

#### **NCPs for Health**



Patrícia Calado

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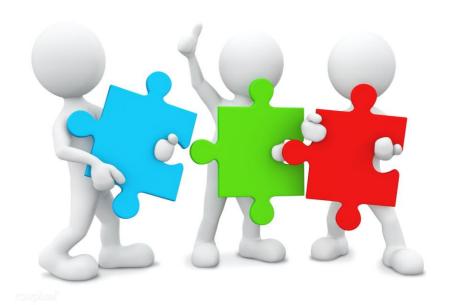




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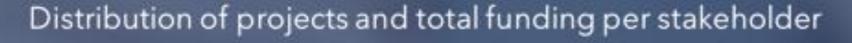


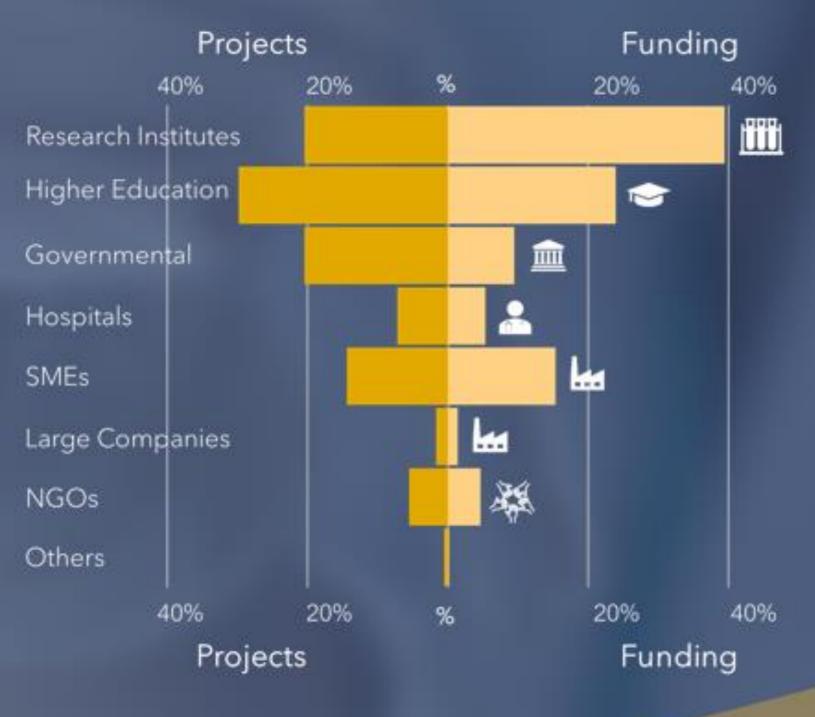


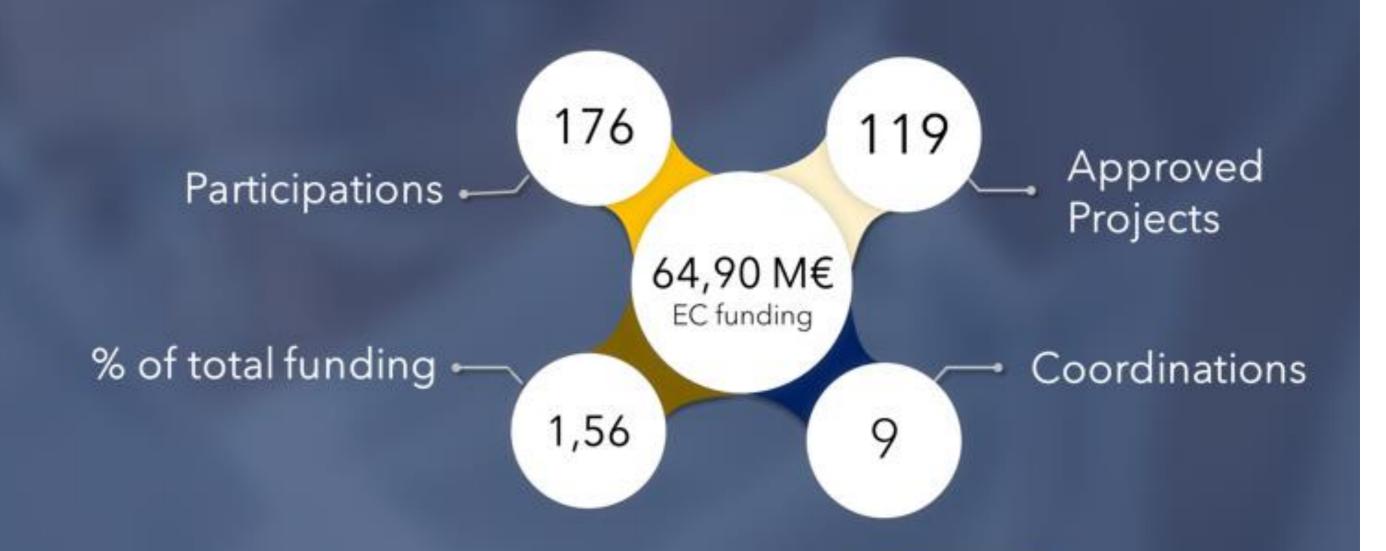


#### Portuguese performance Societal Challenge 1 Health, Demographic Change and Wellbeing

From 2014 to 2020

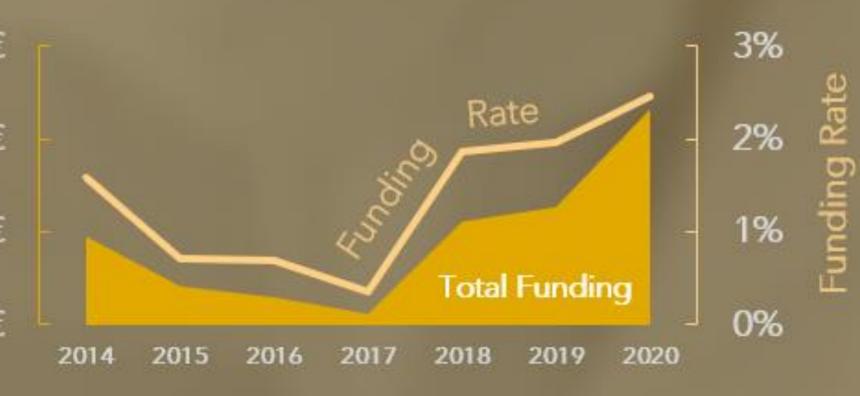


















## Horizon Europe

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)



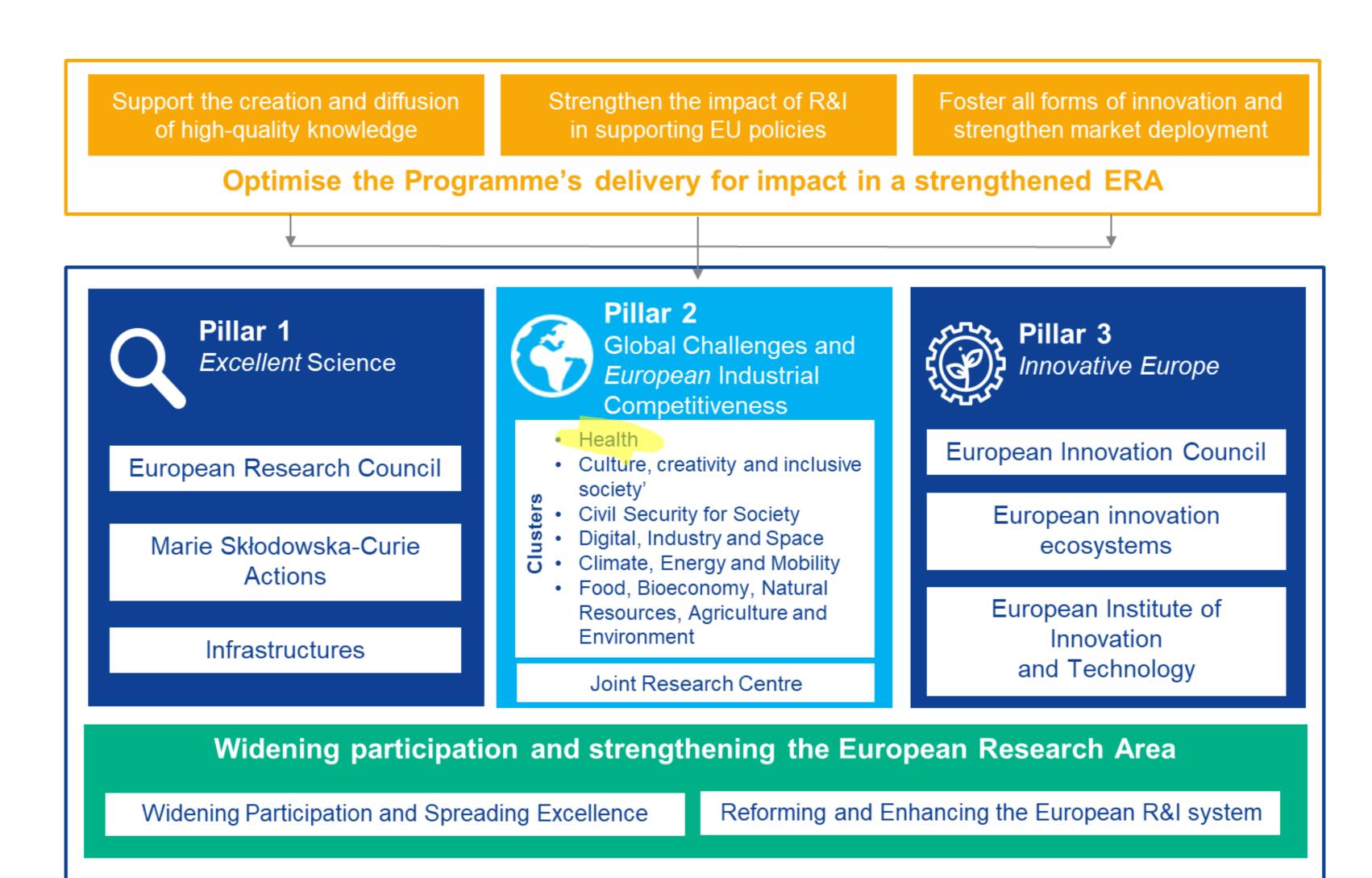
to boost Europe's innovation capacity, competitiveness and jobs



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



## Horizon Europe





## Horizon Europe

## Portugal in Europe Research and Innovation Network

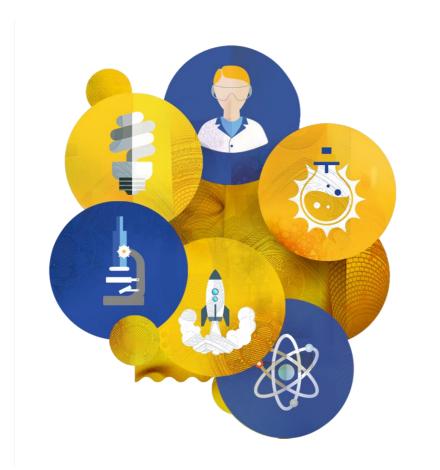
















# European Research Council (ERC) grants

#### **Starting Grants**

Early Stage Career 2-7 years after PhD. Up to 1.5 M€, 5 years

#### **Consolidator Grants**

Career Consolidation 7-12 years after PhD. Up to 2.0 M€, 5 years

#### **Advanced Grants**

Significant track record
Achievements in the last 10 years
Up to 2.5 M€, 5 years

#### **Proof-Of-Concept**

Bridging research and earliest stage of marketable innovation 150 K€ for ERC Grant Holders ONLY

# erc

#### **Synergy Grants**

Joint breakthrough knowledge which cannot be achieved by a single PI



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## Marie Sklodowska-Curie Actions Overview (MSCA)

#### DOCTORAL NETWORKS

Training of Doctoral Candidates

## POSTDOCTORAL FELLOWSHIPS

Advanced Training for Excellent Researchers

European and Global PFs

#### STAFF EXCHANGE

International, Inter-Sectoral and Interdisciplinary Short-Term Mobility

#### **COFUND**

Co-financing New or Existing
Doctoral Programmes and
Postdoctoral Fellowship Schemes



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## CITIZENS

Bringing Researchers Closer to the Public at Large Event to Boost public recognition of science and research education





## Research Infrastructures (RI) **Health Highlights**

#### **Adaptations in service** provision

Transition to digital/remote RI service provision: lessons learnt, needs and best practices

Access to services, training, improvement of services

infectious disease epidemics Cancer | imaging data | EBRAINS

Digital information: access, management, reuse, interoperability

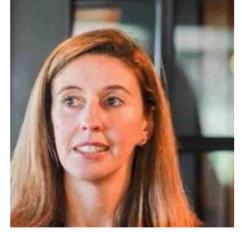
infectious diseases | cancer research

#### Innovative RI technologies

Interdisciplinary digital twins for modelling and simulating R&D for the next generation of scientific instrumentation, tools and methods

Reservem a data! Sessão conjunta Cluster Saúde - Pilar 1

25 Março 2021



Marta Abrantes (FCT)

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#### **TWINNING**

**Institutional Networking** Strengthen Specific Research Field

#### **TEAMING FOR EXCELLENCE**

**Institutional Building** Centres of Excellence in a Research Field



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#### **ERA-CHAIRS**

**Core Instruments** 

Widening

Bringing Excellence to **Institutions** 

#### COST

**Networking Actions** 

**EXCELLENCE INITIATIVES Hubs & Universities** 



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## Cluster Health – Six areas of intervention (2021-2027)



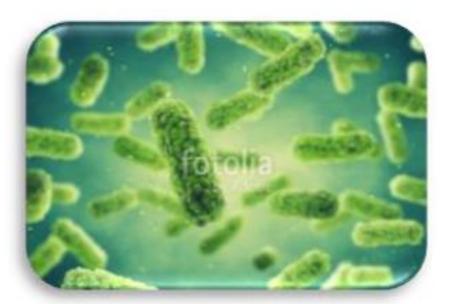
Health throughout the Life Course



Environmental and Social Health Determinants



Non-communicable and Rare Diseases



Infectious diseases

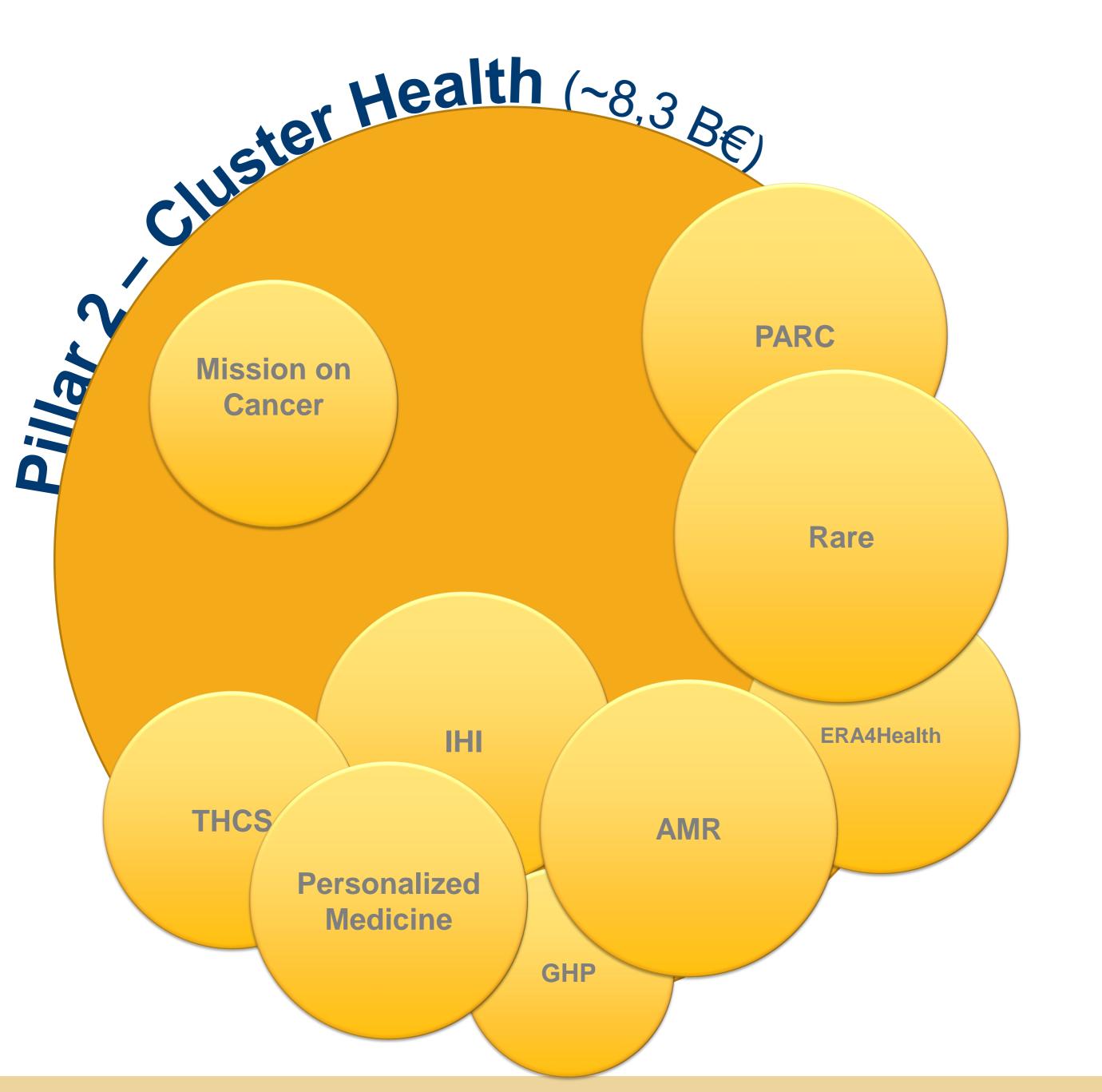


Tools, Technologies and Digital Solutions for Health and Care



Health Care Systems















## Health Partnerships under Horizon Europe

# Institutional Partnerships



IHI

European Partnership for Innovative Health (2021)



EDCTP3

European Partnership for EU-Africa Global Health (2021)

## **Co-funded Partnerships**



#### **ERA4Health**

ERA for Health Research (2022)



PM

European Partnership for Personalised Medicine (2023)



#### **PARC**

European Partnership for Chemicals Risk Assessment (2021/22)



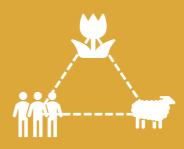
RD

European Partnership on Rare Diseases (2023)



#### **THCS**

European Partnership on Health and Care Systems Transformation (2022/23)



#### **AMR**

European Partnership for One Health/AMR Antimicrobial Resistance (2023-24)

# Co-Programmed Partnerships



European Pandemic Preparedness Partnership



#### **Mission Cancer**

#### Missions should:

- Be bold and inspirational, with wide societal relevance;
- Indicate a clear direction: targeted, measurable and time-bound;
- Be ambitious but realistic research and innovation actions;
- Spark innovation across disciplines, sectors and actors;
- Be based on a bottom-up approach of multiple solutions

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

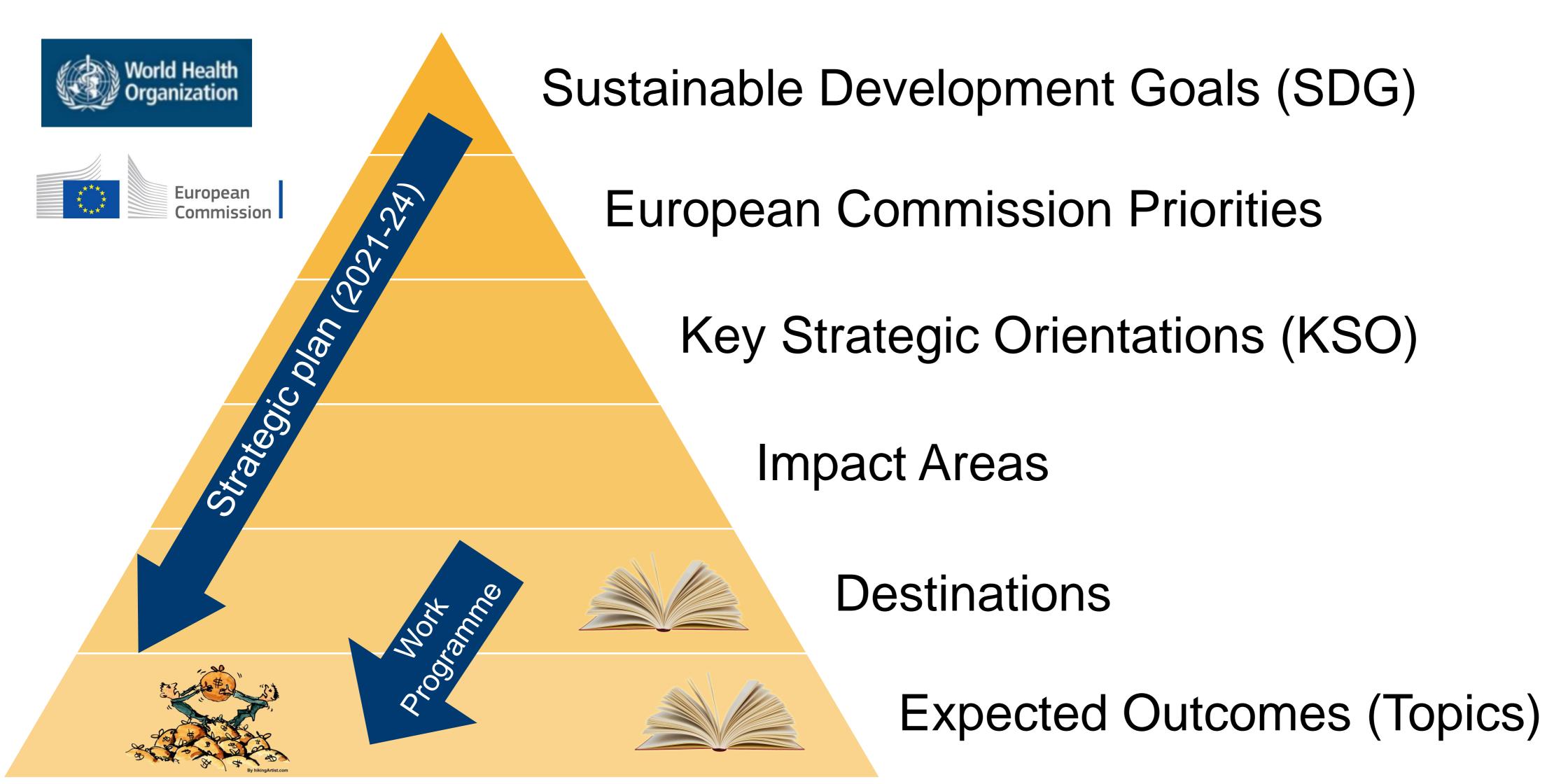








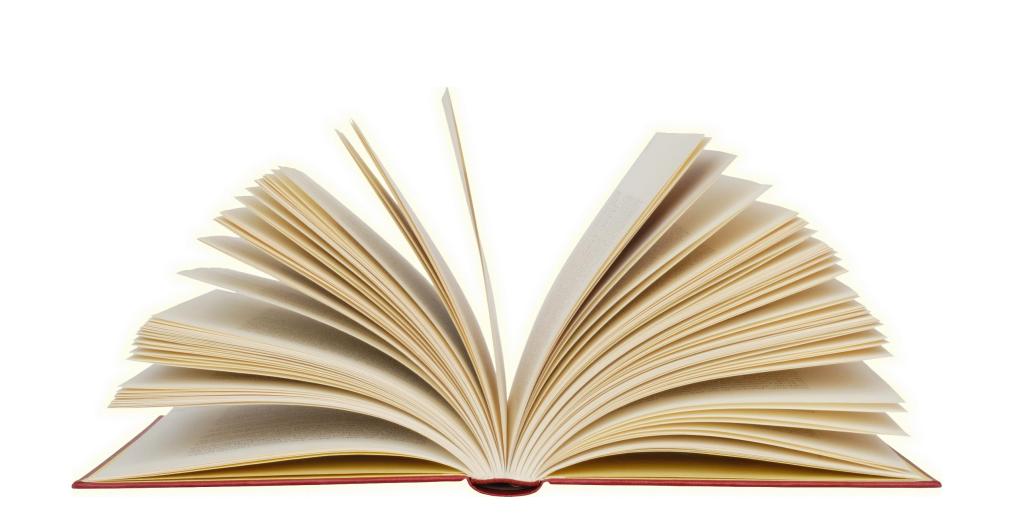
## Pathway for the design of the work programme

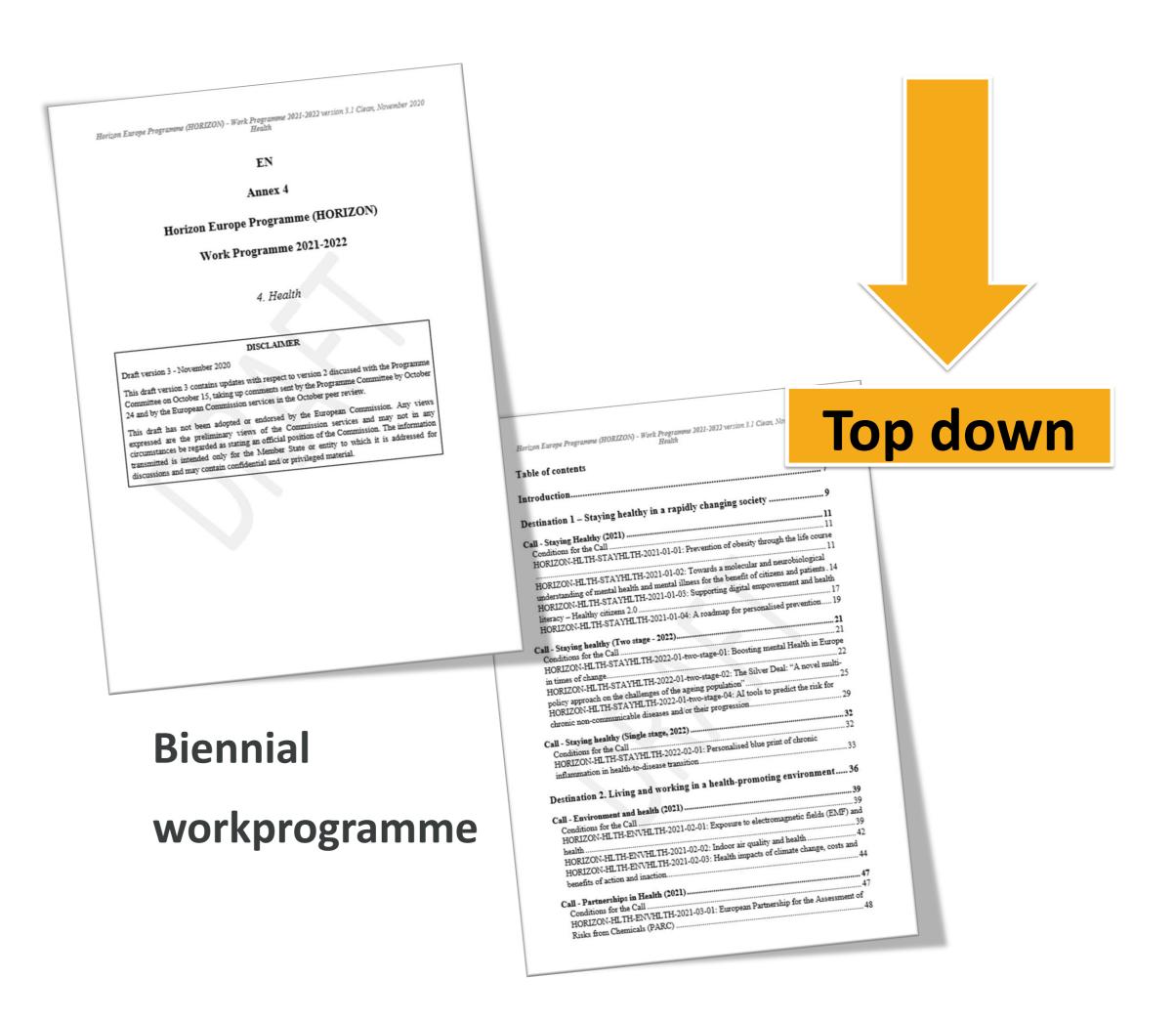


## EU strategic policies for Health



## Work Programme for Cluster Health





The document for your success!!



## Work Programme for Cluster Health

#### **Work Programme**

#### **Destination**

- Expected Impacts

#### Calls

- Topic
- Year
- Types of Action
- Expected outcomes
- Scope

**Destination**, describes socio-economic challenges to be addressed and the related expected impacts that R&I activities will contribute to.

**Expected Outcomes**, are the desired effects of the project in the medium term such as the uptake, diffusion, use and/or deployment of the project's results by direct target groups.

**Scope**, describes the area of research/innovation that needs to be tackled if the expected outcomes are to be successfully addressed, without prescribing the method to achieve them.



## Main types of actions in Horizon Europe

Research & Innovation Action (RIA)

**Funding rate: 100%** 

Action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution.

Innovation Action (IA)

Funding rate: 70% (except for non-profit entities where 100% applies)

Action primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services.

Coordination and Support Action (CSA)

Funding rate: 100%

Activities contributing to the objectives of the Horizon Europe Programme, excluding research and innovation activities



## Participation in Consortium – general rules

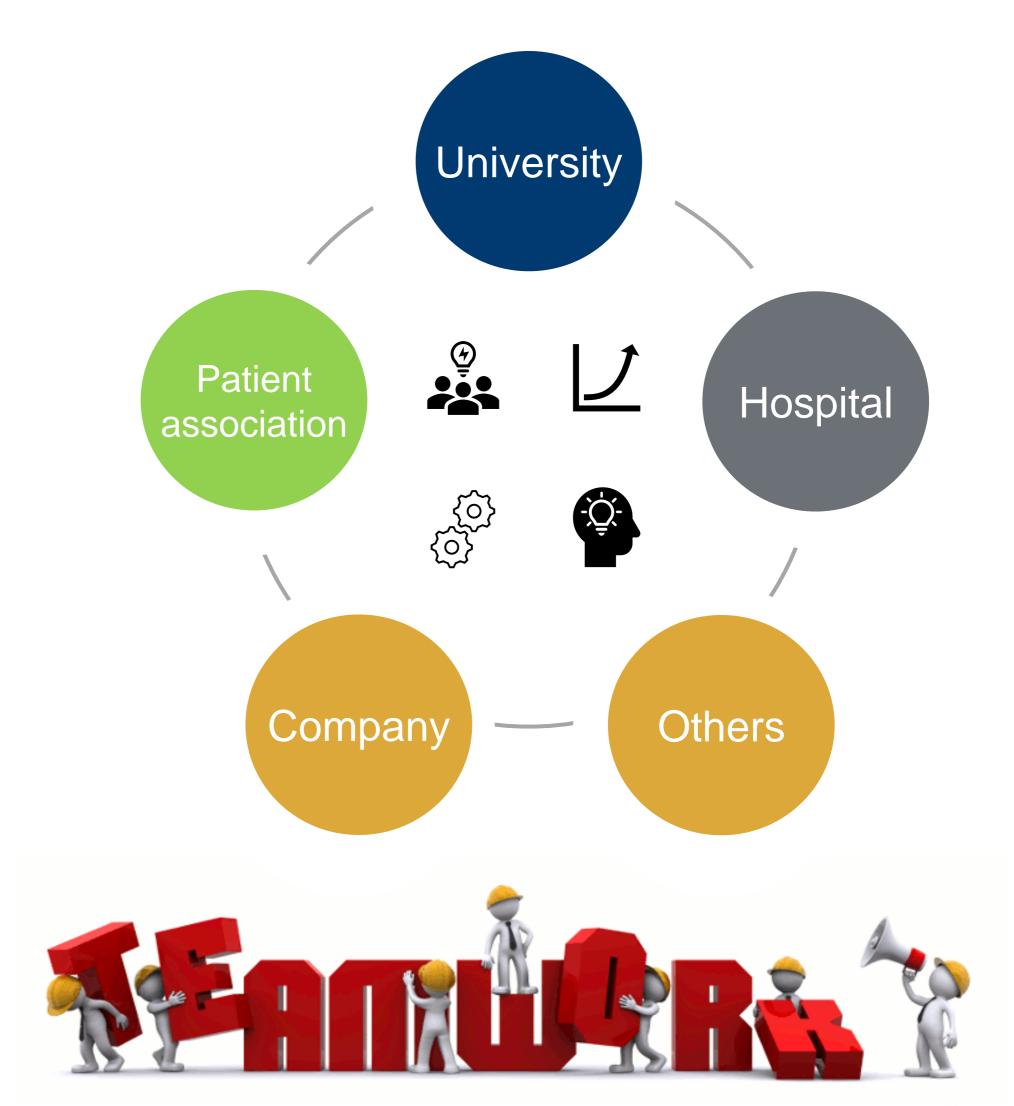
Minimum of 3 organizations from different

Member States or Associated Countries

(at least one established in a Member State)

Public bodies, research org. and higher education (public or private) need to have a Gender Equality Plan

45 pages limit application (30 pages for CSA) Excellence / Impact / Implementation





## Cluster Health Destinations 2021-2024

#### **Destination 1**

Staying healthy in a rapidly changing society

#### Destination 2

Living and working in a health-promoting environment

#### Destination 3

Tackling diseases and reducing disease burden

#### Destination 4

Ensuring access to innovative, sustainable and high-quality health care

#### Destination 5

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

#### Destination 6

Maintaining an innovative, sustainable and globally competitive health-related industry



## Staying healthy in a rapidly changing society

Research under this Destination will enable citizens to live longer and in better health as well as reduce health inequalities, thanks to improved health promotion and disease prevention actions, targeting several of the most striking aspects of changing societies.

#### **Impacts**

Citizens adopt healthier lifestyles and behaviours, make healthier choices

Citizens are empowered to manage better their physical and mental health

Interact with doctors and health care providers.

**Knowledge-based health interventions** 

Improved health literacy

Increased engagement in effective strategies for health promotion, diseases prevention and treatment

Health policies and actions for health promotion and disease prevention are knowledge-based and designed to reduce health inequalities.



## Destination 1 - 2021 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2021-STAYHLTH-01-02 Towards a molecular and neurobiological understanding of mental health and mental illness for the benefit of citizens and patients	RIA	Single	60	≈ 10	6
HORIZON-HLTH-2021-STAYHLTH-01-03 Supporting digital empowerment and health literacy – Healthy citizens 2.0	CSA	Single	3	≈ 3	1
HORIZON-HLTH-2021-STAYHLTH-01-04 A roadmap for personalised prevention	CSA	Single	3	≈ 3	1



## Destination 1 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2022-STAYHLTH-01-01-two-stage Boosting mental Health in Europe in times of change	RIA	Two stage	50	≈ 7	7
HORIZON-HLTH-2022-STAYHLTH-01-05-two-stage Trustworthy Al tools to predict the risk of chronic non- communicable diseases and/or their progression	RIA	Two stage	60	≈ 6	10
HORIZON-HLTH-2022-STAYHLTH-01-05-two-stage Prevention of obesity through the life course	RIA	Two stage	60	≈ 10	6
HORIZON-HLTH-2022-STAYHLTH-02-01 Personalised blue print of chronic inflammation in health-to-disease transition	RIA	Single	50	≈ 7	7



## Living & working in a health-promoting environment

Research under this Destination will permit to understand the impacts on our health and well-being of those environmental, occupational and socio-economic risk factors, such as indoor and outdoor air pollution, chemicals, non-ionizing radiation (electromagnetic fields), urbanisation, climate and other environmental changes, socio-economic inequalities, and changing working environments.

#### **Impacts**

Scientific evidence uptake of research results into environmental, occupational, social, economic, fiscal and health policies at EU, national and regional level

Policy-makers and regulators are aware about environmental, socio-economic and occupational risk factors

Determinants of disease related to choices in energy generation, agricultural practices, industrial production, land use planning, built environment and construction

The health threats and burden resulting from hazardous chemicals and air, water and soil pollution and contamination is reduced

Living and working environments in European cities and regions are healthier, more inclusive, safer, resilient and sustainable;

Premature deaths, diseases and inequalities related to environmental pollution and degradation are prevented

Citizens understand better health issues and support related policies and regulations.



## Destination 2 - 2021 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2021-ENVHLTH-02-01 Exposure to electromagnetic fields (EMF) and health	RIA	Single	30	≈ 8	4
HORIZON-HLTH-2021-ENVHLTH-02-02 Indoor air quality and health	RIA	Single	40	≈ 8	5
HORIZON-HLTH-2021-ENVHLTH-02-03 Health impacts of climate change, costs and benefits of action and inaction	RIA	Single	60	≈ 10	6



## Destination 2 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2022-ENVHLTH-04-01 Methods for assessing health-related costs to environmental stressors	RIA	Single	20	≈ 4	5



## Tackling diseases & reducing disease burden

The topics under this destination will enable health care providers to better tackle and manage diseases (infectious diseases, including poverty-related and neglected diseases, non-communicable and rare diseases) and reduce the disease burden on patients effectively thanks to better understanding and treatment of diseases, more effective and innovative health technologies, better ability and preparedness to manage epidemic outbreaks and improved patient safety.

#### **Impacts**

Innovative diagnostic and therapeutic approaches,

Personalised medicine approaches, Digital solutions, Early diagnostics, Effective and affordable treatment, including for patients with rare diseases

Decrease premature mortality from non-communicable diseases

Mental health and well-being promotion with an immediate impact on the related disease burden (DALYs),

Strengthen research and innovation expertise, human capacities and knowhow for combatting communicable and non-communicable diseases (including through international cooperation).

Patients and citizens are knowledgeable of disease threats, involved and empowered to make decisions for their health

Better adherence to knowledge-based disease management strategies and policies

Reduction of health threats of epidemics and AMR pathogens. In particular, the epidemics of AIDS, tuberculosis, malaria, neglected tropical diseases, hepatitis, water-borne diseases and other communicable diseases.

EU leadership and standing in international fora on global health and global health security, especially in partnership with Africa.



## Destination 3 - 2021 Topics

Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
RIA	Single	50	≈ 6	8
RIA	Single	50	≈ 25	2
RIA	Single	40	≈ 8	5
RIA	Single	60	≈ 6	10
CSA	Single	0,5	≈ 0,5	1
CSA	Single	2	≈ 2	1
RIA	Single	60	≈ 7	9
	RIA RIA CSA CSA	RIA Single  RIA Single  RIA Single  RIA Single  CSA Single  CSA Single	RIA Single 50  RIA Single 50  RIA Single 40  RIA Single 60  CSA Single 0,5  CSA Single 2	ActionCall Single / two stageTotal Budgetproject (EUR Million)RIASingle $50$ $\approx 6$ RIASingle $50$ $\approx 25$ RIASingle $40$ $\approx 8$ RIASingle $60$ $\approx 6$ CSASingle $0,5$ $\approx 0,5$ CSASingle $2$ $\approx 2$

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E INOVAÇÃO BIOMÉDICA

## Destination 3 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2022-DISEASE-06-02-two-stage Pre-clinical development of the next generation immunotherapies for diseases or disorders with unmet medical need	RIA	Two-stage	60	≈ 6	10
HORIZON-HLTH-2022-DISEASE-06-03-two-stage Vaccines 2.0 - developing the next generation of vaccines	RIA	Two-stage	40	≈ 8	5
HORIZON-HLTH-2022-DISEASE-06-04-two-stage  Development of new effective therapies for rare diseases	RIA	Two-stage	60	≈ 8	8
HORIZON-HLTH-2022-DISEASE-07-03  Non-communicable diseases risk reduction in adolescence and youth	RIA	Single	25	≈ 3	8





## Ensuring access to innovative, sustainable and high-quality health care

Research under this Destination research and innovation aims at supporting health care systems in their transformation to ensure fair access to sustainable health care services of high quality for all citizens.

#### **Impacts**

Health and social care services and systems, by shifting from hospital-centred to community-based, people-centred and integrated health care structures and successfully embedding technological innovations that meet public health needs.

Health care providers are trained and equipped with the skills and competences suited for the future needs of health care systems that are modernised, digitally transformed and equipped

Citizens are supported to play a key role in managing their own health and care, informal carers are fully supported and specific needs of more vulnerable groups and addressed.

Health policy and systems adopt a holistic approach for the evaluation of health outcomes and value of public health interventions, the organisation of health and care, and decision-making.



## Destination 4 - 2021 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2021-CARE-05-01 Enhancing quality of care and patient safety	RIA	Single	25	≈ 5	5
HORIZON-HLTH-2021-CARE-05-02 Data-driven decision-support tools for better health and care delivery and for policy-making	RIA	Single	40	≈ 10	4
HORIZON-HLTH-2021-CARE-05-04 Health and care innovation procurement network	CSA	Single	5	≈ 5	1



## Destination 4 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2022-CARE-08-02 Innovation procurement (PCP) for building the resilience of health and care systems in the context of recovery	PCP	Single	25	≈ 5	5
HORIZON-HLTH-2022-CARE-08-03 Innovation procurement (PPI) for building the resilience of health and care systems in the context of recovery	PPI	Single	15	≈ 5	3
HORIZON-HLTH-2022-CARE-08-04 Better economic foresight, financial planning and procurement/contractual strategies for health systems	RIA	Single	30	≈ 5	6



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

Research under this Destination should set out a credible pathway towards unlocking the full potential of new tools, technologies and digital solutions for a healthy society.

#### **Impacts**

Europe's scientific and technological expertise and know-how.

Citizens benefit from targeted and faster research resulting in safer, more efficient, costeffective and affordable tools, technologies and digital solutions

The EU gains high visibility and establishes leadership in terms of technology development, including through international cooperation.

The burden of diseases in the EU and worldwide is reduced

Researchers, innovators and health care providers use health data and innovative analytical tools

Citizens trust and support the opportunities offered by innovative technologies for health and care,



## Destination 5 - 2021 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2021-TOOL-06-01 Smart medical devices and their surgical implantation for use in resource-constrained settings	IA	Single	25	≈ 6	4
HORIZON-HLTH-2021-TOOL-06-02  Next generation advanced therapies to treat highly prevalent and high burden diseases with unmet needs	RIA	Single	60	≈ 6	10
HORIZON-HLTH-2021-TOOL-06-03 Innovative tools for use and re-use of health data (in particular electronic health records and/or patient registries)	RIA	Single	30	≈ 8	4



## Destination 5 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects	
HORIZON-HLTH-2022-TOOL-11-01 Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers	RIA	Single	60	≈ 10	6	d
HORIZON-HLTH-2022-TOOL-11-02  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	35	≈ 7	5	
HORIZON-HLTH-2022-TOOL-12-01-two-stage  Computational models for new patient stratification strategies	RIA	Two-stage	60	≈ 6	10	



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

Research under this Destination research and innovation activities that aim at novel methodologies and metrics adapted to new tools, technologies, digital solutions and interventions, regulatory authorities supported with better methodologies and interdisciplinary approaches to assess new health technologies and interventions, Safe and clinically validated tools, technologies and services developed and delivered by European health industry, Greener pharmaceuticals and health technologies

#### **Impacts**

Health industry in the EU is more competitive and sustainable

European leadership

Job creation

Economic growth

Health industry is working more efficiently along the value chain, including through early engagement with patients, health care providers, health authorities and regulators.

European standards, including for operations involving health data, ensure patient safety and quality of healthcare services, effectiveness and interoperability

Citizens, health care providers and health systems benefit from a swift uptake of innovative health technologies and services

Health industry in the EU benefit from decreased time-to-market.

Health security in the EU benefits from reliable access to key manufacturing capacity.



## Destination 6 - 2021 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2021-IND-07-01  Green pharmaceuticals	RIA	Single	40	≈ 8	5
HORIZON-HLTH-2021-IND-07-02  Development procurement and responsible management of new antimicrobials	CSA	Single	2	≈ 2	1
HORIZON-HLTH-2021-IND-07-03  Promoting a trusted mHealth label in Europe: uptake of Technical specifications for "Quality and Reliability of Health and Wellness Apps"	CSA	Single	2	≈ 2	1



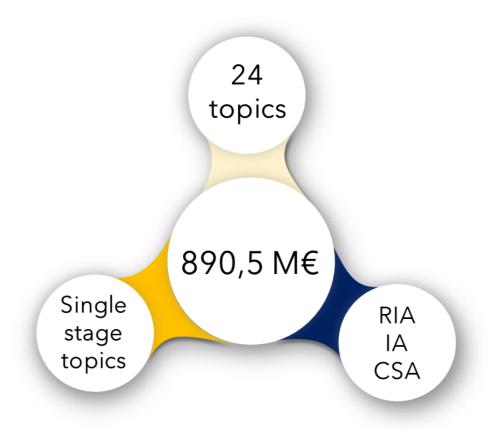
## Destination 6 - 2022 Topics

Topic	Action	Call Single / two stage	Total Budget	Budget per project (EUR Million)	Expected number of projects
HORIZON-HLTH-2022-IND-13-01 Enhancing Cybersecurity of connected Medical Devices	RIA	Single	20	≈ 6	3
HORIZON-HLTH-2022-IND-13-02 Scaling up multi-party computation, data anonymisation techniques and synthetic data generation	RIA	Single	30	≈ 7	4
HORIZON-HLTH-2022-IND-13-03 New payment models for cost-effective and affordable health innovations/new models of pricing	RIA	Single	15	≈ 5	3
HORIZON-HLTH-2022-IND-13-04 Setting up a European Smart Health Innovation Hub	CSA	Single	2	≈ 2	1
HORIZON-HLTH-2022-IND-13-05 Setting up a European Electronic Health Record Exchange Format Ecosystem	CSA	Single	2	≈ 2	1



## Calls timeline & deadlines





2021

Single stage topics





Apr 2021 Opening 2021 topics

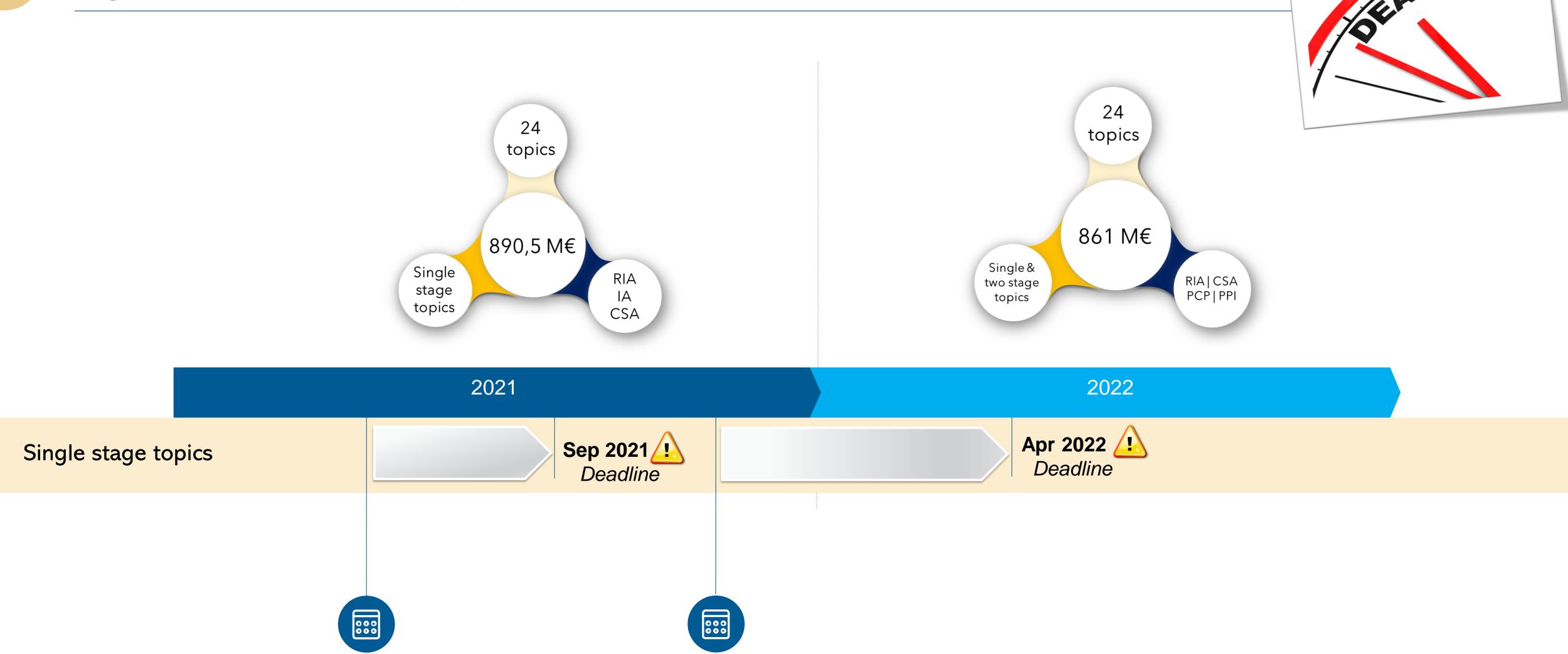
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(Tentative dates)

## Calls timeline & deadlines

**Apr 2021** 

Opening 2021 topics



Oct 2021

Opening 2022 topics



(Tentative dates) Confidential information

## Calls timeline & deadlines



Opening 2022 topics



(Tentative dates) Confidential information

Opening 2021 topics











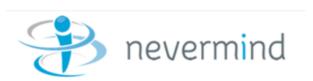


































































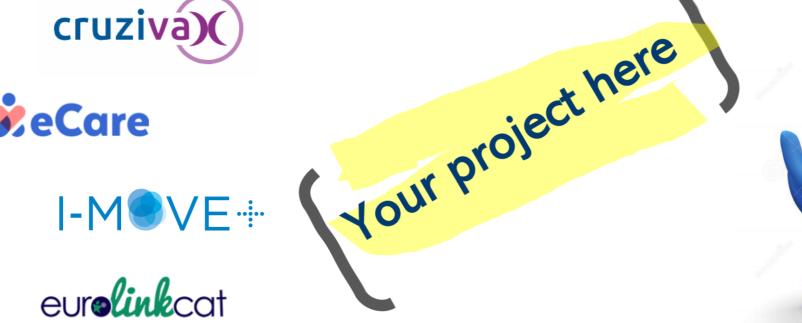




















**legacy** 





























































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