Horizon Europe (2021-2027): Opportunities for geothermal Heating and Cooling
**Horizon Europe** is the Commission proposal for a €100 billion research and innovation funding programme for seven years (2021-2027)

- **to strengthen the EU's scientific and technological bases**

- **to boost Europe's innovation capacity, competitiveness and jobs**

- **to deliver on citizens' priorities and sustain our socio-economic model and values**
Horizon Europe: three-pillars

- The first pillar on **Open Science** will ensure continuity with H2020 in supporting science within a **bottom-up approach** through the European Research Council, Marie Skłodowska-Curie Actions and research infrastructures.

- The second pillar on **Global Challenges** and Industrial Competitiveness will follow a more ‘**top down**’ approach. With calls, a set of highly visible missions will be introduced. Missions, with ambitious but time-bound and achievable goals, should speak to the public and engage it. They will be designed with MS, the EP, stakeholders and citizens.

- The third pillar on **Open Innovation** will focus on innovation by establishing a European Innovation Council (EIC) and continued support to the European Institute of Innovation and Technology (EIT). The EIC will offer a one-stopshop to innovators. Activities will be **mainly bottom-up**.
What’s New I

A mission will consist of a portfolio of actions intended to achieve a **bold and inspirational** as well as **measurable goal** within a set timeframe, with impact for science and technology, society and citizens that goes **beyond individual actions**.

Horizon Europe proposal defines mission characteristics and criteria.

Specific missions will be **co-designed with Member States, stakeholders and citizens** and programmed within the Global Challenges and Industrial Competitiveness pillar (drawing on inputs from other pillars).
Suggested Themes for HE Missions:

- Food & Agriculture: **Sustainable Land**
- Digitisation: **Quantum Computing**
- Health: **Paediatric Cancer**
- Clean Europe: **Clean Oceans** / **Clean cities**
What’s New II

The EIC will support innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors.

Two complementary instruments bridging the gap from idea to investable project

Pathfinder: grants (from early technology to pre-commercial)

Accelerator: grants & blended finance (from pre-commercial to market & scale-up)

www.rhc-platform.org
Budget: €100 billion*

In current prices

- Open Science
- Global Challenges & Ind. Competitiveness
- Open Innovation
- Strengthening ERA
- Euratom

* This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.
### Pillar II: Global Challenges

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Budget (billion EUR)</th>
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<tbody>
<tr>
<td>Implemented through calls, missions &amp; partnerships</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>€ 7.7</td>
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<tr>
<td>Inclusive and Secure Societies</td>
<td>€ 2.8</td>
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<tr>
<td>Digital and Industry</td>
<td>€ 15</td>
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<tr>
<td><strong>Climate, Energy and Mobility</strong></td>
<td><strong>€ 15</strong></td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>€ 10</td>
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<tr>
<td>Joint Research Centre</td>
<td>€ 2.2</td>
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Joint Research Centre supports European policies with independent scientific evidence & technical support throughout the policy cycle.

[www.rhc-platform.org](http://www.rhc-platform.org)
Cluster Climate, Energy and Mobility

- **Areas of intervention**: Climate science and solutions; Energy supply; Energy systems and grids; Buildings and industrial facilities in energy transition; Communities and cities; Industrial competitiveness in transport; Clean transport and mobility; Smart mobility; Energy storage

- **Tackling climate change**: 35% budgetary target
Key features (I)

- **Time to grant**: for informing all applicants of the outcome of the evaluation of their application, a maximum period of **five months** from the final date for submission of complete proposals; for signing grant agreements with applicants, a maximum period of eight months from the final date for submission of complete proposals.

- **Certificate on financial statements**: it shall be mandatory at payment of the balance, if the amount claimed is equal to or greater than **EUR 325 000**

- Increased use of **simplified forms of grants** where appropriate (building on the H2020 lump sum pilot experience)
Key features (II)

- **Indirect costs**: They shall be determined by applying a flat rate of 25% of the total direct eligible costs, excluding direct eligible costs for subcontracting, financial support to third parties and any unit costs or lump sums which include indirect costs. However, if provided for in the work programme, indirect costs may be declared in the form of a lump sum or unit costs.

- **Mutual insurance mechanism**: Beneficiaries shall make a contribution of 5% of the Union funding for the action. On the basis of periodic evaluations, this contribution may be raised by the Commission up to 8% or may be reduced under 5%. The contribution of the beneficiaries shall be returned at the payment of the balance.
Key features (III)

- **Financial capacity**: It shall be verified only for the coordinator and only if the requested funding from the Union for the action is equal to or greater than **EUR 500 000**.

- **Evaluation of proposals**: on the basis of the following award criteria: (a) **excellence**; (b) **impact**; (c) **quality and efficiency of the implementation**

- **Reimbursement rates**: the Programme may reimburse up to 100 % of total eligible costs of an action except for:
  - (a) innovation actions: **up to 70%** of the total eligible costs, except for non-profit legal entities where the Programme may reimburse up to 100 % of the total eligible costs;
  - (b) programme co-fund actions: **at least 30%** of the total eligible costs, and in identified and duly justified cases up to 70%.
Timeline

Ongoing
Parliament and Council negotiations on Union budget 2021-2027, including budget for Horizon Europe

Ongoing
Parliament and Council negotiations on the basis of the Commission proposal for Horizon Europe

2nd half 2019
Strategic planning to prepare first work programmes under Horizon Europe, including co-design of missions and setting up of partnerships

1 January 2021
Envisaged start of Horizon Europe
Thank you!