Finding, sharing, creating, implementing – participatory design process

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This article describes the overview process of participatory design. Participatory design and different ways of encouraging collective creativity are design techniques to frame the problems, as well as, agree goals and actions in a dialogical way (Fuad-Luke, 2009). Every process has its own peculiarities and characteristics as the contexts change and methods are applied to fit the needs of the projects. The depth of participation can also vary during the projects, especially if the project is a long-lasting collaboration with multiple stakeholders (Harder, Burford & Hoover, 2013). The overall steps, *Finding, Sharing, Creating and Implementing,* can, however, be applied to any project (Figure 1).

In this article, I aim to present the participatory design process in which the design is done in collaboration with designers and non-trained-designers that can also be referred to as co-design (e.g. Sanders & Stappers, 2008). I use the term participatory instead of co- as the contexts and methods I often work with are sliding from participatory practices of applied visual arts to design quite organically and the activities are more process-oriented as goal-oriented. I believe that with a carefully executed process with active participants, a goal will be reached and the solutions are more innovative than working with just a goal in mind.

Participatory design is usually driven by some design initiative, such as, design agency, design school or research group, in comparison to other participatory activities which can be organized by other professionals. (Manzini & Rizzo, 2011.) Often, the challenges designers address are called *wicked problems.* Those are ill-formulated problems of different systems with many influencing factors and with more than one possible solution. (Buchanan, 1992.) It has been studied that it is typical for designers to approach problems (or design challenges) with a solution-focused strategies, rather than problem-focused research which is usually the way of researchers from other disciplines (Cross, 2007). I claim that to be a distinguishing feature in participatory design process as well if compared to other participatory actions.

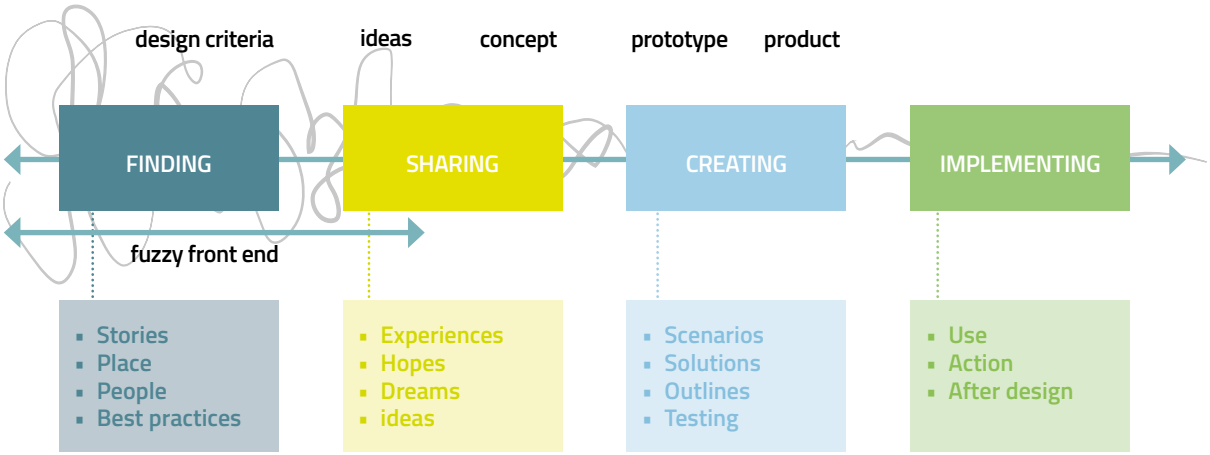

Figure 1. Koistinen, Salla-Mari: Steps of participatory design placed on Elizabeth Sanders' and Pieter Jan Stappers' figure of co-design process. The original figure is published in Elizabeth B.-N. Sanders and Pieter Jan Stappers (2008) Co-creation and the new landscapes of design, Co-Design, 4:1, 5-18.

PARTICIPATION FROM WORKPLACES TO OTHER SYSTEMS

Participatory design has evolved to be the area of expertise in design since the early 1970s. Participatory design started as movement towards democratization and joint decision-making in Scandinavian workplaces as the new technologies brought different strategies and need of skills to worklife. An important standpoint became to be that those affected by design should have a say in the design process. (Binder, De Michelis, Ehn, Jacucci, Linde & Wagner, 2014.) Nowadays participatory design has spread out from the workplaces to variety of social and technological contexts. It still carries the strong emphasis on participants having a meaningful role as equals and strong emphasis on design being creative and proactive activity.

Other collaborative design strategies, that are sometimes used as synonymous, are co-design and co-creation, as well as, user-centred design to some extent. These approaches, that have their own emphasises in

the ways of participation and in the contexts, have now started to influence each other. (Sanders & Stappers, 2008.) Influencing processes to participation in design and collective creativity are also the methods of action research and participatory action research (Bannon & Ehn, 2013) as well as, socially engaged art and social design (Miettinen, Huhtamaa & Kontio, 2016). At the University of Lapland especially, also art-based action research (Jokela, Hiltunen & Härkönen, 2015) and applied visual arts with its place- and context-specific approach (Jokela, Coutts, Huhmarniemi & Härkönen, 2013) bring new contexts, viewpoints and variety of practices to the field of participatory design.

DESIGNER DOES WHAT DESIGNERS DO

In design approaches where everyone designs and creativity is a collaborative effort the roles can get mixed-up and change throughout the design process. Designers are needed in participatory design to explore and keep track on topics, tools and methods that encourage the creative process in non-designer participants. Designers are also skilled in visual thinking, finding relevant information when it is complex and incomplete, as well as, designers are trained to conduct creative processes. (e.g. Sanders & Stappers, 2008.)

Design done in participatory mindset has become a democratized decision-making process with a wide range of participants, so it serves the process if the designer embraces the nature of design being the catalizer of change. This can mean that the designer takes an activist role on behalf of society and environment. (Fuad-Luke, 2009.) Especially now when the design profession consists of many areas of expertise, the ones working outside commercial design are in key position to find sustainable ways of practice and make choices for the future (Margolin, 1997).

FINDING

Finding in participatory design is recognizing the design challenge but also finding the stories of place and people. Mapping of physical elements of place, as well as, investigating resources and potential stakeholders are a starting point for designers in participatory design process. Collecting and analysing best practices and promising cases are phases of investigation and finding the useful strategies for the upcoming design process. (Manzini & Rizzo, 2011.) Finding and sharing are in the 'fuzzy front end' as Elizabeth Sanders and Pieter Jan Stappers (2008) describe the design process (see figure 1, page 71).

Stage of finding is crucial for the designer to grasp the complexity of localness and understanding the context so that the design process will meet the goals of sustainability (Thackara, 2005). When finding the locality and setting the goal for sustainability, I encourage the designer to rely, emphasize and execute the

expertise on materials, visuality and processes, as well as, "reading skills" of visual culture s/he holds as a professional.

For finding the experiences of participants and locality, it is possible to use methods of data collection, such as Design Probes (e.g. Mattelmäki, 2006; Gaver, Dunn & Pacenti, 1999), or apply approaches of place-specific community and environmental art to map the socio-cultural place (Jokela, Hiltunen, Huhmarniemi & Valkonen, 2006). Other useful tools, such as design ethnography and behavioural mapping can be found for example in Bruce Hanington's and Bella Martin's (2012) *Universal Methods of Design. 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions.* Hanington and Martin also guide, on a practical level, for literature review and triangulation which are suitable for finding the best practices and design strategies, beside studying the locality, community and place.

SHARING

The next step is to develop the possibility for stakeholders to share their experiences, stories, hopes and dreams, as well as ideas. The aim of this phase is to facilitate participants to express their backgrounds and visions related to context, and also to encourage interaction in a way that makes sharing of tacit knowledge possible as well. For this phase too, tools are one option to facilitate the expertise of people to focus on the design challenge (Sanders & Stappers, 2008).

Design games (e.g. Brandt, 2006; Vaajakallio, 2012) and Make Tools (e.g. Sanders, 2002) are structured ways of working. Lighter concepts of sharing experiences, ideas and visions, can be, for example Day in the life, Personas or Expectation maps, Idea generation and Contextual interviews (van Dijk, Raijmakers & Kelly, 2011). There are plenty of literature which can be used for inspiration of techniques for the phase of sharing. Marc Stickdorn's and Jakob Schneider's (2011) *This is Service Design Thinking: Basics - Tools - Cases*, Robert Curedale's (2013) *Service Design: 250 essential methods*, and Juha Tuulaniemi's (2011) *Palvelumuotoilu* to name a few. Also internet-sites, such as *Service Design Tools- Communication methods supporting design process* (http://www.servicedesigntools.org/taxonomy/term/1), *Design Kit* (http://www.designkit.org) and *Service Design Toolkit* (http://www.servicedesigntoolkit.org) provide useful tools with instructions for sharing and developing the ideas. (Figure 2)

The preliminary phases, finding and sharing, of the process are aiming to determine what is to be designed and to explore whether the concentration is on a product, an interface, a service or a building or something else (Sanders & Stappers, 2008). Finding and sharing develop regional expertise, co-research and a sense of community, which are required for reinforcing sustainable development of the area (Jokela, 2013).

Figure 2. City plans, images and toys are one example of tools that are useful in sharing the experiences and visions with other participants. Tangible material also help to envision the desired future solutions for the challenges. Image: Salla-Mari Koistinen, 2012.

Figure 3. The ideas and conversations were placed on the outline of tourism service that was based on the eight seasons in Lapland. It is easy to continue planning when the ideas are documented and shared with others. In this example of designing tourism service, the participants represented different fields and the systems of a hotel and a restaurant met the working style of artists so it was important to have a documentation of the ideas to which anyone could get back to at any point of designing. Image: Salla-Mari Koistinen, 2012.

CREATING

When the design challenge has gotten clear(er) by first two phases, it is time to start creating options for solutions. The design challenge or its parts will most likely get more defined still during the creation of solutions. For the phase of creation, designer can make use of tools and techniques that clarify the ideas, as well as, transforms conversations and discoveries into something tangible (figure 3). Sketches, prototypes, mock-ups, models and scenarios mediate visions to others and make the ideas testable (Koskinen,

Figure 4. In the north, it is easy to test the outlines and scale of ideas with natural materials. Here the group is designing an artwork for which it was important to see the size needed for the artwork and find ways for construction machines to come on the ice and clear the snow. Image: Salla-Mari Koistinen, 2012.

Zimmerman, Binder, Redström & Wensveen, 2011; see also Stickdorn & Schneider, 2011; Hanington & Martin, 2012; Curedale, 2013).

In the phase of creation it is possible to test the solutions before actual use. The approach in this step can also be described as design-by-doing, as it requires active form-giving, reflection and evaluation that is followed by new cycles of form-giving, reflection and evaluation.The suggestions for solutions become more refined during every cycle. (e.g. Bannon & Ehn, 2013.) The form-giving in this is thought widely and it can mean creating outlines or concepts for interfaces or services, besides designing physical forms for products. (Figure 4)

Prototypes and mock-ups help the participants see the possible solutions and make sense of the future. Generative toolkits, such as sets of strings, balls, Legos, plastic tubes, etc. can encourage the participants

create the design suggestions. (Brandt, Binder & Sanders, 2013.) Physical props combined with digital toolkits, such as web-camera and projector can help to visualize, stage and to design-in-action experiences, services and products in a way in which anyone can add up or get inspired on the ideas of others (Miettinen, Rontti, Kuure & Lindström, 2011). For creating, testing and refining the designs together, one opportunity is to use laboratories and spaces, such as Service Innovation Corner (SINCO) of University of Lapland.

IMPLEMENTING

Implementation is the step during which the outcomes of preliminary phases are brought into practical level and into use of participants or stakeholders. If the participatory design happens in short time-frame and the designer cannot do a follow-up of the implementation and every-day use of the solution, the important challenge is to find ways to secure that design is realistic and fits for purpose and suits for whom it is intended. (Brandt, Binder & Sanders, 2013.).

Implementation is one of the most critical phases of the participatory design process, as it pushes the design initiatives to action. It is hoped that the design project will go to use and continue to develop further after the process by the stakeholders and potentially new stakeholders (Björgvinsson, Ehn & Hillgren, 2012). To truly set the trigger for the design process to become a solution for everyday life, it is important to agree on responsibilities. In the implementation stage, at latest, it should be clear, who does, what does, when does and with what resources.

FINAL WORDS

As I noted in the beginning, every participatory design process has its own characteristics. The multiple resources for different tools and techniques give a starting point for creating the outlines of the processes but often the designer needs a toolbox from which s/he can apply methods if the process takes an unexpected turn. Proper preparation of the designer is a key element and ensures that the process stays solution-focused instead of it getting stuck in problems.

The role of the design-professional may vary from researcher and facilitator to visual communicator and final form-giver throughout the process as the participants produce data with their actions, are co-designing suggestions for solutions and take responsibilities in implementation. Currently sustainability is one of the most important aspects in design challenges and if the process seems to ignore any part of ecological, social, cultural or economical sustainability, I recommend that the designer utilizes hers or his abilities to deal with wicked problems in order to bring those viewpoints to the process.

For the phases when working with others in a participatory design process, I believe it is efficient to emphasize the visuality, as well as embodied techniques, and practicality. The tools that are introduced in the literature and online, are often visually informative, and they encourage participants to imagine, visualize and act out scenarios, scenes and solutions in such a way that the experiences can be shared with other participants. For preparation, documentation, research and designer's own use it is relevant to use notes and other written material.

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