CHERRIES
RESPONSIBLE HEALTHCARE ECOSYSTEMS

Co-creation of a responsible innovation policy mix

Constructing Healthcare Environments Through Responsible Research Innovation and Entrepreneurship Strategies, CHERRIES project will support Responsible, Research and Innovation (RRI) policy experiments in the healthcare sector in three European territories: Murcia (ES), Örebro (SE) and the Republic of Cyprus (CY).

—

February, 2023

Grant agreement number	872873
Project acronym	CHERRIES
Project website	www.cherries2020.eu
Deliverable number	D5.2
Version/last editor	Ingeborg Meijer, Sonia Mena Jara, Anestis Amanatidis, Stefan Phillip
Work package number	5
Lead	ZSI
Nature	Report
Dissemination level	Public
Delivery date	22 February 2023
Author(s) Email	i.meijer@cwts.leidenuniv.nl
Project Coordinator	ZSI
Executive summary	This report describes the journey dedicated to the development and analysis and of policy recommendations. From the co-creative design process and discussions, it became clear that there are no simple policy mixes to solve the problems. An essential aspect of the development of new practices and innovative approaches in healthcare is that these are not a singular phenomenon but rely on an implementation process into organisational and institutional contexts. Thus, it is important to create stable relations between actors that are based on trust and shared objectives as a basis for developing shared visions and understandings of the general development trajectories of healthcare services in a given local or regional context. These structures are described as a Hub. To support the functions of the Hub, the following policy recommendations are crucial to integrate change processes within regional healthcare systems. 1) Empowerment of professionals to work with a different healthcare paradigm (patient-centred); 2) Patient-centred primary care is required and should be assisted by technology; 3) Improve identification of demands and alignment with regional policies; 4) Ensure sustainability of successful pilots; 5) Provide dedicated resources; 6) Clear benefit and focus on efficiency.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement nº 872873. This document reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains.

Versioning & Contribution History

Version	Date	Author/Editor	Contributors	Comments
1.0	15.08.22	Sonia Mena Jara (UL)	All partners	Rough draft
2.0	22.12.22	Ingeborg Meijer (UL)	All partners	First draft
2.0	10.01.23	Stefan Phillipp		Review and additions
2.0	17.01.23	Ingeborg Meijer and Anestis Amanatidis	All partners	Alignment with D6.2
3.0	03.02.23	Ingeborg Meijer		Ready for QC
3.0	20.02.23	John Rigby		Quality review
3.0	22.02.23	Ingeborg Meijer		Final report

Document last saved on 27/02/2023

Table of Contents

1. Introduction and objectives 4
2. CHERRIES model and topics for deliberation 4
2.1 Three challenges for future iterations 5
2.2 The new CHERRIES Model – lessons learned 7
2.2.1 Conceptual building blocks 7
2.2.2 Transition management 7
2.2.3 The Healthcare Innovation Hub 8
3. Co-creating policy activities: Design, formulation and validation of policy recommendations 10
3.1 Preparatory work (General Assembly Nicosia) 10
3.2 Formulation of recommendations: Regional policy workshops 14
3.3 Validation through co-creation 14
3.3.1 Workshops CHERRIES conference in Brussels 15
3.3.2 Overall impact assessment site visit and interviews – a policy perspective 18
3.3.3 Last CHERRIES general assembly 20
4. Policy summaries from a territorial perspective 24
4.1 Murcia 24
4.1.1. Regional policy workshop summary (March 2022) 24
4.1.2 Mutual learning on change management (May 2022, Brussels) 25
4.1.3 Policy summary from on-site visit and interviews (October 2022) 26
4.2 Örebro 28
4.2.1 Regional policy workshop summary (February 2022) 28
4.2.2. Mutual learning on change management (May 2022, Brussels) 29
4.2.3 Policy summary from on-site visit and interviews (September 2022) 31
4.3 Cyprus 33
4.3.1 Regional policy workshop summary (March 2022) 33
4.3.2 Policy summary from on-site visit and interviews (October 2022) 34
4.4 Cross-learning experiences from other territories 35
5. Policy recommendations: 37
6. References 41
ANNEX 1 Report “WP5 – Co-creation WS and synthesis input” 43
ANNEX 2 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX - MURCIA 44
ANNEX 3 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX – ÖREBRÖ 52
ANNEX 4 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX – CYPRUS 56
CHERRIES Partners 60

1. Introduction and objectives

This report describes the journey dedicated to the development and analysis and of policy recommendations. It is based upon the mapping (WP2) and experimentation (WP4) that both fed into the policy phase of the CHERRIES project (WP5). It merges outcomes from Task 5.2 ('Design a responsible and demand-oriented territorial innovation policy mix') and 5.3 ('Provide evidence-base for future development strategies') and is called *"Co-creation of a responsible innovation policy mix"*.

This work is supported by the results of Task 5.1 which entails the synthesis of the policy mix as obtained from the analyses of the territorial mapping exercises (task 2.2), innovation biographies (task 2.3), and the evaluation of the experiments (task 6.2). These activities served as a basis for further work under the policy strand of the CHERRIES project presented here.

The aim of Task 5.2 is to assess where benefits can be created taking into account the perspective of the stakeholders, patients, payers, professionals and industry, and academia including the review of the territorial policy instrument mix (including general R&I policies, health policies, and RRI-policies) and advancement of the Research and Innovation Strategies for Smart Specialisation (RIS3). Since multiple instruments and multiple governance and objectives are arranged together in complex portfolios of policy goals and means, a multi-level governance perspective is pursued (Howlett *et al*., 2015). This task was analytical and mainly dependent on focus group sessions, desk research and qualitative interviews in the three territories.

The aim of Task 5.3 according to the proposal was to validate the findings for the territorial innovation policy mix through stakeholder interaction and discussion about the findings, learning, expected impacts and engagement for future working modes and potential thematic foci (e.g. EDP). In practice, the approach ensured that the policy mix activities included a demand oriented design that was locally supported, to increase buy-in from stakeholders and to make outcomes more likely to be sustainable. To this end, policy oriented workshops were organized in each territory and during General assemblies and conferences.

In this report we start in chapter 2 by presenting the topics for deliberation that result from Task 5.1 and we outline the new CHERRIES model. In chapter 3, the co-creating activities that were carried out during the process are described, including interviews, focus groups and conference discussions and conclusions. In chapter 4, the territorial policy perspectives are presented, validated and locally contextualized. Chapter 5 summarizes the policy recommendations. In the annexes detailed results are collected in so far they contribute to the policy mix, and in order to keep the main text concise.

2. CHERRIES model and topics for deliberation

The CHERRIES project implemented experiments for the development of healthcare innovations in three European regions – in the Republic of Cyprus, Murcia (ES), and Örebro (SW). The experiments built upon a specific methodology – the CHERRIES model. The implementation of the model revealed the strengths of the model but also highlighted some critical issues that should be considered when applying the methodology.

The CHERRIES model, as deployed in the regional experiments, consists of three main steps that allow innovation in an open, responsible manner while addressing demands within a specific context. The model needs ownership by a central actor within the regional eco-system to implement the process and including, and most importantly to engage the regionally anchored quadruple helix (industry, research, administration, civil society) stakeholder. The steps of the CHERRIES model are as follows:

- **Need identification**: In the CHERRIES experiments, this process built on a *Call for Needs*.
- **Selection of Solution**: A regional Committee selected one of the identified Needs and subsequently the regional team transformed the Need into a Challenge. This redefined Challenges represented the core of the *Call for Solutions*.
- **Co-Creation of Solution**: The regional Committee selected one Solution per Need for funding. The region process leader, the Solution Provider and the Need owners agreed and signed a co-creation agreement as well as a subsidy agreement that outlines the objectives, process, and milestones of the development and testing process.

The model has been implemented in the three CHERRIES regions and during these real-life experiments, the project team were able to gather evidence about the model's strengths. The main positive aspects of the model are:

Speed: The process from identifying a Need to testing a co-created Solution took approximately one year in all three regions.

Fit: The demand-oriented approach and co-creation under the involvement of a broad set of stakeholder warrants that the solution is up to the requirements in a specific context.

Coalitions: The CHERRIES model is an efficient way of building topical coalitions around a perceived problem. By applying the model, a specific Need will be put at the centre of a wider public attention and signals future opportunities to market actors. The co-creation and testing process brings together the quadruple helix within a new and open network in a solution-oriented collaboration that supports the building of shared understandings, trust, and visions.

Flexibility: the model, based on three sequential steps, proved to be very flexible, can be adopted to varying contexts, and can be a place-based intervention. The processes can and should be adjusted to regional cultural and institutional contexts in order to provide value-added to existing initiatives.

The CHERRIES model can be a great addition for central actors within a societal system that delivers social functions like healthcare, energy, mobility etc... However, when replicating the model, the following lessons-learned from the CHERRIES experience should be taken into consideration.

2.1 Three challenges for future iterations

In the CHERRIES context, the project partners identified 3 issues in Task 5.1; *Deliberation as a basis for need identification, From Pilots to sustainable action, and Institutional anchor for the model*. The synthesis of these three main topics has been compiled in the Report "WP5 – Co-creation WS and synthesis input"

(ANNEX 1). In the course of Task 5.2 and 5.3, these issues have been reflected upon (see chapter 3, over time the wording changed slightly, but not the contents), which need to be handled when implementing the model outside a clearly defined project like CHERRIES. These three issues are that the model needs an anchor through clear institutional ownership, the need for an arena for deliberations of sectoral developments and shared strategy development, and the need for a strategy for the sustainability of jointly developed pilots after the co-creation phase.

- **Institutional ownership:** The management of the CHERRIES model requires personal and financial resources. Thus, a central actor (e.g., the Public Healthcare Organisation) or consortium of organisations needs to commit to owning and maintaining such an innovation process model, to build up the organisational capacities, internal and external networks, and commit resources to run the processes. Whereby, the example of Murcia shows that running these Open Innovation processes repeatedly is important for organisational learning and the consolidation of the involved ecosystem. With a long-term perspective, the resources invested in the experiments could be retrieved through efficiency gains or shared intellectual property rights of Solutions.

- **Arena for deliberation:** The CHERRIES model provides an efficient way of selecting a singular Need and targeting it with a Solution. However, the fit of the Solution within the bigger picture of transformations of healthcare provision is not guaranteed and neither does the model provide a clear indication on how to address organisational change in the context of a new practice or product. Ageing populations, chronic diseases, comorbidities and budgetary restrictions put the healthcare sectors under pressure to find ways of treating more patients more efficient. This requires a system transformation, that is yet suffering from several barriers such as: change being socially contested; various actors having different interests and power; and more generally the capacity to engage in a process of change. A shared arena for deliberation of future healthcare provision can help to provide directionality for innovators, align solutions and management objectives, and increase the overall acceptance of new approaches.

- **Sustainability after the pilot:** The CHERRIES model provides a framework for developing and testing a pilot but stops there. Questions of adoption, implementation, or even scaling are beyond the model and part of a sustainability phase that comes after the model. However, the adoption of pilots and thus changing the current practice of healthcare delivery is the core objective of the innovation process. Without adoption, the process is a costly and frustrating exercise of what would be possible. While there should not be an assumption of an automatic purchase of the solution after the co-creation phase, a fourth step in the model that allows for extended testing, evidence gathering, and maturing of the new approach in a shielded space might provide sustainability to the most promising outcomes of the CHERRIES model application.

In order to maintain the strengths and mitigate the issues outlined above, a new model is suggested that combines the RRI and Open Innovation characteristics with approaches and reasoning from Strategic Management and Transition Studies. However, it should be stressed that the model needs to be adjusted to local realities and that everything that is suggested here should be considered critically before implementation and further monitored and evaluated during and after the processes.

2.2 The new CHERRIES Model – lessons learned

In order to improve the tested CHERRIES model and to address the identified issues, the New CHERRIES model is introduced based on the reflections of the original experiments by the partners and the consequences for policy. In the accompanying policy brief (D5.1) the extended version of the new model is presented. In this policy report you can find a summary.

2.2.1 Conceptual building blocks

The traditional models of healthcare are undergoing a substantial transformation and will need to change further to meet the many emerging challenges that aging societies, chronic diseases, and comorbidities pose. It becomes imperative to adjust healthcare systems that are designed for prevention and cure, in a way that allows for a better integration of assistive and care services. Modern healthcare services should build on empowering approaches in which patients are no longer understood as recipients of treatments but are themselves co-producers of health services and co-creators of value. This transformation, thus, requires a horizontal System Innovation approach that mobilises technology, market mechanisms, regulations and social innovations to solve this complex societal problem in a set of interacting or interdependent components that form the "*socio-technical system*" of healthcare.
This requires a long-term approach that brings together actors from all quadruple helices and that avoids pitfalls of transformative approaches as missing directionality, coordination, demand articulation, and reflexivity. The CHERRIES model provides dimensions that can facilitate this system innovation but needs to be enhanced to i) address the issues mentioned above and ii) to be able to overcome issues of missing directionality and coordination in a complex system. Thus, we suggest an extension to the theoretical pillars of **RRI** and **Open Innovation** with approaches coming from **Sustainability Transition Studies**.

2.2.2 Transition management

Transition management is a governance approach that is rooted in sustainability transition policy and aims to facilitate and accelerate change processes through a participatory process of visioning, learning and experimenting. In Sustainability Transitions, transitions are non-linear, long-term and fundamental change processes towards sustainability that alter the way society is organised, operates and values services and amenities (Kuhn, 2012; Loorbach & Rotmans, 2006).
The starting point of Transition Management is not a technological innovation but a societal challenge and as such it is highly compatible with the CHERRIES model and the reasoning provided by RRI. Based on the conceptualization of transition management (see figure 1), the following integration could be achieved:

- **Strategic activities**. Based on inclusion and participatory processes, the sectoral or organisational problems are structured (e.g., deploying system innovation approaches) in shared arenas for deliberation about the future of healthcare settings. This involves the formation of long-term

goals and vision development that addresses both the structural and cultural aspects of the societal system of healthcare provision. The Need identification of CHERRIES, should be aligned with these long-term strategies and arise from the shared arena and visioning processes and go beyond singular technological needs and try to identify bigger demands. This requires the reflexivity and inclusion of RRI approaches.

- **Tactical activities**. The CHERRIES model provides the framework for tactical interventions in the current system. Based, on the overall strategic goals, the Co-Creation Teams should be assembled and define challenges (e.g., based on the Call for Needs) that are directed towards the strategically envisioned transition. The Call for Solution connects the healthcare sector, its visions and strategies with the research, technology and innovation markets and provides a framework for investing, resource distribution, co-definition of rules and incentives and the joint identification of barriers that may inhibit the advancement of the visions and propose adjustments that may be needed. In terms of RRI, it provides a space for inclusion and anticipation.

- **Operational activities.** The operational activities relate to the experimental development of new approaches and learning-by-doing in protected niches. It comprises the co-creation of Solutions based on the Call for Solutions and Co-Creation Teams. It aims at collecting experiences, testing new approach and inform strategic activities about the co-evolutionary dynamics between technology and organisational routines. It involves – at a higher degree than the strategic and operational activities – the inclusion of patients and doctors as end-users and builds on responsiveness to the needs of these groups.

The operational level provides input to the strategic level and thus the process can be seen as a circular process of joint learning, experimenting, testing and organising. The continuous exchange between the three spheres (activities) and the niche accumulation in specific strategic fields, supports the sustainable uptake of solutions. The Strategic level might also provide an alignment with other strategic approaches (e.g., S3) that supports the embedding of such an updated approach in regional and institutional strategies.

2.2.3 The Healthcare Innovation Hub

An essential aspect of the development of new practices and innovative approaches in healthcare is that these are not a singular phenomenon but rely on an implementation process into organisational and institutional contexts. This embedding relies on a co-evolutionary process that involves various actors and thus, these processes require time and continuous exchange. The involved actors might have different preferences or lack resources and competences to engage in this innovation journey. Thus, it is important to create stable relations between actors that are based on trust and shared objectives as a basis for developing shared visions and understandings of the general development trajectories of healthcare services in a given context. These structures can be described as a Hub, providing the space

for building these lasting relationships as a basis for developing of shared perspectives and joint projects. In the following, the idea of how such a Hub could integrate change processes within regional healthcare systems, based on the learning of CHERRIES is introduced (see figure 1).

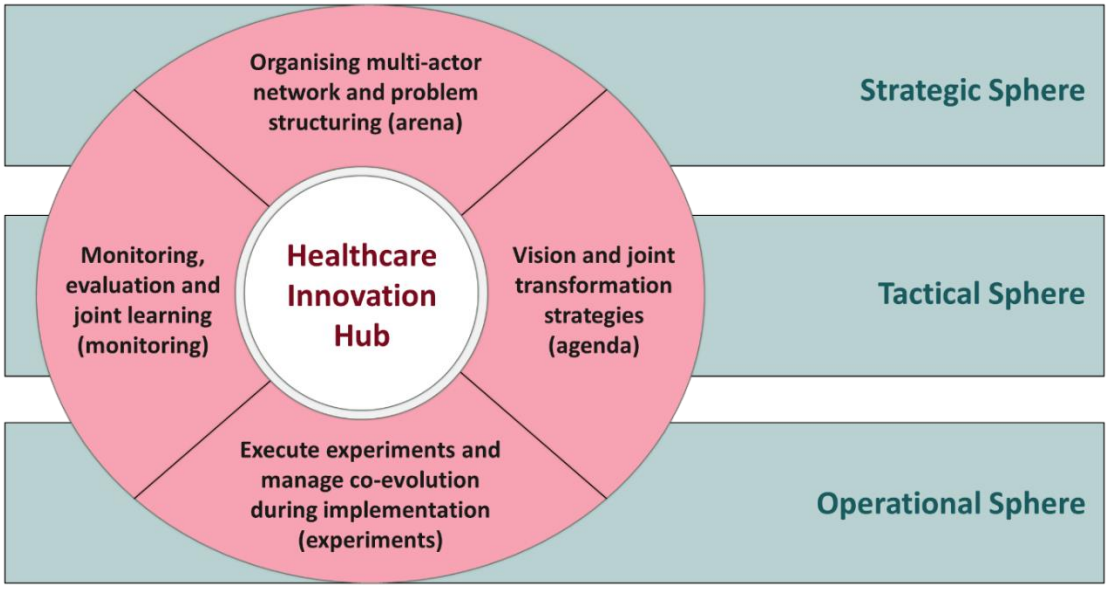


Figure 1: Hub interventions in three spheres (based on Kemp, Loorbach and Rotmans 2007)

A Healthcare Innovation Hub and its institutionalised management functions as a central management element within a regional healthcare innovation ecosystem. These ecosystems are loosely coupled as all members are distinct but still respond to joint challenges. Thus, the Hub and its management must engage in a process of community management and orchestration in order to facilitate an innovation ecosystem around joint value creation and further, create space for experimentation, implementation and strategic niche management. This orchestration is based on managing knowledge flows, the innovation appropriability, the network stability, as well as the individual skills and organisational capabilities within the Hub. In order to achieve these objectives, the Hub should deliver four functions.

1. First, it provides an arena for deliberation that mobilises multi-actor networks and supports the structuring of the problems and trends the regional healthcare systems are facing. This is a strategic intervention into the system, which provides the foundation for further actions.
2. Second, the Hub can coordinate the development of an agenda that is shared and co-owned by the involved actors. In order to achieve this agenda, the Hub implements activities that contribute to that agenda, aligns the interests, and needs of the involved actors.
3. Third, the established regional networks, visions or transformation strategies provide the context for experimentation. The experimentation should align with sectoral needs and visions, engage all relevant stakeholders in the development and testing of novel approaches for healthcare services.

4. The experiments provide the possibility for joint reflecting and learning and thus, they need to be monitored and the learnings should again feed into the visioning and problem structuring processes. The overall reflexivity during the whole process and the anticipation of intended and unintended effects of new solutions on the system is critical for developing responsible solutions.

These four functions contribute to the overall objective of improving the provision of healthcare services, building on joint deliberation about desirable futures, experimental learning and innovation, as well as on supporting a co-evolution of practice, organisation, and institutions.

3. Co-creating policy activities: Design, formulation and validation of policy recommendations

The design thinking approach (Simon, 1969) is employed in Policy Labs which are dedicated teams, structures, or entities focused on designing public policy through innovative methods that involve all stakeholders in the design process. In policymaking processes, design thinking has the potential to improve problem definition and mechanism design to enhance public value (Mintrom and Luetjens, 2016). The practitioners describe these efforts as design or evidence-based approaches, which place the end-users at the center of each stage of the policy-making process (Fuller, M. & Lochard, A., 2016). Policy Labs approach policy issues through a creative, design, or user-oriented perspective and strive to organize experiments or to test proposed policies. These co-creative spaces work for or within a government entity or public administration and contribute to the shaping or implementation of public policies. They address three challenges: (1) establishing the causality and value of public interventions, (2) explaining mechanisms of change, and (3) utilising research findings in public policy (Olejniczak, K. & Borkowska-Waszak, S.2016). In CHERRIES, most policy-oriented approaches and validation activities loosely followed a design thinking approach.

3.1 Preparatory work (General Assembly Nicosia)

The policy approach in CHERRIES departed from the idea how technological change (invention, innovation, diffusion) is faced with multiple market, system and institutional failures and thus requires multi-faceted policy interventions (Weber and Rohracher, 2012). A policy mix which combines several policy instruments would be the response to this challenge. However, during the project, the interactive sessions with the regional partners on policy revolved around two major and related issues that are prerequisites for developing appropriate policy mixes: How can we develop arenas for deliberation that bring together stakeholders from different backgrounds to allow them to discuss policy jointly; and how can we make the pilot actions sustainable?

The kick-off discussion of WP5 was in November 2021 when the first policy session was held during the General Assembly in Nicosia, Cyprus. During this focus group and in an **exploratory setting**, the project partners identified and discussed 3 issues previously defined in Task 5.1:

- *Deliberation as a basis for need identification;*
- *From Pilots to sustainable action;*
- *Institutional anchor for the model*.

The synthesis of these three main topics has been compiled in the Report "WP5 – Co-creation WS and synthesis input" (ANNEX 1). Interactive discussion was in two rounds in three mixed groups (participants from the regional partners were mixed), each group addressing one of the issues.
The first session focused on the problem definition, the needs to be addressed, the evidence and contextualization of the problem, and subsequent reframing of the problem definition so that in the second session the focus was on steps towards a solution, including the what, why, how and when. During the conversation it became clear that the second and third issues overlapped so much that it was decided to focus on one, from pilot to sustainable action which included institutional anchoring. Note that the results of the interactions are not regionally specific. In the table below the results of the two rounds of discussion are combined.

DELIBERATION AS A BASIS FOR NEED IDENTIFICATION	
PROBLEM STATEMENT	We need a space, structural lines, or policies that support the engagement process, keep actors motivated and create a common language. We should consolidate the collaboration process.
NEED / KEY SOCIETAL NEED/PROBLEM TO BE ADDRESSED	• Difficult to change legacy, the lack of trust and bureaucracy • Changes are difficult to implement because of a Mindset problem • It is a challenge to maintain stakeholders engaged and motivated • Communication of the solution: Language used in Science/communication
EVIDENCE OF THE PROBLEM - CONTEXTUALISATION	• There is a necessity to keep innovation alive and give more room for innovation. One main component are start-ups, they should continue to grow and feed the system. • In Cyprus medical professional competition is an issue. Patients prefer young people that know better the system and new technologies to be employed in medical treatments. • Misalignment of healthcare services. • Lack of coordination inter and intra organisation.
REFRAMED PROBLEM STATEMENT, WHAT WE NEED A SOLUTION FOR	• All actors are needed, we need different skills and capacities. • The blocking stone for many initiatives is the political agreement. If an idea does not have political support the change cannot happen. • Doctors are considered key for decision-making. They need to be part of the change and the whole process.
SOLUTION: WHY	It is important to work together for a common goal, for a certain common direction. And we need to engage with different sectors in order to be representative of the territory, so that they can be involved in need

	identification. It is important to keep previous initiatives to life and support some continuity of the work in Healthcare and innovation.
SOLUTION: HOW	Whilst regions are different, and interactions vary depending on the territory, the starting point is to identify the severity of the problem; the percentage of the population that is affected by the problem; and those that will benefit from a proposed change. A policy recommendation/ or strategy supporting engagement or collaboration should be done through public consultation for ownership purposes. Make the actors part of the solution and create a reward system. Solutions do not come from government but bottom-up citizen involvement, which will build trust for change and requires open governance models. Bottom up approaches also need freedom on how to implement the solution in the local context. Finally, ensure there is proper dissemination of the initiative.
SOLUTION: WHO	• **Healthcare providers:** Professional feedback to perform their work according to the Need. Nurses have a key role by connecting sectors. They are messengers. • **Policymakers**: put in places policies that will articulate the needs • **Citizens**: identify not only the needs but also relevant actors to be involved in the whole innovation process. They must have an active role in the initiative. • **Solution provider**: Materialize the need into a sustainable solution.
STRATEGIES	For engagement purposes, the project or initiative should clearly state what it will bring to the population or actors, what are the benefits. It may help to propose easy solutions in technological terms. Practical solution pilots help to make (small) changes and take the first step. But, we should prioritize the problems and assess their magnitude and relevance. Policy makers sometimes need statistics in order to be convinced and take political decisions.

FROM PILOTS TO SUSTAINABLE ACTION	
PROBLEM STATEMENT	The problem is that some successful innovative solutions from projects or pilots that solve problems identified by healthcare professionals may not transfer to other contexts.
NEED / KEY SOCIETAL NEED/PROBLEM TO BE ADDRESSED	• There is need to talk to citizens and the civil society organisations representing them to confirm needs and possible solutions; • It is difficult to adapt solutions because there is a difference in context between the pilot and implementation in the wider society; • There is a lack of transversal communication between different groups of stakeholders who all are part of a puzzle. The more transversal the issues, the more responsibility is needed.

	• There is a need for platforms of collaboration, to improve the collaboration between stakeholders; • In healthcare, responsibilities are distributed, but who takes responsibility in e.g. legal, standards of care or institutional level eventually?
EVIDENCE OF THE PROBLEM - CONTEXTUALISATION	• The role of payers is unclear in bottom up, RRI-approaches. It is diffuse who they are. • Many organisations have multiple roles, and it is unclear to what role a 'solution' should speak or attend to. Be aware of these roles and responsibilities • Many healthcare solutions are regulated by law, which means that sometimes a 'solution' cannot be formally part of an organisations' role. Where is the legal/regulatory ownership, and who decides where it fits? Find a language to talk to regulators. • The delineation between municipal and regional levels is often difficult. This can be cultural, but also regulatory (law) because healthcare is not organized at the regional level. • The contexts are changing: the private sector can respond more quickly but they cannot change the healthcare system. Funding is important but more important is to find the driving force in the system. • It is important to support the healthcare professionals as they are a key player in the system.
REFRAMED PROBLEM STATEMENT, WHAT WE NEED A SOLUTION FOR	The reframed problem statement consist of four interrelated issues to support pilots into sustainable actions, namely: • Early stakeholder engagement (including civilians/patients); • Define a common purpose; • Organize solutions around regulatory frameworks; • Long term commitment.
SOLUTION: WHY	It is critical to define a common purpose and create a sense of commitment among the stakeholders. For this, it is important to communicate in adequate language to really understand the needs, and problem to be solved. It may help to define the exact 'what' in an agreement between stakeholders in an early phase of a pilot.
SOLUTION: HOW	Organise the stakeholders around their roles and responsibilities. In this regard the formal regulations and laws should be an explicit part of the discussion. Part of everyone's role is to spread good results. In the healthcare system, smart specialization can be a driver AND a barrier.
SOLUTION: WHO	A stakeholders platform for collaboration is central, and the most important ones should be identified. In this regard, healthcare professionals (doctors) are critical (in terms of the power they have in prescribing or using new 'solutions'). This is specific for making healthcare innovation sustainable. In such a collaboration platform there should be space for negotiation to give

	room for bottom up versus top down approached. This should be done in the beginning, and could feed into the agreement described in the why.
STRATEGIES	It is important to support a development from the beginning by all partners, the long term commitment comes from people, and not from money. In the adoption phase there is an important role for decision makers.

From the discussions and the collected material (see tables above), it became clear that there are no simple policy mixes to solve the problems. Rather, at different organizational levels, the ownership to change policy is limited and largely dependent on interorganizational collaboration. Institutional anchoring of pilots is dependent on continuation of funding, or uptake of (RRI- or smart specialization) principles underlying the pilot experiments. In the remainder of the policy work in CHERRIES, additional entry points for healthcare, RIS3 and RRI will be identified to support a RRI-compliant territorial innovation policy mix. After the initial policy work, each region organized their own regional policy workshop (from February-April 2022) to elaborate further on the issues identified before.

3.2 Formulation of recommendations: Regional policy workshops

The regional policy workshops were organized by the regional partners, including other relevant policy partners and were conducted in the local language in February and March 2022. These sessions consisted of an iterative discussion aiming to reframe two of the formerly identified issues providing new insights and considering the idiosyncrasies and cultural specificities in each healthcare and innovation system. The full regional workshop reports are presented in ANNEX 2 - 4. The main results per region are presented in chapter 4. These showcase the local context and issues, that also influence the capacity to change as described in more detail in the Monitoring and Evaluation report (D6.2 Overall impact assessment).

3.3 Validation through co-creation

Task 5.3 aims to validate the revised territorial innovation policy mix through stakeholder interaction and discussion about the findings, the revised design, expected impacts and engagement for future working modes and potential thematic foci (e.g. EDP). This will turn the policy mix in a stronger demand-oriented design, that is locally supported, which will increase commitment and make it more sustainable.
Task 5.3, the policy validation process assessed and enriched the regional policy development in three steps: at the CHERRIES conference in Brussels (May 2022); the interviews and on site visit related to the policy aspects of the overall impact assessment; and the final General Assembly (November 2022). This activity combines policy design with an increased focus on integrative policy mixes, that aim to support RRI-compliant territorial innovation policy mix. This activity, led by Leiden University with contributions from ZSI, CEEIM, Activa and AIK in the grant agreement, but with all partners in reality, builds on previous activities conducted under T5.2 “Design a responsible and demand-oriented territorial innovation policy mix”, in which regional policy recommendations were formulated collectively (see 3.1 and 3.2).

Methodological reflections and considerations

- Beyond only data gathering, the engagements designed below were, simultaneously, moments of sensitization on aspects of responsibility;
- The workshops and activities made available strategic channels towards key actors for the CHERRIES partners;
- Who was engaged was mediated by the organisational consciousness of the project and its activities (the engagements happened at a particular point in time in the project, where particular questions were more visible than others);
- Given that the engagement of actors was done through our local partners, their stakeholders and networks (both privately but also CHERRIES), their perceived reality of CHERRIES also implied whom to contact or not to contact;
- Beyond focusing on policymakers only, the audience that was engaged was much broader, allowing for different takes on (the role of) policy in the local contexts;
- This has led to collaboration across work packages 5 and 6.

3.3.1 Workshops CHERRIES conference in Brussels

There were two workshops during the CHERRIES conference in Brussels, May 24th and 25th 2022. One had a regional focus and the other included all participants, including the representatives from mirror regions.

The first workshop focused on Mutual Learning on the concept of change management (see 2.2) with Regional policy makers. The regions had invited local policy makers to the conference and they engaged in the session that focused on preparing a roadmap for change. The goals of the session were to define change management as a focal point in the regional context, its benefits, impact, risks, motivation and strategies to achieve the changes as a desirable future considering changing the culture in and between organisations. Based on the results of the regional workshops, we tackled questions of culture and CHERRIES as an instrument of culture making. The workshop asked what was required and how do we initiate and manage these processes in the given regional systems? In the session the following questions were discussed:

- Is your organisation ready for the change? (organisation readiness)
- What would be a motivation for change?
- How do we start? (visioning and strategy), describing a short term – midterm – long term.

The results are presented in chapter 4 per region.

The second workshop focused on the CHERRIES model (see 2.2). The workshop was open to the public of the conference and consisted of participants from regional partners, policy makers, mirror regions and members of the consortium. The purpose of this session was to obtain feedback on the future of the CHERRIES model and the way of anchoring it in regional practice. Based on the synthesis and discussions during the first policy workshops, the topics of "*a shared arena for deliberation*" as a means for need

identification and "*from pilots to sustainable actions*" were raised as topics in relation to the CHERRIES model. By linking these two dimensions with experiences made in transition management, a new CHERRIES model has been developed that combines *strategical*, *tactical*, and *operational* dimensions needed for developing targeted innovations. The results of the three inter-regional groups are described below.

Group 1 (9 participants)
The general discussion was on **"Upward Transition Management".** Generally, the discussion was on how it is possible to move from an operational, pilot-level upward, penetrating macro-strategic realms of local policymaking. We mainly referred to healthcare. The discussion circled around different themes that can be put under four (interconnecting) bullets:

- Monitoring and Evaluation

Understanding M&E as a practice of making things not only visible, but also tangible; it shows potentials to help this upward motion. That is, because good stories can become available to audiences and issue-publics concerned with similar themes. Furthermore, designing indicators (= designing visibilities) particular to aspects of public concern can also allow for uplift into strategic spheres. In that act, M&E and attached indicators should not be seen as a reduction of, but a creation of worlds, issues, interests, ways of knowing, etc. Furthermore, such indicators can be seen as boundary objects for bridging the social worlds between actors active in either strategic decision-making or the operational, pilot-oriented level (= creation of common language for instance). Finally, M&E activities help evidencing, creating allies (reports or stories as in the first point) that can be enrolled strategically for convincing or 'winning over' key actors in such positions of power.

- Incentives and Incentivising

The second theme that emerged was what incentives and what strategies (or tactics?) can be followed to get actors incentivised to act. The first incentivising strategy was about community-building, serving to create momentum around an issue or agenda. For this, it is important to be able to identify and enrol the right actors that hold power or agency to pursue one's desired goals.
Especially relating to private sector activities in healthcare (think of R&D for instance), exploiting public markets or their gaps (funding, intelligence...) as incentive-spaces to get private sectoral actors to engage was mentioned. Thus, the creation of markets pertaining to a particular agenda.
Another strategy relates to timing and using windows of opportunity for upward motion. For instance the problem of ageing populations in Sweden has been publicly discussed and deliberated, which momentum can be exploited for own purposes. Similarly, the national healthcare reform in Cyprus can serve as a window of opportunities, too.

- Conditions

The third point that was raised by the group was to familiarise oneself and acknowledge the pre-existing conditions of particular systems. This includes the strategic moves of individual key actors, preceding efforts that were done etc. Here, it is imperative to connect these conditions to the desired impacts and the theory of change. This relates to issues of scaling and replication, where projects need to think beyond their lifetime and, from the get-go, cater to the strategic narratives that are dominant in a particular system.

- Sensitisation

Finally, the last point raised was that of sensitisation. This includes a collective reflection (and trying to have others reflect) on the fact the common denominator at stake is a desirable collective future, which renders collective (inter)action a requirement. Part of sensitisation was also to acknowledge the complexity of designing in and for democratic systems.

Group 2 (9 participants)
In this group the general understanding was that the "**strategic, tactical and operational spheres must be orchestrated"** in order to change the system. Similarly to group 1, it was acknowledged that CHERRIES was an experimental tactical Intervention into the system. It is a model that works well, but the participants felt that two issues may hamper the potential of the model.
Whilst the strategic level could be envisioned as the long term perspective, and the tactical level as midterm perspective, in practice long term change will probably need more than strategy only. It needs translation into action plans and interventions. For the CHERRIES model to mitigate transition, the built coalitions should organize themselves as a tactical intervention and aim to facilitate the experimentation at the operational level as well as advocating for changes in the strategic sphere. The Intervention could be a Living Lab, a Hub or regional consortium, that brings the regional quadruple helix actors together in a trusted arena for deliberation. It can be used to develop ideas and run experiments, coordinate, and structure processes.

Time, trust, inclusion and coordination will be crucial in order to manage and orchestrate all three levels. Call for needs - or similar processes - should be run regularly and identified needs be published (as inspiration for entrepreneurs and researchers). Funding for innovation pilots is an aim (H2020 and structural funds might be stepping stones on the way). These arenas are a place to co-design and experiment with future healthcare services. In that way, the future can be defined and built together.

The new CHERRIES-model in 2.2 has been rewritten as a document that serves as value proposition of the process that can be used by the regional partners to convince others. It captures, in a simple and

illustrative way, the model, its advantages and ways to embed it in a regional context. Close connections with the regional actors to find potential entry points and include a place-based approach is needed. Potential examples for an arena: Thessaloniki, Health Hubs (e.g. NHS), Living Labs etc.

Group 3 (10 participants)
In the group, the discussion addressed the two sides of change management: "**Resistance to change and encouraging experimentation"** and how they relate to policy development.
Resistance to change: Change usually is supported by only a part of the organization. Many do resist change and the question is how to acknowledge and address such resistance. The main change of attitude needed is to be flexible to new circumstances.
Ways to tackle resistance are showcasing case studies, role models, demonstrating to people acting in the strategic level. Ways to communicate the ideas can make a difference at this level. A key issue is further to address key target groups, to institutional commitment, and get a real commitment for the adoption of the pilots.

Equally important is the encouragement of experimentation from top-down levels and replicability as a component to consider. A good start is to identify key actors willing to help, the change drivers. The changes really rely on the specific people (actors) involved in the process. These are able to promote certain behaviours and to empower actors in the Hospitals, bringing them together (Hospital managers). These people may help to set up a pool of initiatives to give continuity to the current activities and to support a portfolio of projects to keep the actors engaged. This in connection to the sustainability of the pilots. If there is a continuous stream of projects and initiatives being developed the changes should happen. Apart from the key people, it is important to have new design in funding schemes, and - ideally – to provide permanent resources in order to promote the needed transformation. Finally, it is worth considering procurement of innovation, application of S3 to S4, and taking advantage of the mission oriented approach.

3.3.2 Overall impact assessment site visit and interviews – a policy perspective

The overall impact assessment (OIA) is presented in D6.2. Part of the OIA includes interviews and interactions with regional policy makers. In this report the focus is on regional policy aspects that result from the site visit and interviews. Below the purpose and objectives of the interviews is described. The regional results are described in more detail in chapter 4.

Purpose(s) and objectives of the interviews

In the light of validation activities with regional policymakers in WP5 and inquiries planned to inform the overall impact assessment in WP6, the protocol drawn up in this document aims at illuminating the ethical, procedural, and practical implications of the interviews planned.

The aim of these interviews is bifold. On the one hand, they aim at validating the outputs of the regional workshops carried out under Task 5.2 (see 3.2 and chapter 4) and further validation steps.
On the other hand, these interviews serve as one of four data sources in the context of the overall impact assessment carried out under WP6. Next to document analysis, participant observation and workshops with the regional partners of the CHERRIES project, these interviews pursue two goals: one of creating visibilities about themes, points and issues worth raising that direct partners of the project may not prioritise or overlook based on the path dependencies (and hence priorities) that such infrastructure projects with particular objectives, outcomes and outputs construct. Equally important is the second goal which is to contribute to the ability of traversing what is called 'the project level' and 'the regional level', both in the context of the regional actors' social worlds and as a researchers tasked with leading the overall impact assessment (partially) about contexts that we do not inhabit ourselves and therefore do not understand tacitly.

Moreover, the current efforts of the local CHERRIES teams to make the project's methodology, that is - the CHERRIES approach - sustainable in the local healthcare (innovation) systems focus on local policymaking and governance of healthcare. Coupled with a strong focus on policy during the consortium meeting in Brussels during May 2022 and the responsive nature of formative evaluation (see the Overall Impact Assessment concept note (T6.3)), merging the activities from both Work Packages into one inquiry rather than two separate ones supports the ongoing deliberations and increases collaboration to, possibly, design more effective interventions.

Interview Logic and Design

The discussions during the consecutive workshops circled around a consistent question that gains in weight as the (formal) project approaches its end by the beginning of 2023. That is: how to make the CHERRIES approach sustainable in the local healthcare systems? This question can be approached from a perspective of the CHERRIES pilot projects (how to make the pilots sustainable in the specific healthcare contexts in which they are embedded in) but also from a 'project'-perspective (how to sustainably transform local healthcare governance to value more demand-driven approaches to healthcare innovation). One model that has permeated and structured thinking in CHERRIES, especially running up to the workshops in Brussels in May 2022, was a governance model springing from sustainability transition policy suggested by Loorbach and Rotmans (2006) and van der Brugge and van Raak (2007). It discriminates between three 'spheres' of governance: an operational sphere, where projects and experiments, such as the CHERRIES pilots, are executed; a tactical sphere, where coalitions and agendas are set and monitoring and evaluation finds functions as tactical interlocutors; and finally the strategic sphere pertaining to problem structuring and envisioning of desirable futures (and solutions). Obviously, evaluation feeds into the strategic sphere as well.
Understanding that there is a tactical performance to these interviews at sphere two therefore raises questions about the ends towards which they are employed. Reflecting them against the model introduced above in relation to the questions that are present in the CHERRIES project, one can start

understanding these interviews as moves to penetrate the strategic sphere by e.g., enacting particular issues in the world of the interviewees through the questions asked. With this in mind, the interviews are a form of sensitising local policymakers that hold particular power over local governance structures with regards to the CHERRIES approach and spark reflections about what it takes to put the model into action.

For this, the interview questions are designed to address:

- How the problematisations that resulted from the CHERRIES reflections correspond to policymakers' understanding of the healthcare needs and what it takes to address these;
- How the CHERRIES project traversed operational, tactical and strategic spheres in the context of intervening in the local healthcare innovation system.

Given the uncertainty about who can be interviewed and what their context is, a semi-structured interview format was chosen, leaving space to react to and deepen particular points raised that can be of importance. This allows for ad-hoc questions and steering the conversation. Due to the GDPR, in this report no names or organisations will be listed.

As it happened, during the on-site visits for the Overall impact assessment, many different actors were invited, rather than only policymakers. This has led to a more diverse interpretation of the policy-status-quo; which were taken up in both interviews and other sources for this task. As a consequence, we call them policy validation interviews rather than interviews with policymakers. During the on-site visits, the focus lied on (1) cross-pollinating the learnings across CHERRIES territories and (2) engage CHERRIES partners and stakeholders with the results from T5.2 to further validate the outcomes locally.

This validating move, according to the grant agreement, transforms the policy recommendations into statements that are 'locally supported', enrolling local actors to stand behind the agenda that the recommendations , and thereby to the normative actions that CHERRIES represents. Whilst the actors that were engaged necessarily got sensitised to the issues that CHERRIES as a project, and their representative actors locally, care about, the grant agreement's expectation (ex ante) needs elaboration now that the activities have concluded (ex post).

In chapter 4, the regional aspects from the OIA and the interviews will be summarised in so far the answers pertain to policy aspects of the CHERRIES experimentation and local context. Undoubtedly there will be some duplication with D6.2 reporting on the OIA, as it is hard to disentangle policy aspects from broader impacts.

3.3.3 Last CHERRIES general assembly

In the last CHERRIES General Assembly (Cartagena, 8th and 9th November 2022), there were 2 sessions dedicated to WP5:

The future CHERRIES model and Policy recommendations I

Discussion on the Lessons Learned in the course of the CHERRIES project and the policy recommendations that arise from this reflection. In the session, the new CHERRIES model was presented (see 2.2) and further discussed. Participants were asked to give their feedback on the new model in terms of:

- Strengths of the CHERRIES Model: What else did you perceive as a strength? Do you disagree with some points?
- Issues of the CHERRIES Model: What else did you perceive as an issue? Do you disagree with some points?
- Future of the CHERRIES Model: Do you agree with the ideas of a Hub and a Forth Step? What else should be in a Future model?
- Other comments: Anything else that might help to finalise this work?

In general, the session confirmed earlier assessments made about the model. However, the feedback added granularity. The following paragraphs summarize the obtained feedback.

Strengths of the model

The model provides a step-to-step methodology that regional actors can follow in a very flexible way to develop innovation in a complex environment. The focus around a specific issue helps in building a coalition around a specific issue and enables the promotion of collaboration in a field where different voices are crucial for developing quality products and services. The model's openness is important to identify new information and reformulate initial ideas. This way, a common arena is established that brings together actors with different backgrounds, e.g., practitioners, scientists, civil society, policy and funders. However, managing this process requires personal commitment and ongoing engagement, which requires an active management of people and processes. This management is important during process in order to obtain the fit-for-purpose, which has been identified as a strength, because this fit is not a given from the start but is achieved through the co-creation and collaboration process. It is important to allow every party to participate on their own terms, while focusing on a more inclusive and balanced, and thus complete, deliberation of the final result. When the arena and engagement process work well, and the group of actors share a vision of the result of the process, the model can work as change management catalyser. Thus, it is important to bring the actors together early in the process and build strong relations in order to manage the co-evolution of the new solution and its organisational and institutional context. The implementation process will require these strong relations between the actors. In this way, the model will also provide an early access to markets for new solutions and open possibilities for future collaborations. The question of the model's responsiveness has been challenged as it is has been pointed out that experts may not be able to come to decisions quickly. How such decisions could be improved needs further investigation.

Issues

The model's issues that were identified can be summarised in two bigger themes. First, there is the question of institutional ownership and secondly there is the question of how to design and manage a shared arena efficiently. Regarding the first issue, the concern is that the management of such processes needs structures to implement them properly. The model requires leadership at all stages of the process and hence a professional management. Thus, the implementation of the model requires funding for the management as well as the Call for Solutions. However, in this context, the process needs to focus on the adoption and implementation of novel approaches into clinical contexts. The second cluster of responses addresses aspects of stakeholder and the difficulty to manage the degree of openness at different steps. The role of stakeholders is changing throughout the process and thus, it is a challenge to involve and motivate the right stakeholders at the right time. In general, finding the "right" stakeholders, including the hard to reach groups, and empower them to engage on their own terms is a challenge of the model. This is, further, closely related to expectation management as well as approaches to deal with frustration. In general, these aspects relate to the question of the governance of the process, that has not been a central element in the original model.

The future Cherries Model

The Future Health Hub Model has been met with interest. The concept per se has been considered a good idea, however, the idea was too abstract to get detailed feedback from the participants. The remarks included the practical remarks like the need to secure funding and to engage decision makers early. Some comments stressed the need to put more emphasis on governance structures while other were concerned that this would lead to a bureaucratisation of the process. There were general comments, that there should be commitment for the implementation/adoption if the innovative pilot is successful and that the actors that are involved might require a training on the identification of needs, challenge definition, and co-creation etc. In regard to the Hub directly, the importance of a proper embedding has been stressed, in order to be able to become a central element of the regional innovation system. Further, it is important to leverage existing platforms rather than duplicating structures.

Other Aspects

Under other aspects, the intersectoral integration between social, welfare and healthcare domains throughout the innovation process has been mentioned as a broadening aspect. Further, the need for successful adoptions, the process ownership and the need for evaluation have been mentioned. Furthermore, the question of finance emerged. In the CHERRIES project the pilots did not directly deal with the power structures that exist and the importance of budgetary control of decisions.

The future CHERRIES model and Policy recommendations II

In the second policy session all recommendations that were produced over the course of the project were listed under 4 different categories:

- Healthcare
- Regional innovation

- RRI
- Sustainability

Some of these recommendations come from one specific region, others were more generally expressed. In the interactive session, the CHERRIES participants and policy guests were asked to prioritize the recommendations for three specific levels: supranational, national and regional to indicate at what level or levels recommendations should be addressed. Each participant could vote 3 times, and there were no restrictions to the voting, i.e. all three votes could be put in one topic, or spread over topic and levels. Votes could be put everywhere. As the numbers are low, in this report only totals are shown. In chapter 5 the revised and combined recommendations are presented. These will be further reported on in a policy brief.

4. Policy summaries from a territorial perspective

4.1 Murcia

The story of CHERRIES in Murcia is one of institutionalisation of RRI-inspired demand identification processes across the organisations that, together, have the agency to influence how regional innovation in healthcare is governed and exert influence in this highly political arena. At the same time, it is a story of resistances to changing already-existing practices in healthcare organisations that requires a lot of political work by the regional actors to addressing and advancing the RRI-related approaches envisioned. To this end, not only CHERRIES, but also a previous European Commission-funded project has been hosting the efforts by the regional partners in their organisations.

4.1.1. Regional policy workshop summary (March 2022)

The overall conclusions and recommendations for RRI healthcare and innovation in a regional policy mix as discussed in a first regional policy workshop (March 2022) are given below. The report is available in ANNEX 2.

Research has to reach the patient and has to move towards the improvement of the quality of life or even recover. Right now, the return on investment toward patients is really low.
There is a lack of holistic vision in the relation with the patient and tends to be a one-on-one interaction without considering all the other stakeholders that could influence the patient health. Co-creation avoids individualism.
Not only the healthcare organisations think on services but without considering a demand driven approach and the patient needs, but also the market state-of-the art is not considered.
When it comes to cocreation, it takes some time and effort to understand the role played by each stakeholder, so a previous training might be needed.
Co-creation in healthcare does not exist as such but launching a yearly call might help. The identification of needs could help to the development of an exosystemic approach for the solution.
The patient moves from being considered the subject to co-participant and it is relevant to understand where is the value for him/her (**value-based services**) The cost-benefit analysis is very relevant for this cocreation approach. Technology transfer should involve different stakeholders.
The main challenge is the cultural change as the management has usually been done through results, not processes and in order to include new ways of working, processes need to change and KPI have to be defined.
Research activities should clearly differentiate value vs business. Research should have an aim, an integrated global vision towards, e.g. the quality of life and the model pays more attention to the cost efficiency

4.1.2 Mutual learning on change management (May 2022, Brussels)

The mutual learning session with representatives from the Murcia region (project partners and policy makers) started to discuss the challenges that would need to be addressed through the change management approach. Change would be needed in public administration where resistance to changes is mostly present. Stopping the top-down decision making process is needed. Also, during the need identification the involvement of the final user it is considered essential. And all solutions should address health professionals as well and not only patients. Good practices to be continued are co-creation training such as the activities carried out for InDemand and CHERRIES project. It is recommended to follow up the cultural change process that is now ongoing within the institutions. The impact of these changes would be the adoption of innovation procedures that are better, more efficient and quicker solutions. Also the co-creation process could attract industry. To support his change, policies are needed where the need identification process will include patients. This procedure should be legitimised in the system and anchor it in a sustainable way. We also need commitment to implement the adoption of the innovations.

ROADMAP for change

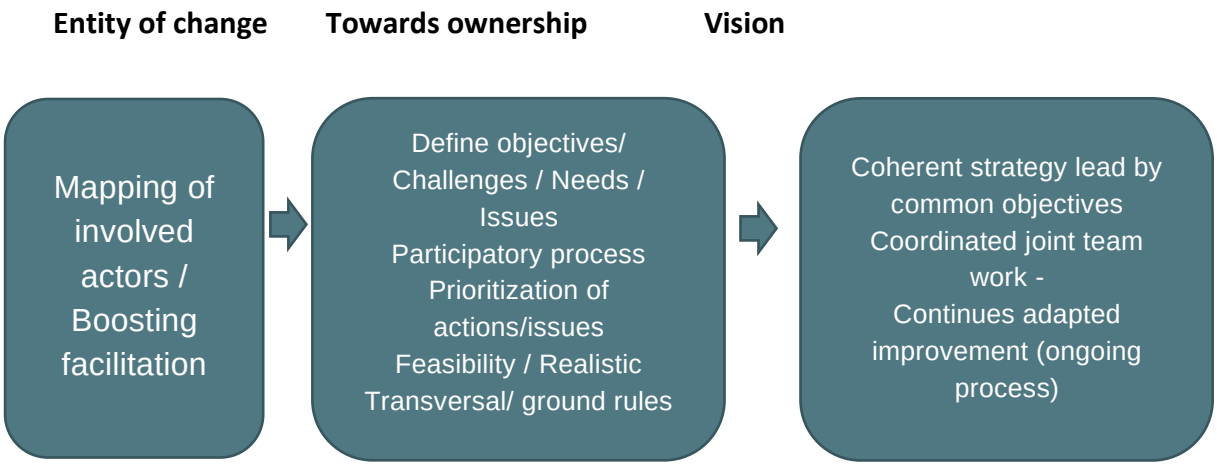
Is your organisation ready for the change? (organisational readiness)

This issue is related to the people in institutions (blocking stones), the change need to be structural (culture of change). It is needed to address the cultural reluctance to change. There is consensus in the group about their organisations are not ready to change (yet). They think the interorganisational collaboration should be a compulsory process, not optional. Innovation should be institutionalised.

What would be a motivation for change?

Motivation for change would be ownership, being part of the initiative. Another way of motivating people is through training and capacity; both in terms of soft skills and hard skills. There is a huge lack of knowledge of methodologies such as co-creation. Another relevant aspect as motivation for change would be rentability. If there is a clear benefit and focus on efficiency it could help to improve the whole system. The motivation should be different for a certain level or area within the organisation. Do better together.

How do we start? (visioning and strategy) (short term - midterm – long term)



4.1.3 Policy summary from on-site visit and interviews (October 2022)

The enriched policy recommendations from Murcia are:

Identify and mobilize agents of change – Innovation leaders

Identify and train key actors at the regional level with the main goal to deliver, disseminate, and create awareness about more responsible ways of working, the relevance of collaboration, and involving different stakeholders in the discussion. The regions need change drivers in each organization, open to promote certain behaviours. The changes rely on the specific people (actors) involved in the process.

Cultural change and co-creation

One of the main challenges in the region is to address cultural change. The management has usually been done through results, not processes including responsible approaches, processes need to change and KPIs must be re-defined. There is a huge lack of knowledge of methodologies such as co-creation and the resistance to change is mainly found in public administration. Not only hard skills need to be addressed while building capacities, but soft skills are essential to achieve the required changes.

Co-creation trainings in the region such as the ones conducted for InDemand and CHERRIES project are a perfect example of good practices. We should follow up the cultural change process that is now ongoing within the institutions. Co-creation meetings aim to clarify concepts, to understand the role played by each stakeholder and to reach a common language between healthcare workers, university researchers or politicians. Training is essential and from a peer level, all types of knowledge are valuable.

Decrease bureaucracy in technology transfer

Bureaucracy in innovation is one of the barriers identified, particularly the knowledge and technology transfer from the research to the market. Setting up a start-up or spin-off is challenging, to register patents, perform market research, develop utility models is a huge amount of paperwork. There are costs involved in this process as well, we need to consult many experts in the process (law, business, administrative). People get frustrated along the way and give up. A recommendation should be in the way of reducing the bureaucracy to them to disseminate their innovations and take them to the market and potential clients.

Foundation for Health Research and Training in the Region of Murcia (FFIS) has experience in mapping or identification of research groups with the potential for transferring results to the market.

Formalization of inter-organisational collaboration

Inter-organisational Collaboration seems to be a key challenge in the region. Some actors claimed it should be a compulsory process, not optional. A few ideas to consider for formalizing participation are mentioned below:

- In the context of Smart specialization strategy (RIS3) the Entrepreneurial Discovery process (EDP) could be used as a formal tool to make the changes in collaboration mandatory.

- To use Forums of communication as spaces for collaboration. A good local example is how has been organized it around rare diseases, they coordinate conversations including clinical professionals, biochemicals, patients and even the family of the patients. Is in these instances that new ideas and project arise, multidisciplinary and multi-actors projects.

Improve identification of demands and alignment with regional policies

There is a lack of holistic vision in the relation with the patient and tends to be a one-on-one interaction without considering all the other stakeholders that could influence the patient health. Co-creation avoid individualisms. More holistic approaches are needed for the patient's wellbeing, where psychosocial visions are integrated. The treatment of the patient is compartmentalized, each one deals with some phase of the patient's care. The identification of demands from the patient's side goes in line with innovations in hospital processes, procedures in primary care, saving patients' discomfort, costs to the health system. These demands need to be permanently updated otherwise they become obsolete.

Observatory of regional demand-driven innovation

Establish an Observatory of regional demand-driven innovation to collect needs in different sectors and made it available for researchers to focus part of the research works on identified needs and develop adapted solutions.

Also, politicians and decision-makers need to better communicate with patients associations. Potential limitations to integrate the issues in the public health system agenda should be explained and clarified. By suggesting and advising how the demands could be better aligned with policy development would be of huge help for patients associations and society more broadly.

Ensure sustainability of successful pilots

To tackle current problems of pilots sustainability and knowledge transfer these are a few ideas defined by regional actors:

- Launch yearly Open call: Co-creation as such in healthcare does not exist as such but launching a yearly call might help. The identification of needs could help to the development of an ecosystemic approach for the solution.
- Bringing this issue into public consultations at European level such as the evaluation of Horizon Europe and horizon 2020, they could apply changes in the selection criteria for projects giving more importance to the sustainability of the pilots.
- Generate a project portfolio with initiatives like CHERRIES model in order to give continuity to the ongoing process of change in the region and keep actors engaged.
- Funding: Funding agencies provide resources to projects and initiatives to a certain extent. A good recommendation would be to ensure continuity of the resources by making agreements between different organisations to reward successful initiatives and encourage experimentation.
- Procurement of innovation (reflective) encourage solution to progress.

Open science and knowledge transfer
Research must reach the patient and has to move towards the improvement of the quality of life or even recover. Right now, the return on investment toward patients is really low. The patient moves from being considered the subject to co-participant and it is relevant to understand where is the value for him/her (value-based services) The cost-benefit analysis is very relevant for this cocreation approach.
Research activities should clearly differentiate value vs business. Research should have an aim, an integrated global vision towards, e.g., the quality of life and social impact and the model pays more attention to the business model and economic impact.

Regarding GDPR and its impact in collaboration, the communication in these projects should be improved in terms of patients feeling freer to share data and information. Otherwise GDPR limitations undermine the impact and diffusion that the project can have at the regional level.

4.2 Örebro

The story of CHERRIES in Örebro region can be told as a story of interorganisational efforts to democratise the processes of identifying, and in effect making (or suggesting) decisions that concern problems that are understood as common. In particular, it is a story about carefully capitalising on already-existing networks and initiatives and, through the CHERRIES pilot activities, involve actors in a larger mission. Eventually, these efforts were carried out by a network of participating and willing organisations that was led by the regional CHERRIES partners with a clear vision to create shared spaces where problems can be made visible, deliberated in public, and be approached collaboratively.

4.2.1 Regional policy workshop summary (February 2022)

The overall conclusions and recommendations for RRI healthcare and innovation in a regional policy mix as discussed in a first regional policy workshop (March 2022). The report is available in ANNEX 3.

We have arenas where we can capture needs – but we need to systematize the work
The workshop participants gave examples of a number of existing arenas and situations where we could have the opportunity to capture needs. For example, in the organization´s operational work, in meetings between professionals and patients/citizens, as well as in targeted activities such as surveys, citizen dialogues, councils etc.
Although there are many possible channels and arenas where needs could be articulated and captured, today we lack tools or the systems to take care of the information we get through these channels. For example, it is unclear who is responsible for running processes to collect the needs and what processes should be in place to process the needs that are collected. These are issues that need to be further processed, at several levels in several organizations, and to be resolved.

We have a lot to gain from a new way of working

All of the attendees were united in the conviction that a more demand driven approach would be beneficial in many ways. Mainly, we could be more efficient with a higher accuracy in the services and products that we offer. In addition, we could offer higher quality in our services. Moreover, a higher level of patient/citizen participation would give us new perspectives and insights, as well as more qualitative knowledge that could improve our services.

To enable this, it has to be worth the while for patients/citizens to engage. They need to know that we listen and that their engagement leads to something. This is often not the case today.

Prerequisites to make this possible

For one, dedicated resources are needed. The willingness is there but professionals often lack time and knowledge to work differently compared to how they work today.

Second, we need to use existing networks and collaborations in new ways. There are arenas where we could share good ideas and working methods but they need to be used differently on order to foster a more demand driven approach and enable patient/citizen participation.

Third, organizations have to be willing to change. Here the workshop participants stressed that the window for change is open now as a result of the ongoing transition to person centered and integrated care. Many discussions and processes are ongoing in this direction and CHERRIES is a piece in that puzzle.

What it comes down to is organizational culture and priorities. We also need to be courageous and decisive leaders and decision makers who dare to try new ways of working. Innovation needs to be integrated in leadership programs and business plans.

In this regard, the next steps would be to incorporate parts of the CHERRIES concept and methodology in the person centered and integrated care processes, as well as the existing work in the partnership for social innovations. To get long-lasting effects, the CHERRIES project cannot stand on its own. However, the processes are somewhat immature.

4.2.2. Mutual learning on change management (May 2022, Brussels)

From the regional workshop it was clear that the partners need to keep talking about the issues (see 4.2.1) to enable change. The more talking, the more the maturity and willingness to change increases. The Brussels workshop was a step in this direction, where it was possible to initiate and deepen the dialogue with policy makers, especially politicians. A third step is the conference that is planned in September 2022 as part of the CHERRIES on-site visit (WP6), where the target group will be both policymakers (including politicians) and professionals. The mutual learning workshop rendered many interesting discussions and insights. It is clear that this process is depending on other ongoing processes and needs to be integrated in – and affect – these. Whilst acknowledging change processes, it was good to reflect on the do's (continue doing) and don'ts (stop doing).

- Stop thinking public sector organisation know best regarding the needs and solutions concerning the citizens. -> that is a change of mindset.
- Stop focusing solely on *solutions* when it comes to financial resources/funding, instead value (and thereby finance) the step before – *the needs*.
- Stop focusing merely on statistics and start valuing the voices of the citizens/ professionals/ stakeholders/others. Both are needed and complement each other.
- Stop focusing on organisations (region/municipality) and instead focus on the inhabitants in a given geographical area -> working together.
- Continue testing the CHERRIES-method in other areas, for example suicide prevention (an area where the regional administration happen to have financial resources to possibly fund pilots).
- Continue to continuously consider which stakeholders to involve in different matters
- Continue to illustrate and exemplify the benefits of a new way of working, in order to effect the will to change.

In order to further support change through policies, procedures, and/or processes, the regional partners discussed the need to "marketing" especially the call for needs method to the politicians; to change civic dialogues from solution focus to focus on needs; and to enable the use of the call for needs method early in the application for funds-process. More generally, the CHERRIES approach would benefit from continued testing in order to fine-tune it to regional needs, but in any case it would be good to get the municipalities and the Region to adopt the CHERRIES method into their internal processes.

ROADMAP for change

Is your organisation ready for the change? (organisation readiness)

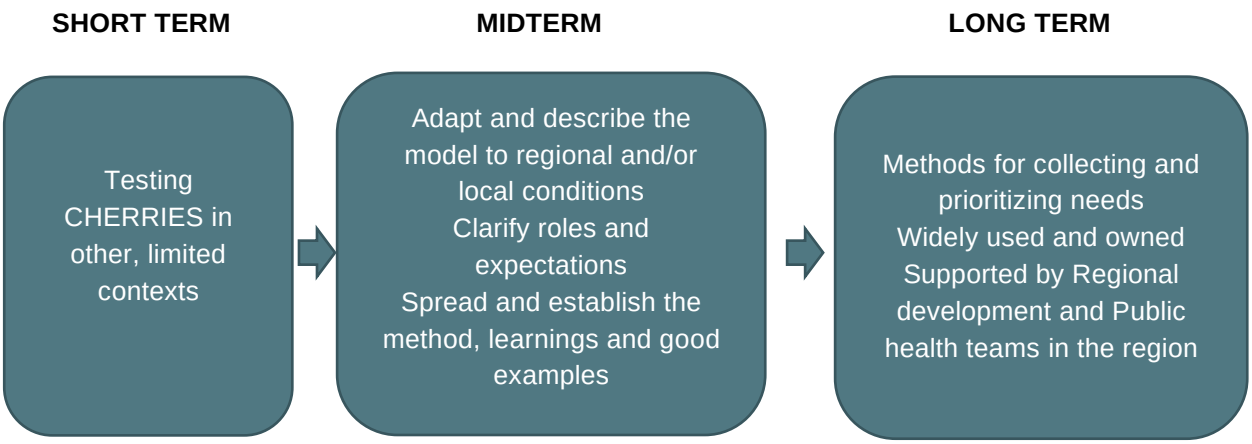
Some are, some are not… but there might be a window of opportunity now, as a transformation of the healthcare is necessary and ongoing…

What would be a motivation for change?

If we are able to develop new solutions with more accuracy;

- Efficiency, resource effectiveness
- Getting more good examples
- Health economic evaluations?

How do we start? (visioning and strategy) (short term -midterm – long term)



4.2.3 Policy summary from on-site visit and interviews (September 2022)

The enriched policy recommendations from Örebro are:

Establish systematised streams to collect healthcare needs (address responsibility)

We have arenas where we can capture healthcare needs – but we need to systematize the work. The workshop participants gave examples of several existing arenas and situations where we could have the opportunity to capture needs. For example, in the organization´s operational work, in meetings between professionals and patients/citizens, as well as in targeted activities such as surveys, citizen dialogues, councils etc.

Although there are many possible channels and arenas where needs could be articulated and captured, today we lack tools or the systems to take care of the information we get through these channels. For example, it is unclear who is responsible for running processes to collect the needs and what processes should be in place to process the needs that are collected. These are issues that need to be further processed, at several levels in several organizations, to be resolved.

Enhance inclusive knowledge practices (especially citizens/patients)

We have a lot to gain from a new way of working, especially in relation to citizens and patients. All the attendees were united in the conviction that a more demand driven approach would be beneficial in many ways. Mainly, we could be more efficient with a higher accuracy in the services and products that we offer. In addition, we could offer higher quality in our services. Moreover, a higher level of patient/citizen participation would give us new perspectives and insights, as well as more qualitative knowledge that could improve our services. To enable this, it must be worth the while for patients/citizens to engage. They need to know that we listen and that their engagement leads to something. This is often not the case today.

Empowerment of professionals to work with a different healthcare paradigm (patient-centred)

For one, dedicated resources are needed, including training on demand-driven approaches. The willingness is there but professionals often lack time and knowledge to work differently compared to how they work today. Furthermore, the conditions that e.g. healthcare organizations operate in determine everyday practices. The indicators that are used to monitor and evaluate should be redesigned to fit a more demand-oriented healthcare paradigm. In effect, daily practices can be influenced through such redesigns of the system.

Creation of relational governance structures rather than 'levelled' structures for innovation

Second, we need to use existing networks and collaborations in new ways. There are arenas where we could share good ideas and working methods but they need to be used differently on order to foster a more demand driven approach and enable patient/citizen participation. Part of this concerns cross-organizational collaboration across municipal (kommun) and regional bodies. Small municipalities are very dependent on their elective communities. Thereby, careful relationship-building and awareness

about local developments is required by the local politicians (to ensure re-election). Vice versa, the reoccurring problem is how to speak to the municipalities as county: do you speak as one voice together or give smaller municipalities another voice? Often, these group together (North, South, West) to get momentum on the 'bigger' municipalities. Municipal political realities interfere cross-organisational collaboration. It is again a matter of moving from a governed to a governance approach, which remains a challenge (Bellamy et al. 2010).

Creation of relational governance structures rather than 'levelled' structures for innovation

Third, organizations have to be willing to change. Here the workshop participants stressed that the window for change is open now as a result of the ongoing transition to person centred and integrated care. Many discussions and processes are ongoing in this direction and CHERRIES is a piece in that puzzle. What it comes down to is organizational culture and priorities. We also need courageous and decisive leaders and decision makers who dare to try new ways of working. Innovation needs to be integrated in leadership programs and business plans.

Beyond the organizational culture, another recommendation is for organizational change. The leadership over particular sections of the organization has the political mandate to make decision for this particular section of the organization. Policy issues however do not (only) emerge in clearly cut categories. For instance, school dropout rate is clearly linked to healthcare needs. Whose responsibility is this? Health or education? Departing from there, political organization around issues seems more productive (this was highlighted by multiple interviewees).

Pre-institutionalise pilots and other spaces for experimentation ('testbeds')

There are serious strains on resources when pilots and other actions that aim at experimentation and testing happen without considering, beforehand, the organisational capacities and abilities of institutional structures to respond to the proposed transformations that the pilots imply. The nature of pilot spaces (as autonomous 'spaces' of development) can be used for cooperation across organisational branches that qualify if they are relevant in relation to the changes proposed. These should be consulted beforehand and cooperated with in order to prime organisational changes.

Develop inclusive epistemic standards for regional policymaking

Especially in expert-driven fields, the logics of 'what counts as good knowledge' are assumed into policymaking (e.g. double-blinded, randomised controlled studies in healthcare). Often, this is unrealistic. This results for example in leaps of faith by policymakers, simply believing that something is a problem that needs policy attention. Alternatively, and especially in healthcare, it results in a 'searching for' beneficial measures that can be taken as evidence. This observation is a question of what knowledge counts. Developing standards for good knowledge that includes a wide range of knowledges (scientific knowledges, experiential knowledges) as a basis for policy action is therefore appropriate and can sensitise policymaking practice to democratic values.

Break interorganisational power structures through democratising strategy-making processes
Power structures are maintained insofar strategies are made through e.g. smart specialisation strategies that direct particular regional priorities. The already-existing actors that do not adapt to the newly given priorities are discontinued from funding. Alternative ways of, e.g., inclusively developing a smart specialisation strategy should be considered to allow for actors in the local R&I system to influence the discussion.

4.3 Cyprus

The Cyprus policy background and territorial dynamics around research and innovation governance builds upon two major issues. 1: The "Cyprus research and innovation strategy framework 2019-2023" highlighting Cyprus to become a dynamic and competitive economic, driven by research, scientific excellence, innovation, technological development and entrepreneurship, and a regional hub in these fundamental areas. And 2: the (ongoing) developments towards a general healthcare system (GHS), that aims "to implement a people-centred system reflective of modern thinking and practices. In this context, the regional partners' own organisations' requirements and standards; as well as project ideas of 'responsible research and innovation' and its logics already indicates major changes to navigate. CHERRIES came with more budget, focused on a national scale, and experimented with 'demand-driven approaches', an RRI-inspired methodology that was used in CHERRIES to identify local healthcare needs. Such approaches and philosophies behind R&I were rather new, as well. It is worth mentioning that the Cypriot case in CHERRIES accounts for changes to the attitudes, capacity building of skills and expertise, changes of attitude towards knowledge exchange and an active strengthening of relationships and trust across actors involved.

4.3.1 Regional policy workshop summary (March 2022)

The overall conclusions and recommendations for RRI healthcare and innovation in a regional policy mix as discussed in a first regional policy workshop (March 2022). The report is available in ANNEX 4.
The workshop was fruitful, and participation was of high involvement by all participants. Upon further analysis of the input provided by the participants two bundles of recommendations were formulated to construct the next steps that go beyond CHERRIES and are perceived as initial approaches to reach national policy recommendations.

Clear health system leadership to embed virtual care strategies into aspects of primary and community care with consideration for advancing telecare in meeting the needs of rural communities that are often isolated from specialists. Recommendation #1 suggests that:

- Sites for telehealth visits should be considered where a healthcare personnel can assist the patients in rural (remote) areas with the use of telecare equipment;
- Different telehealth modalities should be made available;
- Raise awareness and provide trainings so that providers can include telehealth in their services;

- Consider the financial aspect of telecare and have a plan on what charges might be and who will be responsible to fulfil them;
- Inclusion of telecare in the services offered by the general health system.

Patient-centred primary care is required and should be assisted by technology and not be hindered by complex technological barriers. Recommendation #2 suggests that:

- Any technological solution should be simple to use both by healthcare providers and patients;
- Technological assessments should be performed on infrastructure in rural areas to address issues that result in connectivity interruptions;
- Standards and quality assessments should accompany telecare practice to ensure quality of care; Privacy and security issues deriving from a technological solution should be considered;
- Awareness campaigns and free training for digital skills offered to remote users to enable the use of telecare kits and allow smooth and thorough consultations with providers

4.3.2 Policy summary from on-site visit and interviews (October 2022)

The enriched policy recommendations from Cyprus are:

- Clear health system leadership to embed virtual care strategies into aspects of primary and community care with consideration for advancing telecare in meeting the needs of rural communities that are often isolated from specialists (see above, 4.3.1);
- Patient-centred primary care is required and should be assisted by technology and not be hindered by complex technological barriers (see above 4.3.1);

Establishment of a national umbrella organisation for representing patients

The political agency – and interest – of patient organisations in Cyprus are determined by a thematic focus on the illnesses and related patients they care about. Whilst this creates strong communities for particular groups, there is missing an organisation that has an interest in improving the healthcare system and can, in e.g., policy discussions that are concerned about systemic healthcare practices and issues, represent patients.

For research funders: diversify epistemic standards; what knowledge counts

The focus on purely entrepreneurial innovators-researchers for the uptake of ideas and solutions (i.e., knowledge) needs diversification to pertain to democratic ideals. The logic that entrepreneurs' solutions are inherently demand-oriented might be true for consumer logics, a demand by the market, but not for the demand that CHERRIES is promoting. The innovation strategy that is about to be implemented by the Chief Scientist amplifies an entrepreneurial focus that is not necessarily oriented towards needs or societal impacts. The recommendation is to target a wider scope of actors, unlocking the potentials and competences that lie in citizen associations, other NGOs, universities, labour organisations and other actors. As part of this recommendation:

Implement indicators pertaining to societal impact in research assessment

As the primary funding body in Cyprus for R&I, there is enormous potential for inclusion of practices that orient themselves towards societal wellbeing in the interaction with entrepreneurs and other individuals that are the primary source for R&I in Cyprus. For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice, as stipulated by , the San Francisco Declaration on Research Assessment (DORA).

Establishment of interorganisational reflections of innovation practices

Opening up conversations about what standards of research and innovation are being followed – that is, what definitions of good innovation do we, as decision-makers, adhere to, can potentially unlock a self-reflective exercise about the processes of good innovation governance (RRI-y) from within the governing organisations. Such collective spaces need work to become institutionalised but are a baseline for improving R&I governance locally. This may sound logical, but the current role of R&I in producing functional technofixes for social problems and how dominant actors relate to their environment and their practices, is limiting the potentials to change of behaviour.

Imply RRI values into existing organisational methodologies

As a dominant mode of working at e.g. Gravity, agile methodologies are not unknown. As owners and representatives of CHERRIES locally, the project partners could, intraorganisationally, work to imply RRI-related values and themes into already-existing practices (agile).

4.4 Cross-learning experiences from other territories

Currently, there are plans for strategic intervention to manifesting the CHERRIES methodology locally. For one, indirect partners in Burgos, another Spanish region and part of the CHERRIES mirror region activities, have been very receptive to the case in Murcia and are trying to incorporate similar approaches. This is being executed through the European Business and Innovation Center of Burgos (CEEI BURGOS) or Business Innovation Center (BIC Burgos). The Mirror Region of Burgos has been the only one adopting the CHERRIES methodology to the case of rural housing policies, the only innovation sector different from healthcare. Throughout the twelve-months coached innovation process, the main learnings are related to the necessity of building a governance structure to gather all the actors involved in the rural housing sector in the region (sellers, regional entities, local municipalities, universities, etc.); the need of segmentize the different types of use of rural housing (renting for vocational periods, long-term stays for remote workers or pensioners, etc.), and to identify the needs of each group depending on the above-mentioned segmentation.

Also, the West of Ireland (IE) Local Partners have participated in at least two General Assemblies. These partners represent the Regional Development Agency (Western Development Commission), private entities (CISCO) and research organizations (University of Galway). They were interested to get acquainted with the CHERRIES methodologies in all its aspects but foremost on healthcare delivery in remote territories. The region of West of Ireland is composed of small, dispersed municipalities. The sparse populations are hardly accessible due to terrain constraints and weather conditions, as they are settled mainly in small islands around the western coast. Hence, the Irish Consortium is interested in applying CHERRIES methodology to address such problematic in a similar way to the Cypriot Pilot Region.

In Portugal, the Centro Region is one of the five Portuguese administrative regions from the mainland. Here, Ageing@Coimbra was created having as main goal the valorization of the role of the elderly people in society and the implementation of good practices to promote well-being and a healthy and active ageing. Between the founding members of the consortium are Instituto Pedro Nunes, University of Coimbra, the Academic Hospital Centre of Coimbra (all three partners of EIT Health, representing the whole value chain). CCDRC is also one of the members that compose Ageing@Coimbra and it is the regional agency responsible for dealing with the regional development, for managing the Regional Operational Programme, and for coordinating the regional S3 (being Health and Well-Being one of the regional specialization domains since the beginning).

The Romanian health care system is transitioning from centralism to local autonomy, privatization and competition by increasing the role of local authorities, professional associations, funding institutions, communities. Thus, the reform of recent years has tried to fundamentally change the health system in order to rebuild the legislative and organizational framework and to diversify the mechanisms for generating financial resources, in the same time with the transition of gravity center of health services to outpatient care. The North East Region is one of the eight development regions in Romania, which do not actually have an administrative status. The North-East Regional Development Agency (RDA) is a generator of economic and social development, the only regional independent body that manages national and European public funds for regional development. North East RDA designed Smart specialization strategy, coordinating its elaboration together with local, public and private actors: companies, universities, research and development centers, public administrations and civil society. Health is one of the smart specialization sectors and North East RDA supports the innovative health projects promoters to identify the most suitable partners and to attract resources necessary for the implementation.

5. Policy recommendations:

The policy approach in CHERRIES departed from the idea that healthcare innovation requires multi-faceted policy interventions (Weber and Rohracher, 2012). A policy mix which combines several policy instruments would be the response to this challenge. During the project, the interactive sessions with the regional partners on policy addressed several healthcare, regional innovation, RRI and sustainability related issues that are prerequisites for developing appropriate policy mixes. Whilst the assumption at the start of the project was that a multi-level governance perspective would be necessary, it turned out that the regional findings did cover multiple instruments and multiple governance objectives, but not necessarily arranged in complex portfolios of policy goals and means (Howlett et al., 2015).
Current policy discourse supports the idea that there is a need for research to address major societal challenges, such as in healthcare and wellbeing. This trend is also visible at the level of Member States. Transformative Innovation Policies (TIP) (Wittmann et al. 2021; Schot and Steinmueller 2018) aim to develop innovative solutions that will support transformations of the current socio-technical systems towards more sustainable ones. Transformative changes include transformation of established and stable production and consumption modes, technologies, knowledge bases, practices, regulations, norms and institutional structures. It is a complex process to transform the dominant ways of thinking, organizing and doing, requiring both exogenous triggers and endogenous dynamics (Werbelof et al. 2016), and building upon multi-actor innovation processes, experimentation, that feed into learning processes to overcome the various barriers related to path dependencies, oppositions and rigidities.

The selection of policy recommendations from each of the three regions are structured in 4 categories. The prioritization poll (see 3.3.3), that would benefit from more voting, has led to the following.
Priorities

HEALTHCARE	**Total 15 votes**
Clear health system leadership to embed virtual care strategies into aspects of primary and community care with consideration for advancing telecare in meeting the needs of rural communities that are often isolated from specialists.	
Patient-centred primary care is required and should be assisted by technology and not be hindered by complex technological barriers	5
Improve identification of demands and alignment with regional policies	3
We have arenas where we can capture healthcare needs – but we need to systematize the work;	
Empowerment of professionals to work with a different healthcare paradigm (patient-centred);	7
Establishment of a national umbrella organisation for representing patients (if not in place);	

REGIONAL INNOVATION	**Total 7 votes**
Decrease bureaucracy in technology transfer	1
Formalization of inter-organisational collaboration	
Action plan and partnership for innovation	2

Procurement of innovation (reflective) encourage solution to progress.	
Application of S3 to S4	
Observatory of regional demand-driven innovation	3
Develop inclusive epistemic standards for regional policymaking	
Establishment of interorganisational reflections of innovation practices	1

RRI	**Total 6 votes**
Identify and mobilise agents of change – Innovation leaders	1
Cultural change and co-creation	2
Open science and knowledge transfer	
To address key target groups during the need identification process	1
Institutional commitment / regulatory framework around the call for needs process	1
Creation of relational governance structures rather than 'levelled' structures for innovation;	
Pre-institutionalise pilots and other spaces for experimentation ('testbeds')	
Break interorganisational power structures through democratisation	1
Imply RRI values into existing organisational methodologies	

SUSTAINABILITY	**Total 11 votes**
Ensure sustainability of successful pilots	3
Provide dedicated resources	3
In order to change the system in the long run, the 3 spheres of transition management must be orchestrated.	
Motivation for change would be ownership, being part of the initiative.	1
Another way of motivating people is through training and capacity. Soft skills and hard skills e.g. on co-creation	
Clear benefit and focus on efficiency	3
Coherent strategy lead by common objectives	
Coordinated joint team work	
For research funders: diversify epistemic standards; what knowledge counts;	1
Implement indicators pertaining to societal impact in research assessment;	

The listed policy recommendations across the four domains, healthcare, RRI, regional policy and sustainability, each show a wide range of suggestions to improve the processes, support learnings and build capacities. It is clear though that the healthcare domain received the majority of votes (15). This may be related to the need for transformation in that sector. The other one is the sustainability issues, which in this case means continuation (instead of green transition). In particular the nature of pilots as isolated spaces of experimentation were criticised, arguing that getting public actors and policy to commit to pilots' results is extremely difficult. Often, the CHERRIES project became the place where these contradictions could be problematised and negotiated. In fact, recently it was argued that pilots do not threaten dominant actors' positions and are therefore unproductive to transformative changes that are needed (E. Turnhout inaugural lecture 2022).

Prioritized policy recommendations

As described in 2.2., where the new CHERRIES model is presented, an essential aspect of the development of new practices and innovative approaches in healthcare is that these are not a singular phenomenon but rely on an implementation process into organisational and institutional contexts. Thus, it is important to create stable relations between actors that are based on trust and shared objectives as a basis for developing shared visions and understandings of the general development trajectories of healthcare services in a given local or regional context. These structures are described as a Hub, providing the space for building these lasting relationships as a basis for developing of shared perspectives and joint projects. Such a Hub consists of 4 functions:

- Organising multiactor networks and problem structuring (mainly strategic level)
- Vision and joint transformation strategies (mainly tactical level)
- Monitoring, evaluation and joint learning (mainly tactical level)
- Execute experiments and manage co-evolution during implementation (mainly operational level)

To support the functions of the Hub, the following policy recommendations from the CHERRIES participants are crucial to integrate change processes within regional healthcare systems.

- Empowerment of professionals to work with a different healthcare paradigm (patient-centred);
- Patient-centred primary care is required and should be assisted by technology and not be hindered by complex technological barriers;
- Improve identification of demands and alignment with regional policies;

- Ensure sustainability of successful pilots;
- Provide dedicated resources;
- Clear benefit and focus on efficiency

The first three fit under the general topic of organizing needs identification and taking a patient centred approach, which still is a paradigm shift in healthcare. The need for such a transformation is often highlighted, but the current structures are difficult to change. They refer to a cultural change rather than a technological one. The second three prioritized recommendations pertain to the sustainability of pilots and thinking ahead of resources, based upon shown benefits.

From a transformative change perspective there are three types of agency associated with patterns of change:

Culture led: Creation of a strongly aligned multi-stakeholder network or bridging organisation between industry, science and policy spheres, promoting the alternative discourse.

Structure led: The transformation of institutional settings. Typically, by actors with strong positional authority (i.e.: a government agency or another core player) who use their position to influence or change application of aspects of the existing regulatory framework.
Practice led: Innovation, entrepreneurship and change in practice. Makes use of a crisis, window of opportunity or available funding for implementation of a new innovation or solution to a social problem.

Whilst the CHERRIES project provided a practice led change, the prioritized recommendations pertain to culture led change (the first three recommendations), and a structure led change (the second three recommendations. These recommendations support the new CHERRIES model which has integrated the cultural change led and the structure change led into the Hub.

6. References

- Bellamy, R., and Antonino Palumbo, eds. From Government to Governance, vol. 1st Edition: Routledge, 2010
- R. van der Brugge & R. van Raak (2007). Facing the Adaptive Management Challenge: Insights from Transition Management. ECOLOGY AND SOCIETY 12(2). DOI: 10.5751/ES-02227-120233
- Fuller, M., & Lochard, A. (2016). Public policy labs in European Union members states, EUR 28044 EN, Publications Office of the European Union, Luxembourg, 2016, ISBN 978-92-79-60894-0, DOI: 10.2788/799175
- Geels, F.W. 2011. 'The multi-level perspective on sustainability transitions: Responses to seven criticisms', Environmental Innovation and Societal Transitions, 1: 24-40.
- Howlett, m., & Mukherjee, i. & Woo, J. (2015). From tools to toolkits in policy design studies: The new design orientation towards policy formulation research. *Policy and Politics, 43(2)*, 291-311. DOI: 10.1332/147084414X13992869118596
- Kemp, R., Loorbach, D., & Rotmans, J. (2007). Transition management as a model for managing processes of co-evolution towards sustainable development. *The International Journal of Sustainable Development & World Ecology*, *14*(1), 78-91.
- Kimbell, L., & Macdonald. H. (2015). Applying Design Approaches to Policy Making: Discovering Policy Lab. University of Brighton. (Document)
- Kuhn, T.S. 2012. The Structure of Scientific Revolutions 50th Anniversary Edition, by Thomas S. Kuhn (Author), Ian Hacking (Author) (University of Chicago Press: Chicago).
- D. Loorbach & J. Rotmans (2006). Managing Transitions for Sustainable Development. DOI: 10.1007/1-4020-4418-6_10; In book: Understanding Industrial Transformation; Publisher: Springer.
- Majchrzak, A., & Markus, M. (2014). *Methods for policy research (Second* Edition ed.). SAGE Publications, Ltd https://www.doi.org/10.4135/9781506374703
- Mintrom, M., & Luetjens, J. (2016) Design Thinking in Policymaking Processes: Opportunities and Challenges. Aust. J. Public Adm. 75(3), 391-402. DOI: 10.1111/1467-8500.12211
- Olejniczak, K., & Borkowska-Waszak S. (2016). Policy Labs : the next frontier of policy design and evaluation. Implications for the EU Cohesion Policy. In: Learning from Implementation and Evaluation of the EU Cohesion Policy. RSA Cohesion Policy Research Network, Brussels, pp. 224-241. ISBN 9782960187908
- J. Schot & E. Steinmueller (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change. Research Policy Volume 47, Issue 9, November 2018, Pages 1554-1567. https://doi.org/10.1016/j.respol.2018.08.011
- Simon, H.A. (1969) The Sciences of the Artificial. The MIT Press. ISBN 9780262690232
- E. Turnhout, inaugural lecture (2022) https://www.utwente.nl/en/academic-ceremonies/inaugural-lectures/booklets/booklets-2022-2023/inaugural-booklet-professor-esther-turnhout-14-october-2022.pdf

- M. Weber and H. Rohracher (2012). Legitimizing research, technology and innovation policies for transformative change: Combining insights from innovation systems and multi-level perspective in a comprehensive 'failures' framework. Research Policy 41(6):1037–1047 DOI: 10.1016/j.respol.2011.10.015
- L. Werbeloff, R.Brown, D. Loorbach (2016) Pathways of system transformation: Strategic agency to support regime change. Environmental Science & Policy. Volume 66, December 2016, Pages 119-128. https://doi.org/10.1016/j.envsci.2016.08.010
    - F. Wittmann, M. Hufnagl, R. Lindner, F. Roth, J. Edler (2021). Governing varieties of mission-oriented innovation policies: A new typology. Science and Public Policy, Volume 48, Issue 5, October 2021, Pages 727–738, https://doi.org/10.1093/scipol/scab044

ANNEX 1 Report "WP5 – Co-creation WS and synthesis input"

Deliberation as a basis for need identification

The healthcare sectors are under stress from increasing demands, ageing populations, chronic diseases, comorbidities and budgetary restrictions. Thus, the sector needs to adapt to this environment and change itself, its processes, technologies and organisation forms. However, this change is contested and different agents have different interests, power and general capacity to engage in this process of change. In this complex environment of stress and multi-agent networks, decisions are made regarding the way services are provided, which technologies are developed and adopted, and how services are organised.

The problem in this context is that no agent has all the knowledge, many lack capabilities (e.g., resources, mandates, network) to engage, and there are no shared arenas or forums for deliberation on how services should look in the future, what technologies and organisational forms are needed and on how to get there.

From Pilots to sustainable action

There is a trend from technology-push towards demand-oriented innovation approaches, where sectoral actors and innovators co-create new solutions and subsequently inclusion and Open Innovation processes are becoming central, which even gained dynamic through the COVID-19 pandemic. In the course of CHERRIES, inDemand, Societal Challenges Platform but also in regional actions like the Social Investment Fund (SIF) (Örebro), direct experiences with this approach have been made by all involved partners. However, all these processes only cover the identification of needs and the development and testing of a solution (exception SIF). Developed prototypes are left alone depending on markets that are difficult and might or might not succeed there (see Innovation Biographies).

The problem in this context is that innovative solutions, that at least in some context can demonstrate to solve an issue that has been identified by healthcare professionals, fail because there is no (not yet) market demand. If the CHERRIES model (or similar), should be used beyond the project it will need to increase the likelihood that innovations are picked up.

Institutional anchor for the model

In the reflection talks, all three regions confirmed that the process – despite some challenges – is a useful instrument to engage with stakeholders and co-create new approaches towards healthcare services. However, for the sustainability of the process anchors and financial resources are needed**.** The problem in this context is, to identify actors and institutions where the CHERRIES model could be anchored sustainably. How would it fit in existing sectoral approaches or regional development strategies or would be the healthcare sector itself a more fitting platform?

ANNEX 2 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX - MURCIA

Regional Policy Lab Workshop Murcia

Context of the Policy Lab

In the context of Task 5.2 of the CHERRIES project a Policy Lab workshop was carried out on the **22nd of February, 2022** in CEEIM, Murcia. The results of this first session should feed and guide the two further Policy Labs aiming to move over from divergent thinking to convergent thinking, where the discussion should narrow down the focus in each of the three pilot territories, applying a regional perspective to the problem and critically assess all the options on the problem and solution side, against the known context, constraints, and obstacles, available resources, timelines, technical feasibility, etc

These regional Policy Labs aimed at ensuring that the conversation is relevant in terms of current regional policy development processes in each region and framed under existing policy instruments[1]. This session is based on the outcomes produced in the first focus group session held between the consortium members in November 2021 (Nicosia, Cyprus).

Overall presentation

Problem definition and solution-oriented session

Before the workshop implementation, each region had to select one of the 2 main topics to be developed as a Policy experiment, namely "*Deliberation as a basis for need identification"*, or "*From Pilots to sustainable action*". The territorial partners opted for the second one due to their experience in several co-creation innovation processes in the healthcare sector.

Workshop	
Date	22nd of February 2022
Location	Premises of CEEIM, Murcia (ES)
Format	Face-to-face
Goal	Reframe the problem definition in the regional context and with the participation of relevant stakeholders and policymakers
Methodology	The methodology used in this Policy Lab session are an open discussion around key identified questions during the consortium meeting in Nicosia, based on SISCODE co-creation journey

[1] Source: Workshop Agenda and Report Template for Regional Policy Labs, ZSI and UL

Participants Organizations

- Regional Government
- Regional Healthcare Services
- University
- Patients' associations
- Health Research Centre
- Business Centre
- Health Cluster

As for statistics representation, the following table shows the main characteristics of the 12 participants.

Gender	4 men	8 women		
Age	18-29 years (0)	30-49 years (8)	+50 years old (4)	
Education level	VET (2)	University degree (6)	Doctorate (3)	Non declared (1)
Stakeholder group	Provider (0)	Policy Maker (3)	Patients/CSO's (3)	Other (6)

Problem definition and solution-oriented session: Preparatory questionnaire

In order to facilitate the exchanges, a short questionnaire had been prepared by the territorial partners and sent to the participants previous to the event and the results were used as a starting point of the discussion.

Experience, Interests and Participation

- Have you been involved in research and innovation activities? If yes, please specify if any were co-creation, and the type of activities and whether they have been successful.
- One of the main needs of innovation is to move from pilots to adoption of research and innovation results. Do you know of any successful projects that have been sustainable?
- What are the factors limiting the adoption of results? (legal, cultural, structural, financial, etc.)
- Can you provide us with concrete cases in which the adoption of the results obtained from the research and innovation pilots could not be implemented.
- What is the main problem from your point of view? Respond in tweet format
- Free reflections on your expectations of the regional reflection workshop. Why did you decide to participate? What are your reasons for collaborating? What do you expect from this kind of workshop?

Main workshop outcomes

Point of departure: From Pilots to sustainable action

There is a trend from technology-push towards demand-oriented innovation approaches, where sectoral actors and innovators co-create new solutions and subsequently inclusion and Open Innovation processes are becoming central, which even gained dynamic through the COVID-19 pandemic. In the course of

CHERRIES, inDemand, Societal Challenges Platform but also in regional actions like the Social Investment Fund (SIF) (Örebro), direct experiences with this approach have been made by all involved partners. However, all these processes only cover the identification of needs and the development and testing of a solution (exception SIF). Developed prototypes are left alone depending on markets that are difficult and might or might not succeed there (see Innovation Biographies).

The problem in this context is that innovative solutions, that at least in some context can demonstrate to solve an issue that has been identified by healthcare professionals, fail because there is no (not yet) market demand. If the CHERRIES model (or similar), should be used beyond the project it will need to increase the likelihood that innovations are picked up.

Please discuss if this diagnostic is correct and what are the concrete needs, which factors shape it, what are consequences arising from it and how it could be framed differently.

INITIAL PROBLEM STATEMENT: The problem is that innovative solutions from projects or pilots, that at least in some context can demonstrate to solve an issue that has been identified by healthcare professionals, fail because they are being used/implemented beyond the projects.

NEED / Key societal need/problem to be addressed

Stakeholders' engagement

There is a need to focus on the research based on practical results that could reach the patients/users. In the case of CHERRIES, the success was especially on the definition of the challenge thanks to a collaboration between patients' association and neurology service of the hospital, in first time and then with researchers to join forces and willingness to find a solution to detect the progression of MS.

The identification and definition of the need appears to be at the centre of the research and innovation process. In that perspective, it is important to include the patients at all stages of the innovation processes. At time being, researchers and medical services may get lost in the process when health investment lacks of equivalent return for the patients.

Change in processes: starting from the diagnosis and find a solution provider that could work on this diagnosis. Be able to work on a positive and inclusive solution.

The focus must be more placed on patients and patients' association. Close relationship with the patients is needed, and involve also all the people/organisations who are forming the chain to make innovation outcomes conclusive and effective.

Engage also other agents who are in permanent contact with the patients (e.g. social services, care association…), not only during the treatment period but also after, when the patients is out of the radar

of the healthcare service apart from the regular check-ups but still need to receive support in the possible effects of some medicine. Moreover, the socio-economic impact of having overcome a disease should be taken into account by considering the consequences on the daily life (e.g. working permission to attend the check-ups). Patients may not receive further support once they are out of the protocol, especially psychological support. Innovative solutions could also be founded to support the patients beyond the disease itself to address the implied consequences.

Co-creation could be beneficial to think in a different way, promoting more inclusive processes and involving the patients, work closer to the reality of the end-user and not on a paternalistic vision, taking into consideration the limitations that patients may have as a result of their illness.

The language used in the healthcare sector and in innovation development when it comes to patients is also important to give users' legitimacy when providing feedback.

Awareness and prevention campaigns are funded in healthcare sector, which is important. Additionally, the whole reality of the patients should be tackled in parallel, at a socio-economic level. E.g. a patient might be suffering from a severe illness, and receive a treatment but if he/she does not live in good conditions this might be worthless. More interactions could be promoted between all the public services that deal with the patients.

Multidisciplinary co-creation is a requirement to go further in the sustainability of the innovation outcomes and to follow a more inclusive approach. Patients shall be reconsidered as protagonist.

Research environment

The evaluation of the researchers could be more transversal, promoting more multidisciplinary to ensure that the results encompass different sectors, and thus their application and sustainability.

Bridge close relationship between researchers and companies in the development phase to manufacture and test the results of their research.

The transfer of research outcomes and results is important, to put them at disposal of all the stakeholders, enhance open science to make the innovation processes more inclusive.

Evidence of the problem – Contextualisation

Within the research and innovation scope, patients and other key stakeholders' views are missing in the process. Many projects look very interesting on the paper but fail, from the scratch, because they did not count on the key actors that might be the ones to which the innovation is addressed, and technology transfer is nearly impossible.

The problem is mainly culture related.

- Co-creation is not yet an option when implementing innovative initiatives. Innovation could be useful not only to tackle not the medical parameters themselves but also the impact of the secondary effects of some medicine and the socio-economic impact on the daily life that could be reduced.
- Need for cultural changes to include the perspective of the patients as a priority axe for the healthcare research centers.
- Cultural aspect is fundamental and impacts on the rest of the topics: funding, interest in the solution…In the healthcare, the assistance part of the work is absorbing the capacity of research. Monitoring activities are carried out, with indicators to assess the completion of work, but barely its efficiency and value.

Co-creation of solutions in views of their sustainability requires great commitment and effort, moreover, taking into account the patients characteristics who might already be facing challenges, or considering the patients' associations with limited resources.

Policy makers could contribute to the impulse of co-creation approaches from the definition of the calls for innovation. Changes in policies could be an asset and contribute to make a difference.

REFRAMED PROBLEM STATEMENT

Steps needed towards the solution

To achieve good results in terms of innovation, to co-develop the solutions, the first step would be to engage well-trained participants in the co-creation journey, providing a clear overview of what is the role of each participant, and which are the implications in terms of their involvement, "shared understanding" … Preparation is required prior to the involvement of the parties. This can be done before the identification of the needs or in between before the launching of the development of a solution once the co-creation team is set up.

Identify the most accurate leading entity for innovation process. The involvement of the parties shall be well defined considering that co-creation processes are highly demanding in terms of workload and some entities might not have sufficient resources to commit.
Most of the public calls for innovation do not part from the demand, but from research concern/interests that might not always respond to a detected and identified specific need. Research could be further placed at the service of those concrete needs. In that regard, researchers could be better connected to the patients and healthcare sector, so they acknowledge concrete problems to focus on in their research field and find an appropriate and sustainable solution.

Promote demand-driven approach and co-creation in the definition of the public calls the different stakeholders' perspective and expertise, to give sense to the funding of innovation or research projects

and ensure a better acceptation. Also include the vision of the provider of solution, its know-how and specific needs to develop a sound solution.
Co-creation is an opportunity to go further in the multidisciplinary and inclusive approach, need for dedicating appropriate resources to work on co-creation way.

Create a culture of multi-actors' dialogue in which research and innovation are part of the daily activity. Examine the adoption of the research outcomes from the beginning of the processes to avoid to simply acknowledge the results but concretely, commit to implement them if they are tangible.

Promote the education in co-creation, as a transversal area in training and university degrees, to count on a multidisciplinary approach to develop research.

Mentality and perspective shifts are necessary to focus on social innovation, not always on a technical point of view but thinking big in terms of mutuality of services and coordination.

Actors and measures of the process

Actors of the process

- Patients shall move from subject to co-participant, promote the value-based, in which the patient is the one to express what he/she really needs and what is worth or not in terms of R&D
- Associations are focused on their own problematic, but transversal problematics could be raised with a stronger collaboration between them too: find out entities that are willing to collaborate, select them, establish common objectives, and support them to include new processes in their own routine
- Identify the best leading entity for each activity to make sure that this entity is ideal to define the needs and be realistic to the further implementation of the innovative solutions
- Generate culture of co-creation with public engagement and promote specific funding for co-creation management. Create co-creation culture and language, leaving open to "local dialects" to avoid the disconnection with the users.

Measures of the process

- Need for training of all the involved actors to learn how to work differently, to listen to the other needs, life-settings and expertise, and to take into account the specificities of the end-users in the development of the solution. Not only the patients, healthcare professionals, or researchers should be trained but also the solution providers themselves to impulse some changes in their own practice to co-design and co-develop.
- Show the benefits of working in a co-creation with a multi-disciplinary perspective of entities, not only for the patients but also to gain value in terms of go-to-market perspective, as a benefit to gain productivity or economic benefits and to ensure that the developed solution makes sense

for the professionals and potential end-users. In this sense, the company can be interested in participating in a co-creation process of solution development. All types of benefits: Social, cultural, professional, educational and economic.

- Policies and research and innovation calls for funding to address the reality of the market, and promote open innovation processes, e.g. to include co-creation as an evaluation criteria for funding selection, or systematize co-creation processes in the calls and foster the synergies as a key element
- Establish an Observatory of regional demand-driven innovation to collect needs in different sectors and made available for researchers in order to focus part of the research works on identified needs and develop adapted solutions
- Promote the multidisciplinary activities and proximity between the different stakeholders through specific collaboration agreements
- Work on data processing and data sharing to be used in new research based on existing previously collected ones
- On a policy perspective, the decision-making process could be more open to different type of actors upstream, more demand-driven oriented also to determine the budget lines. Policy makers are key actors to be involved in the processes.
- Promote marketing actions to reach the users and reach the citizenship to communicate about the results in an understandable way for the society, e.g. activities such as innovation fair (Transfiere is a good example. https://transfiere.fycma.com/) and promote regional marketing of innovation.
- Promote RRI and include this approach in policy-making, especially in terms of open science and transparency. Do not let the scientific evidence been captured by private interests but make it open and accessible
- Align the need to the solution, the opportunity to the success
- Prioritize the challenges and include all the related stakeholders to ensure that the actions taken are worth, this supports the good perception of the society towards public funding
- Key concept is the science education: transmit since early ages the importance of co-creating the innovation to ensure good results
- Enhance the regulation capacity of the policy-making that can play a key role to create bridges between patients and healthcare professionals, between researchers and policy-makers…e.g. promote the research based on real needs (e.g. thesis) and more multidisciplinary in the research fields.

Overall conclusions and recommendations for RRI healthcare and innovation regional policy mix

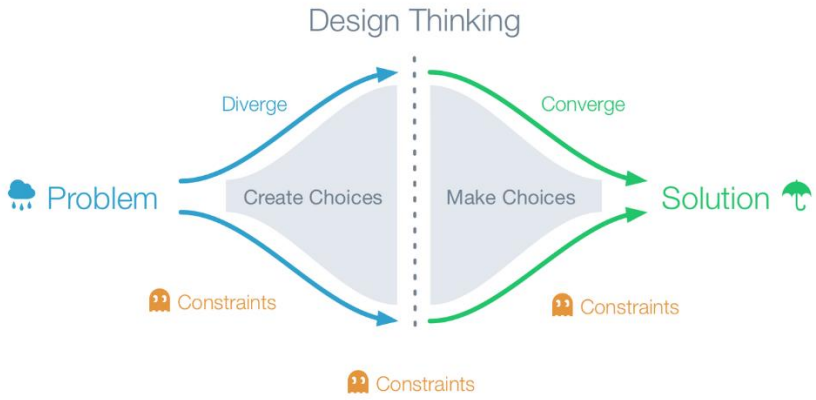
Research has to reach the patient and has to move towards the improvement of the quality of life or even recover. Right now, the return on investment toward patients is really low
There is a lack of holistic vision in the relation with the patient and tends to be a one-on-one interaction without considering all the other stakeholders that could influence the patient health. Co-creation avoid individualisms
Not only the healthcare organisations think on services but without considering a demand driven approach and the patient needs, but also the market state-of-the art is not considered.
When it comes to cocreation, it takes some time and effort to understand the role played by each stakeholder, so a previous training might be needed.
Co-creation in healthcare does not exist as such but launching a yearly call might help. The identification of needs could help to the development of an ecosistemic approach for the solution
The patient moves from being considered the subject to co-participant and it is relevant to understand where is the value for him/her (**value-based services**) The cost-benefit analysis is very relevant for this cocreation approach. Technology transfer should involve different stakeholders
The main challenge is the cultural change as the management has usually been done through results, not processes and in order to include new ways of working, processes need to change and KPI have to be defined
Research activities should clearly differentiate value vs business. Research should have an aim, an integrated global vision towards, e.g. the quality of life and the model pays more attention to the cost efficiency

ANNEX 3 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX – ÖREBRÖ

Context of the Policy Lab

Overall, the workshop was intended to bringing together policymakers and other actors that have a stake or influence in the local policy-system of the CHERRIES regions respectively and discuss what changes are needed to make the CHERRIES approach sustainable, focused on the policy-level of the healthcare systems locally. Practically, it meant to deliberate collectively, discuss aspects that may have not been focused on in the CHERRIES project, identify the key policy-elements that are counterproductive to the creation of a sustainable responsible healthcare ecosystem and address these.

The inputs for this workshop have partly been produced in an interregional workshop in Nicosia in November 2021, conceptually designing this process as a diverging (Nicosia), followed by a converging phase (Policy Labs), where the discussion narrowed down the focus, applying a regional perspective to the problem and critically assessed all the options on the problem and solution side, against the known context, constraints, and obstacles, available resources, timelines, technical feasibility, etc.



These regional Policy Labs aimed at ensuring that the conversation is relevant in terms of current regional policy development processes in each region and framed under existing policy instruments.

Policy Lab Report

Practical Information

Location:Zoom

Date and Time: 2022-03-03 13.00-15.00

Attendees:

- Five municipality representatives – policymakers and professionals (social welfare, public health)
- Four Region representatives – policymakers and professionals (healthcare, innovation, regional development)
- One CSO representative

Format: Digital format via Zoom and JamBoard as workshop tool

Problematisation

The workshop was based on one of the themes identified in Nicosia; *Deliberation as a basis for need identification*. The aim of the workshop was *to discuss opportunities for how we can use social innovations to change and develop new ways of working that address the needs of our residents, and to provide support to enable continued dialogue about change management complexity*. The starting point was that in the future we need to work in new ways to meet the needs of our residents but also to meet societal challenges and manage limited financial resources. Therefore, we need to work with innovations in a way that:

- Is based on the needs of our residents
- Happens much more in a co-creation between several different actors in different sectors of society
- Sees civil society as an equal actor who has the resources to contribute to seeing needs, highlighting needs, and contributing to analysis and solutions of needs.

The topic for the workshop was two sets of questions. The first being reflective of how we work today;

- Need identification and demand-driven approach today
  - How do we capture needs?
  - How do we work based on needs today?
  - How do we address needs that lie in "gaps"?

The second having a more forward-looking and prospective approach;

- Need identification and demand-driven approach tomorrow
  - What do you see as the benefit of having a way of working that involves the inhabitants in the investigation of a need?
  - What is needed for us to be able to work more in this way?
  - How would you design a system for sharing good ideas and working methods?

Approach

After introducing the CHERRIES project (as this was new to some of the attendees), some key incentives to change was presented. The incentives were; the challenges that the healthcare and the society are facing such as demographic change; the transformation to person centred and integrated care; and the need of cross-sectoral collaboration, demand driven approaches and co-creation to meet the challenges that the society is facing. The participants of the workshop was also given a common definition of innovation and a crash-course in complexity and change management. The aim of the introduction and crash-course was to give a common ground for the workshop discussions.

The plan was to divide the participants into two smaller discussion groups in order to enable a nice discussion climate where everybody can be able to speak and to be heard. However, due to some late cancellations, the arranging team decided to have the discussions with the whole group.

After introducing the workshop tool – JamBoard – the first set of questions was presented. Thereafter, the participants had a few minutes in silence when each participant could write their own post-its. This was followed by a discussion led by the workshop facilitators, where the points on the post-its was elaborated and clustered. Each cluster was more thoroughly discussed.

The same approach was used for the second set of questions. This was also followed by a more reflective and practical discussion of the *how* and *when* changes can be made.

Results

The main themes from the workshop are presented in the following section.

We have arenas where we can capture needs – but we need to systematize the work

The workshop participants gave examples of a number of existing arenas and situations where we could have the opportunity to capture needs. For example in the organization´s operational work, in meetings between professionals and patients/citizens, as well as in targeted activities such as surveys, citizen dialogues, councils etc.

Although there are many possible channels and arenas where needs could be articulated and captured, today we lack tools or the systems to take care of the information we get through these channels. For example, it is unclear who is responsible for running processes to collect the needs and what processes should be in place to process the needs that are collected. These are issues that need to be further processed, at several levels in several organizations, to be resolved.

We have a lot to gain from a new way of working

All of the attendees were united in the conviction that a more demand driven approach would be beneficial in many ways. Mainly, we could be more efficient with a higher accuracy in the services and

products that we offer. In addition, we could offer higher quality in our services. Moreover, a higher level of patient/citizen participation would give us new perspectives and insights, as well as more qualitative knowledge that could improve our services.

To enable this, it has to be worth the while for patients/citizens to engage. They need to know that we listen and that their engagement leads to something. This is often not the case today.

Prerequisites to make this possible

For one, dedicated resources are needed. The willingness is there but professionals often lack time and knowledge to work differently compared to how they work today.

Second, we need to use existing networks and collaborations in new ways. There are arenas where we could share good ideas and working methods but they need to be used differently on order to foster a more demand driven approach and enable patient/citizen participation.

Third, organizations have to be willing to change. Here the workshop participants stressed that the window for change is open now as a result of the ongoing transition to person centered and integrated care. Many discussions and processes are ongoing in this direction and CHERRIES is a piece in that puzzle.

What it comes down to is organizational culture and priorities. We also need courageous and decisive leaders and decision makers who dare to try new ways of working. Innovation needs to be integrated in leadership programs and business plans.

Next Steps

The workshop rendered many interesting discussions and insights. It is clear that this process is depending on other ongoing processes and needs to be integrated in – and affect – these.

In this regard, the next steps would be to incorporate parts of the CHERRIES concept and methodology in the person centered and integrated care processes, as well as the existing work in the partnership for social innovations. To get long-lasting effects, the CHERRIES project cannot stand on its own. However, the processes are somewhat immature. Thus, we need to keep talking about these issues to enable change. The more we talk about these issues, the more the maturity and willingness to change increases. The workshop was a step in this direction. Another step is to initiate and deepen the dialogue with policy makers, especially politicians. A third step is the conference that is planned in September 2022 as part of the CHERRIES on-site visits, where the target group will be both policymakers (including politicians) and professionals.

ANNEX 4 DESIGNING A RESPONSIBLE AND DEMAND-DRIVEN TERRITORIAL INNOVATION POLICY MIX – CYPRUS

Policy Lab Report

Practical Information

Location: Gravity Incubator

Date and Time: 29/3/2022

Attendees: A01, A02, A03,A04,A05,A06,A07,A08,A09

Format: Physical Presence, Casual Format.

Problematisation

The team introduced the participants into the workshop by describing the Cyprus CHERRIES default profile as initially described into the project proposal itself "*The calibre of health care in the Republic of Cyprus is improving in leaps and bounds with new specialized medical services and research, as well as the long-anticipated implementation of a comprehensive national health care system, which is set to make the sector more streamlined and cost effective. Most medical professionals in Cyprus are educated at universities in Greece, Russia, the United Kingdom, the United States of America and Western Europe – an influential factor in the strong development of the country's private sector which boasts an impressive 75 private hospitals and clinics. Cyprus is considered as an ideal destination for both medical research and new venture development due to Mediterranean Climate conditions, accessibility – in the cross sector of three continents, the low tax and IPR incentives as well as the top-tier medical centres*". The aforementioned statement was then elaborated to form the basis of problematization inclusive of the necessity for telecare practices beginning with application in rural/remote areas of the island and further application on a national level as a potential part of the newly formed General Health System (GHS).

Approach

We began the approach by identifying individuals from the 4P groups that have been involved in policy making and invited an equal number of each group to our workshop, so we had equal representation of the four groups, however, some had limited availability and could not attend. The final group was comprised of 9 individuals: 2 healthcare providers, a patients' representative who resides in a remote area, 3 policy makers (Public health/ Innovation& Digitization/ Research& Innovation), an academic (Associate Professor in Psychology), 2 members of the CHERRIES team in Cyprus. We then performed background research to identify individual interests and better cater for the groups' needs as a whole. The participants were given 2 minutes each to introduce themselves to the rest of the group reflecting upon their professional and personal capacities for discussion of the 'problem' that followed.

The main objective was to be able to encourage a dialogue between the participants out of which we could extract relevant input on the issue at hand. The majority of the participants had previously joined CHERRIES

during the interregional workshop, so they were able to easily comprehend this exercise and viewed it as a follow up on the CHERRIES concept.

The workshop was modelled on the guidelines of the agenda report and followed it as a step-by-step guide. We chose a more casual setting and conversation between the participants so they could feel comfortable to engage and genuinely express professional opinions. During the course of the workshop, we approached the questions in the mode of an open dialogue and avoided directing the participants towards specific responses one would 'expect' to receive. This open dialogue technique assisted the team in the documentation of commonalities between the groups as well as contradictions, which we used in the analysis of the input.

The workshop was coordinated by CyRIC and the provided templates 'problem definition' (ANNEX A) and 'idea card' (ANNEX B) were used to digitally document responses from each participant and then collided all the responses in a single sheet.

Results

The exercise yielded important results that were extracted from a conversation performed in an agile mode. The main result was the necessity for reformation of the national health system to accommodate telecare and provide patients and healthcare providers with an elaborative platform for quick and quality consultations. The workshop revolved around the necessity of telecare for rural and remote areas in Cyprus with limited accessibility to hospitals and doctors who are often located in cities making it difficult for patients to visit.

Moreover, the group pinpointed 'the need' as a *necessity for access to high quality professional services in remote settings*. However, despite the group's focus in this single need, we have identified that each group approaches it from a different perspective and there seems to be some lack in synchronization. Through discussion about the CHERRIES methodology and the project's objectives we have managed to regroup the workshop participants in assessing the need for policy recommendations that list the benefits of telecare in Cyprus and a structured approach as to how it will be achieved at a national level. The participants all agree that such a policy should fulfil all requirements: medical, psychological, technological, socioeconomical, cultural and financial.

Cyprus has recently implemented the national General Healthcare System (GHS). Despite the implementation being young, a lot of challenges are already identified, and reform of the initial structure seems to be favoured by all the main stakeholders. This issue was a major point of conversation during the workshop we held, with the groups of policy makers strongly suggesting the necessity for telecare services included in the GHS.

Another strong point for discussion derived from the outburst of the Covid-19 pandemic and the national restrictive measures announced by the government at different times, making patients reluctant towards visiting hospitals and GPs especially for routine visits. The group concluded that had telecare been available, patients in high probability would feel better equipped to take a routine consultation. Nonetheless at this primary stage, all participants have expressed opinions that deploying telecare practices in Cyprus must be further researched and piloted and at this stage it is suggested as a medium for reaching remote patients who cannot visit physicians at ease without it being a replacement of traditional physical-presence care.

Finally, a key element identified in the workshop, but is out of the scope and context of the CHERRIES project, is the need for technology infrastructure and least mid-level digital literacy of the users especially of senior citizens. Policy makers with innovation and digitization background have expressed the need for awareness and training workshops at a national level to assist with telecare without it becoming a hindrance to neither patients nor providers. Healthcare representatives were generally in favour of telecare for -mainly- primary care but there are concerns as to how it will be applied. As it is understood, the group feel strongly about not compromising the quality of care for the ease of consultation, and they have also raised concerns on the level of technological skills they should develop for such inclusion. Concerns were expressed also by the patients' representative however, they also expressed confidence that the desirable digital literacy level can be reached.

The following results were extrapolated from the discussions during the workshop:

- Established the necessity for telecare
- Basic digital skills should be taught and available to all patients and healthcare professionals
- Supply cannot fulfil the demand in terms of provision of specialized health services
- Need for commitment for synchronisation between the 4Ps

Next Steps

The workshop was fruitful, and participation was of high involvement by all participants. Upon further analysis of the input provided by the participants we have formulated two bundles of recommendations constructed as next steps that go beyond CHERRIES and are perceived as initial approaches to reach national policy recommendations. Those are listed below:

Recommendation #1:

Clear health system leadership to embed virtual care strategies into aspects of primary and community care with consideration for advancing telecare in meeting the needs of rural communities that are often isolated from specialists. Recommendation #1 suggests that:

a) sites for telehealth visits should be considered where a healthcare personnel can assist the patients in rural (remote) areas with the use of telecare equipment
b) different telehealth modalities should be made available

c) raise awareness and provide trainings so that providers can include telehealth in their services
d) consider the financial aspect of telecare and have a plan on what charges might be and who will be responsible to fulfil them
e) inclusion of telecare in the services offered by the general health system

Recommendation #2:

Patient-centred primary care is required and should be assisted by technology and not be hindered by complex technological barriers. Recommendation #2 suggests that:

a) Any technological solution should be simple to use both by healthcare providers and patients
b) Technological assessments should be performed on infrastructure in rural areas to address issues that result in connectivity interruptions
c) Standards and quality assessments should accompany telecare practice to ensure quality of care
d) Privacy and security issues deriving from a technological solution should be considered
e) Awareness campaigns and free training for digital skills offered to remote users to enable the use of telecare kits and allow smooth and thorough consultations with providers.

CHERRIES Partners

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement nº 872873. This document reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains.