



Guidelines for Planning and Implementing Innovation Camps

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Guidelines for Planning and Implementing Innovation Camps

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Tämän opinnäytetyön tarkoituksena on luoda Open Innovation Camp -nimisen innovointitapahtuman suunnittelun ja järjestämisen tueksi käytännön ohjekirja, playbook. Open Innovation Camp konsepti on uusi menetelmä monitahoisten ongelmien ratkaisemiseen yhteiskehittämistä hyödyntävien innovaatioiden avulla. Se on avoin innovaatiotapahtuma erilaisille sidosryhmille, ja sen tarkoituksena on yhdessä luoda ideoita, määritellä käsitteitä ja vahvistaa ratkaisuja. Kehittämistehtävänä oli kehittää interaktiivinen online-ohjekirja, jota voidaan käyttää Open Innovation Camp -innovaatioleirien suunnitteluun, toteutukseen ja arviointiin osana suuria projekteja. Projektin runkona käytettiin palvelumuotoilusta tuttua tuplatimanttimenetelmää, jossa havaitseminen, määrittely, kehittäminen ja toteutusvaihe vievät projektia eteenpäin. Playbookin suunnittelua varten tietoa kerättiin Open Innovation Camp -konseptin kehittäjiltä sekä ensimmäisessä Open Innovation Camp -tapahtumassa olleilta fasilitaattoreilta. Tiedonkeruussa käytettiin puolistrukturoitua teemahaastattelua.

Tässä opinnäytetyössä kuvataan prosessi, jonka tuotoksena syntyi selkeä ja yksityiskohtainen 63-sivuinen ohjekirja nimeltään Open Innovation Camp (OIC) Playbook - How to solve wicked problems with open co-innovation - Organiser's hands-on guide, johon kuuluu lisäksi 30 erillistä liitetiedostoa ja joka on tarkoitettu käytettäväksi Open Innovation Camp -tapahtuman järjestämisen tukena. Playbookin muodoksi kehittyi täytettävä pdf-muotoinen ohjekirja, jossa on linkkejä tiedoston sisällä, sekä ulkopuolella verkossa oleviin sisältöihin. Liitetiedostot ovat avattavissa verkkotiedostoina tai ladattavissa zip-kansiona omalle koneelle ja muokattavissa omiin tarpeisiin sopiviksi. Playbook helpottaa ja nopeuttaa OIC-tapahtuman järjestämistä, sillä siitä saa kaiken oleellisen tiedon tapahtuman luonteesta, metodologiasta sekä tarkoituksesta, ja lisäksi se tarjoaa valmiit tiedostopohjat monenlaisille asiakirjoille, ohjeille, lomakkeille, muistilistoille ja yhteiskehittämisen työkaluille.

Opinnäytetyön toimeksiantajana toimi Laurea ammattikorkeakoulun (Laurea) CIRC4Life -hanke, joka on osa Euroopan komission Horizon 2020 ohjelmaa. CIRC4Life pyrkii edistämään kiertotaloutta sekä yritysten voimavarana että sitouttamaan kuluttajia aktiiviseksi osaksi kiertotaloutta. Opinnäytetyön myötä syntyneestä playbookista on tarkoitus hyödyntää uusien vastaavien innovointitapahtumien järjestämisessä sekä Laurean toimesta, että palveluna, jolla Laurea voi tarjota ohjausta ja konsultointia Open Innovation Camp -tapahtuman ammattilaisena ja liittää playbookin osaksi tarjottavaa palvelua.

Open Innovation Camp -tapahtuma ja siihen liittyvä kehittämisprosessi on laaja kokonaisuus, jonka järjestäminen vaatii paljon suunnittelua ja työtä. Open Innovation Camp (OIC) Playbook vähentää suunnitteluun ja toteutukseen käytettävää työtä merkittävästi, joten se on tarpeellinen ja odotettu apuväline. Jatkokehittelyssä verkkosivuna ja mobiilisovelluksena toteutettava playbook saattaisi tehdä järjestämisestä vielä tehokkaampaa ja helpompaa. Opinnäytetyön aikana päädyttiin kuitenkin luomaan pdf-muotoinen playbook liitteineen, sillä tässä projektissa tärkeintä oli playbookin sisällön luominen ja kokoaminen sekä järjestäminen helposti käytettävään muotoon.

Asiasanat: innovaatio, yhteiskehittäminen, fasilitointi, digitaalinen palvelu, interaktiivinen käsikirja

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Guidelines for Planning and Implementing Innovation Camps

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The purpose of this thesis was to create a practical instruction manual, a playbook, to help plan and organise innovation events called the Open Innovation Camp. The Open Innovation Camp concept is a novel method for solving complex problems through co-creating innovations. It is an open innovation event for different stakeholders and aims to work together to create ideas, define concepts and validate solutions. The development task was to develop an interactive online handbook that can be used to design, implement and evaluate Open Innovation Camps as part of major projects. The backbone of the project was the double diamond method known from service design, in which the defining, definition, development and implementation phase take the project forward. For the design of the Playbook, information was collected from the developers of the Open Innovation Camp concept and the facilitators involved in the first Open Innovation Camp event. A semi-structured thematic interview was used in the data collection.

This thesis describes the process that resulted in a clear and detailed 63-page manual called Open Innovation Camp (OIC) Playbook - How to solve wicked problems with open co-innovation - Organiser's hands-on guide, which also includes 30 separate attachments and is intended to be used to support the organisation of the Open Innovation Camp. The Playbook format became a fillable pdf manual with links inside the file and to online content. Attachments can be opened as network files or downloaded as a zip folder on user's own computer and customised to suit needs. The playbook makes organising an OIC event easier and faster by providing all the essential information about the nature, methodology and purpose of the event, as well as providing ready-made file templates for a wide range of documents, instructions, forms, checklists and co-creation tools.

The thesis was commissioned by the Laurea University of Applied Sciences' (Laurea) CIRC4Life project, which is part of the European Commission's Horizon 2020 program. CIRC4Life aims to promote the circular economy both as a resource for companies and to engage consumers as an active part of the circular economy. The purpose of the playbook created by the thesis is to be used in organising new similar innovation events both by Laurea itself and as a service by which Laurea can provide guidance as a professional in organising Open Innovation Camp events and integrate the playbook into the offered service.

The Open Innovation Camp and the related development process is a large entity that requires a lot of planning and work to organise. The Open Innovation Camp (OIC) Playbook significantly reduces the work involved in design and implementation, making it a necessary tool. In future development a playbook implemented as a website and mobile application could make organising even more efficient and easier. During this thesis, however, it was decided to create a playbook with attachments in pdf format, as the most important thing in this project was to create and compile the content of the playbook and organise it into an easy-to-use format.

Keywords: innovation, co-creation, facilitation, digital service, interactive playbook

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1 Introduction

This thesis was commissioned by Laurea University of Applied Sciences (later Laurea) related to a project called A circular economy approach for lifecycles of products and services - CIRC4Life (776503) which was funded by European Commission/Horizon 2020. A contract agreement was concluded between Laurea and European commission on 18th September 2018. The contract between the author and Laurea was signed on 27th May 2019. The assignment was to develop an interactive online playbook, which can be used for planning, implementing and evaluating Open Innovation Camps as part of large-scale projects. An Open Innovation Camp is an open innovation event for diverse stakeholder groups, with the aim to co-create ideas, define concepts, and validate solutions. The idea of an Open Innovation Camp process is that carefully selected participants from many different fields of industry and with different level and area of expertise co-create solutions to a predefined problem in facilitated workshops using matrix group working structure to gain and create all the available specialists' knowledge.

This thesis describes the process of defining relevant content and functionalities to the playbook based on the theoretical information on different kinds of innovation events, open innovation techniques and interviews of persons being part of organising and facilitating Open Innovation Camp, and investigation and description of technical possibilities for a playbook based on courses and literature. The process was equivalent to making a book, as information was gathered from multiple sources, processed, and new was created, and formed into a broad but clear whole. No project progress process planned for this concept existed before.

In the current challenging world, all the necessary information and resources must be brought available to find ways to curb climate change. Circular economy is an arising topic in all economic sectors as global resource scarcity starts to concern economy in the society. The CIRC4life project is looking for solutions that would allow companies to make better use of the circular economy and engage consumers in it. An Open Innovation Camp (OIC) is challenging to organise, but when successful, it will deliver significant results. The interactive online playbook which was developed during this thesis project brings new and valuable OIC concept in an easy-to-understand format and accessible to everyone. It is a helpful tool for organising Open Innovation Camps. The playbook will make easier to arrange these events and thus they can be arranged more often and with less expenses. There is no need for as much planning and resources to organise the events when the frame and the execution plan are ready in the playbook. In addition, it will create an opportunity for novices who are unfamiliar with the Open Innovation Camp concept to organise a successful Open Innovation Camp. With the CIRC4life project, information of benefits of Open Innovation Camps will spread and more successful innovations are emerging. Open Innovation Camps can be used in all the industries to figure out solutions to wide and challenging problems. An interactive playbook will keep

things in order, remind of all the tasks involved and give ready-made templates and directions for all the actions.

The key concepts for this thesis are innovation, co-creation (Innovation Camp, Scrum, Hackaton), facilitation and user interface design. The theoretical framework gives the reasoning for the choices that are done for this development task.

1.1 Development Work Problems and a Purpose Statement

The problems guiding development work were: How to bring new Open Innovation Camp concept into an easy-to-use and understandable format? How to arrange a successful Open Innovation Camp -project for a big multi-disciplinary group of people? And how to make arranging of the Open Innovation Camp easier with an interactive digital playbook?

The purpose of the thesis is descriptive. It describes the process by which fragmented written information, as well as information that is available only in experts' minds becomes in a clear concrete form, the playbook. It describes a development process of a playbook and includes qualitative study which was conducted in the form of interviews and resulted in the information on necessary topics, structure and form of the playbook. The implementation took place by examining existing Open Innovation Camp material and by utilising the views of experts in two ways: interviewing OIC experts, and study Laurea's courses to gain knowledge. The courses that the author used for doing the thesis were: Yhteiskuntavastuullinen johtaminen (Corporate Social Responsibility), Digitaalisten palvelujen käyttäjäkeskeinen suunnittelu (User-Centered Design of Digital Services) and Facilitation skills for service development.

1.2 Open Innovation Camp (OIC) -Methodology in CIRC4Life-Project

The Open Innovation Camp concept was used as a tool for CIRC4Life-project which was an international collaborative innovation project. The project had 17 partners in 8 EU countries, and it was supported by the European Commission's H2020 research and innovation programme. CIRC4Life was a three years project that was commenced on May 2018 and end on May 2021 (CIRC4Life 2021). Laurea was one partner (Consortium Member) of the project and responsible for arranging the CIRC4life Open Innovation Camp in 2018, which was also the kick of event for this three-year project. This was the first time the Open Innovation Camp was ever held. There were 80 attendants who according to the feedback were very satisfied with the arrangements and the result of the camp. According to research results many of the participants had attended to several similar innovation events earlier so they owned experience also elsewhere, and because they had a benchmark, the value of a good feedback was emphasised. As the first Open Innovation Camp was successful, the new model was worth of captured and developed to a repeatable model. Laurea's CIRC4Life -project team was suggesting the topic for the thesis. The author took the opportunity to get acquainted with innovation

events and develop her skills on digital user interface design and to study facilitation and circular economy. Some concepts for arranging the similar type of innovation events existed, but they were all different because they were designed for people from the same area of expertise and not meant for arranging an extensive multidisciplinary innovation camps. The focus of this thesis was to implement a systematic development process and the outcome of the thesis was an interactive playbook for arranging a large-scale innovation event for diverse stakeholder groups. The playbook was published as a clickable and fillable pdf-document with online features. The emphasis of this thesis was in hands-on work with creating an interactive playbook. This thesis was carried out as a portfolio-type by combining the expertise of different fields together to implement a playbook, which was the focus of the task, but also including all the stages of research development work.

The playbook, which was created during this learning process, can be used for arranging similar events quite easily even by a person who has not been involved in arranging an OIC event and is not familiar with Open Innovation Camp -process. With help of the playbook, Laurea's CIRC4Life team will arrange an Open Innovation Camp 2021-event that will end and sum up the CIRC4Life-project. Their time is saved considerably as the planning and creation of documents has already been done and can be found on the playbook for this event and for all subsequent events. The content of the playbook was discussed in close dialogue with Laurea's CIRC4Life team so that everything necessary is included in the playbook in form needed to organise the event. Thus, the playbook is a very useful tool both for organising the next CIRC4Life OIC and for achieving commercial benefit when the OIC is launched as a service provided by Laurea.

1.3 CIRC4Life Open Innovation Camp 2018 and 2021

The first CIRC4Life Open Innovation Camp was held in 12-15 November 2018 in Krakow. A lot of material was gathered about organising the first Open Innovation Camp. During this thesis process the collected material was processed, organised and supplemented. In an Open Innovation Camp there were seven facilitators of which five were from the CIRC4life-project team and two were students of Laurea's master program. In addition, there was a director from Laurea who among other things, opened the event with an introduction and brought expertise of co-creation to the event. The participants in the event were divided into eight groups one of which was an ICT team that did not have its own facilitator.

After the camp, online feedback survey was sent to all participants (both external experts and consortium members) resulting 58.6 % response rate (47/80). Nearly ninety percent (89.4%) of all respondents had found new contacts initiated by the IC. All respondents gained new insights and knowledge while over half of them gained to great or to very great extent (51.1%). Over third of the respondents (36.2%) could apply the new knowledge to great or to

very great extent to their work. OIC participants were willing to recommend the camp to others. Eleven respondents (23.4%) had already done it and twenty (42.5%) would definitely do it. Fifteen respondents (31.9%) would probably recommend and only one participant said that he/she probably would not recommend. Astonishing 95.7 percent of respondents would probably or definitely attend OIC again. (CIRC4Life 2018.)

The second CIRC4Life Open Innovation Camp was originally agreed to be held after all demonstrations are completed, at the end of 2020, in Spain. The OIC playbook was ready in August 2020 so the playbook was available for arranging the event. Eventually the event had to be postponed and it was planned to be held in Poland in 2021. The second CIRC4Life Open Innovation Camp will validate and disseminate the outcomes of the demonstrations, that are implemented in real life on the basis of the results of the first OIC. (CIRC4Life 2021.)

1.4 Key concepts

Playbook = a set of rules or suggestions that are suitable for a particular activity, industry, or job: Typically, external representatives are brought in to execute a specific playbook; to solve a particular problem in a particular way (Cambridge Business English Dictionary, 2021).

Quadruple Helix (QH) actors = government, industry, academia, and civil society. The Quadruple Helix contextualises the Triple Helix by adding as the fourth helix civil society and the media- and culture-based public. The Triple Helix is not sensitive enough to democratic complementarity, while Quadruple Helix reflects on this. It also allows for a shift towards open innovation, where innovation becomes a process that involves all stakeholders as active actors to create and experiment together new ways of doing things, and creating new products and services. (European Union, 2016.)

Innovation= a commercially successfully exploited new idea (Apilo, Taskinen, Salkari, 2007, 22).

Open innovation = The concept that includes that not all skilled people are employed by the same company, that not all ideas come from within the company and that the company has not intellectual property rights in inefficient use (Apilo et al. 2007, 46). The use of purposive inflows and outflows of knowledge to speed up internal innovation, and respectively expand the markets for external use of innovation (Chesbrough 2011).

Open innovation 2.0 = Open innovation 2.0 adds two new themes to the concept of open innovation: with the development of technology, innovation is faster and takes on new forms. In addition, the entire Quadruple Helix is included in the innovation (Curley & Salmelin 2013).

Innovation Camp process = the camp preparing, the face-to-face and virtual interaction, the period of prototyping, and the follow-through (JRC 2017).

Co-creation = the collaborative development of new value (concepts, solutions, products and services) together with experts and/or stakeholders (such as customers, suppliers etc.). (Fronteer 2020)

Facilitation = Facilitation is about helping a human system to help itself, making a process easier, enabling a group to collaborate more efficiently. Aims to enable/promote creativity, mutual understanding, consensus, commitment to act, conflict resolution, problem solving, knowledge creation, ideation, etc. (Pöyry-Lassila & Turku 2020).

Circular economy = seeks to get rid of take-make-waste industrial model. Its three principles are: design out waste and pollution, keep materials and products in use, regenerate natural systems (Ellen MacArthur Foundation, 2021).

2 Open Innovation, Co-creation and Usability of the Event Management Playbook

Open innovation includes way of thinking that comprises open sharing and receiving information. Participants work together to address a challenge, and they can create ideas with certain procedure to solve the problem. Chesbrough's (2011) definition of open innovation is: the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and respectively expand the markets for external use of innovation. For companies open innovation is a very profitable way to innovate, as it can reduce costs, speed up time to market, increase differentiation and create new revenue streams. (Chesbrough 2011.) The transfer of knowledge across organisational boundaries made possible by the open innovation method is illustrated in Figure 1 and compared to the closed innovation method, where all ideas come from within the organisation. Open innovation is based on the belief that knowledgeable and creative companies and individuals outside the company can also contribute to achieving strategic goals and that sharing intellectual property both ways is useful for different parties in different ways. The more information is gained, the more educated the decisions are. The open innovation funnel on the right in Figure 1: A closed innovation paradigm vs. open innovation paradigm is like a hybrid between a sieve and a funnel, as the development process is not limited to individuals within the company, but ideas and new technology also come in from the outside. In addition to getting more enlightened ideas, the number of valuable ideas is also higher. (Chesbrough, Vanhaverbeke, West 2008, 2-3, 221.)

Both models have their advantages, as not all information can be shared with the outside world, and sometimes if questions are not generated correctly the result can be big amount of irrelevant, hard-to-process ideas. But then again getting the input of thousands of correctly instructed consumers can result in a very significant competitive advantage. (Sigismund Huff, Möslin, Reichwald 2013, 13-14.)

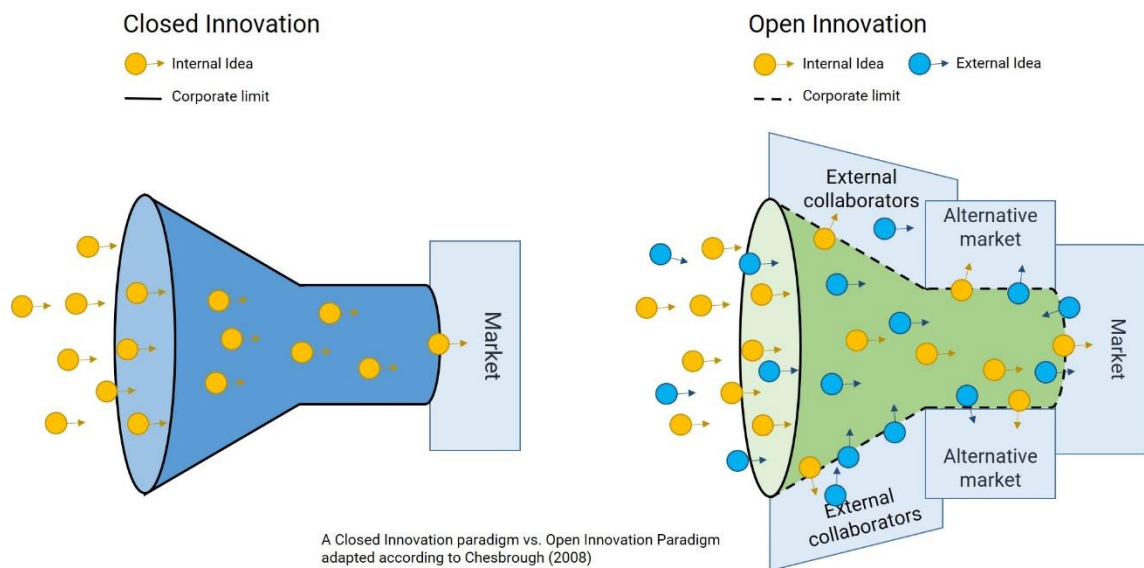


Figure 1: A closed innovation paradigm vs. open innovation paradigm

Nowadays knowledge is far more widely distributed due to widely performed scientific research and distribution of the results. This greater diffusion of knowledge changes the viability and desirability from closed innovation approach to open innovations which speeds up accessing and taking new ideas to market. (Chesbrough 2003, 62.) The crucial goal of open innovation is to capture external knowledge that exists outside the organisations, allowing firms to be more successful at innovation (Chesbrough et al. 2008, 220).

Chesbrough classifies open innovation as a business model and distinguishes it from open-source methodologies for software development although he admits that most involvement in open source fits his definition of open innovation. Some form of open innovation has established its place in the IT industry for decades. Chesbrough highlights a clear observation of the open-source innovation companies: they differ from commercial IT innovations in shared, creative and individualistic organisational culture. Open innovation framework is applicable for growing range of industry. When using open-source software as part of complex system, a company faces the fundamental issues of coordinating the systemic innovation and assuring that the value is created to the company. This is common for any open innovation value network. (Chesbrough et al. 2008, 1, 101-103.)

The Chesbrough's concept of open innovation itself does not take a position on whether innovations are produced by brainstorming together or separately. However, the Open Innovation Camp concept discussed in this thesis is based on co-creation, so the concept of co-creation will be opened as well. Co-creation, also called as co-innovation and collaborative innovation, can be defined in a following way: co-creation is a joint value creation process of developing solutions, facilitating innovations, and creating strategic potentiality through co-design manners for the stakeholders involved (Keränen 2015, 222).

Co-creation offers a powerful approach to nourish innovations. The power of co-creation in innovation is in its capability to merge the knowledge of stakeholders from different perspectives. (Keränen 2015, 216.) Grönroos and Voima (2013) see that interactions between people form a platform for co-creation of value, which indicates that certain kind of interactions is needed in order to co-create value (Grönroos & Voima 2013, 141). Keränen (2015) describes that there are certain characteristics in co-creation, which can be called pre-conditions and co-design manners, that seem to raise the value of co-creation. Co-creation creates scope for strategic thinking, and certain triggers are needed to enhance co-creation activities (Keränen 2015, 216-218). According to Keränen (2015) the pre-conditions for stakeholder interaction are: two-way communication, orientation towards a long-term relationship, trust, knowing in person, transparency, and omnipresent interaction. The co-design manners are focusing on value network, proactive attitude, sharing knowledge, sharing resources, listening and learning together, developing together and testing together. Enabling potentiality of co-creation approach requires adopting co-design manners. Those who have adopted pre-conditions and co-design manners know each other's businesses well. This means that they know each other's customers and can create better value-in-use, plan better future business activities, get more new ideas, and are able to free up resources from mere sales activity. Keränen also states that her research and long experience on the topic of co-creation have raised a clear insight that co-creation generates mutual gain. (Keränen 2015, 228-229.)

Open innovation has gathered growing attraction due to changes in social organisation and markets. Technological changes, increasing interaction among individuals and groups, growing need for new ideas, economic uncertainty and accessible international labour pool create new opportunities and modes of operation for open innovation (Sigismund Huff et al. 2013, 13-14). According to Ligthart, Keränen and Minshall's research (2018) a systematic process is an enabler to open innovation and co-creation. (Ligthart et al. 2018.) Four critical success factors emerge from the perspective of open innovation: motivation and goal setting, careful preparation of the assignment/challenge, active and multidisciplinary attendance at the event, and focus on event aftercare (von Behr 2018).

Driven by advanced technology a new level of openness has been associated with innovation: Open Innovation 2.0 adds an essential part to the innovation approach as it emphasises co-creation processes across all stakeholders, and innovations happen more rapidly due to advances in technology. Open Innovation 2.0 includes increased sophistication and complexity in innovations as higher bandwidth and accelerated trust lead to more innovative options as more shared ideas are activated. OI2 paradigm is an innovation model that is based on extensive networking and co-creative collaboration between all actors in society. It spans organisational boundaries well beyond normal licensing and collaboration schemes. With OI2, sharing and the co-generation of innovations will enable a significant competitive advantage and will also help achieve broader scale benefits for larger numbers of stakeholders. In OI2 there is

seemingly a cultural shift away from resisting change as the full spectrum of Quadruple Helix is involved and can make an impact. Innovations are often user-driven where user has moved to be a contributor and a co-creator of the innovative outcome as user earlier was an object of research in the innovation process. (Curley & Salmelin 2013.)

2.1 Co-creational Methodologies

Open innovation's quintessential idea is of breaking the boundaries of organisations in relation to innovation processes. Open innovation methodologies create a platform for sharing of knowledge and insights and creating valuable results for developing new products or modes of operation. A platform where all the innovation activities take place is very important in successful open innovation. Open innovation seeks to provide a solution to the challenges that the modern world poses to organisations. These challenges can be globalisation, rapid technological development and active labour mobility. It might be challenging to find the right tool to help reaching goals. (Isomäki 2018.)

Open innovation types are often divided into four different approaches:

- Intracompany: Inside the organisation or company. This can be considered a contradiction to the definition of open innovation. However, it's important to include this level as in a large organisation it can be considered open innovation when collaborating within different functions or business units.
- Intercompany: Innovation between two or more different companies.
- For experts: All people outside the company who have the necessary knowledge to make the relevant contribution.
- Publicly open: All people regardless of previous knowledge or reputation.

(Isomäki 2018.)

2.1.1 Profile of Lean

The purpose of Lean is to eliminate activities that are considered waste and, in that way, create more value for customers. Any activity or process that consumes resources, increases costs or time without creating value becomes the object of elimination. (Lean Advisors 2020.) Lean is any process improvement that significantly improves system performance in a sustainable way. The principles of Lean product development are decentralised design, shared project buffers, stand-up meetings, prioritised tasks, pull tasks, visible queues and work in progress (WIP) restrictions. These principles give the first level benefits of visibility, communication, quick feedback, no multitasking and early warning of delays. All of these together give each team member clear and correct priorities for every day and due to this, projects are completed faster. The origin of Lean is the Toyota Production System (TPS), which focuses on

customer needs (customer value), pull (tasks) instead of push (tasks), and making work visible to the team with Obeya rooms. The Toyota Product Development System (TPDS) also looks at mitigating risks and fast learning. The result of TPS was better products, delivered more quickly and consistently. (Accuer 2020.)

2.1.2 Profile of Agile

Agile development takes many of its cues from Lean. For example, it focuses on customer needs and learning (iterative development), as well as visible work and pull (Scrum or Kanban boards). The creators of the Agile Manifesto also place importance on improving requirements definition (user stories), inaccurate schedules (story points & burn-down), persistent resource overloads (sustainability), and multitasking (WIP constraints). In addition to Agile, there are many offshoots or like-minded methodologies such as the Lean Start-up movement, Critical Chain, and Product Development Flow. Not all Lean techniques are suitable in all systems. It is clear that manufacturing systems are different from product development systems and that some Lean manufacturing techniques do not apply to product development. (Accuer 2020.)

Agile project management is a project management style that focuses on fast delivery of business value, continuous improvement of product and processes, apply flexibility, team input, and delivery of well-tested products that meet customer needs. Agile methods tend to minimise risks by dividing software development into short iterations that typically last one to four weeks. Each iteration is like a small software project and includes all the tasks needed to release new functions: project design, requirements analysis, software design, coding, testing, and documentation. Agile project management reduces risk as the failure or success of the product will be clear at an early stage. Also constant development in small pieces, constant feedback, definition of done and always a version of a workable product from the first sprint will ensure that project sponsors have usable functionality regardless of the future of the project. Also agile features include things like increased ownership and collaboration, improved performance visibility, increased project control, improved project predictability and customised team structures. (Layton & Ostermiller 2017, 7, 371.)

2.1.3 Profile of Scrum

Scrum is one of the implementations of agile methodology. Agile means continuous iteration of development and testing in the software development process, while Scrum is an agile process that focuses on generating business value as quickly as possible. The main difference between Agile and Scrum is that Agile is a project management philosophy, which utilises core values or principles, and Scrum is a specific Agile methodology: a framework that is used to make a project easier. (Northeastern University Massachusetts 2020.)

Scrum is commonly used in agile software development. Although Scrum has been developed specifically for software project management, it can also be applied generally to project management. Hirotaka Takeuchi and Ikujiro Nonaka were the first to describe the idea of Scrum's development process in 1986. In their work, Takeuchi and Nonaka describe a new, holistic approach to product development, in which a single cross-functional group completes the development process from start to finish in a phased manner that is strongly interleaved. The group's activities are compared to a rugby team, where the whole group strives to progress as a unit and work closely together. The name of the method (Scrum) also refers to the special situation grouping of rugby. The name has also remained in use since then due to the similarities of the method to the rugby team and its operation; both are adaptable, fast and self-directed to different situations. The Scrum Framework usually deals with the fact that the requirements are likely to change or most of the time are not known at the start of the project. The scrum process contains different events that are time framed and held at certain intervals. The goal of the event must be achieved during the time-box. (Scrum.org 2019a.)

2.1.4 Service Design as User-Centred Innovation Method

In service design, the aim is to identify the needs and values of the target customer, and development work progresses through gathering information, ideation, testing and comparisons, and evaluations of different solution options. With the help of service design tools, the information that is collected from the customers is structured into the form that can be utilised in service development. This information is based on the real motives and needs of the target group of the service. The idea of service design is to provide customers with the kind of service they themselves want and need. Service design's mindset combines an active, iterative approach with a flexible and relatively lightweight toolkit borrowed from marketing, branding, user experience, and elsewhere and combines them as a logically progressive workflow. (Stickdorn, Lawrence, Hormess & Schneider 2018, 14.)

Service design is used for service improvement and designing new services to make them more useful, usable and desirable for clients and efficient and effective for organisations. It is a new holistic, multidisciplinary, integrative methodology. Service design brings customer's perspective visible and helps organisations see their services from that perspective. Service design provides organisations gain true and holistic understanding of their services through collaborative methods that engage both service delivery teams and customers, and enable meaningful improvements. A service design process includes qualitative research methods, fast and iterative prototyping methods and collaborative work in iterative way. (Stickdorn et al. 2018, 19, 21.)

2.2 Co-creational Events

In order to co-create something, people are needed. The idea of co-creation is that people gather to communicate and share ideas either physically or remote. Different development events and methods create frameworks and provide a process model that makes it possible to bring people together to make co-development possible. Many innovation events focus in particular on making people feel comfortable and safe, so that everyone dares to present their ideas and everyone is also given the opportunity to express themselves. An open and positive atmosphere is a prerequisite for creative problem solving (Ojasalo, Moilanen, Ritalahti, 2014, 158). There are many different co-creational events, and they are suitable for different purposes.

2.2.1 Sprint in Agile project

In agile projects, a sprint is a time frame in which the development team creates a specific group of product capabilities from start to finish consistently iterating them. The idea is that the functionality that the development team has created should be working and be ready to demonstrate and potentially shippable to the customer at the end of each sprint. Sprints are always the same length throughout the project. Keeping the sprint lengths consistent helps the development team measure its performance and also plan better at each new sprint. (Layton & Ostermiller 2017.)

2.2.2 Design Sprint

In design thinking, a design sprint is a method that is used to solve complex problems through co-creation, rapid prototyping and testing with targeted users. It has phases of understand, ideate, decide, prototype and test. (Design sprint academy, 2021.) Design sprints are a rapid prototyping and testing sessions to solve and test design problems in 2-5 days. The idea of sprints originates with the Agile framework. A Sprint Master is the leader of the team. This person identifies the design challenge for the sprint, collects the team together and takes them through all sprint stages. This role requires deep understanding of UX methods, strategy, facilitation and negotiation. Formulating a meaningful design challenge that the sprint will centre around is the critical task before the sprint. A good design challenge is inspiring, short and specifies the target groups and deliverables of the sprint. (Garage 2020, 2020.)

2.2.3 Profile of Scrum Sprint

The scrum process contains different events that are time-framed and held at certain intervals. The goal of the event must be achieved during the time-box. (Scrum.org. 2019a.) Scrum is working repeatedly and incrementally (iterative-incremental) to optimise predictability and control risks. The target product is gradually becoming more complete over several

development cycles. The development cycle is called sprint. A sprint is a 1-4 week time limit within which a usable and potentially publishable version of a product that meets the definition of done is produced. The content of each sprint is agreed in a sprint planning meeting before the start of the sprint, and the items in the product development queue that are currently most relevant to the success of the project are selected for implementation. At the end of the sprint, a sprint review will be held, where the development team will present the concrete achievements of the sprint (e.g. the latest version of the software) to the product owner as well as potential stakeholders to gain feedback and increase understanding of the development. Before starting the next sprint, there is still a retrospective of the sprint, which looks at from a process perspective what went well during the sprint and what could be improved in the next sprint. (Scrum.org. 2019b.)

Scrum uses pre-arranged events (A sprint planning meeting, sprint review, sprint retrospective) to create regularity and minimise the need for non-Scrum meetings. Scrum events are time-limited, meaning that each has a maximum length. This ensures that sufficient time is set aside for design, but no waste is made in the design process. The new sprint starts immediately after the previous one ends. (Scrum.org. 2019b.)

2.2.4 Profile of Hackaton

There is very little researched and written material about hackathons. The Hackathon is a competitive event that solves a variety of challenges in small groups within a defined time frame. Themes can be involved in virtually anything, such as service design, product development, or technology development. Hackathon's goal is to have a prototype in the form of a website, application or robot to solve a given problem. The two most popular forms of Hackathons are a physical and a web-based. In a physical Hackathon, the participants are physically in the same space. In a web-based Hackathon, participants can be physically anywhere, but work online on a common platform. For the participant, Hackathon is a perfect platform for expanding their knowledge of new technology and working on projects that inspire. The Hackathons biggest advantage is to offer a structured way to scale innovation and build new features. (HackerEarth. 2018.)

Hackathon as a term was formed in the end of 1990s. It is strongly originated in the IT community, where multidisciplinary teams have collaborated intensively to create something new (Chowdhury 2012, 33; Kienzler & Fontanesi 2017, 130; McGowan 2016, 272). The word hackathon is originated of two words: hack refers to programming and marathon to the precise schedule of the event (Kolog, Sutinen & Nygren. 2016, 2).

Hackathons can be private or public, but they are always arranged to solve challenges that the organisers put out. The teams who are participating the event independently work on the same challenge to provide solutions for them. Best solutions are usually rewarded, and the

best teams have the possibility to continue working on the challenge in co-operation with the organisation. Public hackathon are events that several organisations can take part in. These organisations recruit partner organisations to take part in these events so that every organisation has its own challenge and motive inside the same hackathon event. The hackathons might have one common theme or several tracks with common themes. Hackathons organised for just one organisation either by organising partner or with purely internal resources are called private hackathons. Hackathons are most commonly placed over the weekend and last a total of 24 hours. Hackathon gives the participant a good opportunity to network with like-minded people who are eager to create new products. (HackerEarth 2018.)

2.3 Concept of Open Innovation Camp

The developers of Open Innovation Camp define the concept as follows: “Open Innovation Camp (OIC) is a co-creation sprint type of multi-day event that is grounded on an open innovation 2.0 principles where a group of carefully assorted stakeholders who have diverse but complimentary expertise meet locally and create a common understanding of (a complex societal) challenge and work together in teams to develop, present and review in a co-creative manner user-centred concepts and solutions to predefined challenges in a set timeframe”. (Santonen, Nevmerzhitskaya, Puroila & Haapaniemi 2019.)

Open Innovation Camp (OIC) is a novel way to solve tricky and complex problems. It quickly transforms complex problems into refined innovations by combining people’s skills. Innovation camps are concise processes where economic, social, technological, cultural and environmental challenges can be addressed at the policy, strategy and operational level. OIC provides a way to manage and resolve challenges in an innovative way by Quadruple Helix stakeholders and experts. Camps act as the lubricant for rapidly innovating the policy making process, because they provide an arena for dialogue, mutual understanding, the framing and reframing of challenges from different point of views, and they also provide a facilitated environment based on self-organisation, shared ownership, creative collaboration and mutual empowerment. Camp is an iterative process, in which preparation, camping, and follow-up - where ideas are tested in the real world - are all parts of the same innovation process. (Rissola, Kune and Martinez, 2017.) It is recommended to use OIC in the beginning of a development project, to create a sense of shared responsibility, and attain a common understanding of a challenge and possible solutions. A new OIC event should be arranged at the end of a project, to use it as a validation tool for developed solutions. (Santonen et al. 2019.)

OIC has certain characteristics of its own that differ from other types of co-creation events:

1. Matrix Structure: OIC has an interactive matrix structure (Figure 2) where groups work across group boundaries and persons’ diverse skills are managed

and utilised. The work, conclusions and results of a certain group, will influence another groups work.

2. Self-organising groups: The work is facilitated in such a way that the groups themselves create the content and make decisions on the next issues to be addressed.

3. Selection of participants representing all parties: All groups have representatives from different areas of expertise and from different selection categories, which are: different classification of occupations, geographical origin, representation of all Quadruple Helix (government, industry, academia, and civil society) and gender balance. Due to the diversity and entrainment of the groups, the silo effect does not occur. (Santonen et al. 2019.)

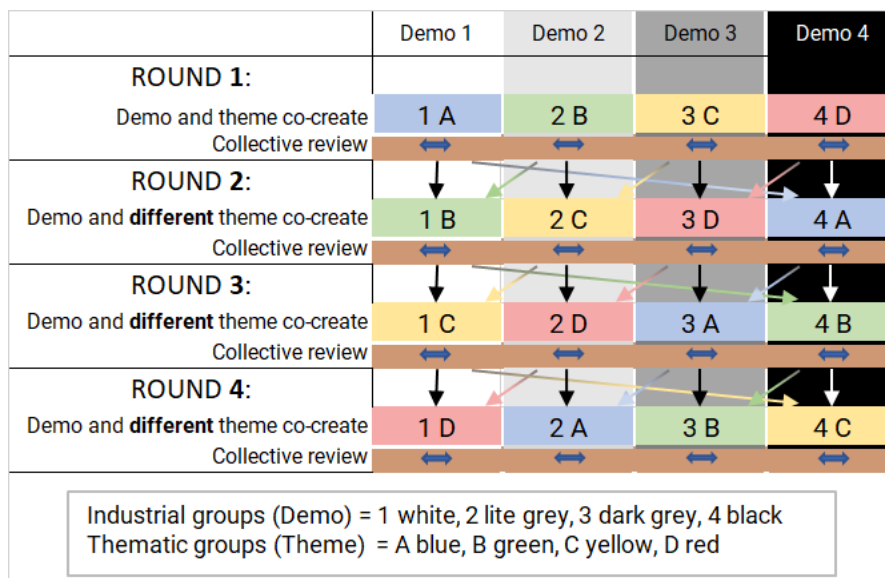


Figure 2: Matrix structure. In each round, each demo group looks at the issue from a different theme perspective

Methodologically OIC concept belongs to a group of time-constrained agile development events (Santonen et al. 2019). The Innovation Camp methodology is an instrument for structuring the co-creative processes of entrepreneurial discovery and open innovation. They are implemented in a concentrated period of time, which helps narrow down large objectives and transform them into concrete actions. Camps help participants to go beyond the usual and broaden their views on how to address different innovation issues. The process has been used to generate breakthroughs in understanding complex issues and stuck in situations, promoting cross-border cooperation, exploring opportunities for open innovation, and removing barriers to innovation. (Rissola et al. 2017.)

The purpose of innovation camps is to create an event where participants from diverse backgrounds, countries and disciplines work together and enable the power of collective and decentralised intelligence. It is a bottom-up approach to the problems and follow the principles of self-organising and rapid prototyping. It can anticipate and respond quickly, effectively and in an agile way to emerging global and local societal needs. (Rissola et al. 2017.) Innovation camp methodology spurs people to do things faster than they normally would do, which is a principal objective of the camping methodology (JRC 2017).

The Innovation Camp methodology can be used as a tool to address effectively and collectively societal and economic challenges. New ways of thinking are needed to respond to societal challenges because traditional problem-solving methods are no longer enough. As a result, more can be invested in the use of human capital and unleash underserved potential. OIC is not only co-creation event as it can take many forms depending on the thematic focus of the event (Rissola, Kune and Martinez, 2017.). They can also be used for educational purposes and for validation. For educational type of an event students with other stakeholders are co-creating solutions for innovation challenges while learning team building, creativity and innovation skills. (Santonen et al. 2019.)

Innovation is not easy, especially when innovation has a societal dimension. It needs effective tools, good communication, real learning and active openness between different stakeholders. An Innovation Camp is an agile response to Quadruple Helix collaboration and a powerful tool for speeding up resolving challenges. Innovation camps identify and refine the challenges of key stakeholders. They are viewed from different perspectives and by different participants, which turns them into opportunities which can be further developed and put into practice. It helps to develop concrete concepts that may otherwise be seen too difficult or too academic to put into practise. (Rissola et al. 2017.)

Face-to-face time is only one part of the camping methodology. Good preparation is essential for an effective innovation camp and follow-up after camp is a real test of the effectiveness of an innovation camp. Prototypes are the most important output of innovation camp. They are the driving force behind innovation camp, both in the physical innovation camp event and in the post-event process. During the innovation camp, they are a result that emerges together during development and can be improved through continuous iteration with real stakeholders. (JRC 2017.)

Innovation camp methodology's roots are in 2010 when several people from Aalto University and the New Club of Paris started to co-create the methodology to increase the impact of innovations and grow the capacity for learning and constructive change. The original camping methodology was called ACSI, Aalto Camp for Societal Innovation. Since the start the methodology has been improved and tested. In 2017 an Innovation Camp Methodology Handbook was

published to describe ways how to organise and run Innovation Camps. Innovation Camps are used for entrepreneurial discovery process and in innovation processes for regional and urban development. The aim of innovation camp is facilitating and taking stock of bottom-up processes and participatory methodologies, shifting the emphasis from technological to social innovation and enabling the transition from a Triple to a Quadruple Helix model, i.e. from a knowledge economy to a knowledge society. Innovation camps are an instrument to design policy interventions with an effective involvement of stakeholders. (Rissola et al. 2017.) The Open Innovation Camp has been developed into a new methodology with Laurea's CIRC4Life project. The OIC was organised for the first time as part of the CIRC4Life project in 2018.

2.4 Differences in Open Innovation Methodologies

A difference between Open Innovation Camp and other co-creational innovation event is that other innovation events are usually designed for small group of people from same area of expertise and are not meant for arranging an extensive multidisciplinary innovation event. Many time-framed service design events/challenged/sprints/service jams are silo-based which means that the team of experts work together to solve defined challenge. Sometimes the group can be even quite multi-disciplinary, but it works with particularly defined challenge throughout the service design event. In an OIC event, the challenge is changing and evolving.

The Open Innovation Camp differs from other participatory innovation methods in a way that it develops an innovation process led by the stakeholders themselves. They begin by outlining the challenges during the initial preparation to reformulate them and come up with new solutions during the face-to-face camp so that the solutions are feasible, testable, and scalable. There are many innovation methods and hundreds of workshops held every year providing promising results, but often the results remain inside the event and no lasting impact is created. Innovation camp events have shown that lasting impact can be achieved even if it were a complex and confusing issue to be resolved. (Rissola et al. 2017.)

The main thing that distinguish the Open Innovation Camp from other co-development methods is careful selection of participants. Participants are invited to apply for the event on the basis of an open notice and from these applicants, participants will be selected on the basis of the Diversity Management Model according to the OIC methodology. Participants are selected in a basis that they represent all parts of the Quadruple Helix and are always cross-disciplinary. The group size and number of groups must be considered in beforehand in order to get enough representation from Quadruple Helix and different fields of expertise. Every participant is equally important and represents his/her own expertise and strand of Quadruple Helix which can be government, academia, industry or society. During the Camp the participants are not working in silos, but the matrix structure is followed where the expertise of the participants can be shared also over the group borders.

The table (Figure 2) below illustrates the differences and advantages of OIC compared to some other participatory and co-creation methods of similar type.

Condition/requirement	OIC	Innovation Camp	(Applied) Hack-aton
The task consists of solving individual challenges (which might be loosely linked or under a same theme)		x	x
The task consists of solving several challenges, which are interconnected (wicked problems)	x		
Innovation process is led by the stakeholders themselves: shaping the challenges and reframing them.	x	x	
Conceived innovative solutions that are feasible and testable and are implemented after the Camp.	x	x	x
The work, conclusions and results of a certain group, will influence another groups work	x		
There is a need to harness the expertise of the same participants for several different themes/challenges	x		
QH and participants from diverse backgrounds, countries and disciplines	x	x	
Dynamix Matrix Structure: allows cross industry linkages and cross expertise linkages	x		
Challenges and groups change	x		
Can be used for validation	x		

Table 1: Differences in Open innovation methods

2.5 Facilitation as a Tool for Successful Innovation Event

In order to achieve results from innovation camp event, facilitation must be done successfully. Facilitation means leading a group of people through meetings, planning sessions or trainings, and successfully achieve a specific goal. A facilitator is in an important role to

make the event comfortable and create an atmosphere where all the participants dare to express their thoughts and everyone's opinions are valued similarly.

If the group's activities are not facilitated there can appear disagreement between people especially if they are from very different educational backgrounds and different origin. In the worst case, disagreements while performing a task can cause emotional conflicts between group members which negatively affects group satisfaction, commitment, and the quality of decisions. Thus, effective facilitation and innovation event management are key challenges for open innovation based on multi-stakeholder collaboration. (Santonen et al.2019.)

According to Losada's study, high performance team will create emotional space which encourage creative mind and openness to possibilities. That is something that can be called psychological safety. Low performance team is the opposite, there is an atmosphere of mistrust and cynicism. (Losada 1999.). There are core set of principles according to which a skilled facilitator can operate. At the heart of these is the belief that two heads are better than one. Other principles are for example: process can be trusted to achieve results if it is well designed and honestly applied, the best decisions are made in groups where everybody's opinion is equal. (Bens 2012, 8.)

Inclusive solution integrates everybody's perspectives and needs. It rejects a general decision-making model in which the quick, the articulate and the strong bring up the matter quickly, and others do not bother to bring out their thoughts, because, however, they are not listened to or their ideas implemented. According to Kaner (2014) groups seldom end up doing inclusive solutions without facilitation. Normal procedure is that people form an opinion very quickly and they take sides and other side wins and other loses. Some groups resolve their differences by voting. Kaner presents that these solutions are far from innovative or sustainable teamwork, and the background force is expediency, which do not work if the goal is to generate creativity or broad-based engagement. (Kaner 2014, 24, 27.)

In a group that support mutual participation all members are listened to and they are encouraged to speak and share what is on their minds. This leads to that people are more courageous in bringing out difficult issues and they dare to share their first-draft ideas. They also learn to treat different opinions as a resource to find new solutions. (Kaner 2014, 24.) The way people present their issues has a big impact on how other people listen to them, regardless of the substance. People are often impatient and do not want to listen if someone repeats things, is shy, and is not able to say things clearly. Some people distort things or say unfounded claims. Sometimes people bring up things that others do not think seem relevant. Showing the emotions can bring an unpleasant feeling to another person. However, groups that tolerate different communication styles will have more ideas at their disposal. The facilitator can be a great help in supporting communication by gathering ideas, reassuring the

speaker, and helping others understand how the issue relates to the whole and making sure the speaker's point becomes clear. (Kaner 2014, 42- 43.)

Kaner's Diamond of participatory decision-making -model describes collaborative decision making where full participation, mutual understanding, inclusive solutions and shared responsibility are considered. The model describes the process of group decision making in a dynamic way. The first part of the model describes the divergent thinking, where the very first section covers safe and familiar topics. In normal circumstances there appears some obvious solution and the discussion is over. Many problems though do not have an easy solution but need to be explored at wider range of possibilities. At this point people should consider new perspectives, controversial opinions and half-ready ideas to broaden their thought process. This is hard for people without causing conflicts and barking and a nasty atmosphere and in real word people do not automatically shift into convergent thinking and if they do, they might get stuck in divergence thinking. Confusion and frustration are part of a group decision-making and that is called a groan zone in Kaner's model. But sometimes just realising the existence of a groan zone helps. A Convergent zone summarises the things considered and eventually ends up with an outcome that is signed by all. This model can be used as an agenda for developing workshops or conversations. (Kaner 2014, 8-21.)

2.6 Usability and Features of a Functional Interactive Playbook

Organising a big event requires a lot of work and sometimes it is difficult for the organiser to keep the threads in their hands. For an interactive manual to help the user achieve their goals and perform their tasks, usability must be considered. Sinkkonen, Kuoppala, Parkkinen and Vastamäki (2006) define the usability as a product quality. Usability relies on research in the field of cognitive psychology as well as human and computer interaction research. People use the products differently, but some theories shed light on the unchanging human behaviour and by exploiting them, better products can be designed. (Sinkkonen et al. 2006. 11.)

Usability includes a method and theory field that aims to make user-device interaction efficient and user-friendly. ISO 9241-11 defines usability as dependent on the application situation. Nielsen's definition of good usability includes simultaneous learning in use situation, flawlessness, memorability, efficiency, and pleasantness. The ISO-standard agrees with efficiency and comfort but adds also productivity to the definition. Among other things people work through learning, remembering, motivation and attentiveness. Developing an easy-to-learn and consistent product requires iteration until it meets the requirements. (Sinkkonen et al. 2006. 3, 5.)

Usability is a qualitative feature that evaluates the ease of using a particular interface. According to Nielsen (2012), there are five factors that present good usability:

1. Ease of use: How easy it is for the user to use the product when he sees it for the first time?
2. Efficiency: How quickly the user can take advantage of the product once he has learned its functions?
3. Memorability: How easily the learned skills are remembered by the user when continuing to use the product again later?
4. Errors: How many errors does the user make and how serious are they? How easily mistakes can be exceeded?
5. Satisfaction: How pleasant the product is to use?

Nielsen (2012) raises benefit as an important qualitative feature alongside usability. Benefit refers to how practical a particular functionality is: whether the user's intended task is accomplished. From a benefit point of view, the problem also is if the user can easily do something that is not appropriate. (Nielsen 2012.) A product's ability to meet the user's goals and needs while also conform business goals and technical constraints is one measure of design quality. Design principles are guidelines for the designing of useful and desirable products and services. They attempt to minimise work while giving the user greater levels of feedback and contextually useful information. (Cooper et al. 2014, 167, 174.)

Everything that results from the design is evaluated according to how it satisfies the user and client needs. The basic pillar of user interface design is user research, as if the designer does not know the needs of the user and the subscriber, the process outcome cannot lead to success. By using the right research method in the right place, time and resources can be saved. The best and deep behavioural information can be collected with a qualitative research. Compared to quantitative research, qualitative research gives results faster, cheaper, and often the answers are better utilised. In addition, qualitative research can be used to find new business opportunities. Still quantitative research also has a role to play in user interface design, for example utilising market modelling techniques and helping to select interviewees. In addition, data analysis from websites, can be used to identify problems that need a solution or redesign. There are also cases that can only be determined by quantitative study, for example frequency of certain behaviour on the market. (Cooper et al. 2014, 31, 59.)

2.7 Summary of the theoretical framework

There are many different things to consider when writing instructions and guidebooks. The goal and objective about what knowledge and learning is wanted to offer the readers must be defined. Before starting to write a manual or playbook, it is important to create a plan, define the target audience, think about the layout, content, text, and pictures of the guide.

When choosing an implementation method, it is worth considering in what form the idea should be implemented in order to best serve the target group.

For a playbook dealing with a new concept of innovation event, the definitions related to the concept must be thoroughly explained so that the basis for learning something new is strong and so clear that everyone understands it in the same way. A playbook, which introduces a new concept of innovation involving co-creation and facilitation and implemented as an interactive online publication, must offer good usability to make it easy and comfortable to use and to provide easily all the information that is needed. This thesis describes the path to achieving this goal.

3 Development Work

The double diamond model developed by the British Design Council was used as a progression model for the implementation of this development task. The double diamond model consists of two consecutive diamonds which are figuratively grinded during development work. The first diamond consists of understanding the problem to be solved. Its steps are an expanding data collection phase, and a converging definition phase where research material was processed and crystallised. The second diamond includes an expanding development phase of a solution, and a converging implementation phase of a solution. (Tschimmel 2012, 8-9.) (See Figure 3: Double Diamond Model by British Design Council).

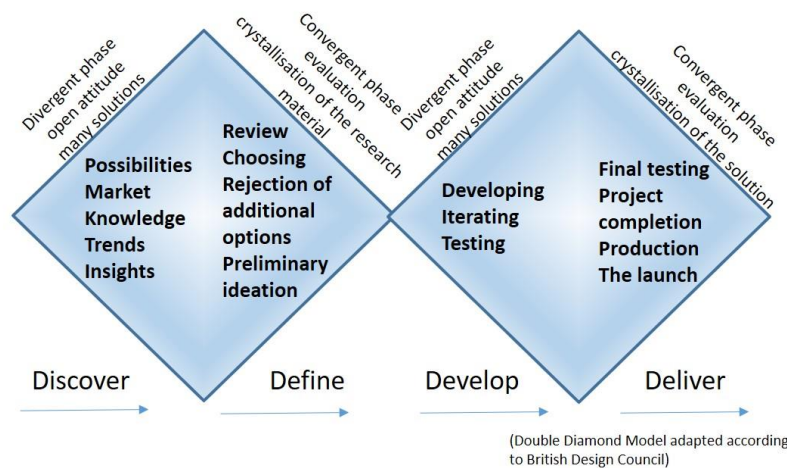


Figure 3: Double Diamond Model by British Design Council

In the discover phase of implementation, information was gathered about users' thoughts and needs to define the problems that needed to be solved. In the define phase, based on the information gathered, personas and preliminary ideas for the playbook to be developed were created. In the develop phase, the ideation and a prototype of interactive playbook was

carried out and the content of a playbook was collected and created. In deliver phase the playbook was executed by structuring information, and implementing an interactive pdf.

The double diamond method is a method familiar from service design, where in the expansion phase of the first diamond, information was gathered by reading books, online articles and publications, attending co-development events and courses on digital service development and the circular economy. In addition, interviews were conducted to determine the content of the future playbook. After that, the subject became clearer, shaped and focused. The interviews were analysed which gave information on the topics that should be included in the playbook. Next, the playbook publication format was developed and a mobile application prototype was created as an option for one possible form of publication of the content. The final output was a fillable pdf playbook with links to content inside and outside the file. Attachments opened as network files or could be downloaded as a zip folder on the user's own computer and customised to suit the needs.

The objectives of this thesis were achieved through a systematic development process that included qualitative research, service design development methods, and user-oriented user interface design. The development task was conducted with designing and implementing a playbook, which was developed based on the needs and wishes of the probable user profiles and employees involved in the CIRC4Life OIC project, and discussions with the thesis commissioners. Interactive content in playbook was the hope of the commissioner as it requires user involvement: instead of reading and analysing content, the user must take some actual steps to achieve benefit from using the playbook. Commissioner's request was also that organising the OIC event with an interactive OIC playbook will be as clear and easy as possible also for a person who is not familiar with the Open Innovation Camp concept and has not organised similar events before. The playbook also helps the more experienced Open Innovation Camp organiser by helping to keep the documents and camp results in order and guiding the organiser logically forward in the arrangements. The playbook will serve a larger group of people in the future, as Laurea's project team intends to develop a service concept that will provide OIC expertise and as part of which the playbook can be offered to those who want to organise an OIC event.

3.1 Discover: Data Collection with Qualitative Research for a Case Study

In order to understand the user in depth, user information was collected and produced systematically. User's needs and wishes were clarified by collecting data in accordance with a data collection plan which enabled obtaining user knowledge and ideas for implementing a playbook. The research material was also analysed according to the plan and the research results were reported. Based on the research material, personas and design drivers were

created and they were used for planning an interactive online playbook. The playbook was developed iteratively in cooperation with commissioners and refined according to their feedback.

During the thesis project, the author collected information in several ways: became acquainted with the topic through literature and articles, attended courses that supported the process, conducted an interview survey, developed an interface based on the interview survey, and eventually ended up developing an interactive, containing links, and fillable playbook in pdf format. The figure 3 below illustrates the progress of the process.

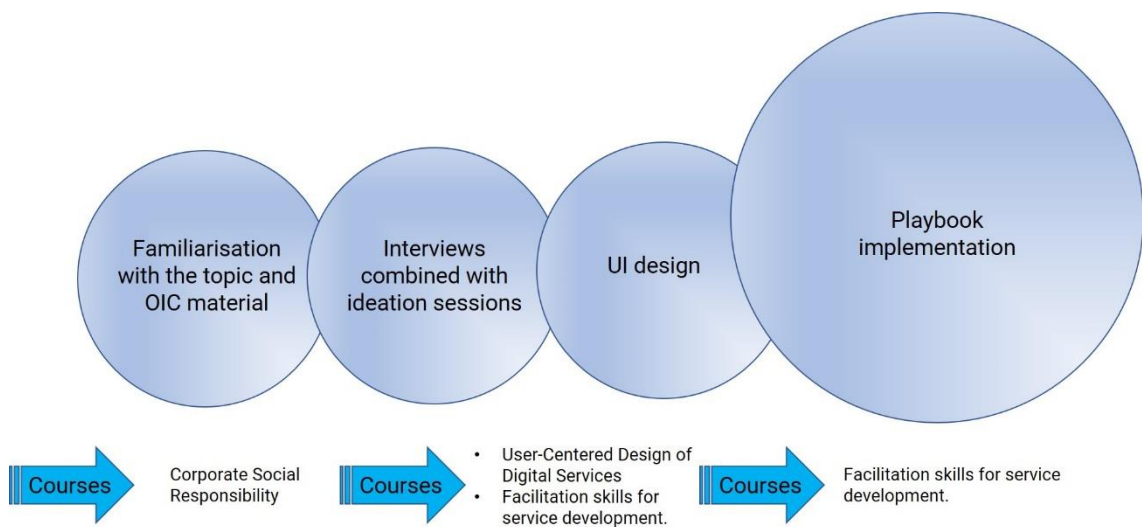


Figure 4: Data Mapping Process

Data collection plan and detailed description of the research process as well as comprehensive justifications for interpretations are an integral part of the research as they allow the reader to evaluate the research reliability. The reliability of the results can be increased by triangulation, for example a phenomenon can be studied from many different perspectives by utilising different materials as well as different data collection methods and sometimes also using several researchers. (Ojasalo et al. 2018, 94.)

Creswell (2012) describes qualitative research as a process that begins with assumptions and in which the theoretical framework guides the identification of a research problem related to individuals or groups importance to a social or human problem. To investigate these problems qualitative researcher use an explanatory qualitative approach to data collection in the natural environment, as well as for data analysis that is both inductive and deductive and form patterns or themes. The outcome includes the voice of the participants, the researcher's discussion on the topic and description and interpretation of a problem, and the effect of the research for theory formation and the need for change. (Creswell 2012.) Qualitative research is often associated with an interpretive philosophy because researchers need to make sense

of the subjective and socially constructed meanings expressed about the phenomenon being studied (Saunders et al. 2016, 168). Data collection is non-standardised so that questions and procedures may alter and emerge during a research process that is both naturalistic and interactive (Saunders et al. 2016, 169).

A case study is an in-depth study of a topic or phenomenon in its real environment. A case study can be related to a person, a group, an organisation, an association, a change process, an event, and many other types of cases. The selection of the case to be investigated and the determination of the boundaries and framework of the study are key factors in defining the case study. Once a case study is defined, it seeks to understand the dynamics of the topic under study in its context. Understanding the dynamics of the subject requires interaction between the subject of the case and its context. (Saunders et al. 2016, 185.) Gummesson (2000, 87) writes that the relevance and particular value of case study arises when research aims to provide tools and support for decision making.

Case studies as a scientific method are challenged by several researchers. Gummesson (2000, 88) summarises the criticism under the following three themes: case studies lack statistical reliability and validity, they can be used to produce hypotheses but not to test them, generalisations cannot be made based on case studies. However, case studies do not only represent sample, as case studies can be generalised to theoretical claims as a method of experimental research, and the aim of case studies should be to broaden and generalise theories. (Gummesson 2000, 88.)

This thesis can be classified as a case study, as it explores at a certain new methodology and the playbook being built around it. Playbook has a lot of common elements related to organising a general event, but a many thing only apply to this topic. The interviewees were also experts in this particular topic and were chosen to be interviewed for that very reason. However, the results of the work can be utilised more widely as the aim of the work is to make available a clear guide of new innovation methodology that will enable almost any party to find solutions to difficult problems.

If a qualitative research method is used, there is a common approach to implementing data collection holistically and in depth, with an emphasis on entities rather than a single phenomenon (Saunders et al. 2016, 157). Qualitative research has several definitions by different experts, but with common features qualitative research is more natural than controlled, and information is collected in words, images, or other audible, visual, or written externally observing method. In addition, qualitative research describes something from the point of view of individuals and their experiences and in the results can be seen the impact of the participants. The purpose of qualitative research is to describe a particular phenomenon that occurs in the world. By describing existing, we develop a complex understanding that can be used in

theory formation as well as to explain how the phenomenon works in the world. Theories created can be tested using quantitative research. (Burkholder, Cox, Crawford, Hitchcock 2020, 82-83.)

Qualitative research is descriptive, but different variables of qualitative research perform description in different ways and can use observation, interview, discussion, description, recording and personal notes. Qualitative research is often used in research in the early stages to increase understanding of the phenomenon. It is interpretive in nature and brings about a phenomenon more visible and interpretable. (Burkholder et al. 2020, 81-84.)

3.1.1 Interview Types, Data Record and Research Ethics

The interview method is one of the most used data collection methods in research and development. In addition to the interview, it is often advisable to use also other methods that support the interviews. There are different interview methods: structured interview, theme-centred interview, depth interview and group interview. The biggest differences are related to the degree of structuring of the interviews, for example defining how much flexibility the interviewer can have in the interview situation and how firmly the questions are formulated. (Ojasalo, Moilanen, Ritalahti. 2018, 95.) In a semi-structured interview, the questions are drafted in advance, but their order and wording may vary to better fit the course of the interview. Questions prepared in advance can be omitted and, accordingly, questions that come to mind in the interview can be asked. Based on the analysis, the questions for the following interviews can also be modified if issues arise, for which more information is required. (Ojasalo et al, 2018, 97, 100.)

Interviews can be videotaped so that all the possible information can be captured, and the information is not left to memory or notation. In addition, this frees the interviewer to focus an interview that is a pre-planned interaction and guided by the interviewer. The interview situation requires motivating the interviewee, as the interview can take from several minutes to many hours. Trust between the parties must also be maintained by communicating openly the purpose of the interview and development work, the processing of the responses, and requesting permission to record. (Ojasalo et al. 2018, 96.) The advantage of a group interview is that the prevailing dynamics in the group takes matters to a new level. Group interviews are suitable for situations where there is not much information on the topic or information is vague in nature. (Ojasalo et al. 2018. 100-101.)

The principles of data protection and data management must be considered in order to manage the data ethically and lawfully. The personal data must be obtained for specified purpose and be adequate and relevant to the purpose for which they are processed. The data must be kept securely and for no longer than is considered necessary. (Saunders et al. 2016, 261-262.) The recorded videos and spelling texts were only in the possession of the author of the thesis

on a password-locked computer. All interview material related to the thesis as well as material related to OIC 2018 that was in authors possession will be destroyed 14 days after the approval of the thesis. The material should not be disposed of until 14 days after the approval of the thesis as correction request for a thesis work can be made 14 days after receiving the grade (Jyväskylän ammattikorkeakoulu 2021). The exploration permit was applied for from Laurea in order to have a permit to interview Laurea's employees as part of the research work. Application for an exploration permit is attached (Appendix 1).

3.1.2 The Interview Research Implementation

The facilitators who had participated in the first OIC by facilitating workshops were interviewed to get experts' view for shaping the content and the form to the playbook being developed. Data was collected through qualitative research. This method of data collection was suitable according to Burkholder (2020) in the early stages of research to increase understanding of the phenomenon being studied (Burkholder et al. 84). From the qualitative research methods, an interview survey was selected for the first phase of the research because Ojasalo et al. (2018) states that it is possible to open new perspectives and clarify as well as connect things with the help of interviews, which is important for developing interactive playbook as it is a new kind of product whose content, form and platform were not clear at the beginning of the project. Interviews proceed as a semi-structured thematic interview because it was appropriate for situations where it has been decided that information on specific issues was collected and was not willing or necessary to give very large freedom for the interviewees in an interview situation (Hirsjärvi & Hurme 2006, 47).

In the early stages of development work, information was gathered through both group and individual interviews. Group interviews aim to achieve a good open atmosphere, where small innovation exercises could be done and thus dig more ideas for support of development (Ojasalo et al. 2018, 100). Sinkkonen et al. (2006) also encourage for group interviews because group dynamics can bring new and useful perspectives to process things. People can recall important details with help of others. Stories and descriptions are a natural way for people to remember and communicate information and therefore action and use studies are also powerful tools. (Sinkkonen et al. 2006, 23, 100.) The group interview was utilised for two interviewees who had been separated from the project for a year and at the beginning of the interview they themselves wondered if they remembered things properly. However, during the interview, it became clear that the memories shared by one helped the other to remember new things again. Thus, it could be seen that the group interview was an advantage in this situation.

The interview part lasted a maximum of 45 minutes. The interviews were conducted by the author and they required a video camera and a quiet room for recording. Laurea's meeting

room on Leppävaara campus and Tikkurila campus were reserved for this purpose. The group interview was held in the meeting room of the second interviewee's work place in the centre of Helsinki. Two of the interviews were held as a remote interview due to the onset of the corona pandemic in spring 2020. Remote interviews were initiated through the Microsoft Teams teamwork application, but another had to be transferred to a phone interview due to a connection issue. These interviews were recorded with the Teams app and the other with the phone dictaphone. However, the recording of the Teams meeting failed and the interviewer took notes of the interview immediately after the interview, when it was still in her fresh memory. Interviews were conducted on March 2, March 4, March 9, March 10, March 16 and March 17 in 2020. The video camera was borrowed from Laurea. Interviews were videotaped. The advantage of videotaping compared to just recording the voice is the fact that the interviewer does not have to focus on writing down the interviewees' reactions. Interviewer directs the discussion and ensures that topics of interest are addressed through. (Ojasalo, K., Moilanen, T., Ritalahti, J., 2018. 100-101.)

After the interviews, the video recordings were transcribed. According to Ojasalo et al. (2018) the accuracy of the spelling depends on the development task. If only the content of the answers is relevant, the interview can be spelled out superficially using common language. If, on the other hand, the words used matter from the point of view of research, spelling must be done word for word. In addition, emotions or phenomena that occur other than in speech such as moods and behaviour of the interviewees should be included in the transcription. (Ojasalo et al. 2018, 96.) In this study spelling was not done word for word, as the content of the answers was more important than wordings used. An important recruitment criterion for participation in this study was that everyone had attended to the Open Innovation Camp. Therefore, they had close information about the event, its progress, participants, the atmosphere, the tasks performed there, the venue and other event-related frameworks. They also had experience in arrangements, and opinion on the successful parts and parts that possibly required development.

Sinkkonen et al. (2006) states that information can be gathered from people and potential users working in different positions and roles that the product is to be developed for (Sinkkonen et al. 2006, 23). Although the interviewees were involved in the project as facilitators, they also had different roles related to the event. One was the project manager, one was the creator of the concept, one had designed the workshops and structure, two had been partially involved in the development of the workshops. The two only came in at the last minute and only received more detailed information about the progress of the event and the participants on the plane on the way to the camp. This variety of the interviewees brought a lot of different perspectives and opinions to the interviews, which enriched the interview material.

Figure 5: workshop task, Timeline and importance of issues related to OIC arrangements

The saturation point is reached when the new interviews no longer produce new information for the development task (Ojasalo et al, 2018, 100). Hirsijärvi & Hurme (2006) also describe saturation in such a way that new interviewees are interviewed until they no longer produce substantially new information. The researcher must decide at what stage the interviews should end, and there is so much material that theoretically significant results can be obtained. (Hirsijärvi & Hurme 2006, 60.) There are problems with this, because depending on the researcher's scholarship, a different number of new perspectives can be found in the interviews. The matter is also somewhat at odds with the feature of qualitative research, where each individual is unique. Furthermore, the researcher cannot be absolutely sure that the new object will not produce new information in any case ((Hirsijärvi & Hurme 2006, 60; Hirsijärvi, Remes & Sajavaara 1997, 181) However, in this study, all seven facilitators who were involved in the first OIC were interviewed and no more interviewees like them were available. A written agreement was drawn up for the permission of recording and use of the interviews in the thesis. (Appendix 2). Participants were informed about the duration and structure of the interview at the beginning of the interview.

According to Osterwalder et al. (2014), Value Proposition Canvas is a tool for visualising value creation, development and benefit. The value proposition describes the benefits that the customer can expect from the product. Canvas is divided into sections on Producer Value Map and Customer Profile. The Producer Value Map describes the company's efforts to generate value for the customer. It divides the value proposition into three smaller parts, which allows for a more detailed examination of these parts as part of the value promise. Its areas include Gain Creators, Pain Relievers and Products and Services. On the side of the Customer Profile, the customer understanding is clarified. It is also divided into three parts, which include Pains, Gains and Customer Jobs. (Osterwalder et al. 2014, 8-9.)

The Customer Jobs is the thing the client strives to do in his life and in his own work. Products and Services are goods produced by the company around which a value proposition is built. Gains are, from the customer's perspective, the things the customer wants to achieve or the things that make his or her life or work easier. From a company perspective, the Gain Creators are those products and services that create those benefits for the customer. Pain describes poor outcomes, risks, and challenges related to a Customer Jobs, and Pain Relievers describe how a company's products and services can alleviate these factors. (Osterwalder et al. 2014, 8-9.) This divisioning of the value proposition canvas revealed the problems and incentives and tasks that the user had.

The recorded research data was listened to several times and typed up. After that, the relevant issues were picked from the text on post-it notes and placed in the Value Proposition Canvas to see the biggest problems, incentives and tasks for users. Based on this, personas were created. With the personas it was possible to reflect on the needs and motives of the users.

Next, the post-it tags were reclassified thematically (Figure 4). Thematising is a natural way to proceed in the analysis of thematic interview material. The themes discussed with the interviewees are usually found in all interviews, albeit to varying degrees and in different ways (Saaranen-Kauppinen & Puusniekka 2006). Thematic analysis is a systematic but also flexible and accessible approach to analyse qualitative data (Saunders et al. 2016, 579.) Thematising is a basic method of qualitative analysis, in which the aim is to outline key topics, themes, or patterns, from the research material (University of Jyväskylä 2016; Saunders et al. 2016, 579). Thematic analysis can be done whether with adopting a deductive or inductive approach or both. With deductive approach the themes might be linked to existing theory and a researcher is looking for predetermined themes in the data. The inductive approach derives themes from the data: The themes are searched for to explore related to the interest of research but will not impose any framework based on existing theory for the data set. A good way to start is to explore the whole set of data by looking for the occurrence and recurrence of themes. (Saunders et al. 2016, 579; Saaranen-Kauppinen & Puusniekka 2006.) In this study the inductive approach was used to look for rising themes.

The data can be analysed by calculating the occurrence of phenomena presented graphically. A typical method of analysis is to thematise the topics found, which are the same for several interviewees, they can be connecting factors, or they can alternatively be distinguishing factors. These can be related to interview themes or be new emerging themes. The observation and examination of the regularities arising from the data in relation to each other is an important part of finding connections, thus creating results. For example, typing can be used to examine the connections (Ojasalo et al. 2018, 99). Post-it cards that have recurring issues

were placed under certain titles. This expressed the themes that were repeated most often and were therefore more significant.

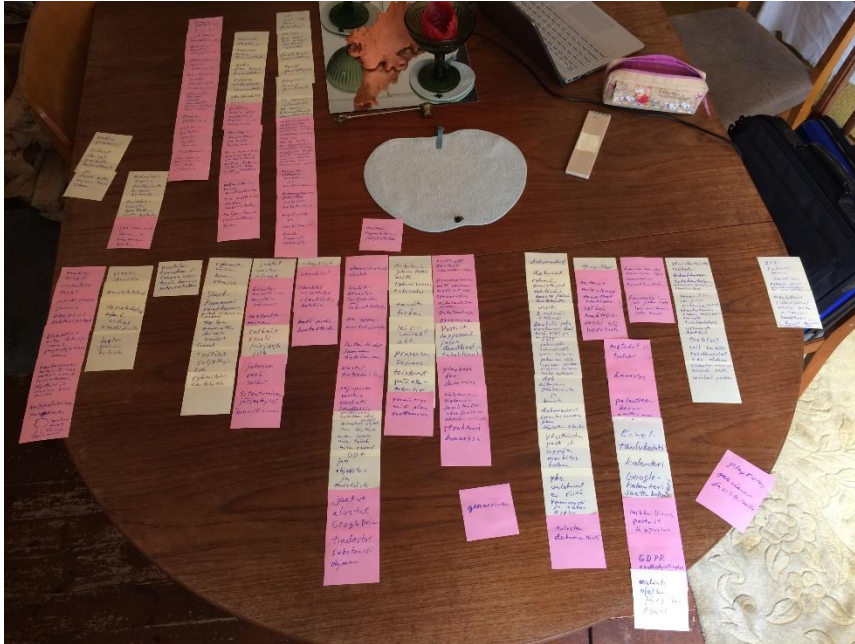


Figure 7: Theming of the results

Categorising results further with types is the basic method of qualitative analysis, in which recurring and typical features, issues or meanings are crystallised from research data (University of Jyväskylä 2016). Type narratives can also be used to form themes: the content of descriptions or narratives containing typical elements can be further specified through themes, or there can be a shift from thematic to typing. (Saaranen-Kauppinen & Puusniekka 2006.) In typing, attention is paid to typicality; the interview material is crystallised into natural facts, which are to be summarised as illustrative. Interest may also be focused on matters that may be thought to be special, individual, bizarre, or out-of-average. Typical features can and often should be analysed. (Saaranen-Kauppinen & Puusniekka 2006.)

The typing takes a step further than thematising, as it describes the material more broadly than with numerous themes. This was done after thematic categorising when the data was further processed (Figure 8: Type classification of entities). Types are like assemblages of assemblages as most often themes are included in the types. Certain types of answers can be searched in the interview materials; interviews or parts of them that are connected by certain elements and can therefore be thought of as representing some type. If types are searched for and if the material is suitable for typing, type descriptions can be prepared with the help of texts belonging to each type. The descriptions combine the common and thus typical elements present in the different responses. By comparing the type descriptions, it is easy to see how the different types differ from each other and what types can be constructed

from the data. Descriptions are a kind of cross-section or summary of the material, in which the most important elements of the material are crystallised. (Saaranen-Kauppinen & Puusniekka 2006.)

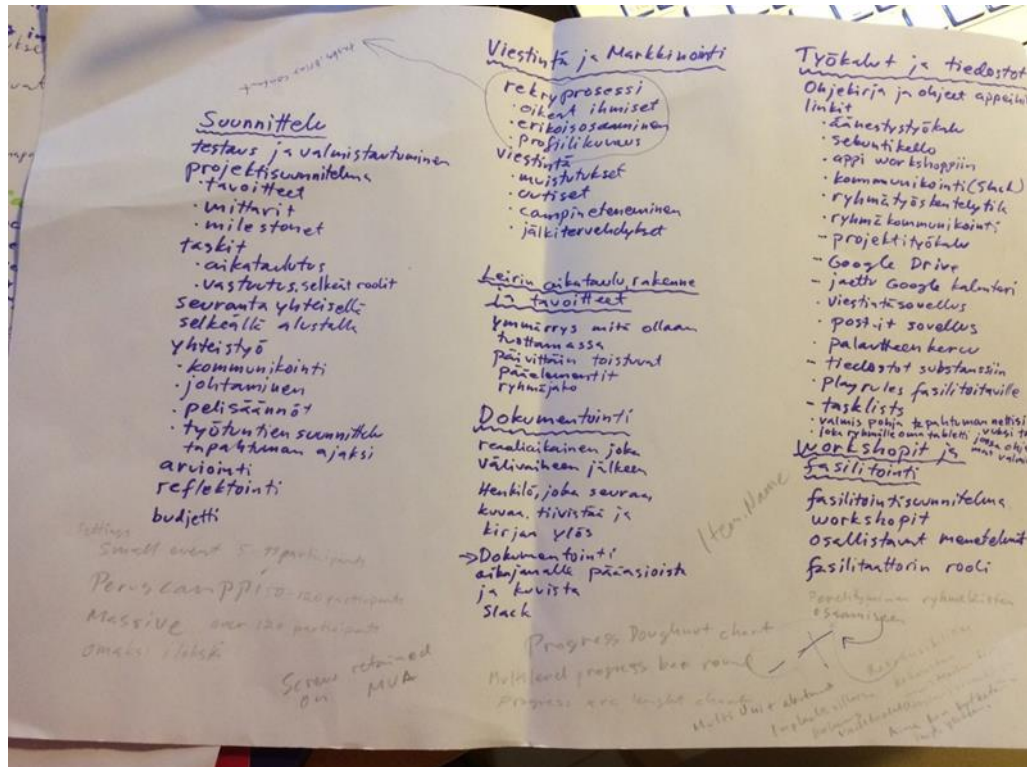


Figure 8: Type classification of entities

3.2.1 User Needs and Desires Based on an Analysis of the interviews

According to background analysis the typical user of the OIC playbook was in working age and possibly organised also other events in their work. He may still be organising a bigger event for the first time and have taken responsibility for organising the event alongside other work which means that he does not have much time to get acquainted with the topic. He has worked on a computer, so he can use digital applications diversely. He might live in Finland or abroad, so the language used in the playbook was English. The CIRC4Life project and the project commissioner also communicated in English, so it was therefore necessary that the language of the playbook was English and therefore the language of the thesis was English as well. The interviewees presented the potential users of the playbook, so the interviews looked for their needs, wishes, values, lives and their environment.

The results were generated based on the systematic data analysis presented before. Regularities and recurring themes emerging from the material were observed and seen significant. The category most mentioned in terms of Playbook content was documenting OIC results in such a way that the results were understandable and easily available later. Various digital

aids and communication applications related to the organisation of the event also received a lot of mention. The checklist was one of the often-mentioned single things that was hoped to be attached to the playbook. Scheduling and staying on schedule also came up frequently as an important issue as well as a clear division of responsibilities between team members and an understanding of what is being done and by when something needs to be ready. It was also seen as important that a less skilled facilitator could facilitate the event with a playbook. Mention was also made of "OIC Playbook for Dummies," which also signalled that the playbook should be easy to understand. There were also several mentions of communication both internally and externally. Based on the analysis, the large entities of the OIC playbook were formed: Planning, Marketing, Participant selection, Camp schedule, Workshops, Data collection and reporting, and applications. Later, these developed to be the titles of the playbook chapters with a slight modification.

In addition to the main findings, lots of information and ideas were obtained for the content of the interactive innovation camp playbook. As a clear result, it was seen that there is no need to develop a project management application for this purpose, as there are many good project management tools existing. However, guidance and recommendations on the group tools, project tools, communication tools and various digital applications to be used as an aid to workshops was hoped. The most important thing in a playbook is its content and clear project control and seeing progress. It is also important that the necessary document templates are easy to find. The playbook should act as a guide for a person not familiar to Open Innovation Camp methodology. The result of the research was comprehensive information on what the planning and implementation of the Innovation Camp project entails and what should be taken into account in arranging OIC. The important finding was that it was hoped that the playbook will provide a framework for organising the project that can be tracked, as well as providing a checklist from which to check what needs to be prepared for every stage of the project. The ready-made document and presentation templates related to the project and finding them easily were considered important. In addition, it was desired that the playbook provides information about what the Open Innovation Camp is all about and why and in which situations it would be worthwhile to use. Clear responsibility and follow-up of tasks were also felt important in the project, which would make it clear if something in the project is not progressing as desired. In addition, setting goals and clear documentation of outputs and results during the event, which could also be used afterwards, were considered particularly important. The interviews provided several ideas for the applications that can be used during the project, the links and brief instructions and descriptions of which were hoped to be included in the playbook.

Based on the research results, the Open Innovation Camp playbook is a necessary and wanted tool to support the planning and organisation of Open Innovation Camp event which requires much preparation but can be very useful method to achieve results.

3.2.2 Design Drivers

Design Drivers were formed based on research findings. They were used as definitions that guided design work by highlighting customer needs, goals, and motivational factors. Well-evaluated and selected design drivers help to develop clear and strong concepts that take customer goals into account. (Tuulaniemi 2016, 156.)

Based on the information gained from the research the personas and design drivers were constructed. The interactive playbook was designed with the help of personas and following design drivers. The design drivers were found based on the research result analysis and were as follows:

- Makes the organising of a large complex event easier
- Makes sure nothing is forgotten
- Provides structure for preparations
- Provides ready-made templates so organiser do not have to start from scratch every time
- Generic to be used widely in arranging Open Innovation Camps
- Structure from large entities to more detailed information
- To organise and easily find files and other necessary information

3.2.3 Personas

Customer persona is one of the basic tools in service design that enables customer understanding to be shared easily both inside and outside the team. The persona is concisely representing one specific group of users. Characters are created, but they are based, whenever possible, on the research data collected from the users. The characters help to make the needs and behaviours of the user group understandable. They also help the service team reach a consensus on key customer groups and help to build empathy. (Stickdorn et al. 2018, 41.) Also Goodwin (2009, 201, 226, 229) has stated that the purpose of the persona is to give the whole stakeholder a unified view of the problems and opportunities in an easy-to-remember way, and it is important that the information in definitions is formed based on the information gathered and not on anybody's own imagination.

Customer personas usually include a picture of the persona as well as other pictures to describe the personality life holistically. Personas usually also include name, age, gender, citizenship, occupation, marital status, quotation or motto, and relevant statistical information. In addition, the persona includes a description that is in some way relevant to the service or

the research question of the project. (Stickdorn et al. 2018, 41-42.) Personas were created to make the design of the playbook easier for the author (Figure 9).

Personas

Anne Rollins

- Anne is well within the Innovation Camp method as a whole and what's involved with it, but since it's a big event, she stresses about the projects as it requires holding many threads in her hands at the same time. Anne has organized similar events before and has been involved in various co-creation events.
- She is a skilled computer user but appreciates simplicity and clarity. She will be happy to introduce new applications if they make her work easier. If they make the work confusing, she prefers to stick to familiar proven applications.
- She has experience in several project management tools and is also an experienced project manager.



Jim Miller

- Jim is a young project manager who graduated as a service designer. He is working on various interesting projects. He is fluent in searching for information on the web and is just as fluent in introducing new applications. He is a novice as an event organiser and needs clear instructions on how to proceed in order to get the task of organizing an innovation camp event completed.
- When he spins things in his mind, he first wants to know what it is all about, and after that, how to start and how to proceed so that the event can be organised and achieve its goals set from the outside.
- Jim is not yet quite inside with all the digital group tools and other digital tools that could make his job easier, so he appreciates clear good advice and links to new applications.



Figure 9: Personas developed from research results

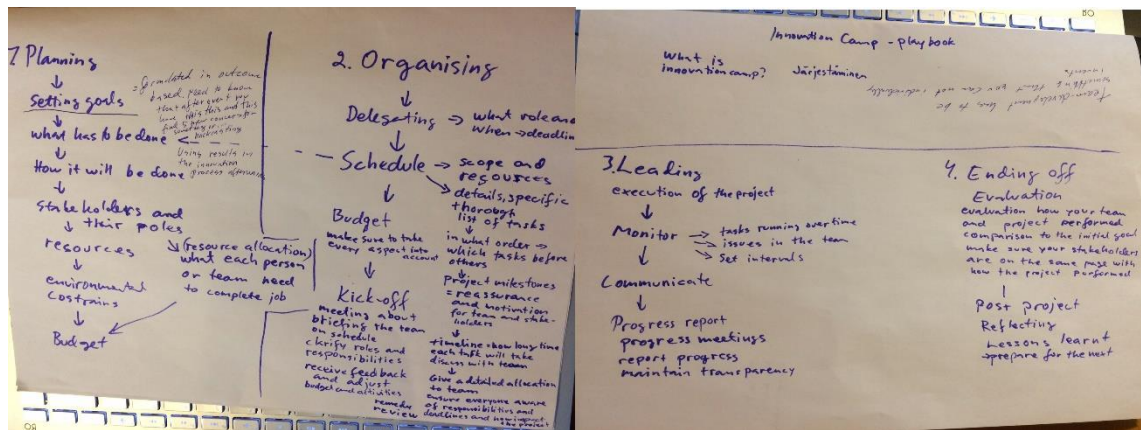


Figure 11: Developing ideas

The process and its components were also outlined in different forms (Figure 12:).

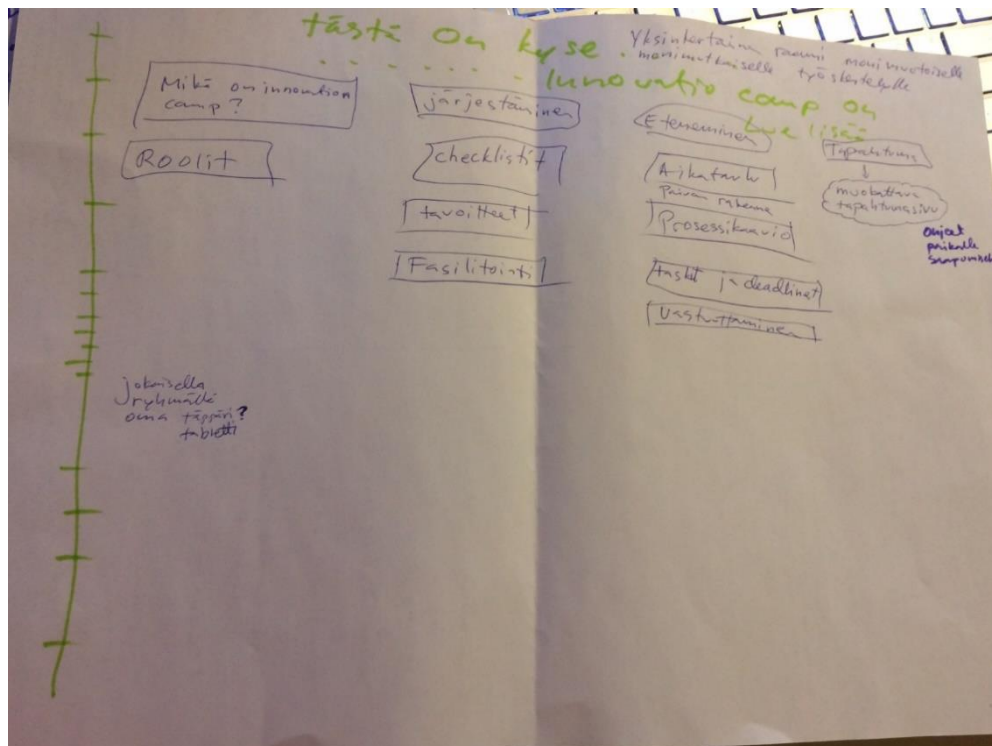


Figure 12: Grouping

Using the results of the interview analysis, the content required in Playbook was grouped into entities that could be utilized in the implementation of the playbook content. (Figure 8: Type classification of entities).

The definitions and ideas of the design phase brought out the fact that the playbook should contain all the necessary information for the arrangement of the event. It should act as a

guide on what should be done for example six months in beforehand, what three months beforehand and so on. It should include reminders and guidelines for implementing the event as well as the written materials that is going to be needed including draft of invitations, info letters, instructions, participant lists, info signs, feedback forms and everything that must be considered when arranging the event. It also should contain a description of what kind of methods and tasks the facilitators can use to get the people to co-create.

The playbook should contain the information on how to upload documents and images to file storage. If it was a mobile application it could have email chimp functionality, registration functionality (the user should be able to edit the view), it could edit and create their own upcoming events. It would also be good to have a reminder of scheduled event. The software should be scalable, i.e. one that can be expanded and further developed. Thus, the software could include various background materials for the event (manuals, presentations, contract templates, form templates, certificate templates, letter templates, images) that could be modified as needed. In addition, it would be good to be able to upload images and files during the event as documentation to a folder created for each session or workshop. The mobile application would be an interactive handbook, that guides the organiser to make an effective, fruitful and unforgettable Open Innovation Camp. The application would make it easier for the organiser to consider all the necessary arrangements and help to adapt into the changing situations during the arrangements.

The development of the playbook prototype started from an idea of the front page, where the main idea was the progress of the project as a visually clear element, from which one could see where to go at a glance. Once the main purpose of the user interface was known, wire models of the user interface screens was drawn on paper (Figure 13: The first draft of the front page). The most important issues raised in the results were found and a prototype was developed to match them. Based on the interviews, the users' desire was a useful tool to ensure that all the documents of the Open Innovation Camp project were easy to find and that nothing was forgotten to do. The draft drawing of the prototype was to show the idea of how the OIC project was progressing and to track the progress of the chart on the front page. The submenu items on the design page were also categorised with a specific icon that would indicate whether it is an instruction, a task list, or an editable document. Things appeared in the order in which they were to be performed, or at least start doing. When the task was completed, it could be clicked in the check box, which would also update the home page progress chart. The initials of the person in charge were also be seen on the design page. The person in charge could be updated on the settings page. The five other buttons on the front page with Planning-button were different sections of the project that were all run partially simultaneously, but the chart on the front page showed how much of that is left to do Before, During, and After Camp. The other pages had the same idea as the Planning page. In the All files and tools table the user would find in alphabetical order all the files listed and a page

with a search box and a filter, where the user could also search for links to the files used in the project and instructions for various digital services related to this project.



Figure 13: The first draft of the front page

The front page was developed by adding project entities as buttons and the chart element of the front page was divided into three parts: before, during and after Camp (Figure 14: Second draft of the front page).

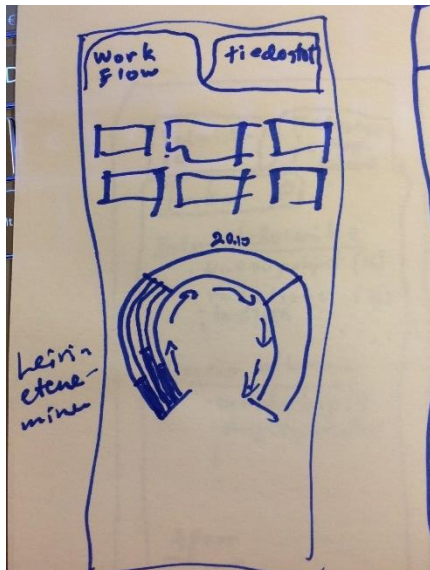


Figure 14: Second draft of the front page

Next, other pages and their functionality were outlined (Figure 15: Home page and other pages). The plan also considered the implementation of the Files and Tools page, although

this had not yet ended up being prototype tested.

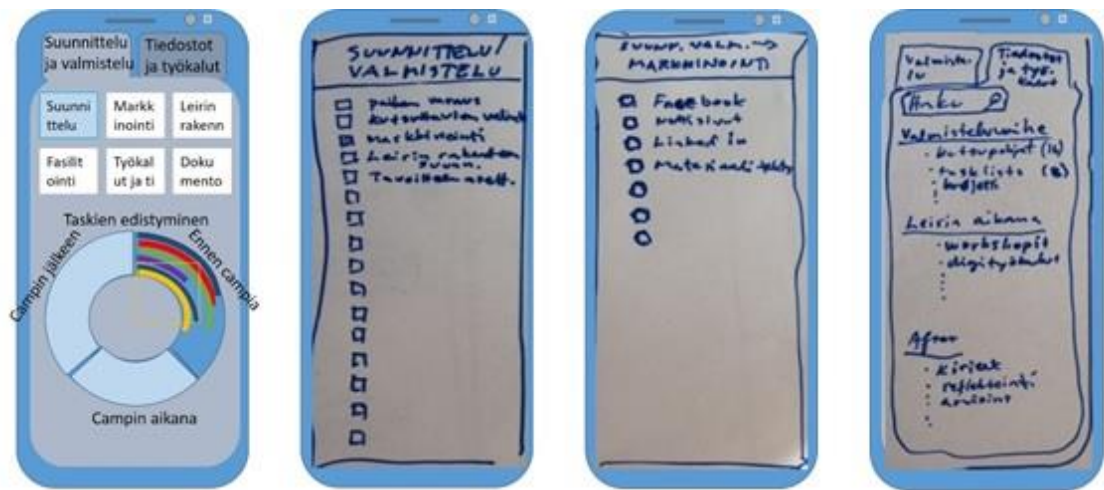


Figure 15: Home page and other pages

The final version of a clickable prototype is below (Figure 16: Finished prototype). There was still a lack of visuals, but since the development of the project continued also outside the prototype, it was not worthwhile to complete the pages of the prototype. The completed service concept was presented and illustrated using a functional prototype.

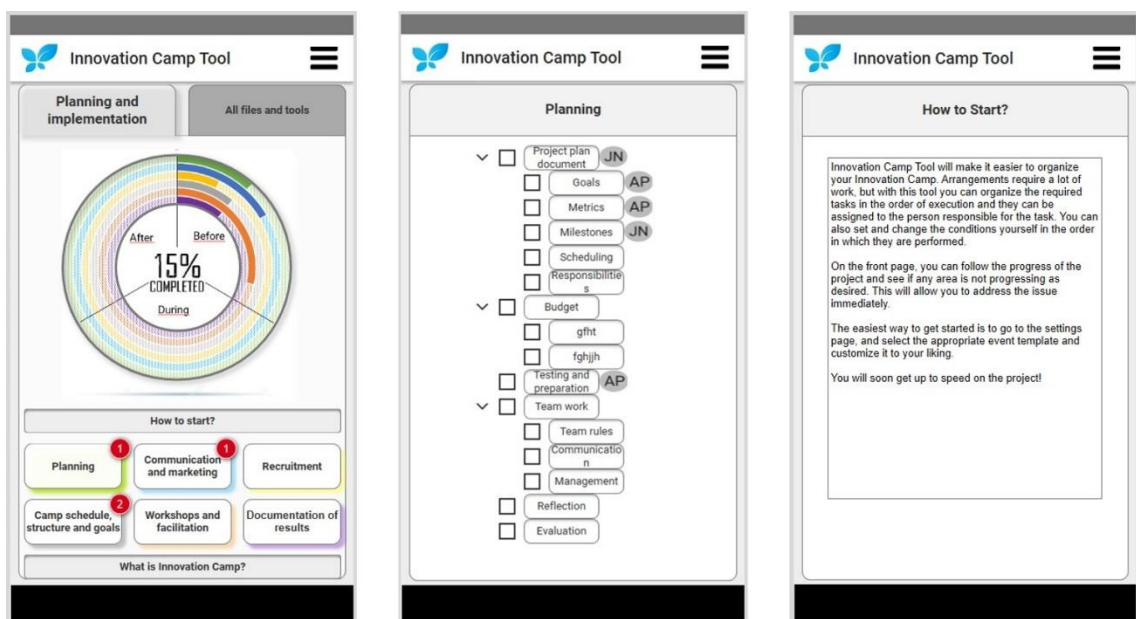


Figure 16: Finished prototype

The file page of the prototype and the common element template of the pages are shown in the figure below (Figure 17: File page open and element template).

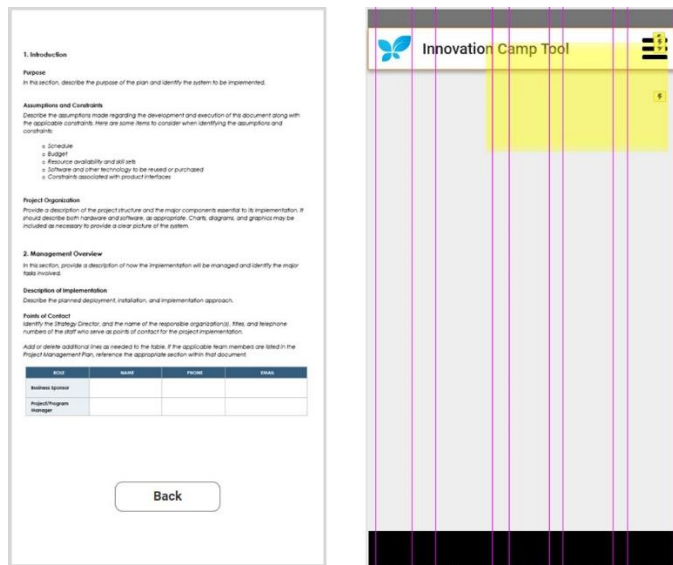


Figure 17: File page open and element template in Axure RP 9

The prototype was tested via the Axure link because on-site testing was avoidable due to the corona pandemic. Two interviewees tested the prototype. Both of their comments showed that the interface has useful elements needed to manage the project, such as tracking the progress of the project which is essential, how to get started, and a collection of documents and templates. However, they found it difficult to test the proto without real content. In their comments, it was pointed out that the added value of the tool comes from the content: the tool should facilitate OIC preparation and use, save time and effort, and provide a clear structure and necessary support (templates, documents, instructions, etc.) for camping. Instead of a mobile application, users would see the output as a web-based interactive manual with a toolkit / resource library.

Usage scenarios were created based on the personas developed (Figure 18:). In the graphs below, the user started using the user interface for the first time and made the settings suitable for him/herself, in later stages the user would actually return to use the user interface over and over again during the project lasting several months. Next time, he would go from the front page directly to the subpages of the project (e.g. Planning). However, he always started from the home page, where he saw the progress of the project and reminders if any part of the project had already exceeded the pre-set deadline.

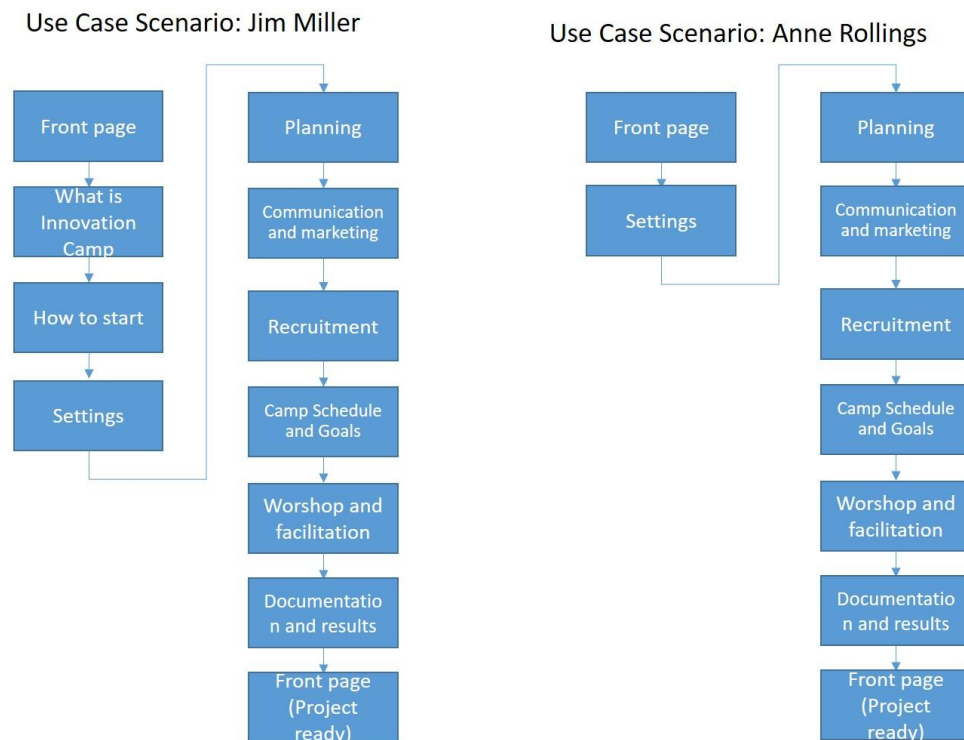


Figure 18: User scenarios

Based on suggestions for improvement, the author began to concentrate to the content, as it was more important in this project than the mobile user interface. When all the content was ready, the interactive clickable pdf-file was implemented. Although the mobile application proto as such has not been fully ready designed, it certainly provided ideas for further development and, in the opinion of the commissioner, there were many elements in the right direction. The design process went according to plan and the interviews were an integral part of shaping the playbook content. The interviews did not provide many new ideas for functionality, as there already exists a variety of good applications for teamwork, communication and project management, so they did not need to be invented. The author sought to create a tool that was just right for the Open Innovation Camp project, although it had elements similar to the functions of a more general group workspace and event organising.

3.4 Deliver: An Interactive pdf-Playbook

In the beginning, the work started by looking for different playbook templates and manuals to get an idea of what kind of playbooks exist. However, the intention was not to limit thinking by getting to know the structure and content of other playbooks too closely, because Open Innovation Camp was a new concept, a playbook about it could also be implemented in a new and appropriate way. After the user interface course, the author actually found out what were the limits of her own mobile app development skills and available time related to

Finally at the end of a great toil, the playbook was completed. (Figure 20: Pages from OIC playbook) (Appendix 4). The final Open Innovation Camp (OIC) Playbook is clickable and

fillable pdf where all the files can be downloaded from the link as a zip-file and edited after that, and the files can be viewed in browser from the links found in the report text. Task lists can be filled with text. Report also has internal links and every page includes links to every main heading at the top of the page, which makes navigation easier.



How to solve wicked problems with open co-innovation

Open Innovation Camp (OIC) Playbook

Organiser's hands-on guide

Liisi Salminen

2020 Lauroa



verify management practices, the desired overall composition of the OIC must be pre-defined before starting the recruitment process. However, the optimal overall composition is always depending on the given challenges of the OIC. (1)

3.1 Checklist: Participant selection

CHECKLIST: PARTICIPANTS

Time for implementation	Chapter	Doc	Task	Responsible person	Due date	Completed
7-6 months before the camp						
7-6 months before the camp						
6 months milestone						
6-5 months before the camp						
5 months milestone						
5-4 months before the camp						
4 months milestone						
4-3 months before the camp						
3 months milestone						
3-2 months before the camp	3.2	3.01	Receive applications. Go through them and make the selection.			
2 months milestone						
2-1 months before the camp						
1 month milestone						
1-0 months before the camp	3.4		Form a linkedin group or participant profile folder.			
Camp						

3.2 Selection criteria: Diversity of participants

As described before in chapter 2.6, applicants will apply to participate in the event in a general open call. The channels to contact potential participants are identified in the marketing plan. After the application period, participants will be selected. The selection is made by the organizing team according to certain selection criteria. Use file [3.01 Group Composition Template](#) as an aid.



Ideas tested and improved with real-world stakeholders after the camp.



Figure 4: Innovation camp timeline

History of Open Innovation Camp

Innovation camp methodology's roots are in 2010 when several people from Aalto University and the New Club of Paris started to co-create the methodology to increase the impact of innovations and grow the capacity for learning and constructive change. The original camping methodology was called ACSI, Aalto Camp for Societal Innovation. Since the start the methodology has been improved and tested. In 2017 an Innovation Camp Methodology Handbook was published to describe ways how to organise and run Innovation Camps. Innovation Camps are used for entrepreneurial discovery process and in innovation processes for regional and urban development. The aim of innovation camp is facilitating and taking stock of bottom-up processes and participatory methodologies, shifting the emphasis from technological to social innovation and enabling the transition from a triple to a quadruple helix model, i.e. from a knowledge economy to a knowledge society. Innovation Camps are an instrument to design policy interventions with an effective involvement of stakeholders. (2)

The Open Innovation Camp has developed into a new method with Laurea's CIRCLife project. The OIC was organised for the first time as part of the CIRCLife project in 2018. It has received praise from the participants involved for its arrangements. This playbook has been made so that this method can be easily utilised in other large innovation projects as well.



Participant diversity management in OIC is based on a model by Santonen (2016). According to Diversity Management Model participant diversity is divided in five sections (Figure 7) (1):

- Cultural: Countries with different standards and markets
- Organisational: Quadruple helix
- User-driven: different end users (personas)
- Cross-functional: Different functional expertise eg. marketing, R&D and management
- Disciplinary and cross-industrial diversity: different scientific disciplines or industries

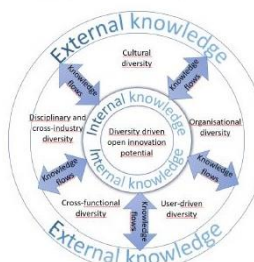


Figure 7: Diversity management model by Santonen (2016)

Cultural diversity is one of the major challenges in the 21st century, which have a direct impact on the innovation acceptance. In the suggested diversity management model, cultural diversity reference is two folded. Cultural diversity refers to a need to recruit participants from different countries in which the market conditions and code of conduct are differing. Organisational diversity is linked to Quadruple Helix model (government, industry, academia, and civil society), which is the foundation of the OIC approach as suggested by Curley & Salminen (2013). User-driven diversity highlights the need to understand different kind of end-users, who are expected to use the co-created solutions. Personas derived from service design methodology are archetypes of actual users and can be successfully used to verify user-driven diversity. The creation of user personalities is recommended in advance, during which they

Figure 20: Pages from OIC playbook

The OIC Playbook includes 30 different appendices which make it easier to organise Open Innovation Camp. They include several templates, forms, examples of marketing texts and material, and tools for calculating budget. Below are pictures of some of the attachments (Figure 21: Pictures from OIC Playbook's are stored on box.com service, where they can be viewed individually or downloaded the entire folder to the computer).

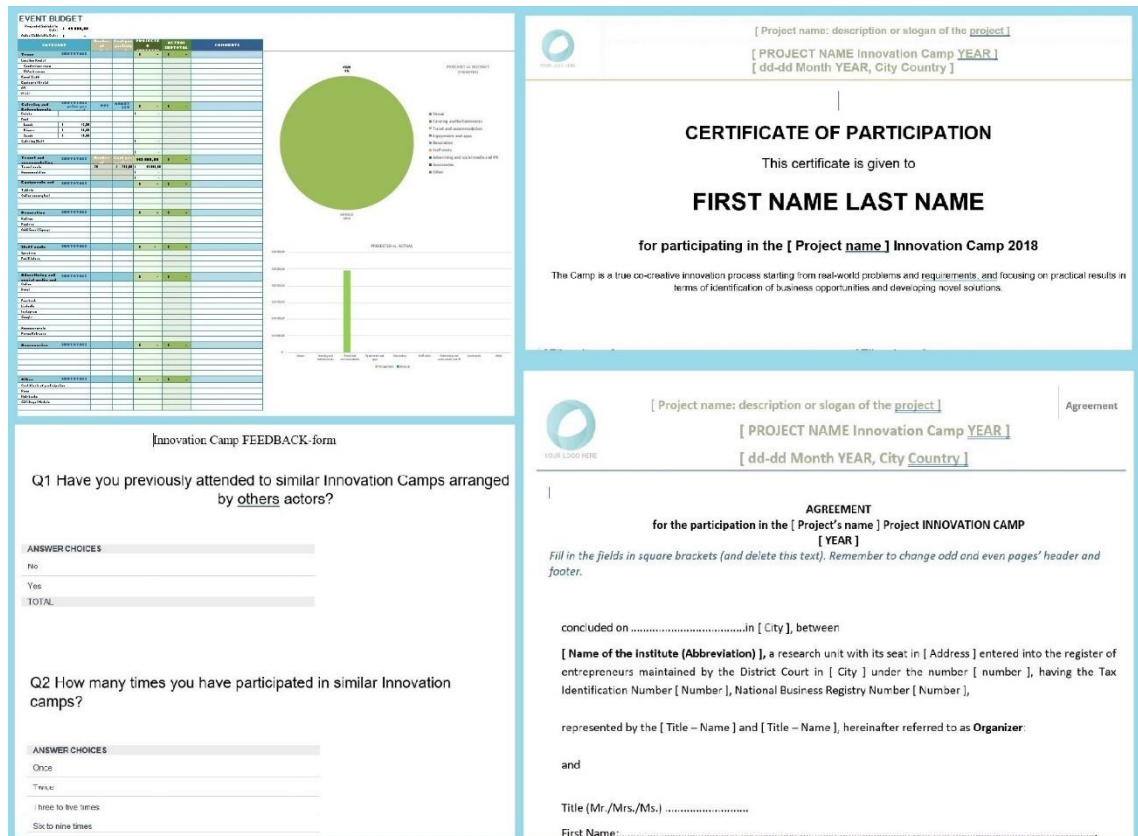


Figure 21: Pictures from OIC Playbook's attachments

The interviews provided several ideas for the applications that can be used during the project, the links and brief instructions and descriptions of which were hoped to be included in the playbook.

4 Research results

The problems guiding development work were: How to bring the Open Innovation Camp concept into an easy-to-use and understandable format? How to arrange a successful Open Innovation Camp -project for a big multi-disciplinary group of people? And how to make arranging of an Open Innovation Camp easier with an interactive digital playbook?

This thesis explored how the new Open Innovation Camp concept can be put into an easy-to-understand and easy-to-use format and utilise it in the development of new innovations. The project explored the possibilities of different forms of publication of the playbook. The

process resulted in the implementation of the playbook as a fillable and clickable pdf file format, with links to both the file and online content, and links to a file repository where all 30 attachments can be viewed separately online and downloaded separately or as a whole package to reader's computer. This solution was reached because the pdf document provided a clearly advancing body for the file, but at the same time made it possible to implement easily navigable content. Finding documents and items in a single file with find feature is easy when the file is digital and when the file names are clearly mentioned in the text and also listed at the end of the playbook. The wish of the interviewees was that the information was easy to find, and with this solution it was possible.

Another challenge to be addressed was how to organise a successful Open Innovation Camp project for a large multidisciplinary group of people? This challenge was approached by exploring several innovation events and familiarising with how facilitation can help people work better together and achieve better results. When people are very different, it can be difficult for them to accept each other's opinions, and listen and understand each other. Well-implemented facilitation helps the group achieve an atmosphere where everyone feels important and brings valuable information for shared use. During the CIRC4Life Open Innovation Camp, 80 people from all over the world and from very different backgrounds were brought together. A statement of the CIRC4Life project's facilitator summed up the importance of facilitation: - "There were so many different people. It was a pleasure to watch when a meat processing engineer encounters a hipster from Berlin, after all it was magical and yet there was an open, equal and good atmosphere."

The last development question was how to make arranging of an Open Innovation Camp easier with an interactive digital playbook. This reflection was assisted by usability analysis and usability theory utilisation. Usability was utilised by designing the mobile app prototype as user-friendly approach, and the findings found with it were used in the implementation of the pdf playbook. Instructions for organising the event were written very accurately and in detail in the playbook. This was thought to ease the organisation of the event. Clear and easy-to-understand instructions are easier to follow and save time and ensure that the implementation is successful, and the event becomes a hit.

The result of the thesis was a finished pdf playbook with appendices for organising an Open Innovation Camp event. This result will be utilised immediately in the organisation of the next CIRC4Life Open Innovation Camp 2021. After this, Laurea will still benefit from the playbook in terms of reputation and money, as it will make it easy to concretise Laurea's OIC expertise and offer OIC organisation as a service to various organisations and companies. Laurea can also sell a playbook with consulting so that the company organises the OIC event itself, but Laurea's expert acts as a consultant. The OIC playbook gathers all the information related to OIC in one place and provides a huge amount of processed information in an easy-to-adopt

format. This is of great benefit to Laurea and anyone who gets to know the OIC concept with help of it.

5 Conclusion and discussion

This thesis process began with the selection of a research topic and its specification as a research subject and the formulation of the research subject as a research problem. The problems guiding development work were how to bring the Open Innovation Camp concept into an easy-to-use and understandable format and how to arrange a successful Open Innovation Camp -project for a big multi-disciplinary group of people and how to make arranging of an Open Innovation Camp easier with an interactive digital playbook.

Next, a research plan was developed to obtain the information necessary to carry out the task successfully. The plan included the background and problems of the study, the objectives, a description of the data collection methods, a description of the data processing methods, and a rationale for the method choices. Before conducting the data collection, the familiarisation with the literature relevant to the topic and its research was done. The author also participated in a co-creation workshop to gain experience in a facilitated co-creation workshop.

Validity and reliability are addressed in this thesis by looking at them related to the data collection and data analysis. Reliability and validity are central aspects to judgements about the quality of research in quantitative research. A distinction can be done between internal reliability and external reliability. Internal reliability refers to ensuring consistency during a research project. This was achieved by writing memos and taking photos to promote stability in the way the data was coded, analysed and interpreted. External reliability refers to whether the data collection techniques and analytic procedures would produce consistent findings if they were repeated by the same researcher on another occasion or by a different researcher. (Gummesson 2000, 91; Saunders et al. 2016, 202.) In this study, the interviewees were a clear small group of experts with experience in organising the same event and the goal was to capture the findings related to this event. The responses of the interviewees would presumably not change at a different time or as interviewed by another interviewer. However, external reliability was strengthened by taking into account the factors affecting it: The interviews were conducted in closed spaces, which reduces the chance that the interviewee would respond falsely if they were afraid others will hear the answers (participant error) (Saunders et al. 2016, 203.). Interviewees were also told that the interview material is used only for this thesis and it will not be visible to others. All interviews were conducted during working hours and within the agreed time, so there was no rushing that could have affected the results (participant bias) (Saunders et al. 2016, 203). According to Gummesson (2000, 80), the researcher's role as an active participant is preferred in order to be able to develop a pre-understanding. The author gathered prior knowledge by getting to know the subject well in

advance. The interviewer was well prepared for the interviews and the questions were planned and practiced in advance (researcher error). The interviewer was aware and familiar with how the questioning and own comments and own opinions might affect the interviewee's responses (researcher bias) (Saunders et al. 2016, 203), so she sought to avoid distorting responses or questions. In addition, the interviews were videotaped so that the answers were not distorted in the interviewer's own memory or notes. Therefore, external reliability can be considered good in this study.

According to Gummesson (2000), the validity of the research is achieved if the researcher by choosing the ideal research method, conducts the research successfully. Validation serves as a tool to analyse the effectiveness of the research method used. In other words, as questions what, who, why and how are answered, the study is valid. Validity refers essentially to the appropriateness of the measures used, the accuracy of the analysis of the results and the generalisability of the findings (Saunders et al. 2016, 202). Triangulation involves using more than one source of data and method of collecting data to confirm the validity of research data, analysis and interpretation. This requires using multi-method qualitative research, or mixed methods. (Saunders et al. 2016, 207). Two different data collection methods were used in this study as in addition to the interview, brainstorming workshop methods were used to obtain more information and ideas from the participants (brain writing task and timeline task). This also provided a way to gather information from a very broad perspective to ensure that the research results provided valid information (Saunders et al. 2016, 207). In this study seven different independent persons were interviewed to collect data from various sources. The various data sources and chosen methods help to reveal the validity in the data as the value of using triangulation is that adds depth, breadth, complexity and richness to the research (Saunders et al. 2016, 207).

As a research development task, this thesis can be considered valid because it includes data collection based on a carefully planned research plan, and the development task is implemented based on the research results. Saturation points were achieved with seven interviewees, after which little new information came but there was so much material that significant results were obtained (Ojasalo et al. 2018, 100; Hirsijärvi & Hurme 2006, 60). The author interviewed people who have been involved in implementing the first Open Innovation Camp, so they all knew the concept very well. Some were very closely involved in the design of the concept, and others were mainly involved in facilitating the workshops during the camp. Still, everyone was aware of the process at the point when the author interviewed them about a year after the event.

Construction of a theoretical framework for research was conducted and written for the most part in the thesis report before analysing the data. Based on the data analysed, it can be said that there was a clear need to organise the information gathered during the first Open

Innovation Camp. The thesis commissioner felt that the information was fragmented and scattered and should be organised and complemented. During the research and analysis phase, that included seven persons' interviews, it became clear what topics should be put into the playbook in the opinion of the organisers and the facilitators involved in the previous OIC, who were the best experts in OIC. The author had also analysed the satisfaction survey of the first CIRC4Life OIC participants and become familiar with the instructions for organising similar innovation events, as well as other playbook-type manuals.

The structure and content of the playbook were compiled based on the analysis of the data material and the drawing of conclusions. The aim was to make the OIC concept easily accessible so that the new concept could benefit more parties. The user research results showed that a playbook should make sure nothing is forgotten, provide structure for preparations, provide ready-made templates, be generic to be used widely and have clear structure. The results are supported by the principles of usability (Nielsen 2012) which are ease of use, efficiency, memorability, error reduction and satisfaction (Nielsen 2012). From this we can conclude that the results are correct and the playbook was developed from the right starting points. The way to make the organisation of the OIC easier became clear from the data and in response a pdf playbook was created. The main purpose of the playbook on Open Innovation Camp was to facilitate the work of the organisers in the future, clarify a large and complex event organisation that requires an understanding of methodological content, and provide ready-to-find and easy-to-use templates and other documents that are needed in organising the event.

The result of this thesis, a completed Open Innovation Camp (OIC) playbook is clickable and fillable 63 pages pdf document with 30 different attachments which all can be downloaded from the link as a zip-file and edited after that, and the files can be viewed in browser from the links in the document. Task lists can be edited with text in the document. Report also has internal links, and every page includes links at the top of the page to every main heading, which makes navigation easier. This thesis describes a process during which a tremendous amount of information was structured into a clear whole in a playbook. This development process will benefit many individuals and multiple parties. In the form of a playbook, the information is easily accessible in a structured way so that it is easy to find and clearly explained. The results of this thesis can be utilised in any field and in any context, as OIC can be used to develop any complex topic. Laurea can use the concept and develop their OIC expert service further. The next concrete use is already underway when the OIC playbook will be used to arrange the second Open Innovation Camp of the CIRC4Life project. With this playbook, anyone can utilise the OIC methodology, organise the OIC and achieve significant new innovations through clear process and systematic co-creation. Thanks to OIC playbook, the OIC concept is available to a wider audience and can be used to solve many difficult and multifaceted problems.

The thesis commissionaire and the OIC organiser team were happy with the work and expressed that it is excellent that the playbook has the interactive elements, links, and editable text fields in place. They believe this work will form a solid basis for developing the OIC-concept as a service further. They were happy with the work and the work was accomplished in a way that there were not any further requests from the commissioner's side. They were also pleased that the text is easy to read and easy to understand, even for a person unfamiliar with the OIC concept.

In many respects the world is currently facing great awkward problems and challenges. Climate issues, pandemics, digitalisation, artificial intelligence and many other issues are so broad and complex that no one can deal with them alone but requires wide-range and multi-level expertise. In order to get 80 experts from different levels of expertise and in different fields to work fruitfully together, a clear structure and a clear goal and knowledge of how to get there are needed. Experts do not want to waste time but when working use their skills usefully and rather simultaneously obtain more information and skills. Open innovation camp is a great solution to this need and based on the research results, there was a need to create an OIC playbook that eases the organising of a large complex OIC event by ensuring that nothing is forgotten, providing structure for preparations, providing ready-made templates, and easy-to-find information. Now, as the output of this thesis, all that is available as an easily accessible playbook.

Open innovation -methodology is getting more attraction all over the world and with this trend, the concept of open innovation is expanding at the same pace as its popularity is growing. This creates new models and ways to implement co-creation. One of these is the Open Innovation Camp, which, as a new concept, might be still transformed and improved in use of different users and user groups. Despite the change, systematic processes are needed to gain results and concrete acts from co-creation and open innovation structured methodologies and events. The OIC playbook provides a structure for performing a systematic process.

As part of the development of the interactive playbook, the development of the mobile app was not indispensable as it was not originally involved in the commissioner's request. However, it interested the author and because of that, the functionality and content of the playbook had to be thoroughly considered from the user's point of view and familiarised with usability. If the playbook were implemented as a website and included a little app made just for the OIC project, this could ease the work of the project manager even more so they can be developed later. Since the playbook is also aimed at people who are not yet familiar with the concept, it might have been a good idea to test the finished playbook, for example, on people who are unfamiliar with the subject. However, this may also remain to be implemented in the next iteration step. The project was extensive and required a lot of work as such, so it was no longer possible to bring more to be developed to one thesis. The creation phase of a

pdf-playbook was interesting. At times the next steps appeared crystal clear in front, and other times the view disappeared, and the backwater phase struck until after considering the matter thoroughly enough it became clear and the following steps opened. According to this experience the clearest single thing to allow progress is enough time. Nodes need uninterrupted thinking and reflection to be solved. In general, the double diamond model was suitable for the implementation of this project as a framework and it also contains chaos phases, while just must rely on the process. Creating a playbook involved a lot of finding, merging, and structuring existing information. But it also involved a lot of new creation. Many things that were self-evident to the creators of the OIC concept did not open to the author in the same way. A new, clearer explanation or diagram had to be created for these cases in order to be sure that people who did not know the subject could internalise it. In this case, the author represented at the beginning of the project the party who has no understanding of the subject. Probably this was useful for the usability of the final playbook because things are explained so that the subject is easy to get inside because all the things that are essential for understanding are clearly explained. The author herself had to understand each sentence she wrote in depth, because understanding it could be critical to understanding some other thing. Sinkkonen et al. (Sinkkonen et al. 2006. 3, 5.) points out that developing an easy-to-learn and consistent product requires iteration until it meets the requirements. The second camp of the project had to be moved forward due to the Covid-19 pandemic from autumn 2020 and for this reason iteration was not possible during the implementation of this thesis. For this reason, it can be recommended that the OIC playbook would be iterated, for example in connection with the implementation of the next OIC in the CIRC4Life project.

The thesis project last about 1.5 years. The task of doing a project alongside the work required the evening, the use of weekends and holidays to do the project, and also flexibility from the employer. The author thanks her family and employer for the flexibility. However, the work proceeded according to the plan, although the schedule was delayed from the author's own schedule. The work proceeded independently, and the work was handed over to the commissioner on time.

The author grabbed on the proposed research development task because the topic seemed important as it has an impact on global environmental issues such as the development and exploitation of the circular economy. This thesis project was instructive and included a wide range of topics, such as creating and completing an interactive playbook, as well as taking over the methodology of a new innovation creation event, recording it clearly and creating planning and organising instructions. The author consciously chose a topic that she was not already familiar with in order to learn as much as possible from the thesis project. During the thesis process the author gained tremendous amount of new knowledge on topics, several of which were not already familiar to her. In the end, however, the author can be happy with

the outcome and be happy with everything she has learned, and can utilise it for new ideas, approaches, and practices for her own work and field.

References

Printed

Apilo, T., Taskinen, T., Salkari, I., 2007. Johda innovaatioita. Helsinki: Talentum Media Oy

Burkholder, G.J. Cox, K, Crawford, L.M. Hitchcock, J.H. 2020. Research design and methods: an applied guide for the scholar-practitioner. California: SAGE Publications.

Chesbrough, H, Vanhaverbeke, W. West, J. 2008. Open Innovation: Researching a New Paradigm. New York: Oxford University Press.

Cooper, A., Reimann, R., Cronin, D., Noessel, C. 2014. About Face: The Essentials of Interaction Design. Fourth edition. Indianapolis: John Wiley & Sons Inc.

Eriksson Lundström, J. S. Z., Wiberg, M., Hrastinski, S., Edenius, M., Ågerfalk, P. J. 2013. Managing Open Innovation Technologies. Berlin: Springer.

Goodwin, K., Cooper, A. 2009. Designing for the digital age: How to create human-centered products and services. Indiana: Wiley Publishing Incorporated.

Gummesson, E. 2000. Qualitative methods in management research. 2nd edition. London: Sage cop.

Hirsijärvi, S. H., H. 2006. Tutkimushaastattelu. teemahaastattelun teoria ja käytäntö. Helsinki: Yliopistopaino.

Kaner, S. 2014. Facilitator's Guide to Participatory Decision-Making. 3rd edition. E-book. San Francisco: Jossey-Bass.

Ojasalo, K., Moilanen, T., Ritalahti, J. 2014. Kehittämistyön menetelmät - Uudenlaista osaamista liiketoimintaan. 3. uudistettu painos. Porvoo: WSOYpro Oy.

Sigismund Huff, A., Möslin, K. M., Reichwald, R. 2013. Leading Open Innovation. Massachusetts: MIT Press corporation.

Sinkkonen, I. Kuoppala, H. Parkkinen, J. Vastamäki, R. 2006. Psychology of usability. Helsinki: IT Press.

Tuulaniemi, J. 2016. Palvelumuotoilu. Third edition. Helsinki: Talentum Pro.

Electronic

Accuer, Inc. 2020. Lean Product Development Step-by-Step Guide. Accessed 27 May 2020. <https://www.playbookhq.co/lean-product-development>

Bengtsson, L., Lakemond, N., Lazzarotti, V., Manzini, R., Pellegrini, L., Tell, F. 2015. "Open to a select few?" Matching partners and knowledge content for open innovation performance, Creativity and innovation management. Accessed 21 May 2020. <https://search-proquest-com.nelli.laurea.fi/docview/1655668391?pq-origsite=primo>

Bens, I. 2012. Facilitating with ease. Core Skill for facilitators, team leaders, and members, managers, consultants, and trainers. E-book. John Wiley and Sons, Inc. Published by Jossey-Bass And Imprint of Wiley. Accessed 17 May 2020.

British Design council. 2020. The Double Diamond: A universally accepted depiction of the design process. Accessed 23 May 2020. <https://www.designcouncil.org.uk/news-opinion/double-diamond-universally-accepted-depiction-design-process>

Cambridge Business English Dictionary. 2021. Meaning of playbook in English. Accessed 23 January 2021 <https://dictionary.cambridge.org/dictionary/english/playbook>

Chesbrough, H. W. 2003. Open innovation: the new imperative for creating and profiting from technology. Harvard Business School Publishing Corporation. Boston. Accessed 17 May 2020. <https://www.nmit.edu.my/wp-content/uploads/2017/10/Open-Innovation-the-New-Imperative-for-Creating-and-Profiting-from-Technology.pdf>

Chesbrough, H. W. 2011. Everything You Need to Know About Open Innovation. Accessed 29 February 2020. <https://www.forbes.com/sites/henrychesbrough/2011/03/21/everything-you-need-to-know-about-open-innovation/#83728c875f4e>

CIRC4Life. 2021. A circular economy approach for lifecycles of products and services. Accessed 10 January 2021. <https://www.circ4life.eu/>

Creswell, W. 2012. Qualitative inquiry and research design: choosing among five approaches. SAGE Publications. 3rd edition. Accessed 25 January 2021. https://mycourses.aalto.fi/plugin-file.php/623548/mod_resource/content/1/John%20W.%20Creswell%20Ch3.pdf

Curley, M. Salmelin, B. 2013. Conference Paper. Open Innovation 2.0: A New Paradigm. Accessed 25 January 2021. <https://ec.europa.eu/futurium/en/system/files/ged/24-oispgopen-innovation20anewparadigm-whitepaper.pdf>

Design sprint academy. 2021. About design sprint 3.0. Accessed 24 January 2021. <https://designsprint.academy/design-sprint-3-0/>

Ellen MacArthur Foundation. 2021. What is circular economy?. Accessed 17 January 2021. <https://www.ellenmacarthurfoundation.org/circular-economy/concept>

European Union. 2016. Report. Using the Quadruple Helix Approach to Accelerate the Transfer of Research and Innovation Results to Regional Growth. Accessed 23 January 2021. <https://cor.europa.eu/en/engage/studies/Documents/quadruple-helix.pdf>

Fronteer. 2020. What is Co-creation? A definition, some background and how it's done. Accessed 17 January 2021. <https://fronteer.com/what-is-co-creation/>

Garage 2020. 2020. Design Sprint Methods. Accessed 27 May 2020. <https://www.garage2020.nl/wp-content/uploads/2017/01/DesignSprintMethods.pdf>

Grönroos, C., Voima, P. 2013. Critical service logic: making sense of value creation and co-creation. Journal of the Academy of Marketing Science. Accessed 20 May 2020. https://www.researchgate.net/publication/256395545_Critical_Service_Logic_Making_Sense_of_Value_Creation_and_Co-Creation

HackerEarth. 2019. What is a hackathon?. Accessed 1 December 2019. <https://www.hackerearth.com/hackathon/info/organizer/>

Isomäki, A. 2018. Open Innovation - What It Is and How to Do It. Viima Solutions Oy. Accessed 21 May 2020. <https://www.viima.com/blog/open-innovation>

JRC, European Commission's Joint Research Centre. 2017. Innovation Camp Methodology Hand-book: Realising the potential of the Entrepreneurial Discovery Process for Territorial Innovation and Development. Accessed 30th Nov 2019. <https://s3platform.jrc.ec.europa.eu/documents/20182/198909/Innovation+Camp+Methodology+Handbook/3e201fe6-ff13-429d-8105-a09140eb1dd7>

Jyväskylän ammattikorkeakoulu. 2021. Oppariiblogi: Aineiston hävittäminen. Accessed 26 January 2021. <https://blogit.jamk.fi/oppari/2017/11/21/aineiston-havittaminen/>

Jyväskylän yliopisto. 2016a. Tyypittely. Accessed 29 February 2020. <https://koppa.jyu.fi/avoimet/hum/menetelmapolkuja/menetelmapolku/aineiston-analyysimenetelmat/tyypittely>

Jyväskylän yliopisto. 2016b Teemoittelu. Accessed 29 February 2020. <https://koppa.jyu.fi/avoimet/hum/menetelmapolkuja/menetelmapolku/aineiston-analyysimenetelmat/teemoittelu>

Keränen, K. E. 2015. An exploration of the characteristics of co-creation in the B2B service business. Doctoral thesis. Accessed 21 May 2020. <https://doi.org/10.17863/CAM.14109>

Kolog, E. A. & Sutinen, E. & Nygren, E. 2016. Hackathon for Learning Digital Theology in Computer Science. *Modern Education and Computer Science*. Volume 8. Accessed 4 March 2020. https://www.academia.edu/24390210/Hackathon_for_Learning_Digital_Theology_in_Computer_Science

Layton, M. C., Ostermiller, S. T. 2017. *Agile Project Management for Dummies*. Second edition. New Jersey: John Wiley & Sons Inc. Accessed 21 May 2020. <https://ebookcentral.proquest.com/lib/laurea/reader.action?docID=4987361>

Lean Advisors. 2020. Introduction to Lean Thinking. Accessed 24 January 2021. <https://www.leanadvisors.com/lean-training/introduction-to-lean-concepts>

Ligthart, R., Keränen, K., Minshall, T. 2018. An initial framework for open service innovation adopting digital co-creation. Conference paper. Manchester: The International Society for Professional Innovation Management (ISPIM). Accessed 21 May 2020. <https://search-proquest-com.nelli.laurea.fi/central/docview/2076276538/fulltextPDF/2AF54E48F0CB48D6PQ/1?ac-countid=12003>

Losada, M. 1999. The Complex Dynamics of High Performance Team. *Mathematical and Computer Modelling* 30, 179-192. Accessed 10 November 2020. <https://www.sciencedirect.com/science/article/pii/S0895717799001892>

Network of Living Labs, 226-241. Accessed 16 June 2020. https://www.theseus.fi/bitstream/handle/10024/227845/Santonen_Nevmerzhitskaya_Purola_Haapaniemi.pdf?sequence=1&isAllowed=y

Nielsen, J. 2012. Web article. Usability 101: Introduction to usability. Accessed 29 February 2020. <https://www.nngroup.com/articles/usability-101-introduction-to-usability/>

Northeastern University Massachusetts. 2020. Agile vs. Scrum: What's the difference?. Accessed 27 January 2021. <https://www.northeastern.edu/graduate/blog/agile-vs-scrum/>

Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A., Papadacos, T. 2014. *Value proposition design*. New York: Wiley. Accessed 23 March 2020. <http://portal.ig-publish.com/iglibrary/search/WILEYB0005236.html>

Rissola G., Kune H., Martinez P. 2017. *Innovation Camp Methodology Handbook: Realising the potential of the Entrepreneurial Discovery Process for Territorial Innovation and Development*, EUR 28842 EN, Publications Office of the European Union, Luxembourg, ISBN 978-92-79-

74613-0, doi:10.2760/924090, JRC102130. Accessed 30 November 2019. <https://s3platform.jrc.ec.europa.eu/documents/20182/198909/Innovation+Camp+Methodology+Handbook/3e201fe6-ff13-429d-8105-a09140eb1dd7>

Saaranen-Kauppinen, A., Puusniekka, A. 2006. KvaliMOTV - Menetelmäopetuksen tietovaranto. Verkkojulkaisu. Tampere: Yhteiskuntatieteellinen tietoarkisto. Accessed 18 February 2020. <https://www.fsd.tuni.fi/menetelmaopetus/>

Santonen, T., Nevmerzhitskaya, J., Purola, A. Haapaniemi, H. 2019. Open Innovation Camp (OIC) - A Tool For Solving Complex Problems Rapidly, In Proceedings of the OpenLivingLab Days Conference. Co-creating Innovation: Scaling-up from Local to Global. Brussels: European

Saunders, M., Lewis, P. Thornhill, A. 2016. Research Methods for Business Students. Fifth Edition. Harlow: Pearson Education Limited. Accessed 26 January. <https://ebookcentral.proquest.com/lib/laurea/reader.action?docID=5138717>

Scrum.org. 2019a. What is Scrum?. Accessed 1 December 2019. <https://www.scrum.org/resources/what-is-scrum>

Scrum.org. 2019b. What is a Sprint in Scrum?. Accessed 1 December 2019. <https://www.scrum.org/resources/what-is-a-sprint-in-scrum>

Stickdorn, M., Lawrence, A., Hormess, M. E., Schneider, J. 2018. This is service design doing: Applying service design thinking in the real world: A practitioners' handbook. O'Reilly. Accessed 8 September 2020. <https://ebookcentral.proquest.com/lib/laurea/reader.action?docID=5219777>

Tschimmel, K. 2012. Design Thinking as an effective Toolkit for Innovation. Proceedings of the XXIII ISPIIM Conference: Action for Innovation: Innovating from Experience. Barcelona. Accessed 12 December 2019. http://www.idmais.org/pubs/KatjaTschimmel/2012/actas_internacionais%20c%F3pia/2012.4.ISPIIM.KatjaTschimmel1.pdf

von Behr, Timo. 2018. Hackathon as a platform for inbound open innovation – case study of a public hackathon. Laurea-ammattikorkeakoulu. Accessed 2 February 2020. <https://www.the-seus.fi/handle/10024/148351>

Unpublished

CIRC4Life. 2018. CIRC4LIFE Innovation Camp 2018. Internal Report.

Pöyry-Lassila, P. Turku, J. 2020. Lecture notes 2.10.2020. Laurea University of Applied Sciences. Remote lecture, Espoo.

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Appendix 1: An application for a research permit



AMMATTIKORKEAKOULU
University of Applied Sciences

Tutkimuslupahakemus

Tutkimuslupahakemuksen tulee sisältää ainakin seuraavat seikat.
Tarvittaessa voit antaa lisätietoja liitteessä

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Koulutusohjelma/ korkeakoulu/ yliopisto:	Tulevaisuuden innovatiiviset digitaaliset palvelut/Laurea ammattikorkeakoulu
Toimipiste:	Leppävaara
[tutkimuksen, opinnäytetyön, jatkotutkinnon] Ohjaaja/ohjaajat:	Marjo Poutanen
Työn/tutkimuksen nimi:	Guidelines for Planning and Implementing Innovation Camps
Tavoitteet/ tutkimusongelma:	Tämän opinnäytetyön tarkoituksena on kehittää interaktiivinen Playbook, joka auttaa järjestäjää suunnittelemaan, toteuttamaan ja arvioimaan Innovation Camp -tapahtumia osana suuria kehitysprojekteja. Innovation Camp on tapahtuma, jossa osallistujat eri teollisuuden aloilta ja eri osaamistaustoilla toimivat yhdessä luoden ja innovoiden ideoita, määritellen konsepteja ja validoiden ratkaisuja.
Tarvittavien tietojen / aineistojen määrittely: Tarkka raja-alue mitä tietoja tarvitaan, missä tiedostomuodossa ne tarvitaan ja miten tiedot toimitetaan tutkimuslupan hakijoille:	Tiedonkeruu tapahtuu videoitavilla tai nauhoitettavilla haastatteluilla. Haastateltavia on 7, joista 5 ovat töissä Laureassa. Laurean työntekijät: Julia Nevmerzhitskaya Aletta Purola Pasi Hario Harri Haapaniemi Teemo Santonen

Appendix 2: Interview permit form

Sopimus haastattelun käytöstä opinnäytetyössä ja haastattelun kuvaamisesta litterointia varten

Tietoja haastateltavasta

Nimi:

Puhelinnumero:

Tietoja haastattelusta ja haastattelijasta

Haastattelija/Kerääjä: Liisi Salminen

Haastattelun pvm:

Tallennusmuoto: Videointi

Tietoja haastattelusta:

Haastattelumateriaalia käytetään Laurea-ammattikorkeakoulun opinnäytetyön kehittämistehtävässä, jossa kehitetään interaktiivista työkalua Innovation Camp -tapahtuman järjestämisen avuksi EU-rahoitteiseen CIRC4Life-projektiin.

Haastattelua käytetään kehittämistarkoitukseen vakiintuneiden eettisten käytäntöjen mukaisesti.

Aika ja paikka: _____

Haastateltavan allekirjoitus

Appendix 3: Interview questions

The meeting will last for an hour. First there is the 45 minute interview section followed by two small development tasks for 15 min.

How you got involved in the project?

Have you been involved in the other similar events?

What tools you have used to organise your events?

When it comes to a goal-driven event, what is the key to success?

Was the CIRC4life Innovation Camp 2018 successful?

What did you consider to be your most important task as a facilitator at innovation camp?

How the group you were managing worked?

Did you miss some help?

Was something missing? instructions, code of conduct, documentation

Was the preparation sufficient for the event? How it could have been improved?

Did anything come up that you would do differently now?

What was the best thing about the event?

what was the best thing about this particular event?

What is the best in the open innovation concept?

Was there any feedback from the attendees that was particularly memorable?

it is about to become a document/platform with instructions on how to organize the event.

what comes to mind of event organizing tool?

what it would contain?

in what way would it help?

What are the benefits to the user of using the tool?

what tasks you could do with help of it?

would it have many users?

if it were an ideal tool, what features would it have?

Should it be a single organizer tool or a whole organizer team tool?

when and in what situations would this tool be used?

What could prevent the tool from being used?

how would you expect an event organizing task to progress with a digital tool compared to not having one?

Appendix 4: Open Innovation Camp (OIC) Playbook



How to solve wicked problems with open co-innovation

Open Innovation Camp (OIC) Playbook

Organiser's hands-on guide

Liisi Salminen

2020 Laurea





How to solve wicked problems with open co-innovation

Open Innovation Camp (OIC) Playbook

Organiser's hands-on guide

Liisi Salminen

2020 Laurea



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How to use this playbook

If you are reading this playbook, you may be starting or consider implementing an open innovation camp project in your process to solve a problem that no one can solve alone or just with a single organisation. If you have previous experience organizing Innovation Camps, this playbook will provide support and help with organizing in the form of a clearly guided, practical, chronologically progressive structure, checklists, links to web applications, and ready-made file and text templates. There is a lot of work and planning involved in organizing an Innovation Camp, but it is easier with aids provided in this Playbook.

If you are a beginner in organising an Innovation Camp, it is advisable next to study well What is Open Innovation Camp? -section to get an idea of what you are up to. Even after this, it is a good idea to read through all the texts in all the sections as the information here is in condensed form and the reading shouldn't take too much time. Reading the whole playbook will give you thorough understanding on the subject and tasks and further a smooth implementation of the Innovation Camp.

At the beginning of each section is a checklist of everything you need to produce and prepare in that section for the project to progress as desired. An editable checklist file is attached. The checklist for each section is on a separate tab. [0.01 Combined checklist and all detailed checklists](#). The file also contains a merged list to which all tasks are combined in one list.

This playbook includes editable file templates and documents which you can use to help design and implement the Camp. Editable version can be downloaded from the link [Download zip file](#), but the links from this document to the files are just for viewing the documents. You can edit the downloaded files according to the instructions therein. The files are numbered, and their function can be found in this playbook. [See page 61 for a list of files](#). Download a file folder on your own computer to edit them: [Download ZIP File](#).

Content at a Glance

More detailed content on the front page of each section

0. Introduction
1. Planning
2. Marketing and communication with participants
3. Participant Selection
4. Camp Schedule, Structure and Agreement About the Goal
5. Workshops and Facilitation
6. Data Collection and Reporting (Documentation)

Files and Web-based tools

What is Open Innovation Camp?

As defined by the OIC developers: Open Innovation Camp (OIC) is co-creation sprint type of multi-day event grounded on an open innovation 2.0 principles where a group of carefully selected stakeholders having diverse but complimentary expertise meet locally and create a common understanding of (a complex societal) challenge and work together in teams to develop, present and review in a co-creative manner user-centred concepts and solutions to pre-defined challenges in a set timeframe. (1)

OIC - Quickly transform complex problems into refined innovations by combining people's skills

Open Innovation Camp (OIC) is a novel way to solve tricky and complex problems. It falls into the same category as Innovation Camps in general, but it has certain characteristics of its own that differ from other types of co-creation events:

1. **Matrix Structure:** OIC has an interactive matrix structure where groups work across group boundaries and persons' diverse skills are managed and utilised. The work, conclusions and results of a certain group, will influence another groups work.
2. **Self-organising groups:** The work is facilitated in such a way that the groups themselves create the content and make decisions on the next issues to be addressed.
3. **Selection of participants representing all parties:** All groups have representatives from different areas of expertise and from different selection categories, which are: different classification of occupations, geographical origin, representation of all Quadruple Helix (government, industry, academia, and civil society) and gender balance. Due to the diversity and entrainment of the groups, the silo effect does not occur.

Since the Innovation camp activities are based on matrix model, the thematic (THEME) group members are circulating sequentially across the industry (DEMO) groups (pl. see Figure 1).

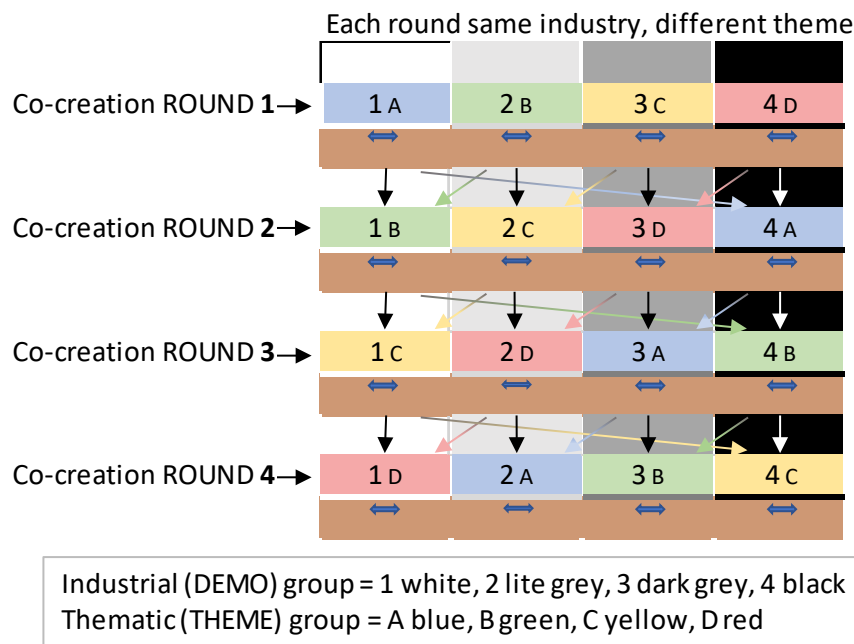


Figure 1: The matrix-based structure allows linkages across industry and linkages across expertise in a dynamic way.

The structure is dynamic which means that the groups change and the challenges change. The matrix structure allows people from different industries and different disciplines to work together on different challenges.

The thematic group brings to the group the special expertise and view of the specific theme and the joined group (combined thematic group and industry group) work with an emphasis on that theme in creating the model to be developed. Industry groups and thematic groups co-create and develop an industry specific solution for each Industry/application field. Figure 2 below visualises the idea of the different concept levels of OIC and the way they appear within the project as upper context under which are abstract thematic development and concrete industry/application field specific development.

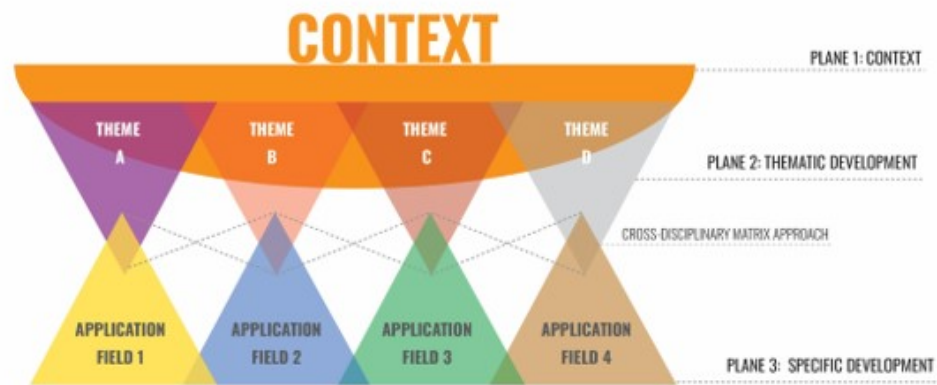


Figure 2: Different concept levels of OIC

Open Innovation camps are implemented in a concentrated period, normally 2 to 5 days, which helps narrow down large objectives and transform them into concrete actions. Each development/co-creation round consists of ca. 2 hours of development activities in which a series co-creation tools and methods are applied. The development round ends with an hour-long presentation and review session, where cross-industry evaluation and exchange of ideas happen (brown colour phase in Figure 1). The co-creation methods and tools can vary across the working groups due the different shared commitment and application field conditions. (2)

Camps are an iterative process, in which preparation, camping, and follow-up - where ideas are tested in the real world - are all parts of the same innovation process. (2) It is recommend to use OIC in the very beginning of a project, to create a sense of shared responsibility among different stakeholders, and a common understanding of a challenge and possible solutions, and at the end of a project, as a validation tool for developed solutions. (1)

OIC is not only co-creation event as it can take many forms depending on the thematic focus of the event (2). They can also be used for educational purposes and for validation. For educational type of an event students with other stakeholders are co-creating solutions for innovation challenges while learning team building, creativity and innovation skills. (1).

And how it differs from other co-creation methods?

Methodologically OIC concept belongs to a family of several time-constrained agile development exercises (1). Many time-framed service design events/challenged/sprints/service jams are silo-based which means that team of experts work together to solve defined challenge. The group can be quite multi-disciplinary, but they work with particularly defined challenge throughout the service design event. The table (Figure 3) below illustrates the differences

and advantages of OIC compared to some other participatory and co-creation methods of the similar type.

Condition/requirement	OIC	Innovation Camp	(Applied) Hackaton
The task consists of solving individual challenges (which might be loosely linked or under a same theme)		x	x
The task consists of solving several challenges, which are interconnected (wicked problems)	x		
Innovation process is led by the stakeholders themselves: shaping the challenges and reframing them.	x	x	
Conceived innovative solutions that are feasible and testable and are implemented after the Camp.	x	x	x
The work, conclusions and results of a certain group, will influence another groups work	x		
There is a need to harness the expertise of the same participants for several different themes/challenges	x		
QH and participants from diverse backgrounds, countries and disciplines	x	x	
Dynamix Matrix Structure: allows cross industry linkages and cross expertise linkages	x		
Challenges and groups change	x		
Can be used for validation	x		

Figure 3: OIC elements compared to other co-creation events

As opposed to most of the other participative methodologies, the Innovation Camps develop an innovation process led by the stakeholders themselves, starting from shaping the challenges during the Camp preparation to reframing them and conceiving innovative solutions during the Camp to make those solutions feasible, testable, and able to be implemented and

scaled up as part of the camp process, once the camp is over. There are dozens of innovation instruments and diverse methodologies for social renewal, and hundreds of workshops take place every year, often producing promising results. But many fail to move beyond the output of the events themselves to create lasting effect in society. Innovation Camps have shown that this can be done, even when dealing with complicated and complex issues. (2)

Period and effort after the camp

After the camp follows a Living lab period, in which stakeholders further explore, test and improve the ideas. This prototyping process leads to more stable prototypes to test in practical, pilots and finally for realisation. Essential is that camp organisers and Challenge/Group Owners commit to after camp prototyping. (1)

Communication phase is about sharing the final deliverables with the OIC participants and to a wider audience. The hopefully positive OIC experience aims to further engagement of the participants into follow-up activities such R&D, testing and demonstrations in Living Labs. Also maintaining established relationships with OIC participants by inviting them into external advisory group of the possible follow up project. (1)

OIC offers an efficient solution for engaging stakeholders who do not know each other. In this sense OIC concept is addressing initiation of new relationships in complex ecosystems. However, maintaining this relationship is a different challenge which can be addressed by systematic engagement of an OIC participants into Living Lab activities and validation process which takes place after the OIC. This is especially important since among network theorists of innovation, organizations are rarely capable to innovate independently. Some even argue that networks are the main source of innovation. Networks and knowledge as the key components of the knowledge and networked society are indisputably the core components of the any business success. Thus, the findings that most of the OIC respondent had found new contacts initiated by the OIC as well as participants were able to apply their new insights to their own work, provides strong tools for knowledge and network driven innovation processes. (1)

OIC is a good tool for solving complex societal challenges rapidly while providing economic value, however, the tool alone is not efficient without supporting Living Lab processes. (1)

Why Open Innovation Camp?

In practice open innovation approach provides a generic framework for involving actual customers and other key stakeholder in the collaborative innovation process. It can be considered as a co-creational process that facilitates stakeholder engagement and is based on the concept that organizations instead of utilising only in-house resources could use external ideas to develop their products and services. In all open innovation activities, the partner

section plays a significant role. Nowadays, organizations are rarely capable of innovating fully independently and therefore the innovation process has become more and more of a joint organisational effort, instead of an isolated effort of individuals or individual organisations. Importantly, partners within an open innovation network should provide the resources and capabilities which their own organisation lacks in order to gain the suggested positive effects of collaborating and additional capabilities.

Innovating is a tough job, even more so if the innovation has a societal dimension, involving government, citizens, knowledge institutions, and industry. It requires effective instruments, good communication, real learning, and active openness between different stakeholders. The Open Innovation Camp is an agile answer to collaboration in the Quadruple Helix and an effective tool to accelerate dealing with challenges in the innovation ecosystem, thereby increasing the potential impact of innovation. (2)

Innovation Camp can be an effective tool for 1) lack of shareholders time and desire to use own financial resources, 2) unbalanced stakeholder representation, 3) silo effect problem in co-creation activities.

- 1) **Lack of resources** often prevents certain stakeholders from participating in Living Lab activities. OIC is a concise and effective event which brings together diverse stakeholders to allow participants to use their time efficiently to resolve complex problems which otherwise require substantial amount of time. The professional facilitators and carefully selected co-creation tools enhance productivity. Camps help participants to go beyond the ordinary and expand their insights into how to tackle diverse innovation issues. OIC includes also social activities during the evening time allowing un-formal discussion in relaxed atmosphere to discuss further bilateral cooperation opportunities. Since the participation in the OIC is pro bono, and the travel and accommodation expenses are covered by the OIC organisers, these events offer a greater return on investment to participants than traditional brokerage events or co-creation activities. (2)
- 2) **Unbalanced stakeholder representation** can be due to several factors. Some of the relevant stakeholders do not share the urgency to discuss the issues at stake and therefore do not take actions, and hence they are left out from the Living Lab activities. Also often happens that some stakeholders, such as academic partners or Living Lab experts, are given more weight than other participants in the co-creation activities. OIC can solve these issues by identifying relevant target groups and make sure that proper representation of stakeholders is achieved and their voice is heard equally during Camp. (1)
- 3) **Silo effect problem** occurs when co-creation activities are very disconnected between different stakeholders and results in lack of cooperation. Indirect stakeholders,

such as representatives of different industry sectors, are often excluded from co-creation activities. The matrix structure of an OIC emphasises close interactions among diverse stakeholders enabling a seamless workflow between different subgroups. The structure also ensures that stakeholders from different ecosystems interact with each other. (1) It brings together people with different, complementary, and often controversial knowledge and skills. (2)

An Open Innovation Camp builds a better understanding of how complicated or complex issues work in their context - and how they may more effectively be addressed through potential solutions that are shaped and prototyped during the Camp, for further feasibility check, refining and testing. Policy makers have clearly a big responsibility to enable and favour innovation, but they are not alone. All driving forces in a society are responsible to tackle problems and create new ideas and practices. (2)

Camp activities in a nutshell

- A real-world challenge brought to the camp by challenge-owners: cities, regions, business organisations, universities or NGO's(=non-governmental organisations). Multidisciplinary groups of 6-10 people in the camp develop new ideas.
- Participants from diverse backgrounds, countries and ages work 3-5 days together with facilitator in groups that also benefit from the expertise of other groups. Every group has a different challenge that changes and evolves. The whole camp is grounded on Role Storming. Participants have a specific role of a person whose experience relates to their contributions to the camp. The role is two-folded: 1) home group and 2) their personal quadruple helix profile.
- A result gained-> Range of new perspectives and applicable models and solutions.

- Ideas tested and improved with real-word stakeholders after the camp.

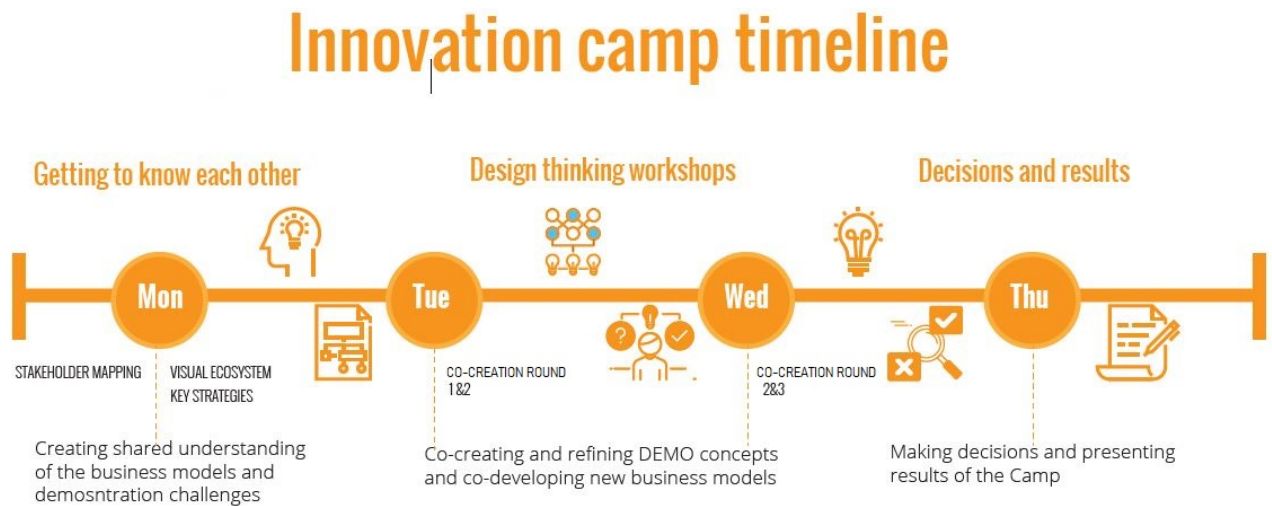


Figure 4: Innovation camp timeline

History of Open Innovation Camp

Innovation camp methodology's roots are in 2010 when several people from Aalto University and the New Club of Paris started to co-create the methodology to increase the impact of innovations and grow the capacity for learning and constructive change. The original camping methodology was called ACSI, Aalto Camp for Societal Innovation. Since the start the methodology has been improved and tested. In 2017 an Innovation Camp Methodology Handbook was published to describe ways how to organise and run Innovation Camps. Innovation Camps are used for entrepreneurial discovery process and in innovation processes for regional and urban development. The aim of innovation camp is facilitating and taking stock of bottom-up processes and participatory methodologies, shifting the emphasis from technological to social innovation and enabling the transition from a triple to a quadruple helix model, i.e. from a knowledge economy to a knowledge society. Innovation Camps are an instrument to design policy interventions with an effective involvement of stakeholders. (2)

The Open Innovation Camp has developed into a new method with Laurea's CIRC4Life project. The OIC was organised for the first time as part of the CIRC4Life project in 2018. It has received praise from the participants involved for its arrangements. This playbook has been made so that this method can be easily utilised in other large innovation projects as well.

More reading

For more information on the theory formation of Open Innovation Camp, you can read the conference proceedings of the developers of Open Innovation Camp -methodology:

Santonen, T. ; Nevmerzhitskaya, J. ; Purola, A. & Haapaniemi, H. (2019) Open Innovation Camp (OIC) - A Tool For Solving Complex Problems Rapidly. In Proceedings of the OpenLivingLab Days Conference. Co-creating Innovation: Scaling-up from Local to Global. Brussels: European Network of Living Labs, 226-241. <https://openlivinglabdays.com/2019/08/16/conference-proceedings/>

1 Planning

The initial decision to organise an Innovation Camp is taken by the OIC Orchestrator(s) who is the main organiser (a public institution, a business, a university or a non-governmental organisation) of the Camp and wants to implement the solution to the problem. This institution, often in cooperation with partners, sponsors and prospective group owners chooses the transversal context that will be tackled across individual challenges during the camp.

Preconditions for organising OIC:

- There is an OIC Orchestrator who is committed to host and co-organise the camp.
- The Group Owners are committed to the camping process as a whole. This includes the co-preparation of the camp, taking part in the camp, prototyping the results of the camp in the real world after the camp is over. Depending on a project this can take from months to years.
- The Group Owners are open to new perspectives, to really seeing the challenge, problems, and issues in new and sometimes unexpected ways.

Once the preconditions are met, practical planning can begin.

1.1 Checklist: planning

CHECKLIST: PLANNING

Time for implementation	Chapter nr	Doc nr	Task	Responsible person	Due date	Completed
7-6 months before the camp	1.2		Check that the challenge/problem is identified effectively.			
7-6 months before the camp	1.5		Find and book the venue			
7-6 months before the camp	1.7		Set goals			

7-6 months before the camp	1.8	1.01				
			Make a project budget			
7-6 months before the camp	1.9					
			Make risk mitigation plan			
6 months milestone						
6-5 months before the camp	1 1.3 2.2		Check that you have an appropriate number of Group Owners in order to find suitably different perspectives in camp. If not, get more.			
5 months milestone						
5-4 months before the camp						
4 months milestone						
4-3 months before the camp	1.10		Find and reserve facilitators			
3 months milestone						
3-2 months before the camp	1.9		Risk mitigation plan			
2 months milestone						
2-1 months before the camp						
1 months milestone						
1-0 months before the camp						
Camp						

1.2 Problem identification, the topic and the Scope

A complex problem or task has emerged that should be solved. In order to solve the task, the challenges need to be addressed effectively. The objective of the initial challenge framing process is to ensure the right problem is tackled, from the right perspective, by the right people. Framing a project properly will assist in aligning the project towards success and reduce the probability of failure. Proper framing at the start of a project implies that the OIC Orchestrator understands the true problem, gets the trust of the key stakeholders, and ensures that everyone on the project is aligned to the project objectives. (3)

The topics and scope to be addressed during the OIC are collaboratively defined by the OIC Orchestrator and Group Owners at the very beginning of the project. Once the agreement is achieved, the collection of the background information and preparation of the starting point

materials and challenge descriptions can start. The Group Owners have the main responsibility in this process. (1)

Characteristics of a good challenge:

- The challenge has an organisation or group with responsibility for resolving the problem with help of the camp, and a responsible person who acts as Group Owner. The challenge can be targeted for this / these organisations but have to be scalable.
- The Group Owner has a clear interest in the potential outcomes and impact.
- The issues behind the challenge are complex: there is no clear 'solution' to a well-defined problem. For this reason, the expected outcome is more than one solution to one problem. OIC provides possibilities to have sufficient capability to successfully integrate the information obtained from the external sources into internal processes which is crucial for open innovation to be effective (1).
- The challenge is in an emerging phase - or is ready for reframing/redefining - with various possible paths for moving forward.
- The challenge has broader implications and is not focused on one specific target group. (1)

1.3 Roles, stakeholders and working groups

As a co-creation event, OIC is an act of collective creativity shared between two or more people (1). It means that planning and implementing OIC requires collective effort of different stakeholders with defined roles. The main roles of OIC are described below in Figure 4.

Role	Definition	Main tasks during the OIC
OIC Orchestrator	The main organizer who is setting the frame of the OIC and acting as a mediator between other involved parties. Similar to Camp Convener role (See Rissola et al, 2017, p.57)	<ul style="list-style-type: none"> -Overall content and outcomes planning, coordination and practical arrangements -Recruitment of group owners, facilitators and participants -Being a host and main point of contact during the OIC
Group Owner	Representative of an organization to which the challenge is of a strategic importance, who sets up the scope of a challenge, and who is motivated, direct interest, and means for solving the challenge. Have substantial understanding of the given challenge. Similar to a challenge owner, case owner or product owner used in design sprints.	<ul style="list-style-type: none"> -Create background materials for the challenge -Introduce the challenge to the team during OIC -Help the team to answer content-specific questions during creative process -Experts in the challenge field.
Facilitator	Person who facilitate people's expressions of creativity at all levels. Experts in service design and co-creation.	<ul style="list-style-type: none"> -Ensure that creative process is implemented according to the plan -Ensure that the right set of service design tools is used to unleash the co-creation potential of a diverse group of experts -Bring people into the design process in the ways most suitable to their ability to participate
Participant	People taking part in OIC. OIC participants are internationally recognized experts in their field and end-users who have been selected based on the participant diversity management framework	<ul style="list-style-type: none"> -to Bring the expertise based on the role he/she is representing in the OIC -to share their knowledge with others and co-create new ideas towards solving the challenge

Figure 5: The main roles of OIC (1)

Careful selection and diverse involvement of stakeholders is crucial. Importantly, successful stakeholder engagement in OIC will go beyond the acquisition of specific information from external experts to trust and relationship building and mutual understanding among various innovation ecosystem actors. (1)

The role of an orchestrator can be shared between different stakeholders, one being responsible for practical arrangements and OIC logistics, and another one for content and facilitation. Also, the group owner role in case of a challenge related to a specific new business

model for a company, or consumer understanding, can be performed by a researcher or a consultant, whereas group owners of sectoral/industry-specific challenges are usually represented by business decision makers. Owners are also responsible for delivering all the background information and materials relating their working group activities. (1) Each working group has an owner, who thematically champions “Industrial” or “Thematic” working group.

1.4 The time of the event, the schedule of the process and the milestones

Plan when you want to organise the Open Innovation Camp. When choosing a time, it is good to consider the other events, such as vacations and concurrent events in the area. After selecting the dates, select the start and end time of the event. The organizers should be present at least two hours before the arrival of the participants in order there is enough time to get acquainted with the space and make the necessary initial preparations. The same goes for the event at the end. At the end of the event, arrange enough time for you to take the necessary actions.

At the beginning of each chapter is a checklist table. By following the time limits for the tasks, you will get an implementation schedule for the process. In the checklist there are set milestones for your project to make it easier to split the project into small pieces and make organising not feel like such a big deal. The milestones are broken down by month and the tasks performed between them progress logically. This playbook acts as a project plan but write down in separate file your goals, division of tasks and responsibilities at a general level, and deliverables.

As a project management tool, you can use for example Trello or similar in addition to this playbook.

1.5 Basic practicalities: venue

Find a venue that fits the budget, the nature of your event, and your schedules. Reserve venue at least 6 months before. The venue must be reserved before you can start really marketing the event for the potential participants.

When choosing a venue, consider:

- Capacity - How many people can be in the room at the same time and how many rooms are needed?
- Overnight stay - Is there a possibility for all the participants to stay overnight?
- Accessibility - Pay attention to potential participants with reduced mobility.
- Opening of the space - Who is responsible for the opening the doors, how does the participant find the space?

- Smooth transport connections in relation to schedules - Whether participants get there easily, for example, by public transport?
- Other users of the mode - Are there other concurrent actors in the mode that may interfere Innovation Camp?
- Dining - Is it possible to eat in the venue or are there places near the venue where can go eating?
- Air conditioning and heating - In the event space there should be adequate ventilation and heating. Is ventilation and heating possible to intensify if needed?
- Internet connection - Does the space provide sufficient network connection?
- Acoustics and Room Division - Have multiple spaces at the venue where teams can work in peace so that there are no voices from the work of other teams interfering concentration.

It is necessary to conclude written agreements on the following matters:

- Venue rental agreement
- Hotel agreement
- Catering agreement

1.6 Basic practicalities: Permits and clearances

Depending on the partners, funders and participants represented, different studies on the project may be necessary. For these, you may have to fill in numerous forms related to, for example, ethical issues and the processing and storage of personal data.

These clarifications may be, for example:

Ethical clearance checklist for the project

1.7 Setting goals, measuring result and metrics

At the beginning of the camping process the more specific objectives of the camp results are defined jointly by each home group by defining their own goals and challenges to be answered. This will be discussed in more detail later in this playbook.

The goals concerning arrangements of the camp can be defined at the beginning of the whole project. They can relate to for example the number of applicants, the satisfaction of the participants or to the evaluation of the joint work of own organising team. Whatever metric is chosen for the goal, it's worth choosing together with the team when starting the project. Indicators and results should be monitored as the project progresses so that corrective actions can be taken if necessary. The results will be reviewed jointly after the project.

1.8 Budget

Even if the project is funded by a social body, it is necessary to calculate the budget and take into account all costs for project reporting. A project budget is the total project costs needed to complete a project over a defined period of time. The project budget will include such things as labour costs, material procurement costs, travel costs, venue costs etc. On the attached budget calculation file you can roughly calculate the project costs. [1.01 OIC-Event-Budget-Template](#)

Collecting and sorting all original documents from the participants (travel tickets, all signed forms, originals of the expert package etc) is essential to make it easy and clear to pay reimbursements and calculate expenses. It is necessary to create a way for receipts and other important paper to be filed. For example, paper receipts can be numbered, scanned, and stored with a number and description. You can also create a list of documents that makes it easy to find them later.

1.9 Risk mitigation plan

Tools for overcoming difficult situations and moving forward are needed in realisation of the different scenarios. If a risk is not identified, there is no precaution against it. The event must be organized with a risk management plan for the various scenarios, so that if changes occur, they can be adapted smoothly without creating a major problem. Risk management as a whole means a systematic process, the needs of which vary depending on the size of the project and the industry. When conducting a risk assessment, attention must be paid to identifying and managing the risks that are most relevant to the success of the event. A detailed explanation of the risks of the specific event must be done for each event separately depending on the special features of the event. That requires extensive and in-depth familiarisation with the subject.

However, here are the risks associated with the Open Innovation Camp event. The table contains the risks, their causes and preventive measures, as well as the magnitude of the risk.

Risk	Cause	Consequence	Magnitude of the risk	Actions in advance to prevent	The residual magnitude
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Event cancellation	Extensive pandemic	Financial losses, jeopardizing project results, participants will not come in fear of a pandemic	5	Closely monitoring the pandemic situation and making arrangements for the event so that cancellation is possible without major financial losses.	4
Interrupting an event	An unforeseen situation that requires an event to be suspended	Image, possible personal injury and property damage	4	Safety planning	3
Interference with electronic communications (website / Facebook)	Technical failure, service attack	Image, problems with communication	4	Preparedness, readiness to react, alternative information channels	3
problem with the Internet connection during the event	Technical failure	Image, Problems with completing the tasks during the camp	3	Preparedness, prior clarification of who is responsible for the connection, preparation with pens and papers	2
Information flow problems in the organization	Inadequate or congested communication channel	Failure to schedule, accumulation of problems	4	Good planning, multiple communication channels, timely communication, clear division of tasks and clear management relationships	2
a sudden attack of illness	underlying diseases, treatment inadequacy	personal injury	3	First aid skills, availability of first aid points, rescue routes free	2

Extensive illness of the organization	Stress, epidemic	Personnel Shortages, hurry and uncertainty in operation	2	Taking care of employees, distributing tasks evenly, important information sharing, appointment of deputies	2
extensive illness of participants	Food poisoning, epidemic	event interruption, image	2	Food hygiene, general hygiene (handcuffs) etc.)	2

Amount of risk: 1 = insignificant, 2 = low, 3 = moderate, 4 = significant, 5 = intolerable

Figure 6: Risk assessment and management of OIC

1.10 Teamwork of the organising team

Taking care of the orientation and motivation of the organising team is important. Gathering feedback from the team during the project and after the project is also important. Team building at the beginning of the project makes it easier to work throughout the project.

Some team members will only join closer to the camp. Such team members include, for example, facilitators who do not participate in arrangements. However, they may be participating making a final facilitation plan so that they get a better idea of its content and can bring their own expertise to it. When a facilitator joins an OIC project in the middle of design, it is a good idea to select experienced facilitators so that they are prepared to adopt the plans and planned co-creation methods quickly.

It is important to agree on the communication tools to be used between the team. For example, a shared Google Calendar works well with a team. However, it is worth agreeing on who will sign the common events and deadlines there. Slack works well as a communication medium between teams as it saves history you can see and search. It allows you to create your own channels for different teams and groups.

You can choose any application you know as a tool, but in any case, you should set up a common calendar and a common communication which is some other than email, in which even important things can be buried.

1.10.1 Responsibilities, clear roles

It is a good idea for camp planners and implementers to have clear roles and corresponding areas of responsibility so that things are completed on time and everyone knows their own

role. So, make it clear to yourself and everyone else who is responsible for any aspect of the event organising. Use the checklists in this playbook as an aid. Check the progress of the work together at appropriate intervals, at least every month during the milestones.

Here are the responsibilities that need to be shared during the project:

- Project Manager - Contact Person
- Camps schedule and workshops
- Partners - group owners, experts. acquisition of representatives of other organizations. Managing the work of group owners, experts and other actors
- Responsible for Registration and Personal Information handling
- Budget - creating a budget, managing money, accounting.
- Traction liability for the event and responsibility receiving and handing over event venues
- Logistics and maintenance - booking of facilities, creation and maintenance of schedules, procurement of supplies, meals.
- Marketing - event advertising planning, advertising, social media events, websites, posters and Flyers.
- Partners can also act in the above responsibilities

1.10.2 Team rules

There are several different guidelines on how teamwork works best. Here are some of the most important of them. You can agree among the team which and when they are best suited for your teamwork.

Teamwork rules:

- A team must be leaded.
- The team should have a common understanding of goals that need to be achieved.
- The team must have clearly defined roles.
- The team should have respect for each other. Respect each other's ideas.
- The team members should be open to compromise.
- The team must be willing to share its resources.
- The team must have frequent, effective communication.
- The decision-making process should be fair.
- The workload is fairly/evenly distributed among team members.
- Conflict (if any) is resolved by satisfying the interests of all team members.
- Relationships among team members are strengthened by working together.

- Teams are successful if team members' participation, satisfaction, learning, and growth are fostered.
- Be happy in the group you are in.

(3) (4)

1.10.3 Communication between the team

Communication channels and principles of communication as well as the frequency of meetings should be agreed at the beginning of the project so that they do not become ambiguous later. They can be recorded as notes so that they are visible to all team members throughout the project and can be revisited if necessary.

1.10.4 Management

The project leader is responsible for the implementation of the project. He is assisted by a team. A team works best if it has clear roles and responsibilities and is given the confidence and freedom to carry out tasks.

1.10.5 Planning the working hours of the team during the camp

The open innovation camp is a big event and it is always unique with different participants, different complex challenges and different organisers. It is common to make small changes to the camp schedule and group work plan during the camp. However, it is a good idea to agree before Camp on the working hours to be spent there, especially if non-project workers such as facilitators have been hired there. If working days are long, it is advisable to agree in advance on compensation for overtime.

1.11 Reflection

It is good to reflect on the experiences and learning gained during the project alone and in a group. Set aside time for team reflection at the end of the event. Reflection seeks to understand the rationale and consequences of action. It aims to deepen understanding. Experiences and learning are structured, considered and transcribed which is followed by understanding: the learner has learned something new that he or she can apply to new situations. Reflection involves recalling the experience and reflecting on it. (5)

What happened? You can repeat in your mind what happened or tell your group the situation as it happened. Also consider the thoughts and feelings that have arisen, both positive and negative. What did I feel? What did I learn? Through reflection, you become aware of your own actions and learning. (5)

Why did it happen? Reassessment of experiences is a key part of experiential learning. Seek to critically evaluate what really happened and why it happened. What things seemed to have happened? Think about what could have been done differently and what would have resulted? With reflection, you form a new understanding, a theory of the subject. New and old knowledge are combined. (5)

This reflection will be done at the end of the camp among the participants. The project staff's experiences of project work and views on project activities can also be assessed after the camp. The results of the reflection and assesment should be used in the organizing of the next innovation camp project. In this way, the process develops even better.

1.12 Evaluation

Project evaluation is the determination of the project's activities and the results, impacts and effectiveness produced by the activities. As the main tasks of the project are expressed in the project objectives, it is especially important to evaluate the achievement of the objectives. Project evaluation is based on two basic questions: Are the right things being done? and Are things being done right? (6)

An OIC project can be evaluated from at least two different evaluation setups: **project implementation** (management, communication or collaboration and networking with partners) or **achievement of project objectives** (the realisation of the project objectives during the project and ultimately its effectiveness and efficiency).

Project activities can be viewed through the goal - output - result - impact -chain. The task of the project is broken down into a few goals. The goals recorded in the project plan indicate what the project aims to achieve. Goals should be clearly stated and achievable, i.e. realistic and credible. From the point of view of evaluation, it would be a good idea to consider at the planning phase how the realisation of the objectives can be assessed during the project and after its completion. The aim of the project tasks is to achieve the goal that is realised as project outputs. The outputs of a project are what the project concretely achieves. The output can be, for example, education, a multi-professional activity model or a concrete building. The results tell about the performance of the project in quantitative terms. The project should consider what indicators can be used to evaluate the result of the project. Thus, statistics measuring results alone do not tell how the project actually affects people's lives. Impact tells you what kind of change the project will bring. The impacts are the concrete changes that can be seen as a change in habits or activities. (6)

The problem with impact assessment is that the impact does not start to appear with the project until usually after the project. The impact assessment would require a follow-up study (at regular intervals) after the project. (6) If the project is organised in such a way that an

OIC is organized at the beginning and end of the project, and there is a longer time between them when the results of the first Camp are tested in the Living Lab activities, the impact can already be seen during the project.

The assessment set-up also includes questions about where and how the assessment is used and who uses the information produced by the assessment. Is the evaluation intended to be the project's own tool or are the results reported to stakeholders, funders and the wider public? Whether the evaluation was done as an external evaluation or a self-evaluation, the project should define these things to ensure the appropriateness of the evaluation. (6)

The importance of evaluation and analysis depends on the organising body. If the project is a one-off and the organising body does not plan to hold the event a second time, the evaluation may not be of great importance. Instead, if a similar event is to be reorganized, it is very important to analyse the results as they will provide important information for organising the next event even better.

2 Marketing and communication with participants

For communication and marketing to be appropriate and consistent, it is advisable to plan it in advance and make a communication plan and define purpose and objectives for each target group. OIC communication plan enables you to communicate effectively on a project with your stakeholders/consortium, own team and external experts/participants. Planning sets clear guidelines for how information will be shared, as well as who's responsible for each section of communication. You can use [2.01 Communication Plan Template to help you make a plan.](#)

In order to find the right stakeholders and target group and to be able to use the OIC participant diversity management -model, it is useful to make a stakeholder analysis. It can be used to find the right target groups and get applicants evenly from each area needed in the OIC. It involves several key elements: Identifying the major stakeholders which can be various levels: local, regional, national, international. A stakeholder analysis identifies the individuals and groups that needs to be involved in the project by investigating their roles, interests, relative power and desire to participate. (5) On the basis of this analysis, a target group can be found to which the marketing of the event can be targeted.

3 months milestone												
3-2 months before the camp		Social media advertisement for consumers	1. reminder Please apply. New information: Further edited and deepened message, and reminding about the project									
3-2 months before the camp	2.3	Consumers or other groups (choose the channel according)	If the number of applicants has been met the message is: please follow our social media and help later by answering queries. Good applicants and it is a pity that not everyone could be selected. If new projects are planned, they can already be mentioned and encouraged to apply again later.	x			x					
3-2 months before the camp		Make social media advertisement for academia and business	1. reminder Please apply. New information: Further edited and deepened message, and reminding about the project. Ask to follow social media									
3-2 months before the camp		Social media ad for consumers	2. reminder: it can be reminded that now is the last chance to apply (if applicants are still needed). Remind of their important role in innovation camp.	x								
3-2 months before the camp		Social media ad academia and business	2. reminder: it can be reminded that now is the last chance to apply (if applicants are still needed). Remind of their important role in innovation camp.		x	x						
3-2 months before the camp		E-mail advertisement for Government	2. reminder: it can be reminded that now is the last chance to apply (if applicants are still needed). Remind of their important role in innovation camp.							x		
3-2 months before the camp		Notify when the application period has ended	Please follow our social media and help later by answering queries. Good applicants and it is a pity that not everyone could be selected. If new projects are planned, they can already be mentioned and encouraged to apply again later.	x	x	x	x	x	x			
3-2 months before the camp		Update with news	Project related news and current topics	x	x	x	x					
2 months milestone												
2-1 months before the camp		Notify selected and non-selected by email 2-1.5 months before the event	Ask selected participants to return the forms 2 weeks after sending the email. Ask to follow social media							x		
		Update with news	Project related news and current topics. Search choices have been made and are now looking forward to the start of the camp	x	x	x	x					
1 months milestone												
1-0 months before the camp		Social media ad	Glorify the project and create a waiting atmosphere	x	x	x	x			x		
1-0 months before the camp	2.5	Write the draft of an OIC article	OIC event: the usefulness and importance of the event and the functionality of the method									
1-0 months before the camp	2.3.	Make drafts for live communication										
1-0 months before the camp	1	Update with news	Project related news and current topics	x	x	x	x					
Camp												
During the camp		Live communication		x		x						
During the camp		A small interview for the article										
Camp												
0-1 months after the camp		Satisfaction survey, send to everyone		x						x		
0-1 months after the camp	2.5	Release OIC article					x	x				
0-1 months after the camp		Update with news	Project related news and current topics	x	x	x	x					
1 month after the camp												
1--> months after the camp		Update with news and results	Project related news and current topics	x	x	x	x					

2.2 Getting group owners

Group owners are often identified at an early stage of the project and can be found through initial project consortium contacts. If more group owners need to be found, it is a good idea to identify and contact suitable companies through various networks and contacts. If group owners cannot be found through contacts, the project can also be marketed at various corporate events as well as through social media. However, it is not advisable to organise too much marketing related to group owner acquisition, because it takes unnecessary work to answer the contacts, as only a few companies can be selected.

2.3 Channels of communication

Digital marketing today is effective and reaches the target audience in a targeted way, so it is worth using it in an OIC project. If the organising organisation is involved in physical events prior to the OIC, the event may be marketed at these events, but, it is not advisable to participate in them for the sole purpose of marketing this event, as the target group is best reached digitally.

Marketing planning starts with defining goals. The ways and means of social media vary depending on whether the intention is to attract applicants or to disseminate information about the content of the event to the widest possible public. Good marketing goals for the OIC project are: enough high-quality applicants and lots of new followers. It obviously depends on the number of applicants to be selected, which is enough, but it is conceivable that if there are double the number of applicants that can be selected, there is enough choice (especially when applicants are of good quality) and also in the case of cancellations, replacements can be made. The goal for new followers could be to get at least as many new followers for the project as there are applicants. Applicants are certainly interested in following the development and results of the project. They just need to be reminded in marketing that it is worth to press the follow-button.

For marketing measures to produce the best results, you need to understand the target group and make marketing communication that is appropriate for those target groups. Knowing what you want to say and to whom, it is already much easier to pick your message and channels. The most relevant factor in channel selection is information about where the target audience and event attendees are.

As the OIC methodology involves participants from a wide range of QH (government, industry, academia, and civil society) and is geographically, culturally and professionally diverse, marketing is not quite straightforward either. You need to use different channels and differently weighted messages.

Facebook is often a safe choice, especially for consumer event marketing. Since ordinary consumers are involved, Facebook should be used to reach this target group. Facebook offers the best paid advertising targeting options on social media channels. The targeting depends on the challenge to be addressed by the OIC, but it is conceivable that people interested in the subject matter of the OIC are interested and for example, charity and ideas, sustainable development, community issues and environmental protection may be of interest to individuals who might want to participate in the Open Innovation Camp. If marketing only seeks participants, a paid campaign may not be necessary because, however, it is not possible to admit very many applicants from one selection group to one event. However, visibility is always a good thing and participants also prefer to be involved in an event that gets the attention it deserves and that is recognised. You can use the social media publications of the CIRC4Life project as inspiration. [2.02 OIC Marketing material, social media texts examples](#)

The best channel for marketing professional events is almost without exception LinkedIn, with which you can reach the industry and academia target audience. LinkedIn can be used to take advantage of organic postings and targeted advertising. Experts' own activity also plays an important role, and for example, group owners should be encouraged to promote the event in their own network. The importance of LinkedIn is especially emphasised in the pre-marketing of events. However, it is not suitable for live tracking at all.

Twitter is particularly well-suited for marketing modern B2B expert events. It's certainly a good option for marketing OIC events, but at its best, it's at events with inspiring content as well-known speakers, as the citations borrowed from their speeches is often passed on.

Instagram can be used to share visual material for an event and market the event to consumers. However, if Facebook is already in use Instagram may be unnecessary.

A very important part of event marketing is the event website. There you can direct traffic from all other channels and the potential participants can get more information about the event and the whole project. Be sure to update the news in the website at regular intervals to make the project seem up to date. It's also a good idea to make an advertisement with image to send and share on partners' websites.

For example, e-mail marketing can be used to recruit representatives from the government and academia. You should find out who you want to involve and ask their organisation for permission to disseminate information about the event in their internal communications. Use the contacts you have.

Because the topic of an OIC event is often a socially important, and very challenging, it is worth to communicate it to the widest possible audience. Especially in this world situation, where new innovations play a very important role in the balanced development of the world,

it is only good if the message of the event spreads to the widest possible audience. However, in order not to put too much work on the event organizer, the selection of participants, communication, application forms and the application process should be built in a sufficiently precise and informative way that it eliminates unsuitable applicants already at the application submission stage. It is a good idea to make a separate application form for each QH segment and send a different link to the application form in different marketing messages. If there are already enough applicants for a given selection segment, marketing can be continued by communicating to that targeted audience that the number of applicants has been met for that group of applicants, but please follow the progress of the project on social media and later you can help the project by answering project development queries published on social media and on the website. In this case, you should close this registration form for that segment.

Potential innovation-oriented partners:

ENoLL, The European Network of Living Labs is the international federation of benchmarked Living Labs. Putting the people in the driver seat of the innovation, the network provides co-creation, user engagement methodologies, test and experimentation facilities in various domains.

OIC panels

2.3.1 Live communication during the camp

It is recommended to prepare in advance for social media live communication during the event. It is a good idea to build a schedule for event communication during an event based on the event schedule, and at least some of the basic messages should be scheduled in advance. Pre-record the topics and titles of the event's joint lectures, the social media accounts of the lecturing specialists, and the most important hashtags so that you can include them whenever needed. You can also write ready-made sentence structures or sketches to complement what you hear on the spot. For example: "On the stage of Open Innovation Camp @XXX: Interesting statement ... " # openinnovationcamp2020, #cocreation #livinglabs". Remember that the effectiveness of social media is based on sociality, so it is not a one-sided information channel, but an interactive platform that must be ready to participate in the debate itself. Scheduling updates makes the job easier but is only a small part of the whole; like, comment, participate, discuss, use relevant hashtags.

2.4 Content of communication

The emphasis on the content of the message to consumers should be the importance of their view as a user advocate and their ability to help in an important matter. To the representatives of the businesses, academia and government can be emphasised the social importance of the project, the know-how and important new contacts gained from it, as well as the good visibility which comes with it.

Because government staff calendars are often filled out early and the decision to participate in a project may take longer than elsewhere, an application form is opened for them a month in advance.

The marketing message may develop as the project progresses. The first goal is to acquaint the audience with the topic, i.e. to tell about the purpose and nature of the project at a general level. After this, you can go a little deeper into the topic and give readers, for example, statistics in the form of information on the topic and an explanation of why it is now worthwhile to act. Then the message can be further edited and deepened, and new information given while reminding about the project. Even closer to the application date, it can be reminded that now is the last chance to apply (if applicants are still needed). If applicants are not needed, one can communicate how good the applicants have been and it is a pity that not everyone could be selected. If new projects are planned, they can already be mentioned and encouraged to apply again later. The news can tell about the project partners and their preparation for the OIC. Just before the start of the project, you can glorify the project and create a waiting atmosphere. In addition, related links and current issues can be shared. However, the basic messages should be completed in advance so that they do not have to be constantly thought and developed.

Every post that is forwarded must have a link to the event's website. At the stage of applying for applicants, the message should tell you where to find the link to the application. However, it is a good idea to place the link in a way that the applicant needs to familiarize themselves with the project before completing the application so that he or she knows where he or she is applying.

To promote Open Innovation Camp social media ad should include information on:

- What is happening?
- Where is it happening?
- When is happening? Dates and times
- Who is organizing the event?
- If everything related to the event is not yet clear, then when and where will be published more information?

- Who is the event for? - Defining the target group affects the how, where and what to post.
- A brief introduction to your Open Innovation Camp to get the reader interested in the event
- What does participation cost? - Is everything: the event, meals and its side activities free?
- What is required of the participant? - Tell the participant what kind of competence or background is needed.
- Links to event registration, websites and other channels: Facebook, LinkedIn, Twitter
- Current contact information of the event contact person
- Information of the partners
- Pictures and videos from previous Innovation Camps
- Accessibility and language information
- Application period. Or if more applicants are received, it will end earlier, i.e. apply now!

2.5 Press releases, and article about the camp

It is useful to write press releases about the project, at least at the beginning of the project and at the time of announcing the results of the project. Writing and publishing an article about the Open Innovation Camp right after the event can be an interesting topic for many trade journals, partner publications, and of course your own website. It should include an interview with participants and comments. In this way, the project gets good visibility even after the event and interest is maintained.

2.6 Application

Application procedure is open to all applicants via online application form. The attached file contains examples of online form questions [2.05 Application form questions](#). All participants go through an application process in which applicants describe their motivation to participate; their relevant expertise and argue what would be their potential contribution to the open innovation camp. To follow participant diversity management practices described in section 3.3, the desired overall composition of the OIC must be pre-defined before starting the recruitment process. The optimal overall composition is always depending on the given challenges of the OIC. (1)

In addition to other marketing the application form may also provide information on the event, its structure and nature, in connection with the questions. This gives the applicant a clear idea of where he is applying (even if she had not read the project description) and if the

event feels unfamiliar or too busy, the applicant does not meet the requirements, or the event is otherwise unsuitable for the applicant, he will not send the application.

Detailed questions on application and disclosure of personal information to the organiser serves both the participant and the organiser. Include in the application form:

- Basic information about the event - What the participant is applying for.
- Participant's name and contact information - First and last name, e-mail, telephone number
- Language and interpretation - Is the participant able to work in English
- Motivation to participate
- Relevant expertise and argue what would be his/her potential contribution to the open innovation camp
- Greetings to the organiser - Free answer field

Once the form has been submitted, make a window popping up thanking you for the application and telling how and when they will be contacted at the latest and informed of selections or no answer. At this stage, it is good to recall that the selection of applicants follows the OIC methodology and sometimes very good applicants have to be rejected in order to meet the selection criteria. However, each applicant is an important part of the process. Also add a link to the event page.

2.7 Acceptance, rejection and waiting list letters

When the selection of applicants has been made, acceptance, rejection and waiting list letters will be sent to the selected applicants by e-mail. The annex [2.03 OIC Rejection and Acceptance Letters](#) provide models for these letters. The letter of acceptance will be accompanied by instructions and forms, which must be returned within two weeks and returning them also serves as a confirmation of participation. The documents are listed under 3.4 Expert package.

2.8 GDPR

Remember to consider EU personal data processing law, GDPR, when processing and storing data.

2.9 Internal reports

Internal project reports play an important role in sharing information within the project. the production and distribution of the content of the internal reports will be agreed at the beginning of the project.

2.10 Feedback from participants during and after the camp

Feedback can be collected from the participants with digital survey using for example Menti-meter as a tool. Several other web-based survey apps also exist, and you can use whichever you want. It is important to gather feedback while the experience is still fresh in attendees' minds. It is recommended to gather opinions from participants both during and after the Camp. The poll at the end of every working day will help to understand the dynamics of OIC. Besides that asking about the feeling, it is also important to ask questions related to content of the challenge. What's important is to make it easy and as friction-free as possible for attendees to answer questions.

The file [2.04 Feedback form questions](#) contains a suggestion on the structure of the survey and questions that should be asked from the participants after the camp.

In order to follow the development of general satisfaction during the Camp, it is important to ask about the participants' mood after each day using some short and easy method. It can be a small survey to fill out on paper or an online survey tool at the end of each day, or a colour sticker to be attached to the wall poster. However, the facilitator must remember at the end of each day to remind participants to answer the questionnaire, and only then can the day be agreed to end. If no one monitors the receiving of answers, the answers will not be received. The survey can be done on paper (e.g. coloured paper that does not mix with other papers), on a shared computer or tablet, or on person's own cell phone via a link sent to it.

One option is to encourage participants to respond to the surveys by attaching an incentive to answering, e.g., for each response, a certain amount is donated to nature conservation, or similar. This would of course require a small budget reserve for this purpose but can provide more good answers. The amount of charity collected can then be reported the next day, which encourages respondents even more to respond to the survey.

3 Participant selection

As this is an OPEN Innovation Camp, an open application process is applied. That ensures open, transparent, and equal participation. Selecting suitable participants of OIC is demanding task, which requires careful planning (1).

Recruiting, defining and inviting the participants based on complementary expertise is an essential part of the planning phase. All participants go through an application process in which applicants describe their motivation to participate; their relevant expertise, and argue what would be their potential contribution to the open innovation camp. To follow participant di-

versity management practices, the desired overall composition of the OIC must be pre-defined before starting the recruitment process. However, the optimal overall composition is always depending on the given challenges of the OIC. (1)

3.1 Checklist: Participant selection

CHECKLIST: PARTICIPANTS

Time for implementation	Chapter nr	Doc nr	Task	Responsible person	Due date	Completed
7-6 months before the camp						
7-6 months before the camp						
6 months milestone						
6-5 months before the camp						
5 months milestone						
5-4 months before the camp						
4 months milestone						
4-3 months before the camp						
3 months milestone						
3-2 months before the camp	3.2	3.01	Receive applications. Go through them and make the selection.			
2 months milestone						
2-1 months before the camp						
1 months milestone						
1-0 months before the camp	3.4		Form a linkedIn group or participant profile folder.			
Camp						

3.2 Selection criteria: Diversity of participants

As described before in chapter 2.6, applicants will apply to participate in the event in a general open call. The channels to contact potential participants are identified in the marketing plan. After the application period, participants will be selected. The selection is made by the organizing team according to certain selection criteria. Use file [3.01 Group Composition Template](#) as an aid.

Participant diversity management in OIC is based on a model by Santonen (2016). According to Diversity Management Model participant diversity is divided in five sections (Figure 7) (1):

- Cultural: Countries with different standards and markets
- Organisational: Quadruple helix
- User-driven: different end users (personas)
- Cross-functional: Different functional expertise eg. marketing, R&D and management
- Disciplinary and cross-industrial diversity: different scientific disciplines or industries

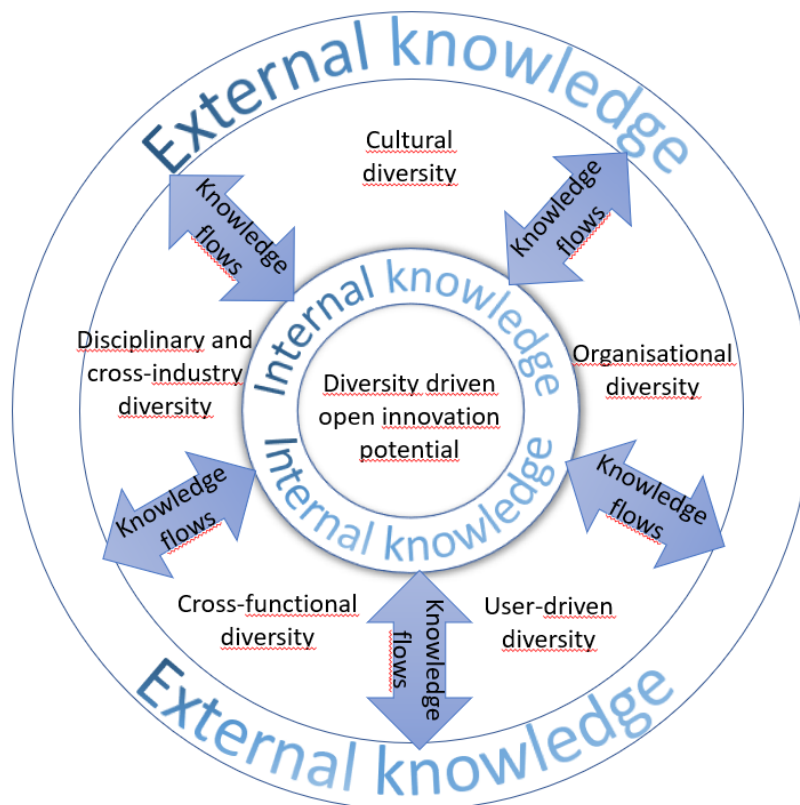


Figure 7: Diversity management model by Santonen (2016)

Cultural diversity is one of the major challenges in the 21st century, which have a direct impact on the innovation acceptance. In the suggested diversity management model, cultural diversity reference is two folded. Cultural diversity refers to a need to recruit participants from different countries in which the market conditions and code of conduct are differing. Organisational diversity is linked to Quadruple Helix model (government, industry, academia, and civil society), which is the foundation of the OI2 approach as suggested by Curley & Salmelin (2013). User-driven diversity highlights the need to understand different kind of end-users, who are expected to use the co-created solutions. Personas derived from service design methodology are archetypes of actual users and can be successfully used to verify user-driven diversity. The creation of user personalities is recommended in advance, during which they

will be used during OIC to support user-centered design and ensure that the diverse needs of users are taken into account. Cross-functional diversity is related to an idea of a cross-functional team in which is a group of people with different functional expertise are working toward a common goal. Basically, this referrer to making sure that OIC includes persons having different job descriptions such as R&D, marketing or management. Finally, disciplinary diversity and cross-industry diversity are referring to involving participants from different scientific disciplines or industries. (1)

By considering the above participant diversity dimensions and making consciously decisions who to recruit to OIC, the likelihood of co-creating more radical innovations should increase. Furthermore, the participant recruitment challenges within Living Lab projects have been identified as a significant barrier to upscaling Living Lab experiments. Therefore, systematic stakeholder management is essential for Living Lab success. (1)

Participant selection is most successful when it is international, when participants from different countries bring valuable insights from other cultures that would otherwise never be available. Cultural diversity has a direct impact on the adoption of innovations. Past camps have integrated participants from more than 30 countries in actively addressing societal innovation issues. When it is difficult to bring in international perspectives, what is essential is that enough participants come from outside the host region, thus bringing new perspectives. (1) Diverse participants will be able to learn from each other and find new ways of solving different challenges.

Once the participants have been selected and they have accepted the place form a list of them and make nameplates at the camp for registration and badge. [4.04 Badges info](#) and [4.03 Participants excel](#).

3.3 Expert package

The expert package contains the files to be sent to the applicants by e-mail after they are selected as participants. Some of the files are to provide information to the participants and some are to be filled out and sent back to the organisers before the Camp.

[3.02 Agreement - Expert Natural Person](#)

[3.03 Annex 1_Hotel Registration Form](#)

[3.04 Annex 2_Application for Reimbursement of Travel Costs Form](#)

[3.05 Annex 3_Bank Account Form](#)

[3.06 Annex 4 - Consent for processing personal data](#)

[3.07 Annex 5_PrivacyPolicy](#)

[3.08 Participant guidelines EXAMPLE](#)

3.4 Participant profiles to be used during the camp

A list of the competencies and experience of all the participants is necessary so that all the competencies in the camp can be used if necessary. The crucial part is sharing the expertise of the people who have gathered for the camp. For each participant to know what kind of competencies can be found in the camp, it is necessary to obtain a competency profile for all participants. One way to do this is to create a Linked In group and invite all the participants to that group. In LinkedIn group people can share their insights and experiences, ask for guidance, and build valuable connections.

Other way is to create a fillable file that is sent to participants before the Camp and into which they can fill their own area of expertise that can be exploited during the camp. A photo and contact information can also be filled in here. The files can be then combined in one place and profiles compiled by Quadruple Helix category and shared with all participants digitally and also with a printed version that can be browsed during Camp.

4 Camp Schedule, Structure and Agreement About the Goal

This chapter introduces the structure and progress of the Innovation Camp. Based on the OIC scope and availability of the background information, OIC Orchestrator will define the duration and structure of the camp as well as select suitable service design tools for the camp in collaboration with consortium and the facilitators. (1)

Defining fluent workflow across subgroups during the OIC days is demanding task, which requires careful planning but also flexibility to change plans based on the daily deliverables if needed. OIC is based on pre-defined structure and carefully planned group interaction between complimentary actors. The success of an OIC is dependent on creating the matrix structure which enables systematic co-creation process, when results of one subgroup interaction are reflected and further developed by the following subgroups. Therefore, designing OIC structure that is easy to implement but also allows seamless interactions between all challenge groups is crucial. (1) You can use file [4.02 OIC Structure](#) to plan the structure and schedule. This is presented in more detailed in chapter 4.4. Also file [4.01 OIC Programme example](#) provides an insight into Camp's progress in the form of a concise example (CIRC4Life Innovation Camp 2018).

4.1 Checklist: Camp Schedule, Structure and Communication About the Goal

CHECKLIST: SCHEDULE

4.2 The starting event

Make sure you have all the equipment and facilities required for the Innovation Camp at your disposal, Internet access is available, technical equipment works, you are aware of the amount of registered participants as well as other actors and you are ready to start the event. Use [4.03 Participants excel](#) to register participants as they arrive and give a badge [4.04 Badges_info](#) and [4.05 Badges template](#) for each of them.

- Welcome everyone and introduce yourself
- Allow other responsible persons and volunteers to introduce themselves
- Briefly introduce the content of the Innovation Camp and the OIC event you are organising
- Ask other involved parties to introduce themselves
- Distribute materials such as schedules and instructions to participants
- Review event rules and safety instructions
- Introduce the facilities
- Group owner's introduces the challenge and goals of Innovation Camp and give participants the opportunity to ask questions and discuss
- Divide the participants into teams, according to the prepared plan
- Introduce a structure of the Innovation Camp so everyone knows what happens next

4.3 Creating a common understanding of the subject

Creating a common understanding of (a complex societal) challenge and what is being done during the camp is important in order to work together to achieve a common goal. At the beginning of the camp, a common understanding is created by presenting the thematic challenges, as well as the industries through which the challenges will be solved. All (8) group owners (4 thematic group owners and 4 industry group owners) also presented the goals they want to achieve during the process.

Initially, the participants and their skills will also be introduced so that it can be utilised during the camp.

Then, together, the groups further deepen the topic by dismantling and addressing it and finding together with their own group the goals to which they will commit together.

4.4 Workshop plan

During the camp, every participant belongs to a home group, which composition is defined by the participant diversity guidelines (presented in chapter 3.3). The home group composition

remains the same during the whole OIC event. Two types of home group are identified: Industry home group and Thematic home group. Industry home group participants represent various industry ecosystem expert roles in the given industry. They have profound knowledge on this specific industry field. Thematic group member represents experts who have specialised skills in a specific thematic field area, which can be used in multiple industry setting. (1) Hence, thematic home groups blue (A), green (B), yellow (C), and red (D) develop general models / processes / business models or parts of them. They deal with business models and their various components and the infrastructure required by these business models. That is, if we seek to move to a particular business model or course of action, then we could use such thematic approaches. They deal with the subject on a general and abstract level.

Industry home groups (1, 2, 3, 4) ponder specifically and in a targeted way about their own industry or organisation and how the models developed in the thematic groups fit into their particular organisation. They wonder what it would mean for their own organisation to follow this model; they process what this means to us, our company and our industry in concrete terms.

Once a common understanding, trust, and familiarity with the participants is reached during the first day, the co-creation round (Figure 8) begins and the groups begin to work together with the pre-selected challenges. One thematic group and one industry group at a time join to work together for two hours. The thematic group brings its special expertise to the use of the industry group and together they develop the industry group's operating model and operating environment from the perspective of the thematic group. In the first round (Co-creation ROUND 1) industry group 1 works with blue (A) thematic group, industry group 2 works with green (B) thematic group, industry group 3 works with yellow (C) thematic group, industry group 4 works with red (D) thematic group (see figure 8).

The groups, who have worked together, then present their solutions to the pre-selected challenges. The solutions are presented to the participants of the whole Camp, in which case it is the task of everyone to comment, come up with ideas and suggest ideas that have arisen from the presented solution within the framework of their own special expertise. After this, the co-creation round ends.

In the next round, the theme groups move on to working with another industry group. In this way, the groups will change so that industry groups will have access to new skills from experts in the second thematic group, and the development of models will continue.

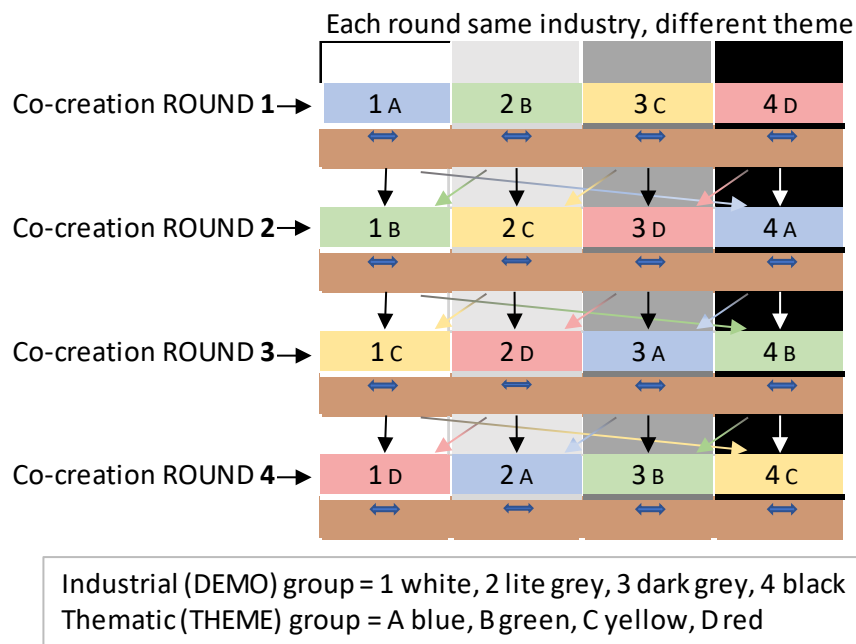


Figure 8: Co-creation rounds

After two rounds of co-creation, at the end of the day, the models developed during the day are still being refined and improved. This work is done in own homegroups, meaning that all eight groups work only with members of their own group. By the end of the day, eight improved concept versions (V2) are distributed among the Innovation camp members.

After four rounds, all industry groups have worked with all thematic groups and thus the models developed have been developed from four different thematic perspectives and with numerous experts and using diverse methods.

The table below shows the program chronologically. Table also as editable file [5.01 Facilitation guidelines-example](#). It also shows in more detail the purpose of the different sections, the tasks, the division of the groups of participants and the facilities needed for the work.

This OIC model describes working with four different industry (DEMO) groups and four different thematic (THEME) groups. The length of the OIC may vary depending on the size of the group and the challenges to be solved (this model is describing a 4 days camp).							
Days	Phase	Type of the event	Room	Tasks	Duration	Group division	Thematic model development/results
Day 1	Phase 1 = Creating shared understanding. co-creating goals, outcomes and vision. Building trust.	Opening the event (OIC Orchestrator and facilitators introduces)	Main room	Listen	20 min	All	
		Introduction Thematic subjects: A, B, C, D, presentation of objectives (10 min each)	Main room	Listen	40 min	All	4pcs of THEME model version 1 (Starting point): A, B, C, D
		Introduction Industry eco-systems: 1, 2, 3, 4, presentation of objectives (10 min each)	Main room	Listen	40 min	All	
		Explaining the World Cafe Method	Main Room	Listen	10 min	All	
		5 minute transit time				5 min	
		World Cafe ROUND 1 (Rounds 1.1 and 1.2): 1.1 Introduction of the group members, their expectations for the camp, other's expertise and 1.2 Identifying and clustering as many key stakeholder and customer groups as possible for each industry group: 1, 2, 3, 4. Each participant has their own paper marked in which groups he or she attends each round of the world cafe (a total of two rounds).	Group rooms	In round 1.1 all work with similar task (Role card writing: own expertise and expectations, presentation, Role card writing: most important expertise from somebody else). In round 1.2 Stakeholder identification task. Tasks depending on their roles and groups. The owner told more about the organisation, others identified stakeholders	30 min	Group composition 1: Home groups: 1, 2, 3, 4, A, B, C, D Groups A, B, C, D can be in one large space	
		5 minute transit time				5 min	
		World Cafe ROUND 2 (Rounds 2.1 and 2.2): 2.1 Getting to know each other, 2.2 Enhancing the stakeholder identification for each industry (DEMO) group: 1, 2, 3, 4	Group rooms	2.1 Role card introduction 2.2 clustering and ranking stakeholders. Grouped in order of priority. To the top level the most important, which are directly linked to companies and to the other two levels loosely linked stakeholders.	30 min	Group Composition 2. One member of the thematic group visited two demo groups. Members visited different groups to obtain information on all four groups. And vice versa.	The result is a wall board of stakeholders
		Coffee break and back to the home groups				20 min	
		Thematic groups: Team building and committing to the shared understanding, Presenting role cards, Introduction group specific context, Review World cafe outcomes, Committing to the shared understanding – Defining the shared objectives, vision and KPIs for each home groups, Group owner chooses the challenges to address during the Phase 2, 1st and 2nd sessions. Groups: A, B, C, D	Group rooms		1h 20 m	Home groups: 1, 2, 3, 4, A, B, C, D	Thematic strategies, 4 new challenges for next day, 2 per session
		Industry groups: Team building and committing to the shared understanding, Presenting role cards, Introduction group specific context, Review World cafe outcomes, Committing to the shared understanding – Defining the shared objectives, vision and KPIs for each home groups, Group owner chooses the challenges to address during the Phase 2, 1st and 2nd sessions. Groups: 1, 2, 3, 4					Ecosystem illustration, 4 new challenges for next day, 2 per session
		Dinner					

Day 2	Phase 2 = Short-term design sprint workshops developing solutions for the defined challenges. Developing model for specific industry.	Developing industry specific solution CO-CREATION ROUND 1: working with challenges. Industry group owner presents 2 raised challenges. Thematic group owner presents 2 raised challenges. Four challenges four tables. World cafe method (4rounds)+canvases. Presenting outcomes per table group. The whole group helps the industry owner to create a presentation of industry specific model taking into account the theme addressed.	DEMO group rooms	The methods and tools can vary across the working groups due the different shared commitment and demonstration conditions.	2h	Joined home groups: thematic group+Industry group: 1&A, 2&B, 3&C, 4&D	Solutions for four pre-defined challenges
		5 minute transit time				5 min	
		Developing industry specific solution CO-CREATION ROUND 1: Presentations . Collective review: subjective assessment and complementing via voting tools - Cross group reflection and learning	Main room		1h	Groups 1&A, 2&B, 3&C, 4&D presenting, others listening and voting	4 presentations
		Lunch				1h	
		Developing industry specific solution CO-CREATION ROUND 2: working with challenges. Group owners go through the results from previous round and voting. Industry group owner presents 2 raised challenges. Thematic group owner presents 2 raised challenges. Four challenges four tables. World cafe method (3rounds)+canvases. Presenting outcomes per table group. The whole group helps the industry owner to create a presentation of industry specific model taking into account the theme addressed.	DEMO group rooms	The methods and tools can vary across the working groups due the different shared commitment and demonstration conditions.	2h	Joined home groups: thematic group+Industry group: 1&B, 2&C, 3&D, 4&A	Solutions for four defined challenges
		Coffee break and transit to the main room				30 min	
		Developing industry specific solution CO-CREATION ROUND 2: Presentations . Collective review: subjective assessment and complementing via voting tools - Cross group reflection and learning	Main room		1h	Groups 1&B, 2&C, 3&D, 4&A presenting, others listening and voting	4 presentations
		5 minute transit time				5 min	
		Refining the models based on ROUND 1 and 2 insights within each Industry (DEMO)and Thematic (THEME) home groups – Defining Concept version 2. Go through the results from the voting and the questions received via app. Voting / Choosing the challenges. Forming sub groups around the challenges. business model canvas / other canvas. Presenting and adding insights. Owners creates the concept V2.	Group rooms	Each group is refining their initial THEME concepts based on Day 2 insights. By the end of the day, eight improved concept versions (V2) are distributed among the Innovation camp members.	1.5h	Home groups: 1, 2, 3, 4, A, B, C, D	8 pcs of version 2 : 1, 2, 3, 4, A, B, C, D 4 new challenges for next day, 2 per session
		Dinner					

Day 3	Phase 2 = Short-term design sprint workshops developing solutions for the defined challenges. Developing model for specific industry.	Developing industry specific solution CO-CREATION ROUND 3: working with challenges. Industry group owner presents 2 raised challenges. Thematic group owner presents 2 raised challenges. Four challenges four tables. World cafe method (3rounds)+canvases. Template for 3-2-1. Presenting outcomes per table group. The whole group helps the industry owner to create a presentation of industry specific model taking into account the theme addressed.	DEMO group rooms	The methods and tools can vary across the working groups due the different shared commitment and demonstration conditions.	2h	Joined home groups: thematic group+Industry group: 1&C, 2&D, 3&A, 4&B	4 new challenges, Solutions for four defined challenges
		5 minute transit time				5 min	
		Developing industry specific solution CO-CREATION ROUND 3: Presentations . Collective review: subjective assessment and complementing via voting tools - Cross group reflection and learning	Main room		1h	Groups 1&C, 2&D, 3&A, 4&B presenting, others listening and voting	4 presentations
		Lunch				1h	
		Developing industry specific solution CO-CREATION ROUND 4: working with challenges. Group owners go through the results from previous round and voting. Industry group owner presents 2 raised challenges. Thematic group owner presents 2 raised challenges. Four challenges four tables. World cafe method (3rounds)+canvases. Presenting outcomes per table group. The whole group helps the industry owner to create a presentation of industry specific model taking into account the theme addressed.	DEMO group rooms	The methods and tools can vary across the working groups due the different shared commitment and demonstration conditions.	2h	Joined home groups: thematic group+Industry group: 1&D, 2&A, 3&B, 4&C	Solutions for four defined challenges
		Coffee break and transit to the main room				30 min	
		Developing industry specific solution CO-CREATION ROUND 4: Presentations . Collective review: subjective assessment and complementing via voting tools - Cross group reflection and learning.	Main room		1h	Groups 1&D, 2&A, 3&B, 4&C presenting by turns	4 presentations
		5 minute transit time				5 min	
		Refining the models based on ROUND 1 and 2 insights within each Industry and Thematic home groups – Defining Concept version 3. Go through the results from the voting and the questions received via app. Voting / Choosing the challenges. Forming sub groups around the challenges. business model canvas / other canvas. Presenting and adding insights. Owners creates the concept V3.	Group rooms	Each group is refining their concepts based on Day 3 insights. By the end of the day, eight improved concept versions (V3) are distributed among the Innovation camp members. Thematic group needs to prepare presentations for Final morning.	1.5h	Home groups: 1, 2, 3, 4, A, B, C, D	8 pcs of version 3 : 1, 2, 3, 4, A, B, C, D
		Dinner					

Day 4 Final Day	Phase 3 = fine-tuning, documenting and presenting the outcome deliverables of the camp to all	Thematic group final presentations. Understanding and collectively reviewing the Thematic models industry specific characteristics. Review via crowd voting system. Similarities and differences between the four industries are presented in order to understand which of the conceptual characteristics are assumed to be domain specific and which ones are universal (at least in context of the four industries). This is the final opportunity for cross-case learnings before finalizing the industry specific models. The group assessment helps to selected and make decisions which concepts should be further developed after the OIC. Collective selection process also aims to lower the resistance in the OIC follow up stages.	Main room	Industry group members write notes (key issues / challenges to solve) during Thematic groups presentations on A4. After the each presentation, innovation camp members will subjectively assess the presented model concepts against the collaboratively defined objectives, vision and Key Performance Indicators (KPIs) via crowd voting method.	1h	A, B, C, D Presenting	Presenting 4 pcs of version 3 (Final version): THEME A, B, C, D
		5 minute transit time				5 min	
Day 4		Finalizing the industry specific models: Thematic group owners and group members will join the demonstration working groups in order to finalize and prioritize the three Thematic models within each demonstration. By the end of the workshop, the final concept versions (V4) of the given demonstration specific THEMES are locked.	Group rooms	Industry group owner explains the current situation. Voting / Choosing the challenges. Forming sub groups around the challenges. business model canvas / other canvas with pre-set questions.	2h	1, 2, 3, 4 THEME group members join to dedicate resources where they are most needed.	Finalising concept versions (V4) of the industry (DEMO) specific model
		Coffe break and transit time				15 min	
		Presenting and collectively reviewing the finalized industry models. Industry groups are presenting their finalized concepts (version 4) which are to be implemented and tested via various Living Lab activities during the later stages of the project. Final crowd voting and commenting takes place.				1, 2, 3, 4 presenting	Presenting 4pcs of version 4 (Final version): DEMO 1, 2, 3, 4
		Innovation camp closing				10 min	
		Lunch				1h	

4.5 Finishing the Camp

- Bring together all the participants and actors of the Innovation Camp
- Keep a brief summary of the event and thank everyone for participating
- Hand out the certificates of participation. File [4.06_Participant_Certificates](#)
- Indicate future plans of Innovation Camp and results
- Encourage participants to come to the next event if they are needed there
- Allow participants to ask a question and set aside time for discussion
- Leave your and partners' contact information for participants

- Save the outputs and notes made by the groups for further work
- Tell about the channels you follow to get information about the utilisation of the results of the Open Innovation Camp

5 Workshops and Facilitation

This chapter introduces the content and facilitation of workshops at a deeper level. In addition, the codes of conduct that are important for the success of the Innovation Camp will be reviewed, allowing for diversity, the disclosure of semi-finished ideas and disagreement, and a phase of development that feels like chaos. However, these can only be achieved by creating an atmosphere in which everyone is allowed and dares to share their own thoughts, each one's opinions are listened to, understood and valued as a valuable part of the formation of the solution. Facilitators are crucial to make this a success.

5.1 Checklist: Workshops and Facilitation

CHECKLIST: FACILITATION

Time for implementation	Chapter nr	Doc nr	Task	Responsible person	Due date	Completed
7-6 months before the camp						
7-6 months before the camp						
6 months milestone						
6-5 months before the camp						
5 months milestone						
5-4 months before the camp						
4 months milestone						
4-3 months before the camp			Recruit facilitators. One facilitator per group. If some industry group has two different companies recruit two facilitators for that group.			
3 months milestone						
3-2 months before the camp	5.6	5.01	Make facilitation plan			
2 months milestone						
2-1 months before the camp	5.10		Buy the necessary goods and props (See list from section 5.10 Necessary equipment)			
1 months milestone						
1-0 months before the camp			Send by e-mail the participant guidelines to be read.			
1-0 months before the camp	5.6		Set up a joint facilitator chat			

Camp						
During the camp						
During the camp						
During the camp						
Camp						

5.2 Play rules for the participants

The camp is a true co-creative innovation process starting from real-world problems and requirements and focusing on practical results in terms of identification of business opportunities and developing novel solutions. It works as a facilitated space for social interaction and exchange among the diverse set of actors. During the camp, there are presentations providing information on the challenges and ecosystem conditions as well as facilitated sessions utilising a diverse set co-creation method to support the teamwork and to develop novel idea for further development. In CIRC4Life Innovation Camp, partners interact with each other and with external stakeholders to jointly discover and specify topics, addressing which serves in order to achieve the goals of the project and consortium, as well as the particular goals that each participant might have alongside these.

Diversity can be associated to any attribute to indicate that another thing, person, group, organisation, network or ecosystem is different. CIRC4Life Innovation Camp consists multi-disciplinary and -cultural teams, which collectively are developing new ideas and solutions for pre-defined circular economy challenges for different CIRC4Life context.

At its best, diversity can increase creativity and innovation performance, but it can also lead to process losses due to task conflicts caused by lack of shared vision or vocabulary. Therefore, the co-creation process of the innovation camp needs to be carefully facilitated in order overcome the diversity derived challenges. Therefore, the following set of play rules are created, to help to collaborate more effectively and bring out the best.

Play rules:

1. We are a team which consists of experts from different fields: Every participant is an expert with all the knowledge of one's life. In the camp, we are aiming achieve our goals as a team instead of as an individual. Therefore, the different kinds of players with varying expertise are essential.

2. Safe and secure environment, trust and respect: Follow the democratic working rules and respect your team members. Other's opinions might conflict with your opinions, since

their knowledge comes from a different domain. The conflict of opinions is inevitable, and we do not need to be afraid of that but instead use that as an advantage.

3. Listen, articulate and respect the group decisions: Every participant is entitled to a balanced opinion - spend more time listening than speaking and aim for solutions instead of only identifying problems, challenges and risk, unless that is the current task. Respect the decisions made by the group even if that was not your favourite option.

4. Be honest, open and committed: Help others to grasp your areas of expertise and have the patience to explain when needed. Share your understanding, data, materials, etc. Remain concentrated and available for discussions. Each team member is counted on to be an active and committed in the creation of the valuable new solutions. The innovation camp is all about sharing the knowledge and learning from each other.

5. Pay attention to timings and instructions: Respect the timer and use the given sheet/template. The work is divided to smaller sub-tasks and it is important to concentrate on the task at hand and its time restrictions, since many follow up tasks are grounded on the previous work.

6. If something is unclear, ask the facilitator: Your facilitators are at your disposal. Rely on that they will always tell what to do next!

7. Take care of your brain: Drink, eat, take another angle and stretch your legs for time to time. Refreshments are available all the time, and you can also use lobby area for working.

8. Enjoy the ride: Co-creating together is intriguing and insightful especially when the group reaches the flow state.

Before the event, participants should be sent an e-mail to read the participant guidelines, which include above mentioned play rules, instructions on how to use social media, practical instructions on the accommodation service, description of the event and its concept, event topic and purpose, list of participating companies, list of participants, list of group owners, group division, schedule and event progress as well as a presentation of the consortium.

5.3 Digital tools for workshops

During the workshop several tools can be used to make the workflow easier and faster. There are multiple digital solutions, such as live polls or quizzes, voting tools, and event gamified systems that can provide a powerful base for efficient and flawless co-creation. Apart from that, this technology will help you collect and display the ideas your audience generated.

Camp includes also online crowdvoting and crowdsourcing activities, which requires online device: mobile phone, tablet or laptop. It makes sense to choose tools that work online without the need to download separate programs. Detailed guidelines for digital tools for crowd voting, crowdsourcing etc can be given during the sessions.

Here are some handy tools to use during Camp:

Flinga: Flinga Whiteboard, visualization tools for collaborative knowledge building and Flinga Wall, to collect participants' comments, questions and answers quickly and easily for all to see. <https://flinga.fi/tools>

Evernote: Workspace, taking notes, scanning, grab screenshots, record audio files and copy an online link: <https://evernote.com/?var=2>

Post-it app: Brainstorm. Capture. Share ideas https://www.post-it.com/3M/en_US/post-it/ideas/app/

Vclock: Stopwatch, timer and alarm clock: <https://vclock.com/stopwatch/#>

5.4 Tablets for the groups

It would be good for each group to have a shared tablet on which the programs and links to different tools needed for group work can be stored in advance.

The tablet can have, for example, a WhatsApp account used by the group, through which you can share links and other necessary material to the members of the group.

5.5 Creativity technics

There are several methods of co-creation and ideation, as well as numerous variations of them. Their choice depends on what their use can accomplish. So first you have to think about what you want to achieve and break it down into small pieces and define the goal and needs of each small session: the number of people, the time available, what you want to get out of the group. The composition of the group also determines the methods to be chosen, ie whether the group is a cohesive or fragmented group in terms of their expertise and field, whether they already know or not, etc. When planning group workshops, it is worthwhile to use people who know it best, experienced facilitators.

Instructions for various brainstorming and co-creation methods can be found on this website and in the attached file.

https://www.mycoted.com/Category:Creativity_Techniques

[5.02 Facilitation_Methods_LAU](#) (in Finnish)

5.6 Facilitation plan

It is important to build healthy environment for co-creation using special tools, methodologies and framework settings. An inspiring and open setting is crucial for bubbling over with ideas, but it is as important to have a clear structure. Each working group will have a designated facilitator, who is responsible for facilitating and managing his/her group's co-creation process according to pre-defined innovation camp structure and workshop plan. Structure applies to content, space, time frame and even (if visible) rules of participation, as well as to the flexibility to adjust procedures during the co-working process whenever necessary

A facilitation plan must be made prior to camp. The facilitation plan may live during the camp if the need arises. The plan should be developed jointly with the facilitation team and so that the latest updated plan and materials are always available to all facilitators. Ideas for facilitation methods and workshop methods can be found in this Laurea publication, [5.02 Facilitation_Methods_LAU](#). Also for example Methodkit <https://methodkit.com/kits/> and Trytriggers <https://www.trytriggers.com/> offer lots of ideas.

The attached file [5.01 Facilitation_guidelines-example](#) contains an example of an OIC facilitation plan for 4 days camp. File [5.03 Facilitation_Templates \(QH roles cards\) EXAMPLES \(QH roles cards\) contains](#) examples of ready-made templates for tools needed in some workshops.

Other useful templates:

[5.04 Welcome_thematic rooms EXAMPLES](#)

[5.05 welcome_facilitators presentation EXAMPLE](#)

[5.06_IC_instructions_GROUP_Owners EXAMPLE](#)

[5.07 Presentation_What_is_InnovationCamp EXAMPLE](#)

It is a good idea for facilitators to set up a joint chat where they can communicate and share feelings, successes and ideas during the camp.

5.7 Role of the facilitator

The facilitator's role is to support the group in working effectively. It is important to have well-trained and skilled facilitators who are able to set up the process and also to react spontaneously to unforeseen developments. The facilitators need to have an open attitude, be

able to create a safe space and let people feel free to contribute in their own way. Facilitators need to be clear on what they expect from participants and how their efforts are made visible. This file [5.08 Facilitator tips](#) contains some useful tips for facilitators.

Depending on a particular group, this may mean ‘doing less’, not doing more. This implies light facilitation, few interventions, and ‘getting out the way’ when the group (or subgroups) are working well. Helping the group to orchestrate their time and to keep track of where they are in the process is often the most important thing a facilitator can do to move the group forward. (2)

Facilitators are always available for their group, but do not necessarily stay the entire time in the group’s workspace - this is part of ‘getting out of the way’! (2)

Facilitators’ tasks:

- Ensure that creative process is implemented according to the plan
- Ensure that the right set of service design tools is used to unleash the co-creation potential of a diverse group of experts
- Bring people into the design process in the ways most suitable to their ability to participate (1)

However, the participant diversity can also reduce innovation performance due too high level of task conflicts (also known as cognitive conflicts), which can be defined as perceived disagreement among group members relating their opinions and ideas. In worst case scenario task conflicts are causing relationship conflicts, (or emotional conflicts), between the group members and leading to negative impact on group satisfaction, commitment and decision quality. Thus, effective facilitation and management of the development and innovation efforts is among the key challenges of any open innovation activity which is grounded on a multi-stakeholder collaboration including Living Lab approach. (1) Conflicts might, however, also be a tool of the process to create space for a more open communication. Conflicts help to find out what really matters to oneself or others.

CIRC4Life Innovation camp creative process is strongly based on co-creation. Therefore, time to time there will be contradictory decision-making situations which needs to be solved before proceeding. In those cases, owners have the final say, after receiving consultation from the other working group members.

Facilitator in Open Innovation Camp: - There were so many different people and it was a pleasure to watch when a meat processing engineer encounters a hipster from Berlin, after all it was magical and yet they have been able to create an open, equal and good atmosphere.

5.8 Preparation

The preparation of the facilitators for the camp involves familiarisation with the facilitation plan so that it does not have to be done on site. Familiarisation with participant profiles and the skills of group members is also important so that the facilitator can direct questions to those who know best during the camp.

5.9 Success factors

Four critical success factors define an open innovation event:

- 1) clear definition of motivation and goals
- 2) preparation of the assignment
- 3) active and multidisciplinary presence in the event
- 4) focus on the after care of the event. (1)

5.10 A list of necessary equipment

- supplies and handouts ready-made and crafted for group work sessions
- large wall posters for group work
- tablets
- Necessary cables, chargers, adapters
- Video cannons in each group room
- Mobile routers if needed
- Paper
- Blue tack, pins or tape
- Various pens, markers
- Post-it notes
- Extension cords
- Audio equipment
- First aid supplies
- Print an event schedule and instructions for participants
- Name tags for participants
- Owners Presentation Folder

6 Data Collection and Reporting (Documentation)

Collecting and storing information during the Camp is very essential so that the information generated during the camp can be utilized even after the camp. It is not enough to take photographs of posters and post-it sheets assembled on the walls to further exploit the data. At the moment of the event, the matter may seem clear, but after a few months or years, it is difficult to understand all the essentials. When data is properly stored, it can be quickly and easily accessed by members of the organisation when needed.

It is therefore important to make a data collection plan in advance of the event. The level of data collection will be affected by how much data will be used later and for what purpose.

6.1 Checklist: Data Collection and Reporting

CHECKLIST: DATA COLLECTION

Time for implementation	Chapter nr	Doc nr	Task	Responsible person	Due date	Completed
7-6 months before the camp						
7-6 months before the camp						
6 months milestone						
6-5 months before the camp						
5 months milestone						
5-4 months before the camp						
4 months milestone						
4-3 months before the camp						
3 months milestone						
3-2 months before the camp						
2 months milestone						
2-1 months before the camp						
1 months milestone						
1-0 months before the camp	6.2.2		Create a folder structure for pictures and files to be saved			
Camp						
During the camp	6.2.3		Make sure that the necessary documents are saved.			

During the camp						
During the camp						
Camp						

6.2 Data collection during and after workshops

6.2.1 Team workspace

If it is possible to implement paid software for group work during the camp, one very good solution is Confluence team workspace. When communication and work took place in Confluence, project and teamwork information would remain there, eliminating the need for a separate storage process. Each team member could add files, pictures and comments to the own project page. In that case, a separate participant profile register would not be needed but would be maintained in the confluence.

Confluence is ideal for teamwork, where content is produced continuously, simultaneously and by multiple users. Adding users is easy when all you need is an email address. Confluence is communal: it allows users to have their own home pages and status updates familiar from Facebook. It is possible to add an image of each user so that people unknown to each other can quickly learn to recognize each other.

All versions of pages and files are archived, which means that data cannot be accidentally deleted. Confluence can be imported to a wide variety of files and editing most is also possible there. Information can also be exported from the system in pdf, doc, xml and rss formats. Creating and linking pages is easy. Quick search allows data to be found quickly. The document or plan can be sent to the people you want to view or approve. With Conifirms add-on, you can easily make survey forms and it works great for collecting ideas as well. You can add a Powerpoint presentation to the Confluence page and edit it as the information increases.

Different bases (sheets, canvases) are used in group work and co-creation. At their best, canvases are filled with post-it notes on the wall to support team work, but it becomes difficult to store information. The simplest, of course, is to take a picture and save it to Confluence. Editing an image is not supported, but you can make templates with Confluence tables, so you can edit content in Confluence as well. Confluence itself is very affordable, but add-ons can raise the price.

6.2.2 Document repository

Some sort of document repository for document and file management is essential if a team workspace is not in use. One solution could be online file sharing tool, like Google Drive or

Dropbox. It would prevent lost files in email, lost track of latest version of the file and access problems to a file. The implementation is done by going through the following steps:

1. Select a tool: Determine requirements, file types, file types and size, budget
2. Create file structure and naming: Create standard folder structure, top-level folders for each group, sub-folders phases or file types, create naming conventions, enable tracking features
3. Grant access and install software: Create account for each person, install software or apps is needed or use web interface if available
4. Make instructions: Train project team and facilitators, don't assume that team will figure out, communicate usage policies

Storing and organising images and information so that it is easy to use later is essential. It's a good idea to do this after each partition so that the information about which file belongs to which case is still in fresh memory. If using It is also recommended that you make into Google Drive a ready-made folder with structure for each day and for each group. Share the folder with participants. There, each participant can add pictures and files. Request and require that all images that are added to the file be named with a descriptive name and that a comment be added to each image over the image using the "Add a Comment" function. After every day make a backup file of all the files, to prevent someone from accidentally deleting valuable files.

6.2.3 Manual data collection and a responsibility person

One solution would be for the Camp to have a separate person in charge of collecting and compiling information on the information created during Camp and reporting the information in a clear and comprehensible way. This person could make direct observations is a simple and unobtrusive way of collecting data.

If it is not possible to hire a separate person to do the documentation, you should choose from among the facilitators, a person responsible for data collection and storing. The task includes the obligation to ensure that each facilitator has, at the end of each day, and preferably at the end of each session, deposited the images, explanations of the images and other material in a mutually agreed location. The person in charge does not have to produce anything other than image clarifications for the groups for which he or she is responsible. Time should be set aside in the evenings for data processing and storage to be done. If you don't do it every day, it becomes tricky later.

The problem, if the facilitator would be in charge of documenting the findings from the workshop is that the ownership of what's been said and done during the day will move from the

group to the facilitator. Not only does that reduce participant commitment but it also increases the odds of misinterpretation. Instead, you should encourage the participants to document progress in their own personal style. Instead of only relying on text-based documentation, pictures and videos are a great way to document the findings. Audio-visual evidence of the surroundings will help the group owners connect with the tasks afterwards.

Web-based applications

There are several app options for workshop and group work. If you have used some tool in the past and feel good about it, keep using it. If you are just looking for a suitable tool, you should try these tools listed below.

Online group workspaces:

What is [Slack](#)? Group Chat & Notifications. Bring all your communication together in one place. Imagine all your team communication in one place, instantly searchable, available wherever you go. That's Slack. All your messages. All your files. And everything from Twitter, Dropbox, Google Docs, Asana, Trello, GitHub and dozens of other services. All together. Each company that uses Slack has a workspace of their own. It's where all of their conversations and files are kept, and it can only be joined by invitation. Any files shared in Slack can be found there. You can add files from your computer, or connect to a service like Google Drive, Box, or OneDrive. Slack's free version includes: With 10k searchable messages, 10 apps and integrations, 1-to-1 video calls, and two-factor authentication, the free version gives your team access to Slack's basic features.

What is [Evernote](#)? Evernote helps you capture and manage ideas, projects, memories, and to-do lists in a single place. Have workspace, write notes, attach documents, scan images, take voice memos, grab screenshots or copy an online web link to organize everything from big projects to personal moments.

[Flinga](#) is community message board and whiteboard. Visualization tools for collaborative knowledge building and Flinga Wall, to collect participants' comments, questions and answers quickly and easily for all to see.

What is [Confluence](#)? For project Management. One place to share, find, and collaborate on information. Capture the knowledge that's too often lost in email inboxes and shared network drives in Confluence instead - where it's easy to find, use, and update.

[Office Teams](#): Teamwork and communication

[Yammer](#): Deliver live and on-demand events with Yammer and Microsoft 365. Easily create and host town halls, company meetings, and training. Share rich communications with events for up to 10,000 attendees. Invite people to view and engage with video and discussions across web and mobile apps

Data repository:

[Google Drive](#), [OneDrive](#) or [Box](#) for data storage

Making surveys, polls and application/registration forms:

[Mentimeter](#) for collecting polls, data and opinions from participants using smart devices.

[Tricider](#): social voting tool. Online votind and social decision making. Voting and commenting of others ideas.

[Typeform](#): Engage your audience with conversational forms & surveys

[Kahoot](#) for quizzes, debates and votes

[Office forms](#) for making surveys

[Poll Everywhere](#): online voting

[Pollev.com](#): online voting

[Quizziz](#): multiple choice tool

[Jotform](#): Online registration form

[Wufoo](#): Online registration form

Other workshop tools:

[AnswerGarden](#) is a new minimalistic feedback tool. Use it for real time audience participation, online brainstorming and classroom feedback.

[Vclock](#): Stopwatch, timer and alarm clock

[Post-it app](#): Brainstorm. Capture. Share ideas https://www.post-it.com/3M/en_US/post-it/ideas/app/

A list of files

Download a file folder on your own computer to edit them: [Download ZIP File](#).

0. Introduction

[0.01 Combined checklist and all detailed checklists](#) (One general checklist for all the tasks and more detailed checklist for each section more detailed checklist in separate tabs)

1. Planning

[1.01 OIC-Event-Budget-Template](#)

2. Communication and marketing

[2.01 Communication Plan Template](#)

[2.02 OIC Marketing material, social media texts examples](#)

[2.03 OIC Rejection and Acceptance Letters](#)

[2.04 Feedback form questions](#)

[2.05 Application form questions](#)

3. Participant selection

[3.01 Group Composition Template](#)

[3.02 Agreement - Expert Natural Person](#)

[3.03 Annex 1_Hotel Registration Form](#)

[3.04 Annex 2_Application for Reimbursement of Travel Costs Form](#)

[3.05 Annex 3_Bank Account Form](#)

[3.06 Annex 4 - Consent for processing personal data](#)

[3.07 Annex 5_PrivacyPolicy](#)

[3.08 Participant_guidelines_EXAMPLE](#)

4. Camp Schedule, Structure and Agreement About the Goal

[4.01 OIC Programme example](#)

[4.02 OIC Structure](#)

[4.03 Participants excel](#)

[4.04 Badges_info](#)

[4.05 Badges template](#)

[4.06_Participant_Certificates](#)

5. Workshops and facilitation

[5.01 Facilitation_guidelines-example](#)

[5.02 Facilitation_Methods_LAU](#) (in Finnish)

[5.03 Facilitation_Templates \(QH roles cards\) EXAMPLES](#)

[5.04 Welcome_thematic rooms EXAMPLES](#)

[5.05 welcome_facilitators presentation EXAMPLE](#)

[5.06_IC_instructions_GROUP_Owners EXAMPLE](#)

[5.07 Presentation_What_is_InnovationCamp EXAMPLE](#)

[5.08 Facilitator tips](#)

References

1. *Open Innovation Camp (OIC) - A Tool For Solving Complex Problems Rapidly*, In *Proceedings of the OpenLivingLab Days Conference. Co-creating Innovation: Scaling-up from Local to Global*. Brussels: European Network of Living Labs, 226-241. Santonen, T.;Nevmerzhitskaya, J. ja Purola, A. & Haapaniemi, H. 2019.
2. Rissola, Gabriel & Kune, Hank & Martinez, Paolo. *Innovation Camps Methodology Handbook: Realising the potential of the Entrepreneurial Discovery Process for Territorial Innovation and Development*. 2017.
3. *Alignment During Preproject Planning*. Griffith, A. s.l. : Journal of Management in Engineering 17, no. 2 (2001): 69-76. [https://doi.org/10.1061/\(ASCE\)0742-597X\(2001\)17:2\(69\)](https://doi.org/10.1061/(ASCE)0742-597X(2001)17:2(69)).
4. cbsnews.com. *The-9-eternal-rules-of-teamwork*. [Online] <https://www.cbsnews.com/news/the-9-eternal-rules-of-teamwork/>.
5. employees.oneonta.edu. *GroupWorkGuidelines*. [Online] [Viitattu: 06. 07 2020.] <http://employees.oneonta.edu/vomsaaw/w/psy220/files/GroupWorkGuidelines.htm>.
6. Reflektointi. *www.kamk.fi*. [Online] [Viitattu: 04. 07 2020.] <https://www.kamk.fi/fi/Opiskelijalle/Oppimisen-tyokalupakki/Projektityokalut/Oppimisprojektit/Reflektointi>.
7. Suopajärvi, Leena. *Opas projektiarviointiin*. *www.ulapland.fi*. [Online] Lapin yliopisto, 2013. [Viitattu: 04. 07 2020.] <https://www.ulapland.fi/loader.aspx?id=a6d01dd9-baad-408a-a6fb-5e131cf74ef5>.
8. Kangas, Philip J. Kangas, Philip J. *Stakeholder management 101*. [Online] Quality Progress, 44, 72, 2011. <https://search-proquest-com.nelli.laurea.fi/docview/866830096?accountid=12003>.