- Exchanging researchers
- Step-up to further bilateral research cooperation

Exchange agreements:

- Czech Republic
- China
- Romania
- Slovakia
- Slovenia

Scientific cooperation:

- Japan
- Bulgaria
- Poland
- China
- Brazil
- Argentina
- France
- South Korea
- Taiwan
- Turkey
- Mexico
- Hungary

Bilateral Research Collaboration

- International collaboration in fundamental scientific research
- Agreements with partner organisations in non-EU countries (Research Councils, Government departments, ministries, ...)
- Selected countries / regions:
 - Québec
 - China
 - Vietnam
 - South Africa
 - Brazil
 - Ecuador
- Cooperation between equal partners
- Indicative annual budget: € 300 000 per country/region

Lead Agency Procedure

- One agency responsible for evaluation
- Transparent procedures / mutual trust
- Results accepted by all partners
 - The Netherlands (NWO)
 - Luxembourg (FNR)
 - Austria (FWF)
 - Slovenia (ARRS)

Lead Agency Procedure

