HORIZON 2020

The EU Framework Programme for Research and Innovation

2014-2020

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European Union Delegation to the USA
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Content of the presentation

Overview of Horizon 2020

Participation possibilities for US-based researchers

Practical Information
30 years of EU-funded research

Average annual budget (€ billion)

- FP2 (1987-1991): 1,4
- FP6 (2002-2006): 4,4
- FP7 (2007-2013): 7,2
What is Horizon 2020?

The EU’s program for research & innovation 2014-20

€80 billion over 7 years

- Responding to the economic crisis to invest in future jobs and growth
- Addressing people’s concerns about their livelihoods, safety and environment
- Strengthening the EU’s global position in research, innovation and technology
- Open to the world

http://ec.europa.eu/research/horizon2020
A new approach ...

• More strategic...
  ✓ 'From lab to market'
  ✓ Focus on societal challenges: health, clean energy, transport, etc.
  ✓ Two-year work programs (e.g. 2014-2015 > €15bn)

• Less prescriptive...
  ✓ Broader and fewer topics

• Open participation...
  ✓ Companies, universities, institutes in EU and throughout the world
~ € 80 billion from 2014 to 2020

HORIZON 2020 BUDGET (in current prices)

- **Industrial Leadership**: EUR 17.0 billion
- **Societal Challenges**: EUR 29.7 billion
- **Excellent Science**: EUR 24.4 billion
- **European Institute of Innovation and Technology**: EUR 2.7 billion
- **Euratom (2014-2018)**: EUR 1.6 billion
- **Other**: EUR 3.2 billion
Three priorities

- Excellent science: € 24 billion
- Industrial leadership: € 17 billion
- Societal challenges: € 30 billion
## Priority 1. Excellent Science

€24 billion, 2014-2020

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>European Research Council (ERC)</strong></td>
<td>Frontier research by the best individual teams</td>
<td>13.09</td>
</tr>
<tr>
<td><strong>Future and Emerging Technologies</strong></td>
<td>Collaborative research to open new fields of innovation</td>
<td>2.70</td>
</tr>
<tr>
<td><strong>Marie Skłodowska-Curie actions (MSCA)</strong></td>
<td>Opportunities for training and career development</td>
<td>6.16</td>
</tr>
<tr>
<td><strong>Research infrastructures (including e-infrastructure)</strong></td>
<td>Ensuring access to world-class facilities</td>
<td>2.49</td>
</tr>
</tbody>
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**Work Programme 2014/15 funding:** ~ € 3/2.7 billion
## Priority 2. Industrial Leadership

€17 billion, 2014-2020

<table>
<thead>
<tr>
<th>Leadership in enabling and industrial technologies (LEITs) (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)</th>
<th>13.56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to risk finance</td>
<td>2.84</td>
</tr>
<tr>
<td>Leveraging private finance and venture capital for research and innovation</td>
<td></td>
</tr>
<tr>
<td>Innovation in SMEs</td>
<td>0.62*</td>
</tr>
<tr>
<td>Fostering all forms of innovation in all types of SMEs</td>
<td></td>
</tr>
</tbody>
</table>

**Work Programme 2014/15 funding:** ~ € 1.8/1.8 billion
### Priority 3. Societal Challenges

€29.7 billion, 2014-2020

<table>
<thead>
<tr>
<th>Category</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health, demographic change and wellbeing</td>
<td>7.47</td>
</tr>
<tr>
<td>Food security, sustainable agriculture, marine and maritime research &amp; the bioeconomy</td>
<td>3.85</td>
</tr>
<tr>
<td>Secure, clean and efficient energy *</td>
<td>5.93</td>
</tr>
<tr>
<td>Smart, green and integrated transport</td>
<td>6.34</td>
</tr>
<tr>
<td>Climate action, resource efficiency and raw materials</td>
<td>3.08</td>
</tr>
<tr>
<td>Inclusive and reflective societies</td>
<td>1.31</td>
</tr>
<tr>
<td>Secure societies</td>
<td>1.69</td>
</tr>
</tbody>
</table>

**Work Programme 2014/15 funding:** ~ €2.8/2.3 billion
Type of Actions under *Industrial Leadership and Societal Challenges* priorities

- **Main Type - Collaborative**
  - Large multipartner, transnational, interdisciplinary projects (Technology Readiness Level 1 to 9)

- **Others:**
  - Coordination & Support Actions (no R&D)
  - SME instrument: 3-phase - feasibility, innovation project, indirect support for commercialisation
Industry

7 PPPs launched July 2014 € 18.5 billion
- IMI2
- Fuel Cells & Hydrogen 2
- Clean sky
- Bio-based Industries
- eComponents & systems
- Shift2rail
- Sesar2020

7 'contractual' PPPs

Strong SME focus
- 20% of budget
- New SME instrument > € 500 million in 2014-2015
- Access to risk finance
- Innovation support measures
Partnerships with Member States

- **P2Ps with Member States**
  - €3.5 billion
    - Active & assisted living
    - Clinical trials - EDCTP
    - Metrology
    - Research for SMEs - Eurostars

- **Cofund, ERA-NETs**
  - E.g. Nanoscience and Nanotechnology - 10-agency, 8-country ERA-NET – 3 U.S. agencies NSF, NIEHS, CPSC
  - E.g. FLAG-ERA to support FET Flagships Graphene and Human Brain Project 26 countries & 37 funding agencies joint call for proposals worth €18.5 M on 27 October 2014
Cross-cutting issues

Social Sciences and Humanities (over € 400 million)

✓ >200 topics - at least 35% of the topics in the Work Programme

✓ Budget > € 400 million + ERC (17% of budget) + MSCA

Gender

✓ Integrated in all the sections + Specific call (€ 9.5 million)

Climate Change

✓ ~35% of the budget
Participation of US-based researchers in Horizon 2020
U.S. Participation Possibilities

- **Individually:**
  - ERC grantees
  - Marie Skłodowska-Curie Action **fellows** (also as MSC [Associated] Partners & Hosts)

- **Collaborative projects:**
  - Full partner / third party / subcontractor in all areas of H2020
  - Specific mention of US in almost **50 topics** under marine and Arctic, health, transport, materials, ICTs, energy, security,.. worth > $500 million 2014-15 (see roadmap)

- **Programme-level inter-agency cooperation:**
  - Joint /coordinated/synchronized calls (Co-fund)
  - International Consortia (shared research agenda, ex post coordination, twinning, ...)

HORIZON 2020
Why Participate in Horizon 2020?

- **Access to expertise, equipment & facilities**
- **Economies of scale & scope**
- **Increased research quality**
- **Greater impact, efficiency and speed**
- **Networks & alliances**
- **Career development**
- **Business opportunities & commercialisation**
- **Other ...**
  - New research avenues
  - Exchange possibilities
  - Cross-disciplinary/ cross-border fertilization
  - ...
Challenges to Participating in Horizon 2020

• Getting familiar with content, rules, process & terminology
• Investment / coordination costs to prepare a multi-partner project
• Conducting one's role in a contractual collaborative R&D project
• Language, cultural and disciplinary differences
• Securing funding from national or other sources if applicable
Practical Information
Participant Portal – your one-stop shop

- Topics
- Documents
- Rules for participation
- Online manual
- E-submission

http://ec.europa.eu/research/participants/portal

http://ec.europa.eu/research/horizon2020
How to Apply?

Using the Horizon 2020 website:

1. Find a call for proposals
2. Find partners (where necessary)
   - Use existing contacts with experience of EU funding programs
   - Search the CORDIS database for participants similar projects in FP7: http://cordis.europa.eu/projects/home_en.html
   - Use social media (e.g. LinkedIn forums)?
3. Create an account and register your organization
4. Submit a proposal
Understanding the call topics – e.g. PHC2

**Specific Challenge:**
What is the problem?

**Scope**
Framework / focus for solution

**Expected Impact**
if your project is successful, which impacts should be reached?

**Type of Action** the support mechanism
**Rules of Participation**

**Minimum Conditions:**

- **For standard (collaborative) research projects:**
  - 3 participants from different Member States or associated countries

  *In addition*, participants from any other country in the world can also be included

- **For actions aimed at individuals, like European Research Council or Marie Skłodowska-Curie:**
  - 1 researcher
  - 1 host institution
  - 1 project
Evaluation criteria

- ERC frontier Research actions ➔ only EXCELLENCE
- Innovation actions ➔ higher weighting for "IMPACT"

Proposal evaluated by the experts “as it is” and not as “what could be” = no need for negotiation

STANDARD AWARD CRITERIA

EXCELLENCE

IMPACT

QUALITY & EFFICIENCY OF THE ACTION

HORIZON 2020
Other useful websites

EURAXESS North America

Destination Europe
http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=destinationEurope

Bilat-USA 2.0
http://www.euussciencetechnology.eu/bilat-usa
For further information

- **Participant Portal**
- **Helpdesk**
  http://ec.europa.eu/research/enquiries
- **Expert evaluators needed!**
- **Learn more about Horizon 2020**
  http://ec.europa.eu/horizon2020

**Thank you for your attention!**
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Find out more: http://ec.europa.eu/programmes/horizon2020/