IV Colóquio de Pesquisa Aplicada da FGV

Session I

Science, Innovation and Socioeconomic Development

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Brazilian NCP Coordinator for Horizon 2020 Programme;
Brazilian NCP for ERC and ICT.

IBE-USP - Who we are

- The IBE-USP was created in 2010 as a project funded by the European Union for a period of three years (seed money);

- Currently, it is a Research Support Center linked to the USP Research director, in partnership with dozens of Brazilian and European universities.

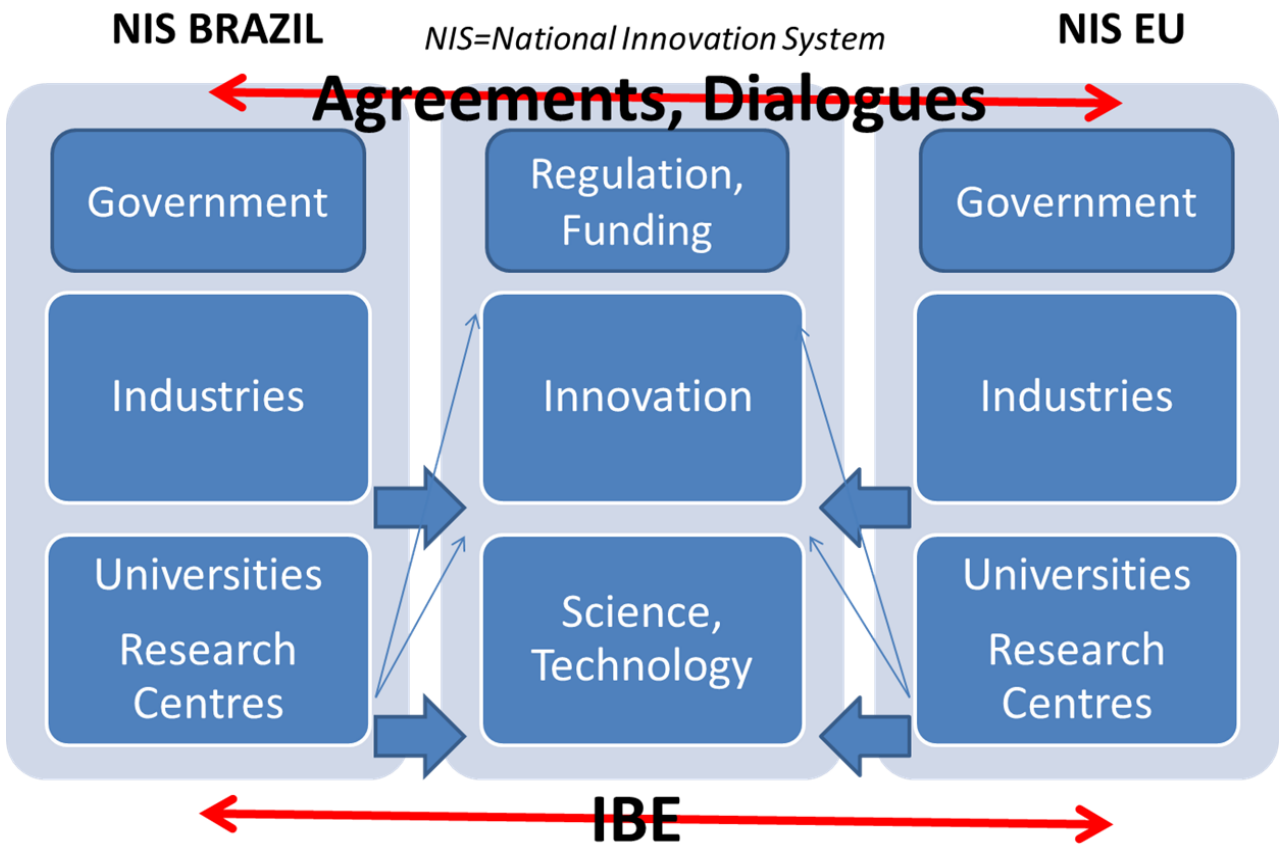
IBE-USP – Main Goal

Encourage the implementation of Brazil and European Union collaborative research projects, with transdisciplinary characteristics, collaborating with increasing the quality of research through international collaboration connected to excellence in the medium and long term.

IBE-USP - Secondary Objectives

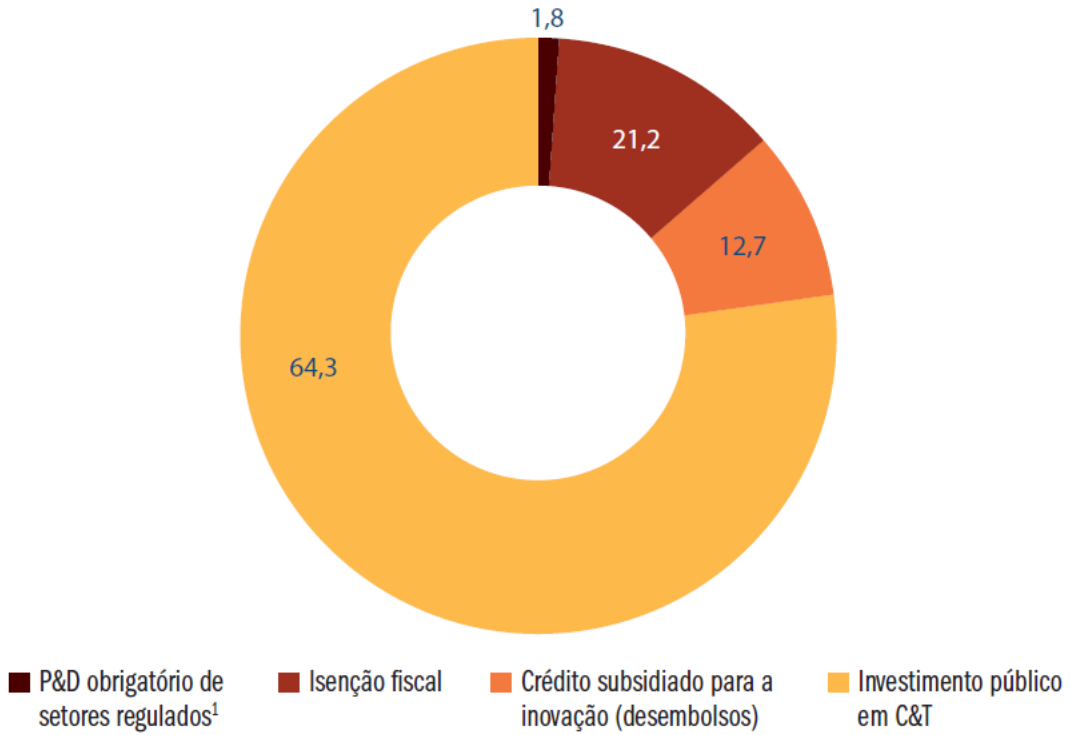
- Promote new research topics;
- Collaborate to improve USP's position in the international context in a structured;
- Promote transdisciplinarity.

IBE-USP - Bilateral Innovation Process



Research and Innovation in Brazil

Principais tipos de instrumentos federais de apoio à ciência, tecnologia e inovação no Brasil (2015)
(Em %)



Fonte: DE NEGRI, F.; RAUEN, A. T.; SQUEFF, F. H. S. Ciência, Inovação e Produtividade: por uma nova geração de políticas públicas. *In:* DE NEGRI, J. A.; ARAÚJO, B. C.; BACELETTE, R. (Orgs.). *Desafios da nação*: artigos de apoio. Brasília: Ipea, 2018.
Nota: [1] Exclusive P&D Aneel.

Research and Innovation in Brazil

Investimentos empresariais em P&D: parcela do PIB aplicada em pesquisas no Brasil e em países selecionados
(Em %)

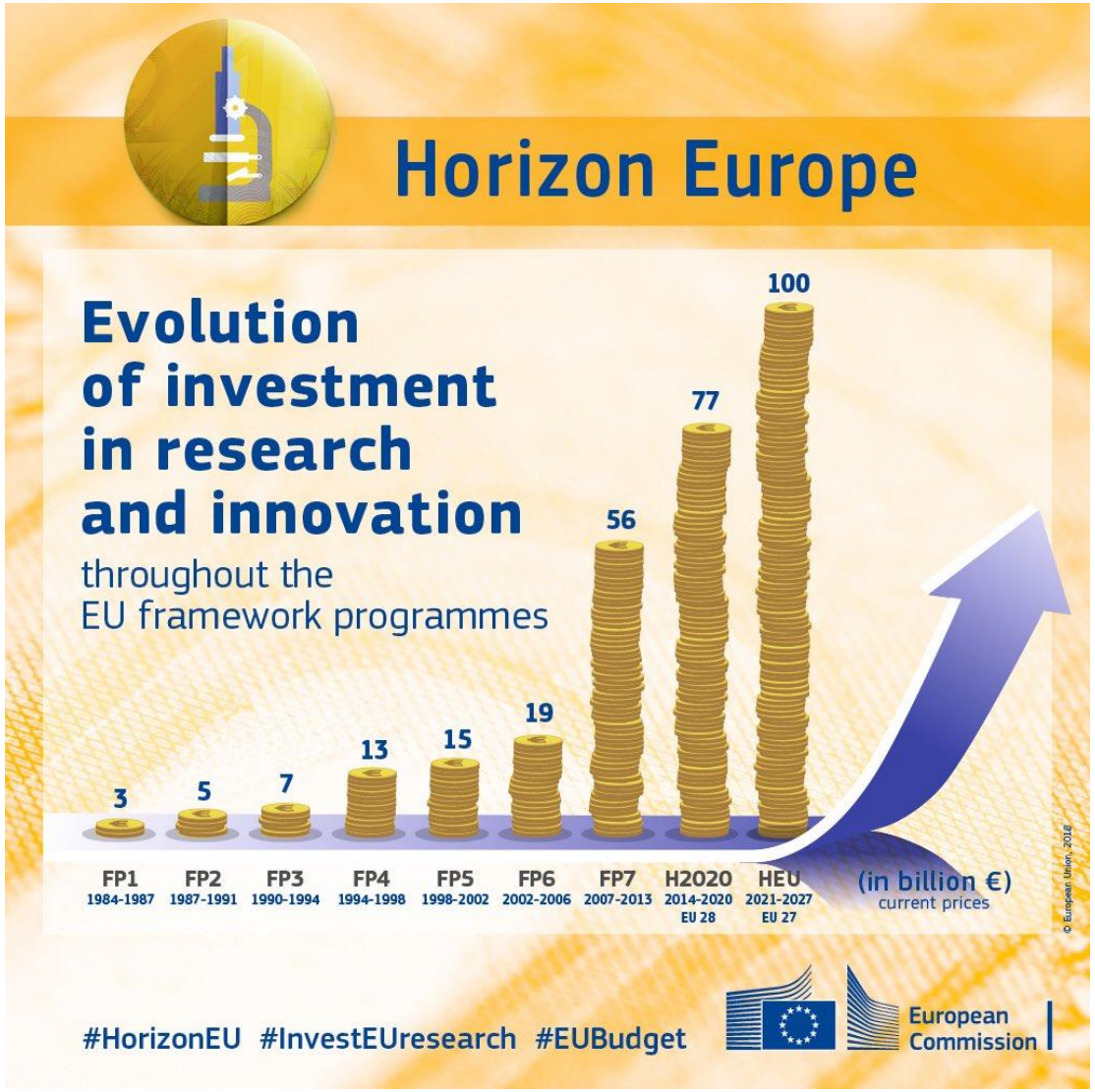
Países/grupos de países	2008	2011	2014
Brasil	0,57	0,55	0,58
Japão	2,72	2,60	2,79
Estados Unidos	1,97	1,90	1,96
Alemanha	1,80	1,89	1,95
OCDE (35 países)	1,58	1,57	1,64
China	1,06	1,34	1,56
França	1,29	1,40	1,45
União Europeia (15 países)	1,21	1,29	1,34
Espanha	0,72	0,69	0,65
Rússia	0,62	0,62	0,65

Fontes: países da Organização para a Cooperação e Desenvolvimento Econômico (OCDE) e Instituto Brasileiro de Geografia e Estastística (IBGE).

Research Framework Programs of the European Commission

- Framework Program 1 from 1984 to 1987 - € 3.27 billion
- Framework Program 2 from 1987 to 1990 - € 5.36 billion
- Framework Program 3 from 1990 to 1994 - € 6.60 billion
- Framework Program 4 from 1994 to 1998 - € 13.12 billion
- Framework Program 5 from 1998 to 2002 - € 14.96 billion
- Framework Program 6 from 2002 to 2006 - € 17.80 billion
- Framework Program 7 from 2007 to 2013 - € 53.20 billion
- Horizon 2020 Program from 2014 to 2020 - € 79.00 billion
- Horizon Europe Program from 2021 to 2027 - € 100.00 billion (est.)

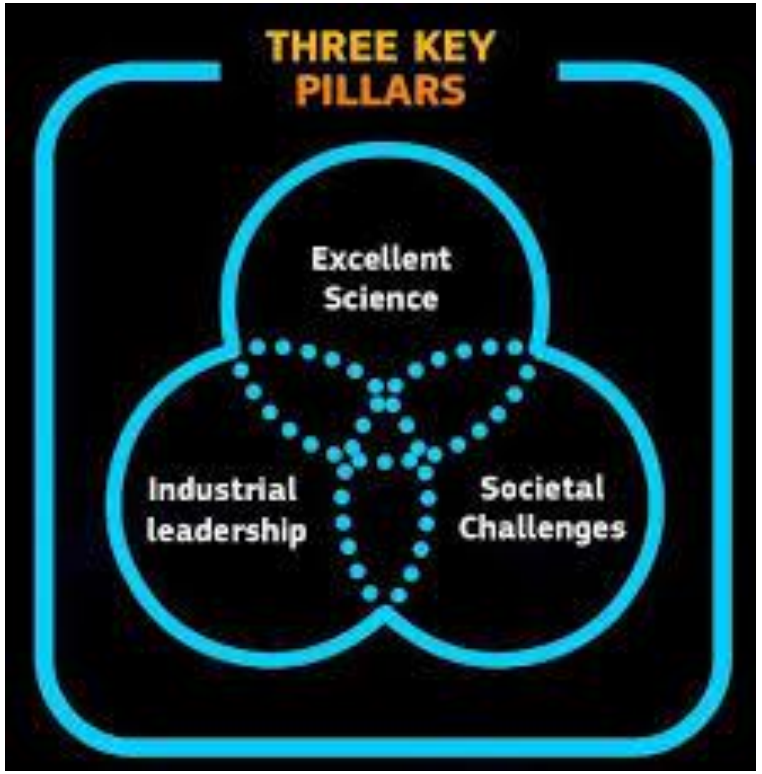
Horizon Europe 2021-2027



Horizon 2020 Program

- The Horizon 2020 Program is the largest research and innovation funding program of the European Union (EU);
- Created in 2014 to stimulate scientific excellence in Europe with the value of € 79 3.27 billion Euros;
- It has the political support of European leaders and Members of the European Parliament who believe that investment in research and innovation is crucial to the future of Europe;
- European strategy 2020 for smart, sustainable and inclusive growth. Horizon 2020 Programme is the largest research and innovation funding program of the European Union (EU);

Horizon 2020 Program



H2020 – Excellent Science

- **European Research Council (ERC)**

Supporting researchers from all over the world to work in Europe

- **Future and Emerging Technologies (FET)**

Supporting visionary thinking through collaboration between science and engineering

- **Marie Skłodowska-Curie Action (MSCA)**

Giving opportunities for training and career development for individual researchers

- **Research Infrastructure -** including e-Infrastructure

Ensuring access to excellent quality facilities

H2020 - Societal Challenges

- Health, demographic change and well-being;
- Food security, sustainable agriculture and forestry, marine, water and marine research and bioeconomics;

- Energy safe, clean and efficient;
- Smart, green and integrated transport;
- Climate actions, environment, resource efficiency and raw materials;

- Innovative, Inclusive and Reflective Societies;
- Secure Societies.

H2020 - Industrial Leadership

❖ Leadership in enabling and industrial technologies

Highlighting key technologies in areas such as advanced manufacturing, microelectronics, nanotechnology, biotechnology, ICT and space.

Horizon 2020 Program

A unique program that:

- **Joins research with innovation:** 'from the laboratory to the market'
- **Focuses on social challenges:** health, clean energy, transportation, etc.
- **Participation is open:** companies, universities, EU and third-country institutions

Link: http://ec.europa.eu/programmes/horizon2020/en

Brazil European Union Collaboration in R&T

- ✓ Science and Technology Agreement signed in 2007:
  - Political Dialogue on S&T&I once a year between Research and Innovation Directorate – DG RTD and Brazilian Technical ministries and Foreign Affairs Ministry;
  - Political Dialogue on S&T&I once a year between DG CONNECT and Brazilian ministries of Science, Technology, Innovation and Communications and Foreign Affairs;
  - Collaborative calls on ICT 4 joint calls;
  - Collaborative calls on Bio Fuels 2 joint calls;
- ✓ Co funding for H2020 - FAPs;
- ✓ Collaboration with ERC – FAPs.

Brazil European Union Collaboration in R&T

Horizon Europe 2021-2017 – (Under Discussion)

Thank you!

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Research and Innovation in Brazil

Distribuição do investimento público federal em P&D – Brasil e Estados Unidos (2015)

Ministérios brasileiros[1]	Participação em relação ao total (%)	Departamentos e agências norte-americanas	Participação em relação ao total (%)
Educação	35,8	Defesa (DoD)	47,9
Ciência, Tecnologia e Inovação	32,9	Saúde (HHS)	21,9
Agricultura	17,5	Energia (DoE)	10,4
Saúde	10,1	Nasa	8,3
Defesa	1,3	Fundação Nacional de Ciências (NSF)	4,3
Comunicações	1,2	Agricultura (USDA)	1,8
Outros	1,2	Outros	5,4

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Nota: [1] Execução orçamentária exclusive pós-graduação.

Research and Innovation in Brazil