



#InvestEUresearch



# Horizon 2020 Work Programme for Research & Innovation 2018-2020

## Generalidades de Horizonte-2020 Futuro del Programa Marco de la UE: Horizon Europe (2021-2027)

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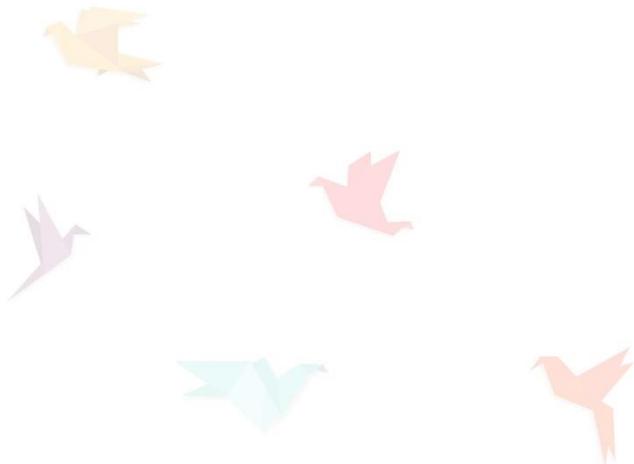
NCP Secure Societies H2020, CDTI-SOST

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Research and  
Innovation



# Hagamos un breve resumen sobre Horizon 2020...

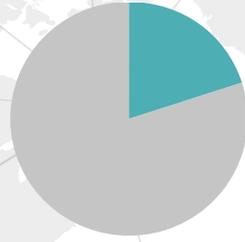


## La Unión Europea...

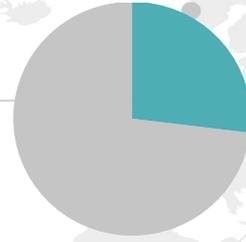
... 500 millones de personas, 28 países y un Mercado único!



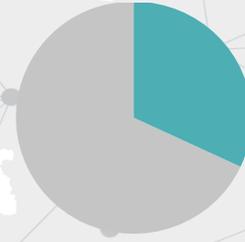
**6% de la población mundial**



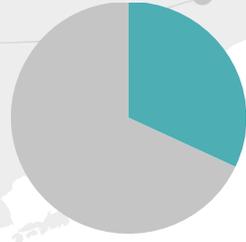
**20% del gasto mundial en investigación**



**27% de las publicaciones científicas**



**32% del total de las publicaciones de alto impacto**



**32% de solicitudes de patentes a nivel mundial**

Algunas de las **mejores universidades** del mundo se hallan en Europa...

... Así como algunas de las **empresas más innovadoras** del mundo!

- ✓ El principal programa europeo de I+D+i para el período 2014-2020. → Es el **Programa Marco referente de Investigación e Innovación de Europa.**
- ✓ Es el programa más importante de financiación de la investigación e innovación, dotado de unos **80.000 M€...** y con las condiciones de **financiación más ventajosas para los participantes!**



- ✓ Sería el equivalente a su **Plan Nacional de Investigación e Innovación a nivel estatal...** últimamente H2020 se centra sobre todo en los aspectos de innovación!
- ✓ **No sólo financia a investigadores europeos, sino también a investigadores y entidades no-Europeas!**

# Quién lo financia... y quién participa!

H2020 está financiado, principalmente por los **Estados Miembros de la Unión Europea** y los **Estados Asociados a Horizon 2020**

 **EU Member States (28)**

 **Associated Countries (16)**

Albania

Armenia

Bosnia & Herzegovina

Faroe Islands

Georgia

Iceland

Israel

the Former Yugoslav Republic of Macedonia

Republic of Moldova

Montenegro

Norway

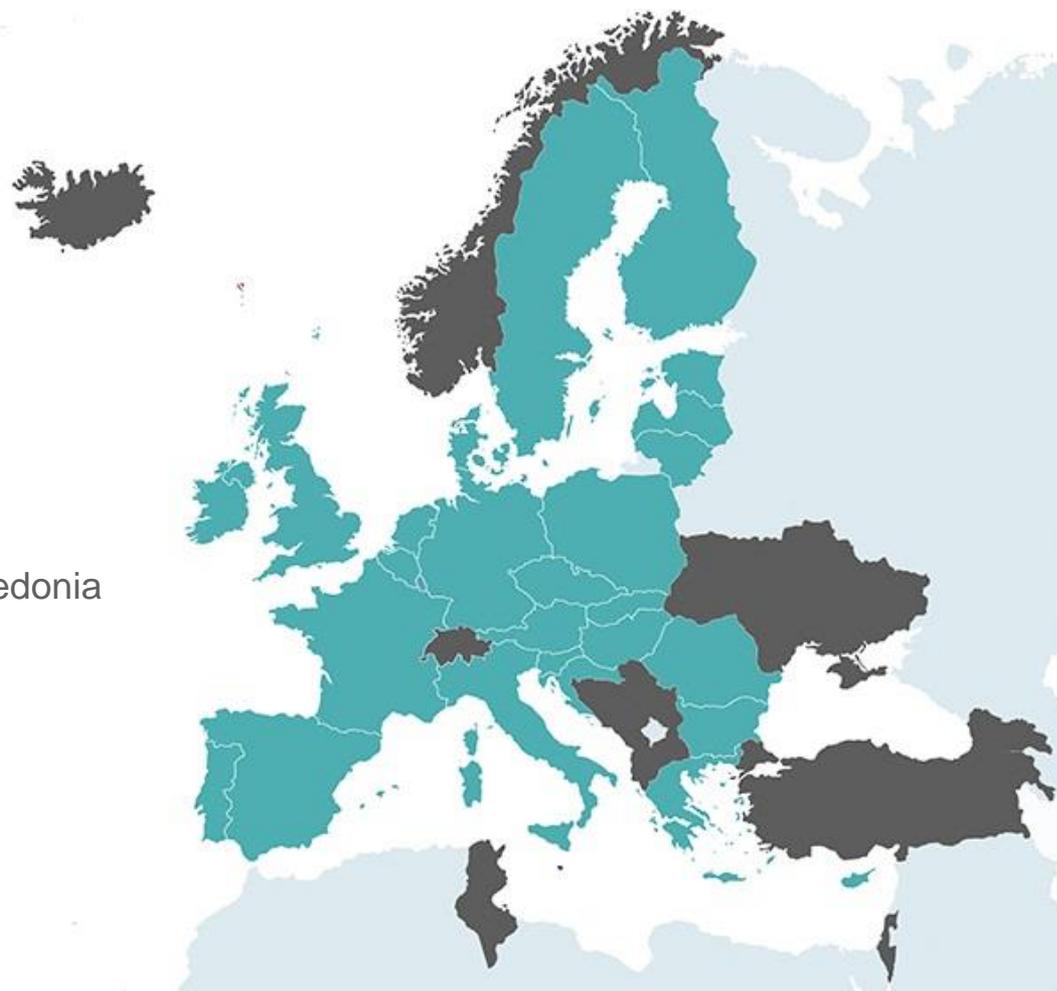
Serbia

Tunisia

Turkey

Ukraine

Switzerland



# Quién participa...



**Third Countries**  
listed in the General  
Annexes



**28 Member States**  
(including their outermost  
regions)

**Overseas  
Countries and  
Territories**  
(OCTs) linked to the  
ME

**Associated  
Countries (AC)**

General annexes:

[https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga_en.pdf)

List of associated countries:  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cp/art/h2020-hi-list-ac\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cp/art/h2020-hi-list-ac_en.pdf)

# Y porqué participar?

**1** Para desarrollar proyectos de investigación ambiciosos e innovadores

**2** Movilidad por Europa

**3** Acceso a nuevas redes y alianzas

**4** Acceso a las principales infraestructuras de investigación del mundo



**5** Nuevas oportunidades, visibilidad de tu investigación

**6** Tratar desafíos globales juntos y con los mejores científicos

**7** Financiación interesante

# Y porqué participar?

Europa invita a partners internacionales a participar en H2020 (investigadores y entidades públicas y privadas) para:

**1** Acceder a nuevos mercados



**2** Acceder a nuevos conocimientos

**3** Atraer talento e inversiones conómicas

**5** Mejorar la explotación de la investigación

**4** Ganar en visibilidad a nivel global

**Sí,** eres elegible para recibir financiación, de acuerdo con las reglas generales de H2020, bajo unos **requisitos...**

## Financiación automática...

- ✓ Si eres de un Estado Miembro
- ✓ Si eres de un Estado Asociado
- ✓ **Si eres de uno de los países del Annex A del programa de trabajo de H2020**



**Lationamérica  
excepto Brasil  
& México**

## O bien si...

- ✓ Existe un **acuerdo bilateral** entre la EU y esa organización no-EU
- ✓ En función de lo que **indique la convocatoria respecto a ese país concreto o área geográfica del mundo**
- ✓ Si en la evaluación del proyecto tu participación se considera **esencial** para cumplir los objetivos de la convocatoria y **eres insustituible** por otro partner EU!

**1**

**Excellent  
Science**

Financia investigadores:  
**Investigación  
fundamental, tecnologías  
del mañana...**

Investigación industrial:  
**Inversiones estratégicas en  
tecnologías clave para EU**

**Industrial  
leadership**

**2**

**3**

**Societal  
challenges**

Society driven:  
**Problemáticas de  
afectan a los  
ciudadanos y a la  
sociedad**

## Horizon 2020 – Principales areas donde desarrollar la **colaboración internacional**

### Excellent Science

- **European Research Council**
  - Frontier research by the best individual teams
- **Future and Emerging Technologies**
  - Collaborative research to open new fields of innovation
- **Marie Skłodowska Curie actions**
  - Opportunities for training and career development
- **Research infrastructures (including e-infrastructure)**
  - Ensuring access to world-class facilities

### Industrial Technologies

- **Leadership in enabling and industrial technologies**
  - ICT, nanotechnologies, materials, biotechnology, manufacturing, space

### Societal Challenges

- **Health, demographic change and wellbeing**
- **Food security, sustainable agriculture, marine and maritime research & the bio-economy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, resource efficiency and raw materials**
- **Inclusive, innovative and reflective societies**
- **Secure societies**



## ✓ Participación individual de investigadores (becas)

Investigadores de todas las nacionalidades son bienvenidos

## ✓ Proyectos colaborativos (subvenciones)

Consorticios de al menos 3 entidades legales de 3 estados miembros o países asociados a H2020



# Si soy investigador (becas)...

✓ **The European Research Council (ERC)**

= Investigación Excelente a nivel mundial

✓ **Marie Skłodowska-Curie Actions (MSCA)**

= movilidad de investigadores y tecnólogos



European Research Council



MARIE CURIE ACTIONS

**Excellent  
Science**

**Investigadores que quieran  
investigar en entidades de Europa!**

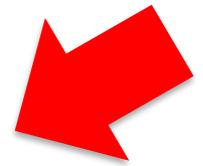
# Proyectos colaborativos (consorcio de entidades)...

- ✓ Quien figura como partner del consorcio (beneficiario) es la **entidad legal de tu país que tiene una vinculación contractual contigo.**
- ✓ Es **tu entidad la que recibe la financiación** por la investigación de tú realizas en el proyecto...
- ✓ Tu entidad puede coordinar el proyecto.



## Proyectos colaborativos...

- ✓ **Research and Innovation Action (RIA)**
- ✓ **Innovation Action (IA)**
- ✓ **Coordination and Support Action (CSA)**

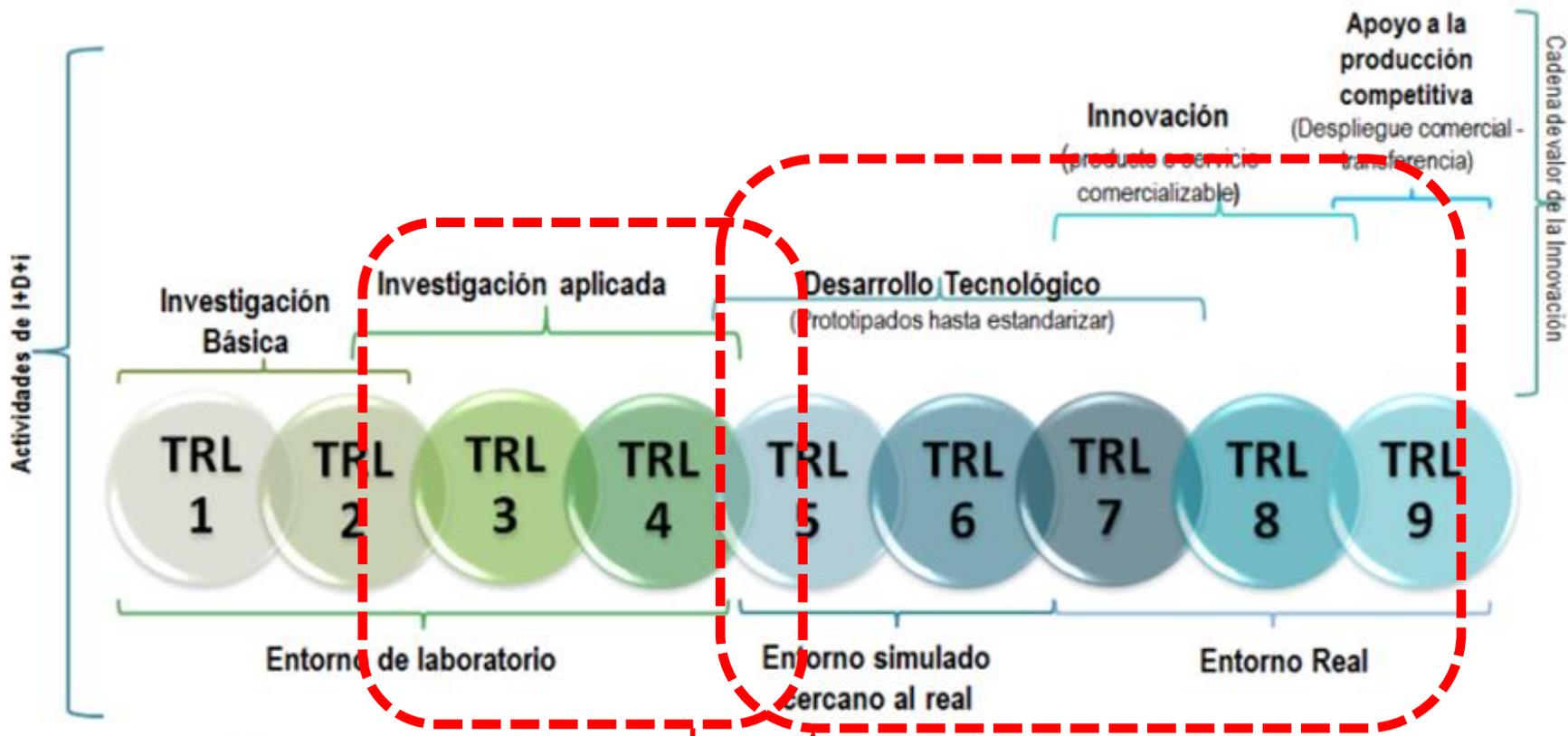


✓ **SME Instrument**

✓ **Pre-Commercial Procurement Cofund (PCP)**

✓ **Fast Track to Innovation Pilot**

# Tipos de instrumentos de financiación en H2020...



Research & Innovation actions (IA)

- ✓ Innovation Actions (IA)
- ✓ SMEs / FTI
- ✓ PCP

# Research and Innovation Action (RIA)

- ❑ **Objetivo:** Desarrollar nuevos conocimientos o bien explorar la viabilidad de una nueva tecnología, servicio o solución.

Puede incluir investigación fundamental y aplicada, Desarrollo tecnológico e integración, testeo y validación de un prototipo a pequeña escala en laboratorio o entorno simulado.

- ❑ **Financiación:** Hasta el **100%** de los costes elegibles.

- ❑ **Criterios de elegibilidad:** Mínimo **3 entidades legales independientes** con sede en 3 Estados Miembros diferentes o Estados Asociados. → **El partner peruano no cuenta como los 3 mínimos...**



**Applied Research**

❑ **Objetivo:** Diseño de nuevos productos, procesos y/o mejora de servicios.

Puede incluir prototipage, testeo, demostraciones, pilotos, validación y replicación a gran escala cerca de mercado.

❑ **Financiación:** Hasta el **70%** de costs elegibles para entidades con ánimo de lucro (empresas) y hasta el **100%** para entidades sin ánimo de lucro (universidades, centros de investigación, asociaciones, ...).

❑ **Criterios de elegibilidad:**

Mínimo **3 entidades legales**

**independientes** con sede en 3 Estados

Miembros diferentes o Estados Asociados.

→ **El partner peruano no cuenta como uno de los 3 mínimos...**



# Coordination and Support Action (CSA)

❑ **Consiste en:** Medidas de acompañamiento como normalización, diseminación / divulgación y comunicación, networkig, servicios de apoyo, diálogos sobre políticas, ejercicios y estudios de training e intercambio de buenas prácticas, actividades complementarias como planificación estratégica, coordinación de redes, ...

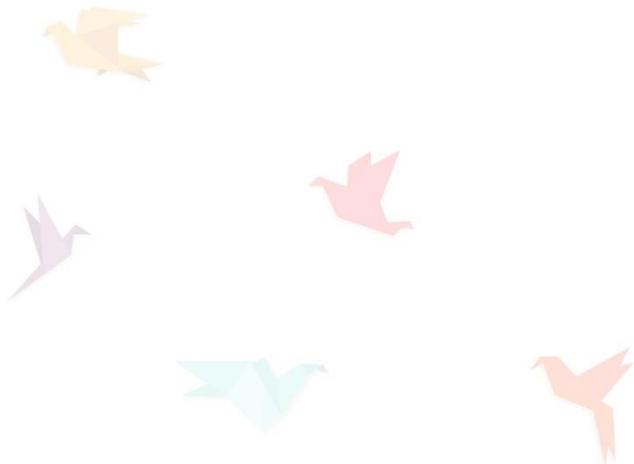
❑ **Financiación:** Hasta el **100%** de los costs elegibles.

❑ **Criterios de elegibilidad:** Mínimo **1 entidad legal** con sede un Estado Miembro o Asociado.

**El partner peruano no cuenta como el uno mínimo...**



# Sobre el próximo programa marco, Horizon Europe 2021-2027...

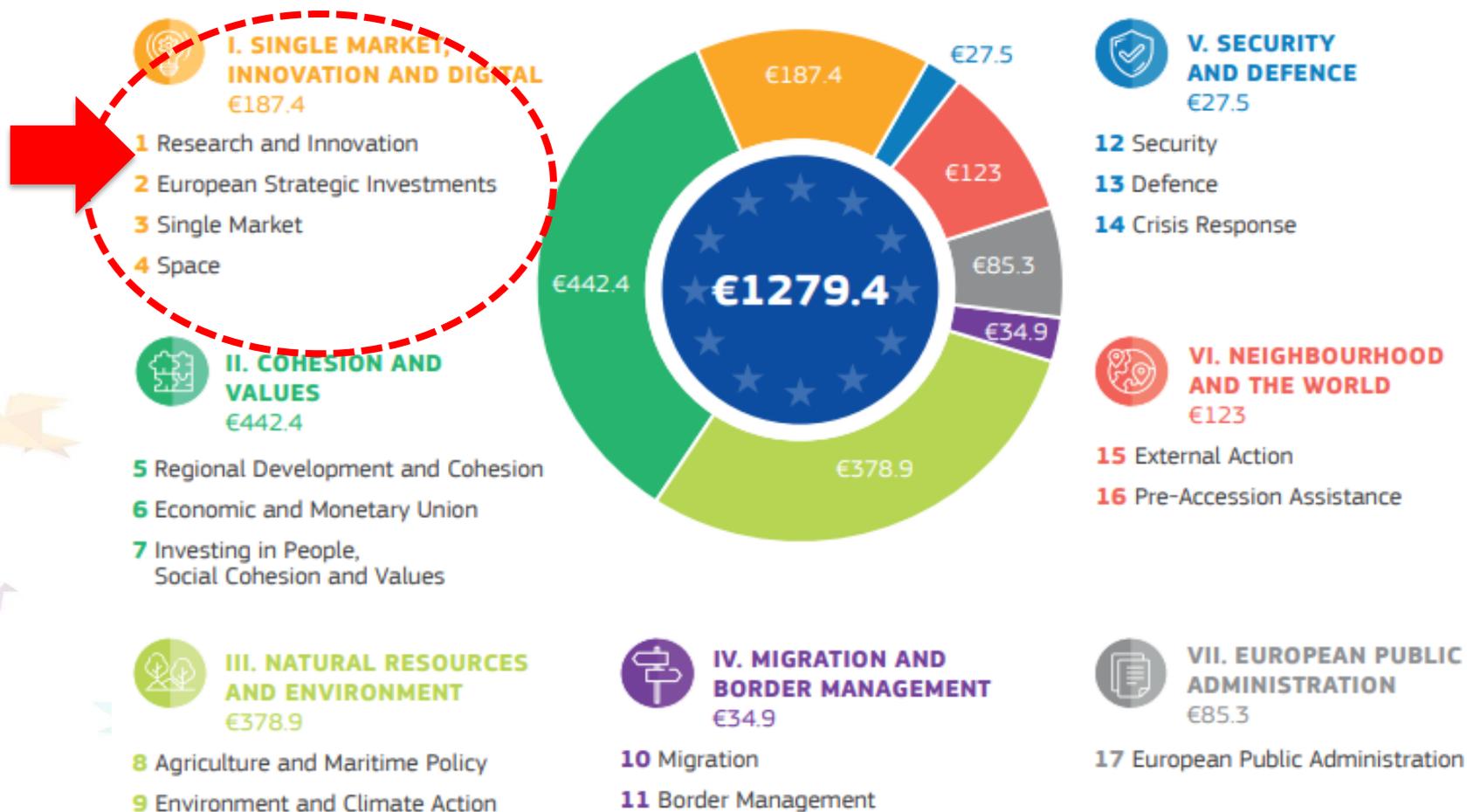


# Cómo se va a financiar...

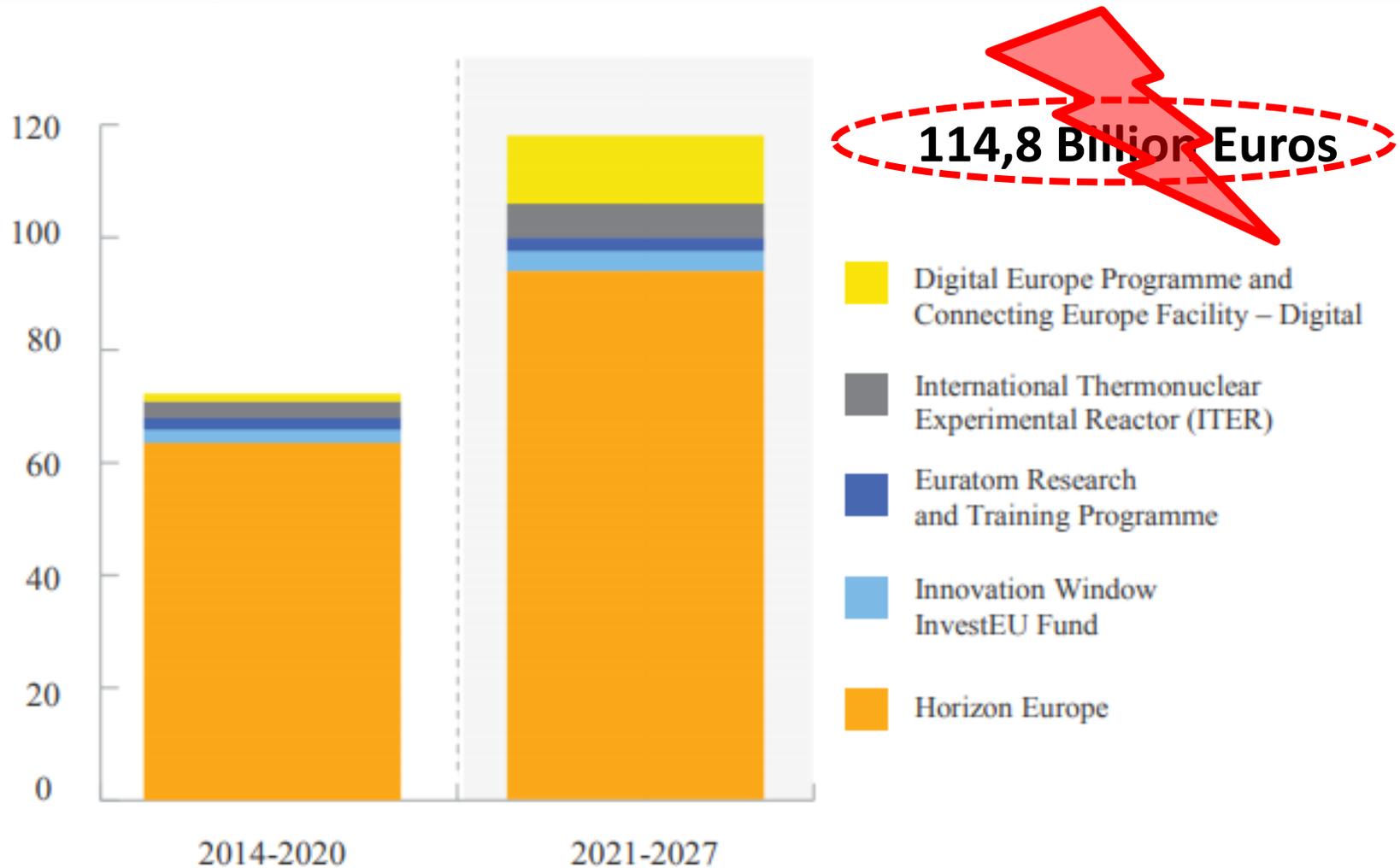
Propuesta de la EC **May-2018**, actualmente, hay acuerdo verbal sujeto a la opinion del nuevo Parlamento Europeo...

## THE NEW MULTIANNUAL FINANCIAL FRAMEWORK 2021 - 2027 A BUDGET FOR A UNION THAT PROTECTS, EMPOWERS AND DEFENDS

In billion euro, current prices



# Cómo se va a financiar...



Propuesta inicial de la EC... pero en las últimas negociaciones con el Consejo EU y el Parlamento EU, quedaría  $\approx$  90 billion Euros...

# ... Estructura de Horizon Europe” 2021-2027



**Horizon Europe**, with a budget of **€97.6 billion**, is the biggest ever research and innovation funding programme. It is designed around three pillars:

- > the **Open Science pillar** supports researchers through fellowships and exchanges as well as funding to projects defined and driven by researchers themselves, through the European Research Council and the Marie-Skłodowska-Curie actions.
- > The **Global challenges pillar** directly supports research relating to societal challenges, setting EU-wide missions with ambitious goals around issues that worry us daily such as such as the fight against cancer, clean mobility and plastic-free oceans. Industrial leadership will be prominent within this pillar and throughout the programme as a whole.
- > The **Open Innovation pillar** aims to make Europe a front runner in market-creating innovation. A **European Innovation Council** will offer a one-stop shop for high potential and breakthrough technologies and innovative companies with potential for scaling up.

Open Science

Global challenges

Open Innovation



**HORIZON  
EUROPE**

# ... Estructura de Horizon Europe” 2021-2027

Support the creation and diffusion of high-quality knowledge

Strengthen the impact of R&I in supporting EU policies

Foster all forms of innovation and strengthen market deployment

Optimise the Programme’s delivery for impact in a strengthened ERA



Pillar 1  
Open Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



Pillar 2  
Global Challenges and Industrial Competitiveness

Clusters

- Health
- Inclusive Society
- Secure Civil Society
- Digital - Industry - Space
- Climate - Energy - Mobility
- Food and natural resources

Joint Research Centre



Pillar 3  
Open Innovation

European Innovation Council

European innovation ecosystems

European Institute of Innovation and Technology

Strengthening the European Research Area

Sharing excellence

Reforming and Enhancing the European R&I system

# En las temáticas concretas...

## C1 - Health

- Health throughout the Life Course
- Environmental and Social Health Determinants
- Non-Communicable and Rare Diseases
- Infectious Diseases, including poverty-related and neglected diseases
- Tools, Technologies and Digital Solutions for Health and Care
- Health Care Systems

## C4 - Digital and Industry

- Manufacturing Technologies
- Digital Technologies
- Advanced Materials
- Artificial Intelligence and Robotics
- HPC and Big Data
- Circular Industries
- Low Carbon and Clean Industries
- Space

Los Retos Sociales & Liderazgo Industrial de H2020 se re-organizan en “**Clusters**” para la competitividad.

## C2 - Inclusion creativity and Culture

- Governance and Democracy
- Cultural Heritage
- Social and Economic Transformations

## C5 - Climate, Energy and Mobility

- Climate Science and Solutions
- Energy Supply
- Energy Systems and Grids
- Buildings and Industrial Facilities in Energy Transition
- Communities and Cities
- Industrial Competitiveness in Transport
- Clean Transport and Mobility
- Smart Mobility
- Energy Storage

## C3 - Civil Security for Society

- Disaster-Resilient Societies
- Protection and Security
- Cybersecurity

## C6 - Food and Natural Resources

- Environmental Observation
- Biodiversity and Natural Capital
- Agriculture, Forestry and Rural Areas
- Sea and Oceans
- Food Systems
- Bio-Based Innovation Systems
- Circular Systems

Trabajo de diseño & definición más a detalle May-Dic 2019 → **Strategic Programming**



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

**ATENCIÓN:** En fase de definición a través del grupo SFIC de la EC para Cooperation International en Investigación y Tecnología → Reunión 06-jun-2019



## Evolution of the EIC...

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

**ATENCIÓN:** En fase de prueba a  
partir de Sep-2019 con el EIC-Pilot



## New initiatives: The 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 intended to achieve a bold and inspirational as well as measurable goal within a set timeframe, with impact for science and technology, society and citizens that goes beyond individual actions.

- ✓ Horizon Europe proposal defines mission characteristics and elements of governance
- ✓ Specific missions will be co-designed with Member States, stakeholders and citizens and programmed within the Global Challenges and Industrial Competitiveness pillar (drawing on inputs from other pillars)

**ATENCIÓN: Se han escogido 5 Misiones para inicio de Horizon Europe y se buscan expertos de todo el mundo para el High Level Group.**

NEWS | 13 May 2019 | Brussels | Research and Innovation

## Commission invites top experts to shape new research and innovation missions

The European Commission launched today a call for experts to join 'Mission Boards', which will advise the Commission for the identification and implementation of missions in Horizon Europe, the next EU research and innovation programme.

These missions will be high-ambition, high profile initiatives, to find solutions to some of the major challenges faced by European citizens with a clear target that captures the imagination of citizens at large.

There will be five 'Mission Boards', one for each of the following areas:

- Adaptation to climate change including societal transformation;
- Cancer;
- Healthy oceans, seas, coastal and inland waters;
- Climate-neutral and smart cities;
- Soil health and food.

The call for applications is available [online](#). The deadline for applications is 11 June 2019. Each of the 'Mission Boards' shall consist of up to 15 members.

OPEN

PUBLICATION	DEADLINE
13 / 05 2019	11 / 06 2019

Call for applications for the selection of members of the commission expert groups: Mission Board for adaptation to climate change, including societal transformation, Mission Board for cancer, Mission Board for healthy oceans, seas, coastal and inland waters, Mission Board for climate-neutral and smart cities, Mission Board for soil health and food

DG: DG Research and Innovation  
Policy Area: Research and Innovation

[Call\\_20190513\\_final.pdf](#) [SEE GROUPS](#)

[Annex I - classification form.docx](#)

[Annex II - MB.adaptation to climate change - Selection form.docx](#)

[Annex II - MB.cancer - Selection form.docx](#)

[Annex II - MB.climate-neutral and smart cities - Selection form.docx](#)

[Annex II - MB.Healthy Oceans - Selection form.docx](#)

[Annex II - MB.Soil - Selection form.docx](#)

[Annex III - Declaration of Interest - DoI form.docx](#)

[Frequently Asked Questions - Call for HE Mission Board members - 20190529.docx](#)



## International Cooperation

### 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.)**





<https://europamediatrainings.com/eu-funding-made-simple>

[https://ec.europa.eu/info/research-and-innovation/events/upcoming-events/european-research-and-innovation-days\\_en](https://ec.europa.eu/info/research-and-innovation/events/upcoming-events/european-research-and-innovation-days_en)

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