

Co-creative practices in service innovation

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Abstract

This chapter is about co-creative practices that can be used for the purpose of service innovation. It starts with an introduction to our core assumption that innovation is a deliberate activity and can be enabled and triggered through staged co-creative practices. The main reasons for co-creative practices are first, bringing different people together to share, make sense and to collaborate, and secondly, to rethink current and explore future possibilities.

In line with Kelley's ideology "You can prototype just about anything. What counts is moving the ball forward, achieving some part of your goal." we highlight the open-ended exploration practices familiar to designers in which the practice of identifying problems goes hand in hand with creating solutions. The basis for exploration in this chapter is in engaging people in reflective and creative dialogues, and to situate activities in order to set frames for reflection. In practice, the co-creative practices emerge and evolve in a non-linear progress of stages that are partly overlapping and in relation with each other. This chapter however, is organised through the use of four lenses: 1) insight generation, 2) concept exploration and development, 3) converging towards a specification and 4) transformative and implementation processes. The chapter introduces a number of examples and applied co-creative practices from various fields of service design. They address the co-creative character of many well-known tools such role playing, context mapping, design games and experience prototyping. Finally, the chapter sums up the main considerations for the applications of co-creative practices, defining the purpose, utilizing co-creative characters and developing facilitation capacity.

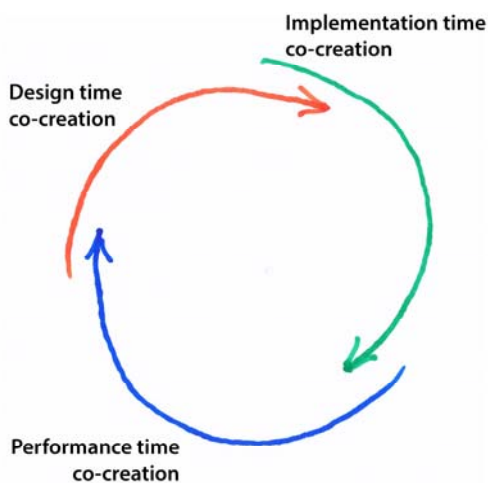
Key words: co-creation, design practice

5.2 Co-creative practices in service innovation

5.2.1 Introduction

Designing is about exploring future alternatives and articulating solutions in a concrete way. Collaborative designing in turn means to do this together with others. In such explorations, identifying the problem and finding the solution often go hand in hand by making sense of the current systems, experiences, solutions and practices and at the same time seeking insights for future ideas.

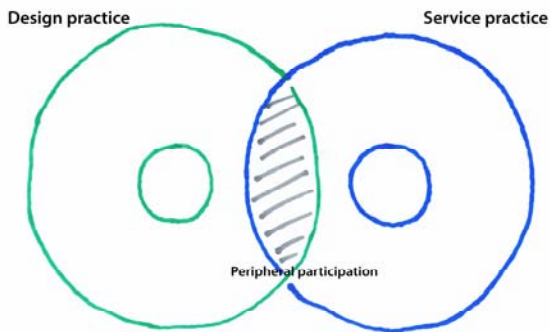
Service is, in one sense, from its outset a co-creative practice. That is, people collaborate in co-creating value in context by integrating resources through usage, to achieve common and individual goals. In service logic there is a distinction made between three value-creating spheres (Grönroos and Voima 2013; Grönroos 2008), where the joint sphere is the service company's access to the knowledge and practices of the customers (Grönroos and Ravald 2011; Heinonen et al 2010). This can be referred to as *performance-time co-creation*, to make a distinction with *design-time* and *implementation-time co-creation* (Holmlid 2012; Edman, et al 2013).



In this chapter we will focus mainly on co-creation practices in design-time but touch upon co-creation in implementation-time. By viewing a service as a co-creative practice, new possibilities of enhancing these practices to contribute to innovation processes are opened. Often this is done by studying and engaging people before proposing solutions. It can also be done through experimenting with changing of the practice as such (see e.g. Burns et al 2006), and/or by changing the surrounding service process and system.

Co-creation and co-design are terms that have been used to represent a variety of creative and collaborative practices in design. In addition, co-creation has been widely used also outside the design field for example in the context of service marketing. In this chapter we focus mainly on design related practices of co-creation.

Co-creative practices can be viewed as practices where a design practice and one or more communities of practice participate in creating new desired futures. Lave and Wenger (1991) describes similar processes from a situated learning perspective, where professional development typically goes from peripheral participation in a community of practice to full participation. In design related practices of co-creation, designers are peripheral participants in several service practices, and vice versa. Given this pluralistic peripheral participation it is important that the co-creative practices used are well crafted.



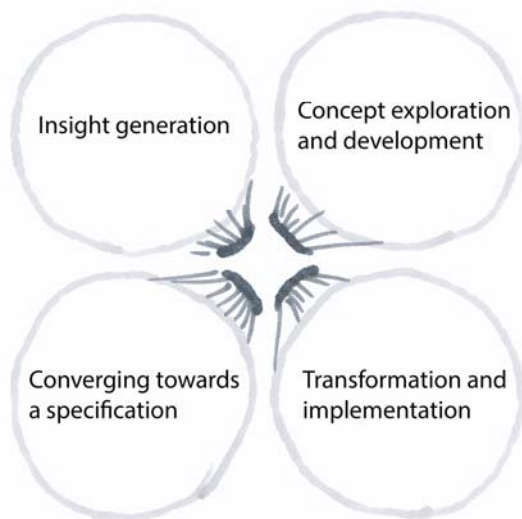
To set the stage for understanding co-creative practices it is important to acknowledge that they cover a spectrum of tools and processes that can be conducted with different modes and mindsets.

Firstly, there are different modes of co-design. Mattelmäki and Sleeswijk Visser (2011) have proposed that there are four modes of co-design that reflect the traditions and practices involved: In the *1st mode*, the users are given voice and their expertise is utilized in the design process, i.e. referring to interviews, observations and the traditional ways to gather user data to design processes. In the *2nd mode*, the users contribution is facilitated with (co-creative) tools provided by the designers or researchers. In the *3rd mode*, the designer is not only a facilitator but participates in the collective creation; and in the *4th mode*, designers and design researchers support and facilitate a collaborative process of various stakeholders, not just users. In this chapter we will focus on the three latter modes.

Secondly, there are different mindsets of co-design approaches Sanders and Stappers (2012) have made a map of different approaches by placing them according to two dimensions: The first dimension addresses design driven *vs* research driven approaches, meaning that some of the practices emphasizes designerly constructive envisioning while others are more research and validity oriented. The second dimension considers expert mindset *vs* participatory mindset, meaning that the relationship and the roles of the people engaged, and their contribution varies according to some mindsets and traditions (ibid). Thus, in some the designers take the leading role and responsibility of the outcomes, while in others the outcomes are constructed collaboratively.

This chapter will give an overview and insight into co-creative practices that can be used for the purpose of service innovation. The chapter is based on the assumption that innovation is a deliberate activity, and the chapter takes as its starting point that the co-creative practices are not part of everyday service performance. We propose that the main reasons for co-creative practices are first, bringing different people together to share, make sense and to collaborate, and secondly, to rethink current and explore future possibilities.

There are a number of different models that explain and depict design processes. Many of them fail in explaining the iterative nature of the process and how co-creative practices could be applied in them. The chapter is based on a conceptual model of lenses, which describes perspectives that direct the process to innovations; where generation of insights, exploration of concepts, convergence towards specifications and implementation all are needed. Instead of a linear progression in several stages of an innovation process one might need to converge towards a specification, in order to open up for generating more insights, etc. Moreover, the different lenses share elements and exhibit ambiguous relationships with each other. That is, it is difficult to devise a co-creative practice that contributes to only one of these stages.



The chapter is organised based on the four lenses: insight generation, concept exploration and development, converging towards specification, and transformative; and implementation processes. Each section of the chapter introduces one of the four lenses, details some general characters of co-creative practices, describes some methods or tools for co-creation, and give some examples from applied projects that show how design for service and service innovation meet and leverage each other through co-creative practices.

5.2.2 Co-creative practices in insight generation

Insight generation activities on the one hand explore the users' and other stakeholders' aims and needs, and on the other seek alternative ways to approach the design solution space. Insight generation is part of the fuzzy front end of the innovation process and often goes hand in hand with many other activities such as stakeholder inclusion, setting up relations, setting the scope of the innovation project, etc. Many of the tools created for insight generation are open-ended and aim to trigger, inform and inspire the ongoing process.

Insight generation is about identifying needs, wants and potentials and, thus, deals with exploring and being curious about what users experience and could experience in the desired future situation. Insights can be considered as starting points for the idea exploration and they can come from many different angles; from desk research (existing information about users owned by the service providers or found through other means) over trends research and strategy positioning to competitive analysis. User research is a prominent part of insight generation, since it aims to document and create understanding of users' everyday lives, their lifestyles and what drives them, their needs, values and motivations. However, this is not merely a collection of available user data. Rather it is a rich rhizome of interpretations and emergent empathic patterns, construed by becoming peripheral participant in the practices of other actors.

To reach this explicit as well as under-the-surface understanding, users need to become aware of their experiences. They need to be given means to open up to share these experiences, as well as to be able or be enabled to expressing them. For empathic understanding, designers need time, dialogue and collaboration, in contrast to more traditional forms of user insight work, where users often are treated as respondents in giving answers to questions¹. There are better ways of dealing with this.

In a project with people with diabetes, run by the do-tank RED², the participants were shadowed and interviewed, but they were also asked to perform a set of exercises that tapped into aspects that were more subtle and harder to capture by observation. They were mapping emotions, sorting cards on leisure activities and doing a drawing exercise. The researchers shared their effort and attitude: "We spent a number of hours with each person, sometimes much of a day, trying to understand their lives, not just their disease." (Burns et al 2006)

¹ There are two problems with the idea of asking questions in this manner. First there is the well-known caveat that one will only get answers to what has been asked. The second, and less highlighted, is that analysis often focus on the words in the text, and not what the answer means, or what the interviewee is talking about.

² Documentation of the work of the do-tank can be found at <http://www.designcouncil.info/RED/>

Because of the entanglement of problem and solution spaces in a design approach, it is not possible to ask users to answer precise questions. Designers simply do not claim to know the exact questions to ask yet.

There is an interesting crux in co-creative practices with users when trying to generate insights: On the one hand activities need to support a dialogue, a mutual understanding of aims and scope, and a shared language to understand existing experiences of users with current products and services in their everyday lives. On the other hand the activities in insight generation need to open up towards alternative futures; desired futures. The multiple goals of anchoring and futuring, becomes a good foundation for participatory design activities.

5.2.2.1 Co-creative character 1: Improvisation in insight generation

Improvisation techniques have been identified to be fruitful for insight generation ((e.g. Sato and Salvador 1999; Brandt and Grunnet 2000; Iacucci et al. 2000)). They build on improvisation theatre and forum theatre to facilitate making the otherwise hard-to-grasp tacit knowledge explicit (e.g. Brandt and Grunnet 2000). Improvisation needs particular facilitation, which can be set either in a use context or in a particular setting such as a meeting room or a workshop. Theatrical exercises call for lateral thinking and spontaneity in form of “imagination-in-action” (Johnston 1998/2005, p 136) and hence, are useful in generating insights into people’s experiences and practices as well as opening up solution spaces for new ideas. Improvisation may not always be easy but there are strategies that can help. For instance, community drama facilitator Chris Johnston ((1998/2005)) suggests giving participants some fixed elements, such as a theme (betrayal), a restriction (no speech), or an objective (to win a favour), as frames for action. Frames can be given also in form of tangible props i.e. artefacts used by actors to support performance (Sato Salvador. 1999). When acting out scenarios, props together with the surroundings, body movement, and verbal expression, helps to convey meaningful ideas.

5.2.2.2 Co-creative character 2: Staging events for insight generation

Staged events, such as different types of design workshops, are common mechanisms to invite users and multiple stakeholders to explore insights together with designers. Workshops are specifically arranged situations that have a predesigned structure, tasks and facilitation. They may be preceded by some tuning-in activities, for example in the form of sensitizing kits, that are given to the co-design partners/users approximately a week before (Sleeswijk Visser et al. 2005). The aim of such kits is to get participants to reflect on the topic addressed and hence be more prepared to share experiences, dreams etc. related to it. Johnston (1998/2005) divides workshops roughly into three main sequences, which are warm-up, main part, and feedback. The three parts give a basic frame to set the timeline for actions, moving from transforming participants’ thoughts into the topic and towards an immersion in own experiences, followed by a creative setting, to insight generation and end with reflection on what was learned.

5.2.2.3 Co-creative character 3: Playfulness in insight generation

Playfulness is a mode used in staged events that aim to facilitate conversations and envisioning among participants. For example, design games are generative, sensitive,

visual and playful tools aiming at sensitizing the imagination and facilitating exploration in co-design settings (e.g. Brandt 2006, Vaajakallio 2012). Tangible material promotes an explorative, playful and creative attitude. The material and rules invite both verbal and non-verbal reactions and dialogue, and support various means of expressing one's thoughts, dreams and knowledge. Acting out scenarios or having tangible props can evoke different kind of insights. The tradition of using constructive design settings can be found in design, with early work on concept games (Habraken and Gross 1987), in participatory design (Ehn and Sjögren 1991) partly influenced by Jungk's work on future workshops (Jungk and Müllert 1987), and in business innovation through serious play (Roos, 2006). In participatory design the aim has been to empower people, and in business innovation to articulate challenges, and its applications in service related innovation has afforded an even wider scope.

If one turns the attention towards methods, tools and techniques in co-creation of insights, they are distinct from traditional research tools. Methods and activities in co-creation of insights are not simply about data gathering and analysis processes, as with traditional research tools, but more about exploring users' past, present and future experiences as well as exploring the future solution potentials. Accordingly, many methods purposely aim at collaborative exploration. In its most lightweight form, co-creation in insight generation has similarities to ethnography, but extended with human-centered design (Segelström and Holmlid, forthcoming).

In the following we will introduce four methods for insight generation. The two first will be shortly introduced, *probes* and *context mapping*. Then, in the following co-creation examples two other methods will be described, *on the move* and *design games*.

5.2.2.4 Co-creative method/tool 1: Probes in insight generation

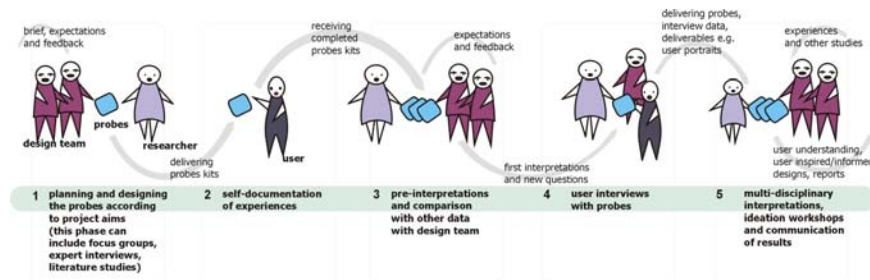
The *probes* method, was originally developed by Bill Gaver and his colleagues (Gaver, Dunne Pacenti 1999; Gaver and Dunne 1999) under the label Cultural Probes, and was used to inspire and inform designers about the contextual issues and personal opinions and lifestyles of people involved. The probes method is based on self-documentation, i.e. the probes are open-ended and often ambiguous assignment kits given to the users to document and reflect, by themselves, about their experiences in the context they happen. Probes are descriptive and predictive, in other words they try to capture the current experiences and trigger the people involved to reconsider possible expectations and solutions. Once the assignments are completed, the kits are returned to the designers for interpretation. Depending on the specific case, probing can be complemented with e.g. interviews and workshops. The probing process is composed of several steps, from (co-)creating the assignments, over invitations to participate in probing, to drawing design ideas. This trigger insights and discussion among users, between users and designers, and amongst the design team. The aim of such discussion is in sharing experiences and inspiring idea generation. The probes, as a method, have been widely spread and the application style and field varies greatly. Some of them following the ambiguous and artistic spirit of the Cultural Probes, some take a more research oriented point of view. In Mattelmäki's research on Design Probes (Mattelmäki 2005; Mattelmäki 2006), there was identified four reasons for using probes. In addition to 1) inspiration and 2) information mentioned by Gaver et

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Brandt, E. and J. Messeter (2004). Facilitating collaboration through design games. *Proc. Participatory Design Conference 2004*.

Brandt, E. (2006). Designing Exploratory Design Games: A Framework for Participation in Participatory Design? Proceedings of the ninth conference on participatory design (PDC 2006). New York: ACM Press, 57–66.

al (1999), the probes can be used for 3) participation, i.e. engaging users in the design exploration, and 4) dialogue, i.e. where the process of probing is initiating and facilitating of dialogues and empathy.



FIGURE

5.2.2.5 Co-creative method/tool 2: Contextmapping in insight generation

The *contextmapping* approach, developed by Sleeswijk Visser (2009), is also built on the same foundation as probes; on collaborative sense-making in which the insight generation process is believed to be a non-linear process that has both rational and non-rational arguments. The process starts by engaging users to tell about their experiences through assignments. The process continues by discussing insights with the designers in open-ended dialogues that aims to support empathy as well as collaborative creation.

These approaches are based on a mindset in which users are treated as experts; experts of their experiences and in that role they contribute to the design process. In contextmapping in particular users and designers typically meet in follow up generative activities. Similar to many co-creative practices for insight generation, the artefacts created by the users in contextmapping, or in the probing assignments, are not aimed at designing solutions as such (although the assignment might be phrased in terms of ‘design your own personal ideal device for...’), but a way to get them talking and reflecting about their experiences. In the methods described below, however, artefacts or ‘props’ and the roles users take (in role playing/acting) are more directed towards identifying constraints and exploring future situations

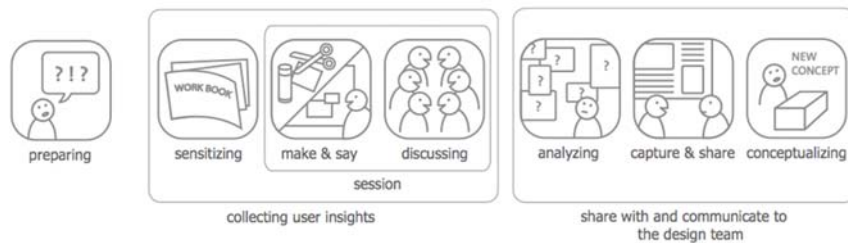


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In the following examples we identify several challenges and mechanisms when creating settings for a dialogue between designers, researchers and users, and for identifying and exploring needs and generating insights together.

5.2.2.6 *Co-creation example 1: Seeking insights from the context with probes*

The first example is from a project that aimed at creating alternative and customized solutions for ageing workers, and that focused on a particular service company in the field of cleaning, catering and maintenance services (e.g. Mattelmäki et al. 2011). One of the first steps in the process was to understand what the ageing workers value, what their reasons are for early retiring and what the practical working days are like. Probes kits were given to 14 ageing workers for about a week. The assignments in the kits varied from more metaphorical tasks considering their motivations and characteristics to practical documentation of workdays. Each of the participants was interviewed to get deeper into the insights found in the probes kits.

The probes process opened up dialogues at least in two ways. Firstly, it was an icebreaker between design researchers and the ageing workers. It was a mediator to get to know each other and to start talking about meaningful issues suggested in the probes kits. This dialogue served as a basis for the next steps in the co-creative process. Secondly, the probe results supported dialogues between other relevant stakeholders. The insights from the probes and the interviews were collected and discussed with other stakeholders, among others the management of the company, by using narrative persona descriptions to underline the personal view on working days, motivations and challenges of these ageing workers. Similar to contextmapping these descriptions were open-ended interpretations and they aimed at sharing insights, for making interpretations when moving towards co-creation of concept exploration (Mattelmäki et al. 2007).

5.2.2.7 *Co-creation example 2: Improvised scenarios in use context*

The second example is from the same project and titled ‘Situated Make Tools’ (Vaajakallio and Mattelmäki 2007; Vaajakallio 2012), and it combined improvised scenarios and make tools (Sanders and Dandavate 1999). The aim of the co-creative exercise was 1) to establish a view into ageing workers’ normal work practices, 2) to generate design ideas expressed in physical, narrative and acted-out formats, and 3) to develop new concepts that are based on the workers’ needs, desires, practices and attitudes. The design space was framed to envision novel functionalities of digital information and communication technologies.

The process was inspired by the “on the move with the magic thing” experiment described by Iacucci et al (2000). In the experiment they used a simple mock-up, a magic thing, to support users’ thinking and acting. The magic thing is open by nature, and it can do anything the user can imagine. Accordingly, in Situated Make Tools, ageing workers were asked to build a dream device that they could somehow utilise during their workday by a provided set of make tools. (Vaajakallio and Mattelmäki 2007). During ninety-minute observations of ageing worker’s practices in their own context, designers’ encouraged the worker to act out possible use situations every now and then. Users’ everyday situations and practices thus served as the basis for improvised scenarios. The users were the experts of their own work, and the dream

device they had constructed earlier, and were able to express important insights for the continued design process (ibid.). Improvised use scenarios illustrated usages of the dream device in a number of ways and for various purposes, and created an understanding of current practices, and how those potentially could be changed/improved with new technologies. They also pointed out contextual needs, opportunities, and limitations.

Since the users were not accustomed to performing scenarios, the design researchers set up the following strategies:

- The designers conducted several observations on similar locations and on work practices to familiarize themselves with the context and with what could be expected to happen there.
- Before organizing the Situated Make Tools sessions, there had been several meetings between the users and researchers so that they knew each other prior to insight generation meetings.
- To get prepared for building the device and for the improvisation, every session started by discussion of (mobile) technology that is part of the users' current work.
- The researchers initiated the performances by asking about what had just happened and whether that could be changed with the dream device, after which they asked the user to show how.
- The performances in which the participants acted as themselves took place in a familiar environment and were based on their daily practices. Furthermore, it was the users who built the dream devices, thus they were their designs – not the researchers' design.
- Tangible 'dream devices' made from make-tools enabled exploring and creating solution ideas when acting instead of a need to rely on earlier proposed features (which might be hard to remember).

To sum up, imagination-in-action became visible when users performed how they would use the dream device in different situations. It made tacit knowledge embedded in situations, environments, and people visible which allowed then the designers' to get a grasp on. For those ageing workers, who didn't feel comfortable with acting in public places where they work; for example, a cleaning woman working at a public swimming hall, verbal description was allowed. In these situations, designers' asked them to describe recent experiences in detail. The dream device played an important role by connecting the described situations and ideas to the tangible mock-up. For most, nevertheless, performing scenarios seemed quite natural.

5.2.2.8 Co-creation example 3: Changing roles while improvising

In the third example, by Lily Diaz-Kommonen and her colleagues (Diaz Kommonen et al 2009), users were taken from out of their comfort zone, playing a role they had little experience of. They were invited to step into the shoes of an archaeologist in order to envision new user interface opportunities. This exemplifies an approach where the idea is to set the story and role outside the user's everyday life and to take storytelling as a creative starting point for new insights. As described (ibid., p 81), "storyboards can capture characters' important moments such as encounters,

emotions, moves, expressions, gestures, sounds, utterances, thoughts, words, environments and artefacts”.

The narrative was a story about an archaeologist, who finds a piece of ancient pottery and then has the task to create a digital three-dimensional replica of it. The participants were asked to take the role of the archaeologist and envision a way they would reach the goal.

In this case, the story and role were purposefully set outside the participants’ everyday life to release them from the restrictions of their work practices and to allow them to imagine the system from several perspectives. According to Diaz-Kommonen et al. (ibid.), performance, supported by the script given in the beginning and some costumes and props, made the participants take different standpoints on the topic, which opened up new insights. Others, such as Seland (2009) are more critical towards creating settings outside the users’ everyday life, since that might trigger stereotypical behaviour. In Seland’s argument, when the participants play themselves, their improvisation becomes natural and they can base the play on their own everyday experiences instead of relying on stereotypical acting, which may easily happen when the participants are asked to pretend to be someone else. (ibid.)

Any insight generation situation may take a different path than what was planned. This open-endedness puts emphasis on designers’ sensitivity towards unexpected; sometimes the most interesting insights are released in those moments (e.g. Mitchell etc. 2013). In addition, when role-taking, participants may overact their roles or put emphasis on secondary issues (Seland 2009), which opens up possibilities to gain insight on system borders and the taken for granted.

These different viewpoints are in line with the two different aspects of insight generation proposed earlier: on one hand understanding the existing situation by collaboratively exploring past and present situations close to users’ realities, and on the other imagining possible futures in which users need to be supported to project their needs in future situations.

5.2.2.8 Co-creation example 4: Insight generation through storytelling

In the fourth example the stage for insight generation was organized with less preparations than in the previous cases. The workshop was structured through a design game planned for this particular purpose; the Storytelling Game (originally Storytelling Group by Kankainen et al. 2011; Vaajakallio 2012). It was a lightweight variant of an insight generation event that aims to open desired future service experiences with a focus on social media. In the game, participants project their current and past experiences into a collectively constructed story with a fictive character. The interaction, and the insights, among participants – in this case people of different ages, skills and habits in social media, service developers from a partnering company and service designers – evolves through storytelling. The players propose events to the story by describing customer journeys of long duration and reflecting on services as a dynamic process rather than a single use situation or task.

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Mitchell, R., Caglio, A. Buur, J. (2013)

Oops! Moments: kinetic material

In participatory workshops. In Proceedings of Nordic Design

Research Conference 2013, Copenhagen-Malmö,

www.nordes.org

The story titled ‘warm-hearted surprise’ or ‘savior of the day’ was given to the participants to guide the storyline, while being open for many interpretations³. To make it relatively fast, cheap and easy to produce, materials were minimized into a white paper with a line drawn to illustrate the timeline of a customer journey and few images as reminders of possible service channels.

The game invited players to bring in contextual understanding and user insights. To transform the players’ verbal expressions towards more tangible evidence of the events in the story, the facilitator wrote players’ propositions down on post-it notes and placed them on the timeline. This materialised the discussion and enabled returning to different parts of it later.

The following techniques to support storytelling and connecting it to user insights were applied:

- The main facilitator focused on writing things down and keeping storytelling evolving
- A second facilitator, a creative secretary, was added to ensure that emergent topics that would be important for the work of designers were discussed further;
- The titles related to the service were fixed elements that gave frames and starting points for discussion;
- Storytelling was utilized as a dramaturgical structure to invite participants into a ‘game world’ where everyday norms and rules did not count, and to point out unexpected situations, that could show the way to novel services (Vaajakallio 2012).

5.2.2.9 *Summing up insight generation*

All of the cases include role-playing in some form. Since role-playing seems to be a powerful way to explore the future situation from everyone’s perspectives its potential has been noticed in service design (e.g. Holmlid and Evenson 2006, Blomkvist, Åberg and Holmlid, 2013). Although role-playing in its different variations has regularly been applied in design during the last decades, it has not been used systematically (Seland 2009). One of the reasons why role-playing hasn’t become common practice could be the stress it puts on the facilitator, that the facilitator has a large influence on the validity of the created scenarios, and thus leadership is a critical factor (ibid.). It can also be a stressful approach for an inexperienced participant. Lego, puppets and playmobile dolls alike have also been applied in similar purposes and situations partly to avoid the discomfort of acting out in person (see e.g. Halse et al 2010).

A basic foundation for identifying real needs of users is to involve them to become aware of their experience and being able to express these. Co-creative assignments and activities often consider the current situation and past positive and negative experiences. By recalling upon their memories and supporting them to reflect on these memories, they become more aware and are better able to express them. The process of co-creative assignments supports the dialogue between the users and designers as

³ The name of the stories in Finnish were, ”sydämellinen yllätys” and “päivän pelastaja”

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Halse, J., Brandt, E., Clark, B. Binder, T. (Eds.) (2010).
Rehearsing the future. Denmark, Copenhagen: The Danish
Design School Press.

well as among design teams (Mattelmäki 2005). To achieve an empathic understanding through the insight generation, the design team has to open up, both cognitively and emotionally.

Discovery into the users' world, immersion in the users' world, and connecting cognitively and emotionally are basic steps in the empathic understanding process (Kouprie and Sleeswijk Visser 2009). To reach envisioned futures designers take distance from the merged worlds with the users in order to detach and start to project the gained understanding into explorations in the future.

5.2.3 Co-creative practices in concept exploration and development

The co-creative practices we will go through in the following, share that they are promoting a divergent approach. Here the interest has moved from being focused on the needs and wants of different stakeholders, to exploration of possible concepts that might fit with these needs and wants. Many of the co-creative practices use articulations and manifestations of these concepts, as vehicles and focal points for experiments with and dialogues about the concepts and their underlying assumptions. At first glance some of them resemble prototyping, and prototyping easily creates a picture of engineering workshops in which soldering and programming takes place. However, as pointed out by Buchenau and Fulton Suri (2000), experience prototyping can take form in quite a variety of ways. For example as a way to build a conversation, identify relevant players and explore and concretize visions.

The manifestations used in collaboratively exploring concepts are not for testing or evaluating ideas but rather concretizing, exploring and developing possible futures in collaborative manner. In effect, the manifestations are agile and lightweight.

5.2.3.1 Co-creative character 4: Reflective dialogue in concept exploration

Reflective dialogue can take on many forms. In the exploration of concepts dialogue complement the tools and events that are employed to drive a divergent mindset. For example, if one is working with a prototyping process, it might be more important to make the prototype together with stakeholders and target groups, than evaluating it with representatives from the intended target group. Here the process of making a manifestation of an imagined future is used as a means to sustain reflective dialogues with many of those involved in service development and later service performance.

5.2.3.2 Co-creative character 5: Situating events for concept exploration

Many authors have emphasized contextual approaches either by taking the workshops into the context under study (e.g. Binder 2007) or conducting design experiments on the fly while users are engaged in their everyday practices (e.g. Iacucci, Kuutti and Ranta 2000; Ylirisku and Vaajakallio 2007). Examples of such contextual approaches were introduced in the previous section to illustrate the link between understanding people's current practices and envisioning future solutions. Building future visions on top of current situations can help to maintain the link between the imagined and facts. Everyday practices can also be valuable sources of knowledge and inspiration. However, contextual approaches have some challenges as well, particularly in service design, where defining the use context may be hard since it typically covers several locations bound together as a customer journey. Hence, the whole service experience

then consists of several activities and stages such as preparation, approach, arrival, actual service experience, and follow-up. These are all influenced contextually and through interactions, specific for their own contexts. Exploring a particular piece of a customer journey in-situ, for example, may not serve the purpose of envisioning a new complete service experience.

5.2.3.3 Co-creative method/tool 3: Speed sketching in concept exploration

One technique that specifically builds on the expressive powers of drawing is *speed-sketching*. It is a form of brainstorming technique, where the output is sketches. As stimuli for generating ideas, different forms of scenarios can be used. In (Wentzel and Holmlid 2009) the facilitator used scenarios that were co-created through design probes, where some were nightmare scenarios and others were ideal scenarios. Participants were supposed to quickly do thumbnail sketches of ideas, solutions, concepts, etc. from hearing a scenario being read out. In that specific project, the nightmare scenarios were the ones associated with the most sketches. Participants claimed that it was easier to quickly identify a problem to solve in the nightmare scenarios and generate sketches for that, than building on and developing ideal situations.

5.2.3.4 Co-creative method/tool 4: Magical things in concept exploration

In their paper “on the move with the magic thing” Iacucci, Kuutti and Ranta (2000) use a simple mock-up, a *magic thing*, to support users’ thinking and acting in a real-world context. These magic things are capable of doing anything the user imagines. As such they become focal-points for needs and issues emerging in the contextual situations in which they engage. The functionalities projected onto the magic thing uncover the resourcefulness of users in their capability to imagine new ways of integrating existing and innovative resources in service performance.

Next, three examples illustrate the above-mentioned for co-creative concept exploration and development. Public organizations and their service development have been considered as slow to change. In the first example such organizations experience design prototyping as a way to step out of the box and co-create ‘the feeling of things’. The two subsequent examples shows concept development in an environment especially designed and built for collaborative explorations of future possibilities and in particular, developing solutions further collaboratively.

5.2.3.5 Co-creation example 5: Dialogue-labs as settings for exploring augmented mood boards

This example is about setting up a co-design activity in a Design:Lab (e.g. Binder 2007) or a meeting room that was transformed temporarily to look and feel like a design studio, hence the name ‘Dialogue-labs’. The setting had similarities with a laboratory or theatre stage allowing to specifically build on and use those elements of a design studio that had been found relevant in relation to the given design task. The meeting room was more controllable than for example the participating designers’ studios, had the co-design taken place there. The dialogue-labs were organised in 2007, including altogether seven co-design events. It was part of a study on

augmented mood boards (Lucero 2009) and the overall theme was to imagine future ways of creating and communicating mood boards. The co-design setting aimed at supporting dialogue among researchers and possible users, the industrial designers, to gain feedback for the initial design concepts and to develop them further together.

The design lab was purposefully planned to act as a stage for co-creative exploration and development. For sharing experiences and developing ideas, there were various triggers, or props, from make-tools to different objects and videos. These props were brought in to the stage without specific connotations. In the process of co-creating the participants attached meanings to them according to contextual and emergent needs. For instance, make-tools foam blocks became binoculars, and a pile of post cards was used to represent a material sample. By providing a wide range of media for expression the participants were allowed to find an appropriate dialogue style in a particular situation, meaning that they could rely on a medium that they are familiar with or feel comfortable working with in a situation where the space and co-designers are typically new to them. In general, co-creation stages, such as the described design lab, use materials as props and building blocks to support co-creation in solution seeking in explorative manners (see e.g Agger Eriksen, M. Material matters in co-design 2012.)

5.2.3.6 Co-creation example 6: Cardboard hospital for prototyping patient-centric environments and services

This example is about exploring and developing more patient-centered hospital infrastructures and services in collaboration with the experts from the field of healthcare, architecture, service design and hospital users. The setting for the co-design process was a black box theatre at the university premises. In this black-box the physical human-scaled prototyping environment was built up for a week. As Kronqvist et al (2013) explain “The idea was to create a setting that would support exploratory and individual ways of acting and doing things while being an aesthetically inspiring environment for creative activity”. The prototyping material included doors, boxes, walls, screens, signs and small screen-like cardboard elements, with which participants could build flexible and easy to modify spatial settings. In addition, the prototyping environment had specific objects such as a hospital bed. This bed turned out to be too realistic, in the sense of limiting the creative thinking in the early design phase.

Three prototyping workshops were organised to co-construct hospital spaces using human-scale cardboard blocks and other prototyping materials. While exploring alternative physical settings, participants also reflected on healthcare services from patients’ perspective. The cardboard hospital was conducted in the early stages of architectural planning process to let concept development influence the new hospital wing that should be ready in 2017 (Kronqvist et al 2013).

5.2.3.7 Co-creation example 7: Design games as setting for concept development

This example looks at a set of co-creative methods, called design games from the perspective of how different types of prototypes or mock-ups have been applied in participatory design practice. The focus of design games that mainly invite users to contribute to design processes has widened to involve multiple stakeholders in the creative exploration of possible futures. Exploratory design games (Brandt 2006), for

instance, may take various forms, but as the name highlights they all share an exploratory nature, hence allowing co-construction of different future scenarios. One such is the Landscape Game, where players create contexts and physical surroundings for personas created earlier in the design process. The tangible game materials include a conceptual game-board, moment cards and trace cards, which introduce elements from the physical surroundings identified during the field studies, while at the same time guides discussion and development of stories. (e.g. Brandt and Messeter 2004; Brandt 2006)

5.2.3.5 Summing up concept exploration

The basis for exploring concepts is to engage users in reflective dialogues, and to situate activities in order to set frames for reflection. Carefully crafting these situations, and tooling them, becomes necessary to allow for, e.g. acting out future scenarios, rather than grounding them in what is possible today. However, if all aspects of such a situated activity are open for experimentation by the participants, it will be difficult to explore and ideate as choices are too many. Thus, it is important to craft both what should be kept static, where elasticity should exist, and what should be open for experimentation.

Moreover, often in these situations designers turn into facilitators of these creative processes rather than designers participating in the processes. To find the right balance, conscious decisions on designers' roles are made, e.g. whether as it is provider of tools and facilitation as in mode 2, or an equal design participant as in mode 3 of Mattelmäki and Sleeswijk-Visser's (2011) framework.

5.2.4 Co-creative practices in converging towards a specification

Co-creation is also effective when there is a need to converge concepts towards specifications. This is especially true for services, as they are depending on several skills and competences that are applied in context when the service is performed. Convergence in this sense means two things. On the one hand it has to do with the definition or specification of a service, and on the other it has to do with that all the involved actors converge on a shared understanding of the service and their specific role in its development and delivery. The former is often aided by prototyping, and the latter by visualizations and modelling.

The latter can be seen as a communicative process, where earlier co-creative events and findings are summarized and reported, often to people that were not involved in the co-creative events. In design for service, there is an extensive use of visualizations to achieve these communicative goals (Segelström, 2010)

As stated earlier in this chapter prototyping can take form in quite a variety of ways and can serve different purposes. They can help in identifying and constructing an overall understanding of the design challenge, as well as eliciting expressions and practices from the stakeholders and provide design drivers for further development. However, in addition to exploring and opening up the design space, they typically also serve for converging towards solutions. Then the co-creative practices aim at supporting participants to make selections and further develop of the alternative components.

5.2.4.1 Co-creative character 6: Open ended interpretation

In co-creative processes it is common that an articulation created in one activity is used as the basis for another activity. To achieve this there needs to be allowed for *open-ended interpretations* to be made. There is also a need for open-endedness in how articulations can be used as building blocks, that might deviate from the initial purpose of that articulation.

For example, a popular tool in design is so called personas. Usually they are developed through deep interviews and using the repertory grid technique to find archetypical factors in the material. These formal techniques are difficult to use in a co-creative manner, because they require a skilled interviewer and analyst. To allow for using the same kind of insights in a more agile manner other approaches are necessary. For example in a set of activities that generates insights, data about users and their lives are collected, and summarized in story-snippets, storyboards, trait cards, issue cards, etc. In themselves, these are open-ended interpretations that can be used later as building blocks and vehicles for collaboratively creating user stories, developing characters of stakeholders and users to be used in e.g. designgames etc.

By being well-founded through e.g. field studies, the articulations are also less sensitive towards being used for other purposes than conceived when the articulations were done. For example, story snippets or storyboards that initially were done as summarizing and communicating the shared understanding of specific situations and scenarios, might be repurposed as tools for identifying needs for mediating technology in service situations.

5.2.4.2 Co-creative character 7: Prototyping service

Prototypes, and *prototyping*, can be seen in the sense of being vehicles for learning about and sorting out details of a service concept, process or system. It is important to note that prototypes in e.g. systems development are used in a more general manner, than in e.g. product development. From a co-creation point of view this should also be the case in service innovation. That is, a prototype may refer to any prototypical representation of the imagined end result, regardless of when in the development process it is developed (Blomkvist, 2012; Blomkvist, Holmlid and Segelström, 2011).

The reasons for prototyping can be summarized as follows:

“Prototyping is acting, exploring and perhaps even failing before finding the answers” as Tom Kelley claims (Kelley 2001) and continues *“You can prototype just about anything – a new product or a service, or a special promotion. What counts is moving the ball forward, achieving some part of your goal.”* In sum, prototyping is about exploration and generation, about communication of the overall concept and appearance of an idea, about facilitation of collaboration and about providing a hands-on feeling of the future solution (Säde, 2001; Blomkvist 2001a, Blomkvist 2011b).

Prototypes in services are often related to drama techniques. In service design prototypes or tangible tool sets like generative tools, are often utilized together with performing/acting out different roles, interactions and situations. (E.g. Sato and Salvador 1999; Brandt and Grunnet 2000; Iacucci et al. 2000; Svanæs and Seland 2004; Diaz-Kommonen et al. 2009). And they are typically customized to specific

user groups, audiences and co-design situation to make it possible for people to relate to their own role in the final service.

However, there is a generic challenge in prototyping, where the fidelity of the prototype will be decisive for the role of the prototype in co-creation. Usually, prototypes that look more like finished products, does not invite radical alterations of the prototype, but rather directs changes towards surrounding system environments, or towards details such as colour. When exploring and developing concepts there is a need to balance between openness and framing. The balance depends of the openness of the concept as well as the objectives of the activity. Mette Agger Eriksen (2012), for example, has categorised materials used in co-design. Some of them can be characterised as topic specific, or predesigned, some of them more generic.

5.2.4.3 Co-creative method/tool 5: Service walkthrough

One prototyping technique that focus on the whole service, as opposed to specific service moments or service channels, is the *service walkthrough* (Blomkvist 2012, Arvola et al 2012). It relies on the idea that an embodiment of a service will give a rich foundation for participants to contribute to the development of a service. In a service walkthrough all components of the service are given prototypical representations, the actors, the resources, the service concept, as well as the service process and the service system. These representations need to be carefully chosen, with respect to what aspect of the service that is under scrutiny.

The walkthrough is then performed by playing through the whole service, collaboratively with stakeholders and users of the future service. When the purpose of the walkthrough is to converge towards a specification fidelity of the representations as well as validity of the walkthrough context need to be considered. The fidelity issue is similar to the general challenge in prototyping, while validity of the context has to do with making sure that the context does not restrict the service action in the walkthrough, and making sure that the actions are framed in such a way that the experience of them are close to the envisioned experiences.

5.2.4.4 Co-creative method/tool 6: Experience prototypes

As many services are partially mediated through technology, focusing on this mediation is sometimes needed. *Experience prototyping* is a method that attempts to express and capture the experience of interaction with an artefact or a system (Buchenau and Fulton Suri 2000). It uses a replica of an existing or envisioned situation, in which participants can understand what it is like to interact with the service through artefacts and systems. The method requires a certain amount of willingness to participate in role-play situations, which might be a hindrance for some (Oulasvirta, Kurvinen, and Kankainen 2003; Brandt and Grunnet 2000).

Even though this technique was not developed as a service innovation technique it is useful when there is a need to converge towards specifications.

5.2.4.6 Co-creative example 8: Design probes as experience prototypes

This example illustrates design probes as experience prototypes in a project with two main aims: to create and support client-centred service networks, and to create

human-centred service offerings in a local neighbourhood in the City of Helsinki. The project focused on senior citizens and especially families in which one needs care, e.g. has dementia, and the other is officially named as a carer. These families are entitled to financial support for some services that has been decided by the municipal care manager. The aim was to create a service offering from both public and private services that create the above-mentioned network, from which the families together with the care manager could make a selection. In the need of human-centred solutions and empathic understanding of the situations probing was considered as way to have a view to the everyday life challenges and joys. This is the typical reason for applying probes. However, in this case, it was also seen as a possibility to experiment a potential future practice for creating a channel of dialogue and reflection between the families and care managers.

Probes were designed, delivered and filled in by the volunteer families, who were then interviewed and the collected material interpreted. During the process, the functionality and usability of the probes kits as such were tested. The first version of the probes was well received with many improvement suggestions. The process of probing helped the families to open up both more general and specific challenges and to prioritise and point out the kind of services they needed. The probes also supported the municipal care-giver to see beyond the official and professional view point. Currently, based on the experience prototype probes experiment, the tool and the process, have been adjusted according to the feedback, have been used in 33 families. The aim of the public organisation is to develop this co-creative and dialogical practice wider to be used as a reflective discussion channel between the families and service providers.

5.2.4.7 Co-creative example 9: Feeding Milan - scenarios as open-ended prototypes

In Italy, Politecnico di Milano service researchers have initiated and been strongly involved with creating strategic plans in a project called Feeding Milan - Energies for change. The project focuses on designing system of services and infrastructures and transforming the food chains and consumption into more sustainable ones by engaging regional food producers and citizens. This is an example of a systemic and strategic approach to services where the design aimed at systemizing by e.g. seeking synergies and collaboration, envisioning by facilitating conversations and solution building, and communicating by making the project and the results visible and understandable for all involved parties.

The scenario building process had several phases that supported each other. 1) Collecting potential example cases, leading to design studios, where the case ideas were elaborated. 2) Testing design opportunities by local projects by exploring and analyzing the local settings. 3) Establishing a digital platform for interaction and 4) a Co-design stall where the ideas and scenarios as early prototypes could be discussed and further elaborated by the stakeholder. The Co-design stall is an actual place in a regularly organized farmers market that offers a forum for proposing the open-ended prototypes to start negotiations and co-creative sessions with farmers, corner-shop owners, citizens, municipalities and other decision makers. Through a long-term process the researchers together with other activists have been able 1) to engage people in reconsidering new potentials, 2) to enable participation to further

development of the scenarios in practice by utilizing their competences and knowledge of local practices, 3) to empower the citizens to become active actors in the sustainable transformation. (Cantu and Simeone 2012)

5.2.4.8 Co-creative example 10: Co-designing a project plan

Services can be described as interactive processes including journeys, phases and touch points and various stakeholders and networks. The expectations, competences and resources of the stakeholders are not always clear. An attempt to co-creatively construct a process, a project plan, was done in the project Developing Extreme Service Design Methods (2008-2009). It featured a collaborative tool named Project Planning Game, based on a design game foundation, that aimed to clarify the potential contradictions early on in a design research project with several partners (Vaajakallio 2012, p. 163). In this project, the participants were researchers from the university and service developers from partner organizations with different motivations to join the project. They were invited to negotiate the project plan during a two hours facilitated session.

The game session included five phases: 1) warming up by sharing typical development processes in participant organizations, 2) choosing the labels that define the main phases of the design process, 3) specifying the goals for each phase, 4) presenting, negotiating and deciding the methods for each phase so that they meet the goals, and 5) allocating the available resources accordingly. The game featured a game board as a project prototype platform, phase cards to identify the phases, method cards, and human figures to represent the number of human resources available. The game rules helped the participants to move from identifying the expectations and needs to more precise decisions that finally lead to a project plan with work packages and divided resources.

Prototyping a project plan might not at the first sight inspire to think about co-creative practices in services. However, it should be viewed as an example of a rehearsal of the coming process by going through it step by step; explicating and making decisions together about the phases, goals and deliverables as well as alternative ways of reaching them.

5.2.4.9 Summing up converging towards specification

The task of converging towards a specification of a service requires involvement of most of the stakeholders and actors that will be the subject of the user's resource integration activities. If this is done in a co-creative manner, not only will a specification of these resources become more precise, but the actors involved in the process will learn, and prepare for future service delivery. As many people are involved, many different aspects, issues and opportunities will be dealt with even possibly before major decisions on actual development/implementation has been taken.

5.2.5 Co-creative practices in transformative and implementation processes

Many organisations use co-creative practices when transforming the organisation, or when implementing new ways of working. Some use internal labs to rehearse future

customer interactions, or set up a roll-out process where one office is the first to use a new service process.

While many of the examples in this chapter point towards creating temporary stages for co-creation, also a trend towards more sustainable co-creative practices that aim at long-term societal transformations can be identified.

Probes and design games as a design approach have been applied in organizations to support the transformation and exchange between siloed organizational structures. Furthermore, prototyping may take on new challenges and formats when used as a means for transformation and implementation. For example, in what sense does a prototype work as training for the service staff, preparing them for potential change.

5.2.5.1 Co-creative character 8: Capacity building

When viewing service delivery as an act of resource integration performed by a user, the *capacity* of other actors in the service system and process needs to be able to respond to these integrative acts. When implementing a new service, working co-creatively with this perspective will build capacity in two ways. The first is that individuals in participating organisations will understand the role of their own capacity in relationship to others in the service, thus increasing operative resilience (Holmlid, 2012). The second is that individuals and organisations may build capacity to act co-creatively together and with others for purposes of innovation.

5.2.5.2 Co-creative character 9: Transformative platforms

It is well-known that for several kinds of services there are multiple actors simultaneously shaping and contributing to the service outcome, such as public service and health and care services. Meroni and Sangiorgi (2011) identify that sometimes it is fruitful to understand the basic components to achieve transformation and change as being *platforms*. Such platforms consists of tools, rules and roles (Sangiorgi, 2011), that together define the possibilities for people to actively participate in service delivery. When platforms are working well, they are not only platforms for co-creation of value in transformative processes, but also platforms that may be used for opening up participatory innovation spaces.

5.2.5.3 Co-creative example 11: Design games as a co-creative structure to organize and facilitate cross-functional collaboration and ideation

In collaboration with the city of Helsinki several co-design sessions that applied the structure of design games were conducted. The purpose was twofold, 1) bringing people together to share a state of mind that allows them to collaborate in developing human-centred public services, and 2) introducing and applying design tools and processes with the belief that they could provide fresh perspectives for public organizations and the networks of actors involved.

One such examples that has a design games kind of structure that was originally inspired by TV-format known as 'ready steady cook', and that has since then been repeated several times. The goal of the workshop has been in gathering representatives from different departments of the municipal organization to share their ideas and to co-create solutions for cross-functional projects and events. The participants shared their departments' proposals as ingredients. Through a creative

process of negotiation and by combining them, adding city strategy as spices they stirred and cooked delicious dishes. Those were finally collected to recipes that described not only the menu but also the atmosphere and who should be invited. All the recipes were collected to a booklet to be shared among the participants.

Hakio and Mattelmäki (2011)

5.2.5.4 Co-creative example 12: Co-designing a design game for involving citizens in City of Vantaa

In the strategy of the City of Vantaa, involving citizens and other stakeholders throughout the organization is specifically articulated. Hence, every department (and teams in them) needs to start to consider how they could achieve that. However, participatory processes are new to most of the people in the organization and therefore they need some tools to help to implement the strategy into the practice.

In the municipality, there are eight persons working as area coordinators, whose responsibility is to support different departments to implement the strategy. It was suggested that design games could be an appropriate approach to allow for different working teams in the municipality to build common understanding of what collaborative processes could mean for them, who they could involve in their processes and why they might be interested and motivated to do that.

Specific design games were developed for that purpose. The area coordinators did most of the work guided and supported by service designer. As a result, there are now two prototypes of design games. One of the games is focusing on learning about service design methods and diversity of people that could be involved. This includes several descriptions of citizens that aim at evoking empathy and understanding of the personalities rather than stereotypical characters. The second game is focusing on co-constructing understanding of topics to consider in regard to team's own on-going and coming projects and citizen involvement.

5.2.5.5 Co-creative example 13: A co-creative tool becomes part of everyday processes

In the RED case with diabetes care and management the insights generated were summarized as a set of archetypical patients and a patient path (Burns et al 2006, see also 5.2.2). These were later used as a basis for involving patients and staff in transformation processes. In many of the projects run by RED it was crucial to transfer the power to transform to the persons involved in the actual situations and practice, such as diabetes care and management. One tool initially was developed for simple prototyping of service in diabetes management, was cards that documented everyday troubles and issues that diabetics experience; the so called issue cards. It showed that they happened to fit into the everyday dialogue between patient and staff in a very good manner. They finally ended up as one important co-creative tool in the revised service process.

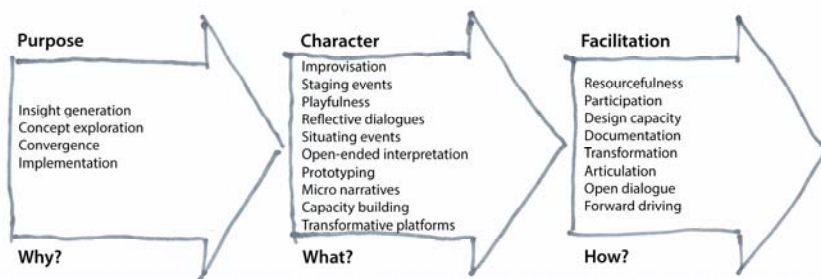
5.2.5.6 Summing up transformation and implementation

Co-creative methods and techniques used for transformation and implementation are powerful in the sense that they build on and develop the capacity of the organization to rely on their resourceful staff, and their customers/users. Sometimes, the co-creative tools used turn into everyday process facilitation in interactions between organization and customer.

5.2.6 Concluding co-creative practices for service innovation

In this chapter we have given an overview of co-creative practices that may be used in service innovation. The examples we have given show how a co-creative attitude and practice give new possibilities for service innovation. We hope that this have triggered you to identify another example, another method, tool or technique, that exhibits co-creative characters. Even though we presented tools and methods, through specific lenses, several of them are used for other purposes than those presented.

When applying co-creative practices for service innovation one needs to consider the purpose of co-creation, the characters of co-creative practices, and how to ensure facilitation:

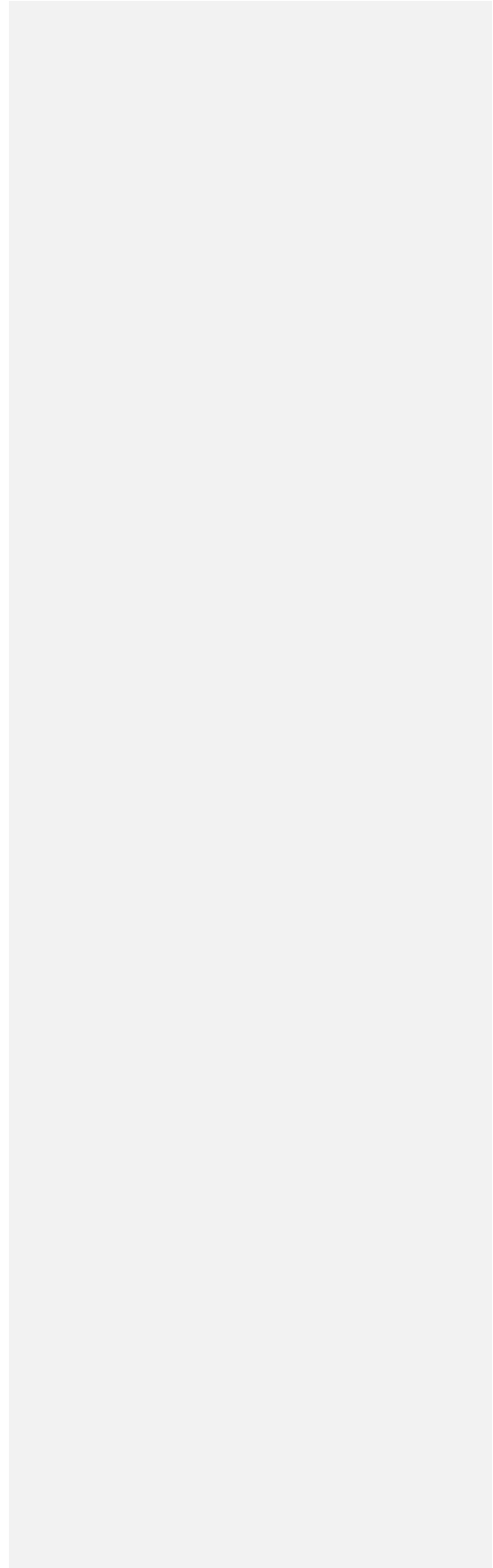


First of all one needs to decide for what *purpose* the co-creative practice will be used; for insight generation, for concept exploration, for convergence or for implementation. Choosing appropriate methods or tools becomes easier this way, and setting up productive co-creative activities will be swifter.

Secondly, the *characters* of co-creative practices need to be carefully considered as the specific co-creative activities are crafted. Some of the characters that co-creative practices exhibit are improvisation, staging of events, playfulness, reflective dialogues, situating events, open-ended interpretations, prototyping, capacity building, and transformation. A good composition of co-creative practices exhibits a variation over these characters across the practices used, which are chosen with respect to the purpose of co-creation.

Third, these co-creative practices need skilled co-creation *facilitators*. These facilitators, regardless of their home practice, take resourcefulness and participation seriously, and know how to build on the character of co-creative activities. There is also need for design capacity in the co-creative practices to document and transform produced

material into new articulations that opens up as and invites into forward looking dialogues.



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