Lo European Innovation Council

Opportunità di finanziamento per la ricerca innovativa, focus sullo schema di finanziamento Pathfinder

Marta Calderaro
H2020 FET/ICT NCP
Sapienza Università di Roma
04 Marzo 2021
PRONTI A PARTIRE?
“The programme aims at giving Europe a new push to a global positioning. Horizon Europe is to be the biggest and most ambitious EU Research Innovation programme ever. It builds on the success of Horizon 2020 and improves it further by fostering a stronger support to breakthrough innovation through the European Innovation Council, by creating greater impact through R&I missions and by streamlining partnerships landscape.”

Mariya Gabriel, European Commissioner for Innovation, Research, Culture, Education and Youth
Le 6 Priorità della Commissione per il 2019-24

**A European Green Deal**
Striving to be the first climate-neutral continent

**A Europe fit for the digital age**
Empowering people with a new generation of technologies

**An economy that works for people**
Working for social fairness and prosperity

**A stronger Europe in the world**
Europe to strive for more by strengthening our unique brand of responsible global leadership

**Promoting our European way of life**
Building a Union of equality in which we all have the same access to opportunities.

**A new push for European democracy**
Nurturing, protecting and strengthening our democracy
Lezioni apprese
dalla valutazione intermedia di Orizzonte 2020

- Sostenere le innovazioni pionieristiche
- Moltiplicare l'impatto attraverso un approccio orientato alle missioni e il coinvolgimento dei cittadini
- Intensificare la cooperazione internazionale
- Rafforzare l'apertura
- Razionalizzare il panorama dei finanziamenti
- Incoraggiare la partecipazione

Novità principali
di Horizon Europe

- Consiglio europeo per l'innovazione
- Missioni di R&I
- Possibilità di associazione estese
- Politica della scienza aperta
- Nuovo approccio ai partenariati
- Diffondere l'eccellenza
Horizon Europe: struttura

Pillar 1
Excellent Science
- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and European Industrial Competitiveness
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment
- Joint Research Centre

Pillar 3
Innovative Europe
- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Widening Participation and Strengthening the European Research Area
- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system

*basato su testo di compromesso (17 Aprile 2019)
### III Pilastro "EUROPA INNOVATIVA"

Stimolare innovazioni pionieristiche creatrici di mercato ed ecosistemi favorevoli all'innovazione

<table>
<thead>
<tr>
<th>Consiglio europeo per l'innovazione</th>
<th>Ecosistemi europei per l'innovazione</th>
<th>Istituto europeo di innovazione e tecnologia (EIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sostegno alle innovazioni dal potenziale pionieristico e creatrici di mercato</td>
<td>Instaurare un legame con gli operatori dell'innovazione a livello regionale e nazionale</td>
<td>Riunire gli operatori fondamentali (ricerca, istruzione e imprese) attorno a un obiettivo comune per favorire l'innovazione</td>
</tr>
</tbody>
</table>

Proposta della Commissione: 3 miliardi di EUR

Proposta della Commissione: 10,5 miliardi di EUR, compresi fino a 500 milioni di EUR per gli ecosistemi
<table>
<thead>
<tr>
<th>Tema</th>
<th>HE (MFF)</th>
<th>NGEU</th>
<th>TOTALE</th>
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<tr>
<td></td>
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<td>2. Culture Creativity Inclusive Society</td>
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<td>3. Civil Security for Society</td>
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<td>4. Industry Digital Space</td>
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<td>15,348</td>
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<td>5. Climate Energy Mobility</td>
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<td>15,123</td>
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<td>6. Food, Bioeconomy, Natural Resources, Agriculture, Environment</td>
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Consiglio europeo per l'innovazione (EIC)

Sostegno alle innovazioni pionieristiche e dirompenti e al potenziale di espansione dei progetti che sono troppo rischiosi per gli investitori privati (il 70% del bilancio è destinato alle PMI)

Aiutare gli innovatori a creare i mercati del futuro, mobilitare fondi privati e sviluppare le loro imprese

Progetti incentrati sull'innovazione, snelli ed inclini ad assumere rischi, gestione e seguito proattivi

Due strumenti complementari colmano il divario tra l'idea e il progetto investibile

Pathfinder: sovvenzioni
(dalla tecnologia in fase iniziale alla fase pre-commerciale)

Accelerator: solo sovvenzioni & finanziamenti misti
(dalla fase pre-commerciale alla fase di mercato ed espansione)
EIC Main Instruments

Pathfinder
- Open (Bottom Up: long-term vision; Concrete, novel and ambitious science-towards-technology breakthrough; High-risk/high-gain research approach and methodology)
- Challenges (Top Down: Digital, Health and Biotech, Energy and Environment)

Transition
- Open (Bottom Up: Key Pathways: Transition to innovation, to the market or to entrepreneurship)
- Challenges (Top Down: Medical technology and devices: from lab to patient; Energy harvesting and storage technologies)

Accelerator
- Open (Bottom Up: To scale up high impact innovations with the potential to create new markets or disrupt existing ones)
- Challenges (Top Down: Digital, Medical, Green Deal)

Prizes
- 1. EU Prize for Women Innovators; 2. The European Capital of Innovation Awards (iCapital); 3. The European Innovation Procurement Awards; 4. The Social Innovation Award
The EIC Instruments and the TRL

1. Basic principle observed
2. Technology concept formulated
3. Experimental proof of concept
4. Technology validated in lab
5. Technology validated in relevant environment
6. Technology demonstrated in relevant environment
7. System prototype demonstration in operational env
8. System complete and qualified
9. Actual system proven in operational environment
10. Market uptake, deployment

- **EIC Pathfinder**
  (Open and Challenges)
- **EIC Transition**
  (Open and Challenges)
- **EIC Accelerator**
  (Open and Challenges) (Grant)
- **EIC Accelerator**
  (Equity)
Within EIC, the spirit of FET remains the same.

From cutting-edge SCIENCE ...  ... to disruptive TECHNOLOGY of the future

https://webcast.ec.europa.eu/the-fet-spirit-revisited-recording
EIC Pathfinder for Advanced Research

- **Grants** to *high-risk cutting-edge projects* exploring new territories, developing radical innovative technologies of the future and new market opportunities.

- The Pathfinder will initially support the *earliest stages of scientific and technological research and development*, including proof of concept and prototypes for technology validation.

- The Pathfinder will be open to *all types of innovators*, from individuals to universities, research organisations and companies, in particular startups and SMEs, and from single beneficiaries to multi-disciplinary consortia

  Mono- beneficiaries schemes in: EIC Pathfinder Challenges / EIC Transition Open & Challenges
EIC Pathfinder for Advanced Research

Open

• interdisciplinary research and development
• **Gatekeepers**: long-term vision; science-towards-technology breakthrough; High-risk/high-gain research approach
• The expected outcome is the proof of principle.
• multi-disciplinary collaborations (≥ 3 partners)
• 3 Millions euros + 50 K
• 19 May 2021

Challenges

• develop key strategic objectives calling for deep-tech and radical thinking
• overcome market or regulatory barriers, or strengthen an innovation community
• multi-disciplinary collaborations (from 2 to 5 partners) and mono-beneficiaries
• Portfolios’ Proactive Mng by PMs
• 4 Millions euros + 50 K
• 27 Oct 2021
EIC Pathfinder Gatekeepers – Main characteristics

Convincing *long-term vision* of a radically new deep-tech that has the potential to have a transformative positive effect to our economy and society.

Concrete, novel and ambitious *science-towards-technology breakthrough*, providing advancement towards the envisioned technology.

*High-risk/high-gain research approach* and methodology, with concrete and plausible objectives.
EIC Pathfinder Open - Evaluation Criteria

Excellence

Threshold: 4/5, Weight: 60%
(Long-term vision; Science-towards-technology breakthrough; Objectives; Interdisciplinarity)

Impact

Threshold: 3.5/5, Weight: 20%
(Innovation potential; Communication and Dissemination)

Quality and efficiency of the implementation

Threshold: 3/5, Weight: 20%
(Quality of the consortium; Work plan; Allocation of resources)
EIC Pathfinder Open - Evaluation Process

5 MONTHS

Proposal

Expert

Individual Evaluation Report

Panel Review

Individual Evaluation Report

Individual Evaluation Report

Individual Evaluation Report

Evaluation Summary Report

Panel Review

Rebuttal Phase

Pathfinder Open Consortium

Eligible proposal

4 experts

Individual evaluation

Additional 4 experts

18

Proposal Approval

5 MONTHS

5 MONTHS

Pathfinder Open Consortium
EIC Portfolios

- Regrouping of selected projects into thematic or objective driven portfolios will allow establishing critical mass of efforts and structuring new multidisciplinary research communities.

- These portfolios of selected projects will be further developed and enhanced, each along a vision developed with their innovators, but also shared with the research and innovation community at large.

- Under EIC Transition activities will be implemented to help innovators develop the different pathway to support the portfolios: for example by enabling collaboration within the portfolio and developing its multidisciplinary community.

Key Open questions: The identification of the portfolio (include projects selected under Horizon Europe programmes)?
EIC Pathfinder identified Challenges

Sources for ideas for potential topics include:

✓ Horizon scanning exercise: e.g., PREFET or OBSERVE (CSAS); Report 100 Radical Innovation Breakthroughs for the future
✓ FET Open scanning exercise: as an excellent “reservoir” for identifying potential future topics
✓ Stakeholders’ consultation: e.g. Stakeholders Workshop on Pathfinder
✓ Existing portfolio of projects: surveys to FET Proactive and Open Coordinators on Emerging Trends and Opportunities in Innovation Development
✓ Inputs from the EIC Programme Managers
✓ Literature, analysis of funding, etc.

<table>
<thead>
<tr>
<th></th>
<th>Pathfinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy, Climate, Environment</td>
<td>- Engineered living materials</td>
</tr>
<tr>
<td></td>
<td>- Novel green hydrogen production</td>
</tr>
<tr>
<td>Digital</td>
<td>- Aware and self-developing artificial systems</td>
</tr>
<tr>
<td>Health</td>
<td>High-precision observation and stimulation of brain activity</td>
</tr>
<tr>
<td></td>
<td>- Emerging technologies for cell &amp; gene therapy</td>
</tr>
</tbody>
</table>

Identifying technology areas where the EU has the potential or the strategic need to develop technology global leadership or signals on major technological breakthroughs
EIC Pathfinder Challenges

- Awareness inside
- Tools to measure & stimulate activity in brain tissue
- Emerging Technologies in Cell & Gene Therapy
- Engineered living materials
- Novel routes to green hydrogen production
EIC Pathfinder Challenge - Evaluation Criteria

Excellence - **Threshold: 4/5, Weight: 60%**
(Relevance to the Challenge; Novelty; Plausibility of methodology)

Impact - **Threshold: 3.5/5, Weight: 20%**
(Potential Impact; Innovation Potential; Communication and Dissemination)

Quality and efficiency of the implementation
**Threshold: 3/5, Weight: 20%**
(Quality of the applicant/consortium; Work plan; Allocation of resources)

Proposal Template*

25 Pages
Single Step submission
Research and Innovation Actions

* Note: Challenge Guidance
EIC Pathfinder Challenges - Evaluation Process

Proposal

Eligible proposal

Minimum 3 experts

Individual evaluation

Challenge Evaluation Committee + Programme Managers

5 MONTHS

IER and Ranking

II Step - Portfolio Considerations

Individual Evaluation Report

Individual Evaluation Report

Individual Evaluation Report

Individual Evaluation Report

Proposal

5 MONTHS

Minimum 3 experts

Individual evaluation

Challenge Evaluation Committee + Programme Managers

Eligible proposal
1. Basic principle observed
2. Technology concept formulated
3. Experimental proof of concept
4. Technology validated in lab
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**EIC Pathfinder**  
(Open and Challenges)

**EIC Transition**  
(Open and Challenges)

**EIC Accelerator**  
(Open and Challenges) (Grant)

**EIC Accelerator**  
(Equity)

The EIC Instruments
**EIC Transition**

- to *nurture potential market creating innovation* out of breakthrough technological ideas, and bring them to demonstration stage or development of business cases or strategies for further take-up by the Accelerator or any other market deployment solution.

<table>
<thead>
<tr>
<th>Open</th>
<th>Challenges</th>
</tr>
</thead>
</table>
| • go beyond the experimental proof of principle in laboratory.  
• tech transfer, spinouts, licensing  
• multi- or mono- beneficiary  
(from 2 to 5 partners)  
• 2,5 Millions euros + 50 K  
• 22 Sept 2021 | • **Medical technology and devices**: from lab to patient  
• **Energy harvesting and storage technologies**  
• Portfolios’ Proactive Mng by PMs  
• 2,5 Millions euros + 50 K  
• 22 Sept 2021 |
EIC Transition Open eligibility conditions

- A single legal entity (‘mono-beneficiary’) if SME or research performing organisation (university, research or technology organisation). Larger companies are not eligible to apply as a single legal entity;

- A small consortium of **maximum five independent legal entities** (‘multi-beneficiary’) that may for example include universities, research organisations, SMEs or larger companies, user/customer organisations or potential end-users (e.g. hospitals, utilities, industry, regulatory and standardization bodies, public authorities).

**Connected to the following eligible projects**

- EIC Pathfinder projects (including projects funded under EIC pilot Pathfinder, FET-Open, FET-Proactive calls, FET Flagships, ERANET Cofund: RIAs and FET ILPs)

- European Research Council (ERC) Proof of Concept projects

  → **Active since 12 months prior the deadline or completed in the previous 24 months**
EIC Transition Open & Challenges - Evaluation Criteria

**Excellence - Threshold: 4/5**
(Technological breakthrough, Technology feasibility and objectives)

**Impact - Threshold: 4/5**
(Business and market fit;
Economic and/or societal benefits; Entrepreneurship;
Partnerships and investment-readiness)

**Quality and efficiency of the implementation**

**Threshold: 3/5**
(Quality of the team; Milestones and Work plan;
Allocation of resources)

Proposal Template

- **25 Pages**
- **Single Step submission**
- **100% Funding Rate (Type of Actions?)**
EIC Transition Open & Challenges - Evaluation Process

9 Weeks

Eligible proposal

Minimum 4 experts

Individual evaluation

6 EIC Jury + Programme Managers

Proposal

Individual Evaluation Report

IER and Ranking

II Step - EIC Jury F2F Interviews (Go/No Go approach)
EIC Accelerator
1. Basic principle observed
2. Technology concept formulated
3. Experimental proof of concept
4. Technology validated in lab
5. Technology validated in relevant environment
6. Technology demonstrated in relevant environment
7. System prototype demonstration in operational env
8. System complete and qualified
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The EIC Instruments

EIC Pathfinder
(Open and Challenges)

EIC Transition
(Open and Challenges)

EIC Accelerator
(Open and Challenges) (Grant)

EIC Accelerator
(Equity)
EIC Accelerator (ex SME Instrument)

<table>
<thead>
<tr>
<th>Target</th>
<th>singole PMI/Start up/Spin off europee for profit con innovazioni ad alto rischio e alto potenziale di crescita (eccezione natural person per short proposal?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obiettivo</td>
<td>“conquistare” nuovi mercati e “distruggere” quelli esistenti</td>
</tr>
<tr>
<td>Finanziamento</td>
<td>per gli ultimi stadi di sviluppo</td>
</tr>
<tr>
<td>Bottom-up</td>
<td>tutti i settori, prodotti, servizi, nuovi business model (eccezione Challenges)</td>
</tr>
</tbody>
</table>

**Grant**
- €0,5 – 2,5 milioni (tasso di finanziamento al 70% del totale dei costi) (TRL6-8)

**Opzione equity (blended finance)**
- Fino a €15 milioni (Market uptake and deployment, TRL6-9)
Introduzione dell’opzione “Equity Only”

3 modalità di presentazione della proposta:

1. Grant only Vs Grant first (partially new)
2. Blended finance
3. Equity only (new) *

* Per l’opzione «equity only» saranno eccezionalmente eleggibili anche le small mid caps
Nuovo Sistema di selezione e valutazione

1. Screening of ideas (NEW)
2. From idea to full proposal (NEW)
3. Remote evaluation of full proposal (IMPROVED)
4. Face to face jury interview (IMPROVED)
Business Acceleration Services

The Modules offered are the following:

- Technology Validation and product-market fit process
- Business Recognition and Market Data Module
- Venture Development Methodology Module
- Exploitation via Lean approach Module
- Presentation Pitch

11 and 12 March 2021 (Last Seats Available) - Apply here: https://entrypoint-smei.easme-web.eu/form/186

15 and 16 April 2021 - Apply here: https://entrypoint-smei.easme-web.eu/form/187

20 and 21 May 2021 - Apply here: https://entrypoint-smei.easme-web.eu/form/188
Launch of the European Innovation Council

Virtual Event

18-19 March 2021

#EUeic

EIC Pathfinder Sources

EIC Community [link]
EIC Pathfinder Sources

- EIC Community [link]
- EIC Pathfinder Data Hub [link]
- Innovation Radar [link]
EIC Pathfinder Sources

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- Innovation Radar [link]
- Deep Tech Europe Report [link]
- Proactive Mng – Report [link]
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- Proactive Mng – Report [link]
- A2EIC NCP Network [link]
- FETFX Communication & Outreach [link]
PRONTI A PARTIRE?

Registrati a **APREmailing**
per non perdere aggiornamenti e opportunità

www.2021horizonteurope.info

#2021horizonteurope
#HorizonEU
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