



VERSO HORIZON EUROPE

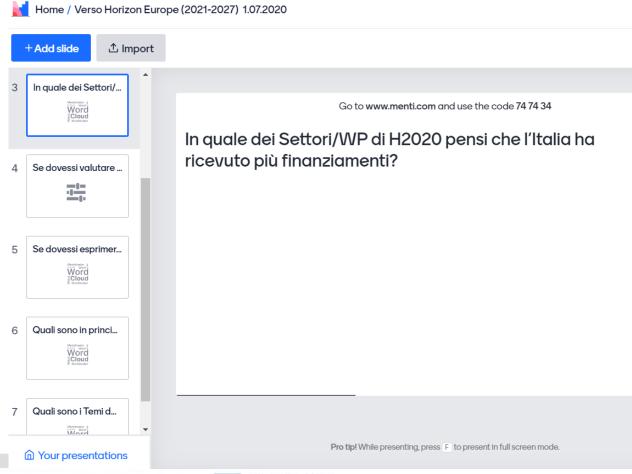
Antonio Carbone

18 novembre 2020

* La presentazione è basata su materiale della Commissione europea sul programma Horizon Europe. <u>Link</u>



Vai su Menti.com e digita il codice 123425

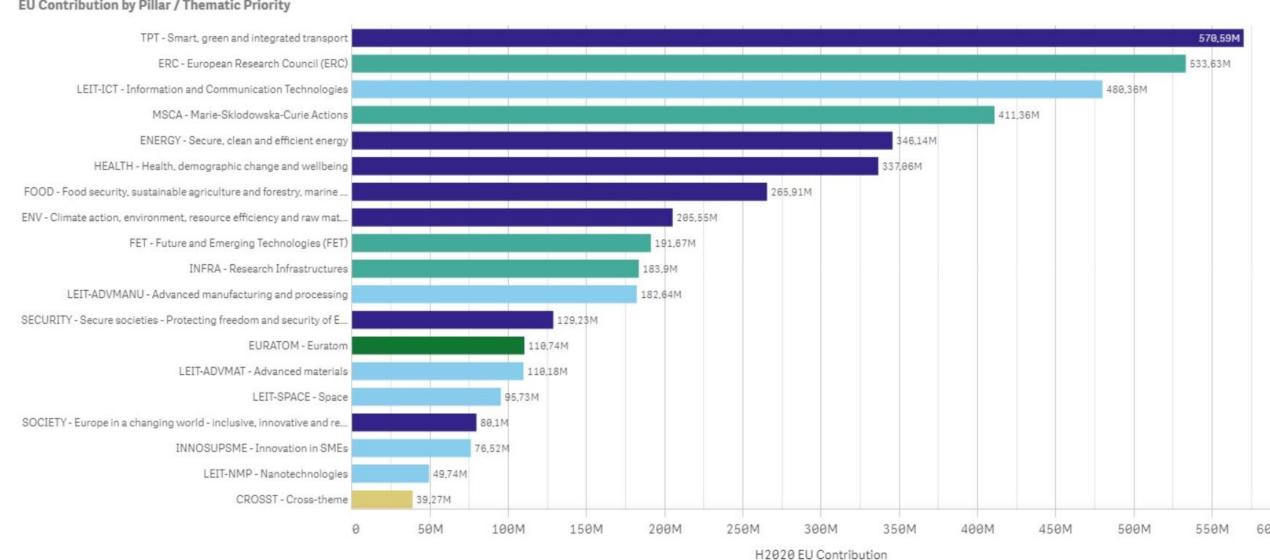






Partecipazione italiana a H2020 - Temi

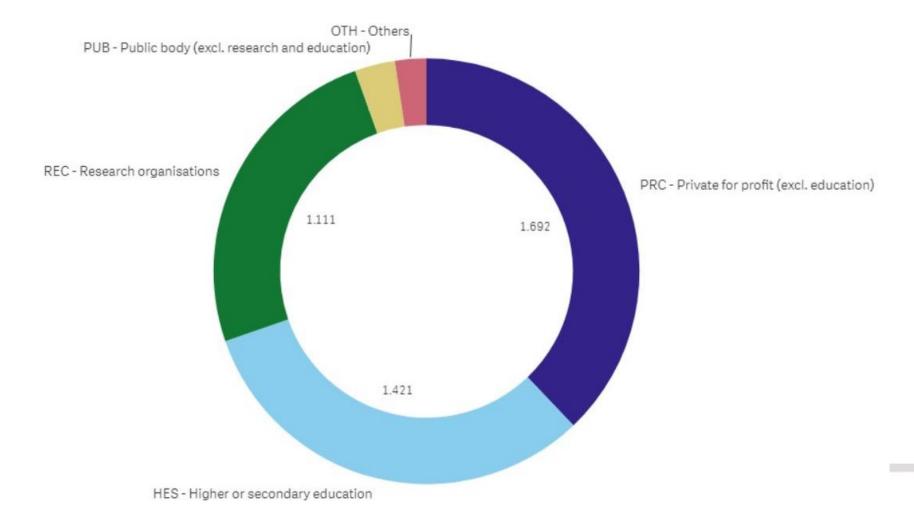
EU Contribution by Pillar / Thematic Priority





<u>Partecipazione italiana a H2020 – Tipologia di beneficiario</u>

Net EU Contribution by Type of Organisation (Mil EUR)



<u>Partecipazione a H2020 – Ranking per Paese</u>

Number of project participations and Net EU Contribution by country - region

Country	Q	H2020 Net EU Contribution	H2020 Participations
Totaux		€ 54.171.574.053	141.023
Germany		€8.098.373.548	16.595
United Kingdom		€6.796.978.786	14.958
France		€ 6.003.098.608	13.656
Spain		€ 4.921.117.274	14.720
Italy		€ 4.467.970.597	13.279
Netherlands		€ 4.223.161.604	8.766
Belgium		€ 2.646.524.268	6.535
Sweden		€1.849.691.079	4.180
Switzerland		€1.817.963.088	4.009
Austria		€ 1.505.768.563	3.936
Denmark		€1.419.539.413	3.240
Greece		€1.280.651.034	4.186
Norway		€1.223.977.093	2.533
Finland		€1.203.219.207	2.722
Israel		€1.062.433.924	1.725
Ireland		€952.839.357	2.329
Portugal		€879.799.425	3.060
Poland		€566.908.434	2.227
Czechia		€401.838.954	1.464
Hungary		€302.489.261	1.215



Partecipazione UniVr a H2020 - Temi

H2020 Signed Grants

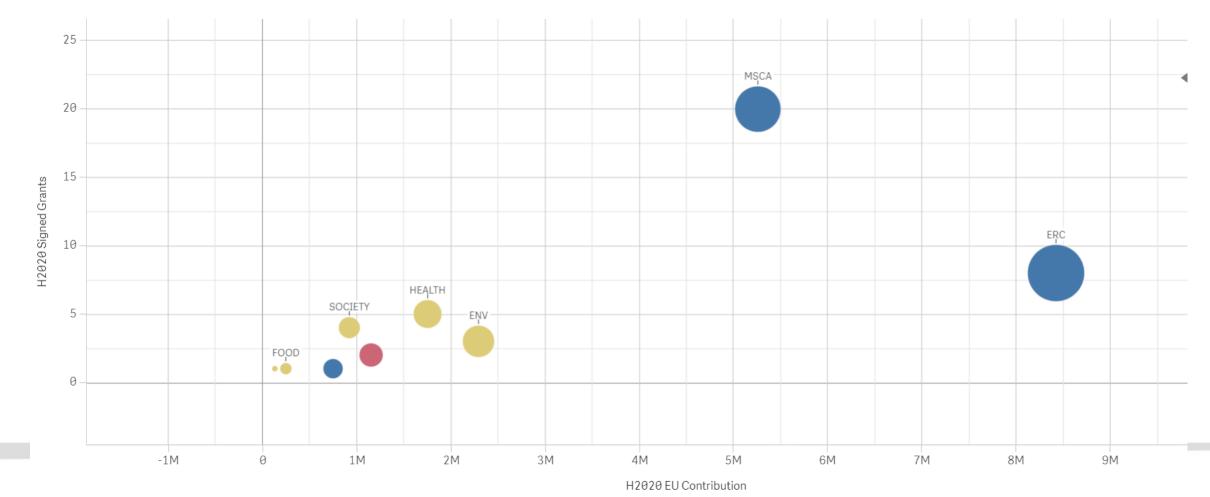
450,15% of H2020

H2020 Participations

450,03%

H2020 EU Contribution 20,95 M_{of H2020}





<u>Verso Horizon Europe 2021 – 2027</u>

- The tappe di Horizon Europe: la proposta della Commissione, il Negoziato e l'Accordo di Aprile 2019
- ☐ I prossimi passi: Strategic Planning, Implementation Strategy, Work Programme

Q&A

- ☐ La struttura del Programma
 - Evoluzione, non rivoluzione: Il budget e la struttura a tre Pilastri
 - Le principali novità del Programma e un confronto con Horizon 2020
 - I tre Pilastri di Horizon Europe in sintesi

Q&A

- ☐ Lo European Innovation Council EIC in Horizon Europe
 - Il Pilot 2018-2020 e le principali novità attese in Horizon Europe
 - Gli strumenti di finanziamento EIC per i ricercatori
 - Strumenti operativi a disposizione di ricercatori e aziende

Q&A e Conclusioni





I principali passi fino a oggi

- **¬ Commissione** − <u>Prima Proposta di Horizon Europe</u> (giugno 2018)
- Parlamento il Parlamento in plenaria ha adottato gli <u>emendamenti alla proposta EC</u> e avviato il mandato ad aviare il negoziato informale (Trilogo) col Consiglio. (Dicembre 2018)
- ¬ Consiglio Il Consiglio ha adottato il <u>partial general approach on the framework programme</u> (Novembre 2018).
- Trilogues Dopo diverse settimane di lavoro a livello di Trilogo, i due co-legislatori (Parlamento e Consiglio) raggiungono un <u>Accordo</u>

 <u>Provvisorio</u> (provisional agreement) nella seduta di marzo 2019.
- ¬ Provisional Agreement & Agreed Text Il cd. <u>agreed text</u> viene adottato in prima lettura dal Parlamento riunito in plenaria il 17 aprile 2019
- Approvazione MFF Multiannual Financial Framework, o Quadro Finanziario Pluriennal (include Next Generation Eu) Il Consiglio approva il MFF 2021-27, che include anche il bilancio per Horizon Europe, il 21 luglio 2020
- Accordo tra i ministri della ricerca EU sul divisione del budget e altri aspetti i vista del trilogo Commissione Consiglio Parlamento. Consiglio Competitività 29 settembre 2020



Mariya Gabriel, European Commissioner for Innovation, Research, Culture, Education and Youth

"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."



Our vision

A sustainable, fair and **prosperous** future for **people** and **planet** based on European values.

- Tackling climate change (35 % budgetary target)
- Helping to achieve Sustainable
 Development Goals
- Boosting the Union's competitiveness and growth





6 Commission priorities for 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



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





«FP9 starts now»

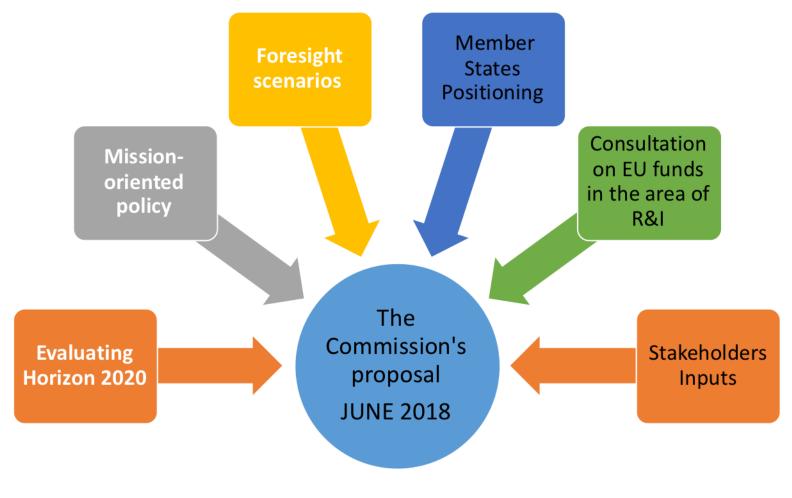


Pascal Lamy, 3 giugno 2017





Before the first H Europe EC proposal (2017-2018)





H2020 assessment



Horizon 2020 Evaluation

Assessment of the first 3 years of implementaiton of H2020 (May 2017)



<u>LAB – FAB – APP: Investing in the</u>
<u>European future we want</u>: indipendent
High Level Group Report, led by Pascal
Lamy, focused on how to maximize the
impact of Eu funding programmes (July
2017)



<u>Communication on the interim</u> <u>evaluation of Horizon 2020</u>, based on the 2 previous documents, it established guidelines on the future H Europe EC proposal (January 2018)





1. EVALUATING H2020 - Horizon 2020 Evaluation

Evaluating Horizon 2020

To conclude, so far Horizon 2020 is an attractive and well-performing programme, highly relevant for stakeholders. It goes in the right direction delivering value for money and is on course to meet its knowledge-creating objectives. Main areas for improvement are oversubscription; stimulating breakthrough, market-creating innovation, notably by SMEs, and scaling up to EU level; further alignment to policy priorities; and bringing results to citizens and involving them more.



Evaluating Horizon 2020

1. EVALUATING H2020

LAB - FAB - APP

Summary of recommendations

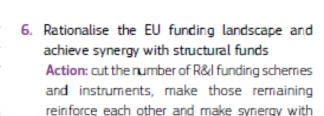
The following recommendations are aimed at maximising the impact of future EU research and innovation programmes. Each of them is exemplified by a key action.

- Prioritise research and innovation in EU and national budgets
 - Action: double the budget of the post-2020 EU research and innovation programme.
- Build a true EU innovation policy that creates future markets

Action: Foster ecosystems for researchers, innovators, industries and governments; promote and invest in innovative ideas with rapid scale-up potential through a European Innovation Council.

- Educate for the future and invest in people who will make the change
 - Action: modernise, reward and resource the education and training of people for a creative and innovative Europe.
- Design the EU R&I programme for greater impact
 - Action: make the future programme's pillars driven by purpose and impact, fine-tune the proposal evaluation system and increase flexibility.
- Adopt a mission-oriented, impact-focused approach to address global challenges

Action: set research and innovation missions that address global challenges and mobilise researchers, innovators and other stakeholders to realise them.



7. Simplify further

and missions.

other programmes work.

Action: become the most attractive R&I funder in the world, privileging impact over process.

Mobilise and involve citizens
 Action: stimulate co-design and co-creation

through citizen involvement.

- Better align EU and national R&I investment
 Action: ensure EU and national alignment
 where it adds value to the EU's R&I ambitions
- Make international R&I cooperation a trademark of EU research and innovation
 - Action: open up the R&I programme to association by the best and participation by all, based on reciprocal co-funding or access to co-funding in the partner country.
- Capture and better communicate impact
 Action: brand EU research and innovation
 and ensure wide communication of its results
 and impacts.



2. MISSION-ORIENTED POLICY

Missionoriented policy

Mission-Oriented Research & Innovation in the EU

A problem solving approach to innovation-led growth (Febbraio 2018)

Mariana Mazzucato report on behalf of the European Commission, with the contribution of external and itnernal stakeholders of the EC

<u>Presentation on mission-oriented research and innovation policy</u>

Call for feedback on research and innovation missions (April 2018) and related <u>Analysis report</u> (November 2018)



3. FORESIGHT SCENARIOS & ECONOMIC RATIONALE

Foresight scenarios

Regular analysis on <u>Economic rationale for public R&I investments</u> and related impact in terms of growth and occupation (March 2017)

BOHEMIA is the strategic study which setting up recommendation and scenarios to develop Eu R&I policies in view of Horizon Europe (June 2018)





3. FORESIGHT SCENARIOS & ECONOMIC RATIONALE

Economic rationale for public R&I investments

Foresight scenarios

Main Conclusion

- The impact of public R&I funding is large and significant as it acts as a catalyser to boost the productivity growth needed to accelerate economic growth and the creation of more and better job opportunities.
- Maximising the impact of public R&I funding will require the adoption of holistic strategies that enable faster and deeper innovation development and diffusion across companies, sectors and countries that have been holding back the positive impacts of R&I in recent years. More precisely, improving the business environment in terms of market functioning, including measures to overcome the persistent fragmentation of the single market in Europe and make the R&I system increasingly open will be crucial. In addition, investing in human capital and ensuring appropriate financing are also important.
- The implementation of public R&I funding should be well targeted to cover the whole research-innovation spectrum, including market creating innovations; and channelled through the appropriate R&I instruments that need to be properly designed and implemented based on the local conditions that affect their effectiveness.

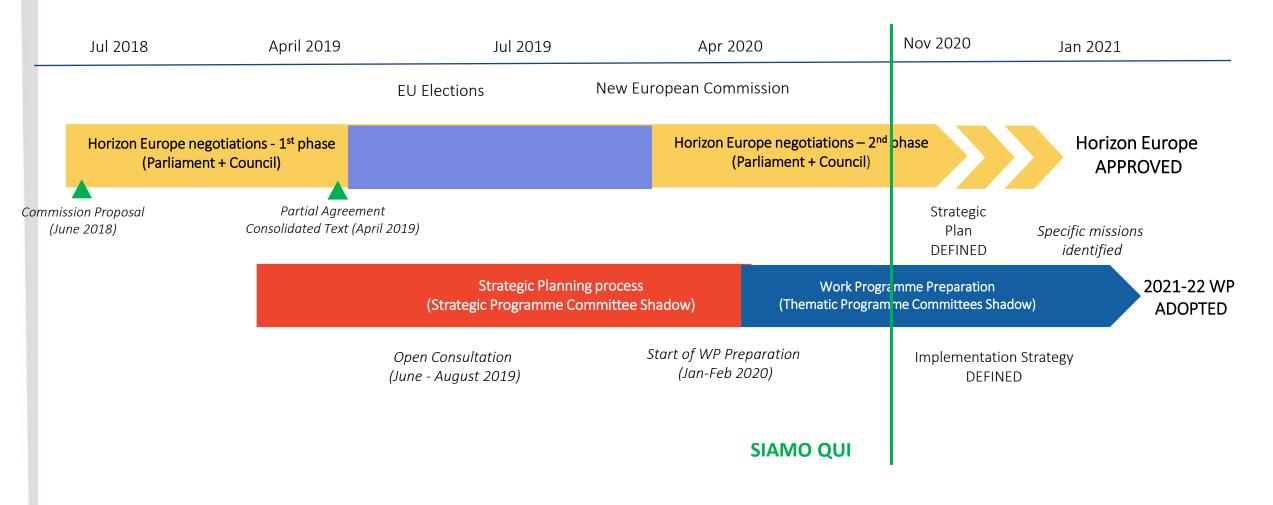


TODAY



7

The Path







Commission's proposal (June 2018)

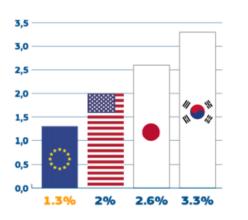




While benefiting from world-class research and strong industries...

Our knowledge and skills are our main resources.

- → 7% of the world's population
- → 20% of global R&D
- → 1/3 of all high-quality scientific publications



1.3% EU business R&D investment ...Europe can do better at transforming this into leadership in innovation and entrepreneurship







Horizon Europe

The ambitious EU research and innovation framework programme (2021-2027)



to strengthen the EU's scientific and technological bases and the European Research Area (ERA)



to boost Europe's innovation capacity, competitiveness and jobs



to deliver on citizens' priorities and sustain our socioeconomic model and values

The Commission proposes a budget of € 100 billion for Horizon Europe.





Horizon Europe: evolution not revolution

Specific objectives of the Programme







Commission proposal for budget: €100 billion* (2021-2027)



^{*} This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.



European Commission



HEU ≠ **H2020** – **Consideration** *

- **100** mld €? = 94.1 HEU + 2.4 Euratom + 3.5 InvestEU R&I (in fieri)
- ¬ ≠ H2020 (1) Nessun target nè introduzioni di soglie minime di budget a supporto delle PMI (20% dei Pilastri 2 e 3 di Horizon 2020)

Ma... Il 70% del budget EIC alle PMI (post Accordo aprile 2019)

- ¬ ≠ H2020 (2) Nessuna % di budget riservata al supporto delle supporto delle KETs (€5.9mld in Horizon 2020)
- Nessun budget "separato" per le Mission "There will not be a separate budget for missions, though missions will have a budget assigned through the work programme. Missions [...] receive their budget from more than one cluster".

Ma... maximum of 10% of the annual budget of Pillar II shall be programmed through specific calls for implementing the missions (post Accordo aprile 2019)

NEW! Horizon Europe – Almeno il 35% del budget sarà allocato a obiettivi relativi al climate change (Vs 25% dell'intero MFF)

* Budget still under negotiation





Lessons Learnedfrom Horizon 2020 Interim Evaluation

Key Novelties in Horizon Europe



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



R&I Missions



Strengthen international cooperation



Extended association possibilities



Reinforce openness



Open science policy



Rationalise the funding landscape



New approach to Partnerships



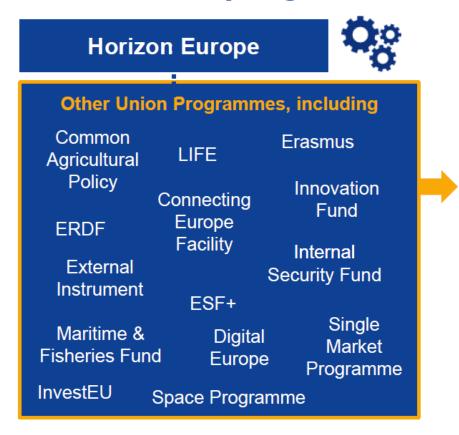
Encourage participation



Spreading Excellence



Commission proposal for synergies with other Union programmes



Enhanced synergies

Compatibility

Harmonisation of funding rules; flexible co-funding schemes; pooling resources at EU level

Coherence and complementarity

Alignment of strategic priorities in support of a common vision









The legislative phase (2018 – 2020)





Gli attori chiave a livello legislativo



Il Parlamento emenda il testo EC > HE rapporteurs, ITRE HE Shadow Committee, ITRE Committee MEPs, Plenary (all the MEPs) Negoziato interistituzionale
Trilogo informale

Testo finale

Il Consiglio emenda il testo EC > Research Working Party (28 R&I Attaché), Coreper I (28 MS Ambassadors), COMPET / Research (28 MS Research Ministers)





Key elements of the Commission proposal are preserved





Missions as key novelty for more impact and visibility

EIC as one-stop shop for innovation to help small companies to innovate and scale up

Strategic planning as direction-setting for the work programmes

New approach to partnerships to rationalise the landscape

Impact pathways to track progress with the achievement of the Programme's objectives over time.

Rules for participation aiming at further simplification and a more robust Open Access regime.





Key changes introduced by Council and EP

- Cluster inclusive and secure society is split
- Fast track procedure in pillar II and in the EIC Pathfinder for bottom-up proposals, small consortia and time-to grant not exceeding 6 months
- EIC to provide two types of support: blended and grants-only
- Areas for possible missions and institutionalised partnerships based on Article 185/7 TFEU are listed
- Widening participation: additional measures and increased budget prospect
- Strategic planning as Commission implementing act to facilitate implementation



Horizon Europe: structure







Get familiar with...



Under definition...

STRATEGIC PLANNING

"for preparing the content in the work programmes(...) covering a maximum period of four years"

https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=40127

IMPLEMENTATION STRATEGY

'will set out how the programme will be managed in practice'

https://ec.europa.eu/info/sites/info/files/research and innovation/strategy on research and in novation/documents/ec rtd implementation-strategy he.pdf

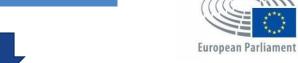




LO STRATEGIC PLANNING

Testo Consolidato di Horizon Europe









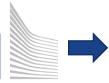


5 Board per le Missioni



European

Commission







Comitato di Programma

Shadow (Strategico)





Missioni specifiche

Piano Strategico





Partenariati coprogrammati e co-finanziati



Programmi di Lavoro di Horizon Europe

Calls for Proposals





Processo di revisione dei Partenariati di R&I

Partenariati Istituzionalizzati





STRATEGIC PLANNING → STRATEGIC PLAN

A seguito dell'accordo politico del testo legislativo ad aprile 2019, la Commissione ha avviato lo Strategic Planning process. Il risultato atteso è la definizione del cd. multiannual Strategic Plan (implementing act, in accordo con art.12 (4)) per preparare i contenuti dei Programmi di Lavoro e delle call per i primi 4 anni di Horizon Europe (2021-24)

In particolare, lo strategic plan i conterrà seguenti elementi:

- **a. Key strategic orientations [KSOs] for R&I support**, *including a description of* **expected impacts**, *cross cluster issues and* **intervention areas covered**.
- **b.** Identificazione European Partnerships according to Article 8(1)(a and b) of the [FP Regulation].
- **c. Identificazione Missions** according to Article 5 of the Specific Programme and Article 7 and Annex Va of the Regulation establishing Horizon Europe.
- **d. Aree di cooperazione internazionale** (actions to be aligned with Research & Innovation of other nations and regions of the world at major scale, or actions to be carried out in cooperation with organisations in third countries)
- e. Aspetti trasversali



COSA ASPETTARSI DAL PRIMO PIANO STRATEGICO?

Strategic Plan : template structure 1/3

- 1. Introduction (1 page)
- 2. Key strategic orientations and expected impacts
 - 2.1 Framework/Intervention Logic (1 page)*
 - 2.2 10 KSOs (10 pages)
- 3. Partnerships (2-4 pages)
- 4. Missions (1-2 pages)
- 5. Areas for international cooperation (1 page)

- 6. Specific issues (~4 pages)
- Gender and diversity
- SSH
- · Ethics and integrity
- · Better access to- and uptake of results
- Open science, including early and open sharing of data and results
- Dissemination and Exploitation, including links to education and training, market uptake and deployment
- KETs
- · Balance between R&I

+ cluster-specific Annexes (pages)





COSA ASPETTARSI DAL PRIMO PIANO STRATEGICO?

Strategic Plan: template structure 2/3

CLUSTER IMPACT ANNEX - Example Cluster 1 – Health

Introduction: References and highlights to the relevant policy context and initiatives for health R&I; mention of the relevant key strategic orientations (up to 1 page)

How will Cluster 1 of Horizon Europe make a difference?

1. Expected impacts of cluster 1: Short presentation of the 6 expected impacts of cluster 1, indicating for each of them the relevant key strategic orientation (2-3 pages)

Table 1 Overview of R&I expected impacts, intervention areas, and Horizon Europe identified partnerships for cluster 1

Expected R&I Impact	Ares of Intervention covered	European Partnerships (co-programmed and co- funded)
Staying healthy in a rapidly changing society	1.2.1. Health throughout the Life Course	ERA for Health
	1.2.2. Environmental and Social Health Determinants	
2.Living and working in a health-promoting environment	1.2.2. Environmental and Social Health Determinants	Partnership on Risk Assessment of Chemicals
	1.2.1. Health throughout the Life Course	
3.Tackling diseases and reducing disease burden	1.2.3. Non-Communicable and Rare Diseases	EU-Africa Global Health partnership
	1.2.4. Infectious Diseases, including poverty-related and neglected diseases	One Healt European Commission



COSA ASPETTARSI DAL PRIMO PIANO STRATEGICO?

Strategic Plan: template structure 2/2

CLUSTER IMPACT ANNEX - Example Cluster 1 – Health

2. International cooperation (1/2 page)

Main actions to be aligned with R&I of other nations/regions at major scale and actions to be carried out in cooperation with organisations in other third countries

3. Cross clusters complementarities

Table 2 Overview of Cross Cluster Complementarities

Cross Cluster Complementarities		
(identification of the relevant expected	d impacts of the other clusters/ to be elaborated after the finalisation of the expected impacts)	
Cluster 2 'Culture, creativity and		
inclusive societies'		
Cluster 3 'Secure Societies'		
Cluster 4 'Digital, Industry and Space'		
Cluster 5 'Climate, Energy and Mobility'		
Cluster 6 'Food, Bioeconomy Natural		
Resources, Agriculture and		
Environment'		
Pillar I		
Pillar II	Europea	
'	Commis	



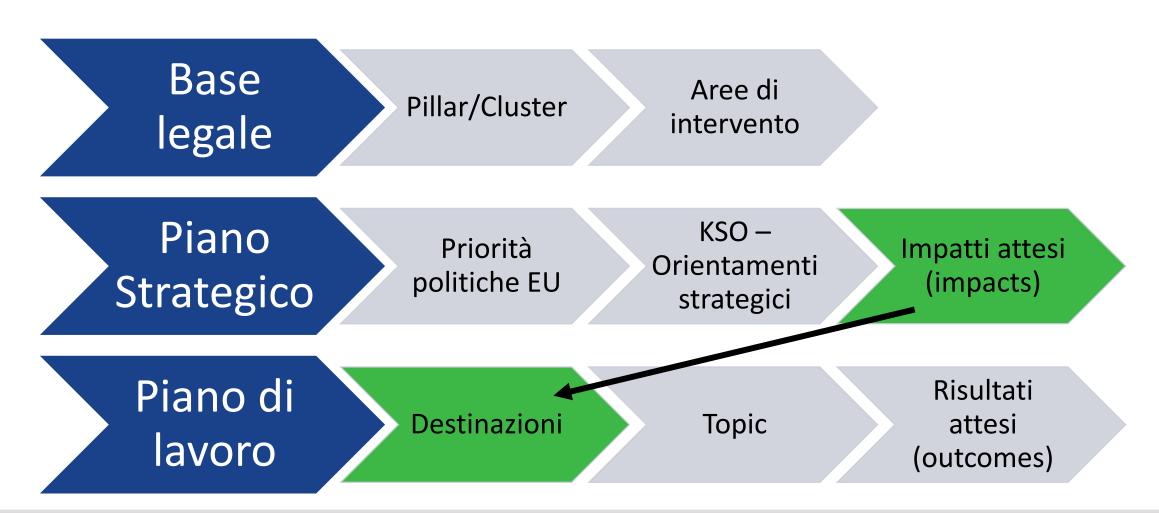
COSA ABBIAMO OGGI?

- ¬ Nuovo glossario (ancora in definizione)
- The lementi di lettura trasversali al II pillar e ai relativi cluster (in discussione)
 - Key Strategic Orientation KSO $(10) \rightarrow (4)$
 - Expected impacts (36, 6 per cluster) \rightarrow (15)
- Nuova struttura dei WP e dei rispettivi topic (in discussione)
 - Destinations
 - Focus Impatto
 - Expected impact (cluster) → outcomes (topic) → outputs (progetto)





Quadro logico







HORIZON EUROPE IMPACT LOGIC GLOSSARY

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EC POLICY PRIORITIES	Political Guidelines for the European Commission 2019-2024 Cluster 4 focuses on Green Deal; Europe fit for a Digital Age; and Economy that Works for People
KEY STRATEGIC ORIENTATIONS	10 strategic objectives within the EC policy priorities, where R&I investments are expected to make a difference (shared by six Clusters)
EXPECTED IMPACTS = DESTINATIONS	Wider, long-term effects on society, environment, economy and science, enabled by the outcomes of R&I outcomes (six impacts per Cluster) Packages of actions around which each Work Programme part within Pillar II will be designed.
ORIENTATIONS FOR TOPICS	Placeholders for topics, while topics and calls for proposals are being developed; they provide a description of the types of topics and calls that will be foreseen under each destination. Will not appear in the Work Progamme.
TOPICS	Outcomes, i.e. medium-term effects of uptake of project results
PROJECTS	Outputs, i.e. what is produced in the short-term during the project implementation, such as innovative solutions, demonstrators, business models, recommendations etc.





ELEMENTI DI LETTURA TRASVERSALI al II pillar

10/4 Key Strategic Orientation

6 Policy priorities

36/15 Expected Impact

6 Cluster

The **key strategic orientations** have been defined to set out the R&I contribution to EC political priorities ('whole of government' approach). They aim at creating a strong bridge between R&I and EU policy priorities, and at giving directionality towards the UN SDGs – across all clusters (and HE parts)



Versione settembre '20

- This is a second of the second
- Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment;
- This is a system of the first digitally led circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems;
- This is a second to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions.





KSO	IMPACT AREAS	CLUSTERS
1. Promoting an open strategic autonomy by leading the development of key digital and enabling technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations.	 A competitive and secure data-economy Industrial leadership in key and emerging technologies that work for people Secure and cybersecure digital technology High quality digital services for all 	Cluster 1 (Health) Cluster 2 (Culture, Creativity and Inclusive Society) Cluster 3 (Civil security for society) Cluster 4 (Digital, Industry and Space)
2. Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment.	 Enhancing ecosystems and biodiversity on land and in waters Clean and healthy air, water and soil Sustainable food systems and nutrition security 	Cluster 1 (Health) Cluster 4 (Digital, Industry and Space) Cluster 5 (Climate, Energy and Mobility) Cluster 6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment)





KSO	IMPACT AREAS	CLUSTERS
3. Making Europe the first digitally led circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems.	 Climate change mitigation and adaptation Affordable and clean energy Smart and sustainable transport Circular and clean economy 	Cluster 1 (Health) Cluster 4 (Digital, Industry and Space) Cluster 5 (Climate, Energy and Mobility) Cluster 6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment)
4. Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions.	 A resilient EU prepared for emerging threats A secure and open EU society Good health and high-quality accessible healthcare Inclusive growth and new job opportunities 	Cluster 1 (Health) Cluster 2 (Culture, Creativity and Inclusive Society Cluster 3 (Civil security for society) Cluster 4 (Digital, Industry and Space) Cluster 5 (Climate, Energy and Mobility) Cluster 6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment)



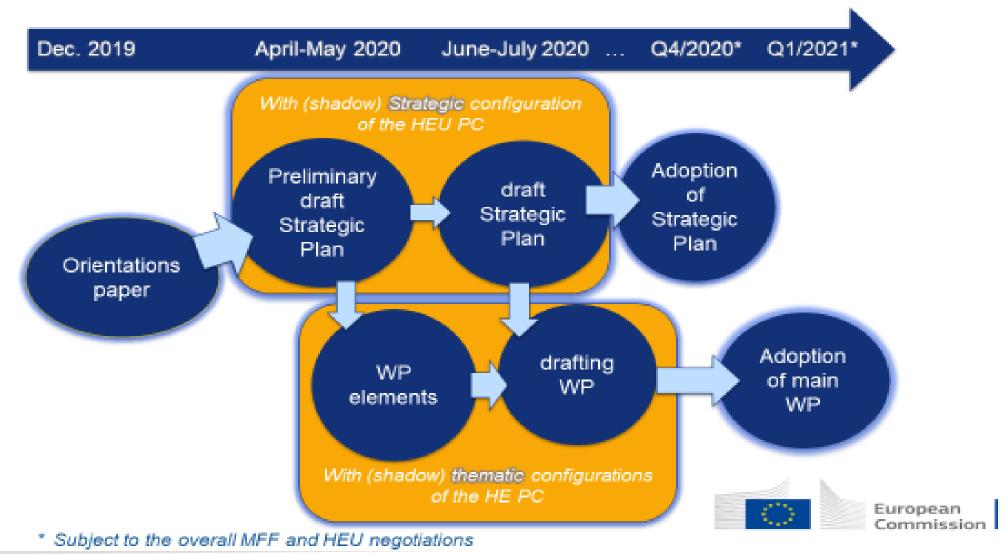
	DEFINITION
EC POLICY PRIORITY	Based on the Political Guidelines for the European Commission 2019-2024 with a focus on three key priorities : Green Deal, Europe fit for a digital age, Economy that works for people
KEY STRATEGIC ORIENTATIONS FOR R&I SUPPORT	= A set of strategic policy objectives that set the directions for R&I investments in order to achieve the political guidelines and policy objectives of the new Commission
=> DESTINATIONS	= long term targeted effects on society (incl. the environment), the economy and science enabled by the outcomes of EU R&I investment
EXPECTED OUTCOMES =>TOPICS	= Uptake, diffusion, use and/or deployment of project's outputs expected by direct project target groups (medium term).
EXPECTED OUTPUTS => DELIVERABLES	= Deliverables to be generated by the project during its implementation, such as a report, a database, a publication, a prototype, trained researchers, new infrastructures, etc. (short term).

PROPOSAL

- DELIVERABLES/EXPECTED OUTPUTS/
- TOPICS/EXPECTED OUTCOMES
- DESTINATIONS/EXPECTED IMPACTS



Overall timeline for Horizon Europe





Under definition...

STRATEGIC PLANNING

"for preparing the content in the work programmes(...) covering a maximum period of four years"

IMPLEMENTATION STRATEGY

'will set out how the programme will be managed in practice'

- Processi implementativi, misure di semplificazione, aspetti trasversali
- Documento di orientamento, co-design (consultazione e co-design workshop) pubblicazione del report (novembre 2019)
- Definizione delle disposizioni finanziarie nel MGA (draft completo in primavera, AGA a settembre)



Under definition...

IMPLEMENTATION STRATEGY

'will set out how the programme will be managed in practice'

- Processi implementativi, misure di semplificazione, aspetti trasversali
- Documento di orientamento, co-design (consultazione e co-design workshop) pubblicazione del report (novembre 2019)
- Pubblicazione prima versione della strategia di implementazione





Implementation strategy Contenuti e obiettivi

Implementation strategy: Guiding principles

- Maximising impacts
- Easing access, greater transparency and further simplification
- 3. Digital transformation
- Fostering synergies with other EU spending programmes





Work Programme

> Semplificazione

Quando?

- Template Q2

- WP più semplici, chiari e concisi
- Specificare nel topic quali sono i risultati e l'impatto attesi
- Template più semplici





Submission and evaluation

- > Semplificazione
- Massimizzazione dell'impatto

- Riduzione delle informazioni richieste in proposta (conseguente riduzione numero di pagine)
- Le modalità di valutazione andranno ad assicurare un portfolio coerente di progetti (soprattutto EIC e Missions)
- Semplificazione del processo di valutazione «double stage»
- Maggiore interazione nella fase di valutazione (right to react)





Digitalizzazione

╗ Facilitare l'accesso al Programma

- Sviluppare e migliorare il Funding and Tenders Portal
- Continuità con l'esperienza H2020
- Estensione del Funding and Tenders Portal ad altri Programmi previsti nel MFF (eGrants)
- Assicurare una migliore attività di reporting e monitoraggio





Model Grant Agreement

- > Semplificazione
- Facilitare l'accesso al Programma
- > Favorire le sinergie

- Corporate approach
- Semplificazione nelle regole e nei processi
- Utilizzo di forme di costo semplificate
- Internal invoice
- Third parties



<u>Verso Horizon Europe 2021 – 2027</u>

- The tappe di Horizon Europe: la proposta della Commissione, il Negoziato e l'Accordo di Aprile 2019
- ☐ I prossimi passi: Strategic Planning, Implementation Strategy, Work Programme

 Q&A
- ¬ La struttura del Programma
 - Evoluzione, non rivoluzione: Il budget e la struttura a tre Pilastri
 - Le principali novità del Programma e un confronto con Horizon 2020
 - I tre Pilastri di Horizon Europe in sintesi

Q&A

- ☐ Lo European Innovation Council EIC in Horizon Europe
 - Il Pilot 2018-2020 e le principali novità attese in Horizon Europe
 - Gli strumenti di finanziamento EIC per i ricercatori
 - Strumenti operativi a disposizione di ricercatori e aziende

Q&A e Conclusioni

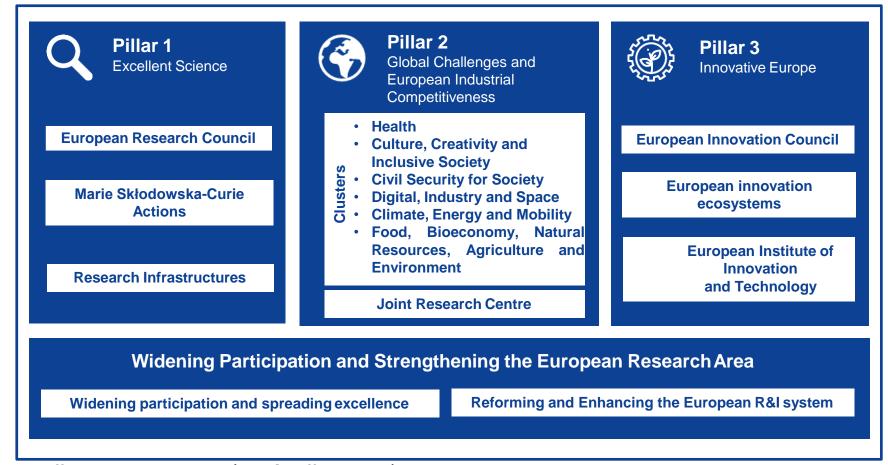


7

Ithe three Pillars of Horizon Europe



Horizon Europe: structure



*basato su testo di compromesso (17 Aprile 2019)



Pillar 1

EXCELLENT SCIENCE:

reinforcing and extending the excellence of the Union's science base

European Research Council

 Frontier research by the best researchers and their teams

Commission proposal: € 16.6 billion

Marie Skłodowska-Curie Actions

 Equipping researches with new knowledge and skills through mobility and training

Commission proposal: € 6.8 billion

Research Infrastructures

 Integrated and inter-connected world-class research infrastructures

Commission proposal: € 2.4 billion





Il II pillar di Horizon EUROPE

- incentrato sulle sfide globali e la competitività industriale,
- nigliorare le problematiche della società e le tecnologie industriali con un approccio top -down
- integrazione in cluster, con una serie di settori di intervento ciascuno per incentivare la collaborazione interdisciplinare, intersettoriale, trasversale e internazionale, ottenendo così un impatto più elevato e cogliendo meglio il potenziale di innovazione che spesso è maggiore i punti di intersezione di discipline e settori
- il ruolo essenziale dell'**industria** nel conseguimento di tutti gli obiettivi del programma, favorito anche dagli investimenti nelle tecnologie abilitanti fondamentali del futuro.

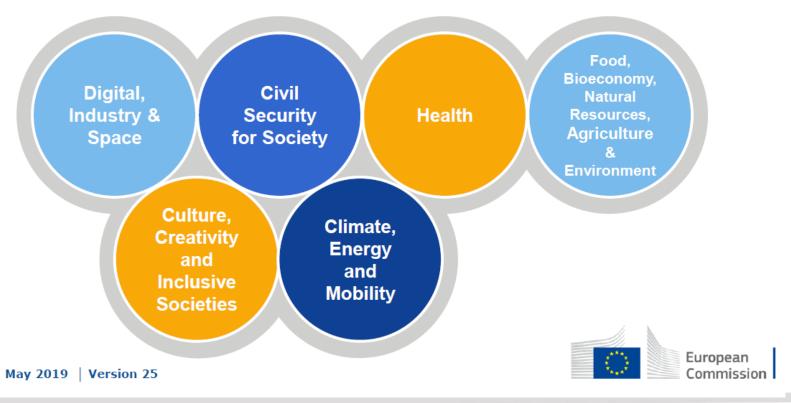


Pillar 2 - Clusters

Global Challenges & European Industrial

Competitiveness: boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

Commission proposal for budget: € 52.7 billion





Cluster	Aree di intervento	
Sanità	 Salute lungo l'arco della vita Malattie non trasmissibili e rare Strumenti, tecnologie e soluzioni digitali per la salute e l'assistenza, compresa la medicina personalizzata 	 Determinanti ambientali e sociali della salute Malattie infettive, comprese le malattie correlate alla povertà e trascurate Sistemi sanitari
Cultura, creatività e società inclusiva	Democrazia e governanceTrasformazioni sociali ed economiche	Cultura, patrimonio culturale e creatività
Sicurezza civile per la società	Società in grado di far fronte alle calamitàProtezione e sicurezza	Cibersicurezza
Digitale, industria e spazio	 Tecnologie produttive Materiali avanzati Internet di prossima generazione Industrie circolari Spazio, compresa l'osservazione della terra Tecnologie abilitanti emergenti 	 Tecnologie digitali fondamentali, comprese le tecnologie quantistiche Intelligenza artificiale e robotica Calcolo avanzato e Big Data Industria a basse emissioni di CO₂ e pulita Tecnologie abilitanti emergenti
Clima, energia e mobilità	 Scienza e soluzioni climatiche Sistemi energetici e reti Comunità e città Competitività industriale nei trasporti Mobilità intelligente 	 Approvvigionamento energetico Edifici e strutture industriali in transizione energetica Trasporti e mobilità puliti, sicuri e accessibili Immagazzinamento energetico
Prodotti alimentari, bioeconomia, risorse naturali, agricoltura e ambiente	 Osservazione ambientale Agricoltura, silvicoltura e zone rurali Sistemi circolari Sistemi alimentari 	 Biodiversità e risorse naturali Mari, oceani e acque interne Sistemi di innovazione biologici nell'UE Bioeconomia

Pillar 3

INNOVATIVE EUROPE:

stimulating market-creating breakthroughs and ecosystems conducive to innovation

European Innovation Council

 Support to innovations with breakthrough and market creating potential

European innovation ecosystems

 Connecting with regional and national innovation actors

European Institute of Innovation and Technology (EIT)

 Bringing key actors (research, education and business) together around a common goal for nurturing innovation

Commission proposal: € 10.5 billion, incl. up to € 500 million for ecosystems

Commission proposal: € 3 billion





Lessons Learnedfrom Horizon 2020 Interim Evaluation

Key Novelties in Horizon Europe



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



R&I Missions



Strengthen international cooperation



Extended association possibilities



Reinforce openness



Open science policy



Rationalise the funding landscape



New approach to Partnerships



Encourage participation



Spreading Excellence





European Innovation Council

Support to innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors (70% of the budget earmarked for SMEs)

European Innovation Council – a one-stop-shop Helping innovators create markets of the future, leverage private finance, scale up their companies, Innovation centric, risk taking & agile, proactive management and follow up

Two complementary instruments bridging the gap from idea to investable project

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

Accelerator:

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



R&I Missions

R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and 5 missions areas.

Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar (drawing on inputs from other pillars)



Adaptation to climate change, including societal transformation

Cluster 5, Cluster 2



Cluster 6 seas, coastal and inland waters



5 Mission areas



Cancer

Cluster 1

Cluster 5

Climate-neutral and smart cities

Healthy





Soil health and food

Cluster 6



MISSIONSIN PILLS

Budget

- There is no fixed budget for each mission
- During the first three years of the programme, a maximum of 10% of the annual budget of Pillar II shall be programmed through specific calls for implementing the missions
- For the remaining part of the programme, and only after a positive assessment of the mission selection and management process, this percentage may be increased



MISSIONSIN PILLS

Is it a new instruments?

- Each mission may involve one or more of the following:
 - Launch specific calls in Horizon Europe and other programmes. These calls will encourage creativity and bottom-up working from the proposer;
 - Identify specific actions to change/ improve policy context, which are critical for missions success, such as framework conditions;
 - Make use of the appropriate partnerships;
 - Mobilise structural funds to the alignment to mission goals;
 - Establish the appropriate links with national programmes;
 - Influence the international agenda, combining efforts with similar third country programmes.





PROPOSTA MISSIONS

Sono state pubblicate il 25 giugno 2020 le proposte di missioni. Durante gli R&I Days i Mission Board hanno presentato ufficialmente alla Commissione le proprie relazioni conclusive con le proposte dettagliate di missioni specifiche.

high-level independent experts proposed potential EU missions: bold goals to be achieved within a set timeframe aimed at tackling some of our greatest global challenges.

Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education and Youth said:

"Missions will be crucial for the transformation of Europe into a greener, healthier, more resilient continent for all. Since September last year, the five Mission Boards have been working closely together with citizens to shape these ambitious missions. I am looking forward to hearing fellow Europeans' views on these proposals, to ensure they capture their vision and meet their expectations."



Conquering Cancer: Mission Possible

Targets by 2030: more than 3 million lives saved, living longer and better: achieve a thorough understanding of cancer, prevent what is preventable, optimise diagnosis and treatment, support the quality of life of all people exposed to cancer, and ensure equitable access to the above across Europe.





A Climate Resilient Europe - Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030

Targets by 2030: prepare Europe to deal with climate disruptions, accelerate the transition to a healthy and prosperous future within safe planetary boundaries, and scale up solutions for resilience that will trigger transformations in society.

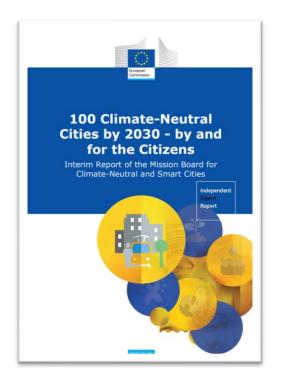




Mission Starfish 2030: Restore our Ocean and Waters

Targets by 2030: filling the knowledge and emotional gap, regenerating marine and freshwater ecosystems, zero pollution, decarbonising the blue economy, and revamping governance. These mutually supportive objectives will enable the regeneration of the water cycle as a whole.





100 Climate-Neutral Cities by 2030 - by and for the citizens

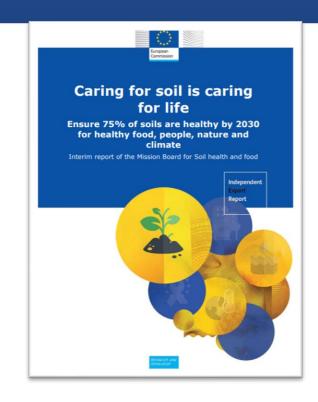
Targets by 2030: support, promote and showcase 100 European cities in their systemic transformation to climate neutrality by 2030 and turn these cities into innovation hubs for all cities, benefitting quality of life and sustainability in Europe.





Caring for Soil is Caring for Life

Targets by 2030: at least 75% of soils in the EU are healthy for food, people, nature and climate. The proposed mission combines research and innovation, education and training, investments and the demonstration of good practices using "Living labs" (experiments and innovation in a laboratory on the ground) and "Lighthouses" (places to showcase good practices).



The EU missions' idea is to tackle these societal challenges in a new way: targeted, time-bound and with a measurable goal. They bring together policies and instruments as a coherent, joined-up approach to ensure a strong impact on society and drive long-term, systemic and disruptive change. It is a huge ambition that we plan to fulfil together for a sustainable Europe for all. M. GAbriel







New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key features

- Simple architecture and toolbox
- Coherent life-cycle approach
- Strategic orientation

Co-programmed

Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

Co-funded

Based on a joint programme agreed and implemented by partners; commitment of partners for financial and in-kind contributions

Institutionalised

Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe





EUROPEAN PARTNERSHIP DEFINITION

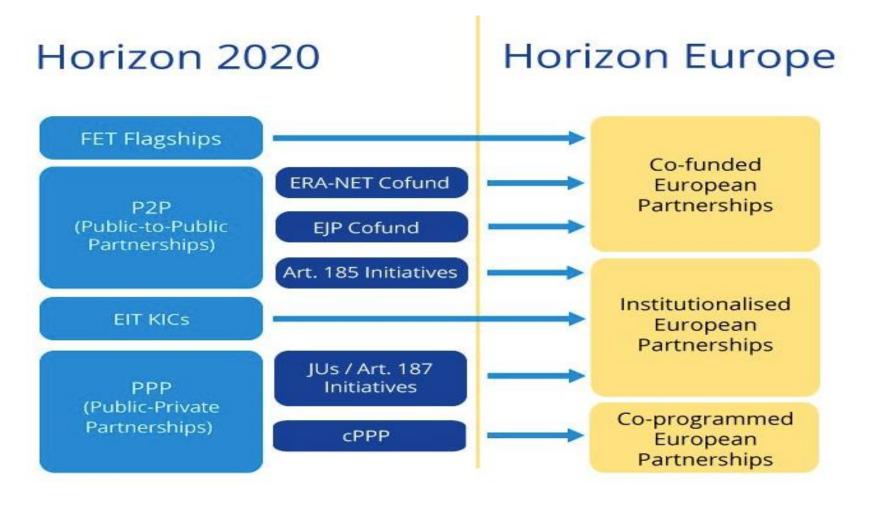
European Partnerships provide a framework for programme level collaboration between the Union and public or private partners.

European Partnerships are initiatives where the **EU together with private** and/or public partners commit to jointly support the development and implementation of a programme of research and innovation activities. The partners could represent industry, universities, research organisations, bodies with a public service remit at local, regional, national or international level or civil society organisations including foundations and NGOs.



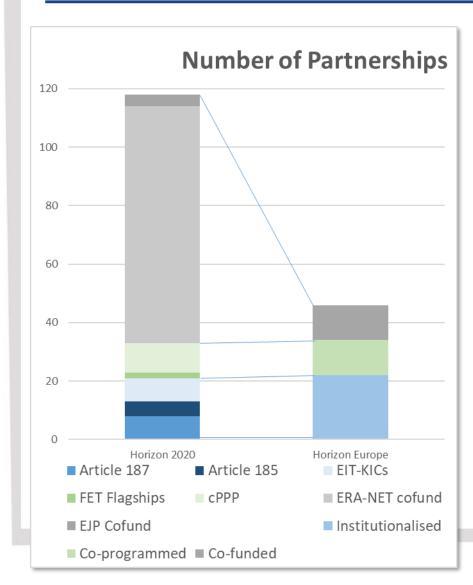


Da H2020 a Horizon Europe





PARTNERSHIP PORTFOLIO in HORIZON EUROPE



49 proposed
Partherships in
HORIZON EUROPE
(+ 1)

The following overview represents the current (April 2020 assumption concerning the form of implementation and iming for European Parmerships in the Horton Europe Work Programme. The final decision on launching a European Partnerships and its timing will depend on further progress: In their preparation and the formul decisions on European Partnerships (linked with the adoption of Strategic Plan/work programmes, and log is lative procedures, depending on the form

CP: Co-programmed, CF: Co-funded, A185: Decision of the European Parliament and Council based on Article 185 TFEU, A187: Council regulation based on Article 185 TFEU

Partnership candidate	Likely form of implementation	WP 2021/2 or A185/7 in 2021	WP 2023/4
Cluster	Health		
EU-Africa Global Health Partnership	A185/A187/CP	X	
Innovative Health Initiative	A187/CP	X	
 European partnership for chemicals risk assessment 	CF	X	
4. ERA for Health	CF (CP)	X?	(X)
 Large-scale innovation and transformation of health systems 	CF (CP)	X?	(X)
6. Personalised Medicine	CF (CP)		X
7. Rare Diseases	CF (CP)		X
8. One Health/AMR	CF (CP)		X
Cluster Digital, In	dustry and Space		
9. High Performance Computing	A187/CP	X	
10. Key Digital Technologies	A187/CP	X	
11. Smart Networks and Services	A187/CP	X	
12. AI, data and robotics	CP	X	
13. Photonics Europe	CP	X	
14. Clean Steel - Low Carbon Steelmaking	CP	X	
15. European Metrology	A185/CF	X	
16. Made in Europe	CP	X	
17. Carbon Neutral and Circular Industry	CP	X	
18. Global competitive space systems	CP	X	
19. Geological Service for Europe	CF/CP	X	
(final allocation to a cluster tbc)			
Cluster Climate, e			
20. Transforming Europe's rail system	A187/CP	X	
21. Integrated Air Traffic Management	A187/CP	X	
22. Clean Aviation	A187/CP	X	
23. Clean Hydrogen	A187/CP	X	
24. Built environment and construction	CP	X	
25. Towards zero-emission road transport	CP	X	
26. Mobility and Safety for Automated Road	A187/CP	X	
Transport			
27. Zero-emission waterborne transport	CP	X	
 Batteries: Towards a competitive European industrial battery value chain 	CP	X	
29. Clean Energy Transition	CF (CP)	X	
30. Sustainable, Smart and Inclusive Cities and Communities		X	





Common for all European Partnerships

SRIA

- Strategic orientation: Priorities are defined as part of the strategic planning of
- **Necessity test for European Partnerships**, compared to traditional calls:
 - > Directionality: based on agreed objectives and expected impacts that are Research and Innovation Agendas / Roadmaps;
 - > Additionality: commitments from partners to mobilise and contribute res
- **Common set of criteria** along their life-cycle, defined in the Horizon Europe re criteria framework);
- Union contribution: clearly defined at the outset for the full duration of the in

In their implementation and certain features they differ, with the co-pro Commitments most simple to prepare and implement, and the institutionalised the mo

Strategic Plan





HEALTH

EU-Africa Global Health
Innovative Health Initiative
Chemicals Risk Assessment
Fostering an ERA for Health research
Large-scale innovation and
transformation of health systems in a
digital and ageing society
Personalised Medicine
Rare Diseases
One Health AMR

CLIMATE, ENERGY AND MOBILITY

Transforming Europe's rail system
Integrated Air Traffic Management
Clean Aviation
Clean Hydrogen
Built environment and construction
Towards zero-emission road transport
Mobility and Safety for Automated
Road Transport
Batteries
Clean Energy Transition
Sustainable, Smart and Inclusive Cities
and Communities

Smart and zero-emission waterborne

transport

DIGITAL, INDUSTRY AND SPACE

High Performance Computing
Key Digital Technologies
Smart Networks and Services
AI, data and robotics
Photonics Europe
Clean Steel - Low Carbon Steelmaking
European Metrology
Made in Europe
Carbon Neutral and Circular Industry
Global competitive space systems
European Geological Service

FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

Accelerating farming systems transition
Animal health: Fighting infectious diseases
Environmental Observations for a
sustainable EU agriculture
Rescuing biodiversity to safeguard life on
Earth

A climate neutral, sustainable and productive Blue Economy

Safe and Sustainable Food System for People, Planet & Climate

Circular bio-based Europe

PAPKE

Water4All: Water security for the planet

PILLAR III AND CROSS-PILLAR

EIT Climate KIC

EIT Health

EIT Manufacturing

EIT Food

EIT InnoEnergy

EIT Manufacturing

EIT Raw Materials

EIT Digital

EIT Urban Mobility

EIT Cultural and

Creative Industries

Innovative SMEs

European Open Science Cloud (EOSC)





International Cooperation

Tackling together global societal challenges; access to the world's best talents, expertise and resources; enhanced supply and demand of innovative solutions

Extended openness to association

- Third countries with good capacity in science, technology and innovation
- Taking into account objective of driving economic growth in Europe through innovation
- General opening for international participation
- Intensified targeted actions (flagship initiatives, joint calls, etc.)





Open Science across the programme

Open Science

Better dissemination and exploitation of R&I results and support to active engagement of society

Mandatory Open Access to publications: beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with open access requirements

Open Access to research data ensured: in line with the principle "as open as possible, as closed as necessary"; Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data

- Support to researcher skills and reward systems for open science
- Use of European Open Science Cloud





Budget evolution

June 2018 – November 2020





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Theme	Billion EUR Current price	% of the total HE		
Pillar I	23,10	27,0%		
ERC	14,86	17,4%		
MSCA	6,29	7,4%		
Infrastructure	2,15	2,5%		
Pillar II	47,18	55,2%		
Clusters	45,21	52,9%		
Health	6,89	8,1%		
Societies	1,25	1,5%		
Security	1,25	1,5%		
Industry - Digital	13,43	15,7%		
Cimate Energy Mobility	13,43	15,7%		
Food, Bioeconomy,				
Environment	8,95	10,5%		
JRC	1,97	2,3%		
Pillar III	12,09	14,1%		
EIC	8,75	10,2%		
Ecosystems	0,45	0,5%		
EIT	2,69	3,1%		
Widening ERA	3,18	3,7%		
TOTAL HE	85,54	100,0%		

CORE BUDGET HORIZON EUROPE

(al quale sommare NGE e top up dell'accordo di novembre 2020)

https://www.consilium.europa.eu/media /45770/st11251-re01-en20.pdf

Fondi Next generation EU – Settembre 2020

QUANTI?

5,4 miliardi (prezzi correnti) o 5 miliardi (prezzi 2018).

Nella posizione del consiglio di Settembre, che deriva dall' accordo degli Stati Membri su MFF di luglio 2020, non si ritrova nessuna suddivisione puntuale delle cifre, ma si afferma solamente che «risorse aggiuntive devono essere destinate esclusivamente ad azioni di ricerca e innovazione volte ad affrontare le conseguenze della crisi COVID-19, in particolare il suo impatto economico e sociale». Un approccio flessibile che non contraddice la proposta della Commissione di ripartire i fondi tra i Cluster 1, 4 e 5 ('Health', 'Digital, Industry and Space' e 'Climate, Energy Mobility') e lo European Innovation Council.





Accordo politico 10 novembre PE – CEU, ma...

- Accordo generale tra Parlamento europeo e il Consiglio sul prossimo Quadro finanziario pluriennale e sul nuovo strumento per la ripresa Next Generation EU.
- L'accordo raggiunto prevede la destinazione di 16 miliardi in aggiunta al Piano di ripresa concordato dai capi di Stato e di governo al vertice di luglio.
- Di questi, 4 miliardi aggiuntivi (prezzi costanti 2018) sono destinati ad Horizon Europe
- La cifra complessiva di Horizon Europe equivale quindi a circa **95 miliardi di €** in prezzi.correnti. A prezzi 2018 il compromesso istituzionale fissa per Horizon Europe una dotazione finanziaria di 84,9 miliardi di euro in prezzi 2018, dei quali 79,9 provenienti dal tradizionale bilancio comune (75,9 + 4) e 5 da *Next Generation EU*.

https://ec.europa.eu/commission/presscorner/detail/en/ip 20 2073



Proposal/Istitution	Proposal	EC Juncker	Position of	CEU Michel	Proposal EC v	on der Leyen	Position	of CEU	Agreemen	t PE –CEU*
Date	June 2018		February 2020		May 2020		29-set-20		10-nov-20	
Price (Current/costant 2018)	current	2018	current	2018	current	2018	current	2018	current	2018
Horizon Europe (MFF)	94,1	83,5	91,2	80,9	91,2	80,9	85,5	75 <i>,</i> 9	85,5	75 <i>,</i> 9
Horizon Europe (NGE)			0	0	14,6	13,5	5,4	5	5,4	5
Horizon Europe (Top -up)			0	0					4,5**	4
Horizon Europe (TOT)	94,1	83,5	91,2	80,9	105,8	94,4	90,9	80,9	95,4	84,9

L'accordo sul budget non è ancora definitivo. Le cifre in tabella sono riportate in miliardi di euro.

NB. Attenzione alla differenza tra prezzi correnti e prezzi costanti al 2018.

* Il valore dei prezzi correnti è basato su una stima interna fatta da APRE

EC= Commissione Europea; CEU= Consiglio dell' Unione Europea; PE= Parlamento Europeo



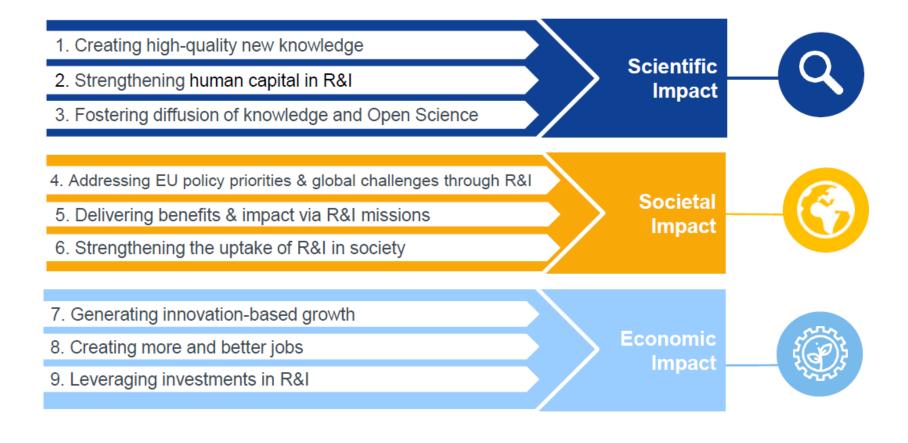


Breve focus sulle regole di partecipazione





Key impact pathways to track progress





Model Grant Agreement

> Corporate Approach

- ✓ Ridurre il numero di MGA (oltre 40 modelli nel contesto europeo)
- ✓ Un unico modello per tutti i programmi
- ✓ Tre versioni in totale: una per i programmi che usano forme di costo miste; uno per i programmi che utilizzano lo «unit cost»; uno per i programmi che utilizzano il «lump sum»
- ✓ Inserimento di specificità relative alle regole di partecipazione per Horizon Europe
- ✓ Ogni programma avrò un suo specifico Annex per gli aspetti specifici (per Horizon Europe disciplinerà: IPR; etica: gender; open access; ...)
- ✓ Favorire sinergie tra programmi e semplificazione

La principale sede di discussione e confronto è il «MGA expert group»





Principali novità MGA Costo del personale

- > Due possibilità: actual cost o unit cost (costo medio)
- > Costo giornaliero e non più costo orario
- Una sola opzione per il tempo produttivo (215 giorni)
- > Un solo metodo per il calcolo del costo (su base annuale)
- > Non più necessario far riferimento all'ultimo anno finanziario concluso
- > Niente più timesheet! (sostituiti da una dichiarazione mensile)





Principali novità MGA <u>Terze parti</u>

➤ Viene meno il termine linked third party → Affiliated entities



- ➤ Nel caso dell'*in kind contribution* non sarà più necessario distinguere se è «not used on the beneficiary premises» ai fini del calcolo dei costi indiretti.
 - ➤ Non esisteranno articoli specifici nel MGA





Model Grant Agreement

>Utilizzo di forme di costo semplificate

Tre tipologie:

- Unit cost
- Flat rate
- Lump sum
- > Ridurre il rischio di errore

Lump sum

- > Ridurre la documentazione finanziaria
- > Eliminare l'audit finanziario

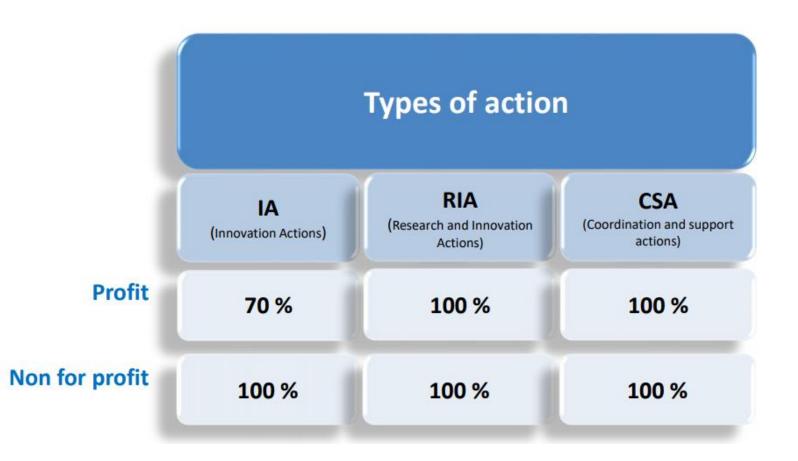






Elementi di continuità con Horizon 2020

¬ Funding rates



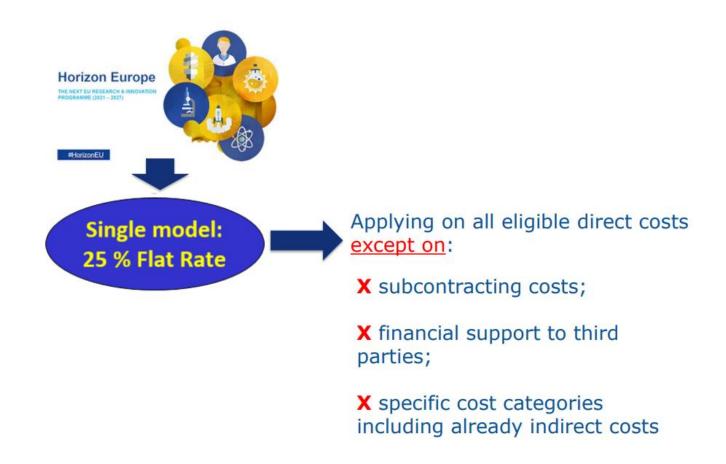




Elementi di continuità con Horizon 2020

¬ Costi indiretti

Flat rate al 25%





Elementi di continuità con Horizon 2020

The draft HE rules set the same three award criteria we have in H2020: **Excellence**, 'Impact' and 'Quality and efficiency of the implementation'. These need to be spelled out, taking into account the lessons learnt:

- Simplify and reduce the number of 'aspects to be taken into account', where
 possible, ensuring that the same aspect is not assessed twice;
- Include an assessment of the quality of applicants under 'implementation', rather than as a separate binary assessment of operational capacity;
- Simplify or remove assessment of management structures.





Link utili

¬¬ Report co-design Implementation Strategy

https://ec.europa.eu/info/sites/info/files/research and innovation/contact/documents/ec rtd hecodesign-implementation 112019.pdf

¬ Prima versione strategia di implementazione

https://ec.europa.eu/info/sites/info/files/research and innovation/strategy on research and innovation/documents/ec rtd implementation-strategy he.pdf



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 - Strumenti operativi a disposizione di ricercatori e aziende

Q&A e Conclusioni





European Innovation Council

Support to innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors.

European Innovation Council Helping innovators create markets of the future, leverage private finance, scale up their companies,

Innovation centric, risk taking & agile, pro- active management and follow up

Two complementary instruments bridging the gap from idea to investable project

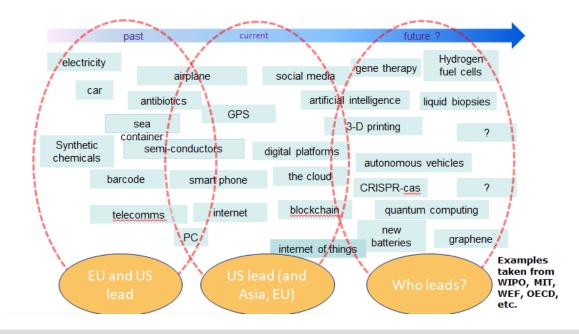
Pathfinder: grants (from early technology to precommercial)

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



DA DOVE PARTIAMO?

"The Enhanced European Innovation Council (EIC) pilot aims to support top-class innovators, start-ups, small companies and researchers with bright ideas that are radically different from existing products, services or business models, are highly risky and have the potential to scale up internationally."





What's holding back European innovation

Innovation performance

Lack of breakthrough and disruptive innovations that create new markets

Innovation funding

Financing gap between R&D grants and private investment for scaling up innovative start-ups

Innovation ecosystem

Many national & local ecosystems, but fragmented at European level



First pilot phase launched in 2018 - 19

- ✓ Introduction of open support for Start-ups and SMEs (no predefined themes)
- ✓ Introduction of interviews with juries of experienced innovators & investors to select SMEs for funding
- ✓ Launch of major prizes for breakthrough innovations, e.g low cost space launcher (€10 million prize); artificial photosynthesis (€5 million prize)
- ✓ Increased budget of €1 billion (2019) and inclusion of "FET Pro-active" in pilot EIC Pathfinder, with 6 target technologies + Transition activities
- ✓ **New EIC Advisory Board** to bring in leading innovators for strategy & implementation (appointed in July 19, meetings in Sept, Dec, Feb)
- ✓ Introduction of pilot accelerator with option to apply for blended finance (combined grant and equity)
- **✓** Recruitment of first EIC programme managers





Final pilot phase in 2020

- ✓ Increased budget of €1.4 billion (2020)
- ✓ EIC Advisory Board to present Vision for "full EIC" and roadmap for implementation
- "Green Deal" EIC accelerator (€300m, applications by 19 May)
- ✓ Pilot for woman innovators (startups with female CEO) at least 25% at final interview phase.
- ✓ Pilots with EIT KICs to test collaboration mechanisms with EIC
- ✓ Establishment of EIC Fund and first wave of equity investments/ coinvestments



EUROPEAN INNOVATION COUNCIL

EIC Advisory Board



CHAIR Mark Ferguson Entrepreneur, Science Foundation Ireland



VICE-CHAIR Hermann Hauser Co-founder of Amadeus Capital Partners



Kerstin Bock **CEO of Openers**



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Jo Bury Managing Director of Flanders Institute of Biotechnology



Dermot Diamond Principal Investigator: INSIGHT Centre for Data Analytics, Dublin City University



Laura Gonzalez-Estefani Founder and CEO at TheVentureCity



Jim Hagemann Snabe Chair Siemens AG, Chair AP Moller Maersk A/S



Ingmar Hoerr Founder and Chairman of the Supervisory Board of CureVac



Fredrik Hörstedt Vice president of utilisation Chalmers University of Technology



Heidi Kakko Partner of BaltCap Growth Fund



Bindi Karia European Innovation Expert + Advisor,



Anita Krohn Traaseth



Jerzy Langer Connector of People and Businesses Former CEO Innovation Norway Physicist, Emeritus Professor at the Institute of Physics of the Polish **Academy of Sciences**



Ana Maigues Chief Executive Officer, Neuroelectrics



Marja Makarow Biochemistry/ molecular biology, director of Biocenter Finland



Carlos Oliveira Serial Entrepreneur, Innovator, Executive President of José Neves Foundation



Valeria Nicolosi Chair of Nanomaterials and Advanced Microscopy



Bruno Sportisse Chair and CEO at INRIA



Kinga Stanislawska Managing Partner and Founder of Experior Venture Fund



Roberto Verganti Innovation academic, former RISE group



Martin Villig Co-founder of Bolt (formerly Taxify)



Yousef Yousef CEO of LG Sonic

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: NA)

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



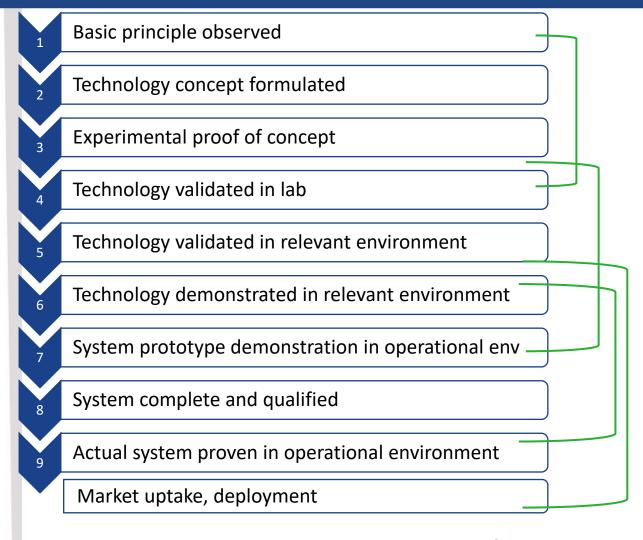


Pathfinder and Accelerator common elements

- Focus on breakthrough and disruptive innovations, including social, that have the potential to create new markets;
- Be mainly bottom-up, open to innovations from all fields of science, technology and applications in any sector;
- Innovations that cut across different scientific, technological (e.g. combining physical and digital) fields and sectors will be encouraged;
- They will be centred on innovators, simplifying procedures and administrative requirements, making use of interviews to help assess applications, and ensuring fast decision making;
- They will support high-risk innovations where the risks, whether technological/market/regulatory, cannot be borne by the market alone or via Fin.Instr. (InvestEU)
- They will be managed pro-actively with milestones to gauge progress and the possibility to reorient projects where needed.







EIC Pathfinder
(Open and Challenges)

EIC Transition
(Open and Challenges)

(Open and Challeges) (Grant)

EIC Accelerator (Equity)

The EIC Instruments





EIC Novel Key Elements & Concepts



- **TITIES** EIC Programme Managers
 - **¬** EIC Portfolios
 - **¬** EIC Fund
 - **¬** EIC Marketplace











The proactive management

On 11th November 2020, the Independent Expert Group published its visions and recommendations on successfully <u>"Implementing the pro-active management of the EIC pathfinder for breakthrough technologies & innovations"</u>.

The outstanding publication describes the lessons learnt from the US ARPA-like models and international practices, and move forward to identify key recommendation for the establishment of the fully-fledge EIC, focusing its analysis on three main streamlines:

- "Programme creation", on the conception, validation and approval process of challenge-driven programmes, including recommendations for the evaluation and selection of projects for the portfolio of a challenge-driven programme.
- "Active portfolio management", as a decisive way to increase the probability of success of a portfolio of high-risk projects.
- "Transition activities", focuses on how to substantially improve and accelerate the transition of a project and portfolio towards having socioeconomic impact.







Role of the Programme Managers

¬■ Build strategic intelligence

- Identify a thematic portfolio of projects (e.g. ~10 highest potential projects for impact)
- Bridge EIC portfolio to Pillar 2 clusters, ERC, KICs

¬■ Active portfolio management

- Negotiation of milestones, project reviews & decisions to reorient
- Access to additional Business Acceleration Services, access to additional 50k grants for Pathfinder
- Organise portfolio & transition activities: workshops, events, on emerging trends, regulatory barriers, etc

¬ Identify topics for EIC challenge-driven funding

- Spot new trends, gaps, opportunities
- Help prepare Work Programme texts
- Engage stakeholders to define portfolio to be specified in call guide







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 for Advanced Research

- Grants to high-risk cutting-edge projects exploring new territories, aiming to develop into potentially 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 overall objective will be 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.





EIC Pathfinder for Advanced Research

- The Pathfinder will be mainly implemented through a continuous open call for *bottom-up proposals*. The Pathfinder will also provide for *competitive challenges* to develop key strategic objectives calling for deeptech and radical thinking.
- 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. In the case of single beneficiary projects, larger companies will not be permitted.
- The Pathfinder will be *implemented in close coordination* with other parts of Horizon Europe, in particular with the European Research Council (ERC).





EIC Pathfinder Open

*Quanto presentato è ancora in via di conferma ed approvazione definitiva; può pertanto essere soggetto ad ulteriori cambiamenti





EIC Pathfinder - Open

EIC Pathfinder Open supports early stage development of such future technologies, based on high-risk/high-gain science-towards-technology breakthrough research (including 'deep-tech').

This research must provide the foundations of the technology you are envisioning by:

- Tonvincing *long-term vision* of a radically new deep-tech that has the potential to have a transformative positive effect to our economy and society.
- Toncrete, 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 encourages interdisciplinary research and development.

The expected outcome is the proof of principle.

EC Contribution: 3 Millions euros

Additional grants with fixed amounts of up to € 50 000 to undertake complementary activities to explore potential pathways to commercialisation or for portfolio activities*







Excellence

Threshold: 4/5, Weight: 60%

(Long-term vision; Science-towards-technology breakthrough;

Objectives; Interdisciplinarity)

Impact

Threshold: 3.5/5, Weight: 20%

(Exploring pathways from research to innovation; Communication and Dissemination)

Quality and efficiency of the implementation

Threshold: 3/5, Weight: 20%

(Quality of the consortium; Work plan;

Allocation of resources)

Proposal Template

17 Pages

Single Step submission

Research and Innovation Actions





EIC Pathfinder Challenges

*Quanto presentato è ancora in via di conferma ed approvazione definitiva; può pertanto essere soggetto ad ulteriori cambiamenti





EIC Pathfinder - Challenges

- competitive challenges to develop key strategic objectives calling for deep-tech and radical thinking
- With each specific challenge call, the EIC will establish a *portfolio of projects* that explore different perspectives, competing approaches or complementary aspects of the Challenge.
- It must plan for portfolio activities (e.g. to *overcome market or regulatory barriers*, or strengthen an innovation community) to be carried out with the other projects of the portfolio and the EIC Programme Manager.
- The complexity and high-risk nature of this research will require multidisciplinary collaborations (from 2 to 5 partners).
- **TITIE** EU Contribution: 4 Million euros

Additional grants with fixed amounts of up to € 50 000 to undertake complementary activities to explore potential pathways to commercialisation or for portfolio activities*





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.

	Pathfinder
Energy, Climate, Environment	 Engineered living materials Novel green hydrogen production
Digital	- Aware and self-developing artificial systems
Health	High-precision observation and stimulation of brain activity - Emerging technologies for cell & gene therapy

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







Excellence - Threshold: 4/5

(Relevance to the Challenge; Novelty; Plausibility of methodology)

Impact - Threshold: 3.5/5

(Potential Impact; Exploring pathways from research to innovation; Communication and Dissemination)

Quality and efficiency of the implementation

Threshold: 3/5

(Quality of the applicant/consortium; Work plan; Allocation of resources)

Proposal Template*

25 Pages

(EoI)

Single Step submission

Research and Innovation Actions

* Note: Challenge Guidance











EIC Transition Open

EIC Transition funds innovation activities that go beyond the experimental proof of principle in laboratory.

- → the validation of your novel technology in the lab and in some relevant application environments (by making use of prototyping, formulation, models or other validation tests) [*Transition to innovation*]
- → business modelling towards the innovation's future commercialisation. [Transition to the market and entrepreneurship]

All pathways can be considered (tech transfer, spinouts, licensing, etc.)

Beneficiaries will have access to EIC Business Acceleration Services (including events and online platforms), thus supporting possible technology transfer.

EC Contribution: 2,5 Million euros

Additional grants with fixed amounts of up to € 50 000 to undertake complementary activities to explore potential pathways to commercialisation or for portfolio activities*





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* ('multibeneficiary') that may for example include universities, research organisations, SMEs or larger companies, user/customer organisations or potential endusers (e.g. hospitals, utilities, industry, regulatory and standardization bodies, public authorities).

Connected to the following eligible projects

- TIEIC Pathfinder projects (including projects funded under EIC pilot Pathfinder, FET-Open and FET-Proactive calls: RIAs and FET ILPs)
- **Topean Research Council (ERC) Proof of Concept projects**
- → Active since 12 months prior the deadline and lasting in the upcoming 18 months





EIC Transition Open Evaluation Criteria

Excellence - Threshold: 4/5

(Technological breakthrough, 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?)





COSA NON CAMBIA

- ☐ Target: single PMI/Start up/Spin off europee for profit con innovazioni ad alto rischio e alto potenziale di crescita
- **TODIETTIVO:** "conquistare" nuovi mercati e "distruggere" quelli esistenti
- **Finanziamento**: per gli ultimi stadi di sviluppo
- **3 Bottom-up**: tutti i settori, prodotti, servizi, nuovi business model

- **司** 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, TRL6-8)





COSA CAMBIA

- ¬ Sistema di sottomissione e valutazione in 2 step (short & full application)
- 1 Introduzione del meccanismo di limitazione della resubmission
- ☐ Introduzione dell' opzione "Equity Only"
- ☐ Eleggibilità per Small mid cap (<500 dipendenti) per equity only (exceptional case)
- **¬** Al Tools



COSA NON CAMBIA - EQUITY

- ☐ Grant and Equity from pre-commercial to market & scale up
- ¬ Innovativeness/Disruptiveness (S&T assessment),
- ¬ High potential impact (business case, market assessment)
- ¬ Team (motivation, key members in place)
- ¬ Financial risk/EU support added value





EUROPEAN INNOVATION COUNCIL

EIC WP: call planning

Before the summer

> As soon as possible: deadline for Accelerator challenge calls on Green Deal and Strategic Technologies

eic

- Pathfinder Open: 1st cutoff (deadline) for in 2021 WP
- Accelerator Open: 1st cutoff (following two stage process) following deadline for Green Deal and Strategic Technology challenge calls

Autumn

- Pathfinder Challenge
- Transition Open & Challenge
- Accelerator Open, 2nd cutoff









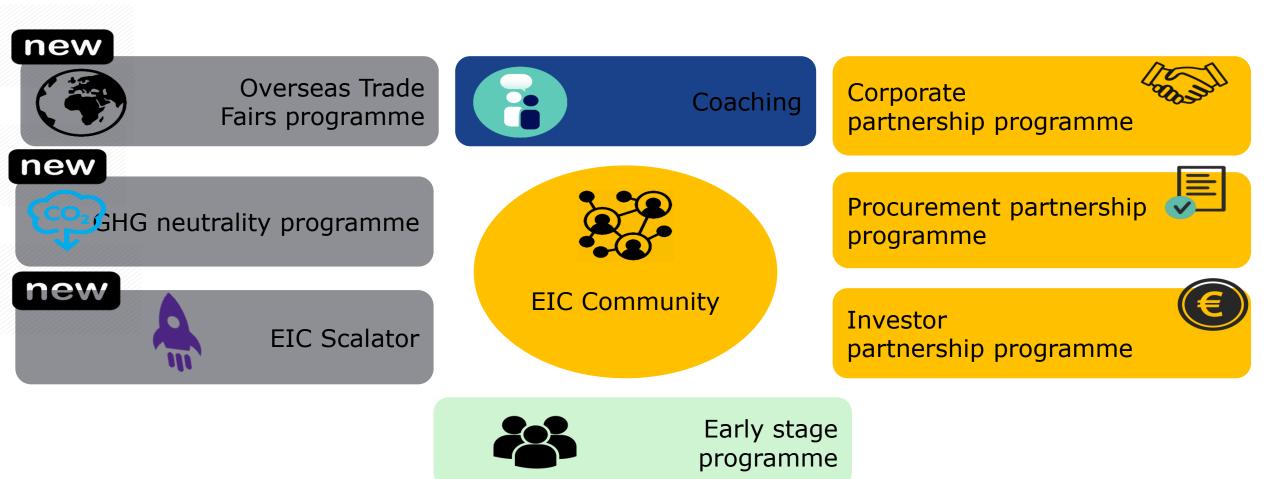


EIC Pilot Business Acceleration Services

- For SMEs EIC clients (Pathfinder and Accelerator)
- Coaching: up to 12 days available
- Mentoring for individual founders, CEOs and leaders
- EIC Community Platform
- EIC Events, such as Corporate Days

EIC encourages the driving role of new actors in R&I, including ambitious high-tech SMEs!







European INNOVATION

EMPOWERING EUROPEAN INNOVATORS

"The future European Innovation Council will turn far more of Europe's world class science and start-ups to global technology leaders. I am glad that this first offer of combined grant and equity financing saw such a high demand from Europe's start-ups and SMEs. This confirms that the European Innovation Council is filling a gap in funding, and that it is right to set it up as a fully-fledged initiative under the next EU budget"

Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education and Youth, December 2019.

Research and Innovation

"Full EIC" under Horizon Europe (2021-27)

- **✓** EIC legally established
- Proposed budget of €10 billion, majority of funding will be bottom-up, but also targeted funding for strategic technologies/ challenges
- ✓ **Dedicated governance with EIC President and independent Board** to set strategy, advise on separate EIC work programme, oversee implementation
- ✓ Creation of "one stop shop" for implementation
- ✓ Fully designed accelerator (mainly blended finance, also grant only & equity only) and pathfinder (including transition activities)
- ✓ More flexible rules for selection and funding (ability to stop or reorient, links to Invest EU) with increased role for programme managers
- ✓ Fast track access for Horizon grant holders (incl. ERC, EIT) and certified national schemes
- **✓ EIC Forum** with Member States innovation agencies



References and Sources

- **¬** European Innovation Council link
- **¬** EASME link
- **¬** Access2EIC NCP Network link
- **¬** EIC Pathfinder Data Hub link
- **¬** EIC Accelerator Data Hub link



Access2EIC



Access2EIC

Access2EIC tools

EIC Accelerator EIC T2I **EIC Pathfinder Annotated template** InnovFIN & **Factsheet** Factsheet InvestEU **EIC Accelerator Annotated** (Q2 2020) Q1 2021 guide pitchdeck TRL4- TRL5 **TRL6-TRL8** TRL9 TRL1-TRL3 InnovFIN **EIC Accelerator (blended finance) EIC Pathfinder** EIC T2I InvestEU **Financial** Grant + equity **Grant** instruments **MRL7-MRL8** MRL2-MRL3 MRL4 – MRL6 **MRLO-MRL1** MRL9 **Toolbox for** Due diligence dashboard SME R&D based Toolbox **Annotated Annex IV** businesses (Q4 2020)



Access2EIC tools: From technology to business

Focus on **businesses coming out from research** (FET experienced) in order to help to frame better their way to market.

Three tools developed as part of this toolset:

- The **business glossary**, that defines the key business concepts in a number of dimensions (based on the Business Model Canvas frame) according to the different matureness levels of a business.
- The "TB.map tool" that helps to map the competitive landscape in terms of TRL (technology readiness level) and BRL (Business readiness level)
- The "Bsize tool" that helps to estimate the potential size of a business opportunity in a given market.







Appendice I

Le azioni APRE verso Horizon Europe





Obiettivi

¬ Informare (NCP - Associazione)

"Raising awareness" rivolta alle comunità nazionali di R&I in merito ai contenuti H Europe e al relative percorso di sviluppo

¬■ Advocacy & Lobbying *

Influenzare la fase preparatoria e il processo legislative di Horizon Europe per promuovere le priorità nazionali nell'ambito delle politiche UE di R&I

* In collaborazione con il MIUR laddove possibile





<u>Informazione</u>





Verso Horizon Europe (da settembre 2017 – Obiettivo FP)



Unico sito web in Italia dedicato a FP9. Contiene raccolta di notizie, informazioni e document su FP9/Horizon Europe

https://www.versohorizoneurope.it/





Gli eventi "Verso Horizon Europe"



L'Italia e la sfida europea: verso il 9Programma Quadro di Ricerca e Innovazione

(12 dicembre 2017)





<u>Lista eventi Verso H Europe (2018-2020)</u>

7/11/18 Horizon Europe. Incontro con DG Paquet – Roma

26/11/19 Verso Horizon Europe. **Partnership**— Torino

4/12/18: Verso Horizon Europe. **ERC**– Milano

31/1/19: Verso Horizon Europe. **Deep-Science, Deep-Tech, DeepMind** —Bruxelles

12/3/19: Verso Horizon Europe. **Missions** - Quali attese – Ferrara

25/3/19: Verso Horizon Europe - MSCA (Marie Skłodowska-Curie Actions) - Padova

28/6/19: European Innovation Council ROADSHOW - Milano

24/10/19: Commission Workshop on **HE implementation** – Roma (co-organizzato MIUR)

30/10/19: Verso Horizon Europe. Le sinergie tra Horizon Europe e altri programmi europei – Firenze

4/3/20: Verso Horizon Europe. I Cluster—Roma. ANNULLATO causa COVID-19

16/4/20 Verso Horiozn Europe. Ricerca fondamentale e innovazione – Pisa. ANNULLATO causa COVID-19





Advocacy





Towards FP9 – APRE's Position Paper

(Febbraio 2018)

- Il nostro (e della rete dei Soci) Position Paper su FP9 e sui principali aspetti emergent dal dibattito istituzionale e tra gli stakeholder
- ☐ Contributo alla preparazione della Proposta della Commissione
- ¬ Forte coinvolgimento dei Soci APRE
- ¬ Sintesi delle visioni dei vari sistemi di R&I pubblici e privati italiani







APRE e il Parlamento Ue Incontri con I MEP



Meeting con i Membri del Parlamento e la Rappresentanza Permanente (Bruxelles, 21 marzo 2018) + Meeting bilaterali a intevalli regolari





The EIC in FP9 – WG & Position Paper

(Maggio 2018)

- Gruppo di Lavoro dei Soci APRE (oltre 45) sullo European Innovation Council in FP9
- ¬ 5 sotto Gruppi di Lavoro
- Obiettivo: informare regolarmente la Rete dei Soci APRE sugli sviluppi del Pilot EIC e stimolare un posizionamento commune rispetto a EIC in FP9.
- ☐ Output = "APRE's position paper on the future European Innovation Council in Horizon Europe"







Lobbying





Raccomandazioni APRE sulla Proposta HE (Giugno 2018)

Le nostre raccomandazioni al Consiglio e al Parlamento europeo in merito alla proposta H Europe della Commissione



29 June 2018

Horizon Europe – The Commission's proposals Recommendations to the European Parliament and to the Council

APRE, the Italian Agency for the Promotion of European Research¹, welcomes the Commission's proposals for Horizon Europe, namely the proposal for a regulation on establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination and the proposal for a decision on establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation, particularly emphasizing the following positive aspects:

- the alignment of the programme structure and objectives with global policy priorities (i.e. United Nations Agenda 2030 and the Sustainable Development Goals);
- the organisation of pillar 2 "Global Challenges and Industrial Competitiveness" into cross-disciplinary, cross-sectoral, cross policy clusters;
- iii) the systemic approach to synergies and complementarity with the other EU funding programmes;
- the strong continuity with Horizon 2020 in terms of participation and dissemination rules (selection and award criteria, co-funding rates, time-to-grant, type of actions, etc.) and further efforts in terms of simplification;





Plea for a SME Instrument in HE

(Luglio 2018)

Inizia promossa da APRE che ha coinvolto le principali associazioni di categoria italiane per promuovere il mantenimento dedicato alle Micro, Piccole, Medie Imprese in Horizon Europe













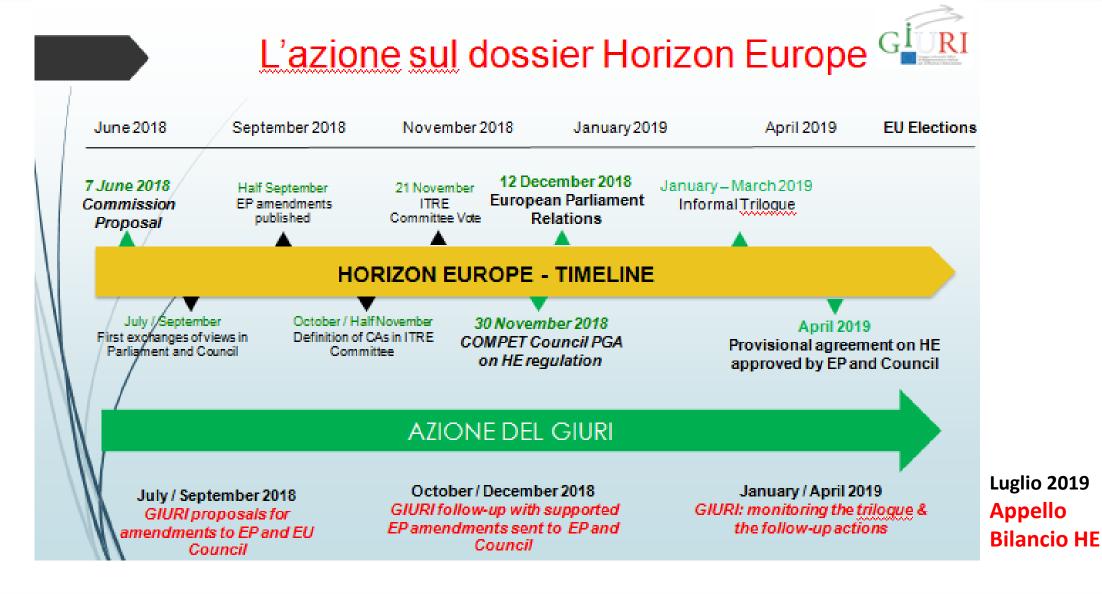


A PLEA

FOR AN INSTRUMENT DEDICATED TO SMEs IN THE NEXT EU FRAMEWORK
PROGRAMME FOR RESEARCH AND INNOVATION













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