

# HORIZON EUROPE: HEALTH CLUSTER

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NKFIH, 2021.02.24.



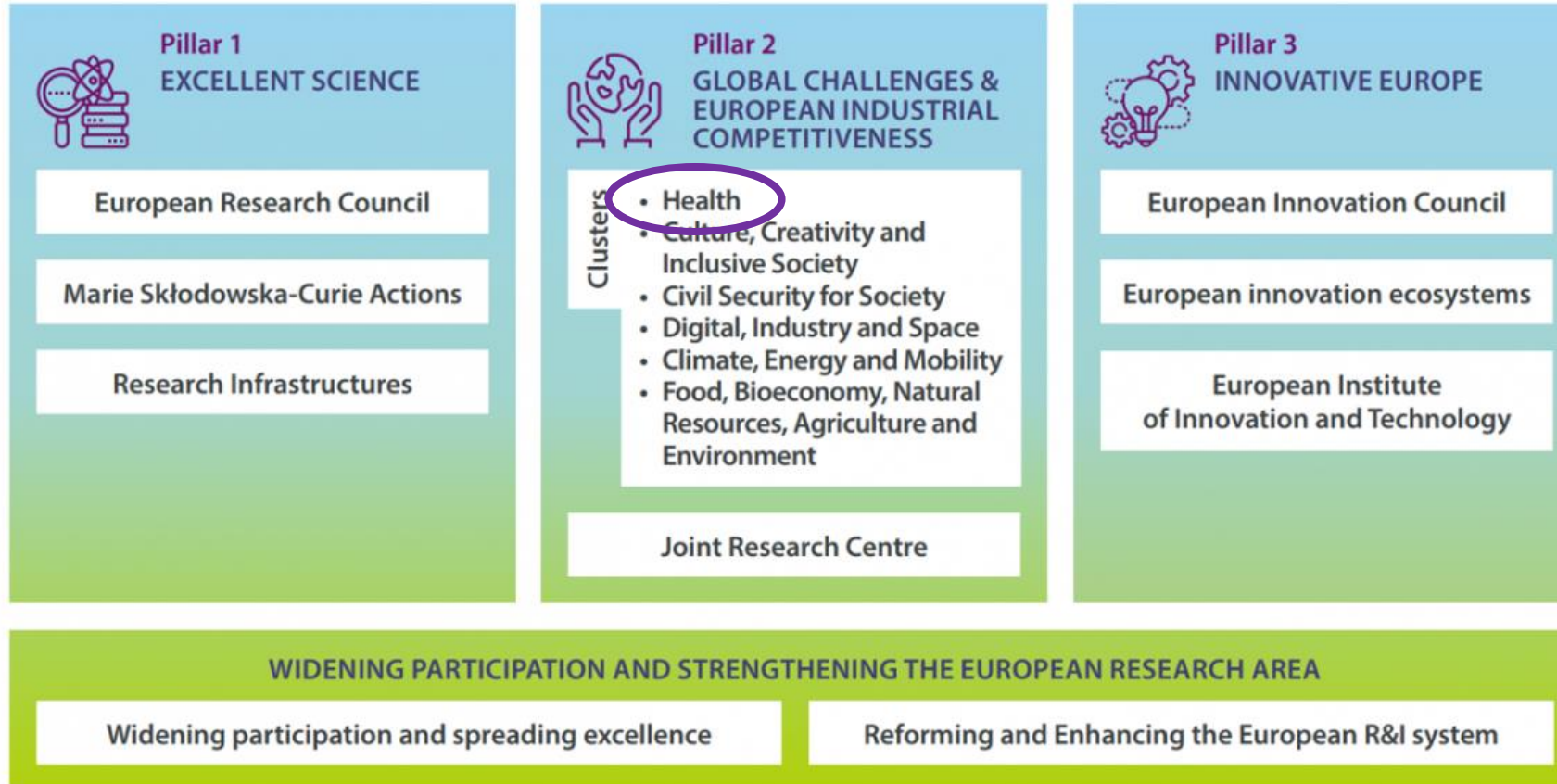
# Agenda

- HE overview
- Health cluster
- Work Programme 2021-2022
- Partnerships
- Cancer Mission
- ERA-NET calls
- Q and A



# HORIZONE EUROPE

## THREE PILLARS FOR IMPLEMENTATION



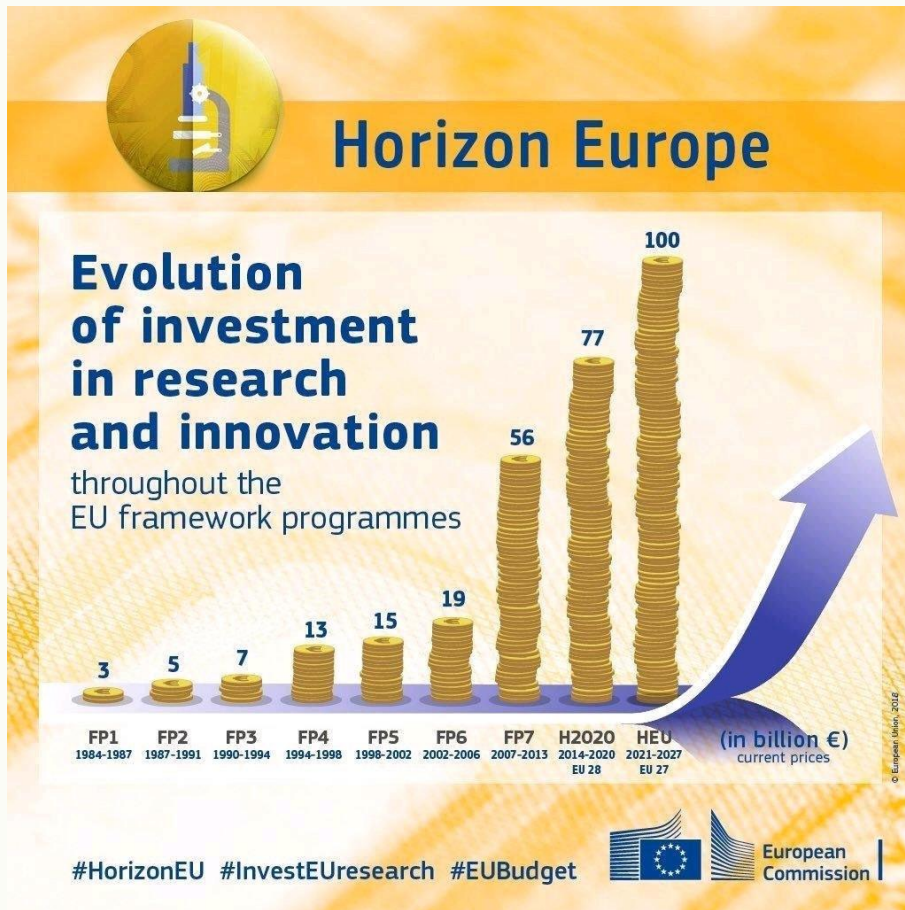
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- Partnerships
- Cancer Mission
- EIT Health KIC
- (Emergency WP?)



# Budget



Horizon Europe: Total budget: **95.5 Billion Euros**

Tackling climate change: **35%**

HE Cluster Health: **8.246 Billion Euros**

**10%: Cancer Mission**

**Max. 50%: Partnerships**

EU4Health Programme: **5.1 Billion Euros**





## Health Cluster

### Challenges:

- a complex, evolving demography (**ageing, multi-morbidities,...** )
- achieving greater **resilience and equity** in our healthcare systems;
- the need to be **better prepared** for the accelerating pace of change and **possible shocks** to our societies.



## Health Cluster



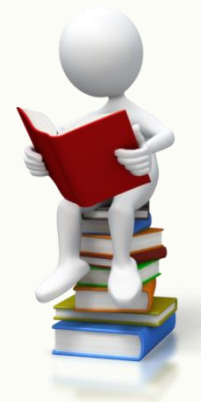
### Role of Research & Innovation:

- advance **knowledge and capabilities**,
- improve **understanding** of health and diseases,
- develop innovative methodological and technological solutions to better **manage health and diseases**,
- design sustainable approaches for the **digital transformation** and delivery of integrated, person-centred and equitable health and care services.



## Health Cluster

- **Policy framework: documents:**
- Sustainable Development Goals
- EU Recovery plan
- EU Health Union
- European Green Deal
- Europe fit to the Digital Age
- Farm to Fork Strategy
- Pharmaceutical Strategy for Europe
- European One Health Action Plan
- Chemical Strategy for Sustainability



## Health Cluster

- Impact
- Interdisciplinary, cross-sectoral
- Social Sciences and Humanities (SSH)
- Co-design; Multi-actor approach:  
end-users, patients, patients organizations, regulatory bodies
- Open science
- Gender aspects
- Closed/running projects
- Joint actions with the other winning projects





## Type of action

- **Research and Innovation Action (RIA)**
- Funding rate: 100%
- **Innovation Action (IA)**
- Funding rate: 70% (non-profit organisations: 100%)
- **Coordination and Support Action (CSA)**
- Funding rate: 100%
- Pre-Commercial Procurement (PCP);
- Public Procurement of Innovative Solutions (PPI)
- Co-Fund Partnership
- Indirect cost: 25%



## Rules of participation

- **Rules of participation:** Any legal entity, regardless of its place of establishment, including legal entities from nonassociated third countries or international organisations may participate in actions.
- **Funding:** member states + associated countries + USA
- Entities shall be part of a consortium that shall include at least **three independent legal entities** each established in a different Member State or associated country and with at least one of them established in a Member State (Exception: Coordination and Support Actions may be implemented by one or more legal entities, plus specific rules for Procurement Actions).



### Structure of the 2-year Work Programmes:

- Introduction
  - Destination
    - Call/year
      - **Topics:**
      - Title
      - Specific Conditions related to topic (budget, type of action)
      - Expected outcome: what should be achieved from the project
      - Scope: what should be done in the project



**Timeline:** Call opening: **22 April 2021**

First deadlines: **September 2021**



## Destinations

### Six “Destinations”:

- 1. **Staying healthy** in a rapidly changing society
- 2. Living and working in a health-promoting **environment**
- 3. **Tackling diseases** & reducing disease burden
- 4. Ensuring access to innovative, sustainable & high-quality **Healthcare**
- 5. Unlocking the full potential of **new tools, technologies and digital solutions** for a healthy society
- 6. Maintaining an innovative, sustainable & globally **competitive health industry**





## Destination 1

### Staying healthy in a rapidly changing society

- R&I should provide new evidence, methodologies and tools to **understand the transition from health to disease, preventing diseases and promoting health.**

### Expected impacts:

- the promotion of **healthier lifestyles, behaviours and environments** to enable citizens stay healthy throughout the life; Innovative evidence-based services, policies and guidelines for **health promotion and disease prevention**;
- accessible, equitable and effective co-designed **digital solutions** for promoting health and preventing disease;
- collaborations across sectors and with other HE clusters to **transform the healthcare system from reacting to illness, to proactively promoting health and preventing disease.**



## CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Towards a molecular and neurobiological understanding of mental health and mental illness for the benefit of citizens and patients	RIA	Single stage	60.00 (10.00/project)
<i>Supporting digital empowerment and health literacy – Healthy citizens 2.0</i>	<i>CSA</i>	<i>Single stage</i>	<i>3.00</i>
<i>A roadmap for personalised prevention</i>	<i>CSA</i>	<i>Single stage</i>	<i>3.00</i>
<i>Mobilising the network of National Contact Points in the Health Cluster</i>	<i>CSA</i>	<i>Single stage</i>	<i>3.00</i>



## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Boosting mental Health in Europe in times of change	RIA	Two stage	50.00 (7.00/project)
Trustworthy AI tools to predict the risk of chronic non-communicable diseases and/or their progression	RIA	Two stage	60.00 (6.00/project)
Prevention of obesity through the life course	RIA	Two stage	60.00 (10.00/project)
Personalised blue print of chronic inflammation in health-to-disease transition	RIA	Single stage	50.00 (7.00/project)



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## Destination 2

### Living and working in a health-promoting environment

- The **environment** we live and work in has direct or indirect beneficial or adverse impacts on human health and well-being. It is a major determinant of health and well-being.

#### Expected impacts:

- the knowledge to identify and **assess the risks and benefits for health of living and working environments** to enable the design of health-promoting and disease preventive **policy actions** and dissemination of best practices;
- solid scientific evidence and uptake of research results into relevant environmental, occupational, social, economic, fiscal and health **policies** at EU, national and regional level;
- new/improved health interventions, technologies, tools and services for care and health.





# CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Exposure to electromagnetic fields (EMF) and health	RIA	Single stage	30.00 (8.00/project)
Indoor air quality and health	RIA	Single stage	40.00 (8.00/project)
Health impacts of climate change, costs and benefits of action and inaction	RIA	Single stage	60.00 (10.00/project)
<i>European Partnership for the Assessment of Risks from Chemicals (PARC)</i>	<i>Co-Fund Partnership</i>	<i>Single stage</i>	<i>200.00</i>



## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Methods for assessing health-related costs to environmental stressors	RIA	Single stage	20.00 (4.00/project)



## Destination 3

### Tackling diseases & reducing disease burden

#### Expected impacts:

- For health burden of diseases in the EU and worldwide to be reduced through effective disease management, including through the development and integration of **innovative diagnostic and therapeutic approaches, personalised medicine approaches, digital and other people-centred solutions** for health and care.
- Patients should be **diagnosed early** and accurately and receive effective, cost-efficient and affordable treatment, including for rare diseases.
- Premature mortality from **non-communicable diseases reduced by one third by 2030**.
- Health care systems should be better prepared to respond to **health emergencies**.
- Patients and citizens should be knowledgeable of disease threats, involved and **empowered** to make and shape decisions for their health.



# CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Towards improved supportive, palliative, survivorship and end-of-life care of cancer patients	RIA	Single stage	50.00 (6.00/project)
Building a European innovation platform for the repurposing of medicinal products	RIA	Single stage	50.00 (25.00/project)
Innovative approaches to enhance poverty-related diseases research in sub-Saharan Africa	RIA	Single stage	40.00 (8.00/project)
Clinical validation of artificial intelligence solutions for treatment and care	RIA	Single stage	60.00 (6.00/project)





# CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Personalised medicine and infectious diseases: understanding the individual host response to viruses (e.g., SARS-CoV-2)	RIA	Single stage	60.00 (7.00/project)
<i>A roadmap towards the creation of the European One Health antimicrobial resistance partnership (OH AMR)</i>	<i>CSA</i>	<i>Single stage</i>	<i>0.5</i>
<i>Building a European Research and Innovation Partnership for Pandemic Preparedness</i>	<i>CSA</i>	<i>Single stage</i>	<i>2.00</i>



## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Pre-clinical development of the next generation immunotherapies for diseases or disorders with unmet medical need	RIA	Two stage	60.00 (6.00/project)
Vaccines 2.0 - developing the next generation of vaccines	RIA	Two stage	40.00 (8.00/project)
Development of new effective therapies for rare diseases	RIA	Two stage	60.00 (8.00/project)
<i>Pandemic Preparedness - Placeholder</i>	<i>RIA</i>	<i>Single stage</i>	<i>10.00</i>



## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Non-communicable diseases risk reduction in adolescence and youth	RIA	Single stage	25.00 (3.00/project)
<i>GloPID R secretariat - Placeholder</i>	<i>CSA</i>	<i>Single stage</i>	<i>2.00</i>
<i>European Partnership Fostering an ERA for Health research</i>	<i>Co-Fund Partnership</i>	<i>Single stage</i>	<i>30.00</i>



## Destination 4

### Ensuring access to innovative, sustainable & high quality Healthcare

#### Expected impacts:

- Health and social care services and systems that have **improved governance** and are more **effective, efficient, accessible, resilient, trusted and sustainable**, with health promotion and disease prevention at their heart.
- **Health care providers** that **are trained** and equipped with the skills and competences suited for the future needs of health care systems.
- People enabled to play a key role in **managing their own health and care** and specific needs of more vulnerable groups are recognised and addressed.
- People can also benefit from improved access to health care services, including safe, effective, and affordable essential medicines and vaccines.



# CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Enhancing quality of care and patient safety	RIA	Single stage	25.00 (5.00/project)
Data-driven decision-support tools for better health and care delivery and policy- making	RIA	Single stage	40.00 (4.00/project)
<i>Health and care innovation procurement network</i>	<i>CSA</i>	<i>Single stage</i>	<i>5.00</i>





## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
<i>Innovation procurement (PCP) for building the resilience of health and care systems in the context of recovery</i>	<i>PCP</i>	<i>Single stage</i>	<i>25.00 (5.00/project)</i>
<i>Innovation procurement (PPI) for building the resilience of health and care systems in the context of recovery</i>	<i>PPI</i>	<i>Single stage</i>	<i>15.00 (5.00/project)</i>
Better economic foresight, financial planning and procurement/contractual strategies for health systems	RIA	Single stage	30.00 (5.00/project)
<i>European Partnership on Transforming Health and Care Systems</i>	<i>Co-Fund Partnership</i>	<i>Single stage</i>	<i>100.00</i>



## Destination 5

# Unlocking the full potential of new tools, technologies and digital solutions for a healthy society

### Expected impacts:

- contribute to Europe's scientific and technological expertise and know-how, its capabilities for innovation in **new tools, technologies and digital solutions**, and its ability to take-up, scale-up and integrate innovation in health and care;
- **enable researchers, innovators and health care providers to use health data and AI supported decision-making** in a secure and ethical, acceptable and trustworthy manner.
- citizens should benefit from targeted and faster research resulting in safer, more efficient, cost-effective and affordable tools, technologies and **digital solutions for effective personalised disease prevention, diagnosis, treatment and monitoring for better patient outcome** and well-being, in particular through increasingly shared health resources.



## CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Smart medical devices and their surgical implantation for use in resource- constrained settings	IA	Single stage	25.00 (6.00/project)
Next generation advanced therapies to treat highly prevalent and high burden diseases with unmet needs	RIA	Single stage	60.00 (6.00/project)
Innovative tools for use and re-use of health data (in particular electronic health records and/or patient registries)	RIA	Single stage	30.00 (8.00/project)



## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers	RIA	Single stage	60 (10/project)
New methods for the effective use of real-world data and/or synthetic data in regulatory decision-making and/or in health technology assessment	RIA	Single stage	35 (7/project)
Computational models for new patient stratification strategies	RIA	Two stage	60 (6/project)



## Destination 6

### Maintaining an innovative, sustainable & globally competitive health industry

#### Expected impacts:

- **Health industry** should be **more competitive, sustainable and growing**, providing high value jobs and contributing to economic growth, in particular SMEs, by tapping into new markets and providing **European leadership** in health technologies and innovations.
- Citizens, health care providers and health systems should benefit from **swift uptake of innovative health technologies and services** offering significant improvements.
- Health industry should work **more efficiently** along the value chain from the identification of needs to the **scale-up and take-up** of solutions at national, regional or local level, including through early engagement with all stakeholders to ensure suitability and acceptance of solutions.



# CALL TOPICS 2021

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Green pharmaceuticals	RIA	Single stage	40 (8/project)
<i>Development procurement and responsible management of new antimicrobials</i>	<i>CSA</i>	<i>Single stage</i>	<i>2</i>
<i>Promoting a trusted mHealth label in Europe: uptake of Technical specifications for “Quality and Reliability of Health and Wellness Apps”</i>	<i>CSA</i>	<i>Single stage</i>	<i>2</i>



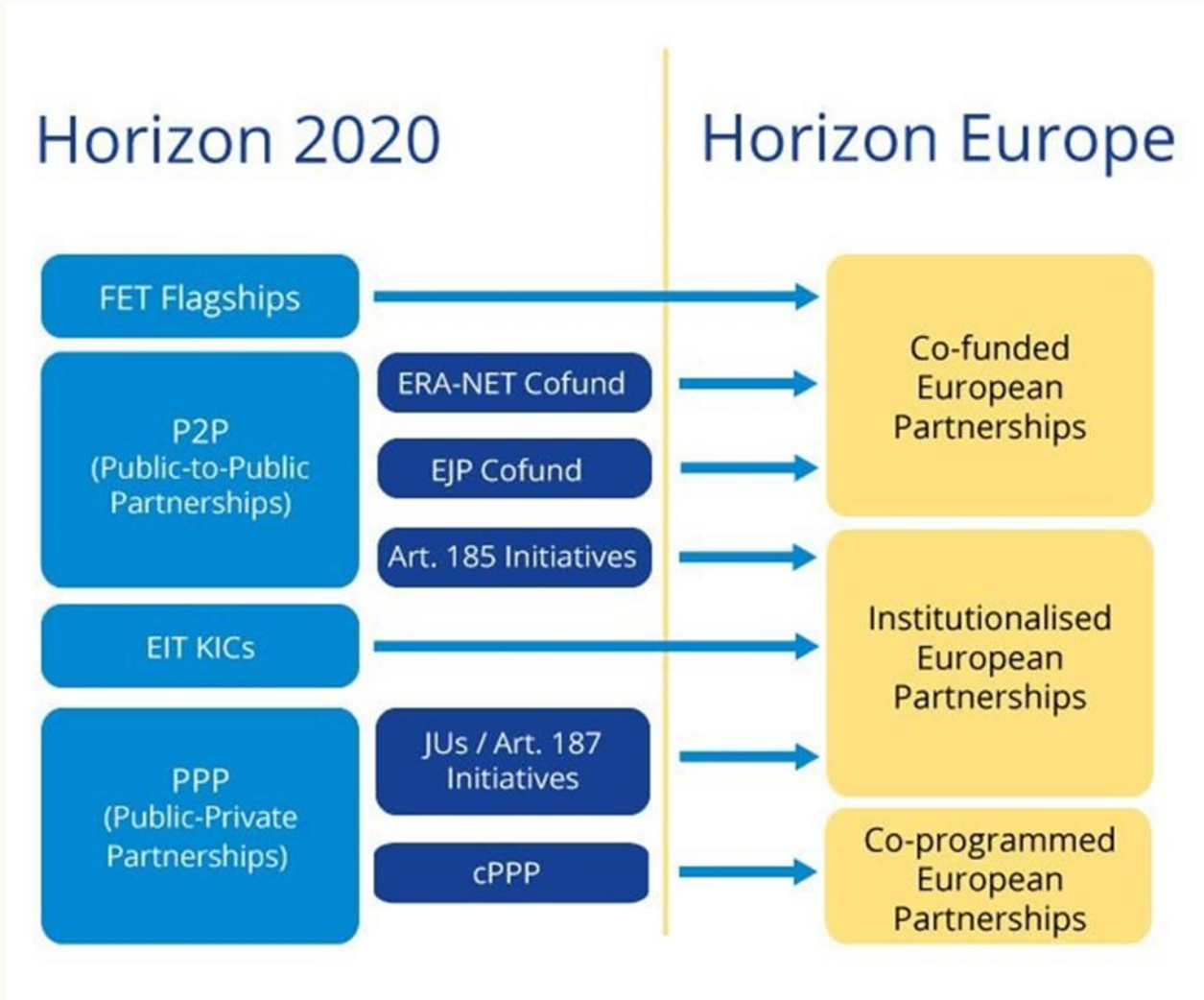


## CALL TOPICS 2022

Topic title	Type of Action	Single stage/ Two stage	Budget (Million EUR)
Enhancing Cybersecurity of connected Medical Devices	RIA	Single stage	20 (6/project)
Scaling up multi-party computation, data anonymisation techniques and synthetic data generation	RIA	Single stage	30 (7/project)
New payment models for cost-effective and affordable health innovations/new models of pricing	RIA	Single stage	15 (5/project)
<i>Setting up a European Smart Health Innovation Hub</i>	<i>CSA</i>	<i>Single stage</i>	<i>2</i>
<i>Setting up a European Electronic Health Record Exchange Format Ecosystem</i>	<i>CSA</i>	<i>Single stage</i>	<i>2</i>



# Partnerships



- to **rationalise** the European R&I partnerships landscape
- to improve the **openness and transparency** of R&I partnerships
- to **link** the R&I partnerships to future EU R&I missions and/or **strategic priorities**



# Partnerships

- EU-Africa Global Health Partnership
- Innovative Health Initiative
- European Partnership for Chemicals Risk Assessment (PARC)
- ERA for Health Research
- Health and Care Systems Transformation
- Personalised Medicine
- Rare Diseases
- One Health/AMR
- (Preparedness and Brain Health)
- [https://ec.europa.eu/info/horizon-europe/european-partnerships-horizon-europe/candidates-european-partnerships-health\\_en](https://ec.europa.eu/info/horizon-europe/european-partnerships-horizon-europe/candidates-european-partnerships-health_en)

2021/2022

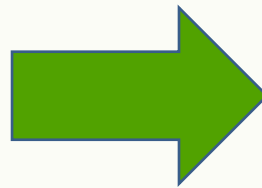
2023/2024/2025



## Partnerships



- **Innovative Medicines Initiative (IMI)**
- Public-Private Partnership (PPP)
- Industry partner: EFPIA
- 2 stage calls
- Call topics: EFPIA



- **Innovative Health Initiative (IHI)**
- PPP
- Industry partner: EFPIA, COCIR, EuropaBio, MedTech Europe, Vaccines Europe
- 1 stage and 2 stage calls
- Innovation panel



## Partnerships

### ERA for Health Research

- Based on H2020 ERA-NETs and other programmes: Cancer, CVD, Systems Medicine, NanoMedicine, JPI HDHL, etc....
- Preclinical research
- Future: Clinical research?



### European Partnership for Chemicals Risk Assessment (PARC)

- Based on Human Biomonitoring EJP
- PARC is an EU-wide research and innovation programme to support EU and national chemical risk assessment
- Hu partner: Országos Környezetegészségügyi Intézet



## EIT Health KIC

- Established in 2015, EIT Health is focused on answering some of Europe's biggest health challenges; bringing together over 1,000 partners
- Programmes:
- **Accelerator:** Catalyses new business growth to deliver transformative products and services. The Health KIC works with entrepreneurs, start-ups and SMEs to **shorten the time-to-market for life-changing products and services.**
- **Campus:** Bridges the gap between academia and enterprise to **upskill professionals** on new innovative techniques
- **Innovation:** we build a task force of world-class experts from the worlds of business, research and education to **develop the most promising solutions into real-world commercially-viable products or services.**
- <https://eithealth.eu/>





# Missions

- „Missions provide a solution, an opportunity, and an approach to address the numerous challenges that people face in their daily lives”

Professor Mariana Mazzucato



- **Connecting to citizens:** Missions will relate EU's research and innovation to society and citizens' needs, with strong **visibility and impact** to rationalise the European R&I partnerships landscape.
- 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.



# Missions

Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe

Adaptation to climate change, including societal transformation



By 2030 more than 3 million lives saved, living longer and better

Healthy oceans, seas, coastal and inland waters



Mission areas



Cancer

Mission starfish 2030:  
Restore our ocean waters

By 2030 at least 75% of all soils in each EU Member State are healthy

Climate-neutral and smart cities



Soil health and food

100 Climate-neutral cities by 2030



## Cancer Mission

- Europe has a **25% all cancer cases** and less than **10 % of the world's population**.
- Each year, **2.6 million people** in the EU-27 are **diagnosed** with cancer.
- Without strong action, the number of cancer cases in Europe will increase **by 25 % by 2035**.
- Cancer **kills 1.2 million** people in the EU-27 each year.
- Hungary: 2020 incidence: 5th in Europe  
mortality: 2nd in Europe



**Target: By 2030 more than 3 million lives saved, living longer and better**



# Cancer Mission



- Prevention
- Early detection
- Diagnosis and treatment
- Quality of life for patients and survivors



## Cancer Mission Board

[https://ec.europa.eu/info/publications/conquering-cancer-mission-possible\\_en](https://ec.europa.eu/info/publications/conquering-cancer-mission-possible_en)



# Cancer Mission



Figure 1. Intervention areas for action

## 5 intervention areas:

- Understand cancer, its risk factors and impact
- Prevent what is preventable
- Optimise diagnostics and treatment
- Support quality of life
- Ensure equitable access

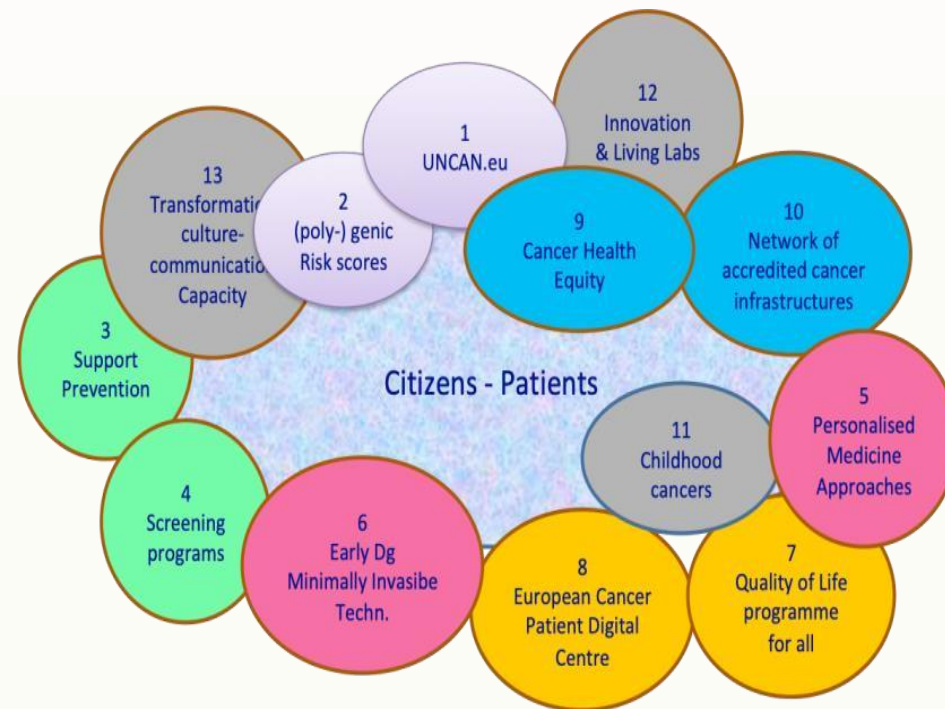




# Cancer Mission

## 13 recommended actions:

- Launch UNCAN.eu
- Identify (poly-) genic risk scores
- Effective cancer prevention strategies and policies
- Screening and early detection
- Personalised medicine approaches
- Early diagnostics and minimally invasive treatment
- Improve the quality of life of cancer patients and survivors
- Create a European Cancer Patient Digital Centre
- Achieve Cancer Health Equity
- Network of Comprehensive Cancer Infrastructures



- Childhood cancers
- Oncology-focused Living Labs
- Transform cancer culture





# CALL TOPICS 2021

Topic title	Type of Action	Budget (Budget/project)
Preparing <i>UNCAN.eu</i> , a European initiative to understand cancer	CSA	3.00 million EUR
Procurement actions to support an EU mission on cancer: Prevent the preventable Optimise diagnosis and treatment Quality of life	Public Procurement	2.00 million EUR



## H2020 ERA-NETs

- ERA-PERMED
  - JPND
  - RARE DISEASES EJP
  - NEURON
  - JPIAMR
  - TRANSCAN
- 
- Hu participants: **2019-2.1.7-ERA-NET**
  - <https://nkfi.gov.hu/palyazoknak/nkfi-alap/era-net-ejp-cofund-2019-217-era-net/palyazati-felhivas-2019-217-era-net>
  - Budget: **300 000 EUR**



- Smaller consortia
- Up to 3 years
- 2 stage calls
- Easier application
- International evaluation
- Different countries!
- Widening actions



## ERA-NET calls 2021

### **ERA PERMED call 2021:**

- „Multidisciplinary research projects on personalised medicine - Development of clinical support tools for personalised medicine implementation”
- Deadline for pre-proposals: **4 March 2021**; for full-proposals: **17 June 2021**
- <https://erapermed.isciii.es/joint-calls/joint-transnational-call-2021/>

### **JPND call 2021:**

- "Linking pre-diagnosis disturbances of physiological systems to Neurodegenerative Diseases"
- Deadline for pre-proposals: **2 March 2021**; for full-proposals: **29 June 2021**
- <https://www.neurodegenerationresearch.eu/initiatives/annual-calls-for-proposals/linking-pre-diagnosis-disturbances-of-physiological-systems-to-neurodegenerative-diseases/>



## ERA-NET calls 2021

### **NEURON Cofunded call 2021:**

- „Call for Proposals for Transnational Research Projects on Neurodevelopmental Disorders”
- Deadline for pre-proposals: **9 March 2021**; for full-proposals: **30 June 2021**
- <https://www.neuron-eranet.eu/en/972.php>

### **JPIAMR Cofunded call 2021:**

- „One Health interventions to prevent or reduce the development and transmission of AMR”
- Deadline for pre-proposals: **16 March 2021**; for full-proposals: **12 July 2021**
- <https://www.jpiamr.eu/activities/joint-calls/open-calls/interventions-and-transmission-call-2021/>



## ERA-NET calls 2021

### **TRANSCAN Cofunded call 2021:**

- „Next generation cancer immunotherapy: targeting the tumour microenvironment,,
- Will be published soon!

### **RARE DISEASES EJP call 2021:**

- Closed
- **ERA-NET calls 2022!**



## Important websites

- Open calls:
  - <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>
- EU research results:
  - <https://cordis.europa.eu/>
- EU research and innovation data: Horizon Dashboard
  - <https://webgate.ec.europa.eu/dashboard/sense/app/93297a69-09fd-4ef5-889f-b83c4e21d33e/sheet/a879124b-bfc3-493f-93a9-34f0e7fba124/state/analysis>
- Register as experts:
  - <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert>
- NCP:
  - <http://www.h2020.gov.hu/horizont2020-program/nemzeti-kapcsolattarto>





Köszönöm a figyelmet!

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