Co-creation or Co-destruction of Value in Virtual Facilitation? - Case CIRC4Life Service Jam

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The main objective of this study was to create understanding on how co-creation practices can be applied in the facilitation of workshops. The context of this research was the facilitation of co-creation workshop in a virtual environment. The researched case was an innovation workshop related to an international innovation project CIRC4Life. The aim was to understand how to support groupwork in a virtual environment with co-creation practices. The thesis also explored what elements of teamwork and facilitation contribute to co-creation of value as well as co-destruction of value within the group.

The research was mainly qualitative and iterative in nature. The development task and data gathering utilized characteristics of the case study approach and service design methods including for example user survey, in-depth interviews, expert interview, co-creative workshops, and prototyping. The analysis and interpretation of the data followed the hermeneutic and phenomenographic approaches.

The key results of this study included describing how co-creation practices can be applied in the facilitation of workshops and provided novel viewpoints to existing research by implementing those practices into concrete development work as well. The thesis identified seven practices of co-creation that support groupwork dynamics in a virtual setting: base information and guidance; approach and tone of voice; ways and tools of working; peer-support and knowledge sharing; decision making; efficient use of time; assistance in problem situations. Furthermore, the thesis pinpointed six possible manifestations of co-destruction (the dark side of co-creation) in a virtual workshop context: obscurity of the case, unclear expectations, passivity, low level of safe space, confusion related to IT tools, and haste.

Keywords: co-creation practices, virtual facilitation, co-destruction, service design, workshop, groupwork

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Tämän opinnäytetyön tarkoituksena oli tutkia, miten yhteiskehittämisen käytänteitä voidaan soveltaa käytäntöön työpajojen fasilitoinnissa. Tutkimuksen kontekstina oli yhteiskehittämistyöpajan fasilitointi virtuaalisessa ympäristössä. Tutkimuksen kohteena oli kansainväliseen innovaatioprojektiin CIRC4Lifeen liittynyt innovaatiotyöpaja. Tarkoituksena oli ymmärtää, miten ryhmätyötä voidaan tukea yhteiskehittämisen käytänteillä virtuaalisessa ympäristössä. Lisäksi tutkimuksessa tutkittiin, mitkä ryhmätyön ja fasilitoinnin elementit vaikuttavat arvonluontiin tai sen tuhoutumiseen ryhmän yhteiskehittämisessä.

Tutkimus oli pääasiassa laadullinen ja iteratiivinen. Kehittämistyö ja tiedonkeruu noudattivat tapaustutkimuksen lähestymistapaa ja palvelumuotoilun menetelmiä, kuten käyttäjätutkimusta, syvähaastatteluita, asiantuntijahaastattelua, yhteiskehittämisen työpajoja ja testausta prototyypin avulla. Analyysi ja tulkinta noudattivat hermeneuttista ja fenomenografista metodia.

Tutkimuksen ydintuloksiin kuuluivat kuvaus, kuinka yhteiskehittämisen käytänteitä voidaan hyödyntää työpajojen fasilitoinnissa, jonka lisäksi tutkimus toi uusia näkökulmia olemassa olevaan tutkimukseen soveltamalla näitä käytänteitä konkreettisessa kehittämistyössä. Lopputuloksena tunnistettiin myös seitsemän yhteiskehittämisen käytännettä, jotka tukevat ryhmätyön dynamiikkaa virtuaalisessa ympäristössä: pohjatieto ja ohjeistukset; lähestymistapa ja äänensävy; toimintatavat ja työkalut; vertaistuki ja tiedonjakaminen; päätöksenteko; tehokas ajankäyttö sekä tuki ongelmatilanteissa. Lisäksi tutkimuksessa havaittiin kuusi mahdollista yhteiskehittämisen vastavoimaa, jotka voivat aiheuttaa arvon tuhoutumista virtuaalisissa työpajoissa: tehtävien epämääräisyys, epäselvät odotukset, passiivisuus, turvallisen tilan puute, IT-liitännäiset haasteet sekä kiire.

Asiasanat: yhteiskehittämisen käytänteet, virtuaalinen fasilitointi, palvelumuotoilu, työpaja, ryhmätyö

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1   Introduction

Every act of creation is first an act of destruction.
Pablo Picasso

Digitalization is constantly changing the world and things that were previously handled face-to-face are switching to online mode, including work, events, hobbies, and doctors' appointments. At the same time, the COVID-19 pandemic is accelerating the shift to virtual working mode (Andersen, Nelson, and Ronex 2021) while it is also challenging our ways of collaboration, co-creation, and teamwork. A recent market research by Suomen Yrittäjät (2021) proposed that over 70 percent of the Finnish working age population would like to continue working remotely also in the future, at least part-time. Forbes, instead, reported that virtual events are up 1000% since COVID-19 (Koetsier 2020). Understanding the elements of the virtual world is now more relevant than ever before.

Virtuality creates opportunities for organizations, companies and institutions that facilitate different co-creation events such as workshops, innovation camps, service jams, or hackathons. Co-creating something new in an innovative environment can be inspiring and invigorating. At the same time, the virtual environment entails risky situations and perilous elements that might jeopardize collaboration, efficiency, productivity, or results of co-creation, i.e., cause destruction. Dryburgh (2014), who provided the citation of Picasso, contemplates the relationship of creation and destruction, and suggests that they are actually two sides of the same coin: in the process of creating new, something has to be destroyed as well. The author follows this thought while addressing the forces and practices of co-creation and co-destruction in the virtual workshop context.

This research takes a qualitative stance to the subject to understand how co-creation practices can be applied in facilitation of workshops and what are the ways and points where co-destruction manifests. Qualitative approach is justifiable since the purpose of the thesis is to understand human perceptions and people's conceptions in a single case study rather than creating widely generalizable recommendations. The development task applies service design methodology while the analysis and interpretation of data follows hermeneutic and phenomenographic approach. The interpretation is based on the views and perceptions of the author. Thus, the findings and discussion are both affected while the credibility of the findings is upheld by constant reflexivity and adaptation throughout the process. Additionally, the author follows the principles of service design and collaborated with different stakeholders to moderate the risk of biased comprehensions.

1.1   Context of CIRC4Life Service Jam

The thesis is conducted in a case context of CIRC4Life, "a circular economy approach for lifecycles of products and services" (CIRC4Life n.d.a), which is an international innovation project funded by the European Commission's Horizon 2020 Circular Economy Programme. The three-year collaborative project has been ongoing from May 2018 and has the total budget of 7.2 million euros. The project consortium, coordinated by Nottingham Trent University, includes altogether 17 partners in 8 EU countries. (CIRC4Life n.d.a) Laurea School of Applied Sciences (hereafter "Laurea") is a partner in the multidisciplinary project consortium and has a role of coordinating and facilitating the co-creation activities within the project (Laurea School of Applied Sciences n.d.). At Laurea the project is managed by a Project Manager / Senior Lecturer who is the commissioner of the thesis work. Other stakeholders at Laurea were two Project Specialists (referred with Project Specialist A or B) working within the project.

Circular economy is an economic model where consumption is based on using a service instead of producing an increasing amount of goods and owning them. Sharing, renting, recycling, and re-using materials are the means to actualize circular economy. (Sitra 2020) Since its initiation, CIRC4Life has been developing three circular economy business models (CEBMs): The Co-creation of Products or Services, The Sustainable Consumption, and The Collaborative Recycling and Reuse. These business models are demonstrated through four case industries: LED lighting products, computer tablets, meat supply chain, and vegetable farming and food. Since its commencing in May 2018, the project has been addressing the development challenges through activities that engage various stakeholders e.g., Living Labs, professional/business networks, and societies. (CIRC4Life n.d.a) CIRC4Life's iterative development method is based on a Living Lab approach that loosely follows the Double Diamond model by the Design Council UK (Purola, Santonen, Haapaniemi, Hirvikoski and Nevmerzhitskaya 2019). The model is further described in Chapter 3.2.

The CIRC4Life development process includes two innovation camps: one in November 2018 and the other in May 2021. The author took part in the first innovation camp as a facilitator and hence, the context was somewhat familiar beforehand. In May 2021, the development of the CIRC4Life project is in the later stages of the innovation process. As a part of the process the project organized a virtual open innovation camp between 27 and 28 May 2021. The event aims to "identify future development needs, as well as market deployment opportunities for circular economy innovations" (CIRC4Life n.d.b). This thesis is conducted to support preparation of a facilitation approach and plan for the event.

More precisely, the context of the thesis is CIRC4Life Service Jam which is a co-creation and innovation workshop held online on 11 and 12 February 2021. The Service Jam was a part of a

Laurea course Developing sustainable consumer culture. As a result, the participants of the Service Jam were students of Laurea. Altogether 37 students participated in the event, and they worked in eight groups of around five people. In the event the students were asked to co-create a framework for validating the success of the CIRC4Life DEMO companies' innovations from customer point of view. The groups were then also asked to use that framework for evaluating a DEMO appointed to each group. Project Specialist A from Laurea was responsible for creating a facilitation plan and schedule for the event, as well as facilitating the event. The Project Specialist A was an important stakeholder and co-creation companion for the thesis author. The thesis context is illustrated in Figure 1.
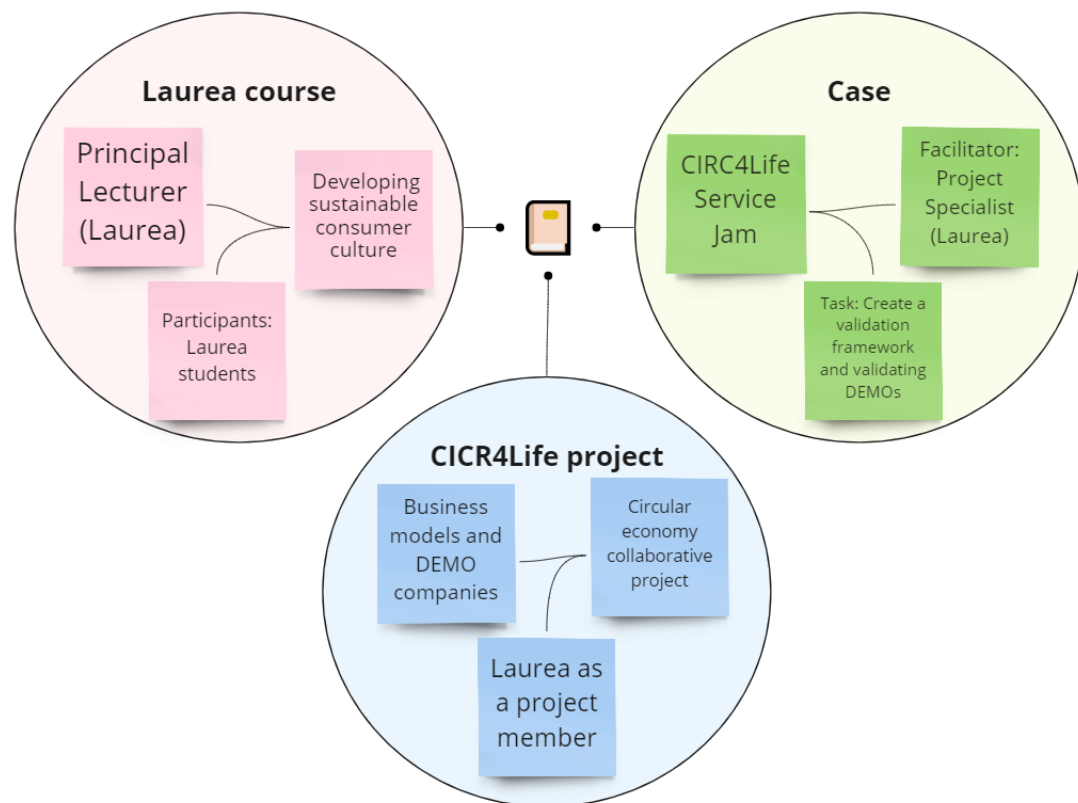

Figure 1: Overview of the thesis context

1.2 The development task objective

The purpose of this development task is to create understanding how co-creation practices can be applied in facilitation of workshops. The researched case is an innovation workshop related to the CIRC4Life project.

The main research questions the study aim to answer are:

1. How can co-creation practices be applied in facilitation of workshops?
2. How does co-destruction manifest in facilitation of workshops?

The research context is facilitating co-creation workshop in a virtual environment. Therefore, the following sub-question is also examined to understand the elements of social interaction and facilitation in this context in more detail:

3. How to support groupwork dynamics in a virtual workshop environment?

The objective and research questions were critically evaluated and scoped throughout the development process by following the path of the data and insights. The thesis aims to answer these questions and add new insights into existing knowledge through a qualitative research data and process that are further discussed in Chapter 3. In the research and development process the author follows guidance given by the thesis supervisor and the principles and values of Laurea School of Applied Sciences.

1.3   Research structure

This thesis consists of two main sections: the theoretical and the practical part. First, chapter two introduces the knowledge basis of the thesis and presents the key concepts and theoretical framework that is structured based on the theoretical phenomenon. Then the practical part of the thesis presents the development task at hand and how it is carried out (chapter three) and the results from the development task (chapter four). Finally, the fifth and last chapter presents the conclusions of the thesis including discussion, limitations, transferability of the results and suggestions for further research. In the end of the thesis literature and sources are presented.

2   Knowledge basis and theoretical framework

This chapter presents the theoretical framework and key concepts of the thesis. The first sub-chapter summarizes the concept of co-creation and introduces a practical approach to it, as well as a more critical view on co-creation. In the second sub-chapter co-creation is considered from a social point of view. Third, the summary will sum up the knowledge basis and argue how the thesis at hand contributes to the previous knowledge of the subject. In addition, a visualization of the theoretical framework for the thesis is presented.

2.1   Co-creation as an approach

This section examines how value co-creation has been discussed in previous academic literature. First, the concept of value co-creation is presented. Then, the relationship between co-creation and innovation is discussed as well as the practical nature of co-creation and innovation. Lastly, the negative side of value co-creation is discussed, and the concept of co-destruction is presented.

2.1.1   Co-creation of value

Co-creation has been defined by many scholars and in different ways. Co-creation as a term is strongly connected to value creation which happens through interaction (Vargo and Lusch 2004). In traditional viewpoint, value is seen as an output of companies' processes that is provided as goods or products for the customer to consume. This company created value is called goods-centered dominant logic. In 2004 Vargo and Lusch introduced a new dominant logic that is service-centered. They suggest that value is co-created in a dialogue between the organization and its customers. Goods are seen as transmitters of service or embedded knowledge, they are intermediate medium that customers use in their value-creation processes. Grönroos (2006), in his presentation of Nordic School's service logic, continues that also other resources, than goods, can contribute to the service to support customers' value creation. These resources can be for example people, systems, infrastructures, and information.

In service-centered logic customer is seen as an active participant, a co-producer, in the value-creation process. In this interactive formation of value consumers engage in the value creation process by using their own resources or capabilities to achieve their own goals (Nenonen and Storbacka 2018). The role of a company is only to make value propositions (Vargo and Lusch 2004), create experience environments where co-creation with the customer can happen (Prahalad and Ramaswamy 2004) and facilitate processes supporting customers' value creation (Grönroos 2006). Nenonen and Storbacka (2018) argue that producing valuable and exchangeable things is not the provider's main goal. Instead, it is to help consumers create value for themselves. Co-creation is not only seen as just engagements

between two actors. Co-creation involves "a multiplicity of interactive system-environments among persons and material entities (e.g., devices), afforded by technological platforms enhanced by digital technologies" (Ramaswamy and Ozcan 2018, 196).

Consequently, value can be seen from two different angles depending on how it is created (Echeverri and Skålén, 2011). First viewpoint is that value is exchanged since it is initially created by the provider and then consumed by the consumer. This is something traditional economists would call exchange value (Nenonen and Storbacka 2018). The second perspective sees value as co-created in an interaction between the provider and the consumer which means value is perceived and experienced by the customer based on value in use (Vargo and Lusch 2004) or use value, i.e., the power to satisfy needs and wants of the customer (Nenonen and Storbacka 2018). Echeverri and Skålén (2011) also extend the understanding of value to a bidirectional construct taking both the provider and the customer into account. They see that "value can be understood in terms of 'matches' (congruence) or 'mismatches' (incongruence) between socially available methods … that providers and customers draw on in order to act and to interpret other actors' actions" (Echeverri and Skålén 2011, 368).

Building on prior research, Heinonen, Strandvik, Mickelsson, Edvardsson, Sundström, and Andersson (2010) argue that the service-centered logic is still production and interaction - dominant logic, i.e., service provider -dominant, and introduce a concept of customer-dominant logic. They see that value is created within experiences. As a result, viewing value-creation only within interactions between the company and the customer is too narrow. They argue that not all customers' experiences are co-created with the service-provider and thus customer's role in the process is more than participator. They propose that this provides interesting innovation opportunities for companies. Kowalkowski, Persson Ridell, Röndell, and Sörhammar (2012) also see that co-creation is not only limited to knowledge sharing between a firm and consumers and note that it is a reciprocal knowledge exchange between any resource-integrating actors, e.g., between the consumers as well.

2.1.2   Practical view on co-creation and innovation

Many academic studies concentrate on co-creation on a theoretical level while less often a practical viewpoint is taken. Co-creation can be seen widely as "any act of collective creativity" between at least two individuals (Sanders and Stappers 2008, 6). On a more concrete level co-creation is viewed as joint collaboration between the developing organization and customers, outside advisors, suppliers, and stakeholders from the ecosystem (Perks, Gruber and Edvardsson 2012). Puerari, De Koning, Von Wirth, Karré, Mulder, and Loorbach (2018) note that the primary purpose of co-creation can be either making together, i.e., working together towards a common goal and innovation, or learning together by

building common knowledge and learning from another. Nambisan's (2002) findings implicate that co-creation may enhance organization's innovation processes.

Anderson, Potočnik, and Zhou (2014) see that innovation and creativity aims at developing and introducing new ways of doing things. They suggest that innovation refers to the stage of implementing ideas towards better procedures, practices, and products whereas creativity is the preceding stage referring to idea generation. Yet, Paulus (2002) proposes that in an innovation process creativity occurs also in the later stages of the process, i.e., idea generation and implementation have a cyclical and repetitive nature. Innovation process is "complex, comprising a myriad of events and activities some of which can be identified as a sequence and some of which occur concurrently" (Adams, Bessant, and Phelps 2006, 1299). In an open innovation model case study Silviana (2018) contributed that an organization can attain competitive advantage by efficiently using both internal and external ideas.

This thesis takes the practical stance on co-creation and innovation that Russo-Spena and Mele (2012) presented: innovating is seen as an on-going process of co-creation practices. These practices are performed by actors who interact, collaborate, and integrate their resources in the innovation process to create something new and better. The authors note that co-creation in innovation and its practices can be considered with respect to social activity and that co-creation and its practices are interdependent. Russo-Spena and Mele (2012, 547) see that "innovators are carriers of practices" and argue that "the practice-based approach stresses how resources (e.g., tools, images and language) are implemented and integrated as a part of everyday life through actions and interactions".

McColl-Kennedy, Cheung, and Ferrier (2015) present a framework where they distinguish three different kinds of practices of co-creating service experiences. These include representational practices that refer to how the actor sees the world and include assimilating, producing, or personalizing. To demonstrate their competence actors may take a certain role to embody the representational practices. Normalizing practices emerge in the ways how the actor interacts, i.e., bonds, bridges, and links to network resources. This process aims to shared understanding and is socially constructed through rules and norms in the context. Exchange practices refer to the things the actor does when engaging in the value creation, e.g., evaluating, classifying, or playing.

Based on a practice-theory based empirical study of public transportation Echeverri and Skålén (2011) present five interaction value practices to understand the interactive value formation better. The practices are informing, greeting, delivering, charging, and helping, see Table 1. If the elements of practices are congruent, co-creation, i.e., value formation happens between the provider and the customer. The practices presented create understanding what interactive value formation is in practice and especially in service

encounter contexts between the customer and the service provider. Even though the context of Echeverri and Skålén's (2011) research is in public transportation, the characteristics of customer-service provider interaction make it a useful tool for examining facilitation (facilitator-participant) context as well. The application of the interaction value practices theory into practice is presented in Chapter 3.3.1.

Practice	Informing	Greeting	Delivering	Charging	Helping
Meaning	Employees and customers sharing information regarding issues related to the service	Greeting as a practice refers to how employees and customers approach each other e.g. salutation	Delivery means the collaborative production of the core service e.g. the actual transportation of people from A to B	The interactive procedure of paying, checking and issuing tickets between the customer and the driver. Charging can also involve using different types of self-service ticketing technologies	Helping entails both help that the staff provide for customers, the help the customers give each other, and the help the customers give the staff

Table 1: Interaction value practices (Echeverri and Skålén 2011) modified by the author

2.1.3   The downside of interactive value formation (co-destruction)

In contrast, co-creation is not always just a happy path leading to coherence and satisfaction; it can turn out negative. Co-destruction, the dark-side of co-creation, is an emerging area of research with limited amount of exploration within the academic community. Misusing resources in interaction may result in co-destroying value which should not be overlooked (Plé and Chumpitaz Cáceres 2010). Echeverri and Skålén (2011) argue that value is not only co-created but also co-destroyed collaboratively in the interaction between the customer and the provider and that the effect can be significant and therefore equally important. Co-destruction may follow when two actors interacting face incongruence in their procedures, understandings, or engagements. Prior and Marcos-Cuevas (2016) conclude that co-creation does not rule out co-destruction and that there is always a demand for trade-offs in interaction. This means that every action may have benefits and opportunity costs.

In their empirical study of interactive value formation in public transportation Echeverri and Skålén (2011) made a notion that co-creation and co-destruction in interactive value creation cannot be separated by time or space. For example, when assisting each other proactively the actors, the service provider, and the customer, co-create understanding with their service-minded attitudes and willingness to help. This is seen as congruent practice. On the other hand, lack of skills may lead to a situation where the actions of helping do not relate to the need of the other party and co-destruction occurs. This is seen as an incongruent practice. Thus, understanding is both co-created and co-destructed within the same occurrence and between the same actors. (Echeverri and Skålén 2011)

Moreover, Järvi, Kähkönen, and Torvinen (2018, 73) note that co-destruction has a temporal nature since "if value co-creation can be seen as before, during and after processes, then

value co-destruction can also be seen at different time points". This means that co-destruction does not necessarily result in a single point of time only. The reasons for co-destruction (or co-creation) can vary in time, and it is important to understand which factors most likely emerge at each point of the process or collaboration. The thesis at hand takes a viewpoint of further understanding how co-destruction can happen over time in facilitation context. To support recognizing the possible pitfalls, Järvi et al. (2018) also identified eight reasons for value co-destruction from service provider's point of view:

1. the absence of information
2. an insufficient level of trust
3. mistakes
4. an inability to serve
5. an inability to change
6. the absence of clear expectations
7. customer misbehavior
8. blaming

Each actor interacting have subjective priorities for the experience (Prior and Marcos-Cuevas 2016). Even though Echeverri and Skålén (2011) discuss interactions between the service provider and the customer, this thesis sees the possibility of interactive value formation (whether construction or destruction) between any actors of co-creation. The interaction occurrence or platform must be handled carefully to avoid co-destruction (Grönroos and Voima, 2013), whoever the active participants of interaction are. To deal with co-destruction Plé and Chumpitaz Cáceres (2010, 435) suggest it is essential to "align the mutual expectations of the interacting service systems … or to be prepared to recover from the occurrence of misuse". This is supported by Prior and Marcos-Cuevas (2016) who conclude that due to the divergence of preferences, value co-creation occurs only if goals are in balance.

2.2 Social aspects affecting co-creation

This section further examines how human side and social aspects can influence value co-creation or co-destruction. First, performance and the elements of a successful teamwork are addressed. Then, facilitation of human interaction is discussed. Lastly, the virtual context of teamwork, interaction and facilitation are considered.

2.2.1 Elements of successful teamwork

What is a group and how to define a team? It can be stated that not all collections of people are groups and not all people working together belong to a team. The distinction between a group and a team is not straightforward and researchers define it in numerous ways.

Thompson (2015) differentiates teams and groups based on common goal and interdependence regarding a shared goal; teams having these characteristics while groups do not. However, a group can also be seen having a shared goal or purpose, and the members may have an interdependent relationship on one another (Levi 2014).

The distinction between a group and a team can be made for example based on the application. Teams are usually engaged in sports or work activities and have a narrower range of size from 3 to 12, whereas groups are more inclusive having a range from 2 to thousands of members (Levi 2014). Tubbs (2009) defines small groups to be from 3 to about 20 people in size. Authority is also a meaningful characteristic of a team as they possess the authority to act on their own and manage their own work (Levi 2014; Thompson 2015). In the context of this thesis the terms "team" and "group" are considered as interchangeable.

Team performance and its success has also been studied by many and the results are varied. Some research results focusing on team task related aspects while some emphasize human aspects of teamwork dynamics in supporting the success of a team. For example, Mullen and Copper (1994, 224) concluded that supporting group performance is most effective through efforts of increasing "people's liking for or commitment to group tasks" and supporting interpersonal relationships is not as effective. Instead, Braun, Kozlowski, Brown and Deshon (2020) highlight that team cohesion is a critical success factor that is positively connected to performance. Thompson's (2015) conclusion of four criteria to evaluate the success or failure of a team's effort includes both task and group related aspects. These evaluation criteria, presented as a team performance analysis in Figure 2, are cohesion, learning, integration, and productivity. Productivity means whether the team successfully achieved their goal or not, whereas integration means how well the team is integrated to the larger organization around it. This sub-chapter observes the concepts of cohesion and learning further. They are discussed as the author sees these aspects most appropriate in the thesis context.

PRODUCTIVITY
- Does the team have a clear goal?
- What objective performance measures have been established at the outset of teamwork?
- Who are the legitimate clients of the team?
- Does the team's output (e.g. decisions, products, and services) meet the standards of those who have to use it?
- Under what conditions should the goal change?
- What sources of information should the team consider to assess whether the initial goal might need to be changed?

COHESION
- Do the team members enjoy working together?
- What conditions could lead to feelings of resentment?
- What conditions could prevent from team members from working together in the future?
- How can team members best learn from one another?
- How are team members expected to accommodate changes, such as additions to the team, growth, and turnover?

LEARNING
- Do the individual team members grow and develop as a result of the team experiences?
- Do the team members have a chance to improve their skills and develop themselves?
- What factors and conditions could block personal growth?
- Are individuals' growth needs understood and shared by the group members?

INTEGRATION
- How does the team benefit the larger organization?
- Are the team's goals consistent with those of the larger organization?
- What other groups, departments, and units are affected by the team?
- What steps has the team taken to integrate its activities with those of others?

Figure 2: Team performance analysis (Thompson 2015, 58)

LePine, Piccolo, Jackson, Mathieu, and Saul (2008, 290) note that "cohesion can be defined as team members' attraction and commitment to their team, team members, and the team's task". Building cohesion within the group fosters team spirit and builds interpersonal connections (Levi 2014). In teamwork, cohesion is demonstrated to have a vital role in team success, and it is suggested to have a reciprocal relationship with team performance through a positive feedback loop, i.e., cohesion boosts performance and performance boosts cohesion. Cohesion is, interestingly, proposed to have an important role already in the early phase of team inception and fostering it early on is essential for future performance. (Braun et al. 2020)

Teamwork processes are positively associated with cohesion as well as team performance and member satisfaction (LePine et al. 2008). Cohesion building can be established for example with unity creating actions that help in developing a sense of co-operation and belonging, such as solving various problems together outside of the work environment (Levi 2014). In comparison, Thompson (2015) notes that if a certain teamwork is a one-time effort, maximizing team cohesion may not be necessary. Virtual groups may also need an outside facilitator to help in ensuring their cohesion through building relationships and trust with

others and developing ground rules (Tubbs 2009). Facilitating virtual groups is further discussed in Chapter 2.2.3.

Besides working well together as a team or a group, individual growth and development opportunities are also important when assessing team performance (Thompson 2015). In an organizational context, learning is an outcome that involves a process of creation, retention, and transfer of knowledge (Argote, McEvily, and Reagans 2003). Affective commitment and constructive communication climate are key variables in determining successful knowledge sharing (van Den Hooff and de Ridder 2004). Furthermore, shared learning affects cohesion and creates meaning as Schein and Schein (2016, 6) describe: "If learning is shared, all the group forces of identity formation and cohesion come into play in stabilizing that learning because it comes to define for the group who we are and what is our purpose or "reason to be"".

In recent decades experiential learning has become increasingly widespread in management education and Kolb's learning cycle is the most well-known model describing it (Tomkins and Ulus 2016). Kolb (1984, 26) presents that learning is "a process whereby concepts are derived from and continuously modified by experience" and the process involves four stages: experiencing; thinking, reflecting, and observing; forming abstract concepts; and generalizations and applying implications of concepts in practice. Through the learning cycle learning is linked to facilitation, as Rogers (2010) notes that when planning a facilitation process all stages of the learning cycle must be included in the process, whether it concerns a single or multiple occasions.

2.2.2 Facilitation of interaction

Whether the expected output of a group or team task is innovating a new service, a co-creating common team values and rules, or addressing obstacles through collaboration, there are two sides in the process: a systems side and a human side. To consider the human-side of the process, facilitation is discussed. Johnson, Suriya, Won Yoon, Berrett, and La Fleur (2002, 390) discovered that "team performance was dependent on how well the teams were able to establish procedures, resolve conflicts, and collaborate to bring about a successful task". Facilitating approach may help in the aim of a successful task.

Facilitation can be comprehended as making something easy, and in a group context the purpose of facilitation is to make the group's learning easier (Rogers 2010). In a facilitation process the facilitator has an important role managing the process and remaining a neutral guide for the group or participants. A facilitator is someone who does not deal with the actual content of co-creation but only concentrates on the process (Kantojärvi 2012) and has no decision-making authority within a group (Lewis 2008). A facilitator helps the group to achieve an outcome (Maxey and O'Connor 2013). Therefore, a facilitator is neutral actor

aiding the group "to work more efficiently together, to create synergy, to generate new ideas, and to gain consensus and agreement" (Lewis 2008, 7-8). Facilitating co-creation maximizes participant's ownership of the developed solution while minimizing the control of the facilitator (Andersen et al. 2021).

Academic research on facilitation is limited as facilitation is usually considered from practitioners' viewpoint. However, some research has been conducted on facilitation, e.g., in an (online) learning context. The learning facilitator can be either an outside instructor or peer-member. In an online course context, it has been studied whether instructor-facilitated or peer-facilitated course is better. Despite that there are some benefits of peer-facilitated events, Phirangee, Epp, and Hewitt (2016) conclude that instructor facilitation is more likely to stimulate participation of students and build stronger sense of community in an online course. When an instructor is monitoring the discussion, students are more likely to engage in the discussion. The facilitator also affects students' perceptions of learning, as in peer-facilitation context people were focused on their own learning whereas instructor-facilitated course people were always thinking about their peers' learning as well.

Various elements and themes can be considered important when thinking about a successful facilitation approach. Kantojärvi (2012) defines that when the workshop event starts there are three main elements to be considered from facilitation point of view: safety, presence, and focus. Safety refers to familiarizing with each other and building a safe environment and trust. Presence means that people are not only attending but also present in the moment and situation and the facilitator needs to make sure this is possible. Focusing brings everybody together when speaking about for example meaning, expectations, objectives, rules, ways of working and documentation. Wardale (2013) studied effective facilitation models and suggested four stages: preparation, event(s), successful outcomes, and transfer, further clarified with key themes in Table 2. The model can be used as a guideline for creating facilitation approaches. Wardale (2013) notes that to ensure effective facilitation the final stage, transfer, should be considered through the whole process. Instead, Merrill (2003) describes the interactive elements of successful facilitation of online courses including student expectations, students' experience with technology, and the role and interaction of the online facilitator. Virtual facilitation is further discussed in the next sub-chapter.

Preparation	Event	Successful outcomes	Transfer

Thoroughness
Outcome clarity
Pre-existing relationship between facilitator and manager
Perceptions about the effectiveness of the facilitation
	Facilitator
	    style
	    role
	    neutrality
	    shared language
	Group processes
	    customisation
	    group dynamics
	Participants present
	Adequate time and timeliness
		Achievement of content outcomes
		Achievement of affective outcomes
		Participant involvement
		Plan for implementation
			Ensure implementation of outcomes
			Consider accountability
			Link to organisational plans and systems

Table 2: The effective facilitation model (Wardale 2013,123)

2.2.3 Virtual environment as a context

As teamwork happens more and more online and different co-creation or innovation events are also facilitated online, the virtual environment is a constantly focal theme in organizational scientists' studies. Consequently, in the context of this thesis it is important to consider the virtual environment as well. Tubbs (2009) note that in many cases virtual group processes mirror the ones happening face-to-face. McKenna and Green (2002) also concluded that as in "real life", a virtual group is shaped by the individuals forming the group, and that the group's success is mainly based on the motivations and meeting the needs of its members. Then again, consumers' motivations can define their expectations towards virtual co-creation while four types of consumers exist: reward-oriented, need-driven, curiosity-driven, and intrinsically interested (Füller 2010). Meeting all these expectations is something that could be pursued when designing online co-creation.

As a working and communication environment the virtual context is different than face-to-face. In the virtual world same behaviors may not persist. Communication via technology can alter people's perception on status, level of anonymity and chance of miscommunication, sometimes due to lack of communication norms (Levi 2014). Vranjes, Baillien, Vandebosch, Erreygers, and De Witte (2017, 331) note that the online context is "characterized by the lack of non-verbal cues, anonymity, intrusiveness, and viral reach" that creates its own dynamics to working environment. Levi (2014) notes that virtual teams perform more poorly on reaching consensus, i.e., decision-making, but points out that decision-making in virtual teams may be more focused, since people are not that easily preoccupied or biased by unrelated social information, like gender or age. The development of trust and resolving interpersonal conflicts in a team may be hindered by the lack of nonverbal social cues when using technology (Duarte and Snyder 2006). Andersen et al. (2021) note that there are four barriers in virtual meetings that need to be taken in consideration: physical distance, social distance, cultural distance, and technological distance.

Occasional in-person meeting during the project can "permit more efficient team development, faster and more effective conflict resolution, and greater team cohesion and satisfaction" (Mesmer-Magnus, Dechurch, Jimenez-Rodriguez, Wildman, and Shuffler 2011, 222). To perform as effectively as face-to-face teams, virtual teams must have clearer processes to compensate the possible relationship and cohesion gaps and therefore require facilitation (Tubbs 2009). Nevertheless, using computer-mediated communication (CMC) has also been found to have a positive effect on commitment as the lack of social cues create positive conditions for affective commitment (van Den Hooff and de Ridder 2004).

Selecting the right technology and approach for groups working online may be a challenge. Duarte and Snyder (2006) propose two primary factors to be assessed: social presence and information richness. The former meaning how the selected technology facilitates interpersonal connections and the latter referring to the amount and variety of information transmitted by the medium. The previous authors also present a model modified from McGrath and Hollingshead for assessing the virtual communication modes related to the requirements of the team's task, seen in Table 3. The matrix illustrates that for example for ideation data only communication mode, i.e., email or instant messaging is the best choice, whereas video connection may create distraction from the team's task. Consequently, a poor fit may result from too much or too little social presence or information richness.

Communication modes	Types of tasks			
	Generating ideas and plans and collecting data	Problems with answers	Problems without answers	Negotiating technical or interpersonal conflicts
Audio only	Marginal fit	Good fit	Good fit	Poor fit
Video only	Poor fit	Good fit	Good fit	Marginal fit
Data only (e.g., email, bulletin boards)	Good fit	Marginal fit	Poor fit	Poor fit

Table 3: Task versus Communication Mode McGrath and Hollingshead (1993) adapted by Duarte and Snyder (2006, 27)

If tasks given for the team are too complex and there is no possibility for face-to-face interaction, it may hinder the accomplishment of the tasks. Johnson et al. (2002) suggest that especially in a virtual environment, there should be a clear objective and benefit established for tasks assigned for groups. Also, they conclude that in a virtual context teams need more time to coordinate their first task and establish relationships. This means more time in the beginning of groupwork to create a solid base for the work by for example creating group norms and procedures and getting to know each other. Early provided practical instructions on team effectiveness, formation, planning, and facilitation are also suggested to create clarity in the early phase of groupwork.

From a practitioner's point of view virtual facilitation is nothing more or less than taking facilitation into the virtual environment. Same essentials and goals persist, since it aims at aiding the group in performing better. The advantages of virtual facilitation include for example the ability to bring the right people together, enabling more effective sessions, better data access during sessions, and more equal contributions from all participants. To make the most out of virtual facilitation the following five aspects should be considered in planning an effective occasion: purpose (why?), participants (who?), platform (in which setting?), process (how?) and partners (who has what roles?). (Andersen et al. 2021)

2.3   Summary

The theoretical framework of this this is presented in Figure 3. In this thesis the author aims to understand how the interaction value practices can be applied to a context of co-creation and facilitation. Echeverri and Skålén's (2011) interaction value practices provide the basis for theoretical framework of this thesis. The practices, informing, greeting, delivering, charging, and helping are described to result in co-creation or co-destruction between the service provider and the customer. This thesis aims to apply these practices into the context of virtual innovation event CIRC4Life Service Jam to provide a basis for facilitation guidelines. Due to the context, the thesis adds a novel viewpoint to the understanding of co-creation practices. Also, the thesis expands the comprehension of co-creation practices from service-provider-customer interface to the interface between customers themselves.

Ramaswamy (2011) concluded that collaborative and contextual interactions are in the core of value (human experience) and its creation (co-creation). This is "supported by engagement platforms that facilitate such interactions in multi-sided fashion–to generate mutual value through productive and meaningful experiences" (Ramaswamy 2011, 196). The relationship between interactions (elements of co-creation and groupwork) and engagement platforms (virtual facilitation) are also in the core of this thesis.

Furthermore, the thesis creates clarity and new perspectives on how co-destruction manifests within a social context of online workshop facilitation. This thesis regards facilitation from the process and practices point of view. Facilitation is contemplated as interaction and practical ways of guiding a group of people to achieve their co-creation objectives, i.e., making, or learning together as Puerari et al. (2018) define it, in a structured and cohesive way. The facilitator must consider safety, presence, and focus (Kantojärvi 2012) as the group's performance is assessed by elements of cohesion, learning, integration, and productivity (Thompson 2015). Facilitation can be either active when the facilitator actively participates in the groupwork or passive when the facilitator is not present but to be utilized by the groups when they need guidance or help to make progress.
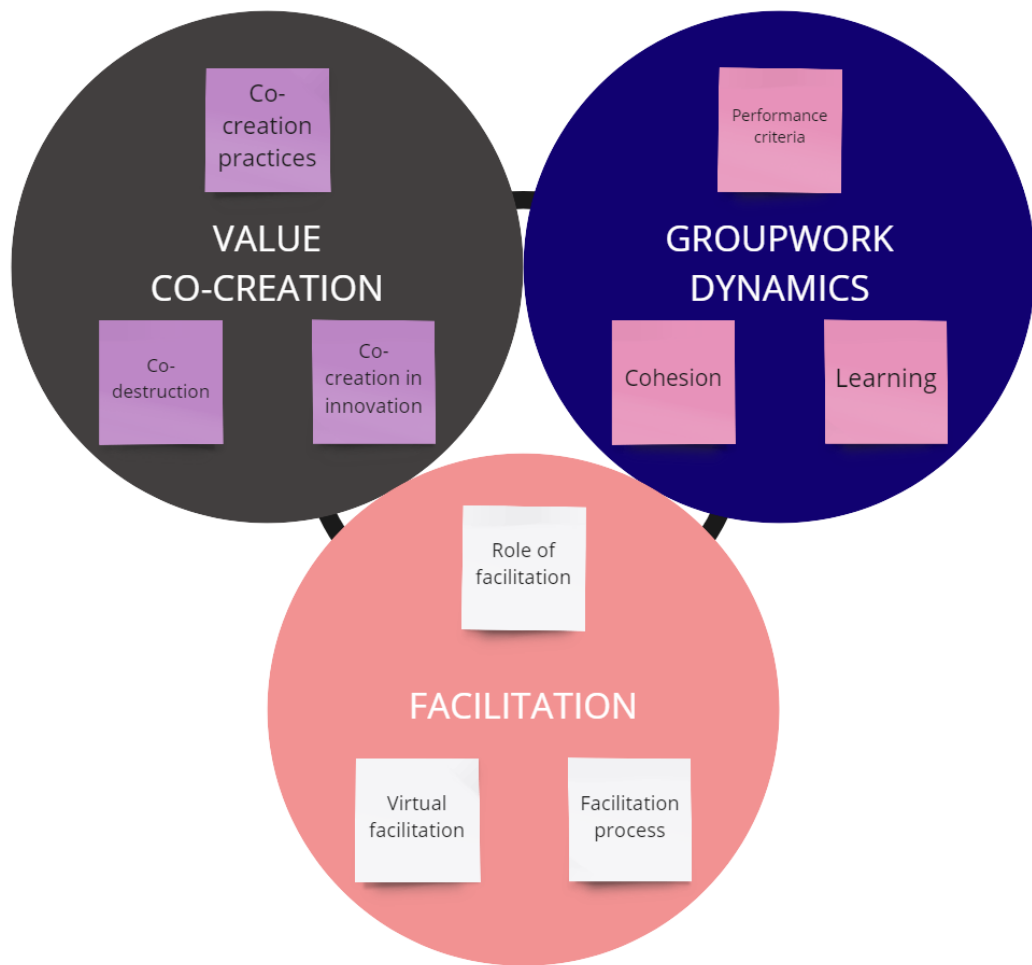
Figure 3: Theoretical framework of the thesis

3   Development setting

This chapter presents the research approach and data collection method. Additionally, the data analysis method used in this development work are described.

3.1   Methodological approach

The author sees that the development task falls into several fields of research and in each phase differing research approaches are seen. The research utilizes characteristics of the following research approaches: qualitative, case study, service design, hermeneutic and phenomenographic approach.

In the big picture the research setting takes place in a case study research approach as the research data is mainly based on a singular co-creation event CIRC4Life Service Jam. Data collection methods, described in more detail in Chapter 3.3, are mainly qualitative as majority of the data is based on interviews, discussions, and written survey results. However, some elements of quantitative methods are also applied as some of the survey data is also quantitative. Quantitative data is only used to guide the qualitative data and show direction and topics or issues to be emphasized. The development process utilizes service design process and design thinking approach, and the process is further discussed in Chapter 3.2.

Analysis methodology follows guidance of hermeneutic approach and utilizes elements of phenomenography. In a hermeneutic study the researcher focuses on understanding a specific case as a part of a larger display (Larsson 2009), in this case understanding CIRC4Life Service Jam co-creation and participants experiences as a part of a wider virtual facilitation context. Phenomenographic study aims at describing variations of conceptions that people have on a certain phenomenon (Sin 2010) or investigating the different ways people understand an aspect of the world (Marton and Pong 2005), in this case study the practices of co-creation in facilitation.

3.2   Development process

To develop new services, there are several different models of the design processes. The study at hand does not aim at creating new services. Nevertheless, a service design process model is utilized in the development process to give structure and guide the phases, steps and tools of data collection and analysis. The service design process models are usually presented as distinct phases following each other but as Moritz (2009) notes, the process actually is ongoing and mostly iterative. As a result, the process might not be chronological altogether and absolute rules cannot be developed even though Stickdorn and Schneider (2011) suggest that it is possible to draw an outline structure. Many of the design process models include similar actions but they are named or framed differently.

One of the most well-known process models for practitioners of service design is the Double Diamond model (Design Council UK 2019). The model divides the design process into four different phases: Discover, Define, Develop and Deliver, see Figure 4. The shape of the illustration showcases how thinking and possibilities are deliberately either broadened or narrowed in the design process. The Double Diamond model utilizes the different phases of diverging, i.e., seeking many opportunities and converging, i.e., narrowing the number of opportunities by decision making as Stickdorn, Lawrence, Hormess, and Schneider (2018) suggest. As Stickdorn et al. (2018) note, first we need to make sure that we are solving the right problem and then solve the problem right. The Double Diamond model can be seen to identify the right problem in the first diamond and then solve it right in the following diamond phase of the process. This process model is developed especially to designers practicing service design methods.
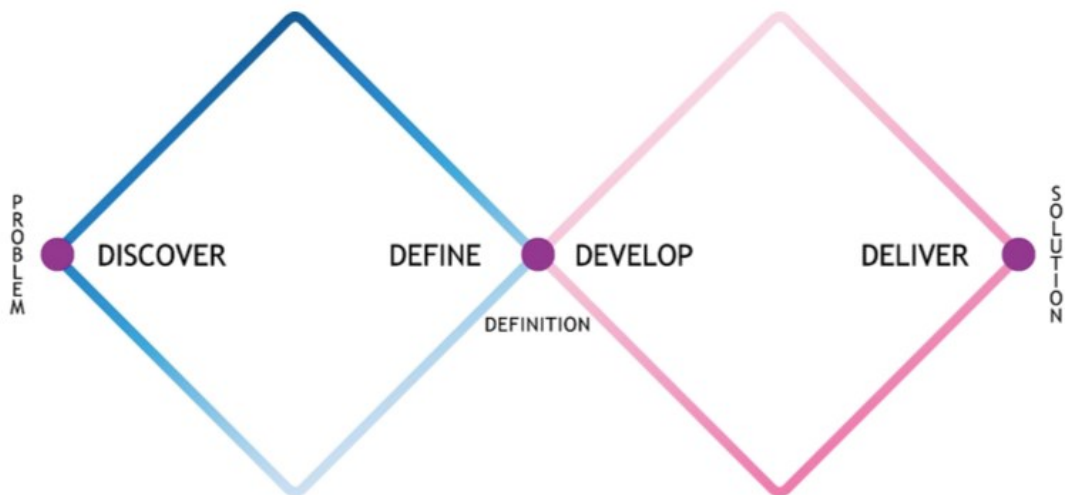

Figure 4: The Double Diamond Model by Design Council UK (2015) modified by the author

Design Council UK's Double Diamond process starts with discovery which means collecting insights and inspiration to identify the customer needs and develop initial possibilities. In Figure 4 the first half of the first diamond represents this phase that acts as a guide for the rest of the design process. In Discover phase the aim is to build knowledge about the subject using qualitative and quantitative research methods such as shadowing or user diaries. Discovery can be made either with the users or by examining and analyzing other available data and wider trends. The intention is to look at the world without expectations and seek inspiration by noticing a great number of new ideas and opportunities. Second half of the first diamond is the phase of definition which means sense-making of the ideas and opportunities found in the first phase. In concrete the Define phase means analyzing research results, synthesizing findings and in turn reducing the number of opportunities, ideas, and problem statements with the help of user personas and brainstorming. (Design Council UK 2015)

In between the first and the second diamond there is a step of defining the problem which can be done with the help of How might we -questions and a final brief (Nessler 2016). Third phase and the first half of the second diamond represents developing, i.e., creating various solutions and testing them with the help of prototyping methods and blueprinting. Collaborating with potential users and iteration are crucial in Develop phase to ensure that the design to be implemented is built on actual feedback and is thereby ready for the next phase. The final section of the process and the Double Diamond model is delivery. This phase converges the possible solutions into the one that is actually developed and launched after final testing. In Deliver phase gathering feedback with interviews or surveys and then sharing lessons, new knowledge, insights etc. inside the organization is emphasized. (Design Council UK 2015)

3.3 Data collection and analysis

The whole development process of this development task followed the Double Diamond model by the Design Council UK. In the process, data was simultaneously both collected and analyzed as they were not distinct phases of data collection and analysis in the process. Study data was collected and analyzed in two main iteration rounds to realize the principle of iterative development (Stickdorn et al. 2018). Both rounds were collaborative in nature which is one of the characteristics of design thinking (Brown 2008). First iteration round aimed at creating an initial version of co-creation practices framework for facilitation. Second iteration developed these practices further to create principles for facilitation in virtual context to be utilized in the CIRC4Life upcoming co-creative innovation camp event. The main emphasis in the scope of this thesis is on the three first stages of the Double Diamond model, the last one, Deliver, being touched only lightly.

In addition, on-going methods throughout the whole development process were maintaining and updating the research plan, decision making, scoping and discussions with the project members. The discussions with project members aimed at gathering information and ideas, guiding development work, aligning the direction, and collecting feedback in the later phase. The virtual tools used in the development task are online whiteboard Miro and collaboration and communication platform Microsoft Teams. The latter being used for online discussions and interviews and the former used to visualize the process and facilitate co-creation with the project members. Method triangulation, i.e., selecting different types of methods is utilized in the data collection to improve the accuracy and richness of the research as Stickdorn et al. (2018) suggest.

Overview of the development process stages, and data collection and analysis methods are summarized in Figure 5. The figure shows how the stages of the development iterations relate to the Double Diamond Model by Design Council UK. The Double Diamond model has been

critiqued by its linearity (Design Council UK 2019), and here the process of development has not been as linear and simplified as presented in Figure 5. Development has followed the iterative (Stickdorn et al. 2018) and explorative (Brown 2008) nature and principles of design thinking. Methods used are overlapping within the phases as the line between each method and tool is not as straightforward as sometimes presented in the literature. In addition to process, the concrete means of working in this research also follow guidance of tools and methods described by service design knowledge sources. This chapter introduces the methods used to collect and analyze the data in the development project.
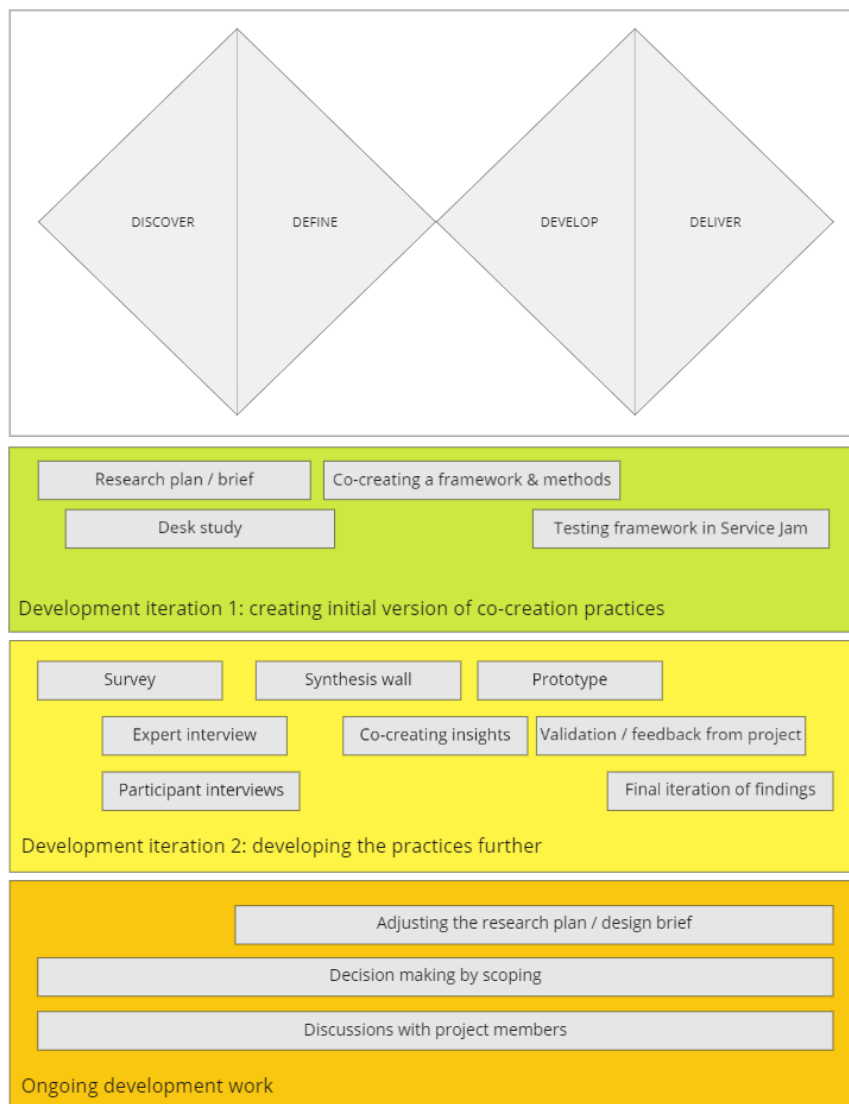

Figure 5: Development process and connection to the Double Diamond model

3.3.1   Development iteration 1

The first iteration round aimed at creating a first prototype version of a framework of how co-creation practices can be applied in facilitation of workshop. The first iteration also

utilized the prototype version in real-life context to test the deployment on field. Hence, it can be described as a phase of applying theory into practice. The first iteration can be seen as an exploratory development round aiming to create better understanding of the topic. Development iteration 1 was conducted as a part of planning and facilitating CIRC4Life Service Jam held online 11 and 12 February 2021. Responsible for the planning and facilitation of the event was CIRC4Life Project Specialist A from Laurea. The author provided support in planning the Service Jam co-creation practices. This chapter describes the first iteration process further and Table 4 presents an overview of the development activities with participants, objectives, and outcomes.

Occasion/Method	Participants	Objective	Outcome
Preparatory research (including briefing and discussions with the CIRC4Life project and thesis tutor)	The **author**, Service Jam Facilitator (Laurea), CIRC4Life Project Manager (Laurea) CIRC4Life Project Specialist (Laurea), thesis tutor	Developing understanding, learning more about the topic Clarifying and agreeing on scope and approach of the development task	Brief, initial research plan including purpose, research problem and questions, data collection and analysis methods, development methods, aimed results, central concepts, target phenomenon and timeline
Secondary research, desk study	The **author**	Further collecting and synthesizing existing research Deepening understanding of the topic	Initial version of the theoretical framework, revised scope and objective of the thesis
Co-creating a facilitation plan for the CIRC4Life Service Jam, three mini workshops	The author, **Service Jam Facilitator/CIRC4Life Project Specialist** and Principal Lecturer	Producing a facilitation plan Applying theory into practice	Facilitation plan, co-creation methods and schedule for the co-creation workshop (completed by Service Jam Facilitator)
Testing the approach in CIRC4Life Service Jam	**Service Jam Facilitator/CIRC4Life Project Specialist**, Principal Lecturer and 37 students of Laurea University of Applied Sciences attending to course Developing sustainable consumer culture	Testing the approach created, students representing consumer viewpoint when co-creating a validation framework and validating DEMOs	Tested version of the co-creation practices approach Students experiences on co-creation and facilitation

Table 4: Activities of the first development iteration, responsible activity participant in bold

Preparatory research, brief and research plan

The initial discussion of the possibility of the thesis started in September 2020 with Project Manager responsible for CIRC4Life at Laurea School of Applied Sciences. The initial discussions were followed by a commissioner brief in early October 2020. Research phase of the design process can be divided into two types of research: preparatory/primary and secondary research (Nessler 2016; Stickdorn et al. 2018). The discussions and commissioner brief were followed by preparatory research: a short desk study on the subjects and issues in question aiming at developing understanding and learning more about the topic (Stickdorn et al. 2018). The desk study included reading academic publications on the main topics and familiarizing with the CIRC4Life project material and previous theses or reports conducted for the project. Also, discussions with the CIRC4Life project stakeholders at Laurea were organized.

Research planning aimed to clarify how to approach the development task at hand and define key aspects of the whole research. Stickdorn et al. (2018) argue that the planning can be seen as the first iteration of the project and call the plan including the purpose, scope, objectives, context, resources, and timings as brief. In this development task the first iteration of the

research plan was concluded in November 2020 based on the commission from the CIRC4Life project, desk study and discussions with the thesis tutor. The plan was made on a research plan template provided by Laurea. The template included similar topics described by Stickdorn et al. (2018) and therefore the plan is seen as a comprehension of the brief. The plan included purpose, research problem and questions, data collection and analysis methods, development methods, aimed results, central concepts, target phenomenon and timeline.

The plan was debriefed both with the thesis tutor and CIRC4Life project members in December 2020 to agree on the details, create common understanding of the objective and to scope and enhance the plan. Also, every discussion with the project members at Laurea was considered as a possible data source for insights. During the development work, the research plan and scope changed direction. The initial plan included a much stronger focus on the innovation process context and especially the later stages of the innovation process. This context was dropped as the data that was gathered did not support the initial plan and objective. Nessler (2016) argues that after the second phase of the Double Diamond, Define, a final brief can be created based on for example the research, insights and, How Might We - questions. In this development task the final brief was concluded just before the actual implementation as scoping and adjustments were done throughout the process.

Secondary research (desk study)

Stickdorn et al. (2018) note that a research process should always start with a desk research. After the primary research, a secondary desk study was conducted by the author to further collect and synthetize existing research and to deepen the understanding of the topic and to create a basis for the theoretical framework of the thesis as well. The desk research in this development project was conducted between December 2020 and January 2021. The author searched academic papers, books, and other sources regarding co-creation of value, co-creation practices and innovation process. Desk study is considered as the foundation of the development work supporting in creating the framework and approach for the thesis.

The most beneficial existing research was the five interaction value practices of co-creation by Echeverri and Skålén (2011) introduced in Chapter 2.1.2. The model was synthetized to provide the base for the next method of co-creating the framework and methodology for the Service Jam. The secondary research provided new knowledge related to the initial research plan. As the scope and objective of the work was modified during the process, the author also had to return to desk study in a later stage of the process to gain deeper understanding of the new and emerging themes and topics to be added to the theoretical framework of the thesis. Other elements of the theoretical framework, facilitation and groupwork dynamics, followed later when the data gathered and analyzed pointed to that direction. This re-research is not

further described as the aim of it was the same as the initial desk study: collecting, synthetizing existing research and summarizing it for the theory part.

Co-creating framework and methods for Circ4Life Service Jam

The five interaction value practices (informing, greeting, delivering, charging, and helping) identified by Echeverri and Skålén (2011) were applied to the Service Jam context to support facilitation of co-creation in the event. The practices provided a basis for a framework created by the author, see Table 5. The framework describes each practice based on Echeverri and Skålén (2011) and the author's comprehension how it could be applied to facilitation context and what kind of methods it would mean in practical deployment of the Service Jam. Based on the suggestion practices, deployment methods for the Service Jam were discussed and co-created with the event responsible Facilitator on three different collaborative occasions in January 2021. The framework was also further enhanced and completed based on the discussions. The collaboration between the author and the event Facilitator happened via Microsoft Teams. The co-creation in the meetings were supported by Miro whiteboard where the framework template was illustrated, and ideas were gathered on virtual sticky notes.

Practice	Informing	Greeting	Delivering	Charging	Helping
Meaning	Employees and customers sharing information regarding issues related to the service	Greeting as a practice refers to how employees and customers approach each other e.g. salutation	Delivery means the collaborative production of the core service e.g. the actual transportation of people from A to B	The interactive procedure of paying, checking and issuing tickets between the customer and the driver. Charging can also involve using different types of self-service ticketing technologies	Helping entails both help that the staff provide for customers, the help the customers give each other, and the help the customers give the staff
Practice applied to facilitation	**Information sharing before and during the event**	**Approach: tone of voice of the organizers**	**Process of co-creation and ways of working**	**Value for time used**	**Assistance in problem situations and questions**
Deployment methods during the Jam	• *Pre-assignment* • *Background information* • *Intro presentations* • *"Research questions"* • *Clear timetable* • *Expectations and goal* • *Role of participans*	• *Empathic tone* • *Encouragement* • *Feedback for each presentation* • *Value of participants*	• *Guidelines of working (rules)* • *Enabling teamwork* • *End presentations* • *Templates in Miro*	• *Reflection session* • *Gathering feedback (survey & interviews)*	• *Q&A before group work* • *Question clinic during work* • *Example tools / templates* • *Support question list to guide ideation*

Table 5: Interaction value practices (Echeverri and Skålén 2011) modified by the author and the framework of co-creation practices for CIRC4Life Service Jam facilitation

In the co-creation with the Facilitator different work modes were utilized. Stickdorn et al. (2018) describe three work modes for teams. In this exercise "One page, one pen" and "Many pages, many pens" were used. "One page, one pen" is a working mode where all the participants are sharing their thoughts and ideas while one is writing or taking the notes. Instead, "Many pages, many pens" defines a mode where the group splits up to work as

individuals and then comes back together to share and discuss their ideas. The latter does not bring shared understanding spontaneously. Thus, it must be created through conversation and explaining the individual ideas together (Stickdorn et. al 2018).

In the first collaborative meeting the Service Jam background, initial structure and plan for the event were presented by the Facilitator. The purpose and outcome objectives were also discussed to form the basis for the collaboration. The framework of co-creation practices was presented by the author in the second collaborative occasion. The framework was further developed through discussion and ideation of methods that could deploy each practice in the event. In this phase notes of the discussion were made utilizing "One pen, one page" work mode the author being the note taker. In the second meeting the collaborators agreed to split up and create individually more detailed timelines and structures for the Service Jam, i.e., apply the "Many pens, many pages" working mode.

Between the second and the third meeting the author created an example structure and timeline for the Service Jam utilizing the co-creation practices and methods identified and selected together. The third collaborative meeting consisted of discussing the plans created individually and creating a draft of a more detailed facilitation plan for the Service Jam, see Figure 6 for an illustrative example. After the collaborative sessions, the final process, structure, timeline, and procedures for the Service Jam facilitation was created and completed by the Facilitator.
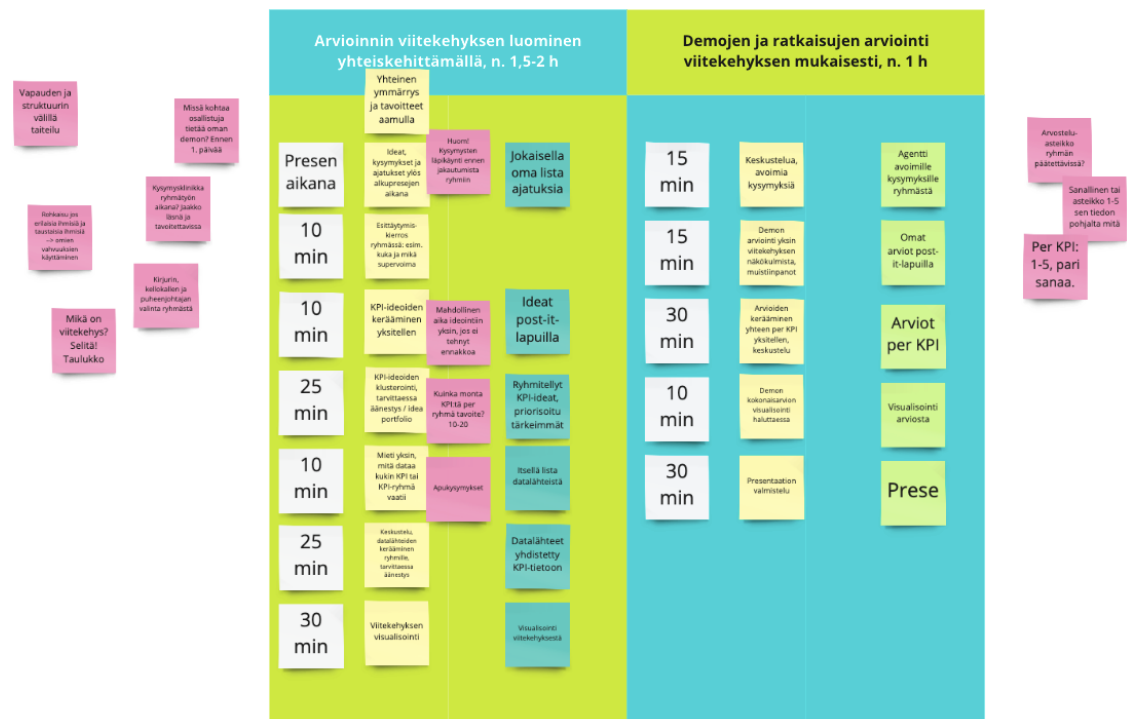

Figure 6: Co-creating the facilitation plan for the Service Jam

Testing the co-creation approach and methods in the Service Jam

To test and evaluate the real experiences of the customer, prototyping is proposed as a solution (Stickdorn et al. 2018). To examine the real perception of the experience there are different levels of prototyping from couple of hours discussion to 2-3 days participation or 1 day simulation, and up to a longer even 1-year piloting (Polaine, Løvlie, Reason, and Lovlie 2013). The CIRC4Life Service Jam can be seen as a simulation of the co-creation practices. The event was held on 11 and 12 February 2021 and facilitated by a Laurea Project Specialist A. The participants were 37 students of Laurea University of Applied Sciences course Developing sustainable consumer culture. The course was organized by Laurea Principal Lecturer. The event was organized and facilitated completely online. The purpose of the event from the author's point of view was to test the co-creation and facilitation approach created earlier in real-life context.

The participants were divided into 8 different groups to work together during the Service Jam. Only the Facilitator and the Principal Lecturer were present during the whole event. Therefore, it was not possible to actively facilitate all groups throughout the event. The tools used were Miro whiteboard, online facilitation platform Howspace and video communications application Zoom. Howspace was used to share instructions and timetables to the participants and provide a channel for commenting as well as questions and answers before and during the Service Jam. The Facilitator created the co-creation process and templates for groupwork in Miro where the actual collaboration between the participants happened. Zoom was used for shared video communications.

The two-day event was divided into three parts: lecture part on the first morning, groupwork part for the afternoon of the first day and morning of the second day, and final presentation part on the afternoon of the second day. Before the event, it was agreed that the author would conduct a survey and interviews for the Service Jam participants to gather insights for further developing the co-creation practices framework of facilitation. Thus, the author was invited to have a short presentation in the beginning of the Service Jam event about the upcoming activities and the thesis. A presentation was prepared to share background information on co-creation, encourage participation in the survey and to start recruiting the interviewees. The presentation introduced the main topics of interest (information sharing, approach, process and ways of working, value for time used and assistance) as the survey questions to be sent later would be classified accordingly.

3.3.2   Development iteration 2

The aim of the second development iteration aimed at developing the co-creation practices framework further. This was done realizing the principles of design thinking by focusing on the people's experiences (Kolko 2015), collaboration (Brown 2008) and evidencing decisions

with research in reality (Stickdorn et al. 2018). The iteration round resulted in completing the final findings of the research. Table 6 presents an overview of the development activities with participants, objectives, and outcomes.

Occasion/Method	Participants	Objective	Outcome
Survey including both quantitative and qualitative	Survey by the **author**, all participants of the CIRC4Life Service Jam invited to answer	Validating co-creation practices approach based on participant's experiences Gathering research data	19 answers including both quantitative and qualitative data for analysis
Analysis of survey results	The **author**	Understanding survey results through analysis Analyzing survey results, developing them into research insights	Survey data developed into insights, classified in seven categories Topics and themes to discuss in in-depth interviews
Expert interview	The **author** and virtual co-creation expert from Howspace	Improving understanding of the subject and field of research more deeply	Topics and themes to discuss in in-depth interviews Data to support developing insights
In-depth interviews	The **author** as an interviewer and 5 participants of the CIRC4Life Service Jam recruited through the survey as interviewees	Purpose of interviewing participants of the Service Jam is to deepen the understanding of how participants perceived the co-creation practices at the event.	5 field notes and over 360 minutes of recordings
Analysis of interview results	The **author**	Synthetizing, clustering and analyzing data Understanding what the interview data talks about Creating key insights based on in-depth interview as well as survey and expert interview data	Synthesis wall with insights
Mini workshop of the data insights	The **author** and Service Jam Facilitator	Identifying key insights from facilitation point of view Creating a basis for transforming insights into actionable principles	Further developed key insights and design principles
Feedback session with Laurea project members	The **author**, Service Jam Facilitator, CIRC4Life Project Manager (Laurea) CIRC4Life Project Specialist (Laurea)	Presenting the key insights and principles to gather feedback from Laurea project members	Feedback and development ideas on the approach and principles created Revised scope and theoretical framework based on feedback
Final iteration of the principles development	The **author**	Summarizing the findings of the research	Facilitation journey map presenting the opportunities of co-creation and co-destruction in the workshop

Table 6: Activities of the second development iteration, responsible activity participant in bold

Survey for the participants of the Service Jam

Gathering feedback is an important part of experience prototyping (Design Council UK 2015). After the Service Jam, a survey was sent to participant students. The purpose of the survey was to gather insights how the participants experienced co-creation during the event utilizing the selected themes from academic literature and the initial version of co-creation practices framework made by the author. Survey invitation was sent on 15 February 2021 to all 37 participants. Answering time was one week. Altogether 19 students, i.e., 51% of the participants answered the survey. The size of the sample was not significant but within the case study context the response rate and thereby the sample size was considered excellent.

The aim of the survey was to validate co-creation practices framework themes and to gather first round of research data and insights to be further understood and developed in semi-structured interviews later. Consequently, the survey can actually be seen as a part of the

Deliver phase of the first iteration round as well as the Define phase of the second iteration round. In this sense, the survey is both confirmatory and exploratory research (Stickdorn et al. 2018) creating an iterative feedback loop. Another survey was also sent to the participants of a co-creative innovation event held in February 2021 for the CIRC4Life consortium members. However, only two answers were given and therefore those results were left out of the research scope. The fewness of answers also resulted in changing the scope of the development task.

Harris and Brown (2010) noted that there are some ways to maximize the likelihood of aligning results of a structured questionnaire and qualitative semi-structured interviews when aiming at confirmation of findings. These recommendations were taken in consideration when planning the survey and interviews. First, it was made sure that the interview and questionnaire items were structured in a similar way so that they speak the same language. The interviews were also scheduled as close to the questionnaire responses as possible. Third, the object of interest, i.e., co-creation practices were presented in a concrete and specific way both in the survey and the interviews through description and examples. Participant responses in the survey were also anchored to the themes or common context already introduced during the Service Jam presentation.

The survey, divided into 6 main themes consisted of altogether 16 quantitative scale statements to be evaluated and 10 open fields for qualitative answers. The outline and questions of the survey are presented in Appendix 1. Survey questions were themed on the basis of the initial version of co-creation practices (information sharing, approach, process and ways of working, value for time used and assistance) and completed with an additional theme discovering the purpose of the Service Jam and its clarity. Purpose of co-creation (Puerari et al. 2018) was added as the author saw it as an important aspect of co-creation.

In addition to purely quantitative questions or statements, also qualitative questions were asked in order to gather more actionable insights and descriptions of why participants think how they think about their experience (Polaine et al. 2013, Stickdorn et al. 2018). The role of the quantitative statements was to pinpoint possible problem areas in the experience and guide the focus of the upcoming interviews. In the end of the survey the respondents could express their interest in participating the interviews and leave their contact information.

Insights from the survey results were gathered and classified in Miro, see illustrative example in Figure 7. Themes for the insight classification were the same as in the survey. Furthermore, a category "Others" was created for emerging insights that did not fall into any of the existing themes. Analysis of the answers revealed the aspects of the Service Jam the participants were satisfied with and those that would have needed more effort. The analysis revealed that especially information sharing, and clarity of the Service Jam objective needed

amplification. Though, the tools, tone of the facilitators and assistance in problem situations were perceived very well. These emphasized themes provided a basis for the questions and field guide of the in-depth interviews conducted later.
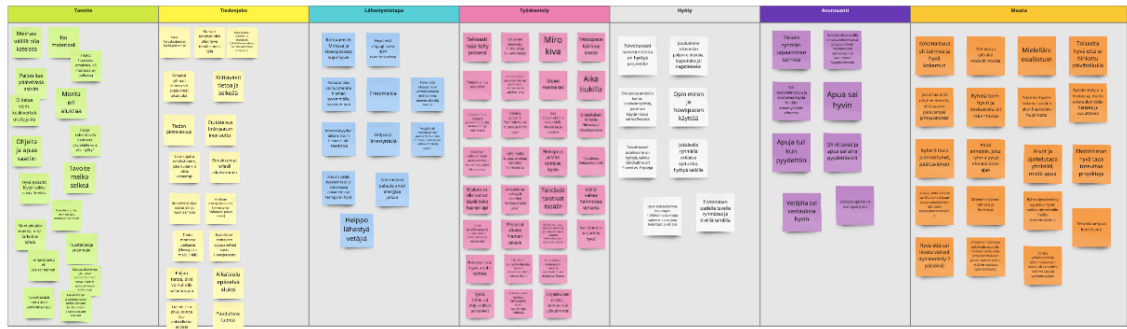

Figure 7: Survey insights classified in Miro

Expert interview

Kumar and LaConte (2012) propose a method of Subject Matter Expert Interview for improving understanding of the subject and field of research more deeply. An hour-long expert interview was conducted on 22 February 2021 with a Learning Expert and Customer Success Manager at Howspace. The expert has a strong background in digital collaboration. Howspace is an online collaboration tool used for, e.g., facilitating workshops and events, learning programs and organizational development (Howspace n.d.). The objective of the expert interview was to discuss and understand co-creation practices in a virtual environment more deeply and receive guidance on matters or subjects that would require special attention in the research. The idea of an expert interview and contact information were provided during a thesis sparring discussion by Laurea Project Specialist B who also works for the CIR4Life project.

The interview was guided and supported by a field guide created by the author. The field guide is presented in Appendix 2. The interview, altogether 73 minutes long, was recorded. The insights were gathered from the recording and interview notes into Miro to support development work. The initial aim was to conduct the interview before sending the survey and utilize the data in creating the survey questions. However, the time schedules did not allow that, and the discussion was, instead, scheduled so that it was used as an input for creating the in-depth interview field guide. The expert interview results were also further utilized when analyzing the research data and creating the key insights. The interview provided important viewpoints that enriched researcher's understanding of the topic.

Recruiting interviewees for in-depth interviews

Research data is needed in the design process and there are several methods to gather it. In-depth interviewing is a qualitative research method to be conducted with relevant stakeholders (Stickdorn et al. 2018). The aim of an in depth-interview is to learn for example about the subject's expectations, experiences, concerns, attitudes, or needs (Stickdorn et al. 2018). Portigal (2013) notes that as interviewing emphasizes depth over sample size it cannot be used to gather statistically significant data. To record the data of an interview, the researcher should take notes, audio or video record the interview and take pictures or make sketches of the situation (Portigal 2013).

In order to deepen the understanding of co-creation practices and enrich insights with participant experiences including their goals and attitudes (Portigal 2013), in-depth interviews were conducted with the participants of the CIRC4Life Service Jam. The objective of the interviews is to deepen the understanding of the participants' experiences and pain points or needs discovered in the survey. 1,5-hour timeslots were reserved with the interviewees and invitations were sent with Microsoft Teams link.

As mentioned, the interviewees were recruited through the survey where students were able to volunteer and leave their contact information. The decision of giving the power to the students of whether to participate, was because the researcher wanted to recruit people who are eager to be part of the research (Portigal 2013). Altogether five students signed up for the interview and five interviews were conducted. All interviewees were students of Laurea University of Applied Sciences as the Service Jam was part of a course organized by Laurea. Next, the interviewees are shortly presented in order to give the reader an idea who these interviewees are. The names of the interviewees have been changed to protect their privacy.

Kirsi is on study leave but normally working in education where the nature of her work is discussive and developing. Before the event Kirsi was familiar with traditional groupwork and sees co-creation being part of that. Instead, the tools (e.g., Howspace) were not familiar to her. Kirsi sees herself as an ambitious and reliable member of the team having a facilitative approach. She finds discussion easy and prefers to work without a haste.

Meeri is a Laurea-student working within sales and marketing. She describes herself as an active and efficient person. Meeri was not experienced with co-creation before the Service Jam event, but she has had practice of different development projects at school and work. She had worked with Miro tool before, but it was new to her that co-creation can also be done virtually.

Aatu works in development and education. He is enthusiastic of working life skills and co-creation. He was familiar with co-creation and facilitation before the event as he has

participated in different groupwork at school and has even organized innovation camps himself for his work. Aatu describes himself as being the one in the group taking the lead role easily and finds it interesting that in groupwork people with differing backgrounds create collective intelligence.

Iina, a first-year master's student at Laurea, who also works in logistics, shares the awareness of collective wisdom with Aatu. She was somewhat familiar with the concept of co-creation even though she did not know it by that name. At work Iina does a lot of projects that include brainstorming and target description. The Service Jam modified Iina's perception of co-creation into a more positive direction.

Pinja studies at Laurea and works with sustainability and quality. The studies have introduced her more to different co-operative platforms. At work, she has experience of more traditional sticky note workshops which she finds a bit chaotic and therefore thinks the virtual event was more effective. Recently Pinja participated in a mobile app development project, but the Service Jam was the most comprehensive development project she has participated in.

In-depth interview field guide and conducting the interviews

Before the interviews a field guide was made to guide and support the interviewer during the interviews, see Appendix 2. Portigal (2013) describes creating a field guide as an essential preparatory stage. It is a document detailing what happens in the interview. The researcher created a field guide that would assist in tricky situations and offer guidance of what kind of questions to ask. The question forming followed the interview guidelines by Stickdorn, Lawrence, Hormess and Schneider (n.d.a): the researcher avoided closed questions as well as leading questions, tried to listen to give the interviewees time to think and used the technique of asking the interviewee five times why. Throughout the interviews empathy and active listening were considered as essential approaches as Penin (2018) suggests.

The interviews took place between 22 February and 3 March 2021, and they were on average 73 minutes long. The interview lengths varied between around 60 to 90 minutes. The interviews followed the structure presented by Cooper-Wright (2015): introductions, getting to know the interviewee, more focused questions, detailed questions, exercises, wrap-up.

The Introductions phase included short introductions by the interviewer, handling some practicalities, setting the tone for the interview, and starting the recording. The purpose was to build rapport (Portigal 2013) in order to create a smooth and clear basis for the upcoming interview. The researcher made it clear that she is there to learn about the perceptions of the interviewee who is the expert of their experience. Getting to know the interviewees, stage two, happened through open-ended questions of who the interviewees are, how they perceive themselves, what kind of background they have in groupwork and co-creation and

how they see co-creation. More focused questions, stage three, were presented of the Service Jam experience on a general level.

In the fourth stage, detailed questions, the researcher asked questions related to specific aspects of co-creation practices identified in the survey as successful (tools) and requiring more emphasis (informing and guidance). The role of these questions was to understand more deeply why these aspects were perceived as they were. Also questions about positive and negative feelings during groupwork were presented to understand factors creating joy or frustration during any groupwork or similar events.

There are different kinds of supporting actions or methods to be used in interviews (Stickdorn et al. 2018) to facilitate discussion in an interview, like demoing, mapping exercises or homework (Portigal 2013). Also, photo elicitation can be used to provide visual aids or act as probes in interviews to stimulate conversation by invoking new ideas, thoughts, or memories, creating a relaxed space for discussion and encouraging interviewees not to limit their responses (Epstein, Stevens, McKeever, and Baruchel 2006). To keep the interview engaging (Cooper-Wright 2015) and prompt deeper discussion (Portigal 2013) the next phase introduced a short issue card exercise (Service Design Tools n.d.) to the interviewees.

The issue cards, see Figure 8 included eight images embodying eight primary emotions by Plutchik and Kellerman (2013): joy, sadness, acceptance, disgust, fear, anger, surprise, and anticipation. The images were selected by the author from a royalty free stock photo bank Unsplash. To maintain coherent connection between the images and to avoid any sort of preferability, the author decided not to include any pictures including human face or animals but to represent the feeling in another way. The interpretation of the emotion embodiment is only by the author. The goal was to provide different photos for the interviewees to make their own interpretation and for that meaning the emotions were used as a reference point.
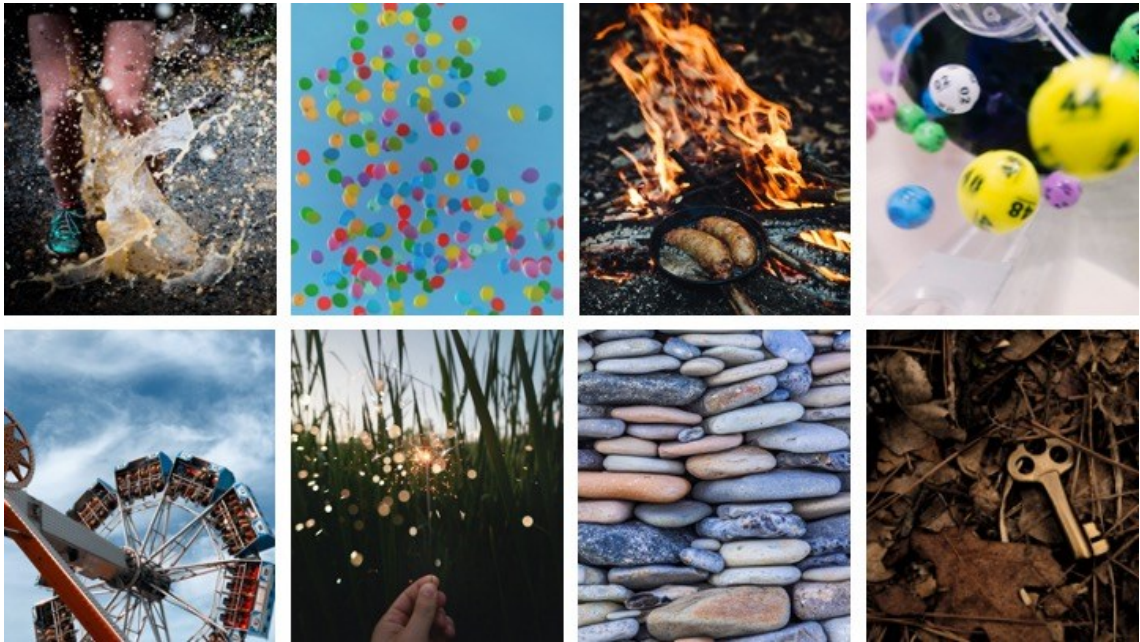
Figure 8: Issue cards used in the in-depth interviews. Collage produced by the author from Calabrese (2016), Upper (2016), Lebedych (2020), Nolte (2018), Melo (2019), Roller (2016), Macháček (2019) and Dziedzic (2019).

During the interview all eight images were shown on a single PowerPoint slide and the interviewees were asked to select photos describing best their feelings before, during and after the Service Jam event, drawing on the notion by Järvi et al. (2018) that co-creation reasons have a temporal nature. Then the researcher asked the interviewee to explain why they had selected that specific image and what it represents. The issue card exercise was conducted to aid interviewees in thinking more deeply about their experience (Cooper-Wright 2015), ground conversation with artifacts and verbalize their attitudes and perceptions to the researcher (Kumar and LaConte 2012).

After the exercise the final phase of the interview wrapped up the interview by summarizing questions, thanks, and next steps. The summarizing questions aimed at outlining what the key aspects of co-creation practices in facilitation were that the interviewees felt were replaceable or removable and what were worth keeping.

In-depth interview data handling: field notes and synthesis wall

Instead of transcribing each interview, field notes were made after each interview to summarize the main insights, see Appendix 3 for an example. Field notes "emphasize narrative and description over conclusions or business implications" (Portigal 2013, 116). The field notes included a section for each interview theme and contained also a quote demonstrating the essence of the interviewee and their experience in a single quote. The

field notes were made as soon as possible after the interview to help memorize the core insights and with the support of the interview recordings and notes made during the interviews. Altogether the interviews resulted in a bit over 360 minutes of recorded in-depth interviews to be analyzed.

To continue building a data inventory and research wall (Stickdorn, Lawrence, Hormess and Schneider n.d.b), the interview data was then assessed, and insights were gathered in Miro, see Figure 9 for illustrative example. Insights were classified under themes identified before based on theory and the survey or emerged from the interviews. Altogether eight themes were identified two being emergent themes: group/groupwork and timing/schedule. In the illustration each column represents a distinct theme while different colored sticky notes represent insights from individual interviewees.
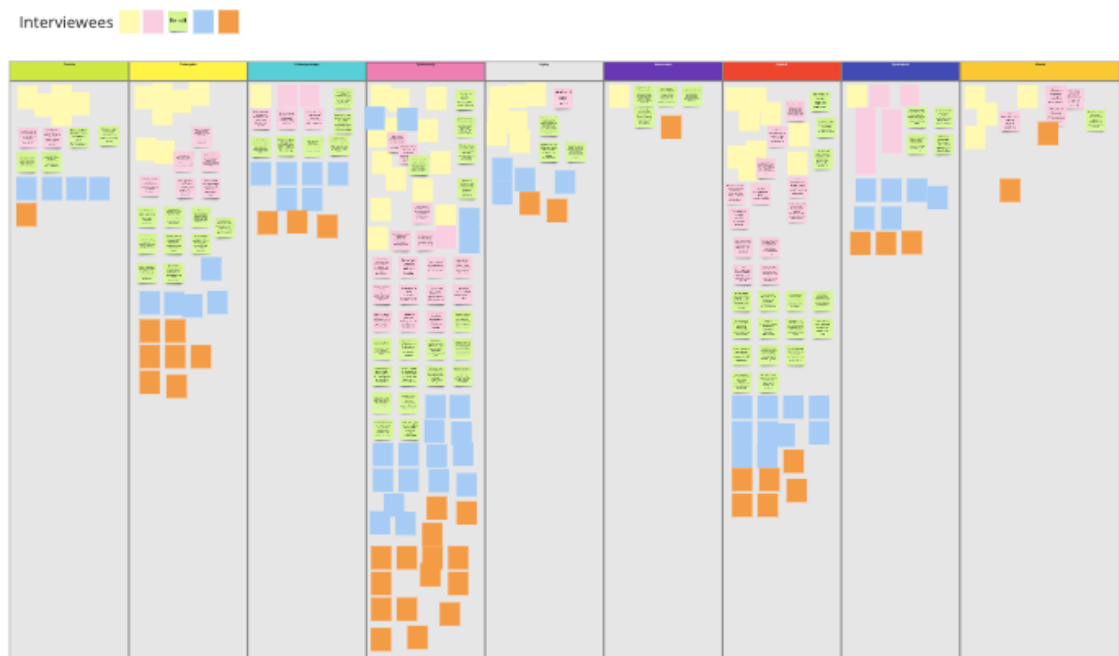

Figure 9: Gathering interview insights in Miro

A research or synthesis wall provides "a visual arrangement of the research data" (Stickdorn et al. 2018, 128) that helps in synthetizing and analyzing it. All the research data gathered was collected in Miro. The research data was already initially divided into themes, and it was further analyzed by identifying common problems, patterns, repetitive themes, and contexts. This manual sorting was made to find clusters and hierarchies (Kumar and LaConte 2012). These clusters were then given names and connected to each other. Six main themes were identified: virtual environment, scheduling, tools, discussion and decision-making, groupwork dynamics and pre-event information sharing. Also, sub-clusters were identified under these main themes. See Figure 10 for an example of the synthesis wall.
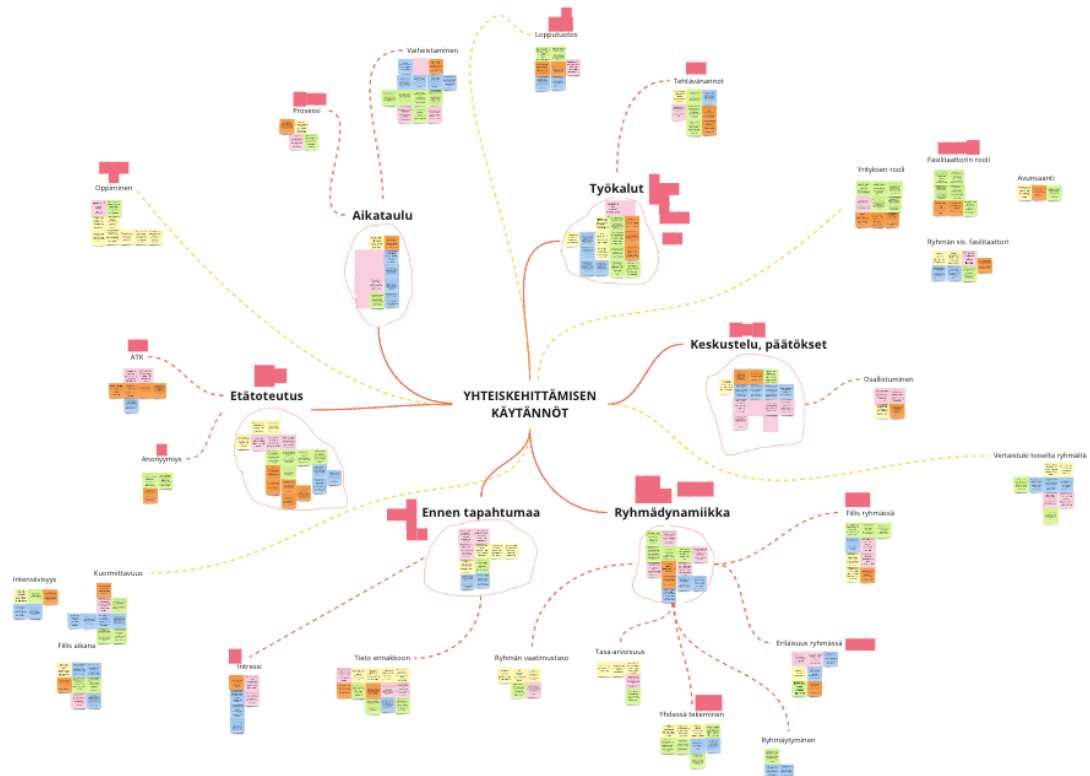
Figure 10: Synthesis wall

Co-creating key insights and generating facilitation principles

The clustered insights were shared with Project Specialist A from CIRC4Life project to be further discussed and developed into key insights through co-creation. To avoid making biased or only subjective assumptions the insights were discussed in a mini workshop with the Project Specialist held on 30 March 2021. The aim of the meeting was to identify key insights from facilitation point of view and to create a basis for transforming insights into actionable principles. The approach and steps were based on Design Principles Generation methodology by Kumar and LaConte (2012), and an illustrative example is presented in Appendix 4. During the mini workshop each gathered cluster of insights were discussed. Based on the discussion the key insights were identified, listed, and reviewed. After going through all the clusters and listing the key insights, they were prioritized through discussion. In Appendix 4 key insights are shown in yellow and blue sticky notes, blue ones being the most important ones creating the basis for facilitation principles. Miro tool was used in the workshop to provide a visual aid.

After the workshop the author continued to transform the "descriptive insights into actionable, forward-looking prescriptive statements" (Kumar and LaConte 2012, 189), i.e., facilitation principles that can be taken into consideration when planning facilitation of upcoming virtual facilitation events. In service design methodology, prototyping is a common and crucial way to test or pilot the developed product, service, or idea before launching it

(e.g., Penin 2018, Stickdorn et al. 2018, Design Council UK 2015). Kolko (2015) notes that using prototypes is a way to communicate ideas and explore potential solutions. The author sees the facilitation principles created as the final version of the outcome of the research work.

Feedback session with project members

Key insights and facilitation principles, a prototype version, were then presented to Laurea project members to gather feedback and finalize the output. The presentation was held on 14 April 2021 via Microsoft Teams meeting. A presentation including an overview of the methods and a collection of key insights and facilitation principles as recommendations was prepared and presented. The author encouraged for a discussive approach to the meeting and comments, or questions were asked by the project members along the way. As iterativeness (Stickdorn et al. 2018) and experimentalism (Brown 2008) are principles guiding service design methodology and mindset, the author sees this meeting as an iterative and validating phase for the research findings. Feedback given did provide important views on the scope and context of the research and as a result the scope of the theoretical framework was modified to match better with the data and results of the study. Also, ideas for further developing the insights and principles were given to the author. Final version of the facilitation framework and recommendations are presented in Chapter 4.4.

4   Results of the development project

This chapter presents the results of the research. The analysis of the data yielded three distinct themes: groupwork dynamics in workshops, virtual environment as a workshop context, and elements of the co-creation process. After considering each theme the summary concludes the analysis. In addition, the author presents a visualization of the findings.

4.1   Groupwork dynamics in workshops

Anonymous survey answerer 1: Group dynamics affect heavily on the quality and success of working.

Kirsi: The tools can be whatever but if you feel side-tracked with the group, that is something that cannot be fixed with any tools.

Meeri: [When talking about the meaning of the outcome] a thing that has been developed together is more valuable than a thing done alone. When it is done together and we commit to it together, we get to create something new. And we make an advancement.

Even though it was not explicitly asked, all interviewees emphasized the role of groupwork dynamics and positive atmosphere in successful co-creation workshop experience. The data illustrates that groupwork dynamics play a major role in co-creation and failing in it may cause co-destruction. Key aspects of groupwork dynamics related themes identified were positive atmosphere, common interest and working standards, and equality and difference within the group.

4.1.1   Positive communication atmosphere and cohesion

The results of this study indicate that a positive atmosphere and constructive communications create a productive environment for the groupwork in a workshop.

Pinja: Everybody was equally lost, and so we supported each other. There was a positive atmosphere and that supported working… We had a good feeling throughout the event, with the support of the group and humor. It wasn't so serious all the time.

Iina: Everybody were supportive to each other. That lifts the spirits and innovativeness up. Thoughts get wings… But if your ideas are underestimated or you are not heard, that creates bad feelings. If the dynamics is not good or others' comments on others or their ideas are hurtful. It discourages the whole development as you don't want to say anything anymore. Ideation must happen in good spirit.

Cohesion means the attraction and commitment to the team, its members, and the task (LePine et al. 2008) and it has been identified having a positive effect on team performance (Braun et al. 2020). The findings of this study indicate that a positive atmosphere and discussion can be seen as a supporting force for groupwork dynamics as it contributes to cohesion. Members of the team are more committed to the task and satisfied in the groupwork in an open and positive communication atmosphere. Agreeing is not always the main thing but discussion in good atmosphere. Positive communication and an occasional humor create acceptance between the group members.

> *Anonymous survey answerer 3: Co-creation is a good way to think about things from different angles and to abandon possible prejudices. Collective and open thinking creates space for creative solutions. As long as nobody judges you and everybody has the courage to share their ideas.*

> *Aatu: In groupwork it is interesting that there are people with differing backgrounds, and we share the collective wisdom… The outcome becomes better, and everybody learns more when we do things together. Like, compared to if we would do it individually and concurrently… If a group member does not see others' opinions than their own, that kills the excitement of everybody else.*

> *Iina: It is discouraging if there is a strong or dominant person in the group that doesn't give floor to anyone else. That is not co-creation if others are not being heard.*

The research data shows that even though difference within the group and different viewpoints are perceived as one of the main success factors in co-creation, the group needs to be equal. Sharing thoughts and ideas from each own background and perspective enrichens the discussion and output but this requires a safe space and courage. Collaboration in a constructive environment together with people of different expertise can contribute to learning as well when people are willing to share and transfer knowledge in their interaction. Consequently, dominance within the group by some group member(s) is not perceived positively. The quotations above demonstrate that negative comments and dominance within the group can hinder cohesion, teamwork dynamics and collaboration. This causes co-destruction during the event as people may lose interest in contributing. Thus, the work and teamwork processes do not progress, and it has a direct effect on group's innovativeness and performance.

> *Aatu: A safe space was created naturally as we were all from the same study group, and you knew who you were working with. Then we didn't have to use time for that [getting to know each other].*

Meeri: Our group was big and almost everybody was familiar to me. It eases things that people are familiar. We were in contact with the group before the event… When we are working remotely, and you don't see people's facial expressions or hand gestures or body language. It took a long time to form the group, longer than normally.

In the Service Jam each group worked together throughout the whole event and introductions happened in the beginning of the event. Also, some people were more familiar to each other as they shared the same study program. Not a single survey answerer or interviewee reported any negative episodes or incidents between the participants during the groupwork but did mention that creating a safe space was quite easy as many were already somewhat familiar to each other. The people that were already familiar with each other felt that it eases working that people know each other before hand and have a connection already. However, even though the group was familiar, group formation can also take more time due to a lack of social cues. Mixing groups during the event could have influenced the safe space creation as the process of building trust and group formation would have needed a re-start. In an event like the Service Jam that has no formal group facilitator to support, it is important that the group is able to create connectedness through safe space and constructive communications environment by themselves.

4.1.2 Commitment and peer pressure

A shared goal and working standards affect groupwork dynamics by creating meaningfulness, commitment, peer pressure and group discipline. Creating connectedness within the workshop group contributes to co-creation.

Meeri: I get a negative feeling if the work is difficult or hard to understand or against your own value system.

Iina: A self-imposed interest is a supporting factor when the task is based on own will to develop oneself. Also, the same goal in schoolwork is an aiding factor when compared to work context where the manager may have forced you into the development work.

Anonymous survey answerer 3: Even though the co-creation happened completely online, it worked extremely well, and we learned a lot. Also, working with the group was flowing even though we were more or less strangers to each other. Values and mindset connected us all and that helps when thinking and co-creating things related to sustainable consumption.

Copper (1994) concluded that a team's performance is highly affected by efforts that increase people's commitment to the task. Based on the data a self-imposed interest in the subject of the task can be seen as an aiding factor in co-creation as it creates individual commitment. This happens especially if the subject or task matches with the value system of the individual. The objective of the co-creation task is usually given by the organizing party and cannot be that much influenced by the participants during the event.

Personal meaningfulness created through own interest is, still, something that cannot be given or assigned. Making sure that people participating the groupwork understand and adopt the task's purpose given to them is important. Also, the participant motivations (reward-oriented, need-driven, curiosity-driven, and intrinsically interested) by Füller (2010) by could be utilized in the planning to align expectations. Meaningfulness in this context means the reason why people participate in the voluntary co-creation process. A group or a team share a common goal or purpose (Levi 2014). The research results also indicate that a shared meaning supports groupwork dynamics and co-creation results. The results also indicate that sharing values supports collaboration by connecting the group and giving a shared reason for being.

> Kirsi: In these study-related groupworks I've realized or perceived that my own standards of working are somewhat higher than others'. This contradiction limits my own experience of the groupwork. I would like to work with people with similar levels of ambition in a group to get the work flowing… Common level of ambition and goals feels good. No free riders, they are annoying.

> Iina: It is always a thrilling situation when strangers are put in a new context to develop something together. Is it gonna work out? And when you have a tight schedule… But when you don't know about others' strengths or are they active participants, what things they bring with them to the group or, like, are we able to agree on anything… Can you trust that others also participate? Not knowing about that creates uncertainty. You know how you will work with the group, but you don't know about the others and whether they have any opinions. Or do you have to support the whole group or is it an equal one? After all this is clarified you get the certainty that this will work out.

> Pinja: The group is so important and that everybody participates in the work. Of course, there are always, like, promoters and it is natural that someone takes the lead role.

One element affecting groupwork dynamics in co-creation is peer pressure and group discipline. Most interviewees mention that it is important that everybody in the team participates in the discussion. Free riding is not taken lightly. In a strange group it may cause uncertainty in the beginning if one does not know how others tend to participate and if they

share similar working standards. As mentioned before, the group needs to be equal and not knowing whether the group is balanced creates stress. Common working standards can be seen to support co-creation while difference in them may cause co-destruction.

4.2 Virtual environment as a workshop context

Concerning the virtual environment, two main topics were identified. First, the social interaction in virtual environment is examined followed by discussion about selecting the tools for an online workshop.

4.2.1 Social interaction in a virtual environment

A virtual group is shaped by the individuals forming the group (McKenna and Green 2002) and all groups differ. As the Service Jam was implemented online, one aspect discussed with the interviewees was their perception of the virtual context, interaction, and the tools. The perceptions of characteristics of the virtual environment were somewhat differing within participants while the perception of co-creation in the virtual workshop was good within the interviewees. Four out of five interviewees considered the co-creation in an online context positively.

> *Pinja: In the online Service Jam it was easier to participate, and it activated better and was more inspiring… The co-creation was more efficient remotely. Thoughts flowed easier as you had the peace of our own space but the support of the group at the same time… If you are a shyer person or so, then you would not go out there and put the sticky note on the [physical] board. You might think that you are better off if you don't participate. Like, I think that it nice when you have… If you are a person that does not want to be that visible, it is easier to ideate things when you are behind a screen.*

> *Aatu: Working remotely even enhances participation and commitment and makes working more efficient, when it is 100% digital… Now [in remote context] you can put the sticky notes there and you don't even have to open your mouth. And that supports somewhat different social interaction and makes working more diverse.*

The comments above illustrate that the online context was indeed perceived better than a face-to-face occasion. The virtual context can enhance social presence and participation of co-creation and activate participants more widely. Also, it can be seen to contribute to commitment in the work as van Den Hooff and de Ridder (2004) suggested. Live co-creation may feel chaotic when people move physically while remote work gives people an own peaceful environment to think. Some interviewees and survey answers demonstrated that the

effectiveness of the remote context was a surprise even for the participants as it was not anticipated.

Social interaction is different as people have their own space and support of the group and possible anonymity. One important thing to note is that the online context cannot be separated from the groupwork dynamics as the interaction and group support is strongly linked to the perception. The data also shows that online tools offer something that is harder to achieve in a live context: anonymity. In an online tool there can be a possibility to leave comments or participate anonymously which can encourage shy people to contribute and commit more actively. Anonymity can also support equal contribution and breaking down hierarchy within the group when neutrality is needed.

> *Aatu: In a remote situation the real social interaction is limited, though. Maybe without the COVID-19 pandemic we would've gone out to have a couple of Corona beers in-person.*

A virtual context facilitates different teamwork dynamics, and it may also hinder formation of the group due to lack of unofficial social interaction and establishment of relationships. Occasional in-person meetings, among other things, are said to contribute to group cohesion and satisfaction (Mesmer-Magnus et al. 2011). In an all-remote process, the interaction is limited as people are not able to meet in person and get to know each other better. This is indifferent to some but meaningful to others as only one interviewee brought it up. Some interviewees mentioned that they see physical presence as a negative element since it requires more travelling. If living in another part of Finland, face-to-face workshops can be more intensive as it includes more travelling and being away from home. As groupwork dynamics is considered as a crucial factor in the team's success, one thing to consider is how to support unofficial interaction and group formation in an online context and with strictly timed schedule.

> *Meeri: Working remotely changes the nature of the event and there is a risk of passivation if the person is not active or social. Somebody might leave something without saying or something may be left undone… We easily talked out of turn and when you have a tight schedule. It's about who gets to say and what… It is harder to take others in consideration, in a remote setting. When you have a large group, and you don't see the others or know them or recognize their voice. Somebody's role might be smaller.*

One interviewee noted that in a remote context it was harder to take others in consideration and that there is a risk of passivity that can cause co-destruction. Both in online and live contexts the group members must be careful of not taking too much space from each other. Lack of nonverbal cues is a characteristic of the virtual context (Vranjes et al. 2017), and it

affects the social interaction. Majority of the interviewees did not see major problems in interacting in the virtual environment as only one, Meeri, noticed its effect. As a result, when planning and facilitating an online co-creation event, the facilitators must be wary of not giving too much power for the tool itself and make sure interaction is ensured, and that social presence is on a suitable level (Duarte and Snyder 2006). It is important to make sure the tools and processes support the ways of working and the objective of co-creation so that everyone is able to participate and give their input, not the other way around.

4.2.2   Selecting the tools

Selecting the tools for the workshop can be seen as a crucial step as inoperative tools may cause task paralysis and havoc or distress within participants. Selecting the tools can be done by assessing the need for social presence and information richness in the workshop (Duarte and Snyder 2006) the former being addressed already in previous sub-chapter.

> *Anonymous survey answerer 4: Having three tools, Zoom, Howspace and Miro was a bit challenging.*

> *Meeri: Miro was familiar to me, and it was easy to use, as well as Howspace. It worked well as we were at the same table and saw what others were doing… When you share the same platform, it eases that you don't have to surf from one place to another. Like, do one task here and the other one there and if you have Zoom there as an addition. It gets more challenging as there are more channels to work with.*

> *Pinja's survey answer: The total selection of tools was quite functional, but in addition to Howspace and Miro we had also Canvas and Zoom. This mixed up my own work. When you leave one platform and move to another and at some point, the network broke down. Annoyingly I had Zoom open in a wrong browser and therefore my voice was not hearing in the presentation so that phase did not go well. This irritated me but it was my own mistake as I did not check the functions. Even though, the pace was so high there wasn't even time for that.*

Experience with the technology is an element of successful online facilitation (Merrill 2003). The main tools used in the Service Jam, Miro, Howspace, and Zoom were perceived positively by the participants even though they were not familiar to everyone beforehand. At the same time others felt that having many tools was tricky and distracting. Consequently, it includes a risk of co-destruction. The participants felt that all tools were easy to use and had a distinctive role, and some were not bothered by using several tools. Yet, some also felt that Miro by itself could have been enough for the event. Some participants noticed a few mismatches in work instructions between Miro and Howspace. That did not cause major problems but may be avoided by concentrating on one main tool. A risk portrayed by the

interviewees is IT related challenges and the lack of IT skills that might affect the experience and hinder participation of some individuals. None of the interviewees faced major problems but detected the possibility. Pinja did have an IT related encounter and that caused distress and co-destruction as she was not able to participate in the introductions within the group.

> *Aatu: Miro especially was the best. You could produce content in real time and with easy access and supported by visuality. It was easy to portray causal connections and emphasize things. It was easy to go back to the previous phase as well.*

> *Pinja: Miro as a platform was good, since you were able to see others work as well. You could check if you are heading the right way and how other groups are doing.*

> *Meeri's survey answer: I would've liked to have the Miro boards visible already before the event. It would've been easier if you would've seen an overall picture of all the tasks beforehand. Then it wouldn't take that long to read all the tasks and assignments during the event.*

Nevertheless, the online tools and context provided some other benefits compared to live event. Miro was given credit for since it aided the work with visuality and provided an overall view to the whole process, i.e., it provided a suitable level of information richness (Duarte and Snyder 2006). Visuality of Miro and the possibility of seeing others work was perceived positively. Some interviewees wished that the process and assignments in Miro could have been visible already before the event to ease the work on the workshop day by giving an overview of what is about to happen in the Service Jam.

> *Iina: Some of the group members had missed the pre-assignment as they had not opened Howspace… If you get more time to think about the tasks in peace, you may find something new. For example, in this event I thought about the tasks in the evening, and I added some things that occurred to me. The next day, I presented the things to the group, like "Hey here are some things that came to my mind, do you approve of these?"*

> *Meeri: Howspace enables reading the discussions also later. I went through the materials afterwards and there were good comments there. I feel that in a work-related thing I would do that more likely and go back to the material… It depends on the context.*

> *Aatu: It would frustrate me if people would just show up and they hadn't done any preparing or done their homework so to speak.*

Furthermore, a couple of interviewees saw that the online tools provide an opportunity to work between official working times. This is also a good functionality from the facilitators

point of view as work could be facilitated together and simultaneously or separately and non-simultaneously with the participants. Service Jam was mainly facilitated simultaneously, and it could be considered if some parts of the process could be done separately. The participants did have a pre-assignment to get to know the demo appointed to them in more detail and work on the elements of the upcoming framework individually. The purpose of the pre-assignment was to align people's comprehension of the upcoming task and provide an opportunity to familiarize oneself with the workshop tasks beforehand. The pre-assignment can also be seen as a mean of aligning expectations of the participants (Merrill 2003). However, some participants had missed or skipped the pre-assignments. This can cause co-destruction and frustration within others as the group does not share the same overview of the demos and assignments in the early phase of working.

From a facilitator's point of view the process and outcomes of each group's work is documented in the tool as they work. This simplifies the facilitators work and enables them to start the analysis of the results quicker after the event as there is no need for gathering or transcribing physical notes, drawings, sticky notes, or other outputs.

4.3   Elements of the co-creation process

The data analysis revealed some important factors related to co-creation in innovation process needing special attention in planning: timeframe, phasing and output; means of decision-making and availability of base information.

4.3.1   Timeframe and process phases

Pinja: It was good that we had a compact time and a frame for working. Then we couldn't nitpick too much. And we pushed through and finished… There were many phases that needed to be completed in a short time. If you haven't worked that way before, it can be, like, quite heavy load of information at once.

Anonymous survey answerer 1: The process was a bit confusing in the beginning. The assignments were quite long and felt challenging – especially because the time was so limited.

Meeri: The working method was not familiar, and it felt distressing and frightening. The clock was ticking, and thoughts were not flowing… I consider myself as a slow-to-warmup kind of person… You could ease the schedule if the structure was shown beforehand. And you would've seen what is required in each task and you could've analyzed what is about to happen... Like, you could prepare yourself better.

The timeframe of the event evoked mixed feelings among the interviewees. Some perceived that the timeframe was too tight, and the group did not have enough time for the tasks and

discussion. This can cause distress. Others, in contrast, felt that the timeframe was reasonable, and the group did not fumble to reach an outcome. To ease the stress caused by the tight timeframe the presence of a group facilitator could provide more focus. Focusing on the task at hand and not worrying what is about to come could also support safety and presence within the group which are important elements of facilitation (Kantojärvi 2012).

Moreover, in a virtual context, it is important that the team has enough time for coordination and establishing relationships especially in the initiation of their work (Johnson et al. 2002). Too complex tasks, objectives or benefits hinder the completion of the group's work. The need for early coordination was illustrated in some participants' answers as the process in the beginning felt confusing to them. For example, individuals with slow-to-warm-up temperament may feel anxiety especially in the beginning if there is not enough time for adjustment and coordination.

> *Iina: During the event, when you realize that things are advancing or moving forward, I like that. In the beginning you are uncertain, but when you are able to crystallize the objective, purpose and how to proceed, that gives a boost… When you can accomplish a step that is always a good thing even though it is a compromise.*

> *Meeri: Could there have been milestones that we could've went through together, sharing milestones with the others. If something felt difficult, you could've gotten some new perspective… If the group does not stay on schedule, this could split the work… The pressure is high when there was constant hurry and we left out all breaks. We didn't have time to eat.*

> *Aatu: The phases were good because that way you create small feelings of accomplishment. And that is important to keep the energy levels up and the motivation varies throughout the day… At some point I thought that why are we doing this or why are we doing this at this point. The goal could have been presented per phase or stage… Through milestones it would be easier to see the big picture and that the tasks are not random. Now we only knew the end goal.*

The data suggests that the phasing of the co-creation process was perceived quite well as it creates focus and provides sense of achievement during the even heavy process of innovation. In can also energize and achievement affects morale by boosting motivation. The amount of information can be overwhelming and therefore the phases split the work in smaller shares that are easier to handle. Though, Aatu also felt that they would have also needed milestone goals during the process as they only knew the end goal of the workshop. Providing purpose for each task could be beneficial in creating a clearer process for the participants as Tubbs (2009) suggests. Sharing knowledge between the groups more actively is also called for, and it is discussed more in Chapter 4.3.3.

4.3.2 Means of decision-making

Aatu: When you develop things based on small amount of information, the creativity of the team members and building thoughts on one another, it has a critical role.

Pinja: Decisions were made through discussion. We expressed our ideas, speculated, pondered. And through that we found the common understanding and an outcome of the decisions… I'm not sure if the knowledge [we had] would've been any refined even if we had some more time.

Meeri: As a group we made decisions through discussion. Not so that someone would've decided on behalf of everybody. It is important that everybody agrees on a decision… When we started to leave behind the group decided, we decided that we just needed to decide something. That now we cannot discuss in detail, and everybody just puts their thoughts on the board.

The data shows that the participants valued the discussions, sharing opinions and argumentation in the groups. Discussion was the basis of collaboration and making decisions. The Service Jam demonstrated how discussion was used as a mean to find common ground, understanding and solutions. Many felt that dialogue and everybody taking part in it is important to have a diverse output. It is worth considering whether discussion is an effective way of reaching a decision as a group. Discussion can be seen as an informal mean of decision making as it does not deploy any predetermined method or technique. The participants were offered instructions to use formal decision-making techniques as dot voting to support their decisions. The groups did not pursue this way and proceeded with decision making based on discussion alone instead. In an event where there are not enough facilitators to support the groups in their decision-making, it may be difficult to use formal methods for decision-making as it requires some of the group member(s) to have strong facilitating approach.

Meeri: The quality of the discussion suffered from the haste. When you just had to push through and leave out the dialogue. Dialogue is such an important thing in co-creation.

Pinja: With the time pressure and all I think we needed to make some compromises and take detours as we were making decisions. We just had to go with something and do it quickly.

Majority of interviewees felt that they had to end good discussions or compromise to keep up with the limited timeframe. As they faced time pressure, they had to skip discussions and decide at least something to be able to move forward. Thus, they felt the value of discussion and justifiable decision-making was compromised. Rush would then cumulate to poor quality

of outcome and result in co-destruction. Many interviewees connected quality of discussion or decision to the lack of time. As performance of the team is affected by, among other things, successful collaboration (Johnson et al. 2002), a more active participation from a facilitator could help to ensure effective collaboration and for example discussion and decision-making. Although, while support in gaining consensus and agreement is one of the main roles of a facilitator it is worth remembering that the facilitator does not take part in the decision-making itself (Lewis 2008) and only acts as a neutral guide for the team.

4.3.3 Sharing information and knowledge

Kirsi: It was absolutely a good thing that I was able to get to know the materials before the event. We got a lot of information, and it came on several occasions. If I hadn't been on a study leave, I would not have been able to look at it all. My knowledge would have been thin on the ground… Still, I was a bit nervous as I didn't know on what level I was supposed to handle the materials before.

Pinja: We got a good introduction material before the event even though I did not know what to expect based on that. The pre-assignment, schedule, links, and all, these were well informed… The guidance was clear and comprehensive.

A facilitator can start making the work easy for the group already before the event. All interviewees agreed that it was crucial that information about the Service Jam practicalities and the case was shared before the actual event. Being able to check access and the functionality of the online tools is something that smoothed the work on the actual co-creation workshop days. The participants felt that it would be good to share all information related to the upcoming event in a single message as multiple messages might get lost in the information flow. Also, one interviewee, Kirsi, felt that it was hard to grasp on what level the base information was to be comprehended.

Aatu: It was good that we needed to get to know the materials before. Even though the baseline knowledge was low, it was almost at the same level in the group, and we did not come to the event unprepared… We didn't have that much base information for the work. With small things it could have been better, like engaging the companies… [Engaging the companies] could have provided us information so that we wouldn't have to speculate and give a general analysis based on gut feeling.

Anonymous survey answerer 3: Background information about the companies could have been more complete. Now the consumer experience was based on reading comprehension as we could not test the service or face it in a live situation… Company presentation videos could have been interesting. They could have demoed the consumer path in them, for example.

Iina: The material [sent beforehand] was a bit challenging or incomplete. I didn't get an overall view based on it. And I also downloaded the app. But I didn't get enough background information about the subject to be able to assess it...The app had a crucial role in the material but there should have been some dummy material, it should've been a playground where you could've seen something… If there was a dummy label or something to be seen. It felt disconnected. It lacked concreteness.

Providing information before the event is essential. The participants were provided information on CIRC4Life webpages and some case-specific details. Majority of interviewees, however, felt that they did not get enough concrete base information for co-creation work. What seems particularly frustrating in incomplete base information was that due to lack of tangible case-specific information, discussion and decision-making had to be based on gut feeling or incomplete comprehension rather than facts and real experience. The participants felt that demoing the consumer path with concrete examples could have been beneficial. Availability of good-quality base information can be seen as an important factor supporting successful co-creation while failing in providing enough good-quality data can be seen to cause co-destruction.

Pinja: The case was confusing. It could've helped if someone could've answered some questions at that moment. It doesn't even matter who… If someone from the company was there to answer our questions for an hour or so.

Additionally, some interviewees felt that an opportunity to ask questions from the demo company representatives and collaboration with them could have helped in creating a better view of the demo cases. Collaborating with the company representative also removes boundaries by cutting down the possibility of misunderstanding.

Aatu: The peer-support and peer-learning was even more important and beneficial than the facilitators circling the groups from time to time… Peer-learning from group to another and the, of course, the collaboration with the case company – these two things I would've liked to see even more.

Anonymous survey answerer 2: The short meeting with the other group worked pretty well, but maybe the other groups were so into their own thing and the meeting was in a so late stage that it did not affect our end results really.

Meeri: We got some new ideas from the other group for our own work. They had similar thoughts but the outcomes and presentation, there we got some ideas… But the cross-development [with the other team] happened too late when everybody was already ready. It could've happened before, between the steps.

During their work the groups were offered a chance to share and collide information and compare their findings with the other group working on the same case. This happened in the later stage of the co-creation process on the second day of the workshop. Several participants felt that the opportunity to shortly collaborate with another group was beneficial and they got some new ideas. Nonetheless, many also felt that the inter-group collaboration happened too late in the process as many of the decisions were already made and the solution was ready.

4.4   Summary of results

The results of this development task are summarized with a journey map in Figure 11 which presents the opportunities of co-creation and co-destruction before, during and after a workshop event. A journey map is, among other thing, a tool for presenting a timeline of a service experience (Polaine et al. 2013) and they help in creating common understanding making an intangible experience visual (Stickdorn et al. 2018). In this thesis a visual and simple journey map is used to summarize the findings of the research. The map makes it observable what are the likely points where creation or destruction of value may manifest in an online workshop context. The map provides a recommendation of things to consider, and it can be used as a guiding tool for facilitators organizing similar workshop events.

There are certain actions for the facilitator that can either support co-creation or cause co-destruction if something goes wrong, i.e., the action itself fails or the participant engages in actions that are counterproductive. However, as Prior and Marcos-Cuevas (2016) note, there is always a possibility of tradeoffs in the interaction. Hence, not all actions simply block co-destruction from happening. Sometimes, e.g., due to lack of time the facilitator may even have to decide knowingly when to accept the possibility of destruction and opportunity costs to gain some other benefits.

Based on the data co-destruction has a temporal nature as Järvi et al. (2018) suggest. Before the event the most crucial points of either co-creation or co-destruction are sharing the base information about the event and possible pre-assignments as well as starting the personal introductions between the participants. During the event the functionable IT tools and clarity of the purpose, guidelines, and group tasks are important elements. Within the groupwork different social factors, such as cohesion, creating a safe space and facilitating decision-making are vital and failing in them may cause major destruction of value in the interaction, and this can have significant effects on the outcome as well. After the workshop learning can be ensured with different actions or assignments that engage the participants into reflection of their work.

Phase of journey	Before the workshop					During the workshop									After the workshop
Actions of the facilitator	Concretize purpose and goal	Prepare materials	Send info and pre-assignment	Select tool(s) that support the purpose	Instruct intro of participants	Start the workshop	Repeat purpose	Instruct groupwork	Encourage discussion on working standards and values	Support team and collaboration	React to possible challenges	Utilize anonymity in tools	Facilitate decision-making	Utilize time between work days	Reflection assignment
Opportunities of co-creation		Align info/ assignment with purpose	Aligning expectations with assignment		Familiarizing with the team		Clear goal contributes to productivity	Clear guidance mitigates confusion	Aligned group commitment	Collaboration creating cohesion and satisfaction	Maintaining a safe space	Neutrality of discussions and decisions	Effective decision-making and use of time	Adding ideas between days	Ensuring learning with an assignment
Opportunities of co-destruction		Amount or quality of information	Skipping pre-work disturbs others			Confusion related to IT/tools		Unclear guidance creates confusion	Differing working standards frustrate	Passivity due to lack of social cues	Mixing groups may affect safe space		Dominance in group hinders work		

Figure 11: Journey map of the workshop: opportunities of co-creation and co-destruction

5   Discussion and conclusion

This section of the thesis further discusses the key results of the research. It also examines how these results discuss with the knowledge base and enrich the current view of virtual co-creation practices and co-destruction. The first main research question addressed how co-creation practices can be applied in facilitation of workshops. The second main research question asked how co-destruction manifests in facilitation of workshops. The analysis of the research data has revealed multiple opportunities for co-destruction to disturb value creation. The third question concentrated on the groupwork dynamics in a virtual workshop environment. Next, I will elaborate on all these subjects followed by the limitations of the research as well as transferability of the results and suggestions for future research topics.

The thesis at hand has provided an example how co-creation practices (informing, greeting, delivering, charging, and helping) by Echeverri and Skålén (2011) can be applied to workshop facilitation. Each practice has been given an example how it can be displayed and implemented in a facilitation context. The thesis has showcased how each of these practices provide an opportunity for both co-creation and co-destruction of value in the interaction.

Informing refers to the channels and ways of sharing information to the participants before, during and after an event. Greeting shows as the tone of voice that the facilitators use in the workshop. In addition, this practice is visible and extremely meaningful from performance point of view in the in the interaction between the participants as well. Delivering is displayed as the processes and ways of working within the workshop, while charging can be seen to represent the value for the time that the participants use for the workshop. The last practice, helping, is established as support and assistance from the facilitators and other participants, i.e., peer members. This thesis also discovered other meaningful practices that are applicable in workshop context. The practices discovered in this research are presented below. These findings also contribute to the third research question by enhancing our understanding on how groupwork dynamics can be supported in a virtual workshop environment.

Seven practices of co-creation in a workshop context:

1. Base information and guidance
2. Approach and tone of voice
3. Ways and tools of working
4. Peer-support and knowledge sharing
5. Decision making
6. Efficient use of time
7. Assistance in problem situations

Base information and guidance refer to the information participants are given of the event before and the instructions and guidance during the event. Base information is an important factor that has an effect on what ground the group is able to discuss and make decisions. Engaging the commissioning case company is beneficial to share real and preferably tangible information of the case for the basis of the co-creative development work. Easily accessible and clear guidance supports effective working as the groups can concentrate on their tasks instead of finding out instructions or objectives.

Approach and tone of voice refers to the communication atmosphere that prevails in the event between the facilitator(s) and the participants as well as between peer-participants. A positive atmosphere supports group cohesion and affects performance. Disagreements within the group is perceived positively if the discussions happen in good spirit. One thing that affects to the approach within the group are shared values or motivation that ought to be discussed within the group to create a supportive ground and common purpose for the team.

Ways and tools of working refer to the phases that the process is divided to and the means, methods, and IT tools of working. Phasing the process and dividing the end goal into milestone objectives are advised as completing smaller tasks create a sense of accomplishment and completion and may support motivation and energy levels. Selecting the methods is done based on the anticipated output of the development work. IT tools should support the desired end goal and groupwork. In selecting the tools should be done assessing the need for social presence and information richness. Information richness can be supported with for example visuality in the tools. Also, the possibility of utilizing anonymity within the tool is something that should be considered.

Peer-support and knowledge sharing refer to the information that is shared between the participants of the event. Sharing knowledge during the event can be seen as a factor that may enhance groups' outputs by offering novel viewpoints. It also can create sense of certainty that the group is advancing into right direction. Therefore, it is advised that if knowledge sharing methods between the groups are utilized, it could happen already in mid-phase of working rather than in later phase. Knowledge sharing between peer also contributes to the individual learning.

Decision making refers to the practices that support concluding decisions within the group. Making decisions is important so that the group is able to advance and discover concluding solutions. Even though discussion is seen as a crucial element in the group interaction, informal decision-making (decisions based on only discussion) is not very effective. Finding a consensus can be challenging without facilitated formal means of decision-making, for example dot voting.

Efficient use of time refers how the timeframe of the event is utilized. Creating a too tight timeframe can cause distress. Therefore, strong focus in the schedule and process plan is advised. In addition to working all at the same time in the same place, utilizing asynchronous work mode is something that could be considered. This means that the participants can be instructed to do some tasks before the event (for example introductions with the team or pre-assignment of familiarizing with the case), between the workshop days (for example individual consideration or development ideas) or after the occasion (for example reflection on the key learnings).

Assistance in problem situations refers to getting aid or help if there are some problems in the groupwork and the group is not able to advance. Creating ways or channels for support is essential in making sure that the group does not get stuck or fall behind of the schedule. The tone of voice of the facilitators and inside the group also contributes to this practice as creating a safe space for working supports courage of addressing unclear matters.

The study underlines the importance of considering the possibility of co-destruction when planning and facilitating a workshop. Since co-destruction has a temporal nature (Järvi et al. 2018) it is important to understand when and where it might occur. The research provides support for the temporal nature of co-destruction and identifies possible phases of the process and elements of the teamwork or collaboration that are inclined to be affected by co-destruction and vice versa factors that support co-creation. The emergence of co-destruction does not exclude possibility of co-creation like Prior and Marcos-Cuevas (2016) suggested.

Of the eight reasons of co-destruction recognized by Järvi et al. (2018) all can emerge in their own way during a workshop occurrence in different phases. These reasons include the absence of information, an insufficient level of trust, mistakes, an inability to serve, an inability to change, the absence of clear expectations, customer misbehavior, and blaming. In contrast to the implications of Järvi et al., this research shows that these components can manifest either between the service-provider (the facilitator) and the customer (the participant) or in the interaction between the peer-participants. This thesis has thrown light on the means that co-destruction can manifest in workshops and especially in a virtual context and they are presented below.

Six manifestations of co-destruction in a virtual workshop context:

1. Obscurity of the case
2. Unclear expectations
3. Passivity
4. Low level of safe space
5. Confusion related to IT tools
6. Haste

Obscurity of the case refers to co-destruction that may happen if the amount or quality of base information or knowledge is not adequate or sufficient. The quality of the base data effects on the performance of the team and individual learning if the participants have to work with hunches or inaccurate insights. Delivering base information that is as useful and concrete as possible. Providing too much information can also hinder work as participants may not separate what is relevant and what is not.

Unclear expectations refer to the confusion that is caused by lack of instructions or not being able to provide an end goal for the development work. Confusion can result in apathy of the participants or falling behind in the work. To address the risk of this, it is advised to make the purpose of the workshop and instructions as clear and intuitive as possible, especially if there is not a designated facilitator for each group that could tackle possible obstacles right away.

Passivity refers to frustration that is caused by passive or indifferent members of the group. This can manifest either through passivity that is caused by the lack of social cues or differing working standards within the team. Taking others in consideration in a virtual setting can be a challenge and cause co-destruction. Also, skipping a pre-work tasks may be caused by uncertainty of the task, and it is more understandable within the group. Instead, free riding during the workshop is something that can create strong emotions and angst in other participants as the group would ideally be equal. Encouraging the group to have a discussion on motivations, working standards, or rules can deflect co-destruction.

Low level of safe space refers to lack of cohesion or trust within the group that is caused by negative commenting, misbehavior, or dominance. Unkind, dominant and loud group members are not perceived positively. The group does not have to agree on everything, but the discussion must happen in a positive atmosphere. Dominance within the group can hinder cohesion, teamwork dynamics and collaboration. Eventually negative commenting can influence the performance and outcome of the group, since as a result other members of the group may yield and stop contributing.

Confusion related to IT tools refers to incidents that may happen with the tools. These include for example defunct tools and browsers or poor network connection. Also, having too many tools to shuffle with is a threat for co-creation. The possibility of this co-destruction can be tackled by providing clear instructions of the tools and their use or requirements in good time before the event.

Haste refers to lack of time perceived by the participants that can influence quality of the outcome. Some perceive haste or rush more strongly than others, and it can be due to the differences in personal temperament. Virtuality may raise the feeling of haste if the tasks assigned to the groups are too complicated. The sense of haste can be resisted with providing

a clearly structures timeline and simple task assignments that are easy to comprehend. Also, active facilitation of discussion and decision-making can enable efficient use of scarce time.

In conclusion, to assess co-creation in the Service Jam the framework by Saarijärvi, Kannan, and Kuusela (2013) is utilized. They suggest that co-creation practitioners can assess co-creation from three perspective. "Value" perspective describes what kind of value is created and for whom. "Co" describes the resources that are integrated in the value-creation process. Finally, "Creation" perspective deals with the mechanisms through which the resources are integrated into the process of value creation.

The main value for the participants in the Service Jam was learning new ways of working together and knowledge building in the joint discussions. In that regard the purpose of co-creation, making and/or learning together (Puerari et al. 2018), are fulfilled. The value for the CIRC4Life project was consumer's view on the solutions and how they could be evaluated. Resources refer to the participants' insights, experiences, or knowledge that they were asked to use as a basis for their co-creation work and evaluation. The recourse aspect required some adjustments and additions, since the participants lacked base information about the case itself from the company that could have aided the work. Facilitation and the process of the Service Jam and similar events can be seen as the mechanism of value creation, and the phased process and facilitation was mainly perceived positively. On the other hand, the results of the development task indicate that some of the participants of the Service Jam longed for more interaction with the companies. Even though the results of the Service Jam were provided for the project the lack of interaction during the co-creation was considered as a negative factor. From the mechanism point of view, company or firm participation and interaction with the participants is something that the author, again, suggests being taken into consideration in following events.

5.1   Limitations of the research

The purpose of this case study was to portray the unique nature of facilitation and co-creation in the specific research context. The study was made using mainly qualitative research approach. The approach choices of the study limit the generalizability of the results. The context of this thesis is narrow as it only explores a small homogenous sample group. The case study data gathering took place in a context of master's students of Laurea School of Applied Sciences. Nevertheless, case studies are accepted by the academic community as a mean to gain knowledge (Larsson 2009). As the research happened in the context of a single occurrence and the number of survey results and interviews was limited, the data cannot be taken as statistically significant (Portigal 2013). The results of the research are not meant to be widely or strictly generalized to other workshops as such.

In qualitative research the researcher has a role of interpreting the data based on her own perceptions and background knowledge. Giddens (1984) has presented a concept of double-hermeneutic nature of human studies by which he refers to researcher studying people who are acting on interpretations which, sometimes, can be produced by the researcher themself. In this study the double-hermeneutic nature is present but still wise judgements of the specific case is pursued (Larsson 2009). Also, Sin (2010, 315) reminds us that in a phenomenographic research "the researcher's voice in reporting the findings is … inevitable" which can be confronted by engaging to reflexivity in the research process. In this study reflexivity and adaptation has been involved throughout the process as stated earlier. The researcher's conceptions and perceptions of the phenomena in the analysis and presenting findings phase are supported by quotations from the interviews and survey answers. This is done to clarify and justify the data behind the conceptions and conclusions made by the author.

5.2   Transferability and suggestions for further research

Despite the limitations, the author believes that the research can provide interesting insights and useful hints to others facilitating workshops in similar contexts and hence, be transferrable. Especially the methodology used in this research can provide applicable ideas and solutions for following practitioners. Also, the nature of the study and the objective of studying co-creation practices in a narrow context to understand the topic more deeply provide an opportunity for additional and validating research. To broaden the scope, similar studies could be conducted on different sample groups, for example different projects within Laurea, separate organizations or workplace communities.

Widening our understanding of co-creation practices and virtual facilitation to other contexts would offer new insights and topics for discussion. Also, another idea for further research in how to apply co-creation practices and use different facilitation techniques and tools in different phases of a wider innovation process. Concentration on studying co-destruction in virtual facilitation context more intensely, could extend our understanding of the negative forces affecting online collaboration and innovative workshops. Furthermore, combining qualitative data with more comprehensive quantitative research provide an interesting direction for further research, e.g., examining how the virtual tools are utilized in fact (tracking the actual behaviors of the participants) and comparing that to the perceived experience.

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Figures

Tables

Appendices

Appendix 1: Google Forms Survey for the participants of the Service Jam (in Finnish)

Yhteiskehittäminen Service Jamissa

Tutkin lopputyössäni, miten palvelumuotoilun ja yhteiskehittämisen käytänteitä voidaan hyödyntää innovaatio-prosessin loppuvaiheissa CIRC4Life-hankkeen kontekstissa. Tämä kyselylomake on osa lopputyöni tiedonkeruuta. Arvostan kommenttejasi ja kyselyyn käyttämääsi aikaa!

*Pakollinen

1. Olitko paikalla

   Merkitse vain yksi soikio.

   ◯ Koko Service Jamin ajan

   ◯ Vain torstaina

   ◯ Vain perjantaina

2. Missä ryhmässä työskentelit Service Jamin ajan? *

   Merkitse vain yksi soikio.

   ◯ Ryhmä 1 / DEMO 1 ONA

   ◯ Ryhmä 2 / DEMO 1 ONA

   ◯ Ryhmä 3 / DEMO 2 IND REC

   ◯ Ryhmä 4 / DEMO 2 IND REC

   ◯ Ryhmä 5 / DEMO 3 JS

   ◯ Ryhmä 6 / DEMO 3 JS

   ◯ Ryhmä 7 / DEMO 4 ALIA

   ◯ Ryhmä 8 / DEMO 4 ALIA

3. Kuvaile ymmärrystäsi tai käsitystäsi yhteiskehittämisestä ennen Service Jamia? *

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4. Muuttuiko ymmärryksesi tai käsityksesi yhteiskehittämisestä? Miten? *

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| Väittämien arviointi | Arvioi seuraavia väittämiä asteikolla 1-5 (1 täysin eri mieltä, 5 täysin samaa mieltä).

Kysymysten aihealueina ovat:
- Yhteiskehittämisen / Service Jamin tavoite
- Tiedonjako tapahtumaa ennen ja sen aikana
- Kohtaamisten lähestymistapa
- Työskentelyn tapa, prosessi ja tilat
- Service Jamin hyödyt
- Avunsaanti pulmatilanteessa

Kunkin aihealueen jälkeen sinulla on mahdollisuus antaa avoimia kommentteja aihealueeseen liittyen. |

5. TAVOITE: Yhteiskehittämisen tehtävän tavoite oli selkeä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

6. TAVOITE: Koin voivani ryhmäni kanssa aidosti luoda arvoa CIRC4Life-projektille.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

7. TAVOITE: Opin jotain uutta Service Jamin aikana.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

8. Anna avoimia kommentteja liittyen yhteiskehittämisen / Service Jamin tarkoitukseen ja tavoitteeseen.

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9. TIEDONJAKO: Ennakkotieto tapahtumasta ja tehtävistä ennen Service Jamia oli riittävä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

10. TIEDONJAKO: Tietopohja (luennot ja alustukset) oli riittävä ryhmätyöskentelyn pohjaksi.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

11. TIEDONJAKO: Odotukset minua ja ryhmääni kohtaan olivat selkeät.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

12. Anna avoimia kommentteja liittyen Service Jamin tiedonjakoon ennen tapahtumaa ja sen aikana.

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13. LÄHESTYMISTAPA: Service Jamin vetäjät olivat helposti lähestyttäviä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

14. LÄHESTYMISTAPA: Sain / ryhmämme sai palautetta työskentelymme tueksi vetäjiltä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

15. Anna avoimia kommentteja liittyen kohtaamisten lähestymistapaan Service Jamissa.

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16. TYÖSKENTELY: Ohjeistukset yhteiskehittämisen prosessiin olivat selkeät.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

17. TYÖSKENTELY: Ryhmän sisäinen fasilitointi oli toimivaa.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

18. TYÖSKENTELY: Työvälineet (Howspace, Miro) tukivat yhteiskehittämistä/ryhmätyötä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

19. Anna avoimia kommentteja liittyen Service Jamin prosessiin, työskentelytapoihin, ohjeistuksiin tai työvälineisiin.

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20. HYÖTY: Service jamiin osallistumisesta oli minulle hyötyä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

21. HYÖTY: Uskon, että ryhmämme lopputuotoksesta on CIRC4Life-projektille hyötyä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

22. Anna avoimia kommentteja liittyen Service Jamin hyötyihin omasta ja/tai CIRC4Lifen näkökulmasta.

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23. AVUNSAANTI: Sain / ryhmämme sai tarpeeksi apua pulmatilanteissa.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

24. AVUNSAANTI: Sain / ryhmämme sai apua tai hyödyllisiä ajatuksia muilta ryhmiltä.

Merkitse vain yksi soikio.

	1	2	3	4	5	
Täysin eri mieltä	◯	◯	◯	◯	◯	Täysin samaa mieltä

25. Anna avoimia kommentteja liittyen avunsaantiin Service Jamissa.

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26. Arvioi ryhmäsi onnistumista yhteiskehittämisessä kokonaisuutena ottaen huomioon edellä arvioidut näkökulmat. *

Arvioinnin näkökulmat: Yhteiskehittämisen / Service Jamin tavoite, Tiedonjako tapahtumaa ennen ja sen aikana, Kohtaamisten lähestymistapa, Työskentelyn tapa, prosessi ja tilat, Service Jamin hyödyt, Avunsaanti pulmatilanteessa.

Merkitse vain yksi soikio.

	1	2	3	4	5	6	7	8	9	10	
Huono	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Erinomainen

27. Voit halutessasi perustella antamaasi arviota.

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Avoimet kommentit kokemuksestasi Service Jamissa.

28. Kerro vapaasti muita kokemuksiasi tai ajatuksiasi Service Jamista.

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29. Voin osallistua haastattelututkimukseen. *

Tämän kyselyn lisäksi haastattelen muutamia opiskelijoita opinnäytetyöni tiedonkeruuta varten. Haastattelussa syvennetään kyselyn antamaa tietoa yhteiskehittämisestä ja jutellaan kokemuksestasi Service Jamissa. Haastatteluun on hyvä varata noin 1,5 tuntia aikaa.

Merkitse vain yksi soikio.

⬭ Kyllä

⬭ Ei

Yhteystiedot

Haastattelua varten tarvitsen nimesi ja yhteystietosi. Vastaukset käsitellään anonyyminä ja nimeä ja yhteystietoja ei yhdistetä vastauksiin.

Appendix 2: In-depth interview field guide

Guidelines for the interviewer

- *Interviewer is here to learn, interviewee is the expert*
- *Create rapport, be kind and warm*
- *Ask open-ended questions, listen to the answer*
- *Dig deeper using 5 whys*
- *No rush*

Intro

- Explain the purpose of the interview
- Recording the interview - is that OK?
- Explain how the interview flows
- Explain what kind of questions
- Ask if everything is clear

Background

- Tell me about yourself
- Describe yourself as a consumer
- What is your background in groupwork?

Co-creation

- Comprehension on co-creation before the Service Jam
- Change in perception during / after the Service Jam?

Experience

- How would you describe your experience in the Service Jam?
- How do you compare it to other similar events?
- Success factors of groupwork and co-creation
- Factors that hinder groupwork and co-creation
- Decision-making techniques with the team

Tools (positive in survey)

- Groupwork in an online mode
- Virtual environment and its characteristics

Informing and guidance (negative in survey)

- How did you perceive informing and guidance at the Service Jam?
- How clear was the purpose of the Service Jam?
- Added: What elements supported interaction (in the group, between the groups, between the group and the facilitators)?

Positive and negative feelings in groupwork

If you think back on this event or similar ones, in what kind of situations you feel

   a. good or positive
   b. bad or negative
   c. discouraged or depressed
   d. energetic or empowered?

Feelings of Service Jam (Photo Elicitation)

   - Which of these photos describes best your feelings before the event?
   - Which of these photos describes best your feelings during the event?
   - Which of these photos describes best your feelings after the event?

Future events

If you would participate in a similar event in the future, what would you hope to be

   a. changed or developed
   b. kept the same
   c. added?

Final questions

   - Is there something you would like to add?
   - Is there something you would like to ask from me?

Thank you!

Appendix 3: Example of fieldnotes (in Finnish)

Aatu, työnimike x

Aatu asuu …. ja opiskelee töiden ohessa …. ohjelmassa Laurean YAMK:ssa. Hänellä on kova kiinnostus työelämätaitoja ja yhteiskehittämistä kohtaan.

Kuluttajana Aatu on tiedostava, mutta loppuen lopuksi kuitenkin impulsiivinen kestävyyden näkökulmasta. Hän on tunteella elävä eikä pohjaa kulutusvalintoja arvoihin. Joissain asioissa on valveutunut, kuten elektroniikassa.

Ryhmätöitä Aatu tekee paljon koulussa ja hänen mielestään mielenkiintoista on se, että mukana on paljon ihmisiä eri taustoilla, jolloin jaetaan kollektiivista älykkyyttä. Töissä kehitetään työkaluja ja opetusta. Sitä kautta uusien asioiden yhdistämistä ja luomista. On kiitollinen mahdollisuudesta tehdä tiimityötä. Ryhmässä Aatu ottaa helposti liidiroolin.

"Se vertaisoppiminen niinku toiselta ryhmältä ja sit se, sit tietysti se yhteistyö siihen case-yritykseen ni ne ois ollu semmosia et niitä ois voinu olla enemmänkin."

Yhteiskehittäminen

Aikaisempi kokemus yhteiskehittämisestä
Töiden kautta yhteiskehittäminen tuttua ja on järjestänyt mm. innovaatioleirejä. Ensimmäinen ajatus yhteiskehittämisestä on se, että on yritykset ja asiakkaat/sidosryhmät, jotka vie asioita eteenpäin yhdessä. Tekeminen tulee yritysten puolelta. Service Jamissa lähestyminen oli vähän eri ja yksinkertaistetumpi kuin tämä ennakkoasetelma, jossa mielikuva oli vahvemmin yritysvetoinen. Yritykset eivät olleet näkyvästi mukana.

Mitä yhteiskehittäminen on?
Yhteiskehittämisen erottaa ryhmätyöstä nimenomaan se, että kehitetään jotain ja viedään asioita eteenpäin. Yhteiskehittämisellä tehdään jotain, jotta se olisi parempi.

Ajankäyttö

Mitä ajatteli ajankäytöstä?
Kaksi päivää meni tosi nopeasti. Mutta Aatun mielestä kaksi päivää oli aika maksimi tälle. Kolmatta näin intensiivistä päivää hän ei olisi enää pystynyt venymään, varsinkin kun päivät oli pitkiä.

Jos työskentely olisi jaettu kolmelle päivälle lyhyemmiksi, ei olisi ehkä kuitenkaan ollut niin tehokasta.

Mitä seurauksia ajankäytön pieleen menemisellä?
Jos kukaan ei katsoisi aikataulun perään tällaisessa työssä, missä on monta välivaihetta ja tiukkoja aikatauluja, se aika nopeasti pilaisi jutun. Silloin kaikki kumuloituisi siihen, että on hirveä kiire ja se näkyisi laadussa.

Appendix 4: Co-creating key insights in Miro using Design Principles method (in Finnish)

PROSESSI

STEP 1: Key insightien läpikäynti, keskustelu

STEP 2: Key insightien priorisointi, vaikuttavuus

STEP 3: Design prinsiippien muodostaminen

STEP 4: Tarvittaessa design prinsiippien klusterointi, priorisointi 3-10 prinsiippiin