Draft proposal for a

European Partnership under Horizon Europe

Transforming health and care systems

Version 9 June 2020

About this draft

In autumn 2019 the Commission services asked potential partners to further elaborate proposals for the candidate European Partnerships identified during the strategic planning of Horizon Europe. These proposals have been developed by potential partners based on common guidance and template, taking into account the initial concepts developed by the Commission and feedback received from Member States during early consultation[1]. The Commission Services have guided revisions during drafting to facilitate alignment with the overall EU political ambition and compliance with the criteria for Partnerships.

This document is a stable draft of the partnership proposal, released for the purpose of ensuring transparency of information on the current status of preparation (including on the process for developing the Strategic Research and Innovation Agenda). As such, it aims to contribute to further collaboration, synergies and alignment between partnership candidates, as well as more broadly with related R&I stakeholders in the EU, and beyond where relevant.

This informal document does not reflect the final views of the Commission, nor pre-empt the formal decision-making (comitology or legislative procedure) on the establishment of European Partnerships.

In the next steps of preparations, the Commission Services will further assess these proposals against the selection criteria for European Partnerships. The final decision on launching a Partnership will depend on progress in their preparation (incl. compliance with selection criteria) and the formal decisions on European Partnerships (linked with the adoption of Strategic Plan, work programmes, and legislative procedures, depending on the form). Key precondition is the existence of an agreed Strategic Research and Innovation Agenda / Roadmap. The launch of a Partnership is also conditional to partners signing up to final, commonly agreed objectives and committing the resources and investments needed from their side to achieve them.

The remaining issues will be addressed in the context of the development of the Strategic Research and Innovation Agendas/ Roadmaps, and as part of the overall policy (notably in the respective legal frameworks). In particular, it is important that all Partnerships further develop their framework of objectives. All Partnerships need to have a well-developed logical framework with concrete objectives and targets and with a set of Key Performance Indicators to monitor achievement of objectives and the resources that are invested.

Aspects related to implementation, programme design, monitoring and evaluation system will be streamlined and harmonised at a later stage across initiatives to ensure compliance with the implementation criteria, comparability across initiatives and to simplify the overall landscape.

In case you would like to receive further information about this initiative, please contact:

Partners (main contact):
Drafting Group of Member State representatives, THCSpartnership@gmail.com
Commission services (main contact):
European Commission, DG R&I E3, RTD-HS-PARTNERSHIP@ec.europa.eu

Partnership sector in DG R&I (overall policy approach for European Partnerships and its coherent application across initiatives), E-mail: RTD-EUROPEAN-PARTNERSHIPS@ec.europa.eu

---

[1] https://www.era-learn.eu/documents/final_report_ms_partnerships.pdf

1 General information

1.1 Draft title of the European Partnership

Transforming health and care systems

1.2 Lead entity

A number of Member States and Associated Countries[2] created the Drafting Group who developed the proposal document in collaboration with the Commission services. The lead entity will be agreed upon at a later stage.

1.3 Commission services

R&D E.3
SANTE B.1
CNECT H.3
ECFIN C.2

1.4 Summary

Health and care systems have been facing increasing challenges. COVID-19 pandemic has highlighted that improvements are urgently needed to reach high quality, efficient, accessible, health promoting, people-centred, resilient, health and care systems for all EU citizens. Research and Innovation activities (R&I) in a EU Partnership will accelerate the transformation towards sustainable health and care systems. The partners' composition will reflect the complexity of both the European health and care systems and the R&I funding landscape that underpin improvements in this field.

---

[2]   BE, ES, FR, IT, LV, NL, NO, AT, PL, CH, SE, FI.

2 Context, objectives, expected impacts

2.1 Context and problem definition

Why is this initiative being proposed now?

The health[3] and care systems of Europe are already under severe stress. The stress is caused by many factors: the conservative nature of health and care systems which are resistant to change and thus unable to easily adapt to an evolving environment, fiscal shortages, societal and economical burdens, climate and environmental changes, social inequalities, political uncertainties, technological push and pulls, and last but not at all least, the demographic changes[4]. Shortage of economic resources and/or qualified personnel causes difficult and sometimes random prioritization in the health and care sectors, and the stories of unwanted consequences for individual citizens are many. Around the world, stress on the health and care systems has increased dramatically during the 2020 outbreak of the COVID-19 pandemic. It has become evident that an improvement in resilience of health and care systems is urgently needed.

According to the definition developed at EU level by the Expert Group on Health Systems Performance Assessment, health systems are resilient when they show "the capacity to absorb, effectively respond, and adapt to shocks and structural changes in a way that allows it to sustain required operations, resume optimal performance as quickly as possible, transform its structure and functions to strengthen the system, and (possibly) reduce its vulnerability to similar shocks and structural changes in the future". Thus, resilient and adaptive health systems would be able to protect themselves and human lives from the public health impact of disasters and are critical to achieving good health outcomes before, during, and after disasters.

COVID 19 has highlighted the pre-existing urgency of rethinking and redesigning the services to best optimise inpatient and outpatient settings and to integrate digital technologies into traditional hospital services to cope with growing demand.

In particular, health workforce imbalances and shortages are major concerns for many European countries. It is evident that skills and composition need to be dynamic, resilient and evidence based to maximise impact using the resources at hand. Task shifting can contribute to get the best outcomes and results given the available work force contributing to the sustainability of the health systems both financially and socially, it can be a means to improve quality of care and enhance the resilience of the health and care systems. However, to realise these potential benefits, action must be informed by the evidence[5].

As described also in the *"Orientations towards the first Strategic Plan for Horizon Europe 10 December 2019"*[6], health and care systems were not sustainable.

---

[3]   In this partnership "*health*" is understood according to the WHO definition of 1948 and revised in 1984 as "the extent to which an individual or group is able to realize aspirations and satisfy needs and to change or cope with the environment. Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources, as well as physical capacities". Furthermore, the approach to care is inclusive, encompassing formal and informal care as well as health related social care.

[4]   https://ec.europa.eu/futurium/en/system/files/ged/eprs-briefing-633160-demographic-trends-eu-regions-final.pdf

[5] "Task shifting and health systems design » opinion of the Expert Panel on effective ways of investing in health (EXPH) adopted on 26 June 2019

[6]https://ec.europa.eu/info/sites/info/files/research_and_innovation/strategy_on_research_and_innovation/documents/ec_rtd_orientations-he-strategic-plan_122019.pdf

The creation of a *research and innovation partnership* with a focus on *health and care systems transformation* appears as a unique strategic opportunity for coordinated, relevant, timely and evidence-based research and innovation (R&I)[7], a must for a successful health and care systems transformation to occur.

The timing of such a partnership is indeed appropriate and dramatically urgent. If one positive lesson could be inferred from the COVID-19 outbreak, it is the need for a global action to tackle global challenges that have rocked the societies in Europe to its foundations.

The rapidly changing society urges countries to quickly and efficiently respond to increasing demands. The European citizens expect high quality in future health and care systems and these need to rapidly respond, adapt and transform to deliver the appropriate care to the ones in need. Complex transformations are necessary, but these do take time and need direction.

European health and care system owners, policy makers, research funders, researchers, developers and innovators in this field have already worked together under different umbrellas, focusing on some solutions for more sustainable systems in Europe. In particular, under the framework of Horizon 2020, some initiatives have been developed, that now participant Countries and relevant stakeholders are ready to consolidate under a single synergic approach to build upon and achieve an increased impact. The TO-REACH project has already delivered a Member State and Associated Country supported strategic research agenda on how to identify more effective and sustainable ways to organize, manage, finance, and deliver high quality care to European citizens. The 'Active and Assisted Living' programme (AAL), has for many years successfully provided bottom up ICT-based innovation opportunities and solutions for the ageing society. The European Innovation Partnership (EIP) brought together relevant actors at EU, national and regional levels across different policy areas to handle societal challenges in this area and involved all the innovation chain levels. The Joint Programming "Initiative More Years, Better Lives" (JPI MYBL) consolidates the activities of more than 15 countries to enhance coordination and collaboration between European and national research programs related to demographic change.

Now is the time to harvest from the impacts of these and other EU-initiatives aimed at improving the health and care systems in Europe, focusing on solutions and going beyond the achievements of these previous initiatives, joining efforts to solve the big challenges that these systems in Europe are facing.

What problems and/or strategic opportunities does the initiative aim to tackle?

Europe is a diverse community, also when it comes to health and care systems. Provision of health and care policy in Europe is organized differently and involves numerous actors at national and regional levels, each system having its own specificities and context. Transformation of the diverse health and care systems of Europe is an extremely complex endeavour that needs to be addressed from many angles simultaneously, using large toolboxes of instruments, involving policy makers, funders, owners, researchers, innovators, formal and informal carers and the citizens. Successful transformation will depend on decision-makers' ability to learn from each other, across national and regional borders and perhaps across the borders of different sectors, from the evidence through research and good

---

[7] In this partnership R&I are used according to the common terminology of the framework programme. In funding various activities and in line with existing regulation at the national levels the categories basic research, industrial research and experimental development are applied.

practices, and to use this know-how to steer the necessary investments and implementation in a direction that matches the vision on health and care of the future.

One unique strategic opportunity is to unite stakeholders from all these categories into one European partnership with a common aim to generate new knowledge on health and care systems organization, governance, funding models, models of care, and uptake of evidence-based practice through research and innovation activities. The partnership will also support identification, development, testing and implementation research on tailored solutions in the diverse landscape of European health and care systems. In addition, there is a lack of a solid evidence base and practical mechanisms to explain why certain best practices and innovative solutions struggle to be transferred to other countries despite adding value in their countries of origin. In this sense, sharing experience and information on effective and sustainable innovations (in biomedical and technological field as well as at organisational and service level, including payment models, workforce development and educational schemes) can assist Member States and Associated Countries to translate these good practices implementing them in their own national or regional environments.

Cross-border learning from practices and good models of health and care (including promotion and prevention) are key in this area of research. A comprehensive *European partnership on Transforming Health and Care Systems* will provide an attractive and logic platform for initiating international collaboration on research and innovation and for effective international dissemination of results.

What are the causes ("drivers") of the problem and their relative importance?

The European societies are constantly changing, and major changes are represented by demographic change[8], technological development, globalization and climate change, environmental factors and changes in the political and social landscape, all can stress the functioning of health systems. Added to these challenges, COVID-19 has shown also the vulnerability of our societies, hitting severely the economy at large and more particularly the health and care systems. There is a clear need to increase the capacity of health and care systems in terms of better use of space (facilities), staff and supplies[9] and there is much room for improvement in terms of prevention, vigilance, reactivity, coordination, information exchange, logistics, overall organization and importantly cooperation and solidarity.

Demographic change, with changes in the composition of the population and societal developments in general will place new and greater demands on the health and care systems, especially growing demands related to older people with long-term chronic, complex medical conditions. Furthermore, the ageing population trend and the rise of chronic diseases will increase the percentage of people excluded from working life, resulting in reduced revenues for the states, thus contributing to more uncertainty around financing of health and care systems, but also negatively impacting the availability of professionals caring of those in need.

The Health and care sector is an important workforce and economic sector in Europe. It employs 8.5% of the workforce, and accounts for almost 10% of the GDP in the EU[10]. The demographic change represents an additional burden for the health and care sector, as a lack of qualified professionals is already a reality in a large part of Europe. Important parts of the

---

[8]   https://ec.europa.eu/futurium/en/system/files/ged/eprs-briefing-633160-demographic-trends-eu-regions-final.pdf

[9] "Beyond Containment: *Health systems responses to COVID-19 in the OECD*", OECD, March 2020

[10] Joint Report on Health Care and Long-Term Care Systems and Fiscal Sustainability prepared by the Commission Services (Directorate-General for Economic and Financial Affairs), and the Economic Policy Committee (Ageing Working Group): https://ec.europa.eu/info/sites/info/files/file_import/ip037_vol1_en_2.pdf

health and care are already being provided by social services and the informal sector, not visible in the health and care budgets.

An important driver is the technological development and biomedical innovation and the need to foster implementation research to support the transformation of health and care systems to become more proactive, focusing not only on treatment, but also on effective prevention strategies for those who need them. There is a need for a shift from intervention to prevention approach as a key transformation process, (i.e. by stressing on positive health and well-being for sustaining mental and physical abilities, and promoting the best possible quality of life for the citizens).

The SAPEA (EC's 'Science Advice for Policy by European Academies') Report on "Transforming the Future of Ageing" (2019)[11] expects technology to play a revolutionary role in the care delivery systems of the future. In fact, development of technology and digitalization of the health and care services, utilization of health data, electronic medical devices, decision support systems, and the opportunities they offer as new ways of communication and interactions, are embraced by many as crucial in supporting future health and care systems. However, novel therapies, technologies and approaches face specific barriers and hurdles in implementation and scale-up before reaching health and care systems and patients, including societal issues such as technology acceptance or public outreach. These are complex questions the health and care sector must tackle to become robust, efficient and deliver at high quality.

The systems must also demonstrate capacity, robustness and knowledge to early detect and tackle emerging threats and public health crisis raised by climate/environmental change and/or globalization.

Climate change causes extreme weather conditions, and extreme seasonal temperature variations. Heat and cold waves have, the last years, hit Europe hard. Vulnerable groups in our populations, especially the elderly and the chronically ill, suffer under extreme temperatures. Consequently, it has been reported that deaths due to extreme weather conditions, are progressively increasing.[12] In addition, climate change is also affecting the spread of infectious diseases, especially the vector born. Health and care systems need to improve the preparedness for new challenges caused by the changing climate. Even distant climate events can impact them.

Future actions to prepare for climate change should include according to the WHO the following[13]:

- Provide leadership and governance in advocating health in all policies. The health sector has a challenge – and an opportunity – to demonstrate its leadership and responsibility in dealing with climate change through its own actions, through leadership in developing health and care adaptation plans that consider how climate change-related actions in other sectors could affect current and future population health, and through promoting equity and good governance in national and regional policies.
- Establish information systems that collect timely and relevant data on vulnerable populations and regions, the incidence and geographic range of climate-sensitive health outcomes. This includes collaborations with national meteorological and hydrological services to ensure that health data, are collected on the same scale of environmental

---

[11] https://www.sapea.info/wp-content/uploads/tfa-report.pdf
[12] IHME (2016), "Global Burden of Disease Study 2016 Results", Seattle, United States, http://ghdx.healthdata.org/gbdresults-tool

[13] https://www.who.int/globalchange/resources/vulnerability_adaptation/case_studies/box_13/en/

data and that policies and programmes are effective in addressing climate-sensitive health outcomes.

- Ensure adequate human and financial resources to protect individuals and communities from the health impacts of climate change. This includes providing training and capacity building for professionals and the public to support efforts to reduce health risks and providing effective service delivery during crises and disasters.

Health and care systems transformation should be seen and implemented as part of the transition of our society to a more sustainable development. Climate change is a major driver in this transition. In the Lancet Countdown on Health and Climate Change Report 2019[1], one of the key messages is "placing health at the centre of the coming transition will yield enormous dividends for the public and the economy, with cleaner air, safer cities, and healthier diets", indicating the importance of health as driver of transition in many policy areas.

Health and care systems are major contributors to carbon emissions. The development of a well-functioning and efficient health and care systems, accessible to all, is an area to include in the efforts and investments of green transition. The proposed Partnership will exploit the available synergies across policy areas in line also with the European Green Deal for the European Union (EU) and its citizens. EU Health and care systems need to contribute to a more sustainable and greener Europe by renovating hospitals and services into more energy efficient building/processes and by strengthening health and care professions' knowledge of environmental health issues.

Globalisation has also an impact on health and care systems by the increasing movement of health professionals, with a brain drain' in the health sector as a result of health workers' migration from developing to developed regions.[14] Migration is one of the key issues in the international as well as European political and public debate. It represents a key global challenge for modern societies and one of the most compelling challenges consists in the adaptation of health and care systems to new needs caused by migration [15].

In addition, in particular, as observed during the COVID-19 pandemics, globalisation has dramatically contributed to the uncontrolled propagation of emerging infectious disease and its heavy impact on the citizens' health and on health and care systems over the world and notably in Europe. The situation has testified the shortcomings and weaknesses of our current systems. Lessons from COVID-19 as well as previous epidemics[16] should be used to improve future health and care systems. We need to incorporate routes for continuous learning such as preparedness exercises to identify the ways in which the response systems need to improve.

Finally, in terms of changes in the political and social landscape, main attention must be given on the fact that public spending on health and care is steadily rising in the EU, consequently putting additional pressure on the Member States given budgetary constraints. It is therefore mandatory that health and care systems increase their effectiveness and efficiency in order to increase overall sustainability. Financial constraints contribute to increase health inequalities across the EU where people with a low level of education can expect to live six years less than those with a high level of education. There are large

---

[14] MMTE Huynen, P. Martens and HBM Hilderink. The health impacts of globalisation: a conceptual framework. Globalization and Health 2005, 1:14-26.

[15] Caterina Francesca G., Petretto A. (2019) Health Care and Migration: What Data Can Tell Us of the Hard-to-Measure Impact of Migrants on the European Health Systems. In: Dobrescu P. (eds) Development in Turbulent Times. Springer, Cham

[16] For instance: Bill Gates, The New England Journal of Medicine, April 9 2015: https://www.nejm.org/doi/full/10.1056/NEJMp1502918

inequities in the access and utilization of health and care services across EU where poorer Europeans are on average five times more likely to have problems accessing health and care than those financially better off.[17] In particular, as mentioned above, the health of migrants is one of the biggest challenges for public health, often causing inequality and social exclusion in the destination countries. Migrant health poses the central issue of public finance emerging from the social inclusion process: defending the sustainability of health and care systems on the financial side is a prerequisite for tackling and winning this great challenge in Europe[18].

Health and care systems currently largely financed – directly and indirectly- through public means, putting a large burden on the public budget, might benefit from innovative funding schemes. The health and care sector represent a large and growing market and is also a key driver for economic growth as contributing to employment through high-value jobs and a positive trade balance. A functional European health industry is imperative to provide health technologies to the benefit of patients and providers of health and care services.

Considering the above-mentioned scenario, the Partnership will need to develop research and innovation activities that can improve the capacity of health and care systems to change and to respond effectively and efficiently to the challenges of a continuously changing society. Main areas that need to be looked at to support transformation towards sustainable and resilient health and care systems include, among others:

- implementation of innovative solutions (organisational, technological) to solve the increasing challenges;
- innovative funding schemes and regulatory framework focusing on equity in access to care, care quality, health outcomes and cost-efficiency;
- uptake of new health technologies, cost and accessibility (including risk and vulnerable groups: older persons, immigrants, etc.),
- development of more qualified/trained health workforce;
- involvement of key stakeholders at local and /or regional levels; citizens/patients, empowerment.

The involvement of local and /or regional stakeholder eco-systems are decisive to allow health and care systems innovation and possible transformation. Many member states health and care services are organised and funded at municipal (local government) and regional level. However, democratic control is exercised at national, regional and local level. The balancing act between providing an equal service across the whole country on the one hand and municipal and regional self-governance on the other creates complications. Regional disparities exist even in the same country. According to the "**Health at a Glance: Europe 2018" report**[19], regional disparities in the same country have been analysed and are therefore a source of inefficiencies in providing health and care to the citizens that originate cross regional imbalances. Taking the picture at European level as a whole, things appear to be quite problematic. Clearly, there is a lot of room for improvement.

Local and regional level plays a key role in the interaction of the different actors, such as concerned citizens/patients, for the education and training of professional, and informal carers, or for piloting and integration of innovative solutions, e.g. as a results of digitalization, into the health and care services. A cross-policy approach based on the

---

[17] "Health inequalities in the EU Final report of a consortium." Consortium lead: Sir Michael Marmot, UCL Institute of Health Equity,. Funded by the European Commission, 2013

[18] Caterina Francesca G., Petretto A. (2019) Health Care and Migration: What Data Can Tell Us of the Hard-to-Measure Impact of Migrants on the European Health Systems. In: Dobrescu P. (eds) Development in Turbulent Times. Springer, Cham

[19] https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf

interaction of all relevant actors will be critical: the use of the local eco-systems in mobilizing local communities for public health work, supporting informal care and end-users involvement– will help the partnership producing results that will facilitate the delivery and implementation of innovations.

Data and evidence on the state and scale of the problems and/or strategic opportunities

EU-financed OECD report 'Health at a Glance – Europe 2018' stresses that Europe's health and care systems are facing increasing pressure on efficiency and effectiveness. This trend will accelerate over the next decade, in particular due to the mounting effects of demographic change as already experienced through the increasing shortage of the care workforce.

In detail, the "**Health at a Glance: Europe 2018" report**[20] provides the most recent data on the Health Status of European Countries and alert on**:**

- Although life expectancy reaches 81 years on average, the gains have slowed down markedly in several Western European countries in recent years;
- Easter European countries has lower GDP and lower average life expectancy as well as lower number of health care personnel;
- The main causes of deaths remain circulatory diseases (over 1 900 000 deaths in 2015) and cancers (1 320 000 deaths), which together account for over 60% of all deaths;
- More than 1.2 million deaths could have been avoided in EU countries in 2015 through better disease prevention policies and more effective health care interventions;
- 790 000 EU citizens die prematurely each year from avoidable risk factors, including tobacco smoking, alcohol consumption, unhealthy diets and lack of physical activity;
- Large inequalities in life expectancy persist not only by gender (women still live nearly 5½ years more than men on average), but also by socioeconomic status. On average 30-year-old men with a low education level can expect to live about 8 years less than those with a university degree or the equivalent. The "education gap" among women is smaller, at about 4 years; Communicable diseases, such as measles, hepatitis B and many others, still pose major threats to the health of European citizens, although vaccination can efficiently prevent these diseases.

The demographic trend, with an ageing population, poses a particular challenge as it not only leads to a greater need for health and care, but also disrupts the balance in the welfare system, with a shrinking proportion of people of working age paying in. There are huge and growing differences between urban and rural areas, between different countries, regions and between municipalities of different sizes and in different geographical locations. The disparities have to be analysed and understood, and this diversity is to be utilised by the partnership as a source for comparisons and exchange of experience and knowledge.

The SAPEA report on „Transforming the Future of Ageing" (2019) states very clearly that in view of the current numbers of older adults in Europe (in 2016, there were 98 million people in the EU aged 65 and older) and taking into consideration that the life expectancy of the next generation of older adults is likely to surpass their parents, two strategies, equally relevant and implementable can be proposed: 1) Promoting healthy lifestyles over the life course, as well as detecting and modifying early and mid-life risk factors of impaired function and chronic diseases with the aim of delaying age-related disability; 2) Providing more appropriate health and social care for the aged EU population by offering integrated and holistic care in all-age community and health and care facilities.

---

[20] https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf

The report also stresses that both approaches must bear in mind that technology will revolutionise care delivery systems and that an adequate number of skilled professionals is essential. Decision makers at national, regional or service level therefore need to explore continuously solutions to ensure that they can continue to provide accessible health and care that is of high quality, responsive, affordable and financially sustainable by taking into account the existing challenges on globalization and technological development, demographic, climate and environmental changes as well as changes in the political and social landscape.

In view of such challenging scenario, the "Health at a Glance: Europe 2018" and the recent "**Companion Report of the State of Health in the EU**"[21] identify a number of major topics that healthcare researchers and policy makers need to consider, in order to improve the effectiveness, accessibility and resilience of health systems as well as to improve the health and quality of life of the EU citizens and patients:

- More effective and people-centred health systems: health and care need to place people at the centre, also developing initiatives that use Patient Reported Outcomes as measurement to assess quality of interventions and co-creative policies and programmes with citizens;
- Improved access to health and care and strengthening the evidence base on access to health and care: universal health coverage and timely access to affordable, preventive and curative healthcare are a key principle of the European Pillar of Social Rights and should remain central to policy action;
- More resilient health and care systems: as health and systems evolve, they must become more resilient and adapted to rapidly changing environments and needs. Tackling the decline in vaccination confidence across the EU: vaccine hesitancy, can be tackled by improving health literacy and countering disinformation head-on, with health workers actively involved;
- Harnessing the digital transformation of health and care systems including also health promotion & disease prevention as part of a broader, comprehensive strategy;
- Shifting tasks and changing the skill mix to explore new ways of providing care: reallocating tasks among new and existing health workers contributes towards health system resilience, provided that traditional boundaries are overcome, and education and training are geared to the possibilities of skill mix innovations.
- Breaking down silos for safe, effective and affordable medicines: the product life cycle of medicines reveals ample scope for Member State cooperation in ensuring safe, effective and affordable therapies, including everything from rational spending to responsible prescribing.

The abovementioned topics represent at the same time, challenges and, if correctly addresses by research and innovation activities, enormous opportunities to steer the necessary change in the health and care systems in Europe.

In line with the above needs are also the recent proposals for country-specific recommendations published in the context of the European Semester and of the current COVID 19 pandemic. The European Semester is a EU-level policy co-ordination tool contributing towards the broader EU aims of strengthening economic governance and greater policy co-ordination. The recommendations issued in this context tailor-made to each Member State, invite EU countries to take steps to strengthen the resilience of its national health system. They take into account specific structural challenges related not just to the short-term resilience of the respective health system (e.g. to ensure the availability of

---

[21] https://ec.europa.eu/health/sites/health/files/state/docs/2019_companion_en.pdf

intensive care beds and of critical medical products such as personal protective equipment and ventilators), but also to the access to and the effectiveness of health and care. Among the longer-term issues highlighted in the wake of the COVID-19 crisis are the working conditions of doctors and nurses and shortages of health workers, as well as the insufficient financing of certain segments of health and care system. High out-of-pocket payments and unmet needs for medical care for patients are also an issue, which can disproportionately affect the most vulnerable. Additionally, in some Member States the crisis has shown an insufficient capacity of the primary care sector and the untapped potential for the deployment and use of e-Health services. Overall, COVID-19 has aggravated the performance of several countries that, prior to the onset of the pandemic, were already experiencing structural and long-term challenges related to the resilience, accessibility and efficiency of their health and care systems. These challenges have been the subject of various country-specific recommendations in the past.[22].

In addition, the aforementioned view is shared from other relevant programs and initiatives across EU, among them **ICPerMed**[23] **and JPI MYBL**[24]. ICPerMed has developed a vision of how the use of personalized medicine approaches will promote "next-generation" medicine in 2030, more firmly centred on the individual's personal characteristics including risk stratification leading to increased effectiveness, economic value, and equitable access for all citizens to the best possible health and care. According to the **ICPerMed Vision Paper**[25], by 2030, the shift from one-size-fits all approach to health and care to a personalized approach in prevention and care will be reflected in the organisation of health and care systems. The reports also outline digital innovation will prompt significant investments in centralized data infrastructure and digital platforms to support data management, interoperability and access, and data sharing between citizens, health professionals, and researchers. Technological advances will create the need for new skills, training programmes involving health professionals, patients and multidisciplinary team. In the **Strategic Research Agenda of the Joint Programming Initiative More Years Better Life**[26], it is reported that effective policy and decision making processes that attempt to integrate social and care services in the different health and care systems have the potential either to empower citizens from control over their lives and thus over their wellbeing. However, not all the emerging needs are well met by existing institutional structures, especially in relation to learning and access to innovative solutions.

Lastly, the **Expert Panel on effective ways of investing in health (EXPH)** provides the EU Commission with sound and independent advice in the form of opinions in response to questions (mandates) submitted by the Commission on matters related to health and care modernization, responsiveness, and sustainability. Among the Opinions released by the **Expert Panel** the "Options to foster Health Promoting Health System", "Defining value in 'Value-based healthcare'[27]", "Task shifting and health system design" and "Assessing the

---

[22] 2020 European Semester Country Specific Recommendations/Commission Recommendations. https://ec.europa.eu/info/publications/2020-european-semester-country-specific-recommendations-commission-recommendations_en

[23] https://www.icpermed.eu/

[24] https://www.jp-demographic.eu/

[25] https://www.icpermed.eu/en/activities-vision-paper.php

[26] https://www.jp-demographic.eu/about-us/strategic-research-agenda-sra/

[27] "value-based health care" as a comprehensive concept built on four value-pillars: appropriate care to achieve patients' personal goals (personal value), achievement of best possible outcomes with available resources (technical value), equitable resource distribution across all patient groups (allocative value) and contribution of healthcare to social participation and connectedness (societal value). Though it is not a legal definition, it covers all dimensions and not only the economic/business dimension which is of interest to the

impact of digital transformation of health services" anticipate some of the major challenges and solutions reported above. In the reports, the EXPH outlined need to set up a long-term strategy to ensure financial sustainability of health and care systems, where reallocation of resources move from low to high value care to create greater awareness on health as essential investment in an equal and fair European society ("health is wealth") and to the centrality of European values of solidarity.

In a nutshell, approaches that would address the complexity arising from these challenges in health and care sit at policy intersections among public health, health care and long-term care, and the wider regulatory framework within which these are embedded. Sustainable transformation must take account of these issues and consider the multifaceted set of interests and priorities of those involved in the organisation, delivery and financing of services, which are likely to differ at the different tiers of the system and across different sectors[28].

Underlying research, innovation, deployment or systemic bottlenecks and/or market failures

Countries in Europe are embarking on a wide range of reform efforts to address the common challenge of rising health and care demand in an ageing society combined with resource constraints and workforce shortages. However, when it comes to health and care systems transformation, policy makers face difficulties in identifying innovations (organisational as well as technical, including digital) that will help improve populations' health and ensure that systems are sustainable, resilient, innovative, of high quality and people-centred.

There are indeed difficulties for many innovative solutions and research results to reach health systems. Gaps stand at several levels:
1. Bridging the innovation gap to support the transformation of health and care systems to contribute to the adaptation from the existing status quo to the existing and new challenges by the design, development and implementation of appropriated mix of service, policy and technical innovations;
2. Lack of scientific evidence that could be used across European countries on innovation's effectiveness and efficiency
3. Identification of already successfully implemented innovations that have delivered effective and efficient results elsewhere;
4. Lack of a understanding regarding:
   a) Factors that contribute to the successful implementation of innovation in services and policies in different settings;
   b) Prerequisites of, and conditions for, their wider dissemination and implementation within and across countries to ensure effective mutual learning/cross – fertilisation;
5. Suboptimal understanding of the context that is fundamental for a successful transfer and scale up of innovations.
6. Innovations not based on the need of the local, regional contexts or on the end users need, due to lack of knowledge on how to involve users in the entire research and innovation chain.

pharma/med-tech industry https://ec.europa.eu/health/expert_panel/sites/expertpanel/files/docsdir/024_defining-value-vbhc_en.pdf
[28] Nolte E, Knai C, Saltman R, editors. Assessing chronic disease management in European health systems. Concepts and approaches. Copenhagen: World Health Organization (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies); 2014

Recent understandings have moved away from the idea of context as a static concept and emphasized the dynamic nature of implementing and transferring innovations, noting that context comprises "a physical location but also roles, interactions and relationships at multiple levels". This also means that the process of transfer will be influenced by and shape the innovation, and these relationships are likely to change over time. This will all impact the transferability of innovative practices.

A shared European approach to health services and systems research and innovation can contribute to address these issues. Because there is great potential to learn from different countries' experiences through comparative cross-national health services and systems research, cross-country comparison offers opportunities for mutual learning and reconsideration of policies, cross-fertilisation, or even policy transfer. But for such learning and possible transfer to be effective we need to better understand the conditions for, and the determinants of successes and failures in the transfer (and possible scale-up) of service and policy innovations between regions and countries.

In addition, innovation in health and care services and policy should encompass also a horizontal, coherent and coordinated approach and cross-sectorial collaboration across different policies. As spill over effect, the partnership will indirectly support a critical mass of innovators (researchers, developers, companies including SMEs, business angels, venture capitalists) that could contribute to the development and integration of innovative tools into the health and care services. Decision makers, health professionals, citizens and patients will also participate in co-development, co-implementation and co-assessment of innovative solutions.

Experience and outcomes of previous R&I Partnerships

The partnership will build on the experience and outcomes of some closely related European initiatives

- The **Active & Assisted Living Programme (AAL Programme)** with a focus on funding R&I projects for new/adapted solutions for older adults and those supporting them, mainly in non-institutional health and care (i.e. at home and in community) by making use of ICT-based/digital technologies; The AAL Programme has extensive experience in involving end-users and different types of stakeholders in the Programme set up, in the call definition, in support actions as well as in funded projects.
- The **Joint Programme Initiative "More Years, Better Lives'** focusing on trans-disciplinary policy-directed research and in particular social sciences and behavioural research about the effects of an ageing population on society at large and in particular with regard to the current health and care systems;
- The **European Innovation Partnership on Active & Healthy Ageing** developing tools, know-how and exchanges to stimulate ecosystems at subnational level, public/private investment and scale-up of innovation within regions for the benefit of the whole society;
- The **To-Reach Coordination and Support Action (CSA)** aiming at developing a Strategic Research Agenda which provides a European strategy to advance our knowledge and understanding of the adoption, implementation and potential scale-up of service and policy innovations and their translation to other settings within and across countries.

Those four initiatives through their increased cooperation over the last two years have demonstrated significant complementarities by not only addressing the whole R&I value chain but also including the institutional as well as non-institutional part of the health and care system. Evidence-based research for policymakers, targeted in particular by TO-Reach and JPI MYBL is coupled with the innovation drive of the AAL programme in health and

care service delivery through public and private enterprises/entities and EIP on AHA's focus on integrating learning into regional eco-systems.

Building on some of the achievements of these past initiatives, this partnership represents a fundamentally novel approach to the problem, creating synergies by bringing together some of their elements with the aim of creating, identifying and testing innovative solutions that can realistically tackle the challenges of the health and care systems.

Finally, the partnership will be aligned with a number of key principles/learnings from Horizon Europe, such as:

- Integrate experience and learnings from national level, in order to not only avoid duplication of valuable resources, but to provide added value also for those national initiatives.
- Make investments more efficiently, learning from each other to better capitalize on those previous European experiences.
- Bring tangible impact to European citizens by constantly adopting an end-user centric co-development/co-creation approach, in order to transform health and care systems in line with citizen needs
- Approach health challenges holistically in line with WHO, SDGs and 2030 Agenda recommendations, giving functional health, well being and prevention an equal importance to cure and care.
- Implementing R&I initiatives that can support a fast uptake of research findings in innovative service, process, organizational and policy innovations; the involvement of Social Sciences and Humanities to understand the mutual relation between research, innovations and its use in relevant local and regional health and care (eco-) systems.

2.2 Common vision, objectives and expected impacts

The common vision of the partnership is to improve the European citizens' health by reaching high quality, fairly accessible, sustainable, efficient, health promoting and resilient health and care systems for all EU citizens.

The general objective is to **ensure the transition towards more sustainable, resilient, innovative and high quality people-centred health and care systems**. This will be accomplished based on evidence provided by research and innovation activities and including the building of ecosystems and multi-actor value chains. Thus, the partnership will provide better knowledge and best practices to guide all relevant stakeholders.

This European partnership on Transforming Health and Care Systems will not only strengthen collaboration between policy makers, users, professionals and researchers in and between different countries and regions, but also support the collaboration between their local/regional health and care eco-systems as the crucial intervention/transformation level. Such cooperation should help accelerate innovation and implementation of innovative solutions while combining and leveraging available funding for research and innovation. It will ensure that results of research can disseminate more rapidly within and across European countries and therefore be introduced in policy and practice.

Specific Objectives

The partnership will be organised around the following specific objectives to be achieved by 2030:
1. To provide multidisciplinary research and innovation actions in priority areas of common interest to fill knowledge gaps, produce evidence and develop guidance on how to transform health and care systems.

The partnership will deliver impact-driven multidisciplinary and transnational research and collaboration to address the knowledge gaps in health and care systems. Through a better coordination of research and innovation funding in this field, it will be possible to break the knowledge silos in health and care systems and bring together research initiatives that work in parallel without mutual learning.

Implementation research will play a crucial role to identify the facilitators and barriers to guide the transfer and scaling up in real life of successful innovative solutions across regions and countries. Adapted solutions should respond to all aspects of health and care systems transformation, including different capacity of developed and developing countries for absorption of the innovation, including organisational, service and policy innovations.

2. To provide applied research/development and innovation actions in priority areas of common interest to develop new solutions for health and care to support and maintain people's health

The partnership will deliver applied research/development and innovation actions supporting technological and interdisciplinary aspects as well as adopting co-creation approaches with end-users and policy makers and involvement of stakeholders for developing solutions that are useful and wanted in response to the needs of a changing and ageing society. Actions will be complemented by activities to produce, develop and scale-up new methodologies, tools and (business) models on an evidence basis and in accordance to an ecosystem wide approach.

3. To strengthen the research and innovation community in the field of health and care systems across Europe

The partnership will support the development of innovative solutions for health and care systems in all their various dimensions (e.g. governance, financing, generation of human and physical resources, health service provision, and patient empowerment.) Target groups will include the research and innovation community that will participate in projects funded by the Partnership coming from the fields of public health, health management, health economics, social sciences and humanities, digital learning and ICT engineering technology and so forth and all relevant actors from health and care systems facilitating the uptake of results and deliverables from this partnership

4. To improve the ability of relevant health and care actors to take up innovative solutions, including organisational, service and policy innovations

Better trained and strengthened participation of human resources at regional, national and European levels will support uptake of developed solutions (both organisational and technological) in health and care systems. Additionally to research and innovation activities addressed under the previous objectives, an important role in this regard will be attributed to demonstrators, pilots, twinning projects and capacity building activities. It is also necessary to provide essential evidence and systemic know-how to all relevant authorities and providers in order to raise their capacity to prepare investment strategies by appropriated policy-making and access financing in health and care.

The partnership plans also to support a community-building program for current and future health care leaders (including scientists, policy makers, providers, other stakeholders and citizens/ patients) to improve collaboration among EU Member States and Associated Countries.

The partnership will also perform activities to increase digital literacy and health literacy among end-users and health and care professionals and also foster them by occasionally launching calls or publishing tenders.

5. To establish a platform for connection and coordination of relevant stakeholders to develop the ecosystems allowing for a swift scaling up and transfer of successful innovations to different health and care systems

The partnership aims to gather a critical mass of innovators (researchers, developers, companies including SMEs), decision makers, teachers, health professionals and citizens a.o. for the co-development and co-implementation of innovative solutions for health and care systems transformation.

A pool of European/national/regional resources (such as research/health data, infrastructure, people and finances) will be created to promote the collaboration among public funding authorities, health and care authorities, formal and informal caregivers and entrepreneurs and other relevant stakeholders to tackle the challenges of health and care systems transformation. Based on research outputs, smart and innovative health and care models will be promoted, where formal and informal health and care professionals, entrepreneurs, researchers and governments will collaborate based on shared values with the focus on the end-users. Networking and coordination activities will be supported both at EU and at National levels. Each country should develop its national mirror group involving national and regional stakeholders.
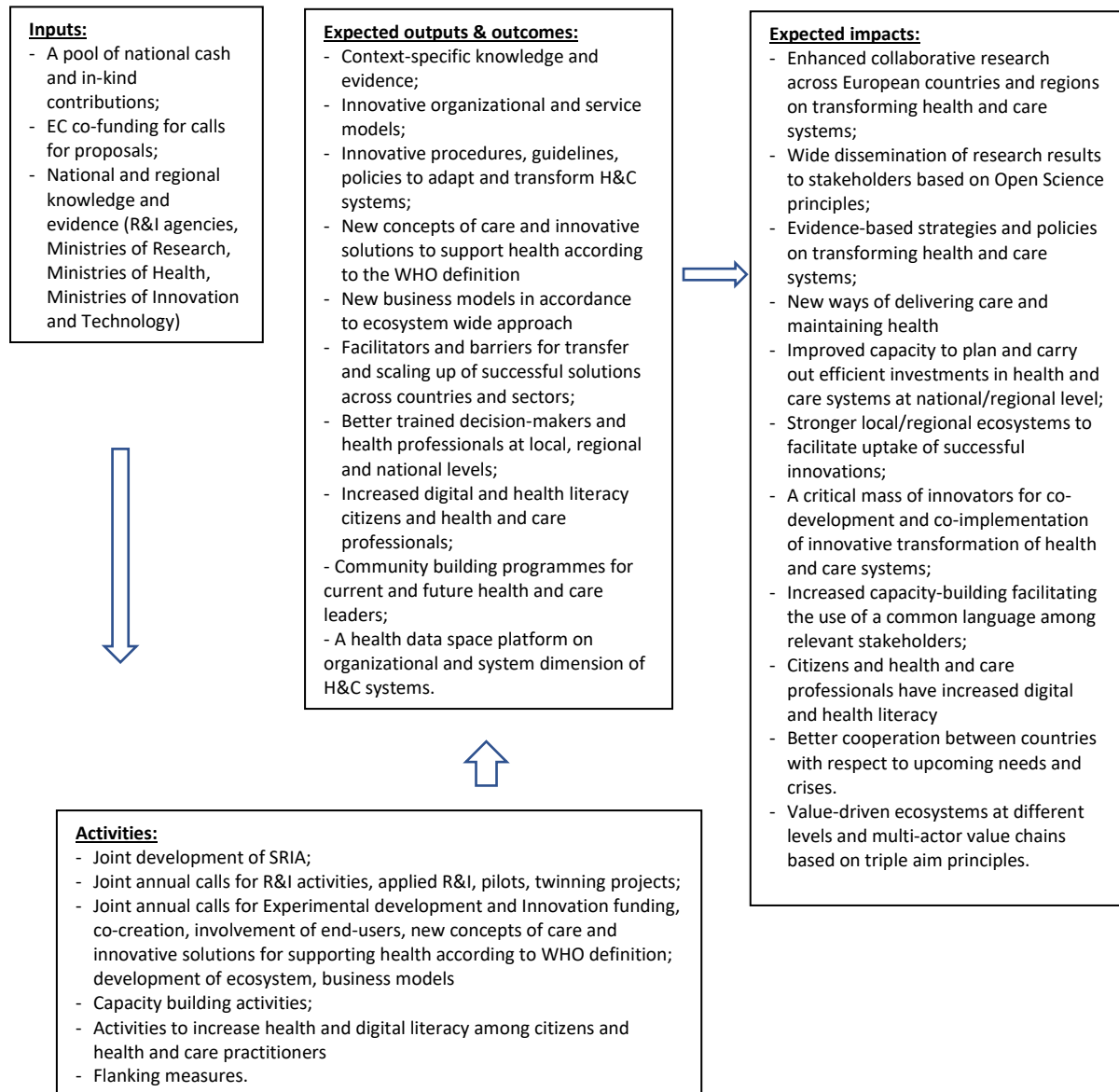
Expected Impacts:

Health and care systems need to be more efficient to deliver better and of higher quality services for prevention, diagnosis and treatment as well as providing better and equal access to the citizens. A common vision based on mutual learning and collaboration among countries and regions in Europe will be a key in the transformation of health and care systems to make them stronger and more efficient to tackle the existing and future challenges. This will be accomplished by sharing best practices and by developing and successfully implementing new solutions and care models. The impact of this transformation will be the adoption of healthier lifestyles with improved health literacy, supported by efficient and/or personalized solutions accessible to all EU citizens via the innovative digital technologies. But also, the sustainability of health and care systems should be a major objective based on new procedures and business models and integrated approaches, to successfully meet citizens' wishes, needs and challenges. Thus, to fulfil the set objectives in transforming health and care systems, researchers, economic forces, administration and the society should work together on the same direction to achieve the impact of their efforts in terms of:

    a.   improved monitoring of health and care systems performance,
    b.   increased availability of practical solutions co-created with end-users and stakeholders as well as ecosystem wide business models,
    c.   improved capacity to plan and carry out efficient investments in health and care systems at national/regional level;
    d.   evidence-based strategies and policies on transforming health and care systems,
    e.   increased leadership of European researchers in the relevant field by increasing digital and health literacy among citizens and health and care practitioners,
    f.   increased capacity-building efforts to facilitate the use of a common language among relevant stakeholders,
    g.   faster and wider dissemination of research results to the society and relevant stakeholders based on an Open science policy, and

h. established value-driven ecosystems at different levels and multi-actor value chains based on triple aim principles.

Appropriated impact monitoring tools and output plus outcome indicators will be required that would also at the same time monitor the performance of this partnership.

A schematic intervention logic is presented below:

Inputs:
- A pool of national cash and in-kind contributions;
- EC co-funding for calls for proposals;
- National and regional knowledge and evidence (R&I agencies, Ministries of Research, Ministries of Health, Ministries of Innovation and Technology)

Expected outputs & outcomes:
- Context-specific knowledge and evidence;
- Innovative organizational and service models;
- Innovative procedures, guidelines, policies to adapt and transform H&C systems;
- New concepts of care and innovative solutions to support health according to the WHO definition
- New business models in accordance to ecosystem wide approach
- Facilitators and barriers for transfer and scaling up of successful solutions across countries and sectors;
- Better trained decision-makers and health professionals at local, regional and national levels;
- Increased digital and health literacy citizens and health and care professionals;
- Community building programmes for current and future health and care leaders;
- A health data space platform on organizational and system dimension of H&C systems.

Expected impacts:
- Enhanced collaborative research across European countries and regions on transforming health and care systems;
- Wide dissemination of research results to stakeholders based on Open Science principles;
- Evidence-based strategies and policies on transforming health and care systems;
- New ways of delivering care and maintaining health
- Improved capacity to plan and carry out efficient investments in health and care systems at national/regional level;
- Stronger local/regional ecosystems to facilitate uptake of successful innovations;
- A critical mass of innovators for co-development and co-implementation of innovative transformation of health and care systems;
- Increased capacity-building facilitating the use of a common language among relevant stakeholders;
- Citizens and health and care professionals have increased digital and health literacy
- Better cooperation between countries with respect to upcoming needs and crises.
- Value-driven ecosystems at different levels and multi-actor value chains based on triple aim principles.

Activities:
- Joint development of SRIA;
- Joint annual calls for R&I activities, applied R&I, pilots, twinning projects;
- Joint annual calls for Experimental development and Innovation funding, co-creation, involvement of end-users, new concepts of care and innovative solutions for supporting health according to WHO definition; development of ecosystem, business models
- Capacity building activities;
- Activities to increase health and digital literacy among citizens and health and care practitioners
- Flanking measures.

The partnership's vision is:

> ***To lay the ground to provide high-quality health and care services at affordable prices to all European citizens in a way that is sustainable for the public finances.***

This means to make the health and care system more efficient and effective. This can be achieved through redesigning the delivery of services and thereby transforming the system itself alongside the tools and processes employed. Technology can act hereby as a transformation enabler. New products, services and processes will need to be designed in co-

creation with all relevant stakeholders and novel multi-stakeholder business models will need to be developed for them to be economically viable for all stakeholders in this ecosystem.

This Partnership will contribute to:
- high-quality health and care services accessible to all European citizens;
- financially sustainable health and care services;
- economic viability and growth.

The vision and objectives of the partnership will be reached by embracing the whole knowledge and innovation cycle from fundamental research to implementation, applied research and development.

Collaborative opportunities will be pursued with the other envisaged health-related partnerships in Horizon Europe, in particular the institutionalized European Partnership Innovative Health Initiative (IHI) that aims to accelerate the development of scientific and technological innovations in the area of health (in a pre-competitive context).

The partnership on transforming health & care systems will be able to support the more effective use of technological and biomedical innovations developed by IHI into health and care systems. Introducing new technologies into a given system has important consequences for how health and care services are being organized, funded and delivered. For this to be successful, a good understanding of the organizational context within which they are being implemented is essential. Lack of attention to the wider context within which services and systems operate can have considerable negative implications for the successful implementation and spread of such innovations in health and care. The innovations needed should stretch the entire continuum from health promotion and disease prevention to long-term and end-of-life care. At the same time, innovation coming out of the partnership will require large-industry partners for upscaling, which can be pursued with IHI. The partnership on Transforming Health and Care Systems could formulate the needs of the health and care systems so also as to inform the research and innovation activities pursued by IHI.

A link with the European Institute of Technology (EIT) Knowledge and Innovation Community (KIC) Health is also envisaged for the areas of knowledge transfer and capacity building in the field of health and care systems research and innovation. EIT focuses on delivering products, concepts and services through the promotion of entrepreneurship and start-ups, which can be linked up with the systemic dimension of this partnership on transforming health and care system. Especially the work on integrated/multi stakeholder business models can be a key driver of their cooperation with EIT Health.

There are also more or less strong links with all the other proposed health partnership candidates: "Personalised medicine", "Rare diseases", "One Health", "Translational Health Research", etc. They will be further developed as their agendas are established.

As mentioned in previous paragraphs, the advancement in health research and in particular in personalised medicine and the use of Big data are all opportunities that require an adequate adaptation and transformation of health and care systems. New interventions resulting from the work carried out by other Partnerships could benefit from research and innovation actions focusing on implementation challenges and contextual factors that support the integration of innovative solutions at larger scale. In addition, with regards to health and health related data, more research and innovation actions on effective and proportionate governance will be essential for the future health and care systems. The cooperation with other proposed Partnerships within the cluster health will be an asset to achieve this goal.

The Partnership will foster a common framework with the other health partnerships through a structured exchange and coordination approach, similar to what the above mentioned four H2020 initiatives had launched, in order to benefit from each other's

expertise and to demonstrate complementarity. Strategic cooperation opportunities should be explored (see the governance paragraph) between the different initiatives.

Finally, this Partnership will search for synergies with other EU and Horizon Europe initiatives (such as EIC, other clusters, the other partnerships and Missions, in particular the Cancer Mission), and cross-cluster synergies with Digital and Industry on technologies, with EU programmes and actions, such as in particular the suggested EU4Health programme and also DEP, ESF+ (European Social Fund Plus, invest in education, employment and social inclusion), InvestEU, ERDF (European Regional Development Fund), Urban Transitions and the European Civil Protection and Humanitarian Aid Operations, when possible. The idea is to look for synergies with the different types of activities in the partnership and funding support. The aim for the synergies would be to support and enhance the dissemination and exploitation of results from this partnership, and that e.g. regional funds can support the uptake of evidence based results, services-innovations and other innovations identified through this partnership, with the aim of transforming Europe's heath and care systems.

This partnership could have strong effect on research and innovation on health and care systems, building a homogeneous framework between the partners, in order to develop a high quality research in this field. It is a great opportunity to align research and innovation strategies in the field of health and care systems optimizing countries' investments within a common approach framework at EU level.

The size of the Partnership may change also depending on its final scope and the contribution of different sources of funding from the same Member State or Associated Country. Mechanisms to maximise synergies with other EU-wide programmes supporting health and care systems after COVID 19 may be also explored.

Based on comparison of programmes in H2020 - such as AAL2 and More Years, Better lives - which tackled important challenges of health and care systems, we need to look at additional investment scenarios for this partnership, in order to achieve the set objectives.

- Significant co-financing resources will therefore be required by the partners, i.e., national and regional research and innovation funders (such as ministries of health, ministries of research, of innovation and or technology and national and regional health and care system providers).
- In addition, the immense amount of in-kind contributions from partnership future members shall be considered, to reinforce the cross-country mutual learning, access to data, activities/resources linked to market, regulatory, societal or policy uptake. These contributions will come from national/regional health and care systems owners/organization, and academia.

And of course, because of the underlying philosophy of the partnership, all the financial and in kind contributions, will have a strong multiplier effect, will avoid the distortion of competition and duplication of research efforts, and possibly have a "leverage effect" to attract private investors.

Transformational changes in the broader research and innovation ecosystem

The proposed partnership will put people at the centre, focusing on all citizen's as well as patients' health needs, by translating specific health & care needs and aspirations into efficient and effective solutions and addressing them along the health and care systems, while considering the whole life-cycle.

The partnership will build on the strategic research agenda developed by the Horizon 2020-funded support action TO-REACH[29] as well as on the expertise, evidence, concrete outcomes and proven programme management and governance models of the respective health & well-being/demographic change partnerships in Horizon 2020, the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA), the 'Active and Assisted Living' programme (AAL1+2), and the Joint Programming Initiative "More Years, Better Lives" (JPI-MYBL) and the Joint Action CHRODIS on Chronic Diseases. Further experiences gathered from regions and countries during the deployment of their respective regional and national health and care plans are of utmost importance and should complement those provided by the referred partnerships.

However, if this partnership will build on previous initiatives, it should not be considered a continuity action. Through its Strategic Research and Innovation Agenda (SRIA) the partnership has the ambition to trigger long term changes in the complex health research and innovation ecosystem.

In summary, the fundaments of the proposed partnership will

- build on the groundwork of existing initiatives at European and national levels in order to avoid duplication of valuable resources, but rather provide added value for such existing initiatives. There is a strong need to make investments more efficient, learn from each other and better capitalise on the on-going so-called 'natural experiments' in Europe. Europe has a unique opportunity and a particular need for pooling of resources and research capacity to critically advance the quality of health and care services and systems research and optimising its use and usefulness for informing policy.
- be aligned with Horizon Europe's mission driven approach to bring tangible impact to European citizens. In this regard, an end-user centric development approach that includes ethical, legal and social implications (ELSI) is essential, in order to transform health and care systems in line with citizen needs.
- Build a holistic approach in line with WHO, SDGs and 2030 Agenda recommendations, giving functional health, and prevention an equal importance as cure and care.
- be focused on implementing types of research that will promote the application of research findings in practice, including in public policy. This foresees service, organisational and policy innovations to embed new technologies (digital solutions, new therapies and so on…) into the system.
- Trigger changes in the health and care research and innovation ecosystem enhancing the interconnectivity between different research fields and communities (for example social sciences and humanities key in understanding the mutual relation between innovations and target-users), health and care providers, payers, industries, innovators and last but not least end users

Transformation could lead to:

- Better understanding of health and care systems in order to improve them,

- Mutual learning and cooperation of health and care institutions and authorities in Europe,

- Availability and uptake of research and innovation results for and by stakeholders,

---

[29] https://to-reach.eu/

- Evidence based health and care policies,
- New organisational models, new methodologies and better information, in particular for cost-effectiveness analysis
- Better visibility for the health industry, thanks to the convergence of practices and points of view.
- Digital transition.

Exit-strategy and measures for phasing-out from the Framework Programme funding.

The partnership is presently planned to have a 7 years perspective when it comes to funding from Horizon Europe, although the perspective of the health and care system transformation itself in most aspects is longer, since it is aiming at a long-lasting sustainable development. Consequently, when planning the activities within the partnership, the time frame for each activity has to be clearly defined. Furthermore, for each activity, plans will be included for how the results, knowledge and new solutions are to be captured, taken further and implemented by various actors in the society. One identified success factor for this partnership is to operate through co-design and in collaboration with actors and potential end users outside the partnership itself. It is necessary for reaching out and for the partnership to make a difference, and at the same time it is a way to build a self-sustainable organisation, which is not solely dependent on funding from the Framework Programme. One major task for the partnership will be to constantly develop forms for cooperation with various stakeholders in the member states, including health and care principals at different levels, authorities, public and private health and care providers, and the profession.

Political commitment will rely on a highly efficient communication and dissemination strategy following relevant policy processes to ensure timely input to discussions, demonstrating the added value of commitment to the partnership.

The General Assembly and Governing Board of the Partnership will bring together the relevant ministerial representatives and be tasked upfront with manoeuvring for sustainability and considering any necessary infrastructures required to continue post EU funding. Partners will start working on this long term sustainable strategy since the starting phase of the Partnership. If needed and priorities remain relevant, a reconfiguration/evolution into a new structure guided by Member States and Associated Countries will be developed in order to create the framework conditions needed for long term cooperation and to avoid fragmentation of health and care research and innovation initiatives across Europe.

The planned process for developing a Strategic Research and Innovation Agenda (SRIA) will build on the work already conducted by previous projects and initiatives (such as TO REACH, JPI MYBL, EIP AHA, JA CHRODIS, AAL JP). The Strategic Research Agenda developed by the CSA TO REACH and the strategic research elements developed by JPI MYBL provide a starting point for the SRIA of the new Partnership to build upon, especially with regard to the research-focused activities. The development of the strategic innovation agenda part can draw on previous work performed by the Active and Assisted Living Programme and the European Innovation Partnership on Active and Healthy Ageing. In addition, concepts and actions already developed in other EU-initiatives e.g. JA CHRODIS, will be valuable. New inputs from the involved stakeholders will be integrated in the work related to developing both the SRIA and the annual work plans. Synergetic effects and cross-sector approaches will be developed to create a coherent SRIA and guarantee the transformation of health and care systems throughout the innovation cycle, from research to innovation.

Workshops to advance the Strategic Research and Innovation Agenda and the related roadmap based on countries priorities and wide stakeholders' consultations will be organised,

involving decision makers and research funding bodies to identify common goals and priorities. Existing regional networks will be involved to include the perspective of the regions. The work of the initiatives to build a common document for common intents will be parallel to the work of the Member States with the EC in building the present partnership and provide useful information for Member States in shaping the partnership.

Building from the results of the workshops and consultation, the partnership, through a specific strategic committee that will be foreseen in its governance structure will work on a draft Strategic Research and Innovation Agenda/roadmap for the partnership. Member States government and funding bodies representatives will discuss the priorities of the Strategic Research and Innovation Agenda, and the related roadmap and make final decisions/approval. The Strategic Research and Innovation Agenda/roadmap will be a living document learning from the experiences and implementation of actions and shall be revised during the partnership duration.

All these activities on the SRIA/roadmap will be embedded in a wider set (pillars/modules/…) aimed at long term policy, health and care system transformation and ecosystem/business model changes.

In the SRIA/roadmap development, the contribution from all the previous project initiatives will be considered in terms of:

- Content, with reference to any Strategic Research and Innovation Agenda or Implementation Plans released in the context of the aforementioned initiatives and
- Consultations process, with reference to the stakeholders involvement for the development of the strategic plans in the context of consultation process.

This approach will ensure that the new SRIA/roadmap will also be developed in a timely manner, in order to allow the Partnership to quickly start up all the Activities foreseen.

The principles that will guide the preparation of the SRIA will include:

- **Consistency** with the scope and the objectives defined by the Partnership;
- **Optimisation** of the work carried out previously by other initiatives and by other projects funded under the H2020 Research Programme surrounding the scope of this Partnership to avoid duplication of effort and resources;
- **Openness and transparency** ensuring involvement of stakeholders through adequate consultation processes;
- **Good Implementation**, respecting all the necessary phases to ensure its correct and efficient planning, execution, monitoring and assessing/evaluation.

The process to develop the Partnership Strategic Research and Innovation Agenda/roadmap will include the following phases/ steps:

PHASE 1: PLANNING (Pre-partnership phase, duration: 4 months; could start in September 2020)

- **Step 1.A - Set up of a SRIA/roadmap Task Force:** Representatives of the initiatives above mentioned will be invited to work in this Task Force in collaboration with members of the drafting group.
- **Step 1.B - Release of a preliminary Concept Paper** developed by the Task Force: this is necessary to ensure that all the main concepts and key messages and actions considered relevant in the Strategic documents that had been developed by the Initiatives surrounding the Partnership will be embedded in the Partnership SRIA/roadmap. The Task force will ensure in the Concept Paper that all relevant initiatives and documents at EU, international, national, regional and local level relevant for the Partnership are considered before designing the SRIA/roadmap in detail.

PHASE 2: FITNESS CHECK and DRAFTING (Pre-partnership phase, duration: 4 months)
- **Step 2.A – Fitness Check:** the first Concept Paper will be discussed during a series of workshops that will address stakeholders (scientific community, Policy Makers at National-Regional-Local levels, Innovators/Companies, health and care organisations, civil society, Insurers and informal carers). Feedbacks from the Workshops will be incorporated in the first Draft of the Strategic Research and Innovation Agenda/roadmap of the Partnership
- **Step 2.B – Drafting SRIA/roadmap:** the contribution from the Workshops will support the Task Force to design the first Draft of the Strategic Research and Innovation Agenda/roadmap of the Partnership. The first Draft will have to be approved by the Partnership Members before publication. The SRIA/roadmap will include objectives, main concepts, activity lines for implementation, defined Key Indicators for Performance Assessment and Monitoring mechanisms.

PHASE 3: CONSULTATION AND FINALISATION (Pre-partnership phase, duration: 5 months)

- **Step 3.A – Open Conference:** the first Draft will be presented in an open conference, in order to draw the attention of all the stakeholders on the rationale, objectives and content of the SRIA/roadmap. The Conference will launch the Open Consultation and it will be an occasion to gather comments on the SRIA/roadmap.
- **Step 3.B – Open Consultation:** An open consultation to provide comments on the first Draft SRIA/roadmap.
- **Step 3.C – Approval and Publication:** Based on the open consultation results, a final version of the SRIA/roadmap will be developed for formal approval by the Members of the Partnership and its Governing Body. Once approved the Final Version of the SRIA/roadmap will be publicly available.

PHASE 4: MONITORING AND EVALUATION/IMPACT ASSESSMENT (throughout the partnership lifetime)
- **Step 4.A – Monitoring and further development:** During the Partnership Implementation, mechanisms and bodies for monitoring of the SRIA/roadmap implementation will be established and put in place. The monitoring activity is necessary that potential new elements, services, sectors, challenges that may arise during the partnership are taken into account in its implementation. The need to update will be assessed regularly.
- **Step 4.B – Evaluation/impact assessment:** During the Partnership, an evaluation will be carried out annually and contribute to continuous learning and improvements. Also, mechanisms and bodies for Measuring Impact Assessment of the SRIA/roadmap will be set up. Impact assessment will be carried out annually.

2.3 Necessity for a European Partnership

The presently described partnership addresses fully half of the targeted impacts of the Horizon Europe Cluster Health, namely:

- Staying healthy in a rapidly changing society: it is one of the main aim of the partnership to provide research and innovation (R&I) activities fitted to explore the way to give access to better health prevention to European citizens;
- Ensuring access to sustainable and high-quality health and care systems: the general objective of this partnership (ensuring the transition towards more sustainable, resilient,

innovative and high quality people-centred health and care systems) is wholly dedicated to achieving this targeted impact;

- Unlocking the full potential of new tools, technologies and digital solutions for a healthy society: the orientation of the partnership towards exploring (R&I) activities in a large range of technologies (digital, medical devices, high-tech, but also low tech and no tech) and evaluating their benefits for the health and care systems.

By dealing with health promotion and prevention policies, it also partially addresses the targeted impact "Living and working in a health-promoting environment", and by working all along the value chain, it helps to address the targeted.

For the reasons explained above, the partnership will also clearly help the European Commission into implementing the tasks assigned to both Commissioners:

- Health and care:
  - o Improve the quality and sustainability of health and care systems;
  - o Improve exchange of best practices;
  - o Make the most of potential of e-health to provide health and care and reduce inequalities;
  - o Work on the creation of a European Health Data Space to promote health-data exchange and support research on new preventive strategies
- Research:
  - o Ensure sufficient investment flows to disruptive research and breakthrough innovations, and better support our innovators to bring their ideas to the market;
  - o Ensure that research, policy and economic priorities go hand in hand.

The coverage of an ambitious SRIA necessitates a level of integration and trans-boarder multidisciplinary research cooperation that can hardly by covered without a joint effort and a strong commitment of the EU and a number MS/AC.

The present partnership aims at being more effective in achieving the aforementioned objectives than traditional and separated Framework Programme and EU Health Programme calls. Its clear strength, through an innovative governance and the set-up of a transversal platform, is to connect and coordinate relevant stakeholders from all over Europe, countries and regions.

The present partnership aims at reflecting the whole knowledge and innovation chain, ranging from basic research, implementation and applied research to development activities that will be performed in interdisciplinary settings in order to respond to the complexity health and care transformation needs. Activities will be aligned and include the whole ecosystem, as well as the development of new business models taking into consideration the whole value chain.

The partnership will be a unique opportunity to bring together policy makers, funders, researchers and all stakeholders of the health and care ecosystem. By aligning research and innovation funding through the SRIA and coordinating with non- research and innovation activities, available resources will focus on those priority areas where joint learning has greatest added value ensuring the knowledge translation needed to best support decision making at services and system level.

This will allow a faster development and implementation of shared solutions helping to overcome common challenges, to build the necessary EU research and innovation capacity and shared vocabulary across Europe and to optimise the uptake and practical use of research and findings to inform practice and policy.

Even though projects funded under traditional Framework Programme calls often managed to demonstrate the proof-of-concept for their innovative solution, their scale-up and

uptake by health and care systems has often encountered significant difficulties. The partnership will thus allow addressing these difficulties, such as for example:

- The need for organisational, service economic model and policy innovations to adapt and embed technical innovations/research results;
- The lack of knowledge transfer between health systems and eco-system actors;
- The lack of cost-effectiveness analysis and lack of data on transferability of innovation into different health and care systems contexts.

The Partnership will implement a long-term strategic research and innovation agenda, which is difficult to do within the framework of biannual work programmes. It will encourage a stronger commitment by all actors in the longer term and better realise the full potential of the European collective investment in solidarity and innovation.

Member States and Associated countries cooperation will also create a mechanism and a consistent timeline for horizon scanning and for identifying emergency issues to ensure that there is systematic prioritisation of research and innovation areas that face greatest changes and highest need, both now and in the decades to come.

Cross-country /cross-regional variations in the design and delivery of health and care, and also in the varying degree and nature of the health challenges will not be an obstacle but an opportunity to define the characteristics of the most robust and resilient models for health and care systems and eco-systems. Existing cross-EU initiatives and twinning activities are of course valuable but miss the co-conception (before the intervention) and the dissemination (after intervention) parts that would both take advantage and benefit from the partnership platform. This will enable research-based conception and evaluation, faster and effective comparisons, faster transfer of the very best practices and at the same time will outline contextual factors important for effective implementation of interventions thus improving outcomes. This Partnership can help converge the health and care system transformations across the EU, i.e. closing the gap between 'frontrunners' and 'laggards'.

Moreover, the partnership and its platform will allow direct access to the overall research and innovation results but more importantly, will be able to share their own data and research results at large, through all national and regional networks (see next chapter). For these reasons, the proposed partnership will be more efficient regarding dissemination and up-take of results. In addition, it has the potential to create the framework conditions to influence national and regional agendas in relevant, but on-research, activities such as staff education, health products pricing or health technology assessment.

Last but not least, by connecting and educating current and future workforce and stakeholders, it will ensure the set-up of an effective transnational health community able to take advantage of the best initiatives within European health systems and eco-systems.

The proposed partnership will indeed help strengthening the support of the EU to the MS/AC in the health and care sector in a coordinated and synergetic way.

The proposed partnership will benefit from the experience of many of its members that already have a deep knowledge of European collaborations, by participating in partnerships, H2020 research and innovation projects and coordination and support actions (CSA).

A key element of the partnership will be the platform designed to connect and coordinate all relevant stakeholders at European/national/regional/local levels. Its basic conception and principles imply the involvement and participation of numerous stakeholders like researchers, health professionals and policy makers already involved in European initiatives, but also in national and regional ones. By having a strong commitment on communication, collaboration, dissemination (about the partnership existence and its deliverables in terms of research and innovation), but also use of already existing knowledge, the partnership must be

able to build upon already existing activities, liaise with national/regional stakeholders and expand their collaboration far beyond what they already do.

In particular the regional dimension will be a relevant aspect of this Partnership as some countries in Europe are organised in a decentralised management system. The existing cooperation between regions in several networks and projects (e.g. EIP AHA, Reference site network, EUREGHA, EURIPHI) will be maximised to avoid duplication and to strengthen the link also with national and EU levels.

Local and Regional Health Authorities play a significant role with regard to health issues and can help especially to identify and implement innovation in service and policy. In some health-related policy areas local and regional inputs may potentially add value to the whole EU policy development processes: for example in health promotion and prevention; to overcome social determinants of health and health inequalities (in particular with regards to monitoring the impact of the COVID 19 crisis for instance) and implement integrated regional strategies to reduce health inequalities; to strengthen primary care and integrated care models; to make an effective use of digital tools; to improve access across regions (see directive on patients mobility).

With more than 7,000 health-related projects financed through the European Structural and Investment Funds (ESIF) in the programming period 2014-2020, cohesion policy demonstrated its crucial contribution to supporting social and economic convergence around Europe and ensuring the health of EU citizens. Regions and cities are close to the citizens and depending on the country could be crucial to understand their health needs, challenges, and the potential workable solutions. The Partnership could strengthen the cooperation between different levels (EU, national and regional) and optimise existing investment in this regard.

Proportions of the total funding could involve the use of structural funds, which can support implementation and scale up.

The capacity of regional actors to innovate and transform health and care systems can be strengthened if additional efforts will be made to create and reinforce existing health and care models and regional and local eco-systems that encourage innovation and research and development (R&D). Investments in health innovation must go hand in hand with interventions on human capital though, and this integration is best made at territorial level. When defining health policies at the EU, national and regional levels, there should be the willingness to overcome the silos approach and ensure the development of more integrated solutions. Successful projects funded by ERDF and ESF could be mapped and scaled up at EU level, benefiting from advanced methods and knowledge developed by research and innovation efforts made by the Partnership. This could be done by exploring synergies and coordination with regional agendas and smart specialization strategies through the SRIA.

The smart specialisation strategies represent indeed an important instrument for coordinating different policies and funds at the regional level. Existing smart specialisation platform could be linked to the Partnership as catalyst to improve the dialogue between policy makers of the health sector and the regional sector, through the involvement of regional key health stakeholders (including patients, health and care providers, health insurance, innovators and etc.)

2.4 Partner composition and target group

Existing networks from the involved H2020 partnerships, such as the regional Reference Sites, the AAL community of businesses, researchers and end-users having been developed over the last 10 years across Europe and internationally, next to the research and health policy network of TO-REACH and the interdisciplinary research and societal stakeholder communities of JPI MYBL will be able to strengthen the new partnership by providing fertile ground for new innovation. Together, they provide a strong basis for launching this Partnership quickly, as these communities include far more actors than the actual existing

partnership members themselves. In addition, the new partnership can build upon the vast experience in building and expanding networks, including stakeholders, launching calls, monitoring projects and performing support actions.

The partnership has to work in a relevant inclusive value chain, related to the theme of the proposal, thus this also includes the end-users who can participate in the piloting or demonstration activities.

Stakeholders and actors relevant for this Partnership can be classified in

- Partners needed to form the partnership (consortium);
- Stakeholders that provide input (e.g. priority setting);
- Stakeholders and target groups that are addressed/involved by the activities implemented

Those actors can be grouped in four categories based on their functional role towards the future partnership: policy, funding, research and innovation and consultation (see the figure below)

Partners composition and target groups

Policy
- European Commisison
- Health and Research Ministries
- Regulatory bodies

Funding
- European Commission
- Government funding agencies
- Independent Funding bodies

Research & Innovation
- Universities
- Research and Innovation Insitutes
- Health and care providers
- Health and care industry
- Others

Consultation
- Public/Client/User
- Health & Care Ecosystem – Quadruple helix
- Health purchasers/insurers

Figure 1: Partners composition and target groups

The full members of the Partnership will include:

- Ministries in charge of R&I policy, and research and innovation and technology funding agencies and foundations (national and regional)
- Ministries in charge of Health and care policy, and Health and care agencies (national and regional)

However, the Partnership will also engage largely with other relevant Ministries for the health and care sector.

Other key actors for this proposed partnership will be contributing to the consortium in particular from regional and local settings and the composition will further evolve during the Partnership preparation.

All MSs and ACs will be welcomed. In addition, collaboration will be promoted with non/associated countries, including from other continents.

- **Additional collaborators/stakeholders will be**:

The relevant innovation value chain involves a broader variety of key players from supply, demand and regulatory side. A comprehensive approach relies therefore on cooperation and capacity building within a value ecosystem, involving a broad stakeholder community. Structuration of activities and governance in the partnership can allow for different levels of involvement. Allocation of resources can include in-kind contributions, which makes the partnership open to a large variety of potential actors. Described in more detail below:

- o **Civil society and end-users**; patient/citizen advocacy groups, formal and informal care organisations, health professionals entities, health workforce/labour organizations, NGOs, international organisations, and health insurance associations) – drivers of change by giving input on the needs and priorities of interdisciplinary research, as well as benefiting from the outcomes of the partnership. Indeed, in the last decade, rapid technological advancement has resulted in a shift toward digital health in medicine. This shift is theorized as a cultural transformation of how disruptive technologies providing digital and objective data accessible to both caregivers and patients lead to an equal level partnership between physicians and patients with shared decision-making and the democratization of care.

- o From the **patients**' side, the result of the evolution of the 'e-patient' – where the 'e' stands for 'electronic', 'equipped', 'enabled', 'empowered', 'engaged' or 'expert', will lead to patients/citizens taking responsibility for their health, and actively engaging in shaping their future – in a mutually beneficial partnership with their caregivers, making the patients as the new "point of care".

- o **Research and innovation community**; national/regional research institutes, public and private universities, hospitals, R&I intensive industry, etc. researchers of the health and care systems, innovators, deliverers of innovative solutions, facilitators and promotors of innovation, integrated business models, innovation procurers, public procurers.

- o **Innovation owners** (spin-offs, start-ups, SMEs and the wider European health and care industry) - related to organizational innovation, including technology supporting organizational/systems' innovation; like prevention and assistive technologies. To this extent, the Partnership, in synergy and alignment with other EU initiatives, shall promote the final aim of supporting access to medical innovation to all European citizens, while rewarding R&D investment.

- o This research and innovation partnership with **health and care systems owners/organisers and the respective research and innovation funders** aim at boosting interdisciplinary applied research for evidence based policy making, uptake and scale-up of innovative solutions to accelerate transformation of national/regional health and care systems. Health and care providers and system owners, health policy makers and providers, also those who are *not* partners are a very important target group for the results and dissemination activities.

To ensure geographical coverage, participation will be open to any health and care systems owners/organisers and research funders of health systems research of the 27 EU Member States, the associated countries, and beyond. There is no strategic need to restrict the international dimension of this partnership. In fact, cross-border learning from practices and good models of health promotion and care is key in this area of research. Research and innovation on health and care systems will benefit from cooperation with international actors: such as the World Health Organization's Science Division and national public health institutes (e.g. Canadian institutes of health research and Agency for healthcare research and quality (AHRQ) in the United States that are already partners of EU-funded projects in health and care systems research). Universal health coverage is also an important area of international development cooperation;

The partnership will support the development of innovative solutions for health and care systems in all their various dimensions (e.g. governance, financing, generation of human and physical resources, health service provision, and patient empowerment.) Target groups will include the research and innovation community that will participate on projects funded by the Partnership coming from the fields of public health, health management, health economics, social sciences and humanities, digital learning and ICT engineering technology and so forth and all relevant actors from health and care systems facilitating the uptake of results and deliverables from this partnership

3 Planned Implementation

3.1 Activities

This chapter represents the first draft and needs to be further developed by the Drafting Group[30].

PILLAR OVERVIEW
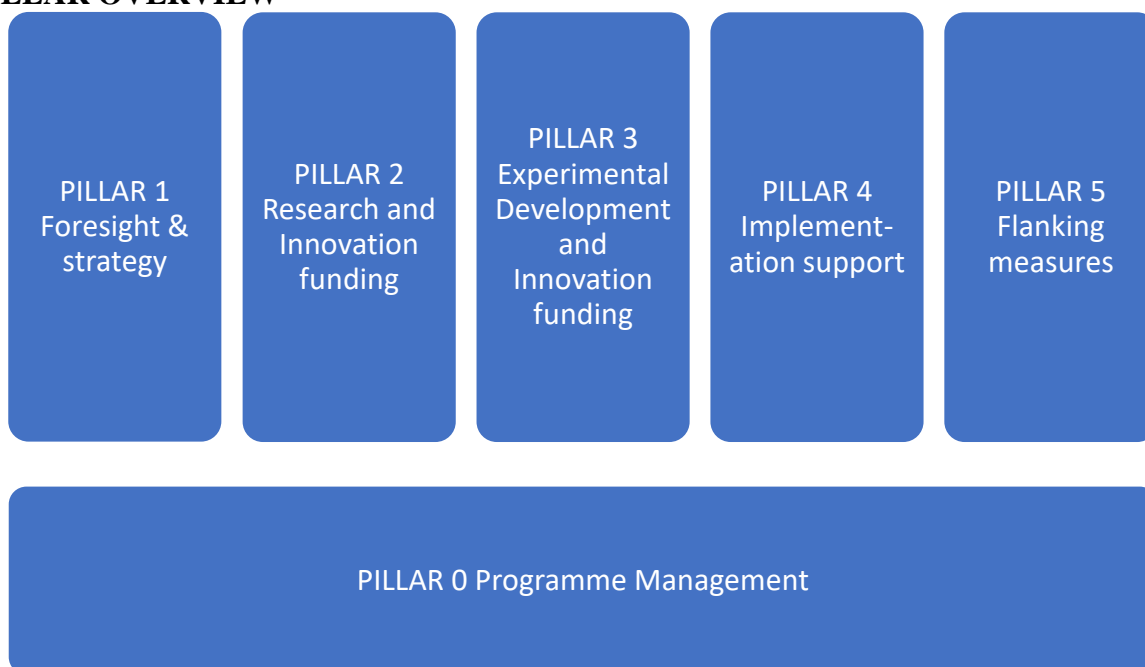
Figure 2: Pillar overview

Please note: We recognize and actually by intention have some overlap between the pillars. We have grouped different types of activities so that they should correspond to roles and mandates for different types of funders and stakeholders. It is expected that not all member organisations of the partnership will participate in all calls, but combination of different types of activities may help funders and stakeholders to find appropriate calls and activities to participate in. Activities in the pillars will be further elaborated, in line with the development of the Strategic Research and Innovation Agenda.

PILLAR 0: Programme Management
This pillar will ensure efficient and effective working of the grant consortium at governance, strategic and operational level, including appropriate programme management, knowledge

---

[30] BE, ES, FR, IT, AT, LV, NL, NO, PL, CH, SE, FI

transfer and operational platform development. It will also facilitate the information flow and cooperation between pillars and initiate appropriate cross pillar initiatives.
- Daily management of the program/co-fund
- Joint secretariat(s)
- Communication and dissemination

PILLAR 1: Foresight & strategy
This pillar will bring together all relevant stakeholders end work on the longer-term vision.
- Development and continuous updating of the SRIA and roadmap.
- Identify main drivers of change in governance, technology, economy and society overall
- Define what demand-driven health and care is needed in a changing and ageing society in order to develop an inclusive vision of (formal, informal and social) health and care of the future to become a reference for policy development, resource allocations and research
- Promote a coordinated, holistic and participatory approach to address social determinants of health, co create the healthy society of the future and overcome existing inequalities between regions, social categories, age groups and gender
- Improve alignment of research activities to health and care demands and develop innovation-promoting initiatives and tools

PILLAR 2: Research and Innovation funding
This Pillar aims at developing a common strategy among Research Funders to **align research funding programmes and topics**. As far as possible, open science and open data approaches will be followed. This Pillar will launch and manage Joint Transnational Calls through a Joint Secretariat, it will monitor project implementation and will assess project results for reporting to the other Pillars. Applied TRLs: mainly 1-4, indicating that basic research as well as more needs driven research is included.
- Implementation research will be the core activity in pillar 2. It requires the engagement of diverse stakeholders and multiple disciplines to address the increasing challenges health and care systems are facing. Implementation research will improve the understanding of the nature of the contextual factors that allow innovative solutions to be largely scaled up and included into routine health and care, in technological, organisational or policy contexts.
- Perform Research and Innovation actions to fill knowledge gaps on the organisational and systems dimension of health and care systems, as e.g. the development of a Common Health Data Space that allows to speed up common action and improve cooperation across countries with respect to upcoming needs and crises, and taking into account vulnerable groups. Such platform could be linked to other relevant platforms like the EOSC Covid 19 platform.
- Perform Research and Innovation actions promoting the identification and transferability of service and policy innovation in health and care across countries and sectors (learning from existing successful projects and initiatives)
- Perform applied Research and Innovation actions to identify and translate good practices, produce evidence, advance existing methods and develop guidance on the organisational and systems' dimensions of health and care systems transformation and to fill innovation gaps, i.e. allow for the development of new solutions in areas that are not served by classic R&I partnerships. Collaboration between researchers, stakeholders, governments are necessary for high quality applied research.

PILLAR 3: Experimental Development and Innovation funding

This Pillar aims at developing a common strategy among R&I Funders to align **applied research/development and innovation funding programmes and topics** with a strong focus on application oriented projects, supporting technological and interdisciplinary aspects as well as including co-creation with end-users and involvement of different kinds of stakeholders. Using TRL classification this would correspond to level 5-8. While the classification originally stems from technological development, in this pillar projects will be included that can demonstrate practical solutions for governance, collaboration between sectors, health and care funding models, competence lift and other salient challenges in for Health Systems. This Pillar will launch and manage Joint Transnational Calls through a Joint Secretariat, it will monitor project implementation and will assess project results for reporting to the other Pillars.

- Applied Research, Development and Innovation actions closer to end users and policy makers are the core activity in pillar 3. Co-creation approaches and involvement of different stakeholders are keys for developing solutions that are useful and wanted. Special focus will be put on the development of new concepts of care and respective solutions to respond to the needs of an ageing and changing society. Other activities will focus on the identification, development and demonstration of relevant successful innovative solutions for supporting and maintaining health according to the WHO definition underlying this partnership. Health and care systems are complex knowledge based systems where much development is driven through day-to-day practice and innovative solutions, often based on technological development and various degrees of pre-existing knowledge more than research. Better systems for monitoring and evaluation are highly needed.
- Applied Research, Development and Innovation actions will be complemented by activities to produce, develop and scale-up new methodologies, tools and (business) models on an evidence base and in accordance to an ecosystem wide approach.
- It is assumed that it will be necessary to fill innovation gaps, i.e. allow for the development of new solutions in areas that are not served by classic R&I partnerships and where no relevant successful ones can be identified

PILLAR 4: Implementation support

This Pillar aims at developing a common strategy among all relevant stakeholders to align implementation and scale-up actions in a (eco-) system wide approach. While major part of the activities performed in this pillar will be covered by in-kind contributions, occasionally launching calls or publishing tenders will complement the activities and increase the scope. While implementation by definition is the role of national and regional authorities, this pillar will build on the implementation research defined under pillar 1 to support capitalization of knowledge and innovation.

- Support demonstrators, pilots, twinning projects and capacity building activities to improve the ability of the relevant actors along the value chain to implement effective innovative approaches at large scale
- Build a collaboration platform of public funding authorities, health and care authorities, formal and informal caregivers, entrepreneurs and other relevant stakeholders and establish efficient models of collaboration between relevant authorities, service providers, research and innovation organisations and users at all levels in order to connect the needs of the health and care systems to inform the partnership and effectively promote its aims, but not in the context of funded projects
- Test smart business models where formal and informal health and care professionals, entrepreneurs, researchers and governments collaborate based on shared values with the focus on the end-users

- Identify and demonstrate relevant successful innovative solutions, establish the conditions for transferability and up-scaling in real life guide their transfer across regions and countries
- Establish pilot infrastructure for exchange and facilitating the collaboration between relevant actors

PILLAR 5: Flanking measures

This Pillar aims at developing a common strategy among all relevant stakeholders to align support actions that act as flanking measures for the other pillars. While major part of the activities performed in this pillar will be covered by in-kind contributions, occasionally launching calls or publishing tenders will complement the activities and increase the scope, especially with respect to capacity building activities.

- Strengthen the skills and human resources needed for collaborative and multidisciplinary health and care services and systems research locally, regionally, nationally and internationally
- Perform activities to increase digital literacy and health literacy among end-users and health and care professionals
- Provide essential evidence and systemic know-how to all relevant authorities and providers in order to raise their capacity to prepare policies and investment strategies and access financing in health and care
- Build a common understanding and vocabulary on European health services and systems to ensure building on and learning from research and innovations done throughout Europe and beyond

How the Partnership will ensure coherence and synergies in relation to major national (sectorial) policies, programmes and activities

The proposed partnership is in line with the Orientations towards the first Strategic Plan for Horizon Europe and will also contribute to the following EU policies:

1. The Commission's priority "An economy that works for people".
2. EU agenda on effective, accessible and resilient health systems (the Communication COM (2014) 215; the State of Health in the EU; the European Semester);
3. Fiscal sustainability and cost-effectiveness of health systems[31,32] in the context of an ageing population and technological change, in line with the Stability and Growth Pact and the fiscal surveillance part of the European Semester;
4. Priorities in the Communication on enabling the digital transformation of health and care in the Digital Single Market (COM (2018) 233);
5. The European Pillar of Social Rights (concerning access to health and care).

The proposed partnership will contribute to achieving the UN Sustainable Development Goals, in particular Goal 3 "Good Health and Well-being", and its sub-target on achieving "universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all".

---

[31] Joint Report on Health Care and Long-Term Care Systems & Fiscal Sustainability INSTITUTIONAL PAPER 037 | OCTOBER 2016
[32] The 2018 Ageing Report Economic & Budgetary Projections for the 28 EU Member States (2016-2070) INSTITUTIONAL PAPER 079 | MAY 2018

3.2 Resources

Commitment

The Partnership will be a multi annual co-funding to a programme of activities to be discussed by participating states, established and implemented by entities managing and funding research and innovation programmes. A financial commitment from Member States and Associated countries and the European Commission is required for realising the partnership. The internal allocation of the contribution from the European Commission may vary depending on the instrument, type of activities implemented (e.g. contribution to the management structure; to the research funding etc.)

Health and care systems are complex by nature and this implies a multidimensional approach for an effective implementation with the contribution of different partner organisations at different levels (EU, national, regional, local).

The financial commitment aims at implementing the following activities: funding of Calls for Proposals, Support Actions, research performed by some of the partnership's organisations and related infrastructure, efforts for national coordination, the internal and external governance of the Partnership.

Contributions will be in kind and in cash. In particular the contribution in cash is used for the funding of the calls for proposals. The co-fund action may be implemented by national funding entities directly or by third parties on their behalf.

To avoid duplication, national programmes/activities including health and care systems already mobilised for EU cooperation could be also considered as in kind activity and be streamlined along the common work plan.
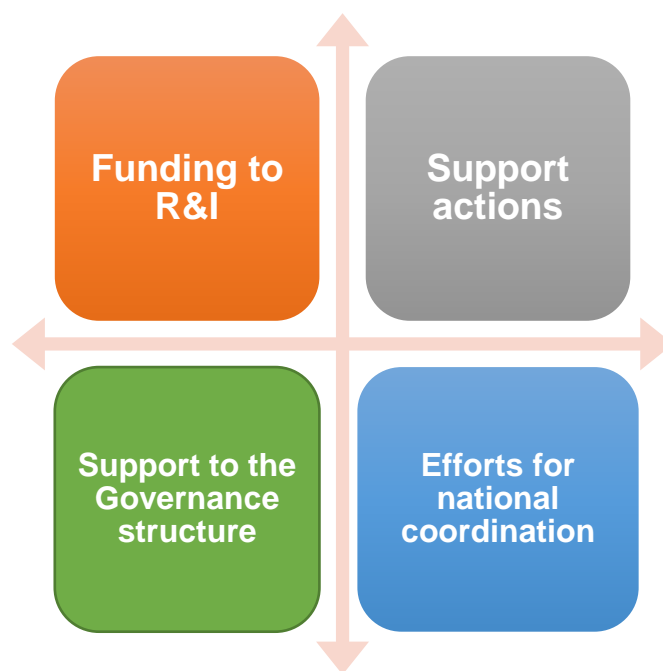
a) **Activities to be funded:**

Figure 3: Activities to be funded

□ **Funding to Research and Innovation (R&I)**

The national contributions from countries participating in the call budgets are expected to range from the order of 100K€ up to several Million Euros per country and call.

Calls will address different categories and different stages of the R&I chain from research and innovation action in the field of health services and systems research to experimental development, e.g. pilots, living labs, etc. This will envisage the potential contribution of

different sources of national funding to increase the capacity and in order to create synergetic effects. It is expected that not all member organisations of the partnership will participate in all Calls according to the variable geometry concept of the Partnership. The funding activities will be complemented by other activities (support actions, national coordination, in kind research activities) to achieve transformation of health and care systems objectives.

☐ **Support actions**

The Partnership will support additional relevant actions aiming at: increasing the cross-project cooperation; enhancing the transnational networking among relevant actors of the health and care ecosystems; implementing training and mobility actions, awareness raising, communication, dissemination and exploitation, a.o.

Some research activities will be performed together by some of the partnership's organisations aligned with the SRIA. Project infrastructure (e.g. testing labs, EU Research Infrastructures) and data resources might complement the joint efforts.

☐ **Support to the Governance structure**

A governance and related management structure shall be set-up and maintained to coordinate and manage the internal and external management of the Partnership both at strategic and also operational level: decision-making process; development of the annual work plans; daily partnership implementation and management etc. (see governance).

☐ **Efforts for national coordination**

National coordination includes all activities for ensuring the mobilisation of relevant stakeholders at country level, local/national promotion of the project calls, strengthening impact creation and implementation of results at national /regional/ local level, and alignment with national and regional strategies and priorities. The efforts will include establishing and maintaining activities to support knowledge translation to improve the health and care systems and aiming at ensuring a broader scientific and societal impact.

The required budget for these activities will vary per country and year to accommodate national requirements.

The total budget and the Union contribution for the (co-funded) Partnership will be defined at a later stage, depending also on the commitments expressed by the participating states.

The size of the Partnership may change also depending on its final scope and the contribution in kind and in cash of different sources of funding from the same Member State or Associated country. Mechanisms to maximise synergies with other EU-wide programmes supporting health and care systems after COVID 19 may be also explored.

Many of the actions in the partnership can be launched by open calls. The amount spent for funding of research and innovation will be the core of the financial contribution of the Partnership and will be around 75%. The partnership can also launch calls for the pilot, demonstrators and twinning projects, capacity and transfer of knowledge and uptake projects that represent important elements of this partnership. The foreseen percentage for open calls is therefore quite high. Between 2 to 5% of it will be dedicated to the coordination and management.

A proportion of around 20% will be dedicated to the funding of other supporting measures such implementation support, training and capacity building activities and networking. The landscape of health and care systems of Europe is very diverse. In order to achieve the objectives and expected impacts, communication and dissemination activities will, thus, be especially important in this partnership, and will be prioritized accordingly.

3.3 Governance

The governance of the proposed partnership includes both a strategic and an operational level, and a link between them, a coordination-level. The different bodies and structures to be established are indicated in the Figure Governance below and explained more closely in the text. The functioning of the governance structure is to be described in a Terms of Reference document, specifying the main tasks and working procedures among the partners as well as the partnership's relation to the European Commission, and other members and bodies of the partnership.

One of the activities in the partnership will be to organize open calls for proposals for research and innovation (R&I) to transform the health and care systems of Europe. The funding of health and care system R&I is complicated and multidimensional when it comes to sectors and actors involved, end users, and expected impacts, and legal regulations of the R&I. Furthermore a number supporting of activities can be implemented trough open calls. The organisation of the funding of joint calls will reflect this. We foresee that calls can be launched to support many of the activities in the pillars. In order to mirror the MS/AC funding agencies that are very often organized according to TRL-level. Different agencies are involved in the "close to person" and technological innovation funding, and other national rules often apply to funding of projects in the higher TRL level range. Most of the support activities will be difficult to co-fund directly by MS/AC due to a lack of suitable national support schemes and will require a high degree of EC funding. The organization of calls is therefore planned to be divided into different pillars depending on TRL levels and the ability to directly co-fund trough suitable MS/AC funding schemes.
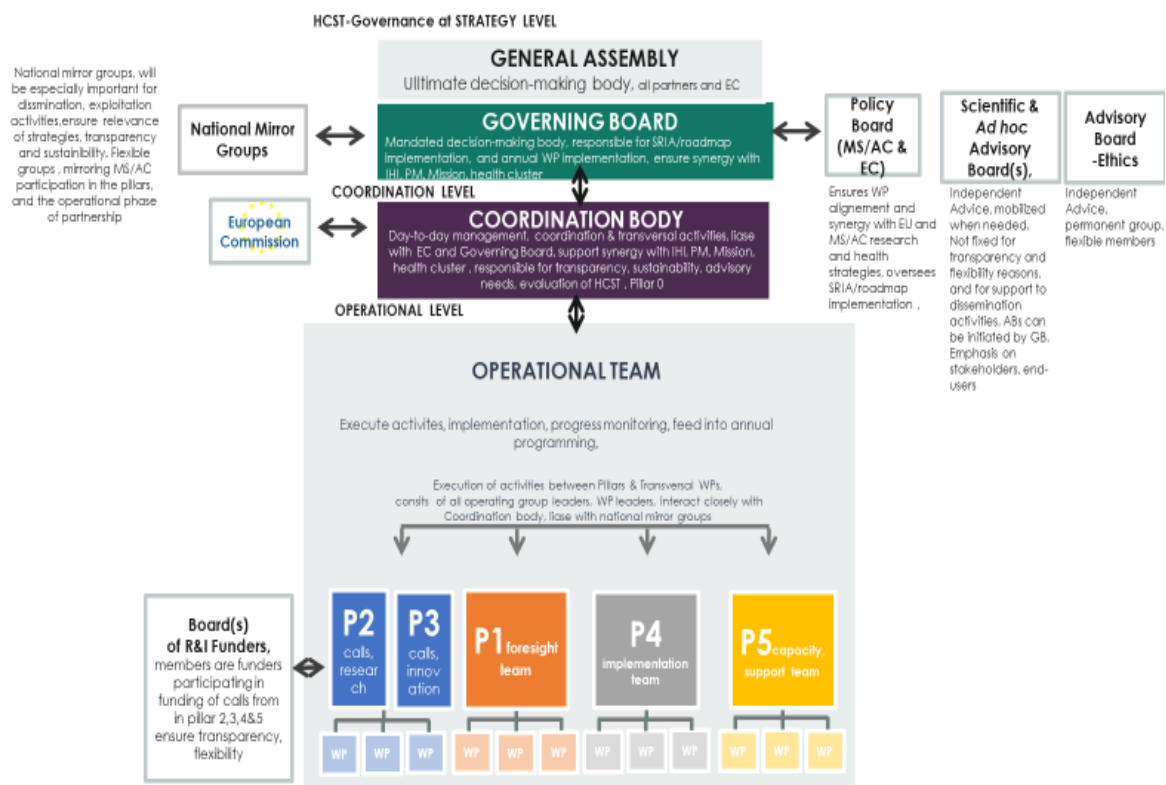

Figure 4: Governance

Figure 2: Governance: *The aim is that the governance will reflect the commitments by the Member States and Associated countries and the co-funded partnership instrument used to implement this partnership. The suggested structure is applicable to the different management options that are to be discussed at a later stage in the drafting process.*

3.4 Strategic level

3.4.1 General Assembly

Full members are the MS/AC programme owners (Ministries of Research and/or ministries of Health, depending of the preference of the individual MS/AC) or Programme Managers appointed by programme owners. To reflect the complex organization of health and care systems and research related to health and care systems in the MS/AC, it is foreseen that individual MS/CA can have several partners in the partnership. Importantly, the General Assembly members financially contribute significantly to the partnership (in-kind and/or in cash contribution). Third parties are not members of the General Assembly. Full members sign the Partnership's grant agreement with the EC (or amendments for later entrants). The General Assembly should elect one Chair and Vice Chair that will regularly rotate.

The EC can have a seat in the General Assembly as observer, without voting rights, since according to the rules of the co-fund action, the annual work plan of the partnership is subject to EC approval.

Each country will have one voting right, but might have more than one member in GA. This will be discussed when the activities in the pillars and partner composition are to be defined.

The members are also responsible for establishing national coordination mechanisms appropriate to prepare national/regional decisions, ensure mobilization of national stakeholders and actors and align the partnership with national programmes (see national mirror groups below).

3.4.2 Governing Board

It will be the mandated decision-making body. The Governing Board (GB) will be responsible for the SRIA/roadmap implementation and the annual Work Programme implementation, for alignment and synergy with EU and MS/AC research and health strategies, and with other partnerships and other relevant EU activities. The GB will also be responsible for strategic alignment with other partnerships, especially IHI. This can e.g. be ensured by biannual meetings, and also by including key persons from other partnerships in scientific advisory boards. . This body takes strategic decisions/proposals for the management of the Partnership. The GB is thus, responsible for obtaining independent advice, when needed, ensure liaising with stakeholders and end-users, ensure liaising with ethics advisory board, and national mirror groups.

The GB will include the Chair and Vice Chair from the General Assembly, operational team leaders, Representatives of the Coordination body and additional relevant representatives, e.g. Regions.

3.4.3 Coordination body

The Coordination body will manage the overall partnership and will include programme management activities, stakeholders' management, communication, and decide on the exploitation type of activities. The Coordination body will ensure that all activities of the Partnership (see Pillars) are fully aligned with the annual Work Plans, and ensure synergies between pillars. We foresee that the partner composition, the range of activities and actions in this partnership will be complex, and that the coordination body will be an important link between governing and operations. The Governing Board/Steering Committee especially will interact extensively with the Coordination body. The Coordination Body t will implement the annual Work Plan through the Operational team, and will provide management support, and

oversee the activities performed by the operational team, and encourage synergies and collaboration between key work package leaders in the Operational team.

3.4.4 National mirror groups

National mirror groups will be established (the representative from MS/AC in the GA is responsible for establishing groups in their respective countries) to bring together the national stakeholders and each country will involve the stakeholders representing its own system. The National mirror groups will reflect the national specificities of the respective Health and Care Systems, that will feed the Management of the Partnership, and in particular the Dissemination and Exploitation activities, and will support and ensure for transparency of the partnership activities, and strengthen the co-creation process of the annual work plan.

3.4.5 Advisory Boards

Advisory boards bring together experts and representative group of (non-member) stakeholders that cover the entire Health and Care system, demand side (citizen, formal health & care, informal care), supply side (companies, investors, insurers,), academia and government as well as representatives of other partnerships.

More than one advisory board will be formed. One will be focused on scientific & health and care issues and others composed by relevant stakeholders to ensure alignment with evidence and other relevant networks and partnerships (see above) on European and international level. Through the Advisory Board(s) collaboration with key experts and networks is aimed to offer reflections on the strategic orientation and the identification of synergies.

3.5 Operational level

3.5.1 Operational team

An OPERATIONAL team will execute the daily operational tasks of the partnership. Key work package leaders from the different pillars constitute the operational team. The operational team will perform the actual tasks in the partnership. One of the major tasks will be to execute open calls. To succeed, the Operational team should execute and manage activities in and between pillars, and transversal WPs, oversee and should be responsible for execution of work packages, and are responsible for open dialogue and synergy between themselves and with the CB. The operational team interact closely with the Coordination body. The team also liaise with national mirror groups and advisory boards, when needed.

Funding board(s), consisting of national, regional or international R&I funding agencies participating in the joint calls will be formed. The Funding Board and operational team will collaborate closely. A representation of funding agencies along the entire innovation cycle in each country – from science funds up to innovation agencies will be ensured in the funding boards. Subpanels might be established to allow an efficient management of calls.

3.5.2 Management structure

The coordination body manage the partnerships daily activities of the various parts of the partnership. This can be organized in various ways, as a central secretariat, or as a shared management structure where different partner countries have different responsibilities. There

are arguments both for a more centralized management structure and a more decentralized structure, which also has implication for funding of the management.

How the management structure is organized will depend on the pillar structures, planned activities, partners involved, etc, and will have to be decided at a later stage.

Involvement of the Commission in the preparation and implementation of the Partnership

The current version of the proposal represents the result of several iterations with participation of the Commission services, including DGs R&I, SANTE, and CNECT who provided their comments both in writing and verbally.

The partnership has been aligned to the Orientations towards the Strategic Plan for Horizon Europe and relevant EU policies listed under p. 3.1 on page 34.

The Commission services will have a seat as observer in the General Assembly. However, the EC will have sufficient leverages to defend the EU public interest within this partnership, since annual work plans are subject to the EC approval.

Additionally, SRIA should be agreed with the Commission services.

3.6 Openness and transparency

A Partnership will maximise its impacts by involving all relevant partners and stakeholders beyond the narrow composition of core partners and by remaining open during its lifetime. Consequently, there should be a high level of openness and transparency regarding the identification of common vision, and the involvement of partners and stakeholders from different sectors, including international ones when relevant. Also, the Partnership should seek to remove barriers that hinder newcomers from entering and participating in the Partnership or its activities. The implementation of the Partnership should include regular activities that allow new players to enter, participate in and benefit from its activities, and add value to the Partnership without compromising the ownership and commitment from the partners.

The drafting group has not had time to develop this part, due to the extraordinary situation.

- Demonstrate that the proposed Partnership will be established in a transparent way with no unjustified restriction in participation and with a broad, open and transparent approach towards different sectors and geographical areas including international partners when relevant. Justify any restrictions for the openness of the Partnership where it is deemed absolutely necessary;

- Describe the strategies and plans throughout the lifetime of the Partnership to ensure easy and non-discriminatory access to information about the initiative and dissemination of and access to results (in line with Horizon Europe provisions), and to stimulate the participation of new partners and actors in the definition of common priorities and their participation in the partnerships itself or its activities (including eligibility for funding);

- Describe how the proposed Partnership will establish a proactive recruitment policy which is dynamic and agile to allow a membership constituency responding to the evolution of the sector and the needs of the partnerships throughout its lifetime, across the Union and, where relevant beyond;

- Describe the process, during the implementation phase of the SRIA/roadmap, for establishing annual work programmes, and define measures to ensure and open and transparent methodology for consulting all constituent entities and relevant stakeholders for the identification of its priorities and the design of its activities

HCST-partnership, Management Structure Options:

There are different options for organising the Management;
Options 1 and 2 are more used in EJP, ERA NET Type of Action while Option 3 is more used in Art 185 type of action

> **Option 1: "Team approach" for the coordination/management of the Partnership.** One partner country acts as the secretariat of the partnership and is responsible for parts of the management task. The management workload is shared, and other partner country (-is) have responsibility for some of the management tasks. The management workload is distributed and executed in a decentralized way.
>
> Partner countries perform programme management activities that are necessary at the national level.
>
> Pillars and work packages are distributed among the consortium and contribute to the successful implementation of overall work packages and tasks of the partnership. Infrastructure and tools existing at National level can be used.
>
> **Option 2: One partner country acts as the secretariat** for the coordination of the partnership and executes all the necessary overall tasks for implementation of the partnership. Overall programme management workload is performed in a centralized approach. Pillars and work packages are distributed among the consortium. Existing infrastructure and tools can be used
>
> Partner countries perform programme management activities that are necessary at the national level.
>
> **Option 3: Establishment of a European secretariat/implementation structure, staffed with hired experts,** that executes all the necessary overall tasks for the implementation of the partnership. Workload is mainly performed in one place (e.g. Brussels). Secondment of national staff on a permanent or temporary basis is possible.
> Partner countries perform programme management activities that are necessary at the national level.