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Pillar 2: Global Challenges & European Industrial
Competitiveness

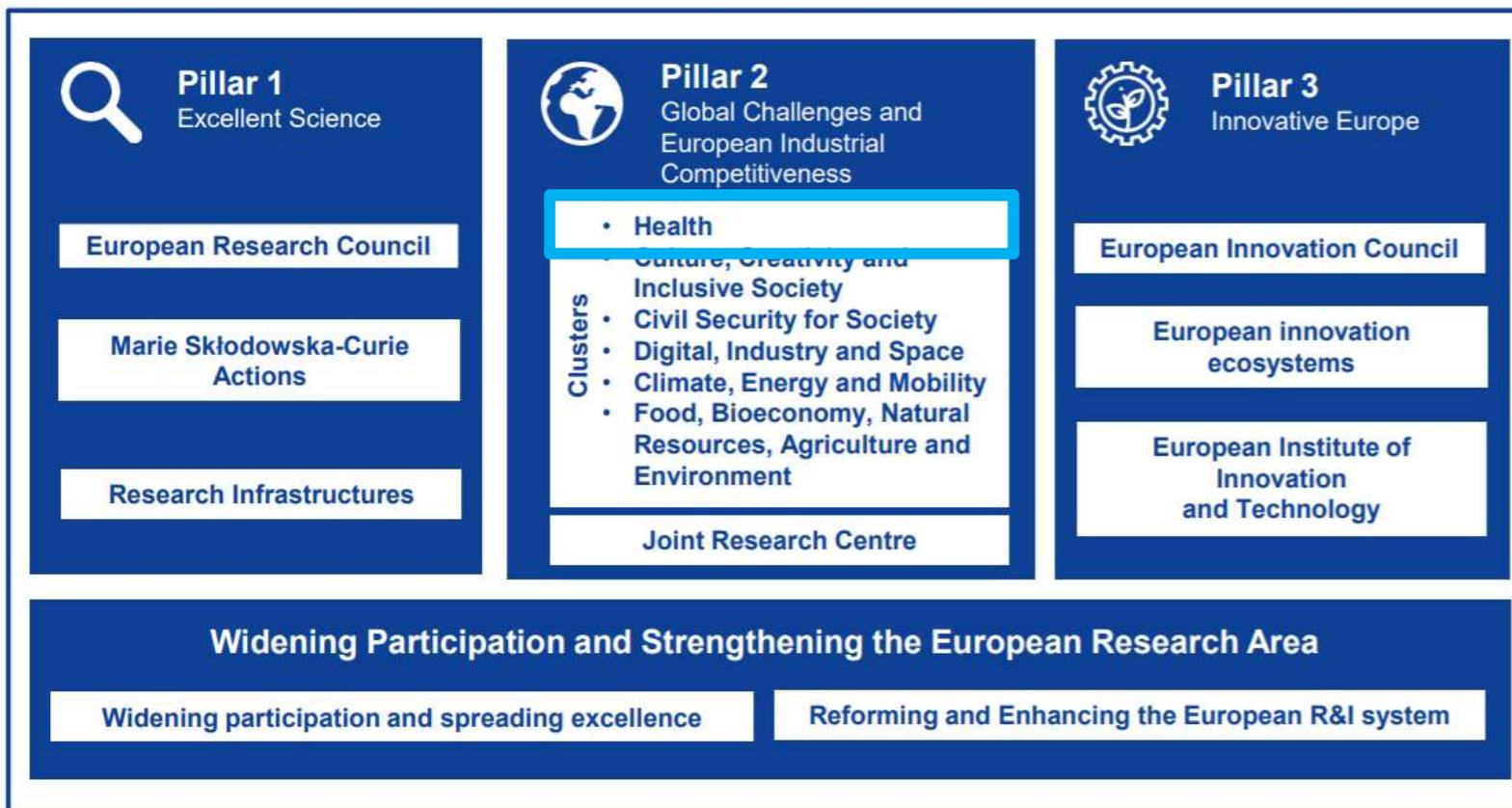
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Cluster 1 - Health

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Cluster 1-Health





Introduction

The work programme 2021-2022 of cluster 1 ‘Health’ is directed towards two Key Strategic Orientations for research and innovation set by **Horizon Europe’s strategic plan 2021-2024:**

- 1) ‘Creating a more resilient, inclusive and democratic European society’**
- 2) ‘Promoting an open strategic autonomy by leading the development of key digital and enabling technologies, sectors and value chains’**

More specifically, cluster 1 aims to contribute to six expected impacts as set by the strategic plan, which are the destinations of this work programme.

Indicative budget for Cluster1 €7.7 billion; Indicative first deadline for proposals Sep 2021

The six Destinations of Cluster 1

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

Mission Cancer

Work Programme 2021-2022, April 2021



#1 Staying healthy in a rapidly changing society

Main challenge

- Healthy behaviour and lifestyles throughout the life course
- Long, active, inclusive and independent life

Expected Impacts

Citizens of all ages stay healthy and independent in a rapidly changing society thanks to healthier lifestyles and behaviours, healthier diets, healthier environments, improved evidence-based health policies, and more effective solutions for health promotion and disease prevention.



#1 Staying healthy in a rapidly changing society

First destination will focused on major societal challenges that are part of the European Commission´s political priorities, accented topics will be as follows:

- **Towards a molecular and neurobiological understanding of mental health...**
- **Supporting digital empowerment in health literacy – Healthy citizens 2.0**
- **A roadmap for personalised prevention**

Boosting mental health in Europe in times of change

Trustworthy AI tools to predict the risk of chronic diseases...

Prevention of obesity through the life course



#2 Living and working in a health-promoting environment

Main challenge

- Environment impacts our physical and mental health (value / cost)
- Causal links between exposure and health response often not known or not clear
- Policies need robust evidences on hazards and risks

Expected impacts

Living and working environments are health-promoting and sustainable thanks to better understanding of environmental, occupational, social and economic determinants of health.



#2 Living and working in a health-promoting environment

Destination aims at filling knowledge gaps in the understanding of the impacts on our health and well-being of those environmental, occupational and socio-economic risk factors that have the most significant or widespread societal impacts such as:

- **Indoor air quality and health**
- **Exposure to electromagnetic fields and health**
- **Health impacts of climate change, costs and benefits...**

...assessing health-related costs to environmental stressors

- strong collaboration across sectors and with other HE clusters – agriculture, food, environment, climate, mobility, security, social inclusion etc.

#3 Tackling diseases and reducing disease burden

Main challenge

- Managing and treating specific diseases
- Reducing the disease burden
- Improving palliative care

Expected impacts

Health care providers are able 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.



#3 Tackling diseases and reducing disease burden

This destination in the first Horizon Europe Work Programme will address major societal challenges linked to Commission priorities such as:

- **...palliative, survivorship and end-of-life care of cancer patients**
- **Building a European innovation platform for the repurposing of medical products**
- **Clinical validation of AI solutions for treatment and care**
- **Personalised medicines and infectious diseases....**
- **Innovative approaches to enhance poverty-related diseases research....**
- **Partnership for Pandemic Preparedness**

Vaccines 2.0 ...

Development of new effective therapies for rare diseases

Non-communicable diseases risk reduction in adolescence and youth



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

Main challenge

- Affordability and cost-effectiveness of health care
- Performance and resilience of health systems
- Quality of care & patient safety

Expected impacts

Health care systems provide equal access to innovative, sustainable and high-quality health care thanks to the development and uptake of safe, cost-effective and people-centred solutions, with a focus on population health, health systems resilience, as well as improved evidence-based health policies.



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

- COVID-19 crisis has revealed limitations in sustainability and resilience of health systems and revealed inequalities in access to high-quality health care services.
- 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.

Topic for this destination will focus on the following issues:

- **Enhancing quality of care and patient safety**
- **Data-driven decision-support tools for better health and care delivery ...**
- **Health and care innovation procurement network**

*Innovation procurement for building the resilience of health and care systems...
Better economic foresight, financial planning ...*



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

Main challenge

- Unlock innovation
- Progress must be ethical, trusted, safe and effective
- Personalisation and health data

Expected impacts

Health technologies, new tools and digital solutions are applied effectively thanks to their inclusive, secure and ethical development, delivery, integration and deployment in health policies and health and care systems.



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

Topic for this destination will focus on the following issues:

- **Smart medical devices and their surgical implantation...**
- **...advanced therapies to treat highly prevalent, high burden diseases with unmet needs**
- **Innovative tools for use and re-use of health data...**

New methods for the effective use of real-world data...

Optimising effectiveness in patients of existing prescription drugs for major diseases

Computational models for new patient stratification strategies

- Opportunities for synergies of the research and innovation actions under this destination with Cluster 4 (Digital, Industry and Space) and Pillar III (European Innovation Council and European Institute of Innovation and Technology) will be explored through broad cross-sectoral collaboration.



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

Main challenge

- Unmet medical needs -market failure
- Environmental, societal and economic sustainability
- Cybersecure digital health applications and use of health data

Expected Impacts

EU health industry is innovative, sustainable and globally competitive thanks to improved up-take of breakthrough technologies and innovations, which makes the EU with its Member States more resilient and less dependent from imports with regard to the access to and supply of critical health technologies.



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

Topics will address in particular green and digital transition and proper supply of health technologies and products:

- **Green pharmaceuticals**
- **Development procurement and responsible management of new antimicrobials**
- **Promoting a trusted mHealth label in Europe...**

Enhancing Cybersecurity of connected medical devices

...data anonymisation techniques and synthetic data generation

New payment models for cost-effective and affordable health innovations....

European Smart Health Innovation Hub

European Electronic Health Record Exchange Format Ecosystem

- The portfolio of actions within this destination may find synergies with Cluster 4 “Digital, Industry and Space” and with Pillar III, “Open Innovation”, in particular the scheme of the European Innovation Council that supports breakthrough and risky innovations.



Partnerships 2021-2022

Co-funded Partnerships

#2 European partnership for the assessment of risks from chemicals

#3 European Partnership Fostering an ERA for Health research

#4 European Partnership on Transforming Health and Care Systems

Institutional Partnerships

2021 - Innovative Health Initiative (ex-IMI2)

2021 - EU-Africa Global Health (ex-EDCTP2)



Mission: Cancer

Mission objectives are: to save more than 3 million lives by 2030, with the possibility for cancer patients living longer and better.

The Mission on Cancer is coherent with and will be an essential and integral component of the **Europe's Beating Cancer Plan**.

The intervention areas include: Understand; Prevent what is preventable; Optimise diagnostics and treatment; Support quality of life; Ensure equitable access.

Topics:

- **European initiative to better understand cancer**
- **Procurement action to support EU Mission on cancer**



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