Horizon 2020
Lessons learned from first calls
The EU's funding programme for research and innovation

Runs for seven years from 2014 – 2020

Almost €80 billion of funding

Structured around three pillars including a wide range of different funding schemes
Overview

• Focus on societal challenges EU society is facing (e.g. health, clean energy, food security, integrated transport)

• Covering the entire cycle from research to innovation – from basic research to bringing ideas to the market

• Opportunities for individual researchers and groups of researchers, including individual grants, funding for European collaborative research, mobility, close to market activities
Horizon 2020 structure

**Excellent Science**
- European Research Council (ERC)
- Future and Emerging Technologies (FET)
- Marie Skłodowska-Curie Actions (MSCA)
- Research Infrastructures

**Industrial Leadership**
- Leadership in Enabling and Industrial Technologies (LEIT) - ICT, NMBP, Space
- Access to Risk Finance
- Innovation in SMEs

**Societal Challenges**
- Health and Wellbeing
- Food security
- Transport
- Energy
- Climate action
- Societies
- Security

Widening Participation; Science with and for Society, Mainstreaming of Social Sciences and Humanities (SSH) and ICT, Fast Track to Innovation

**European Institute of Innovation and Technology (EIT)**

**EURATOM**

**Joint Research Centre (JRC)**
Transition from RC to EU funding - challenges

• Working as part of a large consortium
  – What role should I have on the project (coordinator vs partner)

• International contacts needed (incl. non-EU collaborators)
  – How is needed in a consortium?
  – How to find partners?

• Knowledge of EU policies, strategies and plans required
  – How does Horizon 2020 support EU policies and plans?
  – How do I address this in the proposal?
  – How do I show EU added value with my project?
Transition from RC to EU funding - challenges

• Knowledge of closer to market activities needed (innovation) together with strong links with industry
  – How to work with SMEs?
  – How to find relevant business partners?

• Knowledge of Horizon 2020 rules for participation required
  – Who can receive funding and for what?
  – Where do I get help?
Horizon 2020

Statistics, success rates and lessons learnt so far
Horizon 2020 approach

- Challenge-based, aims to allow freedom to come up with innovative solutions
- Fewer topics but broader, less prescriptive topics
- Cross-cutting issues embedded (e.g. SSH, gender, INCO, ICT)
- Aim to be relevant to wider range of participants and to provide easy access to newcomers
2014 calls for proposals

- Almost 100 calls with budget of over €8 billion closed;
- More than 16 000 proposals submitted by May; over 36 000 by September 2014;
- 25,903 eligible proposals received, requesting funding of approximately €41.5 billion
- Average over-subscription around 7 times of the available budget;
- 60 000 expert evaluators registered but only 5 300 contracted for first round of calls;
2014/2015 calls – GAs signed

• 22 485 participations in 5273 projects

• Total EU contribution – nearly € 9.24 billion

• Average EU contribution per project – €1.75 million

• Average EU contribution per partner – nearly € 410 000

Data from November 2015
Collaborative projects

- 1387 collaborative projects as RIA, IA and CSA
- Total EU contribution – EUR 5.32 billion
  - Average EU contribution per project (RIA) – €5.03 million
  - Average EU contribution per project (IA) – €5.37 million
  - Average EU contribution per project (CSA) – €1.05 million

Data from November 2015
## Top five beneficiaries

<table>
<thead>
<tr>
<th>Country</th>
<th>Participations</th>
<th>EU Contribution (EUR mln)</th>
<th>Ranking by participations</th>
<th>Ranking by EU contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>3008</td>
<td>1,768</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>UK</td>
<td>2979</td>
<td>1,367</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Spain</td>
<td>2311</td>
<td>793</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td>2058</td>
<td>717</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>2018</td>
<td>976</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Data from January 2016
UK performance

- According to data on Horizon 2020 calls released in November 2015, the UK recorded:
  - 2,979 participations (second only to Germany), of which 1,051 as coordinator and 1,928 as participant
  - EU contribution of €1.36 billion (second only to Germany)
  - Average EU contribution per organisation is €460,000
UK participations in first calls

- Higher education establishments: 58%
- Private for-profit entities: 27%
- Research organisations: 9%
- Public bodies: 3%
- Other organisations: 3%
First set of data on 2014 calls

• Available on [CORDIS](https://cordis.europa.eu) since March, updated in November
• Can be used to determine:
  – Average EU contribution per type of action
  – Average number of partners per type of action
  – Average length of projects
  – Type of partners involved
• Cannot be used to determine success rates!
• Also... UKRO factsheet and Portal articles
Success rates

- Significant differences across the entire programme:
  - Overall: 14.5%
  - ERC: 13%
  - FET (RIA first cut off): 4%
  - FET (RIA second cut off): 1.7%
  - MSCA IF: 18%
  - MSCA RISE: 25%-50%
  - Industrial Leadership (Pillar 2): 12%
  - Societal Challenges: 12%
    - SC2: 13.3%
    - SC4: 17.7%
    - SC5: 11.9%
2014 Calls

Lessons learnt
Be there first!

• Approach potential partners early on, as the best organisations tend to be committed to other consortia early in the days.

• Ask your colleagues for the 2016-17 Work Programmes!

• See who participated in successful projects using information available on CORDIS and approach them!

• Check the composition of a successful consortium in 2014.
Think strategically before applying

2014 ITN success rates

- EID: 18.80%
- EJD: 15.40%
- CHEM: 10.30%
- ENG: 9.60%
- ENVI: 9.50%
- LIFE: 9.20%
- SSH: 9.20%
- ECON: 9.10%
- PHY: 8.80%
- MATH: 6.30%
## Innovative Training Networks

<table>
<thead>
<tr>
<th>European Training Networks</th>
<th>European Joint Doctorates</th>
<th>European Industrial Doctorates</th>
</tr>
</thead>
<tbody>
<tr>
<td>- At least three beneficiaries from different MS/AC</td>
<td>- At least three beneficiaries from different MS/AC</td>
<td>- At least one academic and one non-academic partner (primarily enterprises)</td>
</tr>
<tr>
<td>- Doctoral programme enrolment optional</td>
<td>- Doctoral programme enrolment mandatory</td>
<td>- Doctoral programme enrolment mandatory</td>
</tr>
<tr>
<td>- Maximum 540 researcher-months</td>
<td>- Joint governance, admission, selection, supervision, monitoring and assessment mandatory</td>
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<tr>
<td></td>
<td>- Award of joint, double or multiple doctoral degree mandatory</td>
<td>- Maximum 180 researcher-months</td>
</tr>
<tr>
<td>Field</td>
<td>Success rate</td>
<td></td>
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<tr>
<td>--------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>50.0%</td>
<td></td>
</tr>
<tr>
<td>Economic Sciences</td>
<td>33.3%</td>
<td></td>
</tr>
<tr>
<td>Information Science and Engineering</td>
<td>40.7%</td>
<td></td>
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<tr>
<td>Environment and Geosciences</td>
<td>45.8%</td>
<td></td>
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<tr>
<td>Life Sciences</td>
<td>45.5%</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>25.0%</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>32.0%</td>
<td></td>
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<tr>
<td>Social Sciences and Humanities</td>
<td>47.6%</td>
<td></td>
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<tr>
<td>Field</td>
<td>Success rate</td>
<td></td>
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<td></td>
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<td>Physics</td>
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<td></td>
</tr>
<tr>
<td>Social Sciences and Humanities</td>
<td>20%</td>
<td></td>
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</table>
Show understanding of wider EU policies

- Job creation/sustainable jobs
  - Horizon 2020 financial instruments
  - Innovation Investment Package (PPPs)

- Europe’s global competitiveness
  - Closing the innovation divide (Teaming/Twinning/ERA Chairs)
  - New skills and competencies (Societal Challenges and LEIT)

- Growth
  - Training the next generation of researchers (MSCA)
  - Support for excellence (ERC)
  - New European R&I/industrial leadership (FET)
  - Grand challenges, productivity and competitiveness (Research Infrastructures)
Main objective of H2020:

- Exiting the economic crisis through sustainable growth

- 1/3 of all knowledge in the world is ‘produced’ in Europe but US and China much better in commercialising ideas;

- Horizon 2020 is a funding programme for research and innovation... with growing importance of the latter

- What innovative product, service or solution will come out of YOUR project?
Horizon 2020 – the future

• Even more emphasis on innovation rather than traditional research activates in the future

• Fast Track to Innovation Pilot

• Prizes

• Increased number of innovation actions

Links with industry/ SMEs will be even more important in the future
Focus on Impact

• The *Impact* sections has gained more importance in Horizon 2020, as the Commission now wants to see tangible outcomes of the projects in the form on new innovations (products, services, solutions, policy recommendations, etc.)

• Furthermore, there is more focus on *dissemination of results* and *communication of the project activities*.

• Impact was the most problematic section in the first applications and many applications failed because of impact not being addressed properly.
Problems with addressing Impact

• Problem:

  – Treated too artificially with not enough detail provided (too much focus on science in the *Excellence* part.

  – Simply stating that the consortium will reach the expected impact is not enough!

This is done at stage 1 and 2 (in two-stage submissions) where *Impact* is normally *evaluated first* leading to applications often not receiving feedback for the *Excellence* part.
How to address Impact correctly?

• Think of impact at various levels
  – **International**
    • How does it help tackle global societal challenges?
  – **European**
    • How does the project contribute to the objectives of EU strategies and plans?
    • How does it help address fragmentation of research agendas across Europe?
    • How does it help to build lasting partnerships i.e. between academia and industry?
  – **Institutional**
    • How does the project fit with the institution's wider plans and strategic direction?
How to address Impact correctly?

• Be SMART about it:

  S    Specific
  M    Measurable
  A    Assignable
  R    Realistic
  T    Time-bound
Become and expert evaluator

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Go global!

- International cooperation (with third countries) is a cross-cutting issue in Horizon 2020 and for many topics, INCO is a necessity dictated by the Work Programmes i.e. food security, climate action, transport...

- Not all topics require involving third countries, but...
  - having one or two organisations from third countries in the consortium increases the proposal's chance of being funded from 11% to 13%;
  - having more than two organisations from third countries in the consortium increases the proposal's chance of being funded from 11% to 17%.

- There is no guidance provided on this by the Commission to expert evaluators. INCO is simply seen as added value!
Few things to remember

- The deadline is stated using Brussels local time, not UK time!
- Do not submit your application only few minutes before the deadline!
- Click the SUBMIT button and make sure you receive the confirmation email.
- Always read the Guide for Applicants (ERC, MSCA)
- Remember about page limits, margins, font, etc.
  - FET: if the proposal exceeds the required number of pages, it is ineligible
Summary

• Forget you ever knew FP7. This is not FP8!

• Ensure EU added value by showing links to EU policies and strategies;

• Ensure your scope of works and consortium is adequate to the type of action (project) you are submitting to;

• Remember to address the *Impact* section correctly;

• Register as an expert evaluator to get insight into Commission’s processes.
Thank you