

## HORIZON EUROPE (2021-2027)

Η διαμόρφωση του επόμενου Προγράμματος- Πλαισίου της ΕΕ  
για την Έρευνα και την Καινοτομία

ΗΜΕΡΙΔΑ: Χρηματοδοτικές ευκαιρίες για την Έρευνα και την Καινοτομία  
στον τομέα της Υγείας (ΕΙΕ, 17 Σεπτεμβρίου 2019)

*Βασιλική Καραβαγγέλη*  
Διεύθυνση Διεθνούς Επιστημονικής και Τεχνολογικής Συνεργασίας  
Προϊσταμένη Τμήματος Ευρωπαϊκής Ένωσης



# Agenda

- Κύρια σημεία της πρότασης για τον Ορίζοντα Ευρώπη
- Τρέχουσες εξελίξεις στο πλαίσιο του Στρατηγικού σχεδιασμού- Επόμενα βήματα
- Cluster Health (περιοχές παρέμβασης, συμπράξεις, αποστολή για τον καρκίνο)
- Συνοπτικά στοιχεία για την ελληνική συμμετοχή στον Ορίζοντα 2020

# Horizon Europe

THE NEXT EU RESEARCH & INNOVATION  
INVESTMENT PROGRAMME (2021 – 2027)

#HorizonEU

Based on the Commission Proposal for Horizon Europe, the common understanding between co-legislators and the Partial General Approach, both approved in April 2019



# Horizon Europe (2021-2027)

The Commission proposes a budget of **€ 100 billion** (including Euratom) :



to strengthen the EU's scientific and technological bases



to boost Europe's innovation capacity, competitiveness and jobs



to deliver on citizens' priorities and sustain our socio-economic model and values

**€ 4.1 billion** are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund

# Horizon Europe: Preliminary Structure

Creation & Diffusion of high quality knowledge

Strengthen the role of R&I in and for policy making

Foster innovation



**Pillar 1**  
Excellent Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



**Pillar 2**  
Global Challenges and European Industrial Competitiveness

Clusters

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre



**Pillar 3**  
Open Innovation

European Innovation Council

European innovation ecosystems

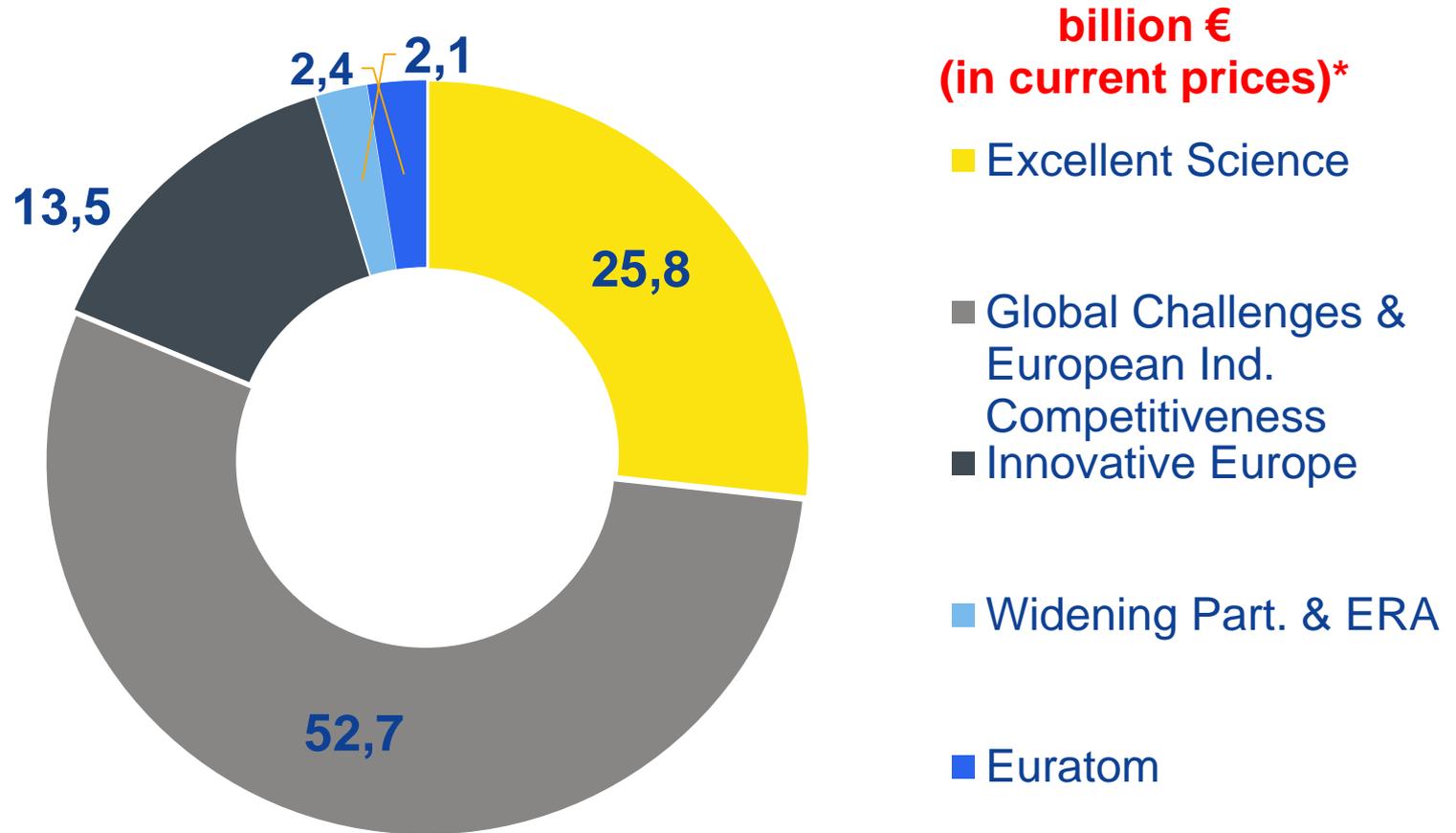
European Institute of Innovation and Technology

**Widening Participation and Strengthening the European Research Area**

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system

# Commission Proposal for budget: €100 billion\*



\* This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.

## 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 researchers 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**

## 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

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

### 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: € 3 billion**



# 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, 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)

# Widening Participation and Strengthening the European Research Area: optimising strengths & potential for a more innovative Europe

## Widening Participation and Spreading Excellence, e.g.

- Teaming & twinning
- ERA Chairs
- COST
- Support to NCPs
- Brain circulation and excellence initiatives
- “Hop-on“

**Common understanding: At least 3.3 % of Horizon Europe budget**

## Reforming and enhancing the European R&I system

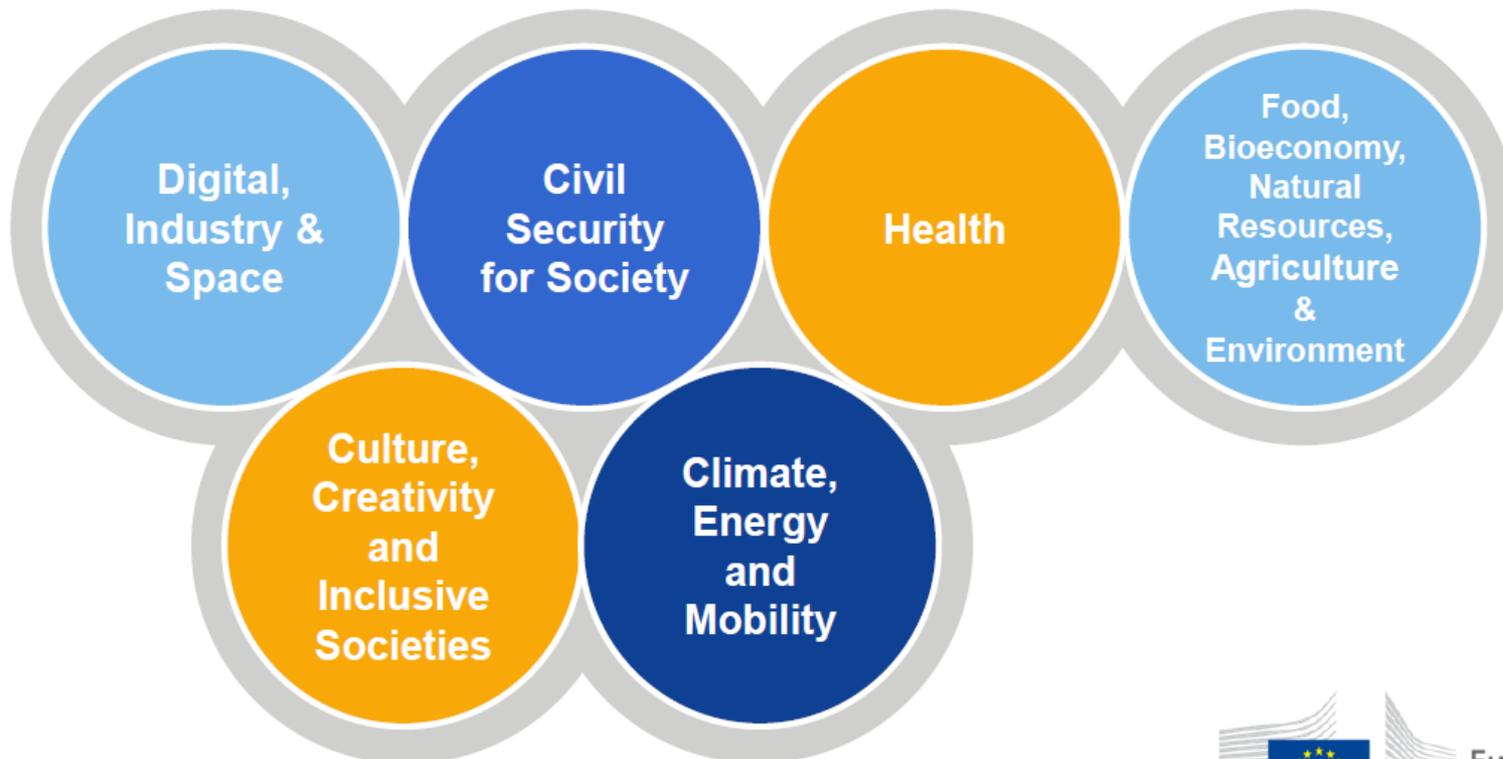
- Scientific evidence & foresight
- Open Science
- Policy Support Facility
- Attractive researcher careers
- Citizen science, Responsible Research & Innovation
- Gender equality

## 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





# R&I Missions

## R&I Missions

**Connecting to citizens:** Missions will relate EU's research and innovation to society and citizens' needs, with strong visibility and impact

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

Horizon Europe proposal defines mission characteristics and criteria

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

# MISSION AREAS:

Soil health and food



Adaptation to climate change, including societal transformation



Climate-neutral and smart cities



Cancer



Healthy oceans, seas, coastal and inland waters



#HorizonEU



European  
Commission



# 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

# Horizon Europe: investing in R&I to shape our future

- The vision:  
" a Europe that protects,  
a Europe that empowers,  
a Europe that defends"  
*Jean-Claude Juncker*
- Tackling **climate change**
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's **competitiveness and growth**



# The Strategic Planning process: to set in gear a transformatory agenda

The  
present  
we have

R&I Strategic Planning of Horizon Europe

Synergies across the MFF

Synergies across other EU policy interventions

Synergies with the MS actions

The  
future  
we want

... and our strategic plan will attract attention  
and cooperation at international/global level

# Strategic Plan for implementing Horizon Europe

The Strategic Plan (*new implementing act by the Commission*) will prepare the content in the work programmes and calls for proposals for the first four years

- Strategic orientation for R&I support, expected impacts
- Partnerships and missions
- Areas for international cooperation
- Issues such as:
  - Balance between research and innovation
  - Social Sciences and Humanities
  - Key Enabling Technologies and strategic value chains
  - Gender
  - Ethics and integrity
  - Dissemination and exploitation

# Steps towards the first Horizon Europe WP

HE  
Legislative  
Package

Strategic  
Plan  
2021-2024

Work  
Programme  
2021-2022

Call for  
proposals

Summer  
2019

Early involvement and exchanges with Member States, consultation with stakeholders and the public at large  
Establishment of Mission Boards

Autumn-  
winter  
2019/2020

Co-creation at Research & Innovation Days 24 – 26 September.  
Extensive exchanges with the new European Parliament.  
Establishment of new Commission - envisaged endorsement of Strategic Plan

2020

Drafting of first Horizon Europe Work Programme on the basis of the Strategic Plan

2021

Start of Horizon Europe

# 1<sup>ο</sup> Στρατηγικό Σχέδιο 2021-2024: Διαβουλεύσεις

- ***First Strategic Plan 2021-2024***

(έκλεισε στις 8/9/2019)

[https://ec.europa.eu/eusurvey/runner/HorizonEurope\\_Codesign\\_2021-2024](https://ec.europa.eu/eusurvey/runner/HorizonEurope_Codesign_2021-2024)

- ***Implementation Strategy***

(έκλεισε στις 15/9/2019)

[https://ec.europa.eu/eusurvey/runner/HorizonEurope\\_Codesign\\_Implementation](https://ec.europa.eu/eusurvey/runner/HorizonEurope_Codesign_Implementation)

- **12 Candidates for Institutionalised Partnerships**

(ανοικτή έως 6/11/2019)

[https://ec.europa.eu/info/news/have-your-say-next-generation-ambitious-research-and-innovation-partnerships-2019-sep-11\\_en](https://ec.europa.eu/info/news/have-your-say-next-generation-ambitious-research-and-innovation-partnerships-2019-sep-11_en)

# EUROPEAN RESEARCH & INNOVATION DAYS

24 → 26  
SEPTEMBER

20  
19

KANAL ♡ CENTRE POMPIDOU  
Brussels, BELGIUM

#RiDaysEU  
@EUScienceInnov

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# Περισσότερες πληροφορίες

## Ιστοσελίδα Ορίζοντα Ευρώπη

[https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme\\_en](https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en)

**Common understanding** of the co-legislators on the Framework Programme: <https://data.consilium.europa.eu/doc/document/ST7942-2019-INIT/en/pdf>

**Corrigendum on Annex III :**

<https://data.consilium.europa.eu/doc/document/ST-7942-2019-COR1/en/pdf>

**Partial General Approach adopted by the Council on the Specific Programme:** <https://data.consilium.europa.eu/doc/document/ST8550-2019-INIT/en/pdf>

# CLUSTER 1: Health

**Everyone has the right to timely access to affordable healthcare of good quality** (EU Pillar of Social Rights, UN SDGs).

## **Newly emerging or persisting health challenges:**

- **Threats to citizens and public health:** rise of non-communicable diseases; spread of antimicrobial drug resistance; emergence of infectious epidemics; health risks in a rapidly changing social, urban and natural environment
- **Sustainability of social and health care systems:** increasing costs for European health care systems; lack of effective health promotion and disease prevention; persistence of health inequalities, affecting disproportionately the vulnerable
- **Competitiveness of EU's health and care industry:** personalised medicine approaches and digitalisation in health and care; increasing pressure from new and emerging global players in health innovation

These challenges are **complex, interlinked and global.**

***New solutions require multidisciplinary, cross-sectorial and transnational collaboration***

# Cluster Health: Intervention Areas

(Common Understanding)

- **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, including **personalised medicine**
- Health care systems (*accessibility, resilience, efficiency, sustainability*)

# 1<sup>st</sup> Strategic Plan (draft):

## 6 health related challenges

1. Staying healthy in a rapidly changing society
2. Living and working in a health promoting environment
3. Tackling diseases and reducing disease burden
4. Ensuring access to sustainable and high quality health care in the EU (role and organizational structure)
5. Unlocking the potential of new tools/technologies/digital solutions (emphasis on increasingly shared resources : data, infra, expertise)
6. Maintaining a sustainable and globally competitive health industry

# Health related actions (current landscape)

## P2Ps

### JPIs

(AMR, HDHL,  
JPND, MYBL)

### Art. 185

(AAL2, EDCTP  
2, EMPIR)

### EJP

HBM4EU  
One Health  
**Rare Diseases**

### ERA-NET Co fund

-JPI – EC- AMR  
-ERA HDHL  
-HDHL –Intimic  
-JPCoFUND 2 (JPND)

### ERA- PerMed

ERAcSysMed  
ERA CVD

### E-RARE

**Euronanomed III**

**NEURON**

**TRANSCAN II**

FLAGERA

### FET Flagship

Human Brain  
Project

### RIs

**BBMRI**

**EATRIS**

ECRIN

**INSTRUCT**

SHARE

ESS

-----  
**ELIXIR**  
**INFRAFRONTIER**

EIP

Active & Healthy Ageing

## PPPs

### Art. 187

IMI 2

(ECSEL, Euro HPC)

c PPP

Robotics

**EIT-KIC**

**Health**

ETP

Nanomedicine

Source: ERALEARN

# HORIZON EUROPE (proposed partnerships)

## Cluster Health

### Rationalisation and reform:

Overall number reduced from 13 to 7, of which

- 4 are reformed continuations of current partnership topics;
- 3 partnerships that would build on existing actions or merge existing partnerships;
- No discontinuation, but merging.

*CF: Co-funded*

*CP: Co-programmed*

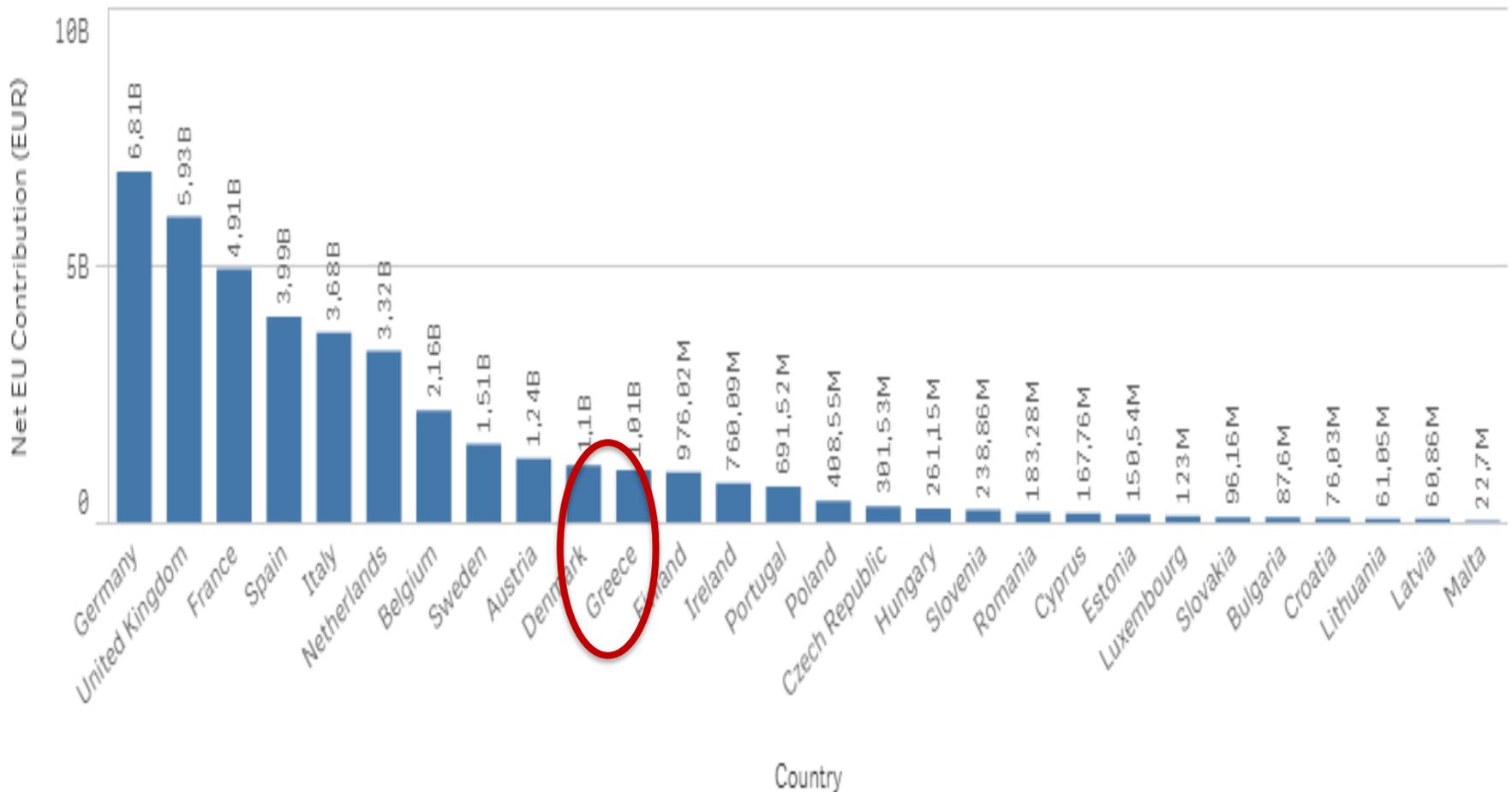
Current candidates	Type
▪ <b>EU-Africa Global Health Partnership</b>	A185/7, CP, CF
▪ <b>Innovative Health Initiative</b>	A187, CP
▪ <b>Chemicals Risk Assessment</b>	CF
▪ <b>(Pre-)Clinical Health Research</b>	CF
▪ <b>Large-scale innovation and transformation of health systems in a digital and ageing society</b>	CF
▪ <b>Personalised Medicine</b>	CF
▪ <b>Rare Diseases</b>	CF
In addition: <b>EIT Health</b>	KIC

# Η Ελληνική συμμετοχή στον Ορίζοντα 2020

11<sup>η</sup> θέση/28 με > 1 δισ. €

Στοιχεία εγκεκριμένης χρηματοδότησης Ιούνιος 2019

Horizon 2020 Contribution (EUR) to Member States



# Η Ελληνική συμμετοχή στον Ορίζοντα 2020 (ανά θεματική περιοχή)

Net EU Contribution (EUR) by thematic priority



ERANET (ΥΓΕΙΑ)	ΘΕΜΑΤΙΚΟΙ ΤΟΜΕΙΣ	Εθνικές προσκλήσεις
EURONANOMED	Regenerative medicine, Diagnostics, Targeted delivery systems	1 <sup>η</sup> Πρόσκληση 2016 (4 έργα)
		2 <sup>η</sup> Πρόσκληση 2018 (1 έργο)
		3 <sup>η</sup> Πρόσκληση 2019 (σε εξέλιξη, 4 έργα)
		4 <sup>η</sup> εθνική πρόσκληση (προς έκδοση)
E-RARE 2 & 3	Rare diseases	Πρόσκληση 2016 (2 έργα)
		4 <sup>η</sup> εθνική πρόσκληση (προς έκδοση)
TRANSCAN	Human tumor heterogeneity to overcome recurrence & resistance to therapy	1 <sup>η</sup> Πρόσκληση 2016 (3 έργα)
	Minimally and non-invasive methods for early detection and/or progression of cancer	2 <sup>η</sup> Πρόσκληση 2018 (3 έργα)
	Transnational Research on Rare Cancers	3 <sup>η</sup> Πρόσκληση 2019 (2 έργα)
		4 <sup>η</sup> εθνική πρόσκληση (προς έκδοση, αναμένονται τα αποτελέσματα)
ΝΕΕΣ ΔΡΑΣΕΙΣ	ΘΕΜΑΤΙΚΟΙ ΤΟΜΕΙΣ	Πορεία υλοποίησης (διαθέσιμη δημόσια δαπάνη)
E-RARE EJP Cofund (δικτύωση και Προκήρυξη)	Rare Diseases	Αξιολόγηση της Β' φάσης σε ευρωπαϊκό επίπεδο (1.000.000,00 €)
PER-MED (μόνο προκήρυξη)	Personalized Medicine "Research towards Implementation of Personalized Medicine"	Ολοκληρώθηκε το 1ο στάδιο υποβολής – 2ο στάδιο (σε εξέλιξη) (1.200.000€)
NEURON (μόνο προκήρυξη)	Biomarkers in brain disorders	Ολοκληρώθηκε το 1 <sup>ο</sup> στάδιο υποβολής – 2ο στάδιο (σε εξέλιξη) (1.000.000,00 €)

Ευχαριστώ για την προσοχή σας!  
[νkar@gsrt.gr](mailto:νkar@gsrt.gr)



# Backup slides



# New approach to partnerships: why?

Impact Assessment annex 8-5 – current partnership landscape

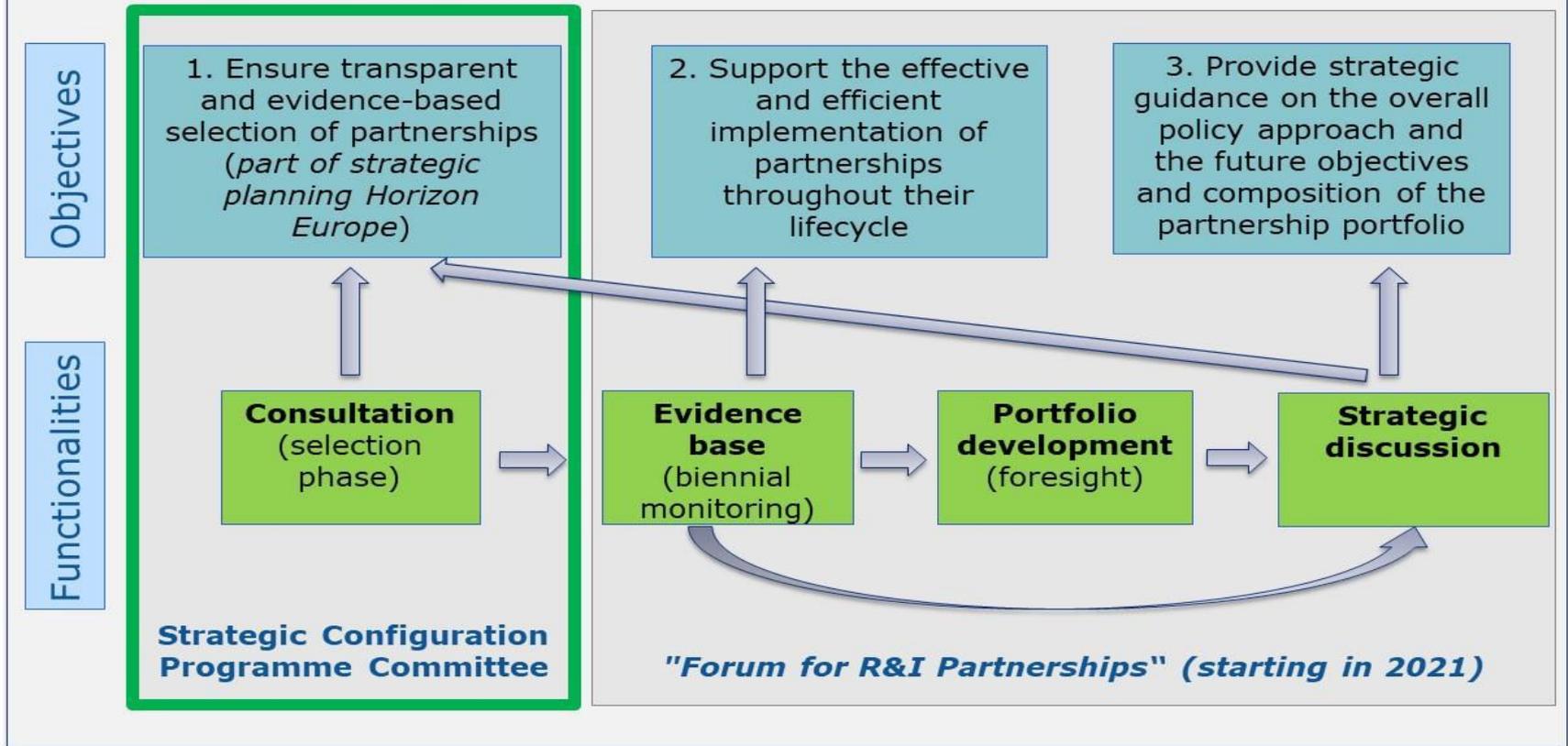
Partnership approaches	Public-public partnerships (P2P)	Public-private partnerships (PPP)	EIT-KICs*	FET Flagships**
Implementation modes	ERA-NET-Cofund, EJP Cofund, Article 185, Joint Programming Initiative (JPI)	Contractual Arrangement (cPPP) Article 187	H2020 Grant agreements for different types of actions Framework Partnership Agreements (FPA)	
Currently active R&I Partnerships (Horizon 2020)	a) ERA-NETs: ~70 b) EJP Cofund: 5 c) Article 185: 6 d) JPIs***: 10	a) JUs: 7 (+HPC) b) cPPPs: 10	a) KICs: 6 (+ 2 until 2020)	a) FET-Flagships: 2 (+Quantum)
Financial contribution from H2020, estimated)	<b>2.500 M€</b> (3,1% of H2020 budget)	<b>13.450 M€</b> (17,5% of H2020 budget)	<b>2.400 M€</b> (3,1% of H2020 budget)	<b>1.000 M€</b> (1,3% of H2020 budget)

\*EIT-KICs: Knowledge and Innovation Communities (KICs) of the European Institute for Innovation and Technology (EIT)

\*\*FET-Flagships: Flagships of the Future and Emerging Technologies programme (FET)

\*\*\* JPIs: Joint Programming Initiatives are no EU level instruments but included here as they receive EU support via ERA-NETs and/or CSAs

# Strategic Coordinating Process for R&I Partnerships



# Lessons Learned

## from Horizon 2020 Interim Evaluation

# Key Novelties

## in Horizon Europe

-  Support breakthrough innovation →
-  Create more impact through mission-orientation and citizens' involvement →
-  Strengthen international cooperation →
-  Reinforce openness →
-  Rationalise the funding landscape →
-  Encourage participation →



# Biosciences & Health RIs

No	Acronym	Title	ESFRI relation	funding plan
1	INFRAFRONTIER-GR / Phenotypos	The Greek Research Infrastructure for Molecular and Behavioral Phenotyping of biological model organisms for chronic degenerative diseases	INFRAFRONTIER	1 <sup>st</sup> batch
2	pMED-GR	The Greek Research Infrastructure for Personalised Medicine Towards more accurate and cost-effective health management for the Greek citizen	-	1 <sup>st</sup> batch
3	Biolmaging-GR	A Greek Research Infrastructure for visualizing and monitoring fundamental biological processes	EURO-Biolmaging	1 <sup>st</sup> batch
4	Openscreen-GR	An Open-Access Research Infrastructure of Chemical Biology and Target-Based Screening Technologies for Human and Animal Health, Agriculture and the Environment	OpenSCREEN	1 <sup>st</sup> batch
5	ELIXIR-GR	Managing and analyzing biological data	ELIXIR	1 <sup>st</sup> batch
6	INSPIRED	The National Research Infrastructures on Integrated Structural Biology, Drug Screening Efforts and Drug-target functional characterization	INSTRUCT	1 <sup>st</sup> batch
7	EATRIS-GR	Infrastructure for preclinical and early-phase clinical development of drugs, therapeutics and biomedical devices	EATRIS	2 <sup>nd</sup> batch
8	BBMRI -GR	Strategic expansion of the Greek Biobanking Infrastructure	BBMRI	2 <sup>nd</sup> batch

# Elements of the multiannual funding plan for RIs

Distribution of RIs per thematic priority

