Horizon 2020
Work Programme for Research & Innovation 2018-2020
Horizon H2020 – Open to the world

Name:
Function:
Overview

1 Warm-up session

2 Horizon 2020 – Open to the World

3 Funding of international partners

4 Participation from Australia in Horizon 2020 - State of Play

5 Opportunities for researchers and entities from Australia in the upcoming calls under Horizon 2020

6 Key messages - final Q&A
1. Warm-up session
1. Warm-up session

- Do you have any experiences in or knowledge about Horizon 2020?

- Why do you want to do research with European partners or in a European context?
2. Horizon 2020 – Open to the World
Did you know? The European Union: 500 million people – 28 countries - one single market

- 6% of the World's population
- 20% of world expenditure on research
- 27% of world scientific publications
- 32% of high-impact publications
- 32% of patent applications

Some of the best universities in the world

Some of the most innovative companies in the world

European Commission
What is Horizon 2020?

• Your access to European research and innovation

Horizon 2020 is open to the world!

• The EU Framework Programme for Research & Innovation

• The biggest multinational programme of its kind with a budget of almost € 80 billion

• Horizon 2020 welcomes researchers & institutions, public or private, from all over the world
European Union Member States and Countries Associated to Horizon 2020

EU Member States (28)

Associated Countries (16)
Albania
Armenia
Bosnia & Herzegovina
Faroe Islands
Georgia
Iceland
Israel
the Former Yugoslav Republic of Macedonia
Republic of Moldova
Montenegro
Norway
Serbia
Tunisia
Turkey
Ukraine
Switzerland
Why should you participate in Horizon 2020?

1. Ambitious research and innovation projects
2. Access to world class research infrastructures
3. Tackle global challenges together with excellent European and International scientists
4. Mobility to Europe
5. Access to new networks and alliances
6. New business opportunities and visibility of your research
7. Research funding
Why is international research cooperation important to the EU?

1. Access to markets
2. Access to knowledge
3. Attracting talent and investment
4. Higher global profile
5. Better research and exploitation
3. Funding of international partners
Eligibility for Funding – General Rules

Automatically funded:
• Member States
• Associated Countries
• Countries listed in Annex 1 of the Work Programme

Other Partner Countries are funded when:
• Agreement exists between 2 funding bodies
• Provision made in the call text
• Commission deems participation essential

Australia
Key message for Australian researchers and legal entities

• Australia is considered a non-associated industrialised third country
• Australian entities may participate in Horizon 2020 actions
• Will not count towards the minimum number of participants required for a project
• EU funding is not automatically available to Australian entities (only in exceptional circumstances stated in the call text)
When is participation essential as a international cooperation partner?

• To be funded, partners from Australia need to:
  – Request funding at proposal stage
  – Have support of all other partners
  – Demonstrate that participation is essential to the project’s success

• To be **deemed essential**, partners from Australia must demonstrate that:
  1. The project would not be successful without contribution
  2. No European can make the same kind of scientific and innovative contribution
Co-funding by international partner countries

A number of countries have made specific provisions for making national funding available for their participants in Horizon 2020:

• Co-funding for **most or all** thematic areas:
  - China, Hong Kong & Macao, Republic of Korea, Mexico, Russia, Taiwan

• Co-funding for **selected** thematic areas
  - E.g. Australia, India, Japan, USA, Canada

• Co-funding by a **region**
  - E.g. Brazil, Canada (Québec)

• Countries where **no** jointly agreed mechanism for co-funding Horizon 2020 projects currently in place
  - New Zealand
4. Australia in Horizon 2020 - State of Play and Future Opportunities
Australia in Horizon 2020 – Statistics (Record date: 05/02/2018)

Projects: 127

Participations: 150

Coordinators: 0

EC contribution (in total): 4,437,759,8 €
## Country in Horizon 2020 – Number of projects in most relevant programme areas

<table>
<thead>
<tr>
<th>Excellent Science</th>
<th>91</th>
<th>Societal Challenges</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ERC</td>
<td>1</td>
<td>1. Health</td>
<td>17</td>
</tr>
<tr>
<td>2. MSCA</td>
<td>81</td>
<td>2. Food</td>
<td>1</td>
</tr>
<tr>
<td>3. FET</td>
<td>1</td>
<td>3. Energy</td>
<td>1</td>
</tr>
<tr>
<td>4. Infrastructures</td>
<td>8</td>
<td>4. Transport</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Climate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. SSH</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Bioeconomy</td>
<td>1</td>
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</table>

### Industrial Leadership

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<th>5</th>
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<tbody>
<tr>
<td>1. ICT</td>
<td>4</td>
</tr>
<tr>
<td>2. Space</td>
<td>1</td>
</tr>
</tbody>
</table>
## Australia in Horizon 2020 – Most active organisations

<table>
<thead>
<tr>
<th>Rank</th>
<th>Organisation, Location</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UNIVERSITY OF MELBOURNE</td>
<td>Higher or secondary education</td>
</tr>
<tr>
<td>1</td>
<td>UNIVERSITY OF NEW SOUTH WALES</td>
<td>Higher or secondary education</td>
</tr>
<tr>
<td>1</td>
<td>THE UNIVERSITY OF SYDNEY</td>
<td>Higher or secondary education</td>
</tr>
<tr>
<td>4</td>
<td>THE AUSTRALIAN NATIONAL UNIVERSITY</td>
<td>Higher or secondary education</td>
</tr>
<tr>
<td>5</td>
<td>COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION</td>
<td>Research Organisation</td>
</tr>
</tbody>
</table>
4. Opportunities for researchers and entities from Australia in the upcoming calls under Horizon 2020
Horizon 2020 covers three priority areas:

1. **Excellent science**
   - **Researcher driven:** The foundation of tomorrow’s technologies, jobs and wellbeing

2. **Industrial leadership**
   - **Industry driven:** Strategic investments in key technologies

3. **Societal challenges**
   - **Society driven:** Tackling the great challenges of our time of citizens and society
How can you participate in Horizon 2020?

There are two general ways to participate:

- **Participation of individual researchers**
  Researchers of all nationalities are welcome to participate

- **Collaborative projects**
  Together with at least 3 legal entities from 3 different countries of the EU or from Countries Associated to Horizon 2020
Where in Horizon 2020 can you find options for individual research?

- The European Research Council (ERC) = excellent research
- Marie Skłodowska-Curie Actions (MSCA) = mobility of researchers and technical staff

These opportunities are for researchers who want to work in Europe.
How to participate in a collaborative project?

• As a legal entity from Australia, you might take part in collaborative projects of Horizon 2020

• Remember! All collaborative-type of proposals must meet certain minimum conditions:

  3 participants from different EU member states or associated countries (Australia in addition to minimum requirements)
International participation is targeted by specific programme elements

• Specific topics in calls for proposals may:
  - indicate that participation of international partners is encouraged
  - indicate that participation of partners from a certain country or region is encouraged or even mandatory

• Coordinated calls exist, used for specific actions
6. Key messages - final Q&A
Key message for Australia researchers and legal entities

• Horizon 2020 is the largest research and innovation programme in the world.

• Australian nationals or institutions are eligible to take part in Horizon 2020, as individual researchers or in collaborative projects.

• Participants from Australia are funded when a co-funding agreement exists for the respective thematic area, provision made in the call text or participation is deemed as essential.

• Participation is deemed essential because it provides:
  - outstanding competence/expertise
  - access to research infrastructure
  - access to particular geographical environments
  - access to data

• Participation in Horizon 2020 projects offers exciting opportunities to extend your research field, your network and your career options.

• International cooperation is encouraged.
Horizon 2020
Work Programme for Research & Innovation 2018-2020

Opportunities for participation for international partners in Horizon 2020

Name:
Function:
Module overview

1. Brief overview of Horizon 2020
2. The European Research Council
3. FET
4. MSCA
5. Infrastructures
6. Industrial Leadership
7. Societal Challenges
8. Spreading Excellence and Widening Participation
9. Science with and for Society
1. Brief overview of Horizon 2020
1. Brief overview of Horizon 2020

Horizon 2020 – relevant areas for international participation

<table>
<thead>
<tr>
<th>Excellent Science</th>
<th>Industrial Technologies</th>
<th>Societal Challenges</th>
</tr>
</thead>
</table>
| ▪ European Research Council  
  ▪ Frontier research by the best individual teams | ▪ Leadership in enabling and industrial technologies  
  ▪ ICT, nanotechnologies, materials, biotechnology, manufacturing, space | ▪ Health, demographic change and wellbeing |
| ▪ Future and Emerging Technologies  
  ▪ Collaborative research to open new fields of innovation | | ▪ Food security, sustainable agriculture, marine and maritime research & the bio-economy |
| ▪ Marie Skłodowska Curie actions  
  ▪ Opportunities for training and career development | | ▪ Secure, clean and efficient energy |
| ▪ Research infrastructures (including e-infrastructure)  
  ▪ Ensuring access to world-class facilities | | ▪ Smart, green and integrated transport |
| | ▪ Climate action, resource efficiency and raw materials | | ▪ Inclusive, innovative and reflective societies |
| | | | ▪ Security society |
2. The European Research Council
What does the European Research Council (ERC) offer?

- For **excellent researchers** wishing to conduct their groundbreaking research **in Europe**
- No thematic priorities → bottom-up approach
- Investigator-driven

**ERC Principles:**
- 1 Principal Investigator and team
- 1 Host institution in the EU/country associated to Horizon 2020
- 1 Selection criterion: EXCELLENCE
- At least 50% of the research has to be done in EU/countries
- Project duration: Up to 5 years

More than 500 grants to non-EU/AC Principal Investigators
Four ERC main funding lines

**Starting Grant:**
Early career top researchers, 2-7 years after PhD | € 2 mio.

**Consolidator Grant:**
Top researchers, 7-12 years after PhD | €2.75 mio.

**Advanced Grant:**
Senior researchers with significant research achievements €3.5 mio.

**Synergy Grant:**
2-4 excellent researchers and their teams, researchers with complementary skills, knowledge and resources, project duration max. 6 years | €14 mio.
Researchers can join running ERC projects as a team member

• Individual new researchers can apply to join existing ERC teams in Europe

• ERC principal investigators expressed interest in hosting researchers also from your country

• More information about Implementing Agreements can be found: https://erc.europa.eu/funding/additional-opportunities

• Find jobs in ERC Teams: https://euraxess.ec.europa.eu/jobs/search/field_is_eu_founded/fp7-ideas-erc-871
Useful links and ERC promotional video

Helpful links
ERC:
https://erc.europa.eu/

ERC videos:
https://vimeo.com/28818767
https://vimeo.com/31716309
3. Future Emerging Technologies (FET)
Future Emerging Technologies (FET)

• Collaborative research for **radically new lines of technology**

• Supports frontier research: alternative ideas, concepts or paradigms of a risky or non-conventional nature (similar to ERC)
# FET Openings and deadlines under WP 2018-2020

<table>
<thead>
<tr>
<th>Funding scheme</th>
<th>Publication</th>
<th>Budget</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>FETOPEN1</td>
<td>07. Nov. 17</td>
<td>647,5 Mio. €</td>
<td>*</td>
</tr>
<tr>
<td>FETOPEN2</td>
<td>07. Nov. 17</td>
<td>2 Mio. €</td>
<td>11. April 18</td>
</tr>
<tr>
<td>FETOPEN3</td>
<td>07. Nov. 17</td>
<td>8,2 Mio. €</td>
<td>**</td>
</tr>
<tr>
<td>FETPROACT2</td>
<td>31. Oct. 17</td>
<td>0,5 Mio. €</td>
<td>22. March 18</td>
</tr>
<tr>
<td>FETPROACT3</td>
<td>05. June 18</td>
<td>6 Mio. €</td>
<td>18. Dec. 18</td>
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<tr>
<td>FETHPC1</td>
<td>01. Feb. 18</td>
<td>4 Mio. €</td>
<td>15. May 18</td>
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<tr>
<td>FETHPC2</td>
<td>07. May 19</td>
<td>64 Mio. €</td>
<td>24. Sep. 19</td>
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<tr>
<td>FETFLAG1</td>
<td>31. Oct. 17</td>
<td>6 Mio. €</td>
<td>***</td>
</tr>
<tr>
<td>FETFLAG2</td>
<td>31. Oct. 17</td>
<td>10 Mio. €</td>
<td>17. April 18</td>
</tr>
</tbody>
</table>

** 16. Okt. 18, 08. Okt. 19 and 14. Okt. 20
*** 20. Feb. 18 first stage and 18. Sept. 18 second stage
Useful links and FET Open promotional video

Helpful links:

FET Open:

FET Proactive:

FET Flagships:

FET Open video:
https://www.youtube.com/watch?v=oTEzxpz69TU
4. MSCA
What do Marie Skłodowska-Curie actions (MSCA) offer?

- Opportunities for training and career development
- **Mobility of researchers is mandatory**

**MSCA principles:**

- Open to all career stages and nationalities
- Bottom-up approach
- International, inter-sectoral and interdisciplinary career and knowledge-exchange
Three MSCA main funding lines

**Individual Fellowships (IF):**
- Supporting experienced international researchers to do research in Europe for 12-24 months
- Host institutions: from academia or industry

**Innovative Training Networks (ITN):**
- Networks of organisations offering research and training to early-stage researchers

**Research and Innovation Staff Exchange (RISE):**
- International and inter-sectoral cooperation
**MSCA Openings and deadlines under WP 2018-2020**

<table>
<thead>
<tr>
<th>Funding scheme</th>
<th>Publication</th>
<th>Budget</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>RISE 18</td>
<td>22. Nov. 17</td>
<td>80 Mio. €</td>
<td>21. March 18</td>
</tr>
<tr>
<td>RISE 19</td>
<td>04. Dec. 18</td>
<td>80 Mio. €</td>
<td>2. April 19</td>
</tr>
</tbody>
</table>
5. Infrastructures
Research Infrastructures (RI)

Goal:

• Integrate and open global research infrastructures

• Build consortia of several key research infrastructures in a field and unite stakeholders from different countries

Third countries also eligible for funding:

• Australia, Brazil, Canada, China, India, Japan, Russia, Mexico and USA

• They provide, under the grant, access to their research infrastructures
6. Industrial Leadership
Leadership in enabling and industrial technologies (LEIT)

- ICT
- Nanotechnology
- Materials
- Biotechnology
- Manufacturing
- Processing
- Space

Top down approach
Leadership in enabling and industrial technologies (LEIT)

The emphasis for Leadership in Enabling and Industrial Technologies (LEIT) actions will be on:

• Research and innovation to strengthen Europe's industrial capacities and business perspectives, including SMEs
• Public-private partnerships (PPPs)
• Cross-cutting KETs
• Seizing ICT opportunities
• Contributing to solving Societal Challenges and to Focus Areas
• Cross-cutting aspects, like international cooperation and responsible research and innovation.
7. Societal Challenges
Societal Challenges

1. **Health**, demographic change and wellbeing

2. **Food** security, sustainable agriculture and forestry, marine and maritime and inland water research and the bio-economy

3. Secure, clean and efficient **energy**

4. Smart, green and integrated **transport**

5. **Climate** action, environment, resource efficiency and raw materials

6. Europe in a changing world: Inclusive, innovative and reflective **societies**

7. **Secure societies** – Protecting freedom and security of Europe and its citizens
8. Spreading Excellence and Widening Participation
Spreading Excellence and Widening Participation

Budget: €816.5 million

Main objectives:

• Enhancing economic growth and competitiveness in Low Research & Innovation (R&I) Performing Countries

• Facilitating access to networks and partnering opportunities

• Providing technical assistance and expertise

• Increasing efficiency of the national research and innovation systems

• Cooperation is established through several actions: “Teaming”, “ERA-Chairs”, “Twinning”, “COST” and more

FUNDING FOR 3-7 YEARS
9. Science with and for Society
Science with and for Society (SwafS)

Budget: € 462 million

• Integrates Horizon 2020 cross-cutting issues
• Emphasizes on Responsible Research and Innovation (RRI) including gender, and enhancing the attractiveness of the research profession

Main objectives:

• Ensure responsible science and enable the development of policies more relevant to citizens
• Improve science-literacy, citizens’ responsibility and access to scientific careers
• Further enhance active participation and focus on science, research and innovation
Thank you!

#InvestEUresearch

www.ec.europa.eu/research

Participant Portal

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

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