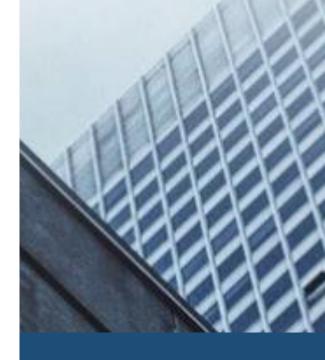CONTRIBUTION TO THE
HORIZON EUROPE STRATEGIC PLANNING PROCESS

September 2019

ERRIN European Regions
Research and Innovation Network

ERRIN – European Regions Research and Innovation Network

Established in 2001, ERRIN promotes the regional and local dimension in European research and innovation policies and programmes. The network counts over 120 members who primarily collaborate through our thirteen Working Groups covering both thematic areas and overarching policy issues. ERRIN supports project development and knowledge exchange between members to enhance regional and local research and innovation capacities and to foster sustainable and inclusive growth in all regions.

The present contribution to the Horizon Europe strategic planning process is based on input from our members and especially from our Working Group leaders in the respective thematic clusters. The work has been coordinated by a dedicated taskforce in our Policy Working Group.

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KEY MESSAGES – THE OVERALL PROGRAMME

Horizon Europe plays a key role in providing solutions for the environmental, social, and economic transformations needed to tackle the challenges faced by regions and cities across the Union, and as a result, it will have a profound impact on improving the lives of Europe's citizens. These solutions will differ across Europe depending on the regional, local, and social context. Therefore, a **place-based perspective built on excellence and collaboration between a range of stakeholders is crucial to develop sustainable and impactful innovations with a wide public acceptance**. Europe's competitiveness depends on our ability to combine economic development with sustainable and inclusive solutions to our societal challenges.

To achieve and maximise the targeted impact of Horizon Europe, regional and local innovation ecosystems are crucial. Innovation happens in places and there are specific local conditions which make such innovation ecosystems flourish. Taking this into consideration, it is important to support innovative environments in a regional and local context and to apply a mix of specific and non-prescriptive approaches across the intervention areas in the clusters. Opening up for more bottom-up proposals spurs innovation and will work to keep competitiveness in the EU. Creating a more competitive Europe is also dependent on taking the lead in emerging fields and disruptive innovation. Therefore, we welcome the European Innovation Council and its open, bottom-up nature while keeping in mind the significance of a supportive innovation ecosystem for innovators to thrive.

An ecosystem approach, involving a wide range of stakeholders – academia, industry, different levels of the public sector, and civil society – should be embedded within collaborative projects under Pillar II. Bringing together stakeholders from different sectors and with different skills will improve the sourcing of new knowledge and allow for the development of more relevant products, services, and solutions. Co-creating ideas and projects requires dialogue between partners as well as mutual respect and patience to learn how to work together across different perspectives. This would also mean that projects are sufficiently demand-driven to ensure further scale-up and a wider uptake and impact of innovative solutions.

More added value can be generated by supporting collaboration between regional and local innovation ecosystems under the European Innovation Ecosystems action in Pillar III. This provides the possibility to access complementary skills, infrastructure, and markets. It will also allow Europe to develop world leading innovation ecosystems that attract the most talented innovators. By focusing on key thematic areas or visions, these excellent ecosystems will increase Europe's competitiveness while contributing to solving global challenges. **This type of actions would build on and create further complementarities with other funding sources** such as the Digital Europe Programme, the Cluster Excellence Programme, and the European Innovation Partnerships.

ERRIN views the EIT as a complement to the European Innovation Ecosystems action, and we welcome the proposed goal in the next SIA (2021-2027) concerning the increased impact of the KICs. More specifically, it is important to create further synergies between the KICs and Smart Specialisation Strategies, combining economic development, strategic value chains, and developing solutions to societal challenges. It is also important to broaden the approach and to be more inclusive when selecting partners and include the public sector in the EIT knowledge triangle.

ERRIN also stresses the importance of **coordination between research and innovation agendas on a local, regional, national, and European level, as well as between the public and private sector, to**

further increase the impact of investments and efficient use of Horizon Europe funds. To do so, we would encourage the Commission to further work on creating practical complementarities between Smart Specialisation strategies, Smart Specialisation partnerships, and how these link to European partnerships as well as more broadly to the R&I orientations and intervention areas in Horizon Europe. The EIC Forum provides an excellent platform for these types of conversations and ERRIN – as a network representing a wide range of regional and local actors dedicated to research and innovation – should be invited to take part in those debates.

PILLAR II
– GLOBAL CHALLENGES AND EUROPEAN INDUSTRIAL COMPETITIVENESS

Ecosystem thinking and effective quadruple helix cooperation should be a key element in the Pillar II of Horizon Europe. A wide range of stakeholders – academia, industry, public sector, and civil society – need to be involved in collaborative projects. Bringing together stakeholders from different actor groups and with different skills will improve the sourcing of new knowledge and allow for the development of more relevant products and services.

Such an approach could be implemented by inserting requirements for consortia to include partners from a wider spectrum of stakeholder groups, in particular to facilitate the involvement of the public sector and end-users. This does not necessarily mean that consortia should become larger, but that it should stimulate new partner constellations and the participation of new actors with the aim to generate new sustainable and inclusive solutions to global challenges.

Following the logic of the mission-oriented approach, the call definitions should be flexible to allow bottom-up proposals based on the needs of – and challenges faced by – the ecosystems and their end-users. This would also mean that projects are sufficiently demand-driven to ensure further scale-up and a wider uptake of innovative solutions.

Effective quadruple helix cooperation will boost demand-driven research and innovation and increase the involvement of citizens in research and innovation projects. Nevertheless, citizens cannot be expected to engage in all research and innovation processes – nor is this always meaningful or desirable. To facilitate when and how citizens could further engage with the programme, the concept of Societal Readiness Level (SRL) could be further defined and introduced. Mirroring the TRL scales used in Horizon 2020, a low SRL would require a low citizen engagement and a high SRL would indicate a strong role for citizens. Such a reflective process could help research and innovation projects determine citizen engagement from an early stage of development and thereby enhance societal impact.

The gender perspective needs to be fully integrated in all parts of the programme, both regarding the composition of research teams and in the research and innovation content to be mindful of the formulation of research questions and the methodology being used. This will not only mean that there will be better solutions for the full population, but companies can also increase their markets.

CLUSTER - HEALTH

Priorities and areas for further focus

Health and healthcare are pillars of the social structure and a public and societal responsibility. The future vision of care should aim to reduce social inequality within and between generations with respect to access to affordable health and social integrated care. As such, it is important to consider further links between health, migration, integration, and inclusion as well as health linked to the environment and climatic causes, both in this cluster and beyond.

Digital solutions in health and care are supporting the well-being of European citizens. To take a leading role, Europe needs to further invest in creating a favourable policy environment to support digital health solutions, fostering transnational/interregional collaboration between innovation ecosystems, and engage in a debate on data security and data privacy for patients.

Further uptake of innovation in hospitals is necessary. With limited resources, our health systems and services cannot afford to invest in innovation that might end up being misused or underperform. Therefore, broader involvement of medical professionals and patients is crucial, which underlines the importance of involving a range of stakeholders in collaborative projects and to make sure the skills are there to make use of the innovation.

The regular application of antibiotics in food-producing animals increasingly contributes to developing **antimicrobial resistant bacteria** in the human organism by the simple and evident contact between these food-producing animals and humans in the food chain. This leads to the treatment failure of certain serious infections as well as frequent and costly hospitalisation. Horizon Europe should prioritise further research on how to reduce, both in length and in frequency, the use of antibiotics, investigate new antibiotics or antimicrobial compounds that reduce the emergence of antibiotic resistance, and raise awareness regarding the dangers of unnecessary antibiotic treatments against diseases where other medications could be sufficiently efficient.

Demographic change represents one of the most significant social transformations of the 21st century. Ageing populations in Europe and beyond will have a significant impact on labour markets, health, care, and social systems. At the same time, increased longevity opens up numerous opportunities for economic and social prosperity. These opportunities and challenges call for a strong interdisciplinary and user-driven approach, including digital technologies and artificial intelligence, supported by research and innovation. This approach should facilitate both independent and active living for the elderly and people with disability, as well as a cohesive society that empowers and supports individuals and families throughout their lives while strengthening the preventative and community dimensions. Similarly, there should also be a crucial shift to empower patients to become an actively involved partner in their health journey to ensure a more sustainable healthcare system.

Ensuring an innovative, sustainable and globally competitive health industry requires a paradigm shift in the healthcare industry from the symptomatic treatment of diseases towards precision medicine and integrated care. As such, health and care should also focus on **innovative methods for prevention, active and healthy ageing, use a person-centred integrated care framework, and employ personalised medicine** across therapies, including not so traditional therapeutic areas such as respiratory or metabolic. This will not be achieved without medical technologies (MedTech). MedTech can increase the efficacy of healthcare and limiting the cost, reconciling better health/healthy ageing

with growth opportunities for healthcare industries. However, several challenges should be tackled: reducing the sector fragmentation and complexities of national administrations; supporting product/business development; and, facilitating knowledge transfer in key enabling technologies.

Finally, aligning the actions under the health cluster with other health initiatives at the EU level is important to promote further coherence and avoid duplication.

Partnerships

The partnership "Large-scale innovation and transformation of health and care systems in a digital and ageing society" should have a clear focus on the development, implementation, and upscaling of innovative solutions. In addition, seeing the recommended scope and objectives of the partnership, it is key to draw on the assets, existing knowledge, and experience of the AAL Programme, the EIP on Active and Healthy Ageing, and the JPI More Years Better Life.

The following building blocks of a highly resilient and efficient health, care, and support system delivering economic and social impact should be steering the newly defined partnership:

- policy environments supporting innovation and market access of these innovative solutions, eventually scale-up and internationalisation;
- strong cohesion and collaboration between stakeholders within a territory (regional innovation ecosystems);
- supply-demand match and co-creation between users and developers;
- skills and competences in order to keep pace with the technological development and non-technological innovations.

CLUSTER – CULTURE, CREATIVITY AND INCLUSIVE SOCIETY

Priorities and areas for further focus

Challenges related to societal transformations, the development of democratic governance, and cultural identity and openness will have a great impact on social cohesion, people's welfare and wellbeing, as well as Europe's competitiveness. Faced with economic, social, environmental, cultural, and technological changes, we need resilient democratic systems to provide stability. Further research and innovation in this area will help to understand and empower participation in democratic processes, how to build trust in democratic institutions, and further understand the dynamic of decision-making.

Migration and integration are growing challenges which both enrich and complicate the notion of culture, identity, and belonging. In this regard, the role of multicultural citizenship and identities should be considered. Culture can play an important role in this if we use it as a transformative force – moving away from the idea that it is fixed and permanent – and use it to manage social and economic transformations. The transformation processes that we face also raise the need to highlight EU origins, values and multiculturalism as an integrated element of social cohesion and the European project.

In connection to this, there should also be possibilities to research the concepts of inclusion and exclusion in a wider sense. Currently, much of the research is done on inclusion/exclusion in education

but bringing in the social, cultural, political, geographical and technological aspects will widen our understanding. Similarly, conceptual and empirical issues should be studied such as what is meant by inclusive and what aspects of social life should we be concerned with regarding inclusion i.e. inclusion of what/whom and why?

The cultural and creative industries (CCI) sector in the EU makes up approximately 6% of the GDP clearly showing its substantial economic impact, and its importance is only growing. More support is needed to develop cross-disciplinary alliances between creative practices and design, and other disciplines such as business and human sciences.

With fast changing businesses and business models, we need to establish holistic partnerships from the very beginning, involving a wider set of stakeholders such as regulators from the start-up phase or when scaling-up enterprises. Cultural and creative industries offer important tools and methods to foster innovation in Europe and to tackle current challenges in all sectors. Culture and Creative Industries are at the same time a topic and a tool to generate innovation processes, and as such seen an opportunity that can benefit various European industries.

More opportunities should be provided for CCI, which should also be coupled with other funding programmes dedicated to cultural and creative industries. Better synergies with other funding programmes such as Creative Europe, Digital Europe, ERDF, ESIF, ESF, and the upcoming EIT KIC should be established.

Horizon Europe should contribute to stimulate innovation processes, applications, and methodologies based on the experimentation driven by CCI.

Potential new funding areas include:

- Sustainability and resilience of cultural ecosystems, including quality principles for cultural heritage protection and promotion;
- EU as a laboratory for heritage-based innovation and cultural tourism;
- Inclusive and creative co-design where scientists and cultural practitioners, artists, operators can address societal challenges as well as disruptive innovation;
- Research on effectiveness of mobility schemes for artists and cultural educators (where synergies with programmes such as Erasmus+ and Creative Europe can be facilitated);
- Research on cultural identity, remembrance, study of the ways to link past and future;
- Ensuring the transmission of heritage by enhancing participatory and collaborative approaches and by fostering mutual cultural understanding between the different European cultural realities;
- Intercultural societies, influence of traditions, perceptions and beliefs on values and sense of belonging.

CLUSTER – CIVIL SECURITY FOR SOCIETY

Priorities and areas for further focus

Horizon Europe can contribute to the architecture of next generation security control including securing free movement within Europe and ensuring efficient border control. Part of this is taking a lead in deep technologies and SSH.

We also see the wide potential of drone technologies – border management, protection of critical infrastructure and public spaces – which should be fully exploited as well as SSH to deliver more impact regarding security.

For cybersecurity, research should focus both on the security of the technology and on the human factor and behavioural aspects. Seeing that there are several initiatives across governance levels, emphasis should be put on coordination between the EU, national, and regional level.

CLUSTER – DIGITAL, INDUSTRY AND SPACE

Priorities and areas for further focus

As digital solutions can work as enablers in all domains, emphasis should be put on the cross-sectorial parts of digital technologies vis-à-vis other clusters' goals looking beyond cybersecurity and artificial intelligence. Horizon Europe should also use Europe's soft assets in this field such as favourable policy environment, digital skills development, and transnational cooperation of innovation hubs such as Digital Innovation Hubs.

Since **artificial intelligence** will have a huge impact on both automating processes and predicting future scenarios it is vital that it is developed taking a human-centred approach based on trust, privacy, transparency, and inclusiveness to benefits all of society.

The complementarities between the Digital Europe Programme, Horizon Europe, and ESIF are crucial for developing excellent, functional, and demand-driven **Digital Innovation Hubs** (DIH). If DIHs are well integrated and part of the existing ecosystem(s) and based on the needs of the end users at local and regional level, they have the potential to create excellent ecosystems that provide services well beyond one region. Further support is needed to develop existing hubs, to develop hubs in key domains (ensure specific skills), and to network them based on expertise and services.

Minasmart Digital Innovation Hub in Auvergne-Rhône-Alpes has successfully created a strong digital innovation ecosystem pooling resources for all SMEs and small businesses. Since the start in 2018, the hub has supported over 200 SMEs spurring digital innovation in the region and beyond through collaboration with other hubs. Minasmart has been successful in securing funding from several different sources: ESIF, the Digital Europe programme, from test beds, and Horizon 2020 – all working towards Auvergne-Rhône-Alpes' goal of leveraging capacity in digitalisation. The hub successfully gathers, mobilises, and orchestrates all the strengths and actors of digital innovation at the regional level, from hardware to services through software, to boost European industry.

CLUSTER – CLIMATE, ENERGY AND MOBILITY

Tackling climate change requires innovative solutions and new types of collaboration. Breaking silos between energy, climate, and mobility areas is crucial to build sustainable low emission regions and cities. For example, in order to address the mobility challenges – air pollution, road congestion, travelling costs, accidents and noise pollution – strong regional innovation ecosystems are needed for testing, experimenting, exchanging best practices, and scale-up.

We place great hope in the mission "Climate-Neutral and Smart Cities". It is a great opportunity to build a European strategic vision which will be the driving force of our actions, requiring a mobilisation from all actors at both European, national, regional, and local level. In addition to the climate challenge, smart should refer to issues such as inclusiveness, safety of citizens, mobility, and how to finance the transformation needs towards becoming greener and healthier. These areas should be tackled in a truly integrated manner as they often overlap and impact one another.

The Orkney Islands (Scotland, UK) and their locally led green energy story shows how a community has used the local conditions of the environment and infrastructure around them as well as the full ecosystem with different actors to successfully develop innovative solutions. To overcome the issues of generating more energy than needed and obstacles of pushing the locally produced renewable energy to the grid, local stakeholders came together, with support from national and EU funding, to develop solutions to take off the renewable energy in another way. The islands show how local conditions can foster an excellence-based approach in bringing together different partners from across the private, public, social, and academic sectors, as well as importing the necessary excellent research and innovation from outside the islands to apply a solution to a local challenge. Through the application of this approach, the islands have acted as a locally-driven innovation environment to further develop specific renewable energy expertise – especially in hydrogen. This has culminated in the design of a local innovation campus – to build upon the expertise through the hydrogen economy development projects to develop further collaborative research and innovation activity at the island-level.

Priorities and areas for further focus

Horizon Europe is a strong vehicle that can assist in leveraging and elevating the EU's global position in solutions that cater for a future within the planetary boundaries. Local and regional actors have a significant role to play in the decarbonisation efforts in the European Union and beyond. Through initiatives such as the Covenant of Mayors, European cities have reduced their carbon emissions and they are increasingly tackling the adverse effects of climate change. These developments could be accelerated by working effectively within the quadruple helix model – research, industry, public authorities, and citizens – to develop and implement innovative solutions for decarbonisation together. Such an ecosystem approach is crucial to achieve the objectives outlined in the *Clean Planet for All* strategy.

This cluster has already taken a significant step towards integrating sectors and breaking silos. Nevertheless, when it comes to tackling climate change at local and regional level, the division between the clusters on *Climate, energy and mobility* and on *Food, bioeconomy, natural resources and agriculture* is artificial as it separates climate mitigation actions (energy, mobility) and adaptation to climate change (e.g. nature-based solutions). Various sectors are often integrated at local and regional level as part of their climate and energy strategies, connecting climate mitigation efforts – as found in the climate, energy and mobility cluster – with climate adaption and nature-based solutions. Thus, further identifying and communicating the added value of working in an integrated way across sectors should be increased. Additionally, achieving the overall objective of Horizon Europe to dedicate 35% of its funding to address climate change will require actions beyond one cluster.

Therefore, the **proposed intervention areas should not only be thematic, but also consider integrated approaches and up-scaling**. Key areas include developing new governance models, strengthening public-private cooperation, developing the regulatory framework to enhance the deployment of new/disruptive technologies, and work on the governance of innovation. City-region and urban-rural interaction is also relevant. For example, using the Smart Cities lighthouse approach, where innovations are tested in several cities and then ideally "transferred" to other districts and cities more broadly, could be deployed to accelerate the uptake of innovation. Such an approach could be more powerful when expanded to a regional level where innovations could be scaled up, for example, in several municipalities within a region with the support of structural funds and other programmes. Smart city approaches could also be integrated with Smart Specialisation strategies to better integrate local and regional innovation strategies, to gain more impact, and to accelerate the transition towards climate neutrality.

Energy system security and flexibility should be prioritised, including local energy systems and networks. It is critical that our energy system possesses the capacity, necessary connectivity, flexibility, and resilience to maintain secure and reliable supplies of energy to all its citizens during the energy transition. This would also include support to prosumers.

Given the high proportion of energy use attributable to the built environment, and the construction industries' huge contribution to waste and other areas of environmental impact, **decarbonising the built environment and construction** should be further emphasised.

Digitalisation and automation create profound changes in the transport and logistics industry, as well as in the supply chains of all lines of business. By supporting innovation that capitalises on these

changes while including environmental and circular issues, the transport and logistics sector can increase the rate of decarbonisation.

Finally, **smarter investment** is essential. For example, integrating different forms of renewable energy into our energy system, the development of more localised approaches to energy generation and management, identifying and overcoming market barriers to make new solutions commercially attractive, all require different forms of finance.

Partnerships

Sustainable and inclusive development does not only require technological solutions and business models. A substantial transformation of the whole spectrum of systems is required: new governance models, innovation in the public sector, ensuring citizen participation and liveability, addressing socio-economic dynamics, and the anticipation of trends like digitalisation. To support such transition processes on local, regional, national, and European level, a solid collaboration among committed partners is required, encompassing capacities for research and innovation, policy, business and society, crossing the borders between disciplines, stakeholder groups, and nations.

Building on the work of the EIP on Smart Cities and communities, the marketplace as well as the Smart Cities lighthouse projects, we support the creation of a co-funded European Partnership on "climate neutral cities and regions". Such a partnership can be both cross-sectoral and mobilise actors at European, national, and regional level. It will also clearly link to the cluster on climate, energy and mobility as well as to the mission on climate-neutral and smart cities, thus contributing to increased coherence and complementarity between research and innovation agendas, while also providing private sector involvement and ecosystem thinking.

Creating concrete synergies, collaboration, and coordination, between European Partnerships and Smart Specialisation partnerships based on regional innovation strategies should be encouraged. For example, the Safe and Sustainable Mobility partnership that has been formed under the Smart Specialisation Platform for Industrial Modernisation (S3P-Industry) and the European Partnership for Safe and Automated Road Transport proposed under Horizon Europe have numerous common topics. When appropriate Horizon Europe funding could be dedicated to such partnerships to develop activities with a research and demonstration dimension, which would create further synergies between Horizon Europe and ESIF.

CLUSTER – FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

Priorities and areas for further focus

In order to stay within the ecological boundaries of the planet, we need to widen the concept of sustainability to make sure that **economic growth is decoupled from natural resources**. Circularity should be considered as a new and powerful indicator of sustainability and competitiveness and it must be increasingly present among processes like management of resources, renewable energy, water, new materials, goods, and services.

As such, economic development through the incentivisation of business as well as local and regional authorities to progressively close the loop on material waste, emissions, and energy leakage should be encouraged. Fostering **circularity and the circular economy** should be a key transversal objective not only in this cluster but throughout the programme. Funding should favour projects which spur the development of products with long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.

Similarly, circular economy and environmental sustainability of business practices and models need to be rewarded. Although Horizon Europe has a strong emphasis on scalability and growth, there must equally be an effort to move away from "business as usual" practices which have led us to such catastrophic environmental conditions. Horizon Europe should provide grant funding and expert consultancy advice targeting the deployment of circular, sustainable, and inclusive solutions, and decision-making for the long-term.

Circular bioeconomy and circular systems centred across critical raw materials should be prioritised. This includes, but are not limited to, natural resource efficiency and resilience, circular economy, innovation sustainable packaging (nanotechnology), and the reduction of plastics. Innovations in these fields have the potential to make significant contributions to reduce resource abstraction and carbon intensity and improve food security. In particular, **the bioeconomy sector has a huge potential to respond to energy and climate related issues**, such as through the use of biogas as an energy source, by properly managing and utilising urban biowaste, or fostering the economic, social, and ecological value of forests and forestry. Nevertheless, this potential is not yet fully exploited, and this is why Horizon Europe is key in supporting the knowledge creation and development of this economic sector.

There is vast potential in the European **blue economy** to develop solutions that makes oceanic sustainability a reality – spanning from sustainable fisheries and marine transport to ecosystem health. Sustainable management of ocean resources both technically and from a governance perspective require further research that needs to be done across borders. Similarly, the **blue bioeconomy sector** will be another important part of the circular economy through innovations of turning aquatic biomass into novel food, feed, packaging materials, and energy.

The challenges posed by demographic change also have an impact on the **food system**. Good nutrition plays a key role in achieving physical, social, and mental health and we need a food system that supports and enables populations to live healthily and independently throughout their lives. Here again, bioeconomy can play a key role by providing consumers with bio-based products that are healthy and highly nutritious such as microalgae-based products. On the consumer side, focus should also be put on shortening the food supply chain and increasing the consumer interest in local products. Since food is closely interlinked with health, climate change, and ICT, it is key to allow the calls in this cluster to be flexible for solutions integrating several sectors.

PILLAR III
- OPEN INNOVATION

EUROPEAN INNOVATION ECOSYSTEMS

To achieve and maximise the impact of Horizon Europe, regional and local innovation ecosystems are crucial. Innovation happens in places and there are specific local conditions which make such innovation ecosystems flourish. Seeing that the SDGs and the societal challenges at EU level often overlap with Smart Specialisation priorities, it is important to build on the excellence across Europe's regions to bring key stakeholder together to increase critical mass and the knowledge base. As such, it is important to support innovative environments in a local and regional context, this is also a prerequisite for innovative competitiveness to stay in the EU.

The value of building European innovation ecosystems

Innovation ecosystems bring together the right stakeholders for the right task, they also have a self-reflective nature and related feedback loops which enables them to anticipate long-term effects and to learn about user needs, as well as allowing experimentation to generate new relevant knowledge.

Promoting the most promising innovative environments and facilitating collaboration between them will allow Europe to develop world leading innovation ecosystems that attract the most talented innovators. This provides the possibility to access complementary skills, infrastructure, and markets, and collaborating ecosystems can form alliances to confront and overcome various challenges that both European society and regions face. This would also include experimentation with policy and regulation as well as public sector innovation. By focusing on key thematic areas or visions, these excellent ecosystems will increase Europe's competitiveness while contributing to solving global challenges.

How do we build leading European innovation ecosystems?

Action for collaboration between excellent regional and local innovation ecosystems

This type of action would build on and complement Digital Innovation Hubs, the Cluster Excellence Programme, and the EIPs. For example, the structure of Reference Sites in the EIP on AHA could be replicated under other policy areas. Reference Sites are inspirational ecosystems, delivering creative and workable solutions that improve the lives and health of the older population. These solutions can now be scaled-up and replicated across the EU.

The Reference Sites are regions, cities, integrated hospitals or care organisations that focus on a comprehensive, innovation-based approach to active and healthy ageing and offer concrete evidence of their positive impact in this field. They demonstrate synergies between different actions, breakthrough solutions within a short time frame, and the added value of taking a holistic approach. Reference Sites share an objective and a thematic priority: improve the resilience of health systems to successfully cope with ageing and care challenges in our modern societies. This common policy priority gives them a framework for networking and partnering for European activities, such as calls

for proposals, exchange and capacity building through various schemes including twinning programmes.

Another example which could be applied at a European level, is the Swedish "Vinnväxt" programme where the aim is to promote sustainable growth by developing internationally competitive research and innovation environments in specific growth fields. Some of the funded projects have been brought together to develop cooperation for sustainable innovation via the national "Strategic Innovation Programmes", which have been put in place to find sustainable solutions to global social challenges and increase Sweden's competitiveness. To get funding, collaboration and active participation is need from industry, public sector, research, and political actors. For Horizon Europe, this could mean funding innovation ecosystem collaboration for sustainable growth in areas related to the clusters and/or missions.

An innovation ecosystems accelerator

Newly initiated innovation ecosystems will need time to develop and grow. This time can be reduced by facilitating collaboration with successful ecosystems in other parts of Europe. This action could focus on start-up support, staff exchange, demonstration etc. allowing emerging ecosystems to benefit from the most promising ones.

Innovation vouchers for mobility between innovation ecosystems

This action would connect different regional and local innovation ecosystems by funding mobility between them in the spirit of ecosystem2ecosystem. This would allow SMEs active in one ecosystem to use services such as research and/or innovation infrastructures in another region. One criterion would be that benefits for the ecosystem as a whole need to be demonstrated.

Through the **inDemand project** companies co-create their solutions with healthcare professionals and validate them in their healthcare organisations. It is an excellent example of how co-creation between actors offers better solutions faster for real needs, and how procurement of innovation can be further developed. The inDemand model builds the innovation capacity of public institutions to drive innovation by articulating their needs and then procure the co-created product because it corresponds to their demand. Looking ahead, this model can be extended to other sectors that are also a regional priority (RIS3). Pre-Commercial Public Procurement (PCP)/Public Procurement of Innovation (PPI) have their purpose and are necessary especially for large projects, but they do not cover all types of needs procurers might have regarding testing and adoption of innovation. The inDemand model covers the gap of testing bottom-up and close to market innovation. Applying the model on a larger scale, with procurers and companies from across Europe, could be funded under the European Innovation Ecosystems action in Pillar III.

Coherent policy priorities – the EIC forum

ERRIN also stresses the importance of coordination between research and innovation agendas on a regional, national, and European level to further maximise impact of investments and efficient use of Horizon Europe funds. Better coordination between regional Smart Specialisation strategies with the

EU innovation ecosystems is important to bridge the gap between the expected impact pathways and the market deployment of innovative solutions. The EIC Forum provides an excellent platform to encourage and develop such processes in practice and ERRIN – as a network representing a wide range of regional actors dedicated to research and innovation – would be an obvious choice to have at the table.

Moreover, the European Innovation Ecosystems action can support implementation of synergies and demonstrate how different programmes can complement each other further and increase the impacts of innovation. This action could be used in synergy with other ecosystem related initiatives, such as the planned Interregional Innovation Investment programme, which was initially proposed as the Component 5 under the ETC.

The EIT – a complement to the European innovation ecosystems action

EIT is a good complement to the European Innovation Ecosystems and we welcome the proposed goal in the next SIA (2021-2027) regarding increased impact of KICs. Especially on the more inclusive selection of cooperation partners as the public sector is missing from the EIT knowledge triangle. Involving end users in the co-design, experimentation and testing of innovative solutions is key to develop products and services for which there is a market.

Importance of governance and non-technological innovation

One of the limitations in the current programme is that insufficient funding is allocated to the development of new, innovative and functioning governance models and structures. At the same time, without a functioning process (or a structure), it will be difficult to implement innovative solutions thus also leaving the exploitation limited. In the European Innovation ecosystems action the role of such governance models and collaboration should be crucial, using this action to encourage development of new ways to exploitation.