WP4 Health 2021-2022

To help repair the economic and social damage caused by the coronavirus pandemic, the European Commission, the European Parliament and EU Member States leaders have agreed on a Recovery Plan for Europe that will lead the way out of the crisis and lay the foundations for a modern and more sustainable Union. The Health cluster will put the focus of this work programme mainly to this endeavour, which will benefit from financial resources from this Multiannua l Financ ia l Framework and from NextGenerationEU (NGEU), the Union's financing instrument to boost the recovery. It requires research and innovation supporting the recovery of people and communities from COVID-19 but also for making society more resilient and national health systems better prepared to any future public health emergency.

The Recovery Plan aims the Union to building back better, which also entails supporting the twin digital and green transitions by unlocking the full potential of data-enabled research and innovation for digitised health systems and a competitive and secure data-economy, including on the basis of European Electronic Health Records as well as the establishment of the European Health Data Space. The digital transformation of health and care will certainly help to increase the capacity of health care systems to deliver more personalised and effective health care with less resource wasting. It will contribute but is not sufficient for making the Union the first climate-neutral continent by 2050, with zero pollution and zero waste. Additional efforts are needed to make also the delivery of health care, the design of health technologies and their manufacturing more sustainable by reducing energy consumption, waste, pollution and the release of harmful substances, including pharmaceuticals, into the environment.

Even though research and innovation has the power to uncovering the knowledge and developing the technologies to serve societal well-being, economic prosperity and environmental sustainability, it only can succeed through cooperation of the best research teams with the prospective users of such knowledge and technologies. It is thus of outmost importance to involve those users - like patients and healthy citizens, health care professionals providers and payers, public health authorities and regulators, researchers or innovators from academia and industry - early in the knowledge generation or technology development process, including through patient/citizen engagement, community involvement or other forms of social innovation approaches, such that research and innovation activities are adjusted to the users' particular expectations, needs, constra ints and potentia l. Any cooperation would benefit from adequate intellectual property management strategies. Beyond cooperating along the value chain of knowledge and know-how production and valorisation or within the knowledge triangle (research-education-innovation), it is in the EU's strategic interest to a lso reach out and cooperate with other countries outs ide the EU and on other continents. This applies in particular for multi-lateral cooperation on (global) health issues with countries associated to Horizon Europe but also with other partner countries and regions in the world. In recognition of the opening of the US Nationa l Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding to support its participation in projects funded under the Health cluster.

Nevertheless, the pandemic shows also the importance of effective coordination among EU Member States in the area of health. The European Commission is building a strong European Health Union, in which all EU Member States prepare and respond together to health crises, in synergy with national activities in the area of crisis preparedness and response; medical supplies are available, affordable and innovative, and countries work together to improve prevention, diagnosis, treatment and aftercare for any diseases, including cancer. Stronger common preparedness and response will rely on greater input from the Union's agencies and bodies, including any future EU Health Emergency Preparedness and Response Authority (EU-HERA) for which the HERA incubator foresees preparatory actions 1. Likewise, some research and innovation actions under the Health Cluster should deliver relevant complementary inputs to the announced "Europe's Beating Cancer

Plan” 2, contributing to actions covering the entire cancer care pathway, including prevention, early detection, diagnosis, treatment, cancer data monitoring, as well as quality of life of cancer patients and survivors.

Horizon Europe is the research and innovation support programme in a system of European and national funding programmes that share policy objectives. Especial attention is given to ensuring cooperation between universities, scientific communities and industry, including small and medium-sized enterprises, and citizens and their representatives, in order to bridge gaps between territories, generations and regional cultures, especially caring for the needs of the young in shaping Europe’s future. Moreover, accelerating the performance and boosting the use and impact of research and innovation also requires it to make use of complementary capacities, such as European research, innovation and space infrastructures and services, or to develop complementary activities in synergy with other European Union funding programmes. Applicants could consider and actively seek complementarities and synergies with, and where appropriate possibilities for further funding of additional activities not covered by their proposal from EU, national or regional programmes such as: EU4Health, Digital Europe Programme, European Regional Development Fund (ERDF), European Social Fund (ESF+), Structural Reform Support Programme (SRSP), Just Transition Fund (JTF), European Maritime and Fisheries Fund (EMFF), European Agricultural Fund for Rural Development (EAFRD) or InvestEU. This could involve dedicated calls (EU synergies calls), meaning that actions that have been awarded a grant under such a call could have the possibility to also receive funding under other EU programmes, including relevant shared management funds. Additionally, to encourage multi-actors approaches and to be more effective in achieving impact, applicants could consider synergies with other relevant initiatives funded under the Horizon Europe programme, including the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation and Technology (EIT). The innovation ecosystems created and nurtured by the EIT-KICs can in particular contribute to building communities or platforms for coordination and support actions, sharing knowledge or disseminating and fostering the exploitation of the project results (the proposals are also encouraged to explore other forms and means of service provisions distinct to the EIT-KICs, in particular EIT-KIC Health and EIT-KIC Digital).

All could help to support the development of skills and capacities in research or health systems, as well as accelerating the take-up and use of scientific evidences, new technologies and best practices in health care and by health systems, industries and markets, at national or regional level.

As examples, the EU4Health programme could help to ensure that the best use is made of research results and facilitate the uptake, scaling-up and deployment of health innovations in healthcare systems and clinical practice. Thereby unlocking the potential of innovation in health, and improving efficiency by avoiding the duplication of activities and optimising the use of financial resources.

The ERDF focuses, amongst others, on the development and strengthening of regional and local research and innovation ecosystems and smart economic transformation, in line with regional/national smart specialisation strategies. It can support investment in research infrastructure, activities for applied research and innovation, including industrial research, experimental development and feasibility studies, building research and innovation capacities and uptake of advanced technologies and roll-out of innovative solutions from the Framework Programmes for research and innovation through the ERDF.

The EU’s Recovery and Resilie nce Facility (RRF) offers support to Member States in financing reforms and investments that improve their resilience and their growth potential, mitigate the economic and social impacts from the COVID-19 crisis, including in the area of health, and support the green and digital transition. For project ideas that go beyond the remits of an R&I proposal and directly contribute to the objectives of the RRF it is advisable to check access to funding ava ilable at nationa l leve l in line with the Member States’ recovery and resilience plans for a fast and targeted support.

Notwithstanding the synergies mentioned above, the work programme 2021-2022 of cluster 1 ‘Health’ captures synergies with other clusters based on the challenges and areas of intervention of each destination. Further synergies are encouraged with regard to complementary funding opportunities provided by topics in other clusters and other pillars of Horizon Europe, notably in the European Research Infrastructure work programme

(under pillar I)3 and the European Innovation Council work programme (under pillar III) 4. Additional synergies could also be explored at project-level, i.e. between the portfolio of projects funded
either under the same topic or by establishing a portfolio of projects funded under different topics (of the health cluster, of the other clusters 2-6, or of the pillars I/III of Horizon Europe).
In particular, applicants to calls of the health cluster are encouraged to consider, where relevant, the services offered by the current and future EU-funded European Research Infrastructures, including the European Open Science Cloud. 5,6 Moreover, if projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, they must make use of European space technologies and services provided by Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). The work programme 2021-2022 of the European Research Infrastructure programme includes the following calls supporting European research infrastructures and services that are or may be relevant for health research and innovation: FAIR and open data sharing in support of European preparedness for infectious diseases; FAIR and open data sharing in support of cancer research; Research Infrastructure services for rapid research responses to infectious disease epidemics; Research Infrastructures services to support research addressing cancer; Enabling research infrastructure services for better use of imaging data to address challenges in thematic research areas; Implement ing digital services to empower neuroscience research for health and brain inspired technology via EBRAINS; Research Infrastructures services for sustainable and inclusive Global Value Chain and Europe recovery from socio-economic crises.
4 The work programme 2021-2022 of the European Innovation Council (EIC) includes the following calls focused on strategic challenges aimed at supporting breakthrough technologies and innovations with the potential to scale up internationally and for European companies to become market leaders: EIC Pathfinder Challenges: Awareness inside, Tools to measure and stimulate activity in brain tissue, Emerging technologies in cell and gene therapy, Engineered living materials; EIC Transition Challenges: Medical technology and devices: from lab to patient; EIC Accelerator Challenges: Strategic digital and health technologies.
The work programme 2021-2022 of c luster 1 ‘Health’ is directed towards two Key Strategic Orientations (KSOs) for research and innovation set by Horizon Europe’s strategic plan 2021-2024, notably to creating a more resilient, inclusive and democratic European society (KSOD) and promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains (KSO-A). It aims to mainly contribute to four impact areas of the strategic plan: Good health and high-quality accessible health care; A resilient EU prepared for emerging threats; High quality digital services for all;
and A competitive and secure data-economy. More specifically, cluster 1 aims to contribute to six expected impacts as set out by the strategic plan, which are the following six destinations of this work programme:
Destination 1 - Staying healthy in a rapidly changing society: 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.
Destination 2 - Living and working in a health-promoting environment: Living and working environments are health-promoting and sustainable thanks to better understanding of environmental, occupational, social and economic determinants of health.
Destination 3 - Tackling diseases and reducing disease burden: 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 onpatients 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.
Destination 4 - Ensuring access to innovative, sustainable and high-quality health care: 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.
Destination 5 - Unlocking the full potential of new tools, technologies and digital solutions for a healthy society:

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 care systems.
Destination 6 - Maintaining an innovative, sustainable and globally competitive health related industry: 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.