EUROPEAN
POLICYBRIEF

DESIGNING AN IMPACTFUL HEALTHCARE INNOVATION HUB

Innovation, as a means to address the healthcare sector's systemic challenges, has been gaining importance. However, as many healthcare innovations fail there is an urgent need to find better innovation management and implementation approaches. CHERRIES provides a model, based on Responsible Research and Innovation and Open Innovation, to develop innovations. We suggest combining such an approach with the emerging practice of Healthcare Innovation Hubs, in order to agitate, innovate and orchestrate change within the existing structures of healthcare systems.

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INTRODUCTION

This Policy Brief outlines recommendations for policymakers as well as for (public) healthcare organisations that aim to support the development and implementation of innovative healthcare practices. The recommendations build on the experiences made in the course of the CHERRIES project that experimented with Responsible Research and Innovation (RRI) and Open Innovation the in Murcia (ES), Örebro (SE) and the Republic of Cyprus (CY). It combines the learnings of these process with insights from Sustainability Transition Studies (see e.g., Loorbach and Rotmans, 2010), which have a long tradition in reflecting and managing change in complex systems.

In CHERRIES, we experimented with a challenge-based model to innovation aiming to build more equitable and more socially "*porous*" healthcare systems. At the core, our experiments consisted of the following: 1) An open Call for Needs was launched to identify innovation needs, which arise from stakeholders' daily experiences. 2) In each region, we selected one Need and translated it into an Open Innovation Challenge. Solution Providers could apply with their innovative solutions to this Call. 3) A selected Solution Provider received a grant for co-creating the proposed solution together with the Need-Owners. This Model proved to be very effective in developing and testing these Solutions in real-life contexts, however, we identified critical aspects that need to be addressed in future iterations.

In order to address these aspects, we developed a "*Future CHERRRIES Model*", that combines the strengths of the CHERRIES Model with Transition Thinking in order to create an multi-scalar architecture for Healthcare Innovation Hubs. These Hubs can provide the context for agitating, innovating and orchestrating innovations in the healthcare context. By creating these intermediary structures, healthcare systems can incorporate an open and flexible innovation management approach, which is steered towards inclusive and fair future practices.

Strengths of the model

The CHERRIES Model has been implemented in three regions as real-life experiment during which the project team could gather evidence about the model's characteristics. 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. The rapid prototyping and testing provide benefits for all involved stakeholder, but especially for businesses providing Solutions, as they can quickly assess how their Solution is performing under real-life conditions.
- **Fit**: The demand-oriented approach and co-creation warrants that the solution is suitable to the requirements in a specific context. The Model provides *fit-for-purpose* and *fit-for-context by addressing* a specific Need in a given context, whereby the co-creation aligns preferences and requirements in order to improve the Solution.
- **Coalitions:** The CHERRIES model is an efficient way of building topical coalitions around a perceived problem. The co-creation and testing process brings together the quadruple helix partners within a new and open network in a solution-oriented collaboration that supports the building of shared understandings, trust, and visions.
- **Flexibility:** The model proved to be very flexible. It can be adopted to varying contexts, and can and should be adjusted to regional cultural and institutional contexts in order to provide value-added to existing initiatives.

With these value propositions, the CHERRIES Model can be a great addition to the innovation toolboxes of actors aiming to change healthcare practices. However, when replicating the model, the following lessons-learned from the CHERRIES experience should be taken into consideration.

Critical issues

The experiences made with the CHERRIES Model led to three main aspects that need to be addressed for future iterations.

- **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 as a part of their innovation management system, to build up the organisational capacities, internal and external networks, and commit resources to run the processes.
- **Arena for deliberation:** The Solutions, when adopted will contribute to the future healthcare practice in a specific (clinical) setting. Thus, these innovations cannot be separated from the practice and its organisational and institutional embedding. 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 pilot:** The CHERRIES model provides a framework for developing and testing a Solution but does not provide guidance for the implementation of the Solution into organisational and institutional contexts. The link between innovation and these contexts is essential for questions of implementation or scaling.

In order to maintain the strengths and mitigate the issues outlined above, the "*Future CHERRIES Model*" combines the RRI and Open Innovation characteristics with approaches from and Transition Studies. However, it is important that the Model is adjusted to local realities in a place-based approach and that potential entry points are critically reflected before the implementation.

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 implementation processes into organisational and institutional contexts. Thus, it is important to create stable relations, based on trust and shared objectives, between partners within these systems. Healthcare Innovation Hubs are increasingly used to provide a space for building these lasting relationships as a basis for developing shared perspectives and joint projects. In the following, the idea of how a Hub could integrate change processes within regional healthcare systems, based on the learning of CHERRIES is introduced.

A Healthcare Innovation Hub functions as a central management element within a regional healthcare innovation ecosystem. These ecosystems are loosely coupled as all members are independent from each other but still respond to joint challenges. Thus, the Hub must engage in processes of agitation, innovation, and orchestration in order to facilitate an innovation ecosystem around joined value creation and further, create space for experimentation, implementation and strategic niche management. These processes aim at deliberating the future and for articulating a critique on current practice, enabling the development of actionable solutions within experiments, and supporting implementation by mobilising others around a future practice. In order to be able to engage in these processes in a meaningful and impactful way, the Hub needs to have a mandate to develop and test novel approaches with the clear objective of changing current practices through the implementation of these novel approaches. In order to achieve these objectives, the Hub should deliver four functions.

1. The Hub 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. The problem identification and structuring represents a problem diagnostic as first step before interventions into the system. This is a strategic intervention into the system, which provides the foundation for further actions.

2. The Hub coordinates the development of a transformation agenda. The Hub Implements this agenda in cooperation with other involved actors through activities that support an effective community management, building of networks, trust and joint understanding about potential barriers. The agenda provides directionality and gathers the regional ecosystem behind common visons for future healthcare services. The joint identification of innovation Needs is aligned with the agenda as a basis for later implementation of Solutions.

3. The established regional arenas and agendas provide the context for experimentation. The CHERRIES Model provides a successful process methodology for developing responsible and open healthcare innovations. The experiments, from the outset, should pay attention to practical, organisational, and institutional aspects of the Solutions and on the facilitation of the co-evolution between these dimensions.

4. The experiments provide the possibility for joint reflection 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. Figure 1 illustrates this Hub idea.

In order to initiate change, two main preconditions are central for the Hub. 1) In order to experiment and sustainably implement future practices, the Hub requires a change mandate as legitimation for its activities. 2) The Hub needs to mobilise, connect and continuously engage a diverse range of actors and empower them to drive change.

The first aspect is central, as innovation is not an end to itself but a means for better and more inclusive healthcare services. The provision of these services cannot be separated from innovation and the other way round. However, the way these services are structured and provided is a societal question, which depends on (political) decisions, rules and regulations. Thus, the Hub needs the mandate as well as the
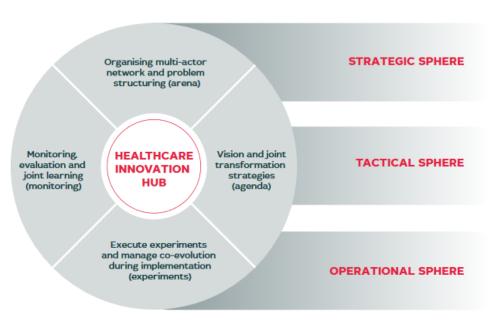

Figure 1: The Healthcare Innovation Hub architecture (based on Loorbach and Rotmans, 2010)

involvement of decision makers to actually initiate this change. The questions should thus not be how to involve decisions makers but how decision makers can use the Hub to initiate and manage envisioned change processes. In this context, the Hub can act as a central transformation actor within a healthcare organisation or system. The Hub management should be taken over by a central healthcare organisation, e.g., the public healthcare provider, a hospital etc., in order to secure the viability and legitimacy of the process and, further, to provide credibility to the advocacy work that aims at gathering all stakeholders behind the visions and new solutions.

The second aspect is connected to people, processes and expectation management. The foundation for transformation in complex systems like healthcare is the coordination between different parts of the system. In this context, the objective of the Hub is to identify and connect the parts needed for transforming the healthcare services in the arena and joined agenda development. The Hub management is essential in this process as it needs to facilitate and lead this process. It needs to manage a diverse set of actors, bridge the divide between top-down and bottom-up processes, internal and external perspectives, short- and long-term objectives, etc. Thus, the Hub will require an open and responsible governance system but avoid building bureaucratic structures. In connection with this challenge, the Hub needs to identify and involve the right people at each step of the implementation of the functions and innovation experiments, including decision makers and other hard to reach groups. Questions of expectation management, benefits of collaboration like e.g., access to data and users, roles and engagement rules need to be clearly defined in order to empower people to engage in the Hub processes in a meaningful way.

In order to define new practices, going beyond a single innovation that can contribute to a sustainable transformation of healthcare services, the new approaches need to be understood in their contexts. The management of the Hub-based experiments, hence, aims to safeguard the co-evolution of practice, organisational and institutional routines and thereby orchestrate the envisioned change. The work is rooted in the principles of RRI by being inclusive, reflexive, anticipatory and responsive. An essential aspect of this work is being aware of power relations and being able to steer and negotiate change between actors with power-imbalances.

SUSTAINABILITY AND LEGACY

The CHERRIES project leaves a rich legacy that regional and sectoral policy makers, similar projects and initiatives can build upon. The project has always been designed around ideas of sustainability and enabling the exploitation of its key results. The core of that process is the establishment of the CHERRIES community, consisting of partner networks in seven regions, working on issues of responsible healthcare innovation.

Besides this network, key exploitable results are the outcomes from the experimentation in the three regions (see D4.3), 2) the tested and enhanced experiment methodology (see also here), that includes templates and detailed process documentation 3) the CHERRIES Toolbox for RRI practices in healthcare (D3.1), as well as 4) the regional policy recommendations (D5.2). The development of a "*Future-CHERRIES Model*", building on our reflections, is another attempt to make the wealth of information, which was created during the last three years, available.

PROJECT OBJECTIVES AND METHODOLOGY

The CHERRIES project supported RRI policy experiments in the healthcare sector in three European territories - in Murcia (ES), Örebro (SE) and the Republic of Cyprus (CY). These processes, their outcomes and the policy frameworks were mapped, monitored, evaluated and serve as evidence-base for revision of sectoral policies, strategies and innovation support instruments. Thereby, CHERRIES engaged the territorial stakeholder ecosystems in participatory agenda setting, need articulation and institutional reflection processes. These served as starting point for collective approaches with shared responsibilities aiming to create more open, inclusive and self-sustaining territorial research and innovation (R&I) ecosystems.

The CHERRIES methodologies for challenge-based innovation approaches were tested, documented and spread beyond the three pilot regions. This methodology provides a framework for participatory innovation-agenda setting within a sector that is facing multiple challenges (e.g., aging societies, increasing comorbidities, financial stability of the underlaying wealth fare model etc.). The methodology, thus, provides a tool for better aligning the directionality of R&I processes with the territorial and social health challenges. At the same time, it is a *"responsibility-by-design"* approach for identifying research priorities and the demand for innovation.

PROJECT IDENTITY

PROJECT NAME

Constructing Healthcare Environments through Responsible Research Innovation and Entrepreneurship Strategies (CHERRIES)

COORDINATOR

Stefan Philipp, ZSI – Centre for Social Innovation, Vienna Austria

CONSORTIUM

Aretaeio Hospital, Nicosia, Republic of Cyprus
Centre for Social Innovation – ZSI –Vienna, Austria
Cyprus Research & Innovation Center Ltd – CyRIC – Nicosia, Republic of Cyprus
European Business and Innovation Centre Network – EBN – Brussels, Belgium
European Business and Innovation Centre of Murcia – CEEIM – Murcia, Spain
Knowledge and Innovation SrlS – K&I – Rome, Italy
Murcia Health Service – SMS – Murcia, Spain
Region of Murcia, Murcia, Spain
Region Örebro County, Örebro, Sweden
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Universiteit Leiden, Leiden, the Netherlands

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WEBSITE

https://www.cherries2020.eu/

FOR MORE INFORMATION

Contact: Stefan Philipp, philipp@zsi.at

FURTHER READING

CHERRIES Deliverable D3.1: RRI & Experiment Toolbox [Link]
CHERRIES Deliverable D3.2: Adapted territorial methodology for the experimentation per territory [Link]
CHERRIES Deliverable D4.3: Report on the co-creation activities [Link]
CHERRIES Publication: The new CHERRIES Model [Link]
Loorbach, D., & Rotmans, J. (2010). The practice of transition management: Examples and lessons from four distinct cases. Futures, 42(3), 237–246. https://doi.org/10.1016/j.futures.2009.11.009