

Interreg

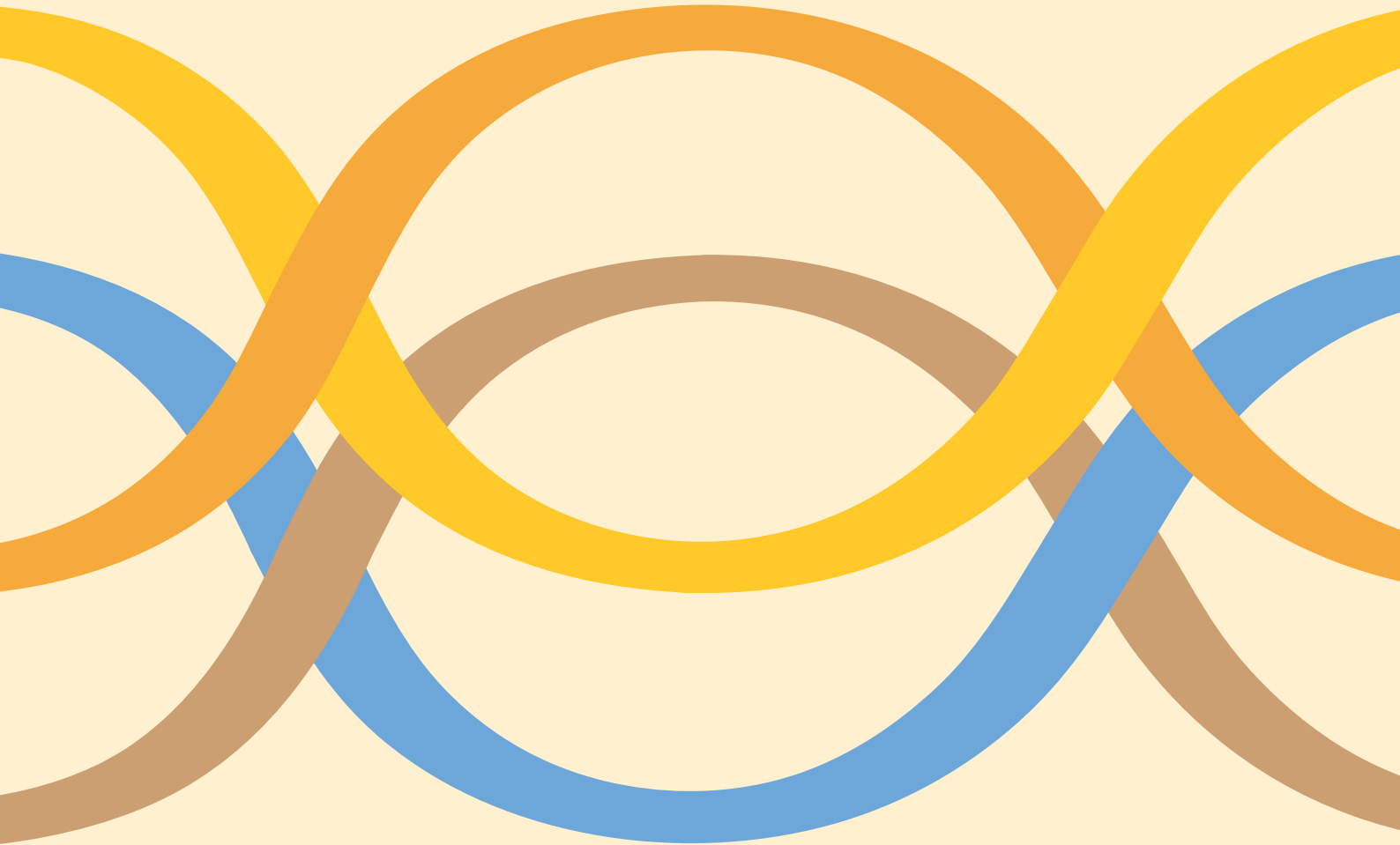
North Sea Region

In For Care

European Regional Development Fund



EUROPEAN UNION



A Quadruple Helix guide for innovations

by Värmland County Administrative Board, Sweden

In For Care: Informal care and voluntary assistance:
Innovation in service delivery in the North Sea Region

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1. Quadruple Helix in the In For Care-project

The Interreg-project In For Care aims to develop innovation in service delivery by optimizing informal and formal networks. The project has three objectives; to create and improve processes of voluntary work and informal care in service delivery, support the public sector to innovate in service delivery and enhance cooperation between SMEs, knowledge institutions, public administration and end-users.

To involve the end-users and enhance the cooperation between stakeholders, co-creation sessions will be organised with relevant stakeholders. The partnership will implement the Quadruple Helix Model as a working method within the project and develop the model towards areas of informal care and voluntary assistance.

Through a quadruple helix approach and the organisation of co-creation sessions In For Care will be able to provide the knowledge needed to create new products and services for service delivery with the positive effect that North Sea Region businesses are stimulated to develop these products and services.

Partners in the In For Care project will work with Värmland County Administrative Board (VCAB) to develop and implement the quadruple helix model. VCAB will also transfer good examples from other regions in Europe within the thematic area of informal care and voluntary assistance. A central part will be co-design involving professionals, care organisations, representatives of governments, private businesses, and citizens in the innovation process.

By sharing good examples and developing a working model for quadruple helix collaboration within the thematic area of informal care and voluntarily assistance, the project can disseminate that user driven innovation and co-creation of solutions are successful approaches and might be particularly effective in developing new solutions. User oriented innovation also creates greater social benefit at a lower cost and by offering user friendly products and services it also strengthens the ability of users to influence their daily lives and society at large.

1.1 Objective 1

To create and improve processes of voluntary work and informal care in service delivery:

Jointly create and improve processes of voluntary work and informal care in service delivery through co-creation sessions with the main target groups, using a quadruple helix approach for user oriented innovation in services, implementing new technology (collaboration tools) and demonstrate valuable matchmaking between informal and formal networks.

1.2 Objective 2

Support the public sector to innovate in service delivery: Changing the mindset of decision makers and professionals, implement new strategies and innovate solutions for the transition whereby services are delivered through cooperation between formal and informal networks in order to deliver better services making more effective use of available resources and embed these solutions in policy in the NSR.

1.3 Objective 3

Enhance cooperation between SMEs, knowledge institutions, public administration and

end-users: Enhance cooperation through a quadruple helix (QH) approach, in order to counteract the rising costs of (health) care services and support efficiency in public service delivery. Increase knowledge flow among QH partners via transnational exchange of practices. Support SMEs to innovate their products and services and create a greater social benefit.

2. A Quadruple Helix approach

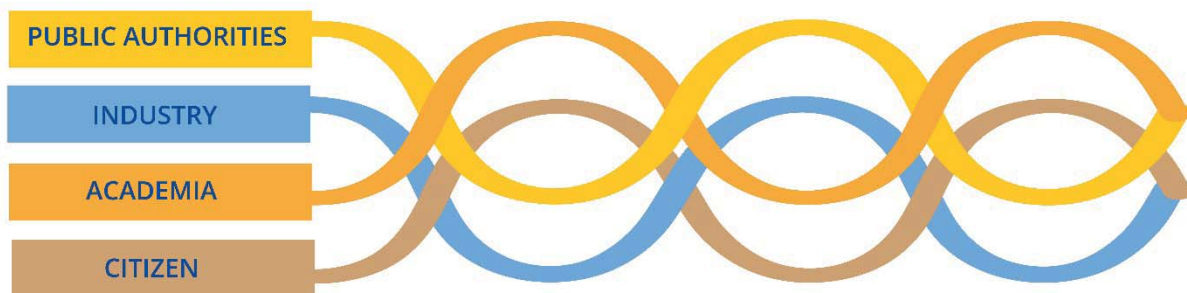
2.1 Why a Quadruple Helix approach

The Quadruple Helix is an innovation and collaboration model with a citizen/end-user perspective. It is useful in an innovation process where the citizens needs are central, as for example in health care and public e-services. When creating an innovation, there is often a lack of involvement of the citizens and end-users. Sometimes a Triple Helix model is used, which is an innovation and collaboration model that describes the interaction between public sector, academia and industry. In the Triple Helix model, citizens/end-users are left to the role of passive recipients, consumers or end- users who assimilate the products and services developed.

No involvement of citizens might lead to:

- Products and services not used
- Lack of transparency
- Innovators and end-users do not understand each other
- Frustration
- Technical innovation instead of social innovation

Using the Quadruple Helix and involving the citizens in the development of an innovation can lead to more successful, user oriented innovations. The end users will be more likely to accept and use the innovation. It will also have a greater social benefit at a lower cost and improve empowerment of the citizens, who will increasingly experience trust towards the innovators and become an active part of the innovation system.



Quadruple Helix model

2.2 Who are the Quadruple Helix actors?

The Quadruple Helix involves representatives from all members of society; public authorities, industry, academia and citizens. Public authorities can be government and regional development agencies and policy makers, as well as formal health care providers in some countries (as in Sweden and Norway). Industry can consist of businesses, for example private health care providers, and business clusters. Academia can for example be universities or research & development bodies.

The fourth actor of the Quadruple Helix is the citizen. In the In For Care project, the citizens that should be involved in the innovation process are two or three different representatives;

- the end-user
- the informal caregivers (who are usually relatives, also known as family carers)
- and/or voluntary organisations and volunteers

The actors can be a bit different amongst the regions in In For Care (see map below) since for example the formal health care provider can be both public, private or mixed.



2.3 Choose the methods

In each case of the innovation process, the Quadruple Helix model is suitable for a certain situation which depends on various characteristics of innovation activity, for example, the aims, the context and the initiator or owner of the innovation process.¹

In different stages, different methods may be chosen on how to involve the Quadruple Helix actors in the innovation process. Therefore, it is important to determine the starting point, what do you want to achieve? Do you already have an idea that you want to test or do you want to

¹ L. Ahonen and T. Hämmäläinen, CLIQ: A Practical Approach to the Quadruple Helix and More Open Innovation, page 26

examine new ideas based on the end-users needs? When you know the starting point, you can determine the suitable method.

It may be that several different methods of involving the actors will be used during the innovation process. One approach is not good for all, and using many methods and communication channels takes more time, but may result in an intensive exchange with a rewarding outcome.² No matter which method you use, it is important to reach and motivate all actors using a strong communication effort.

2.4 Interaction of the Quadruple Helix actors

When it comes to the interaction of the Quadruple Helix actors one main question is: How can or should the Quadruple Helix actors interact to enhance innovation? The Quadruple Helix model is suitable for a certain situation depending on various characteristics of innovation activity and the involvement of the actors varies with what you want to achieve.

To increase the success of the collaboration it is important to define which are the specific QH stakeholders that should be involved (stakeholder mapping) and to make sure all QH actors are involved, motivated and have an open mind. It´s important to involve all QH-actors from the beginning of the innovation process. One challenge can be to have all actors speak the same language.

Throughout the In For Care project one important task for each of the partners is to examine how the Quadruple Helix actors cooperate in their specific context and innovation process. The outcome of the partners innovation process will hopefully add to understanding the various methods and when and how to involve the four helices. This will make a foundation to develop the Quadruple Helix towards an In For Care Quadruple Helix Model.

² L. Ahonen and T. Hämäläinen, CLIQ: A Practical Approach to the Quadruple Helix and More Open Innovation, page 23

3. Two examples of approaches

There are several different approaches that can be used when using a Quadruple Helix Model. Two of them are Living Labs and Service Design, which both puts the end-user in focus. These approaches use different processes. In this Quadruple Helix guide, we have chosen to use Service Design as an example of an approach to use in an innovation process. Since some of the partners in the project are using the Living Lab approach, VCAB has chosen to put this approach in the guide as well.

3.1 Living Labs

Living Labs are a user-centered innovation environment or an innovation approach in real-life setting. The idea is that people's ideas, experiences, and knowledge, as well as their daily needs of support from products, services, or applications, are the starting point of innovation and stimulate and challenge the development. The kind of environment needed depends on the product or service being developed. They contribute to the adaption of technology to real-life use through the feedback of users. This speeds up the lifecycle of realization of innovations.

Tool; The Living Lab Methodology Handbook

https://www.ltu.se/cms_fs/1.101555!/file/LivingLabsMethodologyBook_web.pdf

Examples;

<http://www.innovatedementia.eu/en>

<http://www.openlivinglabs.eu/livinglab/aipa-%E2%80%93-ageing-place-aalst>

<https://www.licalab.be/en>

<http://www.zorgproeftuinen.be/en>

<http://www.irsicaixa.es/en/livinglabhealth>

3.2 Service Design

Service design is an approach and a method of different tools that helps to develop activities to improve its quality and the interaction between the service provider and its customers. If a successful method of service design is done, the service will be user-friendly and relevant to the customers, while being sustainable and competitive for the service provider.³

The method is based on a trial method (also called iterative) to solve challenges based on the user's perspective. The focus is on understanding the users' needs and how these experiences help finding the problem that needs to be solved. Based on this knowledge, new solutions are being developed and tested to create value for both users and organisations.⁴

3.2.1 Service Design - Five steps

The five steps used in this guide are based on the innovation method *Service Design* as used by the County Council of Värmland (VCC).⁵ It's important to involve all QH-actors from the beginning of the design process.

³ https://en.wikipedia.org/wiki/Service_design

⁴ <http://experiolab.se/en/healthcaredesign/>

⁵ www.experiolab.se/en/healthcaredesign/

Service Design is an iterative process which allows that you go back and forth on the basis of the lessons and the knowledge created along the way.

1. Prepare – Define the challenges
2. Explore – Identify the needs
3. Understand – Understand the needs
4. Improve – Improve the solutions
5. Implement – Implement the solutions



1. Prepare

Define the challenges – During the first step, define the frameworks, clarify what the job/project should lead to and put together a team to work together. Involve the key people early and define the conditions for being able to involve end-users.

Work from a wide perspective, maintain a dialogue with the citizen/end-user and other actors to define the challenges and problems together. The aim is to identify the right problems and avoid incorrect assumptions.

Examples of Methods

Brainstorming, dialogues and stakeholder mapping.

2. Explore

Identify the needs – During the second step, the service design process needs the greatest focus. This is when the needs and problems of the users and how they occur are examined. In this step, ethnographic inspired methods and tools to understand people's lives and experiences often are used. It might be necessary to remain in this step much longer than what might feel comfortable, but the more we know about the needs and the problems we are trying to solve, the better the solution will be.

Examples of Methods

Brainstorming, Focus groups, Open Space, Co-creation, Workshop and Customer Journeys. Värmland County Council often combine several tools to get a better understanding.

3. Understand

Understand the needs – After collecting a large amount of information we need to analyze the material and make it understandable and useful, looking for patterns and connections. Together we create joint insights, identify the most important issues and visualizes this knowledge. This process can take time and be a great challenge, but it gives a good picture of the problem area and help to see which challenge to focus on in the next steps. Make sure that everyone involved shares the same understanding and challenge.

Examples of Methods

Meetings, dialogues, Focus groups, Customer Journeys, Personas and Workshops.

4. Improve

Improve the solutions – During this phase, we want to expand our work in order to create so many ideas and solution suggestions as possible on the challenge that was formulated in the previous steps. This can be done through Idea Generation Workshops where people with different skills can add their experiences and thoughts to the ideas. Then the first ideas are developed into concepts, services or prototypes. VCC tries out the prototypes in the actual environment where they will be used, go back, amend and try again. The goal is to have concrete, radical and well-founded improvements ready for implementation. This could, of course, also be a new product or service.

Examples of Methods

Hackathon, Open Space, Co-creation, Brainstorming, Focus groups and interviews.

5. Implement

Implement the solutions – The new solutions or products are implemented. The experience and functionality is then evaluated from a user perspective as well as in relation to previously defined criteria such as quality and economy using relevant evaluation.

Examples of Methods

Surveys, Interviews and Focus groups.

4. Examples of Methods

There are many methods (activities) that can be used when applying a Quadruple Helix approach. Service Design and Living Labs are overall approaches while methods are activities. This document introduces examples of useful methods, but you may also develop and use your own methods. If you do so, please share it with Värmland County Administrative Board so that VCAB can use it for knowledge exchange amongst all partners and for evaluation. Many of the proposed methods can be used in several stages of the process.

CAN BE USED TO:					
TOOL	Prepare	Explore	Understand	Improve	Implement
Brainstorming	X	X		X	
Co-creation		X	X	X	
Customer Journey		X	X		
Focus group		X	X	X	X
Hackathon				X	
Open Space		X	X	X	X
Personas			X		
Round-table Workshops		X	X	X	
Workshop	X	X	X	X	X

The methods are written in alphabetic order:

4.1 Brainstorming

Brainstorming is a group creativity activity method, whereby spontaneous ideas contributed by the actors, are gathered with the aim to solve a problem or get new ideas. Brainstorming is a relaxed and informal approach which encourages actors to be creative and to think out of the box. Avoid criticizing or rewarding ideas. Evaluate ideas at the end of the session.

Tools:

<http://www.designkit.org/methods/28>

<http://www.health.state.mn.us/divs/opi/qi/toolbox/brainstorm.html>

Example: Brainstorm HEALTH 2017 will bring the signature Fortune Brainstorm interactive format to generate new ideas and fresh thinking, while encouraging a hand-selected group of thought-leaders to work jointly on problem solving. Participants will tackle the big questions of how technology can reshape all aspects of health, including personal wellness, intervention, cost efficiency, and research.

<http://www.fortuneconferences.com/brainstorm-health-2018/2017-agenda/>

4.2 Co-creation

Co-creation involves different stakeholders including the end-users/citizens in developing or improving new products and services. The purpose of a Co-creation session is to convene a group of people you're designing for and then bring them into the design process, not just to hear their voices, but to empowering them work with you. Be honest to the end-user/citizen and sincerely interested in their experience and be willing to share information to get the best result of your co-creation. Not only is a community far more likely to adopt a practice or service that it helped create, but you'll also gain valuable insight into all facets of your solution. A co-creation usually consists of two steps; contributions of experiences and then selecting the most promising contributions.

Tool:

<http://www.designkit.org/methods/33>

Example: The American Refugee Committee (ARC) engaged IDEO.org to help design a way to get better health care to the young children of the DRC, and designed Asili, a sustainable business that offers agricultural services, clean water, and a health clinic to its members. By addressing an entire ecosystem of need, from potable drinking water to better seeds to vastly improved health care for children under five, IDEO.org helped ARC impact an entire community.

<http://www.designkit.org/case-studies/6>

4.3 Customer Journeys

This is a method that describes the journey of a user and his interaction with services. It provides a visual overview of the specific incidents that takes place, the authorities and people the user is

in contact with as well as the user's experiences. This allows us to see what parts of the service work for the end-user and what parts might need improving. It also identifies hidden or new user needs.

Tools:

<http://www.servicedesigntools.org/tools/8>

<http://metoder.mind-lab.dk/en/service-journey>

Example: The Patient Journey – where healthcare professionals, companies from the paper industry and researchers together followed the hospital journey (customer journey) through the hospital to better understand the needs in order to improve the patient's experience throughout the health care service.

<http://experiolab.se/en/project/patientresan/>

4.4 Focus group

A focus group is a small group of people whose reactions on a new product are studied and/or tested in guided or open discussions in order to determine the reactions that can be expected from a larger population. Questions are asked in an interactive group setting in which participants are free to talk with other group members. During this process, the researcher either takes notes or records the vital points he or she is getting from the group. Researchers should select members of the focus group carefully for effective and authoritative responses.

Tool:

http://www.scottishhealthcouncil.org/patient_public_participation/participation_toolkit/focus_groups.aspx#.WIXfBWdIKUk

Example:

The pilot project, "Involving patients and carers: an orthopaedic foot and ankle pilot service", sought feedback from patients and carers on the information provided to patients. Through focus groups and feedback cards, patients and carers shared their views on improving the service.

http://www.scottishhealthcouncil.org/case_studies_data/involving_patients_and_carers.aspx#case-study

4.5 Hackathon

Usually, participants gather in a hackathon for developing a whole new service or product for example 12 or 24 hours. The participants work in different teams and when the time has ended, the results are often presented in the form of a short presentation where the project is displayed and evaluated by a jury. The extremely short timeframe and total focus on a task are some of the factors that distinguish a hackathon from the usual development environment.

Tools:

<https://methodkit.com/hackathons/>

<https://hackathon.guide/>

Example; Open4Citizen organized Hackathon for Health (12-13 Nov. 2016). For two days, 35 participants; citizens, employees from the health care sector, students and companies from the IT and communications businesses worked together to create prototypes and new solutions to improve peoples' everyday life and health on Kronoparken, Karlstad, Sweden.

Link: <http://open4citizens.eu/pilots/karlstad/>

4.6 Open Space

The Open Space Method is one way to enable all kinds of people (5-1000 participants), in any kind of organisation, to create inspired meetings and events. In Open Space meetings, the central theme is set in advance, but the participants create and manage their own agenda of parallel working sessions around a central theme of strategic importance. Events can take one day or longer.

Tool:

http://www.scottishhealthcouncil.org/patient_public_participation/participation_toolkit/open_space.aspx#.WIXhtGdIKUk

Example; In the "Braveheart - Healthy Heart Campaign", NHS Lanarkshire examined the barriers preventing minority ethnic communities from accessing cardiac services and worked with communities to find solutions. The team was recognized at the 2006 Scottish Health Awards.

http://www.scottishhealthcouncil.org/case_studies_data/braveheart_-_healthy_heart_cam.aspx

4.7 Personas

A persona is a fictional character created to represent a user type that might use a service or product in a similar way. In most cases, personas are synthesized from data collected from interviews with users and added with descriptions that include behavior patterns, goals, skills, attitudes, and the environment, with a few fictional personal details to make the persona a realistic character.⁶

Personas are useful in considering the goals and needs in order to help to guide decisions about a service, product or interaction space such as features, interactions, and visual design of a website. Personas are archetypes, not stereotypes, and should be made as rounded as possible.

Tools:

<https://connect.innovateuk.org/documents/3338201/3753639/Design+methods+for+developing+services.pdf>

<https://www.usability.gov/how-to-and-tools/methods/personas.html>

<http://www.servicedesigntools.org/tools/40>

<http://www.wereldvannestor.be/>

⁶ www.en.wikipedia.org

Example 1; A set of persona's (elderly) was developed in Flanders.

<http://www.wereldvannestor.be/Nestor>

Example 2; During the project of "Zorg proeftuinen", The living labs AIPA (city of Aalst) & Licalab, developed together with iMinds a frame work/script about the motivation of volunteers. In the In For Care project, they did the same. In the Living Lab case, volunteers are a basic need to conduct innovative projects within a Living Lab environment.

The living labs AIPA (city of Aalst) & Licalab developed two types of personas:

- *The perfect panel/Living Lab member (Jaak)*
- *The anti-Living Lab participant (Lies)*

The perfect Living Lab member, persona Jaak is 76 years old. He is married with Marie and has a son and a daughter. He has 5 grandchildren, who visit Jaak frequently. Jaak lives in X and is a member of the Living Lab. He participate in project X and Y of the Living Lab.

Jaak wants to contribute in designing new solutions. He likes to meet new people, trying things and giving his (critical) opinion. He uses internet and Facebook to stay in touch with his grandchildren. Besides this, he is a member of the local playing card club and loves to take a walk with his dog "Puppie".

The anti-Living Lab participant; persona Lies is 79 years old. She is a widow and mother of one son and two great-grandchildren. She lives in X and is against participating into a Living Lab. According to her, she is too old for this. These new things in the Living Lab won't help her anymore.

She likes to keep things like they are and how they used to be. According to her, computers and machines have only disadvantages. She likes to be surrounded by people and have a little talk. Unfortunately, it is becoming more difficult for her to move and to do little trips. Therefore, she is becoming more afraid.

4.8 Round-table Workshops

A Round-table workshop is a method for public participation or for groups of people who have an interest in a particular service or strategy. The Round-table workshop method enables participants to make a full contribution to discussions on issues of shared concern and to generate ideas for action. This method works well when there is a relatively clear topic to be discussed.⁷

Tool: http://www.scottishhealthcouncil.org/patient_public_participation/participation_toolkit/round-table_workshops.aspx#.WnwKXWcqToo

Example; In the project "Better Access To Health - involving disabled people in hospital design" a group of disabled people were enabled to influence the design of new hospitals in Glasgow over a 5-year period so that the buildings and services are accessible to all. The approach has been repeated in other building projects.

http://www.scottishhealthcouncil.org/case_studies_data/better_access_to_health.aspx

⁷ www.scottishhealthcouncil.org

4.9 Workshop

A workshop is a method where a group of people are actively participating. A workshop can serve multiple functions; provide a common understanding of a problem, find out challenges or bringing new perspectives into the development process. Arranging a workshop takes planning in how can you engage the participants to create the most value and can be done in different formats. Inform the participants how you will follow up the workshop and what the next steps will be.

Tool:

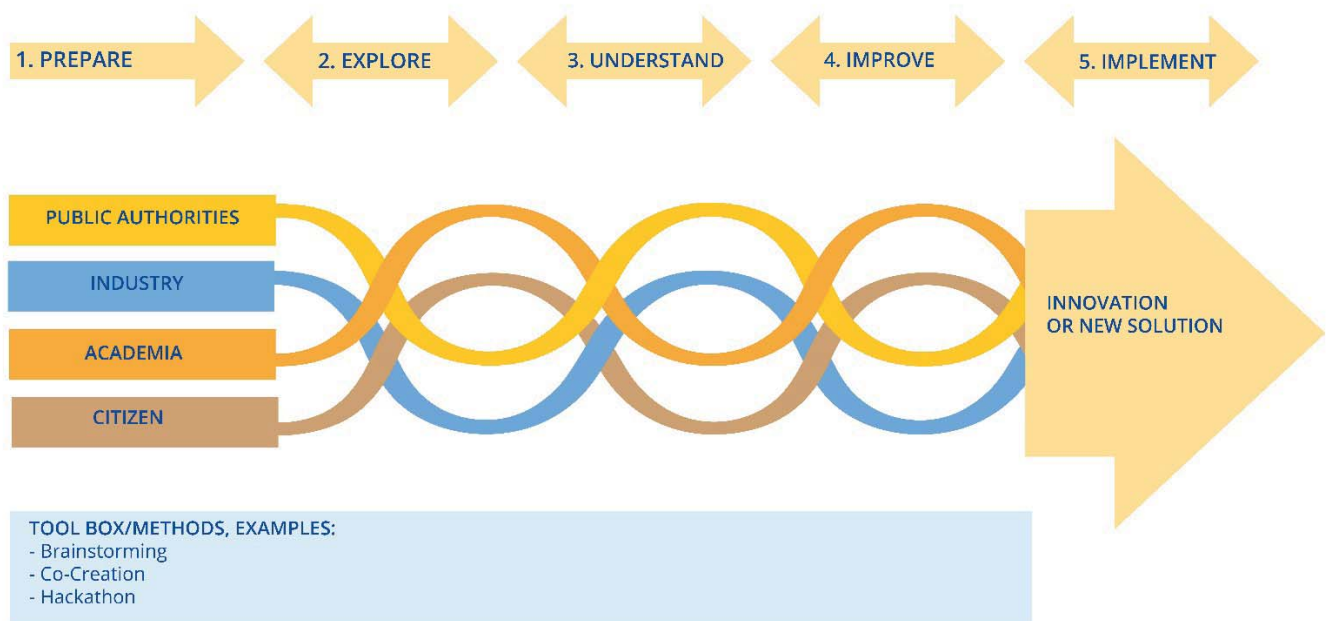
<http://mind-lab.dk/en>

Example; Coherent Patient Experience, the goal was to generate new ideas to optimize the patient´s experience in a hospital. First doctors, nurses and patients were interviewed. Then a workshop was arranged where selected staff identified seven developing themes. After this the staff developed ideas and concepts for new solutions with potential for improvement.

<http://mind-lab.dk/en/case/sammenhaengende-patientoplevelse-paa-rigshospitalet/>

5. Mapping

In order to understand the Quadruple Helix approach in an innovation process, we have made a map to show how we are thinking in this process. Hopefully it can make it easier to understand what we are trying to do in a user oriented innovation process using a Quadruple Helix approach.



6. Next steps

Along this guide, Värmland County Administrative Board has developed a digital questionnaire for all partners to fill in when they are doing their innovation process using different methods. One questionnaire to answer for each method used. These digital questionnaires can be filled in by partners during the project period.

At the end of the In For Care project, Värmland County Administrative Board will do an evaluation of the digital questionnaires and produce an In For Care- model which includes an analysis and tested methods. Hopefully VCAB can find out if certain methods are more useful than others.

7. Useful links

The Swedish Industrial Design Foundation:

<http://www.svid.se/en/>

Design Kit by IDEO:

<http://www.designkit.org/methods>

Service Design Tools:

<http://www.servicedesigntools.org/>

MindLabs innovation guide:

<http://metoder.mind-lab.dk/en/>

Design methods for developing services:

<https://connect.innovateuk.org/documents/3338201/3753639/Design+methods+for+developing+services.pdf>

Experience-based co-design toolkit:

<https://www.pointofcarefoundation.org.uk/resource/experience-based-co-design-ebcd-toolkit/>

Scottish Health Council:

http://www.scottishhealthcouncil.org/patient_public_participation/participation_toolkit/the_participation_toolkit.aspx#.WldECWdlLoo

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