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
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

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

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

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

Creation & Diffusion of high quality knowledge
Strengthen the role of R&I in and for policy making
Foster innovation

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*

- **13.5 billion €** (in current prices)*
  - Excellent Science
  - Global Challenges & European Ind. Competitiveness
  - Innovative Europe
  - Widening Part. & ERA
  - Euratom

* 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

**Marie Skłodowska-Curie Actions**
- Equipping researches with new knowledge and skills through mobility and training

**Research Infrastructures**
- Integrated and inter-connected world-class research infrastructures

Commission proposal:
- €16.6 billion
- €6.8 billion
- €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

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

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 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

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

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

#HorizonEU
New approach to European Partnerships

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

- 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 transformative agenda

R&I Strategic Planning of Horizon Europe

- Synergies across the MFF
- Synergies across other EU policy interventions
- Synergies with the MS actions

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

The present we have

The future we want
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.
1ο Στρατηγικό Σχέδιο 2021-2024: Διαβουλεύσεις

• **First Strategic Plan 2021-2024**
  (έκλεισε στις 8/9/2019)

• **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)
EUROPEAN RESEARCH & INNOVATION DAYS

24 → 26 SEPTEMBER 2019
KANAL Centre Pompidou
Brussels, BELGIUM

#RiDaysEU @EUScienceInnov
Περισσότερες πληροφορίες

Ιστοσελίδα Ορίζοντα Ευρώπη


Corrigendum on Annex III:

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 disproportionally 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)
1st 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
- ERAcoSysMed
- ERA CVD
- E-RARE
- Euronanomed III
- NEURON
- TRANSCAN II
- FLAGERA

**PPP**

- **FET Flagship**
  - Human Brain Project

- **Art. 187**
  - IMI 2 (ECSEL, Euro HPC)

**RIs**
- BBMRI
- EATRIS
- ECRIN
- INSTRUCT
- SHARE
- ESS

**-----------**

**ELIXIR**

**INFRAFRONTIER**

**EIT-KIC**

- Health

**EIP**

- Active & Healthy Ageing

**ETP**

- Nanomedicine

Source: ERALEARN
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.

Current candidates

<table>
<thead>
<tr>
<th>Current candidates</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-Africa Global Health Partnership</td>
<td>A185/7, CP, CF</td>
</tr>
<tr>
<td>Innovative Health Initiative</td>
<td>A187, CP</td>
</tr>
<tr>
<td>Chemicals Risk Assessment</td>
<td>CF</td>
</tr>
<tr>
<td>(Pre-)Clinical Health Research</td>
<td>CF</td>
</tr>
<tr>
<td>Large-scale innovation and transformation of health systems in a digital and ageing society</td>
<td>CF</td>
</tr>
<tr>
<td>Personalised Medicine</td>
<td>CF</td>
</tr>
<tr>
<td>Rare Diseases</td>
<td>CF</td>
</tr>
</tbody>
</table>

In addition:
EIT Health

CF: Co-funded
CP: Co-programmed
Η Ελληνική συμμετοχή στον Ορίζοντα 2020
11η 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)

<table>
<thead>
<tr>
<th>Θεματική Περιοχή</th>
<th>Ευρωπαϊκή Πιστωτική Ανάφερση (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information and Communication Technologies</td>
<td>225,09M</td>
</tr>
<tr>
<td>Secure societies - Protecting freedom and security of Europe and its citizens</td>
<td>100,61M</td>
</tr>
<tr>
<td>Smart, green and integrated transport</td>
<td>74,68M</td>
</tr>
<tr>
<td>Health, demographic change and wellbeing</td>
<td>66,31M</td>
</tr>
<tr>
<td>Climate action, environment, resource efficiency and raw materials</td>
<td>60,95M</td>
</tr>
<tr>
<td>Future and Emerging Technologies (FET)</td>
<td>35,01M</td>
</tr>
<tr>
<td>Europe in a changing world - inclusive, innovative and reflective Soc...</td>
<td>30,71M</td>
</tr>
<tr>
<td>Advanced materials</td>
<td>24,68M</td>
</tr>
<tr>
<td>Secure, clean and efficient energy</td>
<td>81,93M</td>
</tr>
<tr>
<td>Marie-Sklodowska-Curie Actions</td>
<td>69,47M</td>
</tr>
<tr>
<td>Food security, sustainable agriculture and forestry, marine and maritime and</td>
<td>56,68M</td>
</tr>
<tr>
<td>inland water research and the bioeconomy</td>
<td>33,91M</td>
</tr>
<tr>
<td>European Research Council (ERC)</td>
<td>13,19M</td>
</tr>
<tr>
<td>Space</td>
<td>15,35M</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
<tr>
<td>ERANET (ΥΓΕΙΑ)</td>
<td>ΘΕΜΑΤΙΚΟΙ ΤΟΜΕΙΣ</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| EURONANOMED    | Regenerative medicine, Diagnostics, Targeted delivery systems | 1η Πρόσκληση 2016 (4 έργα)  
2η Πρόσκληση 2018 (1 έργο)  
3η Πρόσκληση 2019 (σε εξέλιξη, 4 έργα)  
4η εθνική πρόσκληση (προς έκδοση) |
| E-RARE 2 & 3   | Rare diseases | Πρόσκληση 2016 (2 έργα)  
4η εθνική πρόσκληση (προς έκδοση) |
| TRANSCAN       | Human tumor heterogeneity to overcome recurrence & resistance to therapy  
Minimally and non-invasive methods for early detection and/or progression of cancer  
Transnational Research on Rare Cancers | 1η Πρόσκληση 2016 (3 έργα)  
2η Πρόσκληση 2018 (3 έργα)  
3η Πρόσκληση 2019 (2 έργα)  
4η 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 1ο στάδιο υποβολής – 2ο στάδιο (σε εξέλιξη) (1.000.000,00 €) |
Ευχαριστώ για την προσοχή σας!
vkar@gsrt.gr
Backup slides
New approach to partnerships: why?
Impact Assessment annex 8-5 – current partnership landscape

<table>
<thead>
<tr>
<th>Partnership approaches</th>
<th>Public-public partnerships (P2P)</th>
<th>Public-private partnerships (PPP)</th>
<th>EIT-KICs*</th>
<th>FET Flagships**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation modes</td>
<td>ERA-NET-Cofund, EJP Cofund, Article 185, Joint Programming Initiative (JPI)</td>
<td>Contractual Arrangement (cPPP) Article 187</td>
<td>H2020 Grant agreements for different types of actions Framework Partnership Agreements (FPA)</td>
<td></td>
</tr>
</tbody>
</table>

Currently active R&I Partnerships (Horizon 2020)

- a) ERA-NETs: ~70
- b) EJP Cofund: 5
- c) Article 185: 6
- d) JPIs**: 10

Financial contribution from H2020, estimated

- **2.500 M€** (3,1% of H2020 budget)
- **13.450 M€** (17,5% of H2020 budget)
- **2.400 M€** (3,1% of H2020 budget)
- **1.000 M€** (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

1. Ensure transparent and evidence-based selection of partnerships (part of strategic planning Horizon Europe)

2. Support the effective and efficient implementation of partnerships throughout their lifecycle

3. Provide strategic guidance on the overall policy approach and the future objectives and composition of the partnership portfolio

Consultation (selection phase)

Evidence base (biennial monitoring)

Portfolio development (foresight)

Strategic discussion

"Forum for R&I Partnerships" (starting in 2021)
Lessons Learned
from Horizon 2020 Interim Evaluation

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

Key Novelties
in Horizon Europe

- European Innovation Council
- R&I Missions
- Extended association possibilities
- Open science policy
- New approach to Partnerships
- Spreading Excellence
<table>
<thead>
<tr>
<th>No</th>
<th>Acronym</th>
<th>Title</th>
<th>ESFRI relation</th>
<th>funding plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INFRAFRONTIER-GR /</td>
<td>The Greek Research Infrastructure for Molecular and Behavioral Phenotyping of biological model organisms for chronic degenerative diseases</td>
<td>INFRAFRONTIER</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td></td>
<td>Phenotypos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>pMED-GR</td>
<td>The Greek Research Infrastructure for Personalised Medicine Towards more accurate and cost-effective health management for the Greek citizen</td>
<td>-</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>3</td>
<td>BioImaging-GR</td>
<td>A Greek Research Infrastructure for visualizing and monitoring fundamental biological processes</td>
<td>EURO-BioImaging</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>4</td>
<td>Openscreen-GR</td>
<td>An Open-Access Research Infrastructure of Chemical Biology and Target-Based Screening Technologies for Human and Animal Health, Agriculture and the Environment</td>
<td>OpenSCREEN</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>5</td>
<td>ELIXIR-GR</td>
<td>Managing and analyzing biological data</td>
<td>ELIXIR</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>6</td>
<td>INSPIRED</td>
<td>The National Research Infrastructures on Integrated Structural Biology, Drug Screening Efforts and Drug-target functional characterization</td>
<td>INSTRUCT</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>7</td>
<td>EATRIS-GR</td>
<td>Infrastructure for preclinical and early-phase clinical development of drugs, therapeutics and biomedical devices</td>
<td>EATRIS</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; batch</td>
</tr>
<tr>
<td>8</td>
<td>BBMRI -GR</td>
<td>Strategic expansion of the Greek Biobanking Infrastructure</td>
<td>BBMRI</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; batch</td>
</tr>
</tbody>
</table>
Elements of the multiannual funding plan for RIs

Distribution of RIs per thematic priority

- Transport & Logistics: 1
- Materials & Construction: 3
- ICT: 3
- Health & Pharmaceuticals: 8
- Environment & Sustainable Development: 6
- Energy: 2
- Culture, Tourism & Creative Industries: 1
- Agrofood: 4

Athens, Nov. 2017