

Place innovation: using design thinking in live cases

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Abstract

The paper presents a study based on two views, i.e. innovation in teams of non-designers and live case interactions. This means that a diverse set of roles are involved in the innovation activities that originate from real regional situations. The application area relates to design and development of destinations, e.g. regions, tourism and attractive places. This study focuses on two main issues, namely (a) is it possible to make non-designers momentarily become design thinkers, and (b) is it possible to produce ideas and ‘out-of-the-box’ views in groups consisting of non-designers within a short timeframe? The purpose of this paper is thus to illustrate and explain these issues in order to contribute to a live case platform for collaborative innovation among society, trade and industry, and universities. The empirical data from four workshops, in total engaging 179 participants, shows that there are several challenges related to the efforts to transfer techniques and methods for design thinking and innovation into the heads and hands of non-designers. For example, trade and business can rarely allocate regular working hours for participatory design thinking, so they act based on traditional professional roles. Also, sessions turn into (unproductive) discussions if the participants are not firmly facilitated and encouraged. Bringing in live cases through the participation of mixed teams places additional requirements on innovation research in respect of implementation and packaging for practical uses.

Keywords: Social innovation, destination design, innovation systems, design thinking

1 Introduction

Innovation, in all its facets and applications, is promoted as the key to growth, competitiveness and wealth not only for individual companies but also for whole regions, i.e. places. Supporting regional innovation systems in sparsely populated areas is of interest to policy-makers in order to decrease unemployment by building good business environments, and consequently also creating an attractive environment for citizens. In such an innovation system, universities and higher education institutions are expected to provide skilled future employees, excellent research and applied science (Ylinenpää, 2013). Applied science is based on collaboration with industry and society, ultimately contributing to an increase in new products and services in the region. Research thus has to interact with actors in the region. Ylinenpää (2013) discusses two different types of knowledge production in research, i.e.

Mode 1 means, in simple terms, conventionally produced knowledge in separate fundamental research disciplines and projects, and Mode 2 means multidisciplinary produced in short period of time and from real and specific problems. He concludes that there is an increased expectation from society that research should be directly useful to practice; this is also increasingly evident in calls from research funding organisations. Collaboration with industry and society is accordingly a focus for universities, and namely the core of the ‘third task’ activities (Ylinenpää, 2013).

Social innovation addresses complex social challenges, for example unemployment, demographic change and global competition. It is anticipated that individuals and organisations will experience an improved or better situation due to innovative new solutions (European Commission, 2013). Successful solutions depend on whether or not unsolved societal challenges or unmet social needs are identified and serve as the starting point for the problem solving activities. Brown and Wyatt (2010) conclude that undertaking social challenges demands systemic solutions, and that any solution has to be grounded in people’s needs. Further, they suggest that radically new products and services come from considering the edges, i.e. “*the places where “extreme” people live differently, think differently, and consume differently*” (p. 32). Design thinking captures a shift from a detached product focus to an integrated consumer experience focus by introducing a deeply human process. Designers use three overlapping spaces, i.e. inspiration, ideation and implementation, to understand problems and to bring solutions into people’s lives (Brown and Wyatt, 2010). The practical advices for collaborating with people is to (1) go out into their world and observe what people actually do, (2) to reveal work-arounds that people do when improvising their everyday lives, and (3) to do “homestays” and shadow people in their jobs (Brown and Wyatt, 2010). Design thinking thus suggests that designers are the ones that come up with innovations and people are the experts on their lives, businesses and behaviours. Von Hippel (2005) suggests that users (people, consumers, customers) are themselves capable of innovating and do so frequently. Moreover, they freely reveal their innovations. Open source software and other open approaches are democratizing innovation (von Hippel, 2005). The Needfinding approach (Faste, 1987; Patnaik and Becker, 1999) points out a dilemma in identifying needs, i.e. people are not aware of their needs since they are embedded in routines and things they just do. If so, people as innovators may find new solutions in terms of products, but cannot address social challenges by themselves and cannot find systemic solutions.

Kaulio (1998, p. 143) interprets the work of Eason (1992), and provides three dimensions of customer interaction in design:

- Design *for* customers – solutions are designed on behalf of customers. Data on users, general theories and models of customer behaviour is the basis for the designers.
- Design *by* customers – customers are actively involved and partake in the development and design of the solutions.
- Design *with* customers – different solutions/concepts are displayed for customers so they can react to a proposed design. Customer preferences and requirements are the basis for improvements.

Complex social innovation challenges may benefit from a mix of all three types of interaction, that is designers should (1) observe people to learn from them (e.g. Faste, 1987; Kelley, 2001), (2) involve people in problem resolution to identify real needs (e.g. Patnaik & Becker, 1999), and (3) allow people to experiment and explore proposed designs (e.g. Brown and Katz, 2009; Brown and Wyatt, 2010). A mixed approach may be better to avoid the risk of

users or designers becoming biased toward their own preferences, i.e. being prone to provide positive comments or thoughts on their own ideas. Nevertheless, bringing in mixed groups of people into innovation activities is not straightforward. Can we expect a group of common people to generate radically new ideas? What happens when they take part in inspiration, ideation and implementation of an innovation opportunity?

2 Purpose of the paper

Place innovation (Lindberg, Ericson, Gelter & Karlberg, 2015) is an emerging concept that has its roots in social innovation, service innovation and human-centred methods. Place innovation, as an approach, addresses co-creation among inhabitants and trade and business at the chosen place. The intention is to design attractive environments for businesses and citizens by addressing the development of destinations for tourism, e.g. creating job opportunities, addressing demographic change and global competition. Three elements are in focus for the innovation activities, i.e. content (finding out what is unique), configuration (finding out how it should be designed) and communication (finding out how to sell it). Tree Hotel (www.treehotel.se) and Ice Hotel (www.icehotel.com) are two examples of successful entrepreneurial Place innovations. There are, however, several challenging issues in the endeavour to implement practical design tools and methods for innovation among third task actors. This study focuses on two main issues, namely (a) is it possible to make non-designers momentarily become design thinkers, and, (b) is it possible to produce ideas and ‘out-of-the-box’ views in groups consisting of non-designers within a short timeframe? The purpose of this paper is thus to illustrate and explain these issues in order to contribute to a live case approach for a university’s third task. Basically, live case here denotes actors being actively involved in up-to-date and challenging real social problems, and non-designers are those who are not specially trained in and/or occupied in design or creative work.

3 Research approach

The study presented in this paper is mainly built upon empirical data. The data has been obtained through workshops with non-designers as participants. The participants came from e.g. trade and business, local entrepreneurs, municipalities, policy-makers, tourism and hospitality companies and destination organizations. Some of the participants already knew each other and some only met for the workshops. The participants in the research project came from 14 municipalities (policy-makers and trade and business), 9 destination organizations and 16 local entrepreneurs (mostly hotels, event firms, shops and restaurants). Local citizens took part in one workshop (workshop number 3 below).

The workshop participants worked in groups during the sessions. They were divided into groups by us, and we also acted as facilitators for the workshop process. The division of participants deliberately made the groups heterogeneous, i.e. mixing people depending on their professional role. On average, the workshops lasted for half a day and a format originating from design thinking was used, i.e. inspiration, ideation and implementation (Brown and Wyatt, 2010). The format for the workshop is captured and formalized in an easy-to-use guidebook (Bergström, Ericson and Törlind, 2010). The inspiration space should clearly challenge the task that is given in the workshop, i.e. the participants are encouraged to explore and interpret the task from their own perspectives. Design thinking encourages systemic solutions and a way to find them is to change perspectives several times to explore the situation and test various ideas to generate new solutions in parallel with rephrasing the actual problem. Bernard Roth phrased this very frankly in a recent interview: *“If you have*

tried something and it hasn't worked, then you're working on the wrong problem" (p. D4). Hence, the participants are informed that the workshop should not address 'business-as-usual' – they should rather step out of their "comfort zones". One adaptation to the advice "to go out and discover the real world" is made because of time limitations. Instead, storytelling is one way to bring in users or people to support the inspiration space (e.g. Kelley, 2001). Here, we encourage stories about peoples' behaviour and the participants' previous observations in favour of discussing conventional business cases. Empathy with people has long been the philosophy in design thinking (e.g. Kelley, 2001). The ideation space includes different brainstorming techniques to generate as many ideas as possible (e.g. Kelley and Littman, 2005). The third space implementation is used to elaborate on the ideas and make them tangible or visible, for example by combining them into a concept with a rationale. We deliberately do not speak about prototyping, since one lesson learned is that non-designers interpret it as being related only to late product versions. However, we (very much) encourage the participants to 'show us', sketch, use stick figures or act it out in a skit. Practical tools, methods or guidelines to support each part have been adapted from design thinking and innovation theory (e.g. Brown, 2009; Brown and Katz, 2009; Amabile, 1996; Chesbrough, 2003), as well as from practice (i.e. results from evaluation of the tools in industrially applied research). The participants use A3 sheets of paper, sometimes blank and sometimes with a simple form printed on them. These are the basis for presentations in the workshop and are also collected for analysis afterwards. We have acted as facilitators of this type of workshops since 2002, and have also during this time conducted team-based innovation research and been active in packaging of tools and methods in a number of research projects.

Four workshops feed input into this study:

- Workshop 1, May 2015: 25 participants; the topic was to create new concepts based on inspiration from presentations of local and successful entrepreneurs.
- Workshop 2, October 2015: 29 participants; the topic was to explore 'place' in terms of an innovation opportunity and to create new 'places' for innovation.
- Workshop 3, December 2015: 90 participants; the topic was to create new concepts based on place as an opportunity. Participants were divided into two sessions, each with 45 participants, one in the morning and one in the afternoon, to facilitate the large group. The participants who did not take part in the workshop connected to this study in the morning attended another workshop on a similar topic, and vice versa in the afternoon.
- Workshop 4, February 2016: 35 participants; the topic was to create and design new solutions for a tourism attraction the Artic Circle, and to create concepts for new product and services. This was a full day workshop.

We have collected empirical data in the planning of the activities (dialogues of successes and failures, and improvements to the processes), by facilitating the workshops (turn taking for facilitation, meaning that when one facilitator is leading an activity the other is observing participants) and by analysing the workshops (continuously and often, to provide a critical stance in interpretations, in collaboration with a colleague who has not taken part in the workshop in question).

4 Innovation systems and live cases

There are different models that describe the organized cooperation between trade and business, universities and society, which forms the background against which universities to conduct their so-called 'third task'. Such cooperation is expected to drive economic growth

and innovation; however, actors have different goals and rewards when participating in collaborative structures. Johansson, Wincent and Ylinenpää (2007) conclude that not only must the differences in goals and rewards be managed, so too must the differences in roles. Johansson et al. (2007) describe that critics of heterogeneous collaboration models argue that those goals, rewards and motivations embedded in the roles are too distinct to organize. Any teamwork could end up in a team war (e.g. a struggle for power, slackness, inefficiency, fear and delusion) where conflicting views are expressed in a collective monologue (Paulus and Brown, 2003). However, innovation literature concludes that there is no doubt that combining or bringing together opposing views, different perspectives, diversity and similar are important for coming up with new solutions. People simply become smarter when thinking together (Surowiecki, 2005), and providing an environment and support for this must be addressed in its original place.

The access to additional knowledge is a driver for forming collaborations; this is also discussed in relation to innovation systems. Innovation systems can be described as consisting of “*elements and relationships which interact in the production, diffusion and use of new, and economically useful knowledge [...] and are either located within or rooted inside the borders of a nation state*” (Lundvall, 1985, p. 2). So, any innovation system lives in a specific context. Asheim and Coenen (2005) propose that it is the industries in the region (the economy) that should provide the specific context since their innovation processes are shaped by regional circumstances. Literally interpreted, this suggestion might favour growth based on the conventional, rather than on the unprecedented. Yet, Asheim and Gertler (2005) conclude that two different innovation processes come into play, namely innovation based on existing knowledge (in terms of novel combinations) and innovation based on the creation of new knowledge. Also, Asheim and Gertler (2005) describe a best-case scenario for innovation processes as interactive learning and collaborations with clients, suppliers, R&D departments and research organizations. Some researchers propose that innovation systems describe a theoretical view and model that attempts to explain how knowledge is transformed to enable society’s innovation capabilities and competitive power (Christensen & Kempinsky, 2004). More importantly, they conclude that the goal for innovation systems is to deliver regional growth, and those that could make that happen are citizens, society, universities, research institutes, higher education and trade and business together.

There are naturally different interests among people just as there are also different motivations for their actions. Two types of orientations when searching, internalizing and applying knowledge are mastery and performance (Pintrich, Marx & Boyle, 1993). Tendencies to apply a mastery orientation build upon exploration to learn in-depth or anew, while performance orientation builds upon exploitation of what is known. Bluntly speaking, depending on the situation, some people find it beneficial to address knowledge outside the obvious boundaries of a design problem (outside the box), and some people consider it as deviating from the subject, or even as a waste of time. Design thinking suggests that people ‘go with the flow’ and ‘play the game’ (e.g. Kelley, 2001). Nevertheless, in interactions with a diverse set of actors it is not straightforward to make that mix of people play the game you, as a facilitator, want them to.

A live case is based on a radical innovation viewpoint, i.e. there is a problem situation but no existing solution yet (Faste, 1987), resolution of the problem is based upon exploration (Jacoby & Rodriguez, 2007), and ambiguity is an asset not a threat (Leifer and Steinert, 2011). Participants in a live case have direct interests and rewards in the outcome, but none of them are owners of it and none of them is the sole responsible individual or organization for

making it come true. So, a live case is a way to manage the idea and concept generation of an opportunity. On the one hand, participating in upfront activities creates a desire and interest to make ideas come true among participants; on the other hand, implementation is not straightforward. Nevertheless, the key to making a live case come alive is to interact with it, to facilitate diversity and to bridge opposing views in a formative approach. The efforts are to contextualize the innovation opportunity, to intervene in it and to learn from it. Interactions are, thus, between a number of heterogeneous actors and the case (see left lower part in Figure 1). This is in contrast to a case study, in which the efforts are to isolate it in a specified bounded context, describe it and study it after the fact (e.g. Miles & Huberman, 1994). Interactions are thus between researcher(s) and the case itself (see right upper part in Figure 1). However, a live case can be initialized from the result of a case study and vice versa.

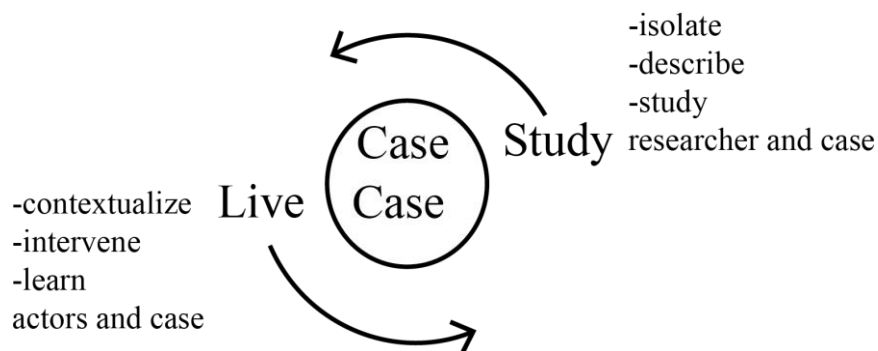


Figure 1. Illustration of live case and its formative intentions in contrast to the case study’s cumulative approach.

In sum, the case in a live case should be set to a real situation that can be resolved by collaborative innovation. Implementing live case interactions may provide a viable resource in applied industrial research that sustains results beyond isolated cases.

5 Procedure through design thinking

Design thinking is, in our view, best understood when it is described as a “*rather loosely labeled box*” (Leifer & Steinert, 2011, p. 152). Such a description indicates the agile and flexible power of it, i.e. it is not one single point of view or a linear process. In our view, it is rather a stance and manner for innovative design tasks. Design thinking is, however, often described as a human-centred methodology that is grounded in the rationale of empathizing with people and their goals in life and business. Inspiration, ideation and implementation should thus be based on real people’s needs (Brown & Katz, 2009). One might get the wrong picture that successful results from design thinking just happen, but it is rather the “*...result of hard work augmented by a creative human-centered discovery process...*” (Brown, 2008, p. 88). Brown and Katz (2009) describe three constraints that should guide a design thinking process, i.e. feasibility (what is functionally possible within the foreseeable future), viability (what is likely to become part of a sustainable business model) and desirability (what makes sense to people and for people). Those constraints are not created equal (since organizations differ), but a harmonious coexistence among them in the solution (or design) should be the result of a design thinker’s mission. Design thinking is thus reliant on the designer’s capability for (Brown, 2008, p. 87):

- Empathy – imagine the world from multiple perspectives; this ‘people first’ view inspires innovation.
- Integrative thinking – create novel solutions that go beyond existing alternatives
- Optimism – at least one potential solution is better than the existing alternatives.

- Experimentalism – posing question and exploring constraints in a creative way. Incremental tweaks are ok, but not the point.
- Collaboration – having and/or searching for experiences in several disciplines.

Meinel and Leifer (2011) capture design thinking in a set of guiding rules (p. xv):

- The human rule: all design activity is ultimately social in nature
- The ambiguity rule: design thinkers must preserve ambiguity
- The re-design rule: all design is re-design
- The tangibility rule: making ideas tangible always facilitates communication.

We have rephrased these capabilities and rules into a simple ‘code of conduct’ for the participants in our piloted workshops, namely:

- Always put people first.
- Think bigger and beyond your first ideas.
- Be positive and say yes.
- Try it out, show us.
- Your best support is sitting next to you.

Prototyping is a key in design thinking processes (e.g. Brown, 2008; Brown & Katz, 2009, Kelley, 2001). A main stream of design thinking originates in product and engineering design (e.g. McKim, 1972; Faste, 1987; Leifer & Steinert, 2011), thereby a focus on tangible prototypes can be proposed to guide the processes. However, prototyping is not restricted to the development of physical prototypes, but rather to ensuring communication and learning in design thinking. Further, it does not currently make sense to talk about standalone products (as in conventionally engineered ones), because from an enterprise strategy perspective physical products and services are part of a complete solution to customers (e.g. Meinel and Leifer, 2011). Design thinking intends to create solutions beyond the existing and hence includes systemic solutions not yet imagined. Prototyping can for example also be bodystorming and scenarios for services, i.e. acting out roles and behaviours (Kelley and Littman, 2005). We have found that at least rough low-fidelity prototyping, for instance skits and role play, supports the collaborative understanding and visions. Logically, this is not unexpected. When asking our participants about their experiences *in* the workshop they conclude it is both useful and fun. Yet, overhearing their reflections *after* the workshops the participants sort of probe each other to work out if it is ok to ‘play’ like this and whether or not it will bring any useful result. Skogstad and Leifer (2011) clarify that results in design thinking can also be what people conventionally tend to consider to be failure or a waste of time and resources. Failures are an important part of learning and support understanding of both problems and solutions. Seemingly, the participants in our live case workshops had a hard time acknowledging experimentation (even though this was based only on thoughts and ideas) as part of learning of their profession and formal roles.

Ylinenpää (2004) exemplifies how focuses and rewards differ among actors in a third task collaboration. Society, for example, focused on long-term goals giving the reward of increased competitive power for the whole region, trade and industry focus on quick benefits in terms of new businesses, while universities typically focus on producing academic knowledge to attract more financed research projects. These distinct focuses have an effect on the different roles from which non-designer participants act in workshops, or in their interactions with a live case. Society, citizens for instance, commonly acts out its roles in respect of profession or education, often avoiding the full aspects of being a citizen, even though being a citizen and having a citizen’s view is the basis for inviting them to participate.

Also, policy-makers stay close to their roles as administrators and decision-makers, having the effect that thinking outside the box and playing out new ideas are considered more or less foolish. Here, we assume that being exposed to a mixed group might reinforce their orientation towards the formal role. Simply put, they are (or think they are) expected to behave or reason in a certain way. Trade and industry representatives are usually keen on taking part in ideation, but they are mainly applying an implementation point of view on (fuzzy) ideas. Their procedure can be captured in the expression – ‘the idea is ok, *but* can we implement it now?’. The consequence of posing such a question is that it decreases the ideation in the mixed group and prematurely turns the attention from ideas to realization. This ‘down to earth’ procedure must be suppressed otherwise it destroys the creativity in ideation. Generating as many ideas as possible is the key here (Kelley, 2001), but the implementation view should not be evident until later. One challenge for any facilitator of the process is hence to ‘park’ the discussion, encourage idea generation, and acknowledge the implementation view when picked up later on.

5.1 Implications of live case interactions

The effort to transfer techniques and methods for design and innovation into the heads and hands of non-designers has hence shown some implications. One main issue is that they tend to stay too close to their formal roles and occupation. In turn, this becomes a barrier to actually thinking outside the box. Another main issue is that their participation is restricted by a short time period. Encouraging participants to quickly share rough ideas thus becomes important. However, motivating non-designers to interact with a real live case from a design thinking perspective is not straightforward. Bringing in the live cases approach through the participation of heterogeneous teams is an area that places additional requests on innovation research in respect of implementation and packaging for practical uses. In sum, we find the issues presented there as relating to a delimitation of the participants’ t-shaped capabilities (e.g. Winograd, 2008), i.e. they cannot make use of their depth in experiences from their profession and/or education, while also applying a ‘crossbar’ for the integration of multidisciplinary perspectives. Being exposed to a mixed group the first time might reinforce ‘business-as-usual’ behaviour among the participants. This issue put extra stress on any facilitator to be observant and guide the team to more vivid communication.

From our experience we would like to share some practical advices:

- If you have a small group of participants, you might reconsider if the head of the team should be invited. Bringing in the team in its formal format is a barrier for open discussions and could reinforce formal roles. However, you should always have support from the head of the team and be meticulous to provide feedback.
- Even though you only have a set and often short time period for interaction, always schedule time for warm-up exercises that do not relate to the topic. Give it 5 minutes every hour to energize the participants, be very restrictive with the time. Another approach is to make sure that participants change positions, i.e. standing up, sitting down or change work mode, i.e. individual and in team.
- Make an effort to encourage the participants to avoid details of ideas, instead make them visualise the situation in which the problems for them occur. We find the method asking five whys utterly effective.

Finally, the live case multidisciplinary knowledge production put additional stress on researchers to act as facilitators. This type of live case interaction is not at the forefront of building image and reputation in academics as conventional case studies are. Nevertheless,

participatory innovation is what is promoted by e.g. research financiers, as well as being an expected activity in the university's third task.

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