Definition of a Service Co-creation Platform

WILLE PROJECT

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Introduction

This document describes in detail a definition for a service co-creation platform providing new building blocks for the existing OuluHealth Labs innovation environment. The building blocks were identified during the WILLE project.

In this document a set of building blocks for a fully operational platform are described. Other relevant experiences and lessons learned during the WILLE project are described in a separate internal document. Also, several scientific publications related to the project are under construction and many have been already submitted to peer review or are in press.

Background

Aalto University’s CECO project has identified the different elements for collaborative hubs and way of working in their benchmarking report in 2015 (Hannula et al., 2015). According to the report the core identified elements are facilities, community and development activities. 6Aika project has studied and defined open innovative platforms for urban development. In the project handbook for developers they state that

"... a platform in the simplest sense refers to any operating environment, technology, system, company, product or service, whose development and/or content production has been systematically opened up to outside developers and value creation, and whose key aims are the benefit produced by the platform’s users to each other and the network effect brought by participation."

Furthermore, the project handbook summarises – similarly to Aalto’s CECO project - that a co-creation platform should be divided into three entities (figure 1): 1. a physical and/or digital space where the different activities happen, 2. a community of people who participate in the activities and 3. open innovation activities that can produce value for platform’s customers, partners and community members. It is important to note that it is actually the network effect (i.e. the different platform users generate value for each other) that transforms the activities into fully functional platform and cultivates the culture of working together. The entities can be facilitated in various ways in order to generate and support this kind of value generating process. (Raunio et al., 2016, p. 12, 38, 41.)
DEFINITION OF CO-CREATION IN GENERAL

The concept of co-creation was developed and made popular by scholars C.K. Prahalad and Venkat Ramaswamy in the early 2000’s. According to them co-creation is the value that is generated together by a company and its customer i.e. the customer co-constructs the service experience to suit his/her context. (Prahalad and Ramaswamy, 2004, p. 4-9) Sanders and Stappers further elaborated co-creation in relation to design development process and stated that co-creation is a broad term with “applications ranging from the physical to the metaphysical and from the material to the spiritual” (Sanders and Stappers, 2008, p.6). They see co-creation as an act of collective creativity i.e. creativity that is shared by two or more people. Furthermore, they determined that by using co-design this collective creativity can be applied across the entire length of the design development process – co-design is an explicit instance of co-creation where the creativity of designers and ordinary people meet and work together. Thus, co-creation should be viewed as a way of working – i.e. a process – rather than set of certain methods. (Sanders and Stappers, 2008.)
DESIGN DEVELOPMENT PROCESS

Since there are many different versions of design development process in the world, one is obliged to pick one process as a starting point. Today, it is safe to state that IDEO (www.ideo.com) is one of the most prestigious design houses in the world and for that reason their approach was selected here. Another significant reason is that IDEO has used their creative model in numerous projects ranging from social enterprises and communication campaigns to medical devices throughout the globe, and it stays the same no matter what the design challenge. IDEO’s iterative process is divided into three main phases: inspiration, ideation and implementation (figure 2). This builds profound empathy with the target group the future design is intended to, turns learned lessons into a new solution and builds and tests the solution before it is released. More precisely, IDEO’s process comprises of the following:

1. INSPIRATION
   In this phase, the focus is to better understand people by observing their everyday lives and hearing them out. Generally, the aim is to get smart on the challenge in question.

2. IDEATION
   Here, the focus is to make sense of everything that was collected in the previous phase, generate lots of ideas, identify specific points for design, develop solutions (i.e. concepts and prototypes), and finally, test and refine them.

3. IMPLEMENTATION
   The final phase is focused on bringing the solution to life and market. Also, it is important to maximize its impact in the world.

IDEO has naturally selected a comprehensive set of different research methods that they have deemed as the most suitable for the process and the particular phases. The methods will put the building of solutions in the right track and make sure that the targeted people are squarely at the centre of the work. (IDEO.org, 2015.)

COMBINING CO-CREATION AND THE DESIGN DEVELOPMENT PROCESS

In this document co-creation is defined similarly to Sanders and Stappers’, and Prahalad and Ramaswamy’s; as a way of working together and generating creativity. This way of working is further defined here as constantly involving as many representatives of different groups/stakeholders (i.e. users, professionals, designers) as possible throughout the development phases. When IDEO’s design development process is attached to this co-creation definition, the combination can be treated as a co-creation development process which contains the same main phases as IDEO’s and keeps the intended customer/user in the focus throughout the process. In short, the network effects mentioned earlier are brought about by combining the co-creation approach and IDEO’s process with community in the spaces provided by the platform.
Building Blocks for OuluHealth Labs Service Co-creation Platform

**BACKGROUND**

The service co-creation platform definition presented in this document is based on the existing development platform of OuluHealth Labs, mainly on the physical OYS TestLab (owned by the Northern Ostrobothnia Hospital District) environment at Oulu. During the WILLE project, the OYS TestLab and its current activities were examined with the following methods: creating customer personas, mapping out customer journeys and building a service blueprint describing both service interaction and service production. In addition to experiences gathered throughout the project information was collected by interviewing key people from the OYS TestLab, the WILLE project and companies participating in project workshops and events. *It became evident that the three core elements for co-creation platform exist, but at different stages of readiness.* The physical and digital space, where the different activities can happen, is already working, thus forming the absolute foundation needed for the platform. However, the community of people who participate in the activities and the development activities require some work in order to achieve the desired co-creation approach. The findings of the scrutiny are described in more detail below.

NB. OuluHealth Labs service co-creation platform is currently focusing solely on hospital- and health-related products and services.

**BUILDING BLOCK 1 - SPACE**

The OuluHealth Labs innovation environment currently contains the following:

- OYS TestLab owned and maintained by The Northern Ostrobothnia Hospital District
- CityLab owned and maintained by the town of Oulu
- SimLab owned and maintained by The University of Applied Sciences of Oulu

The labs have been constructed during other projects and initiatives, and they are all working focusing on different areas. The OYS TestLab is part of the hospital and concentrates on providing companies – small and large – access to test their products and services with healthcare professionals in the testing environment. The CityLab, on the other hand, concentrates on testing products and services at customers’ and patients’ homes and social and healthcare services in the city of Oulu. The SimLab lets companies collect feedback about their products, services or ideas from professional healthcare teachers and students. (OuluHealth website, www.ouluhealth.fi)

In the WILLE project, the OYS TestLab environment was complemented with a new technology layer which was defined and developed during the project. First implementations of the platform were started in October 2016 when three patient health record systems were integrated by few interfaces such as medical data. These three systems were the sandboxed version of ESKO (Electronic Health Record, EHR, system of Oulu University Hospital), Lifecare by Tieto and Omni360 by CGI. After the work had been accomplished, the next step was to integrate wireless devices, which were provided by Nokia/Withings. At the moment, it is possible to showcase, for example, patient activity data, blood pressure and temperature directly at the PHR (Personal Health Record). Now, it is possible to make integrations and experiments in a real-like environment that is not bound by any legislation.
In this sense, the Digital Integration Platform offers a modular testing environment for future health software development. The modular system can also be used as a testing environment for Finnish healthcare reform. In the figure below (figure 3) the technology layer is summarised.

NB. A technological layer for the space, as described above, is essential for the OuluHealth Labs service co-creation platform, but in other environment it may be less important.

**Digital integration platform status March 2017**

*Figure 3: Summary of the technology layer*
BUILDING BLOCK 2 - COMMUNITY

The community in the WILLE project consists of 1) healthcare professionals, 2) citizens, 3) companies and 4) project personnel.

Healthcare professionals
The healthcare professionals available to the OYS TestLab are the healthcare professionals (doctors and nurses) from the Oulu University Hospital. Since there is no systematic process for recruiting and maintaining this pool of professionals, the development activities have taken advantage of professional networks and contacts in meeting recruitment needs, but steps are being taken for new way of working e.g. the hospital has started an innovation ambassadorship training among the personnel. During the WILLE project the needed healthcare professionals were recruited similarly to the general practices in the TestLab. Altogether 27 healthcare professionals were recruited and participated in the events. They were recruited according to the particular needs of the project activities and certain wards were directly contacted.

Citizens
As is the case with professionals, there is no systematic process for recruiting and maintaining a pool of citizens at the OYS TestLab yet. Currently, there is an existing patient panel available, and thus working as a starting point for the community, but it is still very small – only 47 participants. The panel consists of citizens that have earlier indicated that they would be interested in participating in the development work of the Oulu University hospital. Even though the panel exists, it turned out to work only as a communication channel for recruitment purposes. During the project, 40 new citizens were recruited for the activities by using different channels and contacts.

Companies
There were 9 WILLE partner companies in addition to 6 small companies selected via a 5G FWD Innovation competition co-arranged by the project, that were involved in the development activities.

Project personnel
During the project there were altogether 24 persons involved in different research and development areas. They were covering a wide range of expertise such as technological, business, medical and user research. Project personnel's academic research guided the co-creation activities including the planning, execution and analysis. It turned out that such a wide selection of expertise is quite essential in the production of co-creation platform services, and thus, it should be an integral part in the future platform. Whether this expertise is in-house of provided via partnerships is up to debate.

Based on the insight gained from the WILLE project, it is suggested that the service co-creation platform needs a complementary building block to manage the platform and the development activities. The building block is introduced in more detail on page 13.

Keep in mind
The current number of citizens and healthcare professionals in the community is far from sufficient for the platform to start functioning properly, so, it was recognized that a systematic approach of mass recruiting and maintaining the community needs to be carefully planned and executed. In relation to this, it was noted that the community should be strongly integrated to the internal processes of the hospital environment, especially, for the ease of recruitment of citizens, healthcare professionals and other related experts. It could be e.g. a part of general information collected when admitting patients. It could, also, be integrated to different hospital feedback channels, so, that when active citizens give feedback they would be directed to participate
in the community. It must be mentioned here that the community members, namely citizens and professionals, should cover as wide a range of different demographics as possible. Additionally, it is imperative to remember that citizens’ privacy, and patient-related data, are sensitive issues in healthcare context. Furthermore, it would be wise to some way compensate the efforts and time of persons who choose to participate in the activities of the co-creation platform.

It must be emphasized here how challenging and time-consuming recruitment of people (i.e. patients, parents, nurses and especially doctors) can be. Thus, it needs careful planning and a substantial amount of time and effort, and the correct contacts, in order for it to be successful. It is wise to use as many channels (e.g. social media, stakeholders’ websites, professional and personal networks) as possible in the recruitment of people. Face-to-face recruitment turned out to be the most efficient way to recruit citizens. Additionally, it was noted that in health-related development context collaboration with different patient and volunteer associations and organisations could be very beneficial. The screening of the target group for co-creation events is naturally also important. If the screening is very tight, it automatically reflects to the recruitment schedule for that particular event: a lot of extra time, and effort, is needed in the process. So, as it is very important to define the screening parameters as carefully and reasonably as possible, researchers should prepare themselves for longer recruitment time if the screening is kept limited. Attention should also be paid to the fact that men and women participate in the co-creation activities and events equally.

Motivating community members to participate in development activities and events is something that must be taken very seriously. Especially, since citizens are expected to use their free time – contrary to professionals who were allowed to use their work time – for participating, it is crucial to keep in mind that co-creation development activities actually compete with citizens’ time dedicated to family, friends, hobbies and entertainment. So, competition is fierce and it should be addressed accordingly. During the project it became evident that there are three significant motivational aspects that weigh in when citizens’ make decisions related to participating in this kind of development activities. 1) It was noticed that many have a genuine desire to improve things, i.e. make the world better. Their motivation for participation stemmed from intrinsic desire to make a valuable contribution to an important cause, and thereby making them feel important and actually enabling them to make a difference. 2) Another important motivational aspect seems to be a sincere interest in the innovation itself, and therefore it is important to search for and recruit persons who indicate this interest to the community. 3) Third significant aspect for citizens seems to be the feeling of being heard and taken seriously – i.e. citizens’ should feel that their experiences and opinions matters. Once people see that their feedback has generated changes in real-life, they seem to be enthusiastic in participating co-creation activities.

In discussions with healthcare professionals it became explicit that they were worried about the workload and how much time they were committing themselves to if they were to participate in development activities - it should not be taxing and take a lot of time or be too complicated e.g. long surveys were an immediate red flag. They felt that participation should be included in their official work (e.g. 10% of hours) and it should always start with the person’s internal motivation and desire to participate, not with a superior’s say-so. Another way to reward personnel would be to compensate them financially in some suitable way. Also, as was the case with citizens, healthcare professionals stated that it is important to feel that their participation is not futile - it should generate some real-life changes. Furthermore, especially doctors were adamant in their view that companies with development intent should be handled by a “middleman” e.g. an organization that takes care of the activities and all related communication, so, that they are spared from it. Additionally, they pointed out how significant hospital organization’s role is in enabling such development activities - personal motivation and desire is useless if this way of
working is not integrated into the organization’s strategy and participation of personnel is not regarded in high esteem.

BUILDING BLOCK 3 - DEVELOPMENT ACTIVITIES

The current development process at the OYS TestLab is divided into three: 1) Ideas, 2) Development and 3) Testing. TestLab’s Ideas phase concentrates on idea evaluation and improvement whereas development is focused on early stage prototypes and pilots. In other words in the development phase it is possible to develop medical procedures and prototypes with healthcare professionals in a simulated, as close to reality as possible, environment. Testing phase on the other hand focuses on product and service user testing in simulated environment. The TestLab has chosen to emphasize and prefer simulated environment as the preferred environment for development activities simply because the legal regulation needs are lower, and thus, generating less restrictions. Also, the privacy and patient-related data issues possess no problems when dealing with simulated data.

Development activities in WILLE project
As one of the aims of the WILLE project was to develop two proof-of-concept cases in the current platform with emphasis on co-creation, the TestLab process was complemented with co-creation approach and additional methodology. This brought the process closer to co-creation way of working and made it possible to find out what the future co-creation service platform should contain and how it should work.

The WILLE cases had two focus areas: first one concentrated on children’s surgical operations and the second one on emergency care. Conducted development activities in the project covered all development phases, and they are summarized below in figure 4 and consequently mirrored to the different development phases.

Figure 4: Summary of WILLE development activities
New co-creation development process

The experiences and tacit knowledge gathered during the project indicate few adjustments into IDEO's original development process. Namely, the ideation and implementation phases. It is thus suggested that it would be beneficial, and more comprehensible, to further divide the phases into the following sub phases: ideation into ideas, concepts and rapid prototypes, and implementation into live prototypes and simulations, pilots and product and service testing. This distinction would fit quite conveniently the platform’s inherent nature – a development platform with physical environments and emphasis on testing in health-related context – and suggest concentrating on IDEO’s ideation and implementation phases in its co-creation development process. This new process is called a co-creation development process and it could form the basis for the future co-creation platform (figure 5).

In the process, consisting of seven phases, 1) Inspiration phase is still concentrating on understanding people whereas 2) Ideas focuses on idea generation and evaluation, and both 3) Concepts and 4) Rapid prototypes focus on developing, evaluating and testing concepts and rapid prototypes. Whereas 5) Live prototypes and simulations deals with brief testing of solutions (i.e. a prototype or a simulation) in a service or simulated environment and 6) Pilots consists of piloting fully functional and ready for market solutions preferably in actual service environments. Finally, 7) Product and service testing concentrates on testing and evaluating finished products and services in service or simulated environments. According to the experiences in the project and OYS TestLab, when a company buys co-creation development services the most likely phases they go through are 2-5. However, when dealing with public innovation partnership procurement, it is more probable that the process would start from inspiration and reach the sixth and seventh phases, too.

Figure 5: From IDEO's development process to WILLE’s co-creation development process, most likely process for companies 2-5
Example cases
In the project there were two example cases: case 1 and case 2. Below more detailed descriptions of the cases.

Example case 1 – Company-driven case. Company A had just started their development work with the hospital and healthcare professionals when it was encountered by the WILLE project and the mutually beneficial co-operation started. It is important to state that even though the development work was initiated and lead by the company, it closely followed the created process and fits to phases 3-5. The development activities the company went through after the initial planning were:

- The company started their co-creation work with a workshop focusing on nurses from the hospital. The main goal of the workshop was to collect initial feedback about the company’s idea of a mobile communication application for patients, parents and hospital personnel.
- After the workshop, they directly built their first prototype, which was evaluated and validated in their next feedback workshop with the nurses. After this stage, the company rebuild the next version of the prototype, which was then tested by the nurses in a separate session.
- While the company was analysing the feedback from the testing session and building the next version the prototype, the WILLE project personnel mapped out both the patient and personnel journeys related to children’s surgical operations. This insight was later communicated to company A, which made changes to the prototype accordingly during the next couple of months.
- The company participated in an exhibition type of event where they were free to collect authentic feedback and improvement suggestions from both health care professionals and citizens.
- The company made final adjustments to their prototype before taking it to pilot phase at children’s ward.

Example case 2 – Hospital-driven case. While the project personnel mapped out experiences and needs related to the second focus area (emergency care) at the hospital, a concept started to emerge. The development activities belonging to phases 1-5 were the following:

- Experiences, needs and improvement ideas related to emergency care were explored in group discussions and workshops with healthcare professionals and citizens. Simultaneously, the personnel and patient journeys were mapped out.
- Based on this insight a framework for a concept started to shape up. The concept was described and further developed together with the healthcare professionals in workshop.
- After this, the concept was visualized by using cartoons, and eventually by a video.
- Also, a prototype was built for the OYS TestLab digital environment and feedback related to it was collected in a session at the WILLE project seminar.

Keep in mind
During the project, several research methods were tested e.g. group and individual interviews, workshops, mapping out the patient and personnel journeys, online discussions, online and offline questionnaires. It must be said, that for different target groups different methods are required and deemed as most suitable. For instance, individual interviews seemed to suit doctors better than group interviews and workshops whereas nurses seemed to be readily available for all three. Also, group interviews and workshops appear to work well for collecting citizens’ experiences. It is important to state that during the workshops and discussions some ideas were generated based on already existing technology and technological solutions. However, it should be kept in mind that citizens may find it difficult to generate ideas, since they seldom consider themselves specialists. Healthcare professionals, especially nurses, proved to be a much better source of ideas, though. They seemed to have an excellent motivation for it since ideas generated
by them were closely related to improving their everyday work and challenges they face. When one compares nurses and doctors in relation to how well they could empathize with patients’ viewpoint, nurses were considering it more – doctors were mainly focused on improving their own performance, which in turn naturally has an indirect effect in patient care.

Since there was an additional aim in the WILLE project to evaluate PATIO (www.patiolla.fi), an online tool for user involvement, online group activities were set-up. Based on experiences, it is safe to say that PATIO works well as an online discussion tool and as a way of collecting feedback and experiences. In the beginning of the project it was quickly noted that healthcare professionals had the perception that online tools are cumbersome and time-consuming to use, and they had little interest in participating in online activities. However, PATIO worked better in relation to mapping out patient experiences: conducted different questionnaires and diaries seemed to be suitable for the themes at hand. General forum discussions were not as successful though. Thus, it must be remembered that such discussions require careful attention and active motivation of the participants.

It is important to remember that generalizations about the best research methods are quite hard to do due to the limited number of participants and methods used, but the experiences of WILLE project should provide some guidance for future reference. Extra emphasis should be given to figuring out the correct activation and motivational perspectives/actions for different development activities, too. This is a crucial fact that should be kept in mind especially when planning online activities.

NB. More co-creation and design development related research methods can be found e.g. at IDEO’s website.

**BUILDING BLOCK 4 — PLATFORM ADMINISTRATION**

Complementary administrative building block was identified during the WILLE project. The platform administration block contains all the necessary elements needed in the day-to-day operations of the platform. The elements in question are management, operational model and business model for the platform. The management element contains all the administrative roles and responsibilities that are needed for the working platform. A starting point for the roles and responsibilities was the 6Aika’s division of roles (Raunio et al., 2016). However, the WILLE project experiences suggest that there should be more specific roles than is presented in the 6Aika model. It should be noted that one person can have several administrative roles depending on the focus and needs of the platform operations. The administrative roles and responsibilities are summarised in the following table (table 1).
Table 1 The administrative roles for the platform

<table>
<thead>
<tr>
<th>ROLE</th>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>Organization, which builds and funds either the initial stage of the platform or the entire platform.</td>
</tr>
<tr>
<td>Operational manager</td>
<td>Person who is responsible for the day-to-day operations and customer relationships.</td>
</tr>
<tr>
<td>Co-creation expert</td>
<td>Person who is responsible for the co-creation development process and methods.</td>
</tr>
<tr>
<td>Account/project manager</td>
<td>Person who is responsible for the development projects i.e. a project/account manager.</td>
</tr>
<tr>
<td>Lab Manager</td>
<td>Person who is responsible for the physical and online environments and facilitates the activities.</td>
</tr>
<tr>
<td>Community Manager</td>
<td>Person who is responsible for the community i.e. is in charge of recruitment of new community members and manages the community.</td>
</tr>
<tr>
<td>Marketing and sales expert</td>
<td>Person who is responsible for marketing and sales.</td>
</tr>
</tbody>
</table>

The platform requires an operational model according to which the desired network effects are reached and the platform organization is working. A suitable business model for the platform is described in another WILLE project document dealing with business development. Also, it became obvious that in healthcare and medical context agreements must be emphasized. They cannot be neglected in the platform operations, instead they should be part of the operations from the start. Three optional elements - which would further ensure the high quality of the platform operations - were detected for the administrative block: 1) a model for service provider partnerships, 2) a model for collecting accumulating tacit knowledge and competence within the platform organization, and 3) a pool of suitable partners for supporting the platform operations where needed.
Summary

During the course of the project, building blocks for a general functioning service co-creation platform were identified. The elementary blocks of the platform are 1) space, 2) community and 3) development activities and 4) a complementary platform administration (figure 6). Where space contains the physical and digital testing environments and tools, the community needs to be active, consisting of large and versatile pool of members and the development activities emphasise co-creation development process and way of working. The complimentary building block makes sure that the three previous blocks are able to function – it can be seen as the “motor” of the platform. When the motor is working well and ensuring high quality co-creation operations, the expected co-creation and network effects will also be on a high level. The building blocks are summarised in the figure 6 below. In addition to the fundamental elements of the blocks, optional elements that were detected during the project are presented in the figure, too.

1. SPACE
Finished testing environments including tools
Optional: Technological layer and tools for the testing environments, Community involvement online tool

2. COMMUNITY
Active community - citizens, companies and experts i.e. healthcare professionals, representatives of other hospital personnel and students, and representatives of other relevant organizations

3. DEVELOPMENT ACTIVITIES
Co-creation development process and way of working

4. PLATFORM ADMINISTRATION:
Management - including needed agreements
Operational model
Business model
Optional: Model for service provider partnerships, Model for collecting accumulating tacit knowledge and competence, Pool of partners

Figure 6: The building blocks for service co-creation platform according to WILLE project
During the project the different roles and responsibilities – both obligatory and optional - for the platform were examined and the following table (table 2) summarises them.

Table 2: Summary of roles and responsibilities for the platform

<table>
<thead>
<tr>
<th>ROLE</th>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obligatory</strong></td>
<td></td>
</tr>
<tr>
<td>Platform personnel</td>
<td>Organization which is responsible for the platform and its day-to-day operations: owner, operational manager, co-creation expert, lab manager and other personnel.</td>
</tr>
<tr>
<td>Customer</td>
<td>Organization who pays for the use of the platform and services. Identified primary customer is an organisation that wants to take advantage of the co-creation development process. It should be stated that the customer is also involved in the development process and thus is playing a role in community, too.</td>
</tr>
<tr>
<td>Community member</td>
<td>People who participate in the different activities arranged by the platform. In addition to so-called regular citizens, there should be expert members with healthcare background i.e. nurses, doctors, other hospital staff and students.</td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>Organisation who produces a part (or parts) of the platform’s elements e.g. technological solutions, devices, interfaces and/or research services.</td>
</tr>
<tr>
<td>Stakeholder</td>
<td>Organisation who can be part of the platform e.g. public sector, educational and research organization, patient associations and voluntary groups etc. Stakeholder can be especially helpful in the promotion of the platform and recruitment.</td>
</tr>
</tbody>
</table>

Recommendations
The main lessons learned during the WILLE project and working in healthcare environment are summarised next.
Remember that...

- co-creation is a way of working not a single event.
- hospital organization’s role is crucial in enabling such development activities – this way of working should be integrated into the organization’s strategy and participation of personnel should be regarded in high esteem.
- the core roles need to be fulfilled i.e. the owner, operational manager, co-creation expert and lab manager. Time and people need to be allocated to the administration of the platform.
- wide selection of expertise is essential in the production of co-creation platform services; especially co-creation competence. All expertise does not have to be in-house, it is recommended to form partnerships.
- it is important to find the right partners for all aspects of the platform e.g. technology, recruitment, research services and other needed stakeholders.
- the context of the platform can have significant influence on the platform administration e.g. agreements and privacy issues in healthcare and medical environment.
- the community should be strongly integrated to the internal processes of the hospital environment.

- it is important to build an environment where all involved in the development activities feel they can have an influence in the outcome.
- the feeling of being heard and taken seriously is very important for all participating in development events.
- since co-creation development process is a certain way of working in phases, everyone involved should be well prepared for it.
- it is good to keep participants’ updated on how the development is progressing, and let them see the end result if possible.
- different target groups require different research methods.
- it is wise to use a versatile set of different research methods during the course of the development process. Preferably, give participants various choices of how to participate e.g. both on-site and online.

Plan carefully...

- how to market the platform. Start it as early as possible.
- how to recruit people for the community. Do not forget to plan how to involve both women and men – men might need more work.
- how to maintain and manage the community.
- how to motivate and activate community members when they participate in development activities. This is crucial when planning online activities.
- how to communicate with the community.

When recruiting...

- try to identify and recruit at least few innovative users who most probably will produce high quality input, if possible - e.g. using Technology Readiness questionnaire by Mathing et al, 2016.
- reserve a substantial amount of time and effort – it is imperative to locate the correct contacts and channels. Start early, especially, if you are starting from scratch.
• avoid tight screening if possible.
• use **as many channels as possible** e.g. social media, stakeholders’/partners’ websites, professional and personal networks.
• in health-related development context, it is recommended to collaborate with different patient and volunteer associations and organisations.
• try to make it **personal**. Do it preferably face-to-face since it is the most effective way.
• be ready to **compensate participants’ efforts** accordingly – it can be a gift card or a simple cup of coffee depending on the level of work expected from the participants.

**Future research**
The developed co-creation should be further validated in order to find out if it truly works as expected and whether there are elements missing. Also, it would be important to assess the platform from an international perspective: Would it work internationally, and, how it would be possible for the platform model and entity to be scaled up globally?
References


