Horizon 2020
Work Programme
for Research & Innovation
2018-2020

Horizon H2020 – Open to the world

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Function: Service Facility for International Cooperation of DG RTD // Canada
Overview

1 Warm-up session

2 Horizon 2020 – Open to the World

3 Opportunities for researchers and entities from Canada in Horizon 2020

4 Proposal preparation and submission

5 Closure
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
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
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
Horizon 2020 covers three priority areas:

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

2. **Industrial leadership**
   - **Society driven:** Tackling the great challenges of our time of citizens and society

3. **Societal challenges**
3. Opportunities for researchers and entities from Canada in Horizon 2020
How can you participate in Horizon 2020?

There are two ways to participate:

• There is funding for individual researchers
  Researchers of all nationalities are welcome to participate

• There is funding for collaborative research
  Together with at least 3 entities from 3 different countries of the EU or from Countries Associated to Horizon 2020
Funding for individual researchers in Horizon 2020!
1. Where in Horizon 2020 can you find funds 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.
a) 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% research has to be done in **Europe**
- Project duration: Up to 5 years
a) Four ERC main funding lines

**Starting Grant:**
Early career top researchers, 2-7 years after PhD | €1.5 mio.

**Consolidator Grant:**
Top researchers, 7-12 years researchers after PhD | €2 mio.

**Advanced Grant:**
Senior researchers with significant research achievements | €2.5 mio.

**Synergy Grant:**
2-4 excellent researchers and their teams, researchers with complementary skills, knowledge and resources, project duration max. 6 years | €10 mio.
a) Researchers can join running ERC projects as a team member

- Canadian researchers can apply to join existing ERC teams in Europe

- ERC principal investigators expressed interest in hosting researchers from Canada

- More information about Implementing Agreements can be found: https://erc.europa.eu/funding/additional-opportunities
b) 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, intersectoral and interdisciplinary career and knowledge-exchange
b) 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-Third Countries

<table>
<thead>
<tr>
<th></th>
<th>Beneficiary</th>
<th>Partner Organisation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN</td>
<td>in cases of exceptional funding in non-Annex A third countries</td>
<td>Partner organisations cannot directly claim any costs. Instead, the costs they incur for activities in the research training programme are to be covered by the unit costs paid to the beneficiaries</td>
</tr>
<tr>
<td>RISE</td>
<td></td>
<td>Located in third countries – if in an Annex-A third country, costs for the secondment of their staff members are eligible and are being claimed by the beneficiary that hosts them. In exceptional cases, a legal entity established in a TC not listed in General Annex A to the Work Programme may be eligible for funding</td>
</tr>
<tr>
<td>IF-Global Fellowship</td>
<td></td>
<td>Organisations in TC host the researcher during the compulsory initial outgoing period and provide additional training. It is strongly recommended that the beneficiary concludes a partnership agreement with all partner organisations involved in the action</td>
</tr>
</tbody>
</table>

*The partner organisations contribute to the implementation of the action, but do not sign the Grant Agreement.
Funding for collaborative research in Horizon 2020!
How to participate in a collaborative project?

- As an entity from Canada you can take part in collaborative projects of Horizon 2020
- You can receive funding
- You can even coordinate a project
- Remember! All proposals must meet certain minimum conditions:
  - 3 participants from different EU member states or associated countries
  - You as an international partner must come in addition to this minimum
3 ways for Canadian researchers to participate in Horizon 2020

<table>
<thead>
<tr>
<th>I. Standard Horizon 2020 Terms</th>
<th>II. Article 14a “International Partners”</th>
<th>III. Regular 3rd party (e.g. subcontract or legal link, EU definition)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Horizon 2020 project</strong></td>
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<tr>
<td><strong>Considered as:</strong></td>
<td>Beneficiary</td>
<td>Third Party (linked to beneficiary either via subcontract (Art. 13) or legal link (Art. 14))</td>
</tr>
<tr>
<td><strong>Form of funding:</strong></td>
<td>EU funding from Horizon 2020 in exceptional cases possible</td>
<td>EU partner funded via H2020 Canadian partner brings own funding</td>
</tr>
<tr>
<td><strong>Agreement with funding organisations:</strong></td>
<td>H2020 Grant Agreement</td>
<td>No legal obligation to sign an agreement, but Canadian partner must be named in Grant Agreement</td>
</tr>
<tr>
<td><strong>Agreement in consortium:</strong></td>
<td>Consortium Agreement in accordance with H2020 regulations All parties share complete workload</td>
<td>Can sign MoU or alternative agreement Canadian partner has responsibility for specific task</td>
</tr>
<tr>
<td><strong>Form of Reporting:</strong></td>
<td>In accordance with H2020 regulations (and via Participant Portal)</td>
<td>EU partner in accordance with H2020 regulations and can report about Canadian International partner Canada: in accordance with Canadian funding organization but reports to EU partner</td>
</tr>
</tbody>
</table>

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**Notes:**

- In the context of Horizon 2020, Canadian researchers have three primary ways to participate:
  - **I. Standard Horizon 2020 Terms:** Beneficiary status is assigned when participating through standard EU contract terms.
  - **II. Article 14a “International Partners”:** Canada is considered an International Partner, where third parties can be linked to the project either via subcontract or through a legal link.
  - **III. Regular 3rd party (e.g. subcontract or legal link, EU definition):** Involves a third party that could be a subcontractor or linked through legal arrangements, with specific obligations and responsibilities outlined in EU regulations.

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**Further Reading:**

- Canadian International Partnerships Framework: <https://www.ari.net/>
International participation is targeted in numerous topics

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

- Coordinated calls exist, used for specific actions e.g. call SC1-BHC-05-2018 International flagship collaboration with Canada for human data storage
Where to find collaborative calls?

1. Excellent science
   - In Leadership in enabling and industrial technologies (LEIT)

2. Industrial leadership
   - Marie Skłodowska Curie Actions
   - FET open
   - Research Infrastructures

3. Societal challenges
   - In all seven societal challenges
Societal Challenges

- **Health**, demographic change and wellbeing
- **Food** security, sustainable agriculture and forestry, marine and maritime and inland water research and the bio-economy
- Secure, clean and efficient **energy**
- Smart, green and integrated **transport**
- **Climate** action, environment, resource efficiency and raw materials
- Europe in a changing world: Inclusive, innovative and reflective **societies**
- **Secure societies** – Protecting freedom and security of Europe and its citizens
Leadership in enabling and industrial technologies (LEIT)

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

Industrial Leadership

Top down approach
Future Emerging Technologies (FET)

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

- Supports frontier research: alternative ideas, concepts or paradigms of risky or non-conventional nature (similar to ERC)

- 3 main pillars:
  - **Open, Proactive,**
  - **Flagships**

**Top down approach**

**Bottom-up approach**

![European Commission Logo]
Specific topics targeting cooperation with Canada

- **Health**
  - Flagship call now open!

- **Transport**
  - Flagship call now open!

- **Marine and Arctic**
  - Flagship call now open!

- **Nanosafety and technologies for global healthcare**
  - Flagship call now open!

- **Migration**
  - Flagship call now open!

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
EU Member States (28)

Associated Countries (16)
Albania
Armenia
Bosnia & Herzegovina
Faroe Islands
Georgia
Iceland
Israel
Macedonia (FYR)
Republic of Moldova
Montenegro
Norway
Serbia
Tunisia
Turkey
Ukraine
Switzerland

Source: DLR-PT
Horizon 2020 funding rates and evaluation

- Basic funding rates:
  - 100% for Research and Innovation
  - 70% for Innovation/close-to-market
- Indirect costs: 25% flat-rate

- Three evaluation criteria:
  - Excellence
  - Impact
  - Implementation
5. Proposal preparation and submission
Where to find opportunities to participate?

The Participant Portal

How does it work?

OPEN COMPETITION
+ PEER REVIEW

Find a relevant call (in the work programme)

Find partners

Submit a proposal

Be selected & Get involved!
12 facts you need to know about Horizon 2020 proposal preparation I

1. Funding opportunities published in the Participant Portal

2. Proposal submission in response to "calls for proposals" only

3. Typically calls open annually

4. Calls open at different times
Calls are open for at least 3 months

Calls describe in detail what is expected from the applicants

Call template defines structure for proposal

Proposals consist of an administrative and descriptive part
12 facts you need to know about Horizon 2020 proposal preparation III

9. Proposal structure is oriented towards evaluation criteria.

10. One-stage or two-stage proposal submission.

11. Online proposal submission only.

12. Time to grant max. 8 months.
4. Project examples for Canadian participation
EU-Canada success stories

Combining data on climate, biodiversity, ocean chemistry, fisheries, oil spills and more into one system

High Altitude Ice Crystals (HAIC) (2012-2017)
Canada’s NRC contributed to this project, which developed technology to detect hazardous icy flying conditions at high altitude, using satellite detection, radars and on-board detectors.

Risk of brain cancer from exposure to radiofrequency fields in childhood and adolescence (MOBI-KIDS) (2009-2016)
Epidemiological study on the impact of mobile phone use in childhood and adolescence
Horizon 2020 – Participation % of all 3rd countries
Horizon 2020 in numbers

Canadian participation in 2016

- 234 participations in collaborative actions
- 36 projects funded
- Success rate of 27.5%
- 41 Canadian participations in 36 signed grant agreements (up to 03/05/2016)
- 189 proposals

- Canadian participants received €2.7 million from the EC, and contributed €11.1 million

Source: Roadmap Canada, Oct 2017
Canadian researcher participation in ERC

• Since 2007 the European Research Council (ERC) evaluated a total of 417 proposals from researchers with Canadian nationality

• currently there are 66 principal investigators of Canadian nationality holding an ERC grant

Canada is the country of nationality of the highest number of ERC non-ERA grantees!

Source: Roadmap Canada, Oct 2017
Marie Skłodowska-Curie actions (MSCA)
Canada has hosted:

18 International and inter-sectoral cooperation through the Research and Innovation Staff Exchanges (RISE)
13 Innovative Training Networks (ITN)
19 Global Fellowships (GF)
5 Co-funding of regional, national and international programmes (COFUND)
6. Closure - final Q&A
Please create a top 5 list!

- What are the benefits of participating in Horizon 2020 for you?
- Name 5 arguments!
Key message for Canadian researchers and entities

- Horizon 2020 is the largest research and innovation programme in the world.
- International cooperation is encouraged in Horizon 2020.
- Canadian nationals or institutions are eligible to take part in Horizon 2020 and receive funding, as individual researchers or in collaborative projects.
- Participation in Horizon 2020 projects offers exciting opportunities to extend your research field, your network and your career options.
National Contact Points in Horizon 2020

- Established, operated and financed by EU Member States, associated countries and third countries
- Nominated by national ministries to the European Commission
- For all specific areas of Horizon 2020
- **NCPs give personalised support on**
  - application process
  - grant preparation and project management
- Organisation of workshops and information events
- Contact details of Canadian NCPs on the Participant Portal ([http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html](http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html))
Useful links

• Horizon 2020: http://ec.europa.eu/programme
• Marie Sklodowska-Curie Actions: http://ec.europa.eu/research/mariecurieactions/
• European Research Council: http://erc.europa.eu/
• EURAXESS: www.euraxess.org
JOIN NOW:

Non-EU Expert Evaluators Needed!


The new Horizon 2020 Work Programme and Calls for 2018/2020 are open for application!

Thank you!

#InvestEUresearch

www.ec.europa.eu/research

Participant Portal


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