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## **CONFERENCE PROCEEDINGS**

### **ServDes.2010**

#### **EXCHANGING KNOWLEDGE**

Edited by

Stefan Holmlid, Janne-Valtteri Nisula and Simon Clatworthy



# The 2<sup>nd</sup> Service Design and Service Innovation Conference, **ServDes.2010** ExChanging Knowledge

Edited by  
Simon Clatworthy  
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The second ServDes Conference was held in Linköping, Sweden on 1-3 December 2010. It was hosted by The Linköping University. The theme for ServDes.2010 was ExChanging Knowledge. It was divided into 3 days; unconference day and two conference days.

### **December 1st: UnConference day**

The first day of the conference had an unconference theme. The unconference was held on the main campus (Campus Valla) of the Linköping university. The initiator's of the various UnConferences wrote introductory texts. The day ended with the release of the book *This is Service Design Thinking*.

<b>Starts</b>	<b>Theme</b>
10.00	Service Design Evaluations Using the Service Architecture Review Method
12.00	Evidence Informed Practice
13.00	Tourism and Service Design
13.00	Social Innovation by Design
13.00	Design Thinking as Management Approach in Service Design
14.00	Defining the Designerly Approach from Scientific and Practical Insights
14.00	Business Model Innovation
14.00	Design – A way of Highlighting the Patient and User Perspective in the Public Sector
<b>Joint session</b>	
16.15	Knowledge ExChange between participants in the various UnConferences
18.00	ServDes.2010 reception and book release of <i>This is Service Design Thinking</i>

## December 2nd

The day was situated at Konsert & Kongress in central Linköping.

Time	Musikalen	Operetten
9.00-	<b>Visions</b>	
10.00	<i>Service Design: social innovation is our motivation</i> Sarah Drummond, Lauren Currie: Snook <i>Spicing up public journeys – Storytelling as a design strategy</i> Sandra Viña, Tuuli Mattelmäki: Aalto university	
	Coffee break	
10.30-	<b>Design &amp; Business</b>	<b>Workshop</b>
12.00	<i>The concept of value in design practice – an interview study</i> Katarina Wetter-Edman: Göteborgs universitet <i>The design value of business</i> Stefan Holmlid: Linköpings universitet <i>Characteristics of value co-creation in a learning environment by service design and service-dominant logic frameworks</i> Jussi Haukkamaa, Pia Yliräsänen-Seppänen, Eija Timonen: University of Lapland	<i>Service design for social innovation: a strategic approach to strengths and weaknesses</i> Anders Emilson, Anna Seravalli: Malmö universitet
	Lunch	
13.30-	<b>Dealing with Complexity of Services</b>	<b>Workshop</b>
15.00	<i>Transformative Services and Transformation Design</i> Daniela Sangiorgi: Lancaster university <i>Health and social care services for people with complex needs: The role of contextual knowledge for the design process</i> Eva-Maria Hempe, Terry Dickerson, Anthony Holland, P John Clarkson: University of Cambridge <i>Adapting service design tools to facilitate interdisciplinary research collaborations</i> Gemma Teal, Alastair Macdonald, Paula Moynihan: The Glasgow School of Art	<i>Service Architecture Review Method</i> Simon Field: University of Glamorgan
	Coffee break	
15.30-	<b>Tools</b>	
17.00	<i>Service prototyping according to practitioners</i> Johan Blomkvist, Stefan Holmlid: Linköpings universitet <i>Alternate reality games and participatory storytelling beyond entertainment: new and more effective ways of triggering people and creating communities.</i> Marco Zamarato: pidublu <i>Service innovation through touch-points: the AT-ONE touch-point cards</i> Simon Clatworthy: AHO	

## December 3rd

The day was situated at Konsert & Kongress in central Linköping. It ended with the Michael Treschow design award.

Time	Musikalen	Operetten
9.00-	<b>Service Design in a Local Context</b>	<b>Service Design in Niches</b>
10.00	SVID city move Eva-Karin Anderman, Claes Frössen: SVID <i>Creating scenarios for regional projects. An ongoing strategic and service design practical approach for multifunctional and collaborative food networks</i> Daria Cantù, Giulia Simeone: Politecnico di Milano	Service Design for tourism SMEs – The concept of service design and its application on the Alpine Zoo in Innsbruck, Austria Marc Stickdorn, Anita Zehrer: MCI Management Center Innsbruck Plan, Design, Explore & Reflect – Customer relevance in bank services through action research Erik Widmark: Transformator
		Coffee break
10.30-		<b>Workshop</b>
12.00	<b>Service Innovation</b> Towards a practical application of innovation theory for financial services firms – a quick step from academy to tooling Åke Freij: IBM <i>Exploring networked innovation; Results of an exploration and the setup of an empirical study</i> Katinka Bergema, Rianne Valkenburg, Maike Kleinsmann, Cees de Bont: Delft University of Technology <i>Innovating implementation and design of services within the public sector</i> Stuart Bailey: Glasgow School of Art <i>Ten Strategy Paradoxes in Service Innovation and Design</i> Robert Bau: Mind Your Table Manners	Service Design Research: Which direction do we want it to take? Johan Blomkvist, Stefan Holmlid, Fabian Segelström: Linköpings universitet
		Lunch
13.30-		<b>Healthcare and service design</b>
14.30	Service design & healthcare innovation Karin Freire, Daniela Sangiorgi: Lancaster university <i>Hälsokollen: Design methods for creating services that support longterm behavioural change</i> Elin Ankerblad & Marianne Norelius: Doberman & Apoteket AB	
14.30- 14.45	Michael Treschow design stipendium is awarded to a Swedish design student	
14.45- 15.00		Closing remarks

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# Service Prototyping According to Service Design Practitioners

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## Abstract

Current trends in service design research include case studies and similar approaches that aspire to reveal what the practice of service design looks like. The understanding of how service design is performed can serve as a base for future research into more specific research endeavours. One area where knowledge is said to be lacking is service prototyping, part of which knowledge this paper attempts to contribute. The main data source for the paper is findings from in-depth interviews with six practicing service designers from some of the more well-known design agencies. The informants consider service prototyping to be a very important part of their work that allows them to learn and communicate about design ideas. The practitioners' account of how they work with prototypes indicates that service prototyping has different meanings and that the practice of prototyping is very diverse. The interviews also uncover a number of areas that, according to the designers, might prove extra challenging for service prototyping to be successful. This research shows that there is much potential in the not yet fully formed practice of service prototyping.

**KEYWORDS:** service prototyping, interviews, design practice

## Introduction

There is a turn in service design toward more rigorous research and thorough inquiry of what service design is, how it is practiced and what it means to design services (Segelström & Holmlid, 2009). This paper is an attempt in that spirit to uncover what practitioners mean by service prototyping and how they describe what they do to prototype services. The potential in service prototyping is frequently mentioned, but the actual practice of service prototyping is yet to be revealed.

*“Although methods for expressing important characteristics of a service have been widely used, the understanding of how these can be used to prototype services is lacking. It is often stated that prototyping a service experience could potentially contribute to higher quality services, more well-directed service engineering processes, etc.” (Holmlid & Evenson, 2007 p.1)*

To be able to place the research presented here in context, a brief summary of the research about service design practice will be presented in the following sections, pointing to some areas of missing knowledge and the current understanding of what service prototyping is. After that, the approach of interviewing practicing service designers will be detailed followed by the results of the interviews and a discussion. In the conclusion, the main contributions of the paper are summarised. This will highlight the new knowledge about what service designers do to prototype services and what they mean by service prototyping.

## Research into the practice of service design

Blomkvist, Holmlid, & Segelström (2010) have identified current trends in service design research based on an overview of peer-reviewed papers published during 2008-2009. The trends were described as research about 1) *design theory*, exploring the fundamental questions of service design, the language of service design and co-creation, 2) the overlap between and contribution from service *management*, 3) *systemic* approaches to service design, such as product-service systems, 4) *design techniques*, such as tools and processes and 5) the practice of service design researched through *case studies*. The trends were used to contrast recent research with older research which focused mainly on how the discipline relates to other (design) disciplines and arguing for service design in its own right (Blomkvist, Holmlid, & Segelström, 2010).

In total, six case studies were published during the two years covered by the study. The emergence of empirical studies of service design is contemporary with the breakthrough of the discipline as a whole, (Kimbell, 2009a). Extensive research about the practice of service design has been conducted by Lucy Kimbell in the project Design for service in science and technology-based enterprises (Kimbell & Siedel, 2008), covering the practice of three design consultancies that work with services. Kimbell's (2009b, c) work has shown a number of interesting features that characterise the practice of service design. They are summarised and presented below.

- » Looking at services from both a holistic and detailed point of view.
- » Considering both artefacts and experiences.
- » Making services tangible and visible through visualisations.
- » Assembling sets of relations (between artefacts, people and practices).
- » Designing business models.

An ambitious case study, looking at the practice of service design by 17 design agencies, consulting firms and experience-centric service providers (Zomerdijk & Voss, 2010), reported similar results as Kimbell (2009b,c). The result shows that the broad sense of designing services – not only carried out by actual designers – concerns the delivery of physically- and socially mediated touchpoints through interactions between the customer and a strategic front-line and backstage system. In addition, the study found that the studied companies to some degree 1) designed the dramatic structure of events and 2) managed the presence of fellow customers (Zomerdijk & Voss, 2010). The evidence of 1 was most obvious in companies with design backgrounds that more easily adopt the theatrical metaphor, and for 2 they found only limited evidence (*ibid*).

The studies performed by Zomerdijk, Voss and Kimbell concern the practice of service design on a general level and the distinguishing features of what service designers do. More focused studies, looking at specific activities in service design or at the activities that are shared by other disciplines are still uncommon.

*“Until recently research regarding design with a service perspective as well as services with a design perspective has been scarce. Many fundamental aspects of service design are still unexplored academically.”* (Segelström & Holmlid, 2009 p. 1).

Other researchers (Segelström & Holmlid, 2009; Segelström 2009) have looked more closely at how service designers visualise research material. This research was based mainly on interviews with service designers and supports the idea that visualisations are important for the practice of service design by showing that visualisations are used as communication tools, to preserve empathy within the design team and to make insights tangible (Segelström 2009). It also showed that visualisation techniques are important for service designers and facilitate the early research stages of the design process (Segelström & Holmlid, 2009).

### **Missing knowledge about service design practice**

The research so far about what service design practice is has mainly looked at the process in general or focused more on the early stages of the design process – the research phase. No studies have explicitly shown what prototyping is in service design. The need for more research about service prototyping has been pointed out among other important research areas recently; “[r]esearch is also needed to deepen and creatively expand knowledge of design methods and tools, such as service blueprinting, service prototyping, and service simulation models / .../” (Ostrom, et al. 2010, p. 18).

Holmlid & Evenson (2007) have claimed that the specific attributes of services makes prototyping special in a service context but that knowledge about how this is done, or should be done, is missing. The idea and the ways that services are different from products is persistently reiterated by the service design community, but studies that thoroughly explore the implications of those differences are not common. This is especially true for service prototyping, and this paper aims to provide parts of that missing knowledge.

To find out what service prototyping is, a number of different approaches can be imagined. A common characterisation of design research is to divide it into research *about* design, research *in* design and research *through* design (Frayling, 1993). This paper is part of a larger attempt to map out the practice of service prototyping, mainly focusing on research about design. That means that this research is focused on interviews with- and observations of - practicing service designers.

### **Early attempts to frame and define service prototyping**

Service prototyping has been described in a variety of ways by design practitioners, and is also mentioned in academic literature, as we have seen, as an area that needs more investigation. Some rudimentary definitions of service prototyping exist, like the one suggested on the online repository for Service design tools (2009), a project aimed at identifying communication tools for design processes in complex systems: “[service prototyping is a tool] for testing the service by observing the interaction of the user with a prototype of the service put in the place, situation and condition where the service will actually exist.” The same definition is basically reproduced in academic reports from the project but adds that: “[t]he difference between this kind of simulation and all the others is the attention paid to the external factors that could interfere with the service delivery, factors that have a great impact on the user experience.”(Diana, et al. 2009 p. 8) In essence, this would mean that any prototype that is tested in the intended “place, situation and condition” is a service prototype. The data behind the work is collected via several case studies, existing

literature and interviews with designers and academics, but focused mainly on different types of visualisations.

Another description focuses more on the emotional impact and the business side of service prototypes. According to Jeneanne Rae (2007), service prototyping helps in gaining a competitive advantage and reduce risk. She also says that:

*“Good service prototypes appeal to the emotions and avoid drawing attention to features, costs, and applications that can clutter the conversation and derail the excitement factor. Storytelling, vignettes, cartoons, amateur videos—all are low-budget tools that bypass the intellectual “gristmill” and go straight to the heart.” (Rae, 2007)*

The exact meaning of service prototyping is not mentioned by Rae, though it is described as a collaborative, explorative, iterative and open-ended activity. Miettinen (2009) exemplifies a quite different approach to service prototyping. In her work she has stated that; “[s]ervices are usually prototyped through scenario-building and role-playing.” (p. 4512) and in the specific case she described, prototyping was also placed in a real-life environment. The actual process and meaning in Miettinen (2009), about what service prototyping is meant to imply is unclear though, and the question remains what service design practitioners do to prototype services.

In the next section, the approach used in this paper to find out what service design practice looks like is presented. This is followed directly by the results, which is divided into the purpose, attitude and challenges associated with prototyping services that were reported in the interviews. And then, a discussion about the implications of this research clarifies the main points followed by some future research considerations and finally the conclusions are presented.

## Interviews

The paper is based on interviews with practicing service designers in Sweden(1), Norway(1), USA (2), and The Netherlands (2) (see Table 1). The interviews focused on prototyping but started with some background questions about the designers and general questions about their typical work process. Their backgrounds and level of experience within the field of service design varied. The backgrounds of the informants can be seen in Table 1, where some additional information can be found as well. The shortest interview was 35 minutes and 4 seconds long, and the longest one took 104 minutes and 34 seconds. The average interview was ca. 74 minutes long and all the interviews were conducted via telephone (2), or Skype (4).

This paper reports mainly on answers to the question “Can you talk a little about how you actually make prototypes?” but also include other answers relevant to that question. None of the designers knew beforehand that the interview was going to be about prototyping. A table (Table 1) show some basic information about the informants and what geographical region they are active in. The information in the table has been retrieved from the interview material and the answers provided there. Mainly the questions about their background, prototyping practice and who they involve in the creation of prototypes have been used.

**Table 1: the informants and some characteristics of each prototyping approach**

#	Region of operation	Author of prototypes	Scope of prototypes	Background	
				Educational	Professional
1	Nordic	Themselves	Holistic	Industrial and Interaction design	Interaction and Service design
2	Nordic	Themselves	Single touchpoint/s	Industrial design/ Art school	Design strategy
3	USA	All stakeholders	Single touchpoint/s	Journalism	Interaction design/ Marketing
4	The Netherlands	Themselves/ stakeholders	Single touchpoint/s	Software engineering	Mobile marketing
5	The Netherlands	Specialists	Single touchpoint/s	Photography/ Communication	Marketing/ Business strategy
6	USA	In-house experts	Single touchpoint/s	Interaction design/ Media	Web design/Art director

## Results

In the following sections, the main themes of the reported practice of service prototyping will be presented, starting with the main purposes for prototyping services. How and why prototyping is seen as an essential part of service design, and then some characteristics of current service prototyping will be described, followed by a presentation of the challenges for service prototyping according to the informants. The symbol “#” followed by a number is used to denote the different informants according to Table 1.

### Purposes for prototyping services

Service prototyping is primarily said to be used as a tool for *learning* or as a tool for *communicating*. All of the informants report using prototypes for both purposes, generally with the emphasis on one or the other. Service prototypes are communicative tools in the collaboration with stakeholders and colleagues; “[service prototyping] is a way to show a service without creating the service, to show what it could look like and how it could work” #2. The visualisation of services is an important part of communicating with prototypes “[a] service prototype is an attempt at visualising for someone, whether it is a client or the end user, what the service would be like in the future, when wholly realised” #3.

The learning purpose can be divided into *exploring* and *evaluating*. These purposes are mentioned in different variations by most of the interviewed designers. Exploring is mentioned in terms of “generate insights, developing your thinking [about a situation] and gathering insights”, while evaluating is described as “testing, receiving feedback and finding fail-points”. Service prototypes are described as “a lightweight version of the actual service

where the crucial parts of the service are tested” #1, “a situation from which you learn how to improve a service” #4, and “a way to develop your own thinking and receive feedback about that thinking from others” #6. Service prototypes not only help designers explain services to others, but also make them more feasible to themselves, it lets them “get a glimpse of the future” #3.

### Prototyping as an essential part of service design

The informants were all asked whether they considered prototyping to be an important part of their work. Without exception, the answer was yes. Looking at their description of what their work processes looks like though, only half of them spontaneously mentioned prototyping. Looking at a larger data-set, including other interviews with service designers (see Segelström 2009, for a description of the interviews) prototyping seem to be a priority in the work process for about half (8/15) of the informants. This means that when half of the service design practitioners were asked about their general work process, they did not mention prototyping (or activities closely related to prototyping). There was also a big difference in how the informants approach prototyping. One design agency stands out in particular. #1 was the only informant to report that prototyping is done in a systematic way, regardless of the specific project they are working on. They were also unique in that they always make holistic prototypes, which means that they prototype a select number of touchpoints and test them to evaluate their prototypes, i.e. they prototype several touchpoints at the same time, instead of single artefacts or interactions, see Table 1. This allows them to take the whole service into account when prototyping.

The interview data also show that some of the agencies do not have a specific phase dedicated to prototyping. Two out of the six informants reported to have a prescribed way of working with prototyping. The process of collecting data and sorting the material seemed to be generally more well-defined and were accounted for in greater detail than prototyping. Excerpts from some of the interviews illustrate that prototyping is not a very articulated; “what is a service prototype? I don’t use that word” #2, or distinct practice within some of the agencies; “[t]he prototyping starts when we talk about ideas ./ If I have an idea and I talk about it with my client or with anyone- like a colleague -then the idea comes a little bit to life and ./ that is a way of testing the ideas” #5 and “[f]or me a prototype can be anything – anything that helps you learn about the thing you want to test ./ Prototypes for us are anything that can be used to test a certain part of a new concept” #4.

As expected from reports on service design practice (see e.g. Vanstone & Winhall, 2006; Fullerton, 2009), the prototyping approaches were collaborative. A prerequisite for prototypes to serve as facilitators of communication is, like prototypes in general, their function as manifestations of ideas and thoughts (Lim, et al. 2008). This allows designers and stakeholders to communicate more effectively and collaborate around otherwise abstract concepts (Samalionis, 2009). This function was evident also in the interviews that support the image of service design as collaborative; “./ we work really closely with our clients and try to involve them in some way or another. It’s not like they give us an assignment and then we return to [our office] and then work for six weeks ./ and then return to uncover the finished product” #2. Working intimately with clients and involving decision-makers were seen as especially rewarding. In most cases though, the prototypes are produced (authored) by the design agencies themselves, see Table 1. When it comes to the evaluation of prototypes, all informants say they involve the stakeholders as much as possible.

## Challenges for service prototyping

The result that service designers use prototypes to learn and communicate is perhaps not so surprising; variations of those purposes can be found in most design research papers about prototyping. More interesting are the specific challenges that the informants see with prototyping services.

The general attitude towards prototyping services seemed to be that it is helpful and that the benefit is greater than the cost. When asked whether the designers, in an average project, spend enough, too much or too little time on prototyping, two of the informants said that they want to do more prototyping. The interesting question is perhaps not if they do enough, but rather if they do enough for the client. #1 said they do enough for their clients, but that they had a feeling that the community as a whole does not. The reason why some informants do not do more prototyping is because the clients either do not see the benefit (#5) or the designers cannot motivate the extra time for more iterations (#4). Another aspect of the client relationship is reported by #3, who says that during prototyping it is important to “slow the client down” because at that point clients often want everything to happen at once. #2 believe they are doing just enough prototyping but would like to learn more about how to actually prototype for services.

The awareness that service prototypes are different than prototypes using other design materials was high, though the interpretations of the implications and concerns related to this difference varied a lot. For instance, several different aspects that make service prototyping more challenging was suggested, such as the *inconsistent* nature of services; “If it’s a technology-based prototype its presentation is the same each time, if it’s a human-delivered prototype ./ it’s going to be delivered a little bit different each time, even within the same person, or from person to person.” #3. The problem of *authenticity* was also stressed (e.g. by #3) and this was reflected in some of the answers; “if you do role-play, you know the people who are taking part- they are role-playing. It’s not the actual situation. They respond to each other because they pretend” #5.

The *validity* of the test situation in relation to the intended implementation context was mentioned several times by the informants. Simulations are not real situations, and therefore prototyping might not even be the best tool to use, according to #6. Testing concepts in isolation and then letting them out in “the real world”, you never know what is going to happen #5. The complexity of services makes them more difficult to prototype and understand since it is hard to know what to look at #4, was another opinion. An associated challenge was *time*, which largely affects the experience of service prototypes (#1 and #6). The problem of prototyping *intangible* things, such as experiences and social interactions was also prevalent in the interview material.

Another challenge is that many of the design agencies work with clients who do not necessarily know what service design is or that they are actually delivering a service, which means that the companies sometimes do traditional prototyping (e.g. mock-ups #2, animations #2, product models #6, and information #2). This can be frustrating, as illustrated by this excerpt where an informant talks about a project where they were hired to design the printed material for a public transportation service, but where they:

“[know] that public transportation is about much more – it’s about what they tell you onboard the train or bus, what phone number to call for route information, how does the travel card work and how do you buy it online – all these things are parts of the service ./ But in this case the client could only handle one part of the service at once. In that case we did only one thing, but tried to push the client to see the whole picture.” #1

## Discussion

The purpose of this paper is to reveal and describe the practice of service prototyping, according to service designers. In a sense, it is easier to describe what service prototyping is not. For instance, it is not *one* thing to the interviewed designers. The reported practice, and the definitions provided by the informants, varied largely. This means that the description of a service prototype found in Diana, et al. (2009) could not be confirmed by this research, since most of the descriptions of how service prototyping is actually done deviated from that description. The interviews also revealed that service prototyping is not very articulated (some informants were unfamiliar with the term) and not very rigid in the sense that it can be pretty much anything- like an idea, an everyday object or a deliberately constructed artefact or social interaction. To most agencies it was also not a specific phase in the design process, i.e. it could happen at any time and place during a project. This is a natural consequence of not having a language- and a process for, working with service prototyping.

The fact that there is no actual prototyping phase in the projects is partly due to the designers' clients. For instance, #2 explains that they do not sell projects based on prototyping; it is not part of the specification for projects, unlike e.g. research. It is likely though that this varies a lot between different design agencies. There is also reluctance among service designers to actually work with methodologies or rigid processes, which is evident in other research as well: “[w]hilst some organizations had well-developed and tight methodologies, many successful innovators preferred a more flexible approach. They feared that tight methodologies would inhibit the creativity required for experiential service design and would increase time to market unnecessarily. This suggests that the relatively tight and rigorous methodologies typically found in product innovations may not always be applicable to service innovation.” (Voss & Zomerdijk, 2007 p. 3)

Another piece that was largely missing in the interviews was the holistic perspective of services. What is interesting about this is that when asked, all recognise the value of a holistic perspective, but when asked about how they actually prototype, all but one company (#1) talked about single interfaces, products or interactions. This indicates that some knowledge about how to approach service prototyping is missing and that the practice is more reactive than proactive. There is also the question of how much of a priority service prototyping actually is. All informants recognise the importance when asked but only half even mention it as part of their work process. This might of course be due to the fact that prototyping is implicitly taken for granted, or they simply do not prioritise prototyping to the extent they say they do.

One thing that can be said about service prototyping, and that is corroborated by findings about service design in general (Rae, 2007) is that service prototyping is a collaborative effort. “The quality of the service depends on your collaboration with your customer” #5. To achieve this, the use of prototypes to visualise service concepts and ideas seem especially valuable.

This paper also reveals that designers see a number of challenges for service prototyping. A number of specific features of services, and for prototyping in particular, was mentioned; inconsistency, authenticity, validity, intangibility and time. At the same time, most designers did not report any problems in their *own* work in prototyping services, which might indicate that they do not actually address these service related issues in their practice. A problem related to clients was said to be the amount of prototyping that occurs within projects, and showing the value of prototyping services. This problem has also been identified in other service research:

*"It seems the main barrier to using design (as well as creativity-and innovation-related practices more generally) in service firms was the perception that it was not relevant: half the service firms expressed this opinion. This aside, the more important barriers were the cost of these activities and the lack of clear tangible rewards." (Tether, 2008 p. 8)*

### Future research

This research needs to be completed by observations of actual prototyping cases, to wholly understand the practice of service prototyping. A holistic approach to service prototyping, that address the challenges suggested in this paper, also needs to be developed or brought to light in future research. Especially the issue of how to prototype whole services, in a realistic environment that accurately convey the experience of the future service, is a question that should be further investigated. Responding to this question means developing processes that investigate how new service concepts relate to "servicesscapes" (Bitner, 1990) and whole services; "the physical environment, the service employees, the service delivery process, fellow customers and back office support" (Zomerdijk & Voss, 2010 p. 25).

Another important area is how the value of service prototyping can be measured and communicated to service providers. The design community seem to realise the benefits of prototyping, but lack the tools to convince key stakeholders. More research on how to develop methods for practicing service designers that clearly communicate the benefit of their work is needed.

## Conclusions

This paper has shown that service prototypes are used to explore, evaluate and communicate design ideas and concepts. A number of challenges with prototyping services as opposed to products were identified: inconsistency, authenticity, validity, intangibility and time. At the moment, service prototyping cannot be said to be one thing but rather a variety of approaches and activities. The area shows great opportunities for improvement and one of the informants even pointed out the lack of knowledge about service prototyping within the community, and another designer said that they, at their agency, need to learn more about how to prototype. Findings along that line underscore the notion that service prototyping is still not wholly formed and needs further development.

What the research presented here can contribute is a number of characteristics of contemporary conceptions of what service prototyping is. Summarising the prominent features according to service design practitioners, indicates that service prototyping is an activity that is:

- » 1) central to their work (but not a structured unit of their processes),
- » 2) about making services visible, to learn and communicate about services and
- » 3) collaborative.

The potential and still unrevealed knowledge about how to tackle certain aspects of services makes this area one of the more interesting future research areas that can develop tools and methods specifically for the prototyping of services. The attempt to unmask service prototyping should focus on developing a new shared language of prototyping and arriving at a first description of service prototyping as a well-defined and structured activity, taking the service specific attributes seriously.

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# **Creating Scenarios for Regional Projects.**

## *Service design for multifunctional and collaborative food networks.*

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## **Abstract**

This paper presents a strategic and service design approach to create scenarios for regional projects through an action-research strategy. The intent is to reflect on the basis of an on-going project, insisting on the Agricultural Park South Milano, lightening the actions taken and their contributions to the scenario building process.

Starting from a brief introduction on the shifting in the orientation of the design discipline from a single product or service to a more systemic approach on places development, the essay describes an on-going project in which the method is applied. Then an analysis of the specific actions, tools and results is carried out leading to a twofold contribution: on one side the method's structure is better outlined, supporting the planning of future activities; on the other hand specific collaboration schemes, for service provision, between producers are defined.

**KEYWORDS:** scenario building, service design, regional development, food networks, local synergies.

## **1. Introduction**

This paper focuses on the Scenario Building phase that has been carried out in a wider research program called “Feeding Milan. Energies for change” (Nutrire Milano. Energie per il cambiamento). This project is an ongoing research, promoted by Slow Food Italia, Politecnico di Milano-INDACO dept. and University of Gastronomic

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\* This paper is the result of a collective work but for the purposes of this publication D. Cantù has written the paragraphs 3.2, 4.1, 4.2, 4.4, 5.2; G. Simeone has written the paragraphs 1, 2, 3.1, 4.3, 4.5, 5.1

Sciences. The aim of the project is to design a system of services and infrastructures to make the Milanese agri-food chain more efficient and effective, in order to shape a scenario of sustainable and innovative metro-agriculture. The method of work and the tools adopted to build and create consensus according to a co-design perspective are presented around a scenario based on two main concepts:

- » multifunctionality and collaboration among food producers to get economies of scope;
- » de-mediation of the agri-food chain to foster the relationship between the city and the productive countryside.

## 2. Design scenarios for territorial projects

Moving from Meroni's (2007) definition of creative communities (*local social innovations, virtuous and promising activities in different areas of doing*) so far, designers started to analyze and boost localised and punctual project-based initiatives. Currently this role is shifting towards a more systemic approach, in which design gives shape to a *framework project* that includes, drives and connects different local projects. This type of approach makes the defining of a framework necessary in order to coordinate and systemize all the local projects. The first task that designers have to tackle when dealing with such projects is to build up a scenario, in order to give shape to a common vision to share with such different stakeholders, stressing competences, resources and interests.

Such scenarios can lead to what Manzini and Jegou (2004) called Design Orienting Scenarios (DOS). DOS are defined by authors as sets of motivated and articulated visions that help the involved actors to generate common shared visions and to give the same direction to their actions. In particular, this approach is opposed to the Policy Orienting Scenario (POS), adopted to direct policy choices for long-term actions. The DOS building activity, which is the collaborative creation of a common vision about a desirable future as well as the strategy to implement it, is primarily focused on a short term prospective, and its main purpose is to provide direction for on-going projects development. In our case, DOS specifically figures out the following series of design competences as:

*Systemising*: to improve the overall system effectiveness. It consists in making connections actors with resources in order to generate synergies, and, through this collaboration, the sharing risks and advantages.

*Envisioning*: to facilitate the social conversation on the action plan and how it can be put into place. That is, to create consensus and to make the possible solutions visible.

*Communicating*: to make the project and its results visible and understandable to different actors: from the research group to the stakeholders and the wider public.

## 3. Feeding Milan: an on going case.

### 3.1 The general framework

“Feeding Milan. Energies for change” started from the observation of a matter of fact: in Milanese urban area, the demand of high quality and fresh food hugely exceeds the actual, available production, despite the presence of a wide potential “urban larder” known as Agricultural Park South Milan (APSM).

The main idea to support this demand is to make agriculture the praesidium of land's territorial quality. This means to revitalise local networks, encourage the sharing of common principles and optimise the resources in order to create a new territorial system. The emerging vision figures out a rural-urban area where agriculture flourishes feeding the city and, at the same time, offers to the city dwellers a set of opportunities for a multiplicity of farming and nature related activities.

The project structure could be told taking advantage of an agricultural metaphor, borrowing terms from the farming process.

1. *Planning the crops (Scenario building)*. It is the building phase of the project's scenario related to a set of de-mediated services between APSM and Milan metropolitan area. This phase aims to define the guidelines and the strategic vision as well as give a frame to the overall project.

2. *Tasting the soil (Regional analysis)*. This phase aims to explore, understand and map the metropolitan area (APSM + Milan), in order to point out the strengths and weakness, the best practices and underexploited resources, the most proactive individuals and group of consumers, in order to identify the design opportunities.

3. *Cutting the furrow (Service design)*. It deals with boosting the existing best practices by designing specific new services and integrating them into a system of local connected solutions related to short food-supply chain.

4. *Seeding (Piloting)*. It is about launching pilot projects and modelling the designed solutions. The aim of this phase is to trigger a change in the local food system by planning by projects.

5. *Manuring (Communication and participation)*. It is the phase that deals with project communication, the users participation and dissemination. The aim is to create a stable confrontation with the project's stakeholders at different levels, starting co-design activities.

### 3.2 Strategies for scenario building

The *scenario building* stream is built on two main pillars: *multifunctionality* of the farms and *de-mediation* of the food chain. The concept of multifunctionality in agriculture ascribes to a farm the opportunity to diversify its sources of incomes by supplying, jointly to its primary function of producing food and fibre, other non-commodity outputs contributing to the socio-economic viability of many rural areas (OECD, 2001; Renting et al., 2003). These additional functions can be seen as services linked to the environment, territory and people. This idea is proposed as a promising strategy for European agriculture (EU, 2000) especially in the periurban areas, where these services could be addressed to the city, shortening the food-chain and creating direct connections between city dwellers and farmers (Meroni, 2006; Kneafsey et al., 2007).

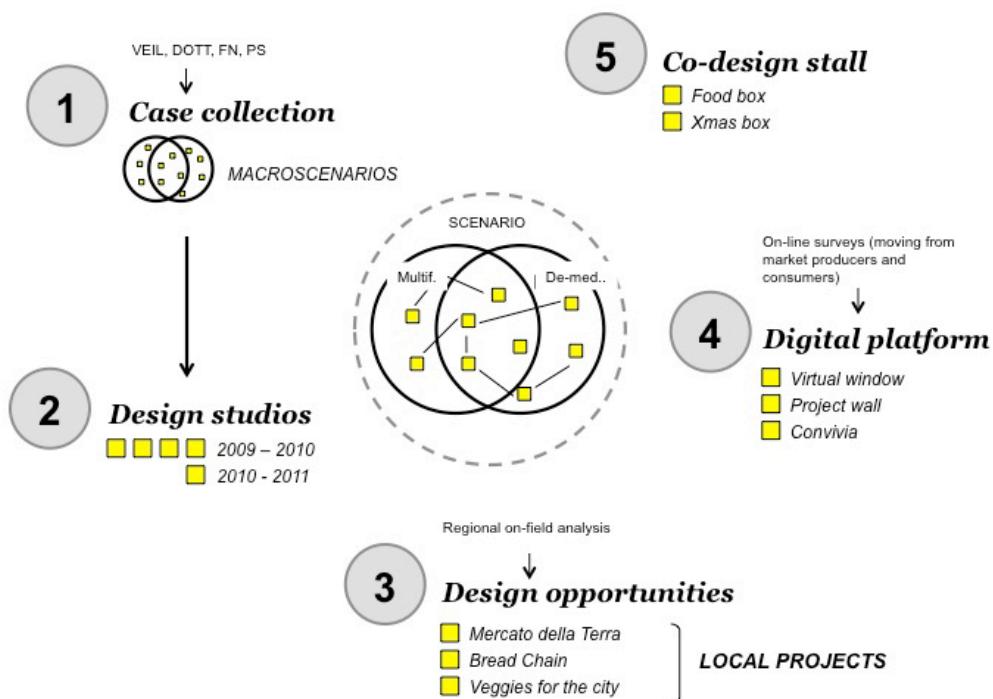
Thus the project on one side will foster the development of a local agricultural system with various functions, offering the opportunity to create synergies and shared services platforms among the producers; on the other hand it will support direct connections between them and the city dwellers, developing system of interconnected food distribution services. In detail, the specific goals of the project are the following:

- » To promote a shift from industrial agriculture to organic multifunctional farming thanks to the support of existing best practices and the development of new, specifically conceived, projects;

- » To conceive and develop a new set of services to improve the quality of life in the countryside, and to facilitate the links among the small farms and the city;
- » To activate unexploited local resources (infrastructure, initiatives and people);
- » To promote a new culture of food and agriculture and to rise among the citizens the awareness of the agricultural park (APSM) relevance to improve the quality of life in Milan.

## 4. Scenario building: actions, tools and results

As shown in the picture below, “Feeding Milan” scenario is the sum and systematization of different output coming from many coordinated activities. It is “a story of stories” formed by a selected set of service ideas (the *seeds*). These *seeds* are the existent and foreseen services that contribute to the creation of a regional multifunctional and de-mediated food system. They could be b2b (business to business), b2c (business to consumer) or both at the same time, depending if their focus is on the collaboration among the producers, between producers and consumers or both, in the case in which one interaction implies the other.



**Figure 1. Scenario building process**

### 4.1 Case collection.

A desk and on field research on cases of social innovation related to food networks has been done, both taking advantage of previous research projects and collecting new inspiring cases. This work aims at creating a common knowledge and understanding about the social movements and the already existing solutions in order to develop a first set of service ideas shared among the research group. The activity carried out was an internal workshop aimed to reorganise the visions emerging around the project two

main pillars: de-mediation and multifunctionality. This exercise was structured in four main steps:

- » *Brainstorming*: a first draft ideas generation about possible services and conceptual mapping of the results according to modalities, places and actors;
- » *Polarity generation*: distribution of the ideas on interesting polarities axis that generate couples of feasible alternatives about the scenario;
- » *Cross definition*: choice of the most significant axis couples, able to generate meaningful quadrants about alternative visions for the framework scenario;
- » *Macro-scenarios definition*: naming of the most interesting project's areas.

This activity led to the characterization of twofold alternatives related to the project pillars, providing a first general vision to foster the scenario building process.

## 4.2 Design Studios.

### 4.2.1 Design Studios 2009-10

A research activity aimed at developing the first ideas about feasible connections between the city and the countryside was carried out involving the students from the first year of the Master degree in Service Design of the former academic year. The work included three main focuses:

- » *Field research*. From the observation of the local cases of social innovation, 3 farms in the Agricultural Park South Milano (APSM) were selected on the basis of the richness of their relations and direct connections with the urban dwellers and the other producers. While working on this topic many visits have been done and a visualization of the multifunctional systems of these farms was outlined, lightening the touchpoints of the existing services. The visual material produced, suitably elaborated, set up the basis to share a common definition of local networks, enabling the following steps of the strategic conversation with the group of actors involved.
- » *Workshop: service ideas generation*. Starting from the macro-scenario definition, this activity focused on the concept of de-mediation to define and approach a set of ideas from the user point of view. In fact the aim was to define firstly the desirable solutions for the users and then to understand how the collaborative and multifunctional system supporting them should be like. The resulting ideas, duly selected, were translated in a set of cards that supported the students groups to define the projects concepts.
- » *Solution development*<sup>3</sup>. The third activity undertaken was the development of four specific concepts aimed at deeper describe new and feasible relations in the APSM context. Hence the following four services descriptions has to be seen as a tentative sketch of an integrated system of local food related connections:

**Pianta tu.** How to make the children understand the importance of taking care of the natural environment while providing them with significant collective experiences during summer holidays?

The idea is to take advantage of the closed countryside of the APSM to provide a summer camp service to teach the children the rhythms of nature. *Pianta tu* offers an active learning environment, involving the children in vegetable garden activities and other didactic and recreational ones in different farms in the same area. In fact each group of children, from 6 to 11 years old, spends one week in the farm taking care of the

<sup>3</sup> The projects were developed by the students in collaboration with the professors and tutors of the course.

growing plants and having to develop a collective diary that supports them in the end of the week to pass on the baton to the following group. In the end of the summer there is a collective party with all the children who participated.

**En Plein Air.** How to enable Milan urban dwellers to discover new places for open air activities while making them discover local typical food production?

The service is based on a social network including citizens and local producers and offers the tools to organize a pic-nic with the products coming from the farms. Each farm providing catering activities could join the network becoming a local hub for picnic basket distribution. It can use its products and the ones from the smaller farms in the surrounding area. Furthermore it starts the building of a collective map on the digital platform, helping people to find the nicest places in the park to organize open-air lunches. Adopting this solution many local collaborative systems could be potentially developed.

**Estendo.** How to make use of the farms' space as a place to foster the creation of elective communities?

The solution proposes to extend the domestic space to the farm to do washing activities for cumbersome things like curtains, eiderdowns and other stuff. This activity is usually done in public laundries, waiting long time in uncomfortable places to have the clothes done. With the project proposal it's possible to create a local system of replicable services supported by different associations able to create new social environments while taking advantage of the benefits of open air drying. The service is supported by APSM that provides a communication support for the overall system creating connections between the initiatives through the APSM's digital platform.

**Coltiva l'energia.** How to foster the local product and service economy in the APS promoting virtuous relations with Milan urban dwellers?

The project wants to create a distributed energy production system based on solar panels built on the roof of appropriate sheds in the farms. The idea is that the citizen, through *Banca Etica*<sup>4</sup>, could finance the project and, thanks to an economic incentive, have in return of their investment products or services supplied by the park's farms. The solution proposes a win-win strategy that enables small farmers to become local energy producers into a distributed system. On the other side it offers the citizen the opportunity to subscribe an ethic investment being paid with credits with a higher spending power compared to the corresponding monetary one. This solution provides the opportunity to outline a first scenario of local interconnected systems of services developing economies of scope and scale.

#### 4.2.2 Design Studios 2010-11

During the current academic year (2010/11) in Politecnico di Milano we are running the Final Design Studio in the second year of Service Design Master Degree course. It aims at designing a food-coop in Milan. Currently the work is still in progress and so far the students are looking for innovative retail cases to get insights for the project development, and to analyse four peculiar contexts (four neighbourhood in the city: Bovisa, Brera, Isola and XXII Marzo) thinking about the opportunities, the resources

<sup>4</sup> Banca Etica here is just taken as an example of a possible stakeholder in the scenario development.

and the communities that might support the food-coop implementation in such areas. In the next steps, the most suitable context will be chosen according to its features and the concept of the solution will be developed. Then each group of students will be asked to design a part of the whole system including both front and back office activities.

#### **4.3 Design opportunities.**

According to the project process, introduced at the beginning of this paper, the *regional analysis* phase is addressed to look for design opportunities, being the triggering point to implement local projects.

In the specific case, during the first year, our project partner Slow Food provided designers with a very precise map of all the producers of APSM and, broadly, Lombardy region within 40 km from Milan. These producers were selected according to sustainability criteria and represent the best practices (the creative communities) in the Milanese region. They were asked to be involved in the first local project, Slow Food Milan farmers market (Mercato della Terra di Milano). In the same way, the other local projects were started because of the opportunities coming out from the regional analysis.

##### *Local project 1 - Mercato della Terra di Milano (Milan Earth Market)*

This is the farmers market of the producers from Agricultural Park South Milan and other guests from the Lombardy region. It is promoted by Slow Food Italy, the Province of Milan and authorised by Milan city municipality. It is a monthly market that takes place every 3rd Saturday in the former local vegetable market of the city. The farmers market could be a good system for de-mediated selling in Milan, where it is difficult to find good local produce in the mainstream distribution system.

The strategy combines people's increasing interest in local food and the intent of farmers to move towards organic production and de-mediation: this means offering high quality food from local small farms only. Other drivers that can shape the strategy for this local project are:

- » The crisis in the agro-industry can push farmers to switch to a more sustainable way of production (organic crops, de-mediated selling systems, etc.);
- » The role of a well known association like Slow Food as a guarantor of good quality produce;
- » The use of available digital technologies that can facilitate meeting between farmers and consumers.

This project aims to become self-organised, in order to provide producers with proper infrastructures and tools; it offers educational and teaching activities to push the citizen to sustainable consumption.

In order to implement the local project, the following activities have been carried out (in synthesis):

- » Selecting and recruiting farmers, according to quality parameters;
- » Getting permission from local authorities;
- » Organising the logistics and turnover among the farmers;
- » Communicating the event to the city;
- » Providing a tool(kit) to help farmers to organise the market.

##### *Local project 2 – La panificazione territoriale (Regional bread-making)*

This project regards Milan's bread chain from the crop to the shop. Milan is suffering from a lack of good quality bread. Over recent years prices have risen very high and many people buy industrial bread from the supermarkets.

The aim of this project is to re-build the bread chain from the quality of the crops, through the processes of transformation, to the final consumer, who will be able to buy good, clean and fair bread at the right price in the shops.

» *Local project 3 - Ortaggi per la città (Veggies for the city)*

This project is about local vegetable production and distribution. In Milan there is no chance for city dwellers to easily buy local fresh vegetables though the mainstream distribution at the right price. Some farms have made shy attempts to encourage shopping on the farm, but of course this solutions, even if really interesting, can't be a solution for the majority of the people.

The aim of this project is to bring fresh veggies to the urban population, boosting de-mediated ways of selling, both in the city and on the farms.

#### 4.4 Digital platform

A specific research activity in order to explore the possibilities offered by digital platforms was developed jointly to the farmers market project. This intervention started by defining two on-line surveys for producers and consumers connected with the market with the aim of investigating their current practice and future possible ways of interact. Thanks to the analysis of the results obtained the research group outlined three feasible digital services to support a collaborative system among the producers: I convivi di alta formazione (Convivia of professional education); Il centro risorse e competenze (The resources and competences centre); La bacheca dei progetti (The projects bulletin board system).

These solutions have been after discussed with the producers themselves and the process is currently on going.

#### 4.5 Ideas sharing stall

Another challenging tool that Feeding Milan developed is the *Ideas sharing stall* in the farmers market. It works like a desk aiming to open a discussion between designers and city dwellers coming at the market. In each market edition designers propose new service concepts and get feedbacks from the participating people. The stall is firstly a way to actively involve consumers and producers in the project initiatives, using co-design tools and, secondly, to communicate the projects initiatives to a broader community.

In order to better understand, in this paper we provide a sample of one of the initiatives of the stall: the Farmers Food Box. According to the third local project *Veggies for the City*, we are developing a solution to distribute the produce coming from the local countryside. In order to do that a co-design activity supported by a rough service prototype was carried out, helping the city dwellers to point out their preferences about a service of weekly and local food delivery. According to the results coming from this activity, the next step is to design a solution proposal and to discuss it with the farmers that will be involved in this project.

## 5. Conclusion

### 5.1 Story Telling

Regional projects always deal with complexity. Thus it is not possible to separate the single phases and describe them as linear processes. The case of *Feeding Milan* is not different: the scenario building phase is recursive along the whole project and, as previously said, interacts with the regional analysis and pilot projects phases. Specifically they affect each other with: values and guidelines, in order to drive the on-field research and the early implementation of the pilot projects; available resources and design opportunities, to build up a possible, trustworthy scenario.

As mentioned before, the scenario is a “story of stories”, and it needs to be told to a broad audience in the city. Such a story is like a modular pot that can be extended according to the increasing number of seeds (services) designed.

In the project the selected seeds came out from the set of activities aforementioned, in which different proposals were developed and selected according to feasibility, effectiveness and contents criteria. Then, a plenary session between the project partners was carried out and the most original and promising ones were chosen to build the main part of the plot. The result obtained is a story foreshadowing a new regional collaborative system scenario visualized both as a video and a sequence of images to be effective for both dynamic and static communication means.

### 5.2 Systemising. Creating synergies in multifunctional systems.

From the process developed some general features of the scenario took shape. What emerges is an image of an APSM based on distributed systems<sup>5</sup> (Manzini, 2005; Mirata, Ristola, 2007) and collaborative services involving both producers and consumers. Based off this framework it is possible to outline two main points: the first on the organizational aspects that a multifunctional system has to carry out to create profitable synergies; the second on the services typologies that seem more interesting for the development of an efficient and effective local food network.

From the undertaken activities, and taking as an example the emerging solutions from the first design studio, it's possible to outline a scenario involving different kinds of multifunctionality. A scenario in which one or more farms could supply a service, leading to different possible synergies (Meroni et al., 2009) to create economies of scope and scale:

- » *Autonomous multifunctionality* is recognizable in a system where services are developed autonomously into one farm and could be replicated in others with similar features. These solutions could share knowledge and information promoting collectively the service and taking advantage of the definition of a set of enabling technical and conceptual tools (Manzini, 2005) to ease their replication. An example of this kind of multifunctionality is outlined in *Estendo* and *En plain air*, and fosters synergies between analogue functions.
- » *Distributed multifunctionality* is a characteristic of a small local system in which few farms, in the same geographical area, decide to expand their services offer. They accomplish this by taking advantage of the previous existing resources and activities, from hospitality

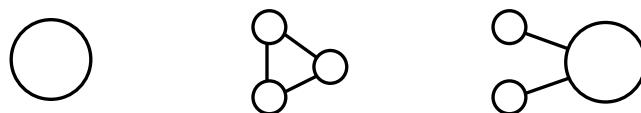
<sup>5</sup> i.e. distributed intelligence, distributed generation, distributed creativity, distributed economy.

to auto production and didactic farm, and joining together in supplying a new one. This organizational structure could be seen in *Pianta tu*, when systemize activities for children offered by different farms, fostering synergies between complementary functions.

- » *Centralized multifunctionality* is related to the idea that new functions are promoted by territorial hubs, i.e. more structured farms or other places in the city as the farmers markets. These hubs carry the strength and the resources to trigger new virtuous synergies between different actors and services.

*In any network, some nodes are more connected than others, making them 'hubs'. [...] A 'hub' is not just a node with a few more connections than a usual node; a hub has connections to many other nodes – many quite distant – and also connects many disparate nodes (nodes of very different types). (Halpin, Summer, 2008, p.57)*

An example is the project *Coltiva l'energia* in which synergies between compatible functions are developed.



**Figure 3. Schematic representation of the multifunctional networks: autonomous, distributed and centralized.**

From existing cases and foreseen solutions observed, another important feature of the scenario emerges. The idea that in a multifunctional food system there are services with a different levels of relational involvement: some requiring a growing level of active involvement from all the participants (Cipolla, Manzini, 2009) while others have evolved through time into something different, offering the possibility to participate at various levels to the supplying activities while improving the effectiveness of the service<sup>6</sup> as well.

Looking at APSM multifunctional farms, it reveals quite clearly that in a new proposed regional system, based on medium and small family managed farms, it's necessary to find a balance in the participation level of both the farmers and the consumers. Leaving to the former the time needed to carry on their main activity, that is food production, and to the latter the possibility to chose their personal participation in the solution in order to include very different consumers profiles among the users, potentially open the system to all the city dwellers.

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# Service innovation through touch-points: the AT-ONE touch-point cards

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## Abstract

In this paper we review the area of touch-point innovation in services and specifically describe the development and use of a card-based toolkit developed in the AT-ONE project - the AT-ONE touch-point cards. These cards have been developed to assist cross functional teams during the first phases of the new service development (NSD) process. This paper describes the development of the tools, their intended use and their evaluation. The results show that the toolkit assists the innovation process and helps develop team cohesiveness. The card-based approach offers a tangibility that teams find useful, and that offers multiple usage alternatives. Discussion and suggestions for further work are included.

**KEYWORDS:** Touch-points, cross-functional teams, service design, innovation

## Introduction

Touch-points are the points of contact between a service provider and customers. Each time a person relates to, or interacts with, a touch-point, they have a service-encounter. This gives an experience and adds something to the person's relationship with the service and the service provider. The sum of all experiences from touch-point interactions colours their opinion of the service (and the service provider).

Touch-points are one of the central aspects of service design. They describe one of the major differences between products and services, and are the link between the service provider and the customer. In this way, touch-points are central to the customer experience. It is not surprising then, that touch points are mentioned as one of the three pillars of service design (Koivisto 2009 p .142)

Due to the importance of touch-points as part of service design, there is a lot of interest regarding how a project team can innovate within the area. This paper considers existing touch-point research and describes the development and use of a card-based toolkit used to help project teams develop innovative new services.

## Research into Touch-points

Despite being a major part of service design, there is little, or no, documented research within the area (Howard 2009). We have to move to other disciplines to find research into touch-points, yet this research has a different focus and approach. Existing knowledge comes mainly from practice-based consultancy within service design, and can be traced back to literature from marketing and CRM (customer relationship marketing). This literature generally focusses upon the need for strategies for the integration of multiple channels, often with focus upon integration into a CRM system. In marketing and CRM, the term multi-channel delivery is often used instead of touch-points, and the focus has been mostly upon CRM systems themselves, rather than customer experiences or touch-point interactions. Design of individual touch-points is not covered, nor is innovation through touch-points considered, other than at a cursory level.

However, the concept of designing points of contact between the service provider and the customer is not new. Shostack (1984) introduced thinking around touch-points as part of services, using the term tangible evidence as part of what she termed ‘service blueprinting’. She describes touch-points as follows:

*... everything the consumer uses to verify their service's effectiveness. The setting, including colour schemes, advertising, printed or graphic materials and stationary, all proclaim a service's style. The design should not be carelessly delegated to outsiders or left to chance Shostack 1984 p137*

Shostack also used the term “orchestration” to describe how these points of contact should be designed.

In the medical domain, the term emotional touchpoints has started to appear in the research literature (eg. Dewar, et al 2009). The use of the touchpoint term here is more in alignment with usage in service design, in relation to the customer experience. However, the term is specifically applied in their article as an interview tool for eliciting critical incidents during a service journey - ie. as an evaluative tool for completed services, rather than as an innovation tool during the early stages of the design process.

Within marketing, integrated marketing (Iacobucci and Calder 2003) places most importance upon touch-points. Integrated marketing combines three elements that are closely related to service design; an understanding of consumer behaviour, focus upon brand and the link to customer experience. Integrated marketing takes a holistic view of services, in which coordination of touch-points is one major part of linking what is termed contact experiences to the brand:

*in a more complex consumer experience ... there may be literally hundreds of small elements of experience the consumer notices. (Fortini-Campbell 2003 p63)*

In CRM, the focus is upon using technology to organise and automate relationships with customers and prospective customers. It is often centred upon automating and integrating interactions, often with a focus upon efficiency rather than upon the customer experience:

*CRM is a management approach that seeks to create, develop, and enhance relationships with carefully targeted customers to maximise customer value, corporate profitability, and thus, shareholder value (Payne and Frow 2004 p527)*

Within CRM research the term touch-points has been used within a context of maximising profitability and shareholder value. Technology is used to organize, automate, and synchronize business processes—principally sales activities (Payne and Frow 2004, Hogan,

et. al. 2005). Recent developments in CRM practice show a new attention towards touch-points as part of the customer experience (Choy 2008),

Unfortunately, there is a lack of literature that provides methods, approaches or case studies describing how a project team can work to achieve the goals described in the literature. Much literature covers the importance of touch-point orchestration (Payne and Frow 2004, Holmlid 2008, etc). However, there is little literature available regarding how this is done, how this could be done or how this should be done. The work described here, describes therefore a methodology to assist cross-functional teams when working with touch-points.

Holmlid (2008) states that 'For design management the challenge becomes one of both coordinating multiple service channels, and the coordination between service channels' (p7). There is therefore a clear need for assistance that helps project teams achieve these two goals, yet little or no research to help project teams with the 'what' and 'how' of touch-point orchestration and innovation exists.

## Research questions

The research presented here contributes to the limited discourse around touch-points by identifying categories of touch-point innovation and by proposing an approach to innovation suitable for cross-functional project teams. Further, a toolkit and its evaluation is described.

The research questions explored in this paper are:

1. How could cross-functional teams innovate service touch-points during the early stages of a project ?
2. In what way can design-based tools assist team integration at the first stages of a project?

## Context

### At the fuzzy front end of the innovation process

The fuzzy front end (Smith & Reinertsen, 1998) describes the phase at the start of the NSD (New Service Development) process and has come into focus during the past years. This phase is described as the most important part of service innovation by innovation managers (Allam and Perry 2002, Allam 2006). This is because the earliest phases of the development process offer the greatest opportunity for transformational innovation. Approximately 66% of life-cycle costs are decided during this phase, whilst only about 5% of development costs are utilised (Berliner and Brimson, 1988). Kelley and Storey (2000) summarise its importance in this way:

*While previous management disciplines have rationalised and routinesed the back end of the new service development (NSD) process, the front-end of the process remains a knowledge-intensive black art that appears, from all industry studies available, to be consuming an increasingly large portion of the total concept to cash-flow cycle time. (Kelley and Storey 2000 p.45)*

The fuzzy front end is increasingly being focussed upon by designers, as they are given a more explorative and open brief (Sanders and Stappers, 2008). This phase is also seen as an opportunity to lift design up to a strategic and tactical level of an organisation.

### Cross-functional development teams

Cross-functional development teams are now used in most development projects. Such teams include relevant stakeholders, representing different functional areas within (and from outside) an organisation, and diverse disciplines (de Jong and Vermeulen, 2003, Gladstein et al 1992, Sethi et al 2001). The process and tools described in this paper are aimed at assisting cross-functional development teams, where the team, together with designers, explore the project mandate and develop ideas together, through workshops. This, amongst other things, aims to aid the development of team collaboration and communication (Sarin and O'Connor 2009), and helps maintain a common understanding and a shared vision of the object of development (Molin-Juustila 2006).

### The AT-ONE project

This work is part of the AT-ONE research project. AT-ONE is developing process support, and tools, for cross functional teams during the first stages of the NSD process. The AT-ONE method helps teams map, ideate and conceptualise potential new services through a structured series of workshops (Clatworthy, 2008).

Each of the letters of AT-ONE relate to a potential source of innovation in services, and the letters can be seen as a set of lenses through which a service can be viewed. The method therefore runs workshops with focus upon each of the following lenses:

A - New combinations of ACTORS who together can provide improved services

T - Orchestration and development of TOUCH-POINTS to provide innovative services

O - Developing new OFFERINGS that are aligned to brand strategy

N - Understanding customer NEEDS and how new services can satisfy them

E - Designing customer EXPERIENCES that wow the customer

The work described here relates to the development of the method for innovation in touch-points, the letter T in AT-ONE. The context for this work is therefore upon innovations based exclusively upon focussed workshops on touch-points in which cross-functional teams work together.

## Method

The research approach taken was one of participatory action research (O'Brien 2001) in which the author was involved in planning, developing and evaluating the support tool through several iterations.

### Use context/requirements specification

The idea for developing a tangible tool emerged when we started running workshops in the AT-ONE project three years ago. As part of the Touch-Point workshops, we found

ourselves using touch-point examples to help with both mapping and analysis (before a workshop) and for idea generation during the workshops themselves. In addition, we identified a need for activities that help build project team cohesiveness, common understanding and common goals.

This need is supported by research into design and collaborative teams (Molin-Juustila 2006), and from literature in which showed cards or games as an innovation support tool (Brandt 2008, Brandt and Messeter 2004, Halskov and Dalsgård 2006).

Based upon existing research into touch-points, cross-functional teams and card-based tools, the project therefore developed a card-based tool with the following seven functions:

A. Team building for cross functional teams

1. To build a common understanding of touch-points and their role as part of a holistic service design
2. To assist with team cohesiveness and mutual respect within the team for different disciplines and views

B. Analysis and mapping:

1. To gain an overview of the multiple touch-points used during the customer journey
2. To identify critical touch-points during the customer journey
3. To understand the limitations and possibilities of each touch-point that the company utilised
4. To identify who is responsible for design, development and maintenance of each touch-point

C. Idea generation

1. To generate ideas regarding how to innovate through changes in touch-point usage, design or implementation.

### The development process for the cards

The development process has been iterative and evolutionary during the past three years. Several touch-point workshops have been held with cross-functional teams from industrial clients and in addition, student projects, working with industrial clients have also utilised the cards as part of the workshop process. The cards were initially developed to enrich existing innovation workshops based upon the touch-point analysis and mapping. A need was quickly identified during these workshops to have a checklist of possible touch-points, to save time and to reuse knowledge. We found however, that developing the cards helped further develop the tools, so the tools and cards developed together. The tools and the cards have been prototyped several times and improved each time, most recently during workshops during the Autumn of 2010.



Figure 1: The first cards were images of individual touch-points and fairly large. Their tangibility was good, but they were too large when mapping complex service systems involving many touch-points.

The first cards were images denoting different touch-points. They were larger (ca. 15x15cm) and placed on foam-board. This made them tangible elements that were easy to handle and share and a strong improvement on post-it notes. However we found two problems with them. Firstly, they were too large and unwieldy when many touch-points were being grouped - they simply took up too much space on a table. Secondly, it was unclear from some of the images, which touch point they represented - the images were ambiguous.

The second cards were made as an innovation game for one of the industrial partners in the project. The intention here was to identify touch-points specifically for lottery and betting contexts. This time the cards were of normal playing card size. We found that the size worked well for the game context, and was a size that worked both on tables and on walls, when used for group work. In the images, we attempted to show both the touch-point and the use context. This caused two types of confusion. Firstly, ambiguity of some images, caused confusion, similar to the first series. Secondly, the association to context made it difficult to distinguish between the object in the images as a touch-point (for example a glass) or the context being a touch-point (a bar). This confusion raised questions within the group during group processes and transferred focus from the innovation process to discussion of card meaning. Although not a significant problem, it interrupted the flow of conversation.



Figure 2: The second series of cards were playing card size and incorporated into a game. They incorporated more contextual information about the cards by often including contextual information in the images.

During development of the third, and present set of cards, the project leader and designers discussed the issue of confusion and multiple interpretations. This led to two decisions. Firstly, that we would put the name of the touch-point on the card. This enabled a quick recognition of the touch-point, and together with the image, presented an unambiguous representation. This led to a discussion regarding the choice of images for the cards, and the usage of the cards themselves. Were they to be abstracted and inspirational for idea generation in themselves, or should they be concrete representations of the touch-points? We chose to make them as clearly descriptive and concrete as possible based upon the confusions earlier reported. This eliminated the problems mentioned earlier, and smoothed out group processes, allowing the group to focus upon the innovation process rather than negotiation of meaning.



Figure 3: The final cards added a text label to the image, and contextual information was reduced. This was found to improve group processes. (photo: Nina Lysbakken)

### Innovation tools developed using the cards

The cards can be used in different ways, depending on the requirements of the project. In this way, they assist the divergent phase of the front end of innovation.

#### Use context 1: Mapping an existing situation.

The cards help map out an existing situation. For example, the team can go through each stage of a service (or customer) journey and pick out the touch-points that are relevant at each stage. From this, many aspects can be discussed, such as which touch-point is most important to the customer, which are used in sequence, which are most frequently used etc. This helps get the discussion moving around how customers view the service through touch-points, and how they often jump between them.

#### Use context 2: Identifying so called ‘pain points’

Once the service journey has been mapped out, then there are many options open to a project team, depending upon level of ambition. One of the things we find useful is to identify the touch points along the service journey that don’t perform particularly well from a customer point of view, and why. This can be a useful means for improving consistency of experience along the service journey.

#### Use context 3: Whose touch-point is it anyway

In large organisations, different departments can be responsible for the design and content available through different touch-points. This often comes as a shock to an organisation, but is something that is usually noticeable from the customer perspective. There can be different tones of voice, interaction styles, use of images, typography and especially different terminology. Identifying who is responsible for each touch-point and finding ways of

coordinating between them can be very useful. This assists an organisations co-ordination activities around the customer experience.

#### Use context 4: Touch-point migration

An organisation might get lazy, or might just not have routines in place for updating their touch-points. Over time, a touch-point might become out of date or there could be a better touch-point alternative that can be used as a replacement or addition. This is particularly relevant when it comes to use of technology and discussions regarding self service. Going through the touch-point cards can give ideas for new touchpoints and can help map out a migration strategy from one touch-point to another.

#### Use context 5: Touch-point addition or subtraction

This challenges todays situation by removing important touch-points. Based upon the touch-point mapping, the main touch point at each stage of the service journey is removed, and idea generation used to find a better replacement. If it cannot be replaced, then the team has gained a deeper understanding of the touch-points importance and role. An alternative to this is to pick a random card at each step of the service-journey and discuss how it could be used to improve the service. We have added some specific touch-points for this, such as "service integrated into a product" or "smart phone". This can be a useful task in many ways, particularly to help challenge todays situation, which might have deep historical roots and need updating.

#### Use context 6: Forced association to create new services

In this task participants are forced to create a service based upon random cards: they pick two (or more) random cards from the pack and design a service based only upon these cards. Forced association is an idea generation technique to force you away from logical thinking, and doing this with the touch-point cards forces the team to break with pre-conceived understanding. Its a fun and challenging way to look at touch-points, and often unearths useful reflections regarding a service.

## Evaluation

The project has carried out two AT-ONE workshop series per year, for each commercial partner in the project, and have therefore evaluated over 10 iterations of the touch-point toolkit. This means that the cards have been used together with a broad set of service providers and, additionally in several student projects.

The evaluation of the cards has combined several methods: observation, group discussions, questionnaires, and semi-structured interviews with workshop participants.

### A. Team building for cross functional teams

Mulin-Juustila (2006) discusses the five critical elements that together create team cohesiveness during the fuzzy front end: personality barriers, different cultural thought worlds, language barriers, organisational responsibilities and physical barriers. Similar elements are identified by Persson (2005) and Pei (2009). Of these, the cards, used as part of collaborative workshops, have shown positive effects upon all. However, it is difficult to distinguish between the role of the cards and the role of the workshop process in these positive team building results. Comments from participants support their use in team

building; '*very useful as a common point of reference*', and that '*the use of visual tools simplified the process and created a common understanding in the group*'.

### B. Analysis and mapping

The cards received positive reactions when it comes to their ability to assist the analysis and mapping of existing situations. They were seen to assist both holistic understanding, by allowing a visual overview of all touch-points, and the ability to focus upon individual touch-points. This seems to be aided by the combination of clear images and texts, which allows them to be viewed individually, but also in combination. This ability was also useful when identifying critical touch-points or possibilities or limitations of individual touch-points. The same can also be said when it comes to identifying who is responsible for each touch-point. Some workshop participants compared the content of the cards to a checklist, others said that '*the process is built up like Lego blocks, meaning that you can unfold ideas on a large scale*'.

### C. Idea generation

The cards were given positive evaluations in terms of their potential for generating new ideas. Firstly, the cards encouraged both systemic innovation (changing the whole service system) and innovation in individual touch-points. For individual touch-points, innovation related to both removal (or addition) of touch-points, but also upon changes to the interaction design of an individual touch-point. Further, the cards aided alignment of touch-points to brand strategy. Workshop participants commented upon the cards ability to 'make you both concrete and experimental at the same time' and their ability to 'open up the process'.

One issue was that the cards might inhibit radical thinking in which invention of new touch-points could arise. Similarly, it was commented that a missing touch-point could potentially have consequences, since using the cards constrained thinking within the alternatives given. This is something we have considered, but have not experienced when running workshops. The cards deliberately suggest a very broad range of touch-points, many of which are outside the scope of traditional touch-point thinking. Indeed a common comment is that participants initially considered many touchpoint cards unnecessary or irrelevant. Once used, this changes to an expression of how useful the broad approach turned out to be. However, it is difficult to know if a potential solution is inhibited, without using controlled testing procedures, which have many practical disadvantages in the project context. We have met the thought that the cards can constrain idea generation, but in reality have not been able to identify situations in which this occurs.

Over time, we have identified a need to continually update the touch-points, such that they remain up to date. As an example of this, we have had to add a new category of touch-point - the iPad/tablet, since this was launched during the first 6 months after the last set of touchpoints was produced. We see that the touch-point cards need continual updates to remain contemporary.

### D. Needs elicitation

Recent developments in the AT-ONE project have included the cards during the customer insight phase of a project. The cards have been used as an aid for needs elicitation when interviewing potential users of a service. For example, we have recently used them to elicit preferences regarding touchpoints when contacting customer service in a

telecommunications company. They were found to be useful and allowed potential customers to compare different touchpoints, prioritise touchpoints and think aloud about touchpoint preferences. This is a new and promising area of use for the cards, and one which we will be exploring in more detail in the future.

### Discussion

The touch-point cards and related tools fulfilled the requirements identified from both research and practice. They had a positive effect upon team collaboration, assisted with analysis and mapping processes and aided idea generation. In addition, they showed similar benefits to results found in other domains, regarding the use of cards as part of a collaborative process.

One clear issue regarding the cards is the danger that they can in some way constrain thinking within the contents shown. Experience from using the cards in workshops and the evaluations did not raise this as an issue, although it is clearly a factor to consider in future evaluations.

A second issue is whether the tool directs innovation towards incremental innovation rather than encouraging transformational innovation. Again, experience shows that this is unlikely, although it is dependent upon how the cards are used. A focus upon analysis and mapping of an existing system can constrain thinking towards incremental changes. However, the cards have been used for innovation without an analysis of an existing solution, and this constraint was not visible. We did notice, however, that design students particularly enjoyed using methods such as ‘forced association’ or ‘can I use it here’. The open nature of this for of use was considered exciting and liberating, even though many ideas generated were not usable in a commercial context. The same did not seem to be true of participants with business or marketing backgrounds. They disliked the open approaches offered by these techniques, and considered them inefficient (large number of irrelevant ideas in relation to relevant) and preferred to use mapping and analysis based approaches. This finding supports the difference between design thinking and business thinking and highlights designs abductive approach, as described by Margolin and Buchanan 1995.

Finally, the recent use of the cards as support for user-interviews offers a new area of use. Initial trials of the cards as part of customer insight work shows that the tangibility of the cards assists semi-structured interviews.

### Further work

Since this is one of the first pieces of research discussing the ‘how’ of touch-point innovation in project teams, further work is needed to verify the findings presented here. We would like to see additional work related to the tasks and activities that a project team need to do to innovate through touch-points. Secondly, we would like to explore alternative representations of the touch-points, using more abstract representations or using richer representations. This would allow us to identify if there is a relationship between representation and innovation outcome. Finally, we would like to develop a team game, based around the touch-point cards to see if this adds to the innovation potential.

## Conclusion

This research has identified seven aspects of touch-point innovation of relevance to cross-functional teams. Two of these aspects relate to team building through the use of cards and workshops. Four relate to analysis and mapping of touch-points, which assist touch-point orchestration. Finally, one aspect relates to idea generation based upon changes in touch-point usage.

Evaluation of the card-based toolkit shows that the toolkit has a positive impact upon all seven of these. Firstly, the results show that a card-based approach to innovation in teams can successfully be transferred from product innovation to service innovation. This is perhaps not surprising, but is a valuable affirmation of design-based tools in service innovation. Secondly, that the toolkit assists touch-point orchestration by assisting with analysis and mapping of touch-points in a group context. Finally, the toolkit assists with idea generation. It aids new ways of orchestrating touch-point combinations, and with the identification of new touch-points.

Further work is needed to discuss and further develop the seven aspects of touch-point innovation described in this paper. We would also like to see exploration of alternative and richer touch-point representations to explore the effect of representation upon innovation. We would like to see the development of one or more design games to support the tools presented here. Finally, we would like to further explore the potential that the cards have for eliciting user insights.

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# SERVICE DESIGN & HEALTHCARE INNOVATION: from consumption to co-production and co-creation

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## Abstract

In the last decades the economy saw two significant changes in the way value has been conceived and created: the introduction of the value-constellation model and the advent of the open innovation movement. This paper will report on how these paradigmatic changes are mirrored in public services reform, with a focus on healthcare services, and on how Design practice and research are contributing to this shift. The authors will use four case studies of healthcare design-driven service innovation as a way to reflect on which models and approaches designers have been using and to evaluate the actual results and impacts that have been achieved so far.

**KEYWORDS:** service design, healthcare, service innovation

## Background

In the last decades the economy saw two significant changes in the way value has been conceived and created: a shift from the value-chain model of Michael Porter to the constellation model as proposed by Normann and Ramirez (1993); a movement from the Fordist industrial model of mass production, to the market driven strategy of mass-customisation and recently to the advent of the open innovation movement of mass collaboration.

- *From Value-chain to Value-Constellation Model:* in the chain model, value is added by different suppliers in a sequential process, whilst in the constellation model value is co-produced by different actors in a non-linear set of activities and interactions. Users are involved in the value creation system in the way they use ‘offerings’<sup>1</sup>.

<sup>1</sup> This term is used by Normann and Ramirez (1993) to indicate both products and services, as, in this new model of value creation, it is difficult to distinguish among them.

Services that are by definition co-produced are good examples of the new value co-creation model. As Ramirez and Mannervik (2008) pointed out, to succeed in the Service Economy organisations need to learn how to mobilise users and various partner organisations to create their own value by co-producing offerings. In this context Design has the great opportunity to bring value and meaning generation at the heart of its activity. Both authors also suggest that whilst the users' role has evolved from "*destroyer of value, to source of value, and finally to co-creator of value*", the competences that Design brings to value creation systems have been evolving as well from "*interface design, interaction design to navigation and enclave design*" (p.36). Designers are called to create platforms that support value creation processes, helping users and organisations to make sense of how to use the system and build their own value.

- *From Mass-production to Mass-collaboration:* Henry Ford ideated the industrial model of mass production, where value was created in R&D teams and where designers played the role of 'creators', while consumers acted as 'destroyers' of value when 'consuming' the products. In Ford's model, only specialised knowledge was capable to produce value, and experts created innovations in a special space, free from market pressure. Leadbeater<sup>2</sup> describes this model as 'closed innovation', while he considers the value constellation paradigm as 'open innovation'. 'Open innovation' represents the end of knowledge monopolies, and it works with multiple sources of ideas, combined through networks (communities of practices), with users being part of that. In this new paradigm designers' role becomes the one to facilitate the connections among actors by providing tools for co-creation (Cottam & Leadbeater, 2004).

## Paradigm shift in healthcare

The evolution of healthcare services could actually be described, simplifying it, following the same paradigm changes, from centralised and sequential models of value creation to more distributed and open paradigms, where citizens are looked at as co-creators of their own wellbeing:

- *Mass-production: a Fordist model of healthcare delivery.* The current model of healthcare service delivery in United Kingdom has been developed as an answer to the needs of a post-war world that had to deal with acute diseases and infections. The National Health Service (NHS) was born on a Fordist paradigm of value creation, where patients entered the health system with a disease, and doctors, with their specialised knowledge, would treat and cure them. The focuses were here on the application of expert knowledge to treat illnesses and on service efficiency;

- *Mass-customisation: a personalised model of healthcare delivery.* When the citizens' notion of value changed from costs to quality, the Fordist industrial model changed from mass production to mass customisation; organisations started to adapt service offerings to the diverse needs of citizens, while keeping the sequential approach to value creation. Public service organisations started then to apply market research techniques to better understand their users. In the healthcare sector this focus on citizens as 'clients' started with the advent of the 'internal market' concept during the Thatcher's government (Parliament, 1989). It then developed, during the Labour government, with the introduction of the NHS reform programme "The NHS plan" (DH, 2000) that claimed the need to re-design the system around patients' needs, and to deliver a more personalised service. The focuses are here on developing effective 'clinical pathways' and on patients' experiences;

<sup>2</sup> Website <http://www.charlesleadbeater.net/cms/site/docs/Open%20Innovation.ppt> [accessed 30/04/2010]

- *Mass-collaboration: toward a participatory model of healthcare.* The challenges of healthcare have changed becoming more complex: we have less acute diseases and more chronic ones that significantly depend on demographics and lifestyles. As complex problems, are caused by multiple factors that interact in complex ways (Horne & Shirley, 2009), linear approaches to service delivery can be partially effective. As Burns *et al.* (2006) indicated:

*"Traditionally, organisations have been designed for a complicated rather than a complex world. Hierarchical and silo structures are perfectly designed to break problems down into more manageable fragments. They are not, however, so effective handling high levels of complexity. For this reason, many of our most long standing institutions are now struggling to adapt to a more complex world."* (*ibid*: 8)

At the same time the original focus on treatment is not sufficient, as people need an ongoing support to live well with their chronic conditions. As a consequence the Department of Health launched a new reform programme called "Creating a Patient-Led NHS" (DH, 2005) aiming at changing the whole system so that 'there is more choice, more personalised care, real empowerment of people to improve their health', moving from '*a service that does things to and for its patients to one which is patient-led, where the service works with patients to support them with their health needs*' (p 3). The new focuses in the policies are today then on co-production and patients' engagement.

These three paradigms (mass-production, mass-customisation and mass-collaboration) actually co-exist in the NHS as they answer to different needs and the system is anyway difficult to change radically. A transformation process is though undergoing moving from treatment-centred and centralised models of care toward more health-centred, community-based and co-produced service models. Design is contributing to this transformation bringing its own methodologies as the authors will illustrate in the following sections.

### Design and Healthcare innovation

Designers have been adopting two different approaches to innovation: working within organisations to introduce design methods and suggest new service configurations; or acting outside the system to generate radically new solutions.

These two main innovation strategies have also been accompanied by design methodologies moving from an emphasis on co-design and co-production, toward the emergence of the co-creation philosophy. **Co-design** in healthcare services implies a partnership between patients, professionals and community working together in the design development process (Sanders & Stappers, 2008). The final solution is then implemented and led by professionals. Otherwise, **co-production** asks people's help, using their capacities to **deliver** public services in an equal and reciprocal relationship between professionals and the *core economy* (family, neighbourhood and community), shifting the balance of power, responsibility and resources from professionals to individuals (Boyle & Harris, 2009). Finally, **co-creation** happens when users are central not only to the **design** of services, but also to their **production** and continuous **development**. It is based on ordinary people generating the content of services and shaping their nature (Cottam & Leadbeater, 2004; Murray *et.al.*, 2006).

The work of NHS Institute for Innovation and Improvement (NHSi)<sup>3</sup> with service designers can be seen as an effort to change the system from within engaging users in the re-design of their services. NHSi in 2005, with the support of IDEO consultancy, developed a model of work based on the design innovation process. To test that process, they developed a pilot

<sup>3</sup>NHSi is an organization that sits between Department of Health and NHS to supports the NHS to transform healthcare for patients and the public by rapidly developing and spreading new ways of working, new technology and world class leadership.

project applying design methods focusing of patients' experiences (Experience-Based Design), and since then they have organised a series of training workshops and pilot projects to support the adoption of EDB approach on a wider scale.

The work of the RED team<sup>4</sup> of the Design Council pioneered instead experimental research into new radical service models for healthcare operating outside the NHS system. Cottam & Leadbeater proposed a new welfare state model, introducing the notion of 'open welfare' (2004); they recognised that the most of public sector innovations from the past "have been designed to make the traditional, closed model of service delivery more efficient" and argue "that many of the biggest improvements in public services will come from mass, participatory models, in which many of the "users" of a service become its designers and producers, working in new partnerships with professionals" (p. 1). The RED team co-designed and experimented with people new service prototypes aiming at providing tools to people to take care of their own health, becoming in this way co-creator of their services.

Even if these projects are well-known in the design community, little effort has been done to evaluate their work and actual results in transforming healthcare. The authors have selected four completed design projects that applied design thinking to innovate healthcare services: 1) "Living well with diabetes cases" (RED team Design Council) exploring how it is possible to help people to self-manage their conditions 2) "Activmobs" (RED team Design Council) exploring how to motivate people to conduct healthier lives 3) "Open Door" (Martin Bontoft) exploring how to engage people that don't generally use primary care services 4) "ENable Team" (Live|work) exploring how to improve care to people with Multiple Sclerosis. Interviews to main designers and project partners were then conducted<sup>5</sup> to map the design process and evaluate the implementation and actual impact. Comparing their approaches and results some overall considerations have been then developed.

### Case 01: Living well with diabetes

This service design project was developed with the Bolton Diabetes Network (BDN) in order to create a new service for helping people live well with diabetes. The main aim of the project was to create a service integrated with individuals' everyday lives, not focused solely on their disease.

**METHODOLOGY:** RED team applied user-centred research methods (i.e. interviews, observation and generative tools) and co-design methods (i.e. workshops and prototyping techniques). They engaged in the process BDN, Bolton residents, and Bolton Primary Care Trust (PCT) staff. They used the Design Council double diamond method articulated in two main phases: 'shallow dive' (discovery) and 'deep dive' (define, develop and deliver). Both stakeholders and users were involved mainly in the Discovery and Develop phases, sharing their knowledge and prototyping with the design team.

**SERVICE OUTCOMES:** The RED team created Agenda Cards, self-diagnosis cards to support the collaborative process of care planning between the patient and the doctor. Combined with Agenda Cards, the team also developed the concept of a new role to this service (ME<sup>2</sup> coach): a personal trainer for people with diabetes. Of the various solutions suggested, The Bolton Diabetes Network decided to pilot just the BoND Agenda cards. They launched the BoND programme (Bolton's New Deal for Diabetes) to health

<sup>4</sup> RED is a 'do tank' established in 2004 by the Design Council to tackle social and economic issues through design led innovation.

<sup>5</sup> We interviewed: Martin Bontoft (designer consultant), Colin Burns (designer and innovation consultant), Jennie Winhall (design strategist at Participle), Julia Schaeper, Jamies Nel, and also Helen Bevan (from NHS), Krzysztof Walecki (from Ealing PCT), Mark Lemon (from Kent Council), Lynda Helsby (from Bolton PCT) and also secondary data provided by interviewees.

professionals in May 2006, along with a range of other patient education initiatives. They also made “Agenda Cards” available on the Internet with links to other information resources. Although the Bolton PCT were very proud of the work that they have done with RED and expected that it would be used extensively in Bolton to support diabetics patients, the project did not go beyond the pilot phase; the Programme Manager of Bolton PCT said that “*unfortunately the clinicians were very reluctant to use the cards and found them too time consuming in consultations*”. When asked why the project didn’t go ahead, a RED team member mentioned how “*there was a fundamental error that both groups made [...] we didn’t involve, early enough in the project, the people who might be able to carry the work on afterwards*”.

### Case 02: Activmobs

Kent County Council (KCC) worked with the RED team to promote more active lifestyles and potentially reduce chronic disease among their population. KCC proposed to work in a deprived area of Maidstone in and around the Park Wood estate.

**METHODOLOGY:** RED worked with Kent residents in two main phases called by the team “shallow dive” and “deep dive”. The shallow dive involved two days of contextual research, including visits in six homes of potential participants. The information and ideas from this phase informed a workshop in Kent with local stakeholders such as the community support officer, youth club leaders, a local vicar and an Age Concern worker, asking them to complete the portraits with profiles that were missing and to brainstorm ideas for motivating individuals to increase activity. The initial ideas were clustered in two groups: Park Wood Olympics and “individual and small group activity like flash mobs”. These were quickly prototyped trying ideas out and adjusting as they went along, using feedback immediately rather than at the end.

**SERVICE OUTCOMES:** the design outcome was the Activmobs concept, an informal self-organising group between 2 and 15 people (a mob), formed around a shared activity that could benefit health and well-being (for example, dog walking). Activmobs provided an on-line platform that would support the creation, registration and validation of each mob, and tools to motivate people to sustain their group activities such as: “health miles” cards, which would give discounts from public facilities, shops and services for active participants; self-rated qualitative improvement measures like ‘well-being chart’, where people could indicate tangible changes in their well-being; and a “statement” to be delivered every three months to participants, showing their well-being improvements. The platform was implemented in KCC and is still running today. The most important impact of this project had been the understanding of the role of Design for Social Innovation and the creation of the Social Innovation Lab: a place providing a creative environment to Kent Council’s staff to work together on the challenges that the county faces, having people and citizens at the centre of solutions. Now, Activmobs is helping other communities (like Bettleshanger Community) to set up their own active projects.

### Case 03: Open Door

Martin Bontoft<sup>6</sup> and his design team were asked by North East Lincolnshire PCT to solve an old problem of health inequalities in Grimsby. The main goal of this project was to reach the ‘hard to reach’ groups (for example, drug and alcohol abusers, sex workers, and offenders) who do little about their health and get progressively worse until they present to A&E, when

<sup>6</sup> A researcher and design strategist who employs emphatic design research methods. Website: [www.bontoft.com](http://www.bontoft.com)

it is more difficult and expensive to treat them. Their aim was to motivate people to register with a General Practitioner, and take better care of their health conditions.

**METHODOLOGY:** The design team used a co-design approach articulated in four main phases: discovery, define, develop, implement. In the discovery phase the team conducted ethnographic studies using techniques such as feedback probes, interviews, observation, conversation cards and disposable cameras. In the Define phase, the team facilitated a workshop with the stakeholder group (NHS Staff, Drug Agencies, third sector, Citizens Advice Bureau, a Bank) to visualise the data and define the problem. In the Develop phase, they started to develop some potential solutions (between the design team and stakeholders) that were shown to the users group to get their feedback. In the Deliver phase the team prepared a document to communicate the service process and values and a rough prototype of the service, to encourage funding and other stakeholders to participate.

**SERVICE OUTCOMES:** the project outcome was the Open Door new service model. Open Door is an health and social care enterprise, defined as an “activity centre – somewhere you go to engage, be challenged and supported, meet like-minded people, feel part of something, and do something useful” - whose purpose is to deliver better access to health and social care for people who normally do not attend traditional services. Six months after completion of the project, NHS team identified the right location to implement Open Door, as a social enterprise, partially funded by NHS and affiliated to the Big Life Group (social businesses and charities). They also invited people from the community to participate and co-produce Open Door, giving them roles and responsibilities. For example, Antony, well known in Grimsby for his misbehaviour, but being a good decorator, was asked to contribute to the centre by painting the whole place and the Open Door team helped him to become a painter/decorator and start his own business. After two years, the benefits that Open Door brought to East Marsh (its neighbourhood) went beyond the original expectations. It increased by four times the number of people attending the health centre (721 patients registered), while re-introducing 187 people to mainstream health services. Simultaneously they have seen a concomitant reduction of 12% in reported crime each year since Open Door was introduced. Open Door was twice profiled in Society Guardian, and was awarded with a “pathfinder” status by Department of Health’s Social Enterprise Unit.

#### Case 04: Ealing PCT Multiple Sclerosis team

In 2007 in the London Borough of Ealing there were about 300 Multiple Sclerosis (MS) patients accessing NHS Services. People who live with MS may have their mobility, vision and co-ordination affected, and the disease can cause pain, fatigue and depression. As their conditions vary along the years getting alternatively worse and better, they have to constantly access a range of diverse specialists. The Ealing PCT staff recognised the difficulties MS patients had in accessing those different professionals, but did not know what the ideal solution could be. They asked NHSi to help them to design a new service model for MS sufferers.

**METHODOLOGY:** NHS Institute set up a team to support Ealing PCT which comprised representatives from NHS Institute’s Service Transformation team and service design consultancy Live|work, with the intention that this project might help the NHS understand how the design method could help medical professionals and managers to innovate services. The team aimed to understand the problem and the service experience from the point of view of the patient, their family or carers, as well as frontline staff and other stakeholders. They followed four main phases: discovery, define, develop and deliver. Live|work led the

discovery phase, conducting interviews, observation, shadowing, service mapping and timelines of events. In the Define phase, the team synthesised their understanding of people's experiences in *user profiles*, with photos and quotes, and developed *ideas sketches*. In the Develop phase, the team designed a *blueprint* for the kind of patient experience they were seeking to create. In the Delivery phase, the Live|work team detailed the *touch points* indicated in the blueprint, to deliver the service experience, such as websites, and various communication tools.

**SERVICE OUTCOMES:** ENable is the service outcome of this process, a new community neurological rehabilitation and enablement team, which integrates the Ealing Primary Care Trust and the London Borough of Ealing Social services, with a multidisciplinary team (Physiotherapist, Occupational Therapist, Speech & Language Therapist, Counsellor, MS Nurse Specialist, Clinical Psychologist) accessed by a single point of referral and contact. The service was successfully implemented, and although it has been difficult to measure the real impact of the service in terms of reduction of A&E admissions, the ENable team manager confirmed that the project has achieved good results and the service has a good reputation in the local area. As a result, the patients recognised that the Ealing PCT services have changed and improved: "*I do not have to keep ringing everyone, I just phone Emily (her social worker) [...] you feel as you were protected [...] I'm much happier now than I was two years ago [...] it has improved my quality of life because I do not have to worry about my health*". They also have satisfaction research results that show 81% of patients have their needs met by the service.

## Analysis

### Innovation focus and strategy

The table 1 summarises the relationship between the three production and value models with the innovation practices in healthcare. The four case studies we have been studying represent efforts to move beyond a mass production model toward more personalised and effective service solutions, effectively designing services around patients' needs. They though differ (as showed in fig. 1) in terms of the level of patients' engagement in both the design and delivery of services (co-creation) and in terms of NHS transformational change (Chapman, 2002).

The Bond Agenda Cards, even if part of a suggested wider strategy, in their application aimed at improving the interaction between patients and carers without changing the overall service system. The design team applied co-design approaches, but in the end they didn't manage to affect the existing power relationship between the professionals and the patients.

The ENable project implemented a new integrated service model and interface that better answer to patients' individual needs. The final solution, though, didn't affect the participation level of patients in the service delivery; the integration of functions improved the patient experience, but not necessarily its role in the service.

Finally the Open Door and the Activmob projects both aimed at a significant transformation in people's behaviour and service delivery models. The Open Door, introduced new service actors in the existing system, helping reframing the original model into something completely different (a social enterprise); while Activmob generated a service platform to provide the right support for people to change their lifestyle. Open Door created an open space to health care, reducing perceived barriers to access, allowing for a degree of patients' engagement in

the use of its facilities and services. Activmob applied a co-creation approach as people participating in the design of the services (even if mainly to test initial ideas) then took on board the implementation and development of the solution. In this way they actually became the co-creators of their services.

<i>Production &amp; Value Model</i>	<i>Service philosophy</i>	<i>Design Focus</i>	<i>Design Method</i>	<i>Examples</i>
Mass production	Disease-centred	Service efficiency	Process analysis	The productives <sup>7</sup>
Mass customisation	Patient-centred	Interaction & Service Relationship	Co-design & Experience-based methods	Agenda Cards ENable
Mass collaboration	Patient-led	Behavioural Change & New services models	Co-creation	Open Door Activmobs

Table 1: Healthcare service innovation ladder

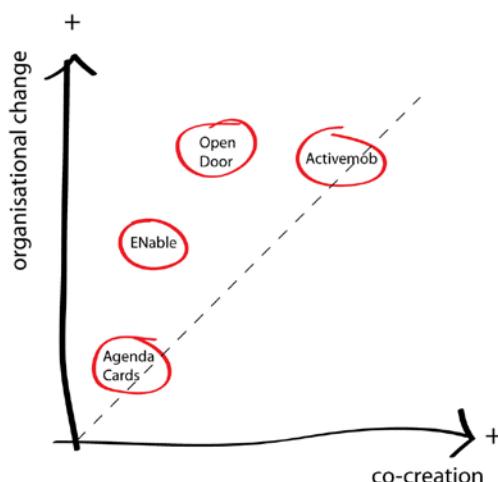


Figure 1: Innovation approach and impact

### Long-term impacts

If we look at the long-term impacts of the projects some considerations emerge about the drivers and barriers for healthcare innovation. All projects apart from the Bond Agenda Cards developed beyond the prototype, being adopted and adapted by the relevant community of practice. The Open Door service has been particularly successful, not only reconnecting with the 'hard to reach' populations, but also indirectly contributing to an improvement of the security in the community.

The agenda cards were designed through iterative prototyping sessions with patients and healthcare professionals to help patients identifying their barriers to behavioural change. The central idea was that both patients and doctors could use the cards in consultations to build, in a collaborative way, a self-care programme. The design team though didn't involve the doctors in the idea generation, missing then to deeply understand doctors' practice and

<sup>7</sup> 'The productives' is a program from NHSi that aim to give to NHS staff principles and techniques that could help them to identify unproductive uses of their times and improve the process of service delivery in order to spend more time with patients and improving standards of care.

beliefs and to engage them in the change process. As some quotes suggest, doctors showed resistance to accept their roles to support people in changing their behaviour and to loose control of the process by using the cards: ‘healthcare professionals don’t like the idea of not being in control’ or ‘we are health professionals not social workers’. Activmob on the opposite took a life of its own having people adapting the service concept to their realities (for example, they don’t use the ‘health miles and qualitative measures) and using design methods to help others to create their own groups of activities.

Being services co-produced, a user-centred approach is not enough. Service Design practice needs to be *centred on the community of co-creation*, understanding the problem from the different perspectives of actors involved and uncovering eventual *fundamental assumptions* (Junginger, 2008) that shape their practices and lifestyles. The professional-patient relationship in particular is a deep-rooted model of social interaction that is now one of the main barriers to healthcare services radical transformation. Changing individual service interaction tools, without addressing deeper assumptions and social norms (Shove, 2003) that would shape their adoption, is destined to failure.

Vice versa the Open Door project started the process by engaging the overall community of co-creation, working with the PCT to re-design the core ‘design principle’ that would generate a significant change in the service delivery. Working to uncover assumptions of what a normal healthcare centre should be can provide solid foundations to achieve more sustainable and radical transformation.

A second consideration is related to the role of Designers in these processes. In the mass collaboration model Designers need to change the perceptions and understanding of their own profession and release power to the *community of co-creation*. They must design entities that leave space for adoption and adaptation (as Activmobs and Open Door project have shown). Pelle Ehn in his latest work on Participatory Design (2008) suggests a shift from considering ‘Design before use’ to ‘Design for Design after Design’:

*Rather than focusing on involving users in the design process, focus shifts towards seeing every use situation as a potential design situation. So there is design during a project ('at project time'), but there is also design in use ('at use time'). There is design (in use) after design (in the design project)' (ibid: 5).*

At project time then the object should be open to controversies that could support new products and practices to emerge. Using a Leigh Star’s concept Ehn talks about ‘infrastructuring’: ‘*an infrastructure, like railroad tracks or the Internet is not reinvented every time, but is ‘sunk into’ other sociomaterial structures and only accessible by membership in a specific community-of-practice.*’ (ibid: 5).

With this perspective, Designers are responsible to build these infrastructures or platforms (like maps) that show the connections (like roads and signs) between actors (like places) which enable people to create their own route to change. So design for behavioural change is about building the capability and the systems that allow change to occur. This is illustrated in Open Door and Activmobs examples where Designers co-designed a service platform made up of: **principles** (to guide the service), general **roles** and **rules** (that should be followed by those who would use the system). The traditional service specifications become a general ‘infrastructure’ that allows the community to ‘design in use’ accessing their own resources.

## Conclusions

This paper has illustrated how designers are currently contributing to the paradigmatic change in the healthcare system. The overly used terms of co-design, co-production and co-creation require a deeper reflection on their real nature and impacts on service models, design processes and designers' roles. At the moment designers are working within and outside the NHS introducing human-centred design approaches to innovation, but the implementation of the co-creation model asks designers to develop new skills, sensitivity and attitudes. Generating lasting and transformative projects require participatory design inquiries that question the very assumptions and norms behind service practices and interactions; require engaging the right set of actors in the right moment; and actually release power to project participants, co-creating flexible platforms or 'infrastructures' that people can own, inhabit and transform.

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# **Characteristics of value co-creation in a learning environment by service design and service-dominant logic frameworks**

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## **Abstract**

Presently, educational institutions exist as complex networks of expertise that fulfil the needs of their stakeholders and respond to the challenges of a transforming society. Therefore, educational services are subject to a constant design process in co-operation with the customers and other stakeholders. Co-operation between parties is strongly related to the value co-creation, since the customer is the co-producer of the value according to the concept of service-dominant logic.

Service design research has paid little attention to the value of co-creation in networked education services. This paper focuses on value co-creation in service-dominant logic and service design frameworks using a case study of supplementary healthcare education service. The case study is situated at the ENVI Virtual Center for Wellness Campus, which is a virtual and simulation learning environment for healthcare in Rovaniemi, Finland.

The goal of the three focus group interviews was to study which characteristics support networked value co-creation in design of educational services. Based on the research data, we have determined features that increase understanding in terms of the value-creation processes related to the networked education services: network transparency, trust and shared expertise. The paper also proposes some service design tools for the research and development of such services.

**KEYWORDS:** value co-creation, service design, service-dominant logic, education service

## Introduction

During the last few decades, the economy has shifted from the dominance of manufactured goods toward the era of services (Vargo & Lusch, 2004). Simultaneously, resources for the public sector—including education—have constantly faced pressure to cut costs and develop services aimed at providing better satisfaction and performance.

Educational institutions are often complex networks of expertise, fulfilling the needs of their stakeholders and responding to the challenges of a transforming society. There is little research regarding the elements onto which networks of expertise develop their strengths. It is essential to identify these elements, especially when designing complex customer-oriented services, for example supplement education services. This paper studies the features of these networks.

The dominant value-creation logic for the twentieth century has been based on manufacturing tangible goods for markets at the lowest cost possible. This goods-dominant logic views the customers merely as a target for the marketing operations (Vargo & Lusch, 2004). The roles of “customer” and “producer” have been quite clear, and value creation has been considered as a series of activities managed by the producing firm. During the past decade, the focus has been shifting from the tangible toward the intangible; meaning concepts such as knowledge, skills, interactivity and ongoing relationships (Vargo & Lusch, 2004). Firm-centered, goods-dominant, value-creation logic has been considered outdated, and value co-creation has been suggested as a substitute for the dominant marketing theory (Prahalad & Ramasvamy, 2004; Vargo & Lusch, 2004; Vargo et al. 2008).

Customers now take a more active role, and have changed from being a target to being a co-partner, both in business-to-customer and business-to-business markets. According to service-dominant logic (SDL):

*[The] customer is always the co-producer of the value—the customer becomes embedded in the service offering and ultimately is responsible for the value added to the process. (Ordanini & Pasini, 2008, p. 289)*

Service firms and educational organisations are in a changing economic environment—in order to be competitive, they should understand their value-creation processes as well as the needs of their customers. Conversely, policy makers have suggested closer collaboration between designers and users of the public services "hoping to reinvigorate public services under pressure from a more demanding public, increasing social complexity and overstretched resources" (Bradwell & Marr, 2008, p. 10). The returns should be more effective and functional public services.

The SDL framework has been seen a model for creating knowledge about the mutual processes (Ordanini & Pasini, 2008). In the SDL model, the value of a service is realised at the same moment it is consumed. This removes the distinction between tangible and intangible products. The focus of the SDL is to explain how value is created, where in the process it is created, and by whom. In an SDL domain, value has been divided into two meaningful concepts: value-in-use is specified by the beneficiary (user, customer) at the moment of use. On the other hand, value-in-context emphasises the time, place and network relationships as key variables (Edman, 2009).

One of the main critiques towards SDL is that it lacks guidelines for concrete service development and implementation, which are the core competence of service design practice and theory (Edman, 2009). Therefore, it could be suggested that the two frameworks, SDL and service design, could complement each other. The use of the SDL perspective in combination with user-centred service design tools could help to develop services both practically and theoretically.

Service design is a human-centered and holistic approach that integrates user-oriented, team-based methods (Mager, 2007). Therefore, it offers a user-centred point of view to develop also education services for better operations and results. Service design research emphasizes the user's involvement by asking how and why the service experiences are triggered and what exactly triggers them (Edman, 2009).

Bessant and Maher (2009) discussed the need for new ideas to engage users as more active co-creators within the healthcare sector service innovation. They conducted a series of case study experiments in the UK, and argued that a potentially useful toolkit of design methods could be found. We are interested to explore if and how service design methods could be applied in networked education services.

The aim of this qualitative research is to study value co-creation in the healthcare service education using two frameworks: service design and service-dominant logic. The main research question is which characteristics support networked value co-creation in the design of education services? The results of this research create new knowledge for the design of education services, and can also be applied to the development and design of expertise organisations within a service design domain.

In the following chapters, we introduce The ENVI Virtual Center for Wellness Campus, which has been the case environment and source for the research material. Afterwards, we present the analysis, main results, and finally the conclusions.

## Case environment: ENVI – Virtual Center of Wellness Campus

The ENVI Virtual Center of Wellness Campus<sup>TM</sup> is a virtual and simulation learning environment in Rovaniemi, Finland. It was created by Rovaniemi University of Applied Sciences (RUAS) and Lapland Vocational College during 2005–2007, and RUAS has been developing the environment since 2007. ENVI has been a target for research activities (Haukkamaa, 2010; Keskitalo, 2010; Yliniemi, 2009; Yliniemi, 2010; Yliräisänen-Seppänen & Timonen, 2010), e.g. in the MediPeda III project, which was aimed at developing pedagogical models, user-centred design methods and a value creation model for simulated and virtual learning environments for health and welfare (MediPeda III, 2010). ENVI simulates practical situations and environments in the field of health care and social services. ENVI is divided into four rooms (Fig. 1):

- » incident environment and ambulance transport
- » emergency treatment and intensive care ward
- » cardiac critical care (CCU), surgical ward and bed ward
- » maternity/child health clinic and distance consultation



**Figure 1: ENVI Virtual Center for Wellness Campus™ includes nine operational environments. Published with permission from the Rovaniemi University of Applied Sciences and the Lapland Vocational College, copyright 2010.**

Multi-professional care teams can practice seamless cooperation during the entire healthcare process, from the scene of an accident to a virtual hospital and finally to the rehabilitation process (ENVI, 2010). ENVI is a mixed reality learning environment, as it combines physical environments and simulation manikins with immersive full-scale 3D simulation projections. In the incident environment, users can view, navigate, and interact with hand-held interaction devices, so it offers full-body movement in front of a large-scale projection display.

This research will be focused on the supplementary education at the incident environment, meaning it is a pre-hospital environment where an individual can learn first aid and acute care (Fig. 2 and 3). The utilisation rate of the ENVI learning environment is high, as there are several user groups: vocational college students, students of the RUAS, and work communities from Finland as well as other countries.

Simulation techniques in healthcare training have a wide range of positive driving forces, for instance, improvements in care, patient safety, learning, performance, efficiency, and uniformity of care. Moreover, simulation brings reductions in costs, errors, and “training” on patients (Gaba, 2004).



**Figure 2 (left):** The incident environment with 3D projection displays offers realistic and safe learning experiences at ENVI Virtual Center for Wellness Campus. **Figure 3 (right):** Training with a simulation manikin at the incident environment in front of the 3D projection displays. Pictures published with permission from the [www.seven-1.com](http://www.seven-1.com), copyright 2010.

## Research data and analysis method

In this case study, focus group interviews have been seen as a suitable data collection method, because we aim to study the value co-creation between several parties. Focus group interviews can highlight the operational structures and relations in diverse manners, as the interviewees may comment and complement each other (Alasuutari et al., 2005; Ruusuvuori & Tiittula, 2005).

During the pre-planning phase, we discovered in preliminary discussions with ENVI personnel that the decision-makers of the education purchase (buyers) are seldom taking part in the actual training sessions at ENVI. There are two groups of stakeholders within the customer organisations: the buyers of the service who are usually in managerial position, and the supplement education students, who are mostly operative employees in various professions. Therefore, we selected three different groups.

The focus group interviews ( $n = 14$ ) were conducted at Rovaniemi, Finland during May-June 2010 in three groups:

Group 1: Supplement education teachers and healthcare service sales manager of at RUAS ( $n = 3$ ). Reason for selection: they are familiar with the education service and its customers.

Group 2: Purchase decision makers (buyers): chief physicians, surgeons, and head nurses at Central Hospital of Lapland (LCH,  $n = 5$ ). Reason for selection: several departments of the LCH have been using the ENVI services, and therefore their interviewee group included professionals from many departments.

Group 3: ENVI Supplementary education students: group of Finnish Border Guards ( $n = 6$ ). Reason for selection: this customer group was selected by their suitable schedule.

Two of the interviews were realized at ENVI, and the one at the LCH with their staff. All the interviews were audio recorded. The interviews have been only partly transcribed due to time constraints. The analysis of the data has been made using the qualitative content analysis method (Graneheim & Lundman, 2004), focusing mainly on the interfaces and interaction between the actors.

The interview data was read through several times and the data were sorted into three categories: co-creation parties, forms of co-operation and expectations for the co-operation. Based on these categories we raised three categorical analysis questions:

- » With whom are the parties co-creating related to the ENVI education service?
- » What kind of co-operation exists between the parties with the ENVI education service?
- » What kind of expectations do the parties have for the co-operation at the ENVI education service?

For the reasons of reliability and validity evaluation (Alasuutari et al., 2005; Graneheim & Lundman, 2004), readers should be aware that the three writers have been part of a research project MediPeda III (2008-2010), which has been funded partly by the RUAS. Additionally, one of the writers is currently an employee of the RUAS. However, besides the interview sessions with the ENVI personnel, the RUAS has not been involved in the planning or implementation of this research.

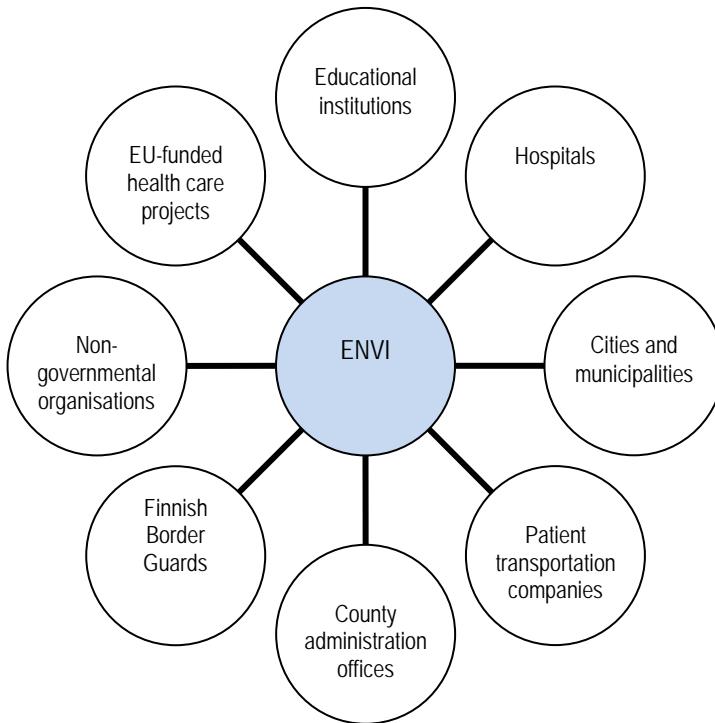
This research was conducted following the research ethics guidelines (University of Lapland, 2010; Kuula, 2006); all the interviewees have been informed about the objectives of the research and they all signed a consent form before the interviews. The research data materials are only accessible to the writers and are stored in confidentiality.

The following section presents our essential research results. During the interpretation, the focus was especially on characteristics supporting networked value co-creation in design of education services.

## **Transparency between design parties of a service enables an internally strong network**

We argue that the network of design parties of a service should be transparent in order to enable an internally strong and interactive development process. Presently, organisational knowledge and expertise are fragmented to various networks. Participation of the stakeholders has to be visible in order to build a vital and developing network. It is necessary to clarify the members and their needs.

The interview material revealed that the ENVI education service has a large network of stakeholders. Figure 4 presents many of the essential parties, for example educational institutions (RUAS and Lapland Vocational College), hospitals (LCH and others in northern Finland and Norway), cities and municipalities (health centres, day-care centres, patient transportation services, rescue service authorities and so on), private healthcare companies (e.g. patient transportation companies), county administration offices, Finnish Border Guards, non-governmental organisations (e.g. Finnish Red Cross), and some EU-funded health care projects.



**Figure 4. Some stakeholders of the ENVI Virtual Center for Wellness Campus.**

Organisations cannot afford to recruit all the expertise they need for productivity reasons. Moreover, economic challenges in the public sectors (Parker & Heapy, 2006), strategic rationalisation, operational centralisation, outsourcing and similar efficiency activities have been common operations during the previous years. Thereby, the service organisations are increasingly dependent on one another. The intensity and depth of the co-operation between parties have an influence on the ability of shared knowledge and strength of the network.

When studying the co-creation stakeholders, the research material supported the argument that transparency enhances the network strength. For example, some of the network parties had a common development project, which created a new and regular First Respond Unit (a trained and equipped first aid group) for the northernmost parts of the Lapland by the Finnish Border Guards.

*"This First Respond Unit development was a nice two years project, which created concrete results: training session, equipment etc. It brought real permanent results" [group 2, interviewee 3].*

This project has resulted in a broader co-operation between several parties, even though the main parties have different motives for co-operation: for the Finnish Border Guards, it is learning operational first aid skills, whereas the LCH interviewees pointed out the need to develop teamwork skills and internal processes. Within the network, these parties can complete each other's, as it so happened in this case: the planning and implementation of the new groups were a co-operation project for many of the stakeholders at ENVI. For example, some of the LCH physicians were involved in this project. Currently, these first response units have training sessions at ENVI. A successful project has generated trust and new ways of co-operation within the ENVI network.

SDL suggests that more professionals from the participating organisations can become involved and understand each other for the value co-creation (Edman, 2009). This also requires more transparency between the parties in order to incorporate employees into the service design process.

Networks of expertise are multifaceted and all members have their own ambitions. Therefore, cooperation forms are changing case by case. In the design process, customer involvement is essential for the service design domain (Koivisto, 2009) when innovating new service offerings based on the needs of the stakeholders. All the members are tied to the common service development in order to get compensation on their investment in value co-creation.

When developing a complex service of expertise for education, we would like to suggest some potential service design tools for finding out the stakeholders, their relations and motivations. An ecology map (Edman, 2009), also known as an actor map, represents actors and their relations in the system. A customer journey map describes the user's route in a service emphasising the touch points of the service. A motivation matrix reveals the needs and expectations of each member. A system map describes stakeholders, relations, and flows of material, energy, information and money through the system (Tassi, 2010).

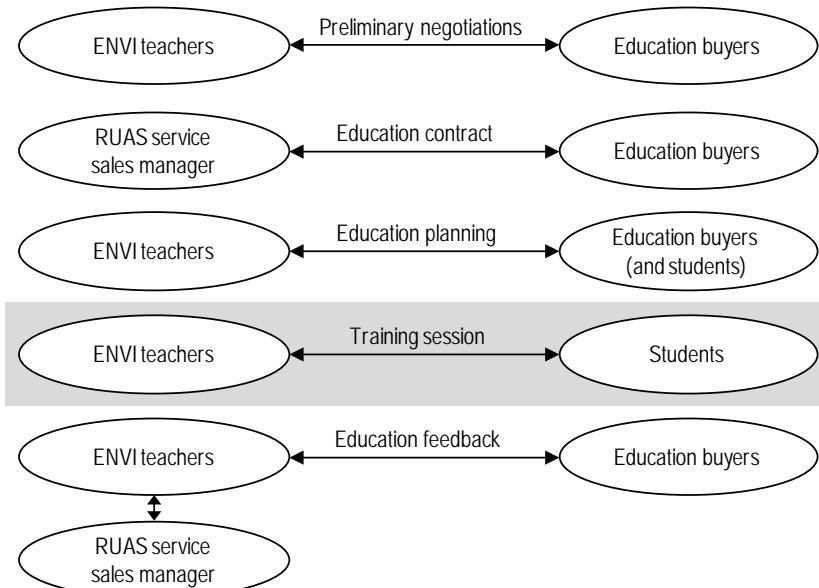
In this case, we would strongly propose the system map tool, which can effectively aid in previewing the service system. It visualizes the immaterial process and components of the service and builds a common understanding for the stakeholders. This tool could be useful, especially during the design and evaluation phases of education service development.

In our service-based society, similar networks of expertise are countless: new service networks are constantly being created and removed. Transparency of the service network is a vital attribute for an expert service when developing and co-creating mutual value for all the participants.

## Trust between parties is based on rich co-operation

In expert network services, the trust between members is established on versatile, wide-ranging co-operation activities. Trust has implications in service business e.g. on expertise, performance, reputation, satisfaction and sales effectiveness (Johnson & Grayson, 2005), which are also meaningful factors for value co-creation. Thus, trust is based on the transparent relationships of the network members.

An actual training situation can be seen as the most significant moment for the value co-creation (Vargo et al., 2008), but also the co-operation activities that occur before and after are remarkable for the building of commitment and trust in value co-creation. This argument was noticed when studying the aspect of "how" between the participation of the network members. Based on the research material, we introduce the co-operation process for supplement education training in the ENVI (Fig. 5). The preliminary goals for the education content are usually negotiated between the buyers and ENVI teachers. The cost estimate and contract are discussed with the healthcare service sales manager at RUAS. The teachers plan the final content with the purchasing parties: managers of the departments, or professionals who will join the sessions as students. In the beginning of a training session at ENVI, the teacher presents the content and goals of the session with the students for a discussion together. After the training session, the teacher collects feedback and aggregates a summary for the customer. Main co-operation tools between buyers and teachers are e-mail, phone and planning meetings, education sessions and feedback reports.



**Figure 5. The process model of the ENVI supplement education services.**

In the SDL framework, the value is co-created at the same time that the service is consumed in co-operation between the customer and the service provider (Ordanini & Pasini, 2008). Based on the research material, there are various touch points in which value is co-created both before and after the actual training session (see Fig. 5). These interaction points are important for both the service content and the service process development. Therefore, the designers of the education services should take into consideration all the touch points within the value co-creation parties.

Service organisations are motivated to increase trust between the parties and to engage their customers in the development of the service in order to keep the relation dynamic (Parker & Heapy, 2006). Thus, service providers should be familiar with their customers so as to make them feel as though they are valued partners in the design process. However, this co-operation model can be realized only if there is trust between the actors and the upper administrative levels, where the decisions for co-operation resources are made. In addition, mutual trust is also an important element in terms of confidence. When the parties ask for certain supplemental education content, they also reveal their shortcomings or targets for development.

Based on the interviews, students have been motivated in training sessions. As an example, LCH personnel wanted to improve co-operation between their internal departments. They arranged a training session at ENVI, which was designed to help teamwork operations in practise :

*It has been said, that the (team) co-operation needs to be improved a great deal -- and maybe therefore it has been seen important to participate in training and it (training in the ENVI) has created successful experiences in real work [group 2: interviewee 5]*

In this case the interviewee was both an education buyer and a participant in the training session. Their team had the opportunity to design the content for the training session beforehand and was thusly motivated by it. Afterwards, she was satisfied by the improvements in their team's processes and work practice. This example underlines the importance of engaging customers with the design process.

A conceptual element of value-in-context in the SDL framework expressly emphasizes the network relations and the time and place dimensions between the parties (Edman, 2009). There seems to be a connection to the notion of trust, e.g. with expertise, performance and similarity (referring to the presence of common values and interests) (Johnson & Grayson, 2005). Value creation in an education service requires certain a place (physical or digital) and time for activities and the existence of a network of the teachers and students. Conversely, the concept of value is not usually explicitly discussed in the design discipline, but it is present in many definitions of design. For example, the goal of service design is to ensure that service interfaces are useful, usable and desirable for the user, and that they are effective, efficient and distinctive for client (Mager, 2007). Many of those factors could be interpreted as valuable to the stakeholders. The key elements of service experience are the customer journey, service moments and touch points (Koivisto, 2009), all of which are connected to the time and place factors – and the concept of value-in-context.

An aspect of the mutual trust between the network members can be studied with a group of service design tools (Tassi, 2010) in order to obtain a better understanding. The motivation matrix has been introduced above. The moodboard effectively exposes values related to the service. Role playing puts users, actors or designers in their dedicated roles in order to play through some of the key functionalities of a service as it would exist. In this case, we would propose the latter: as a co-design tool, role playing can simulate interdependent tasks, build knowledge about service interfaces and create empathy and understanding about the users' motivation and trust. This tool can be useful in all phases of the design process, especially when conceptualising a new service.

## Shared expertise increases motivation for common value co-creation

Sharing of expertise is an essential foundation for value co-creation, as every member brings their own knowledge to support the network as a whole. The opportunity to use the know-how of the other members may be a motivation to join in to the network, especially for the small specialist organisations involved. In turn, one missing party may cause problems for the others in the accomplishment process of the common target within the network.

These arguments were supported by the research data: with a trauma team, there was an external evaluator assessing the interaction within the team:

*We had an (external) interaction consultant in our training (in the ENVI), and it was very useful, because we got evaluation about our group's interaction immediately --- and he said 'you gave instructions like this' [group 2: interviewee 5]*

The members of a trauma team do not know each other, since they are usually working in various departments of the LCH and some members come from different organisations, e.g. the paramedics who operate in the patient transportation units. The members of a trauma team are rarely the same. Therefore, this kind of consultancy about the team's interaction skills and work processes had added value to the organisations and is an example of shared knowledge.

Temporal changes may also have influence on shared expertise, both internal and external, even in a well-planned education session. In another trauma team rehearsal at ENVI, the team leader (surgeon) was absent, and the group had to practice without one key member.

*"--- it (the absence of the surgeon) just makes the training situation so incomplete." [group 2: interviewee 5]*

*"(trauma care) training is simulation (of real work), and if one have to play another role in it, it is a failure." [group 2: interviewee 2]*

In the situation mentioned above, the rehearsal was led by another team physician. Some members of the trauma team felt as though the practice was a partial failure, even though many other aspects of the process were learned. These temporal factors may influence the success of the co-operation, and also highlight the sensitivity of the networks of shared expertise: a session may include 5 to 15 professionals and one missing person, which affects the training results. However, an active and strong network can also tolerate such problems without significant loss of the mutual trust. After a failure, new activities and successes should normalize the relations within a network of shared expertise.

Shared expertise can only happen in a co-operative context. It thereby supports the SDL concept of value-in-context and can also be seen as related to the service design focus, where various visualisation techniques are used to develop temporal and intangible aspects that occur in time and place, such as service touch points (Edman, 2009). To study the notion of shared expertise between the network participants more closely, we suggest a couple of service design tools, which are role playing, a motivational matrix and system maps. In this case, we would especially propose a motivation matrix, which is a tool for understanding the connections between the parties by showing their expected motivations, benefits and possible interactions, and presents the reasons for shared expertise (Tassi, 2010). This tool should be useful in the pre-design phase of an educational service.

## Conclusions

This paper has focused on value co-creation in service-dominant logic and service design frameworks. The research method was content analysis for the case of a supplementary healthcare education service. The goal for the focus group interviews has been to study which characteristics support networked value co-creation in the design of education services.

Based on the research data, we have found features that increase understanding in regards to value-creation processes of education organisations. The following characteristics support networked value co-creation in design for an education service:

- » Result #1: Transparency between design parties of a service enables an internally strong network
- » Result #2: Trust between parties is based on rich co-operation
- » Result #3: Shared expertise increases motivation for common value co-creation.

A focal concept in service design domain is the customer journey, which can be seen as a path through the service by way of offering multiple touch-points provided by the service network. When designing this service journey, it is essential to understand the characteristics of a common value co-creation process between the participants to be able to meet the motivations of the stakeholders. In order to be solid and cumulative in knowledge, the service network has to be open and transparent for the members; meaning it also allows new participants to join and others to leave.

The internal strength of the expertise network is related to mutual trust, which allows constant changes, a multitude of activities and shared expertise. A customer journey is possible to design if the parties rely on each other and share their knowledge.

The more a network of expertise fulfils these conditions, the more robust it is in terms of preventing various disturbing factors (e.g. missing parties or resources). Symbolically, a firm service network may be able to repair itself in a way similar to how living organisms fix their shortcomings.

We have suggested some service design tools for the development of the three characteristics mentioned above. The service design tools were an ecology/actors map, a customer journey map, a motivation matrix, a system map, a moodboard and role playing.

We believe that with better understanding of value co-creation characteristics and with the help of service design techniques, an education service could be more customer-centred, student service experiences could be improved, and operations could be rendered more functional for all the members of the network. This could be a potential subject for future research activities. We hope that this work provides possibilities for more research on implementing service design tools for the education services to better design and increase knowledge about the subject.

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# Transformative Services and Transformation Design

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## Abstract

This paper claims how the parallel evolution of the conception of services and of Design for Services toward more transformational aims, would require a collective reflection on and elaboration of guiding methodological and deontological principles. By illustrating connections with similar evolutions in Participatory Design (from ‘Design for use before use’ to ‘Design for Design after Design’), Public Health Research (patient engagement and ‘empowerment’) and Consumer Research (Transformative Consumer Research), the author identifies key characteristics of transformative practices that ask for more ‘reflexivity’ on the designers’ side. Developing Design profession as contributing to society transformative aims is extremely valuable, but it carries with it also a huge responsibility. Designers, the author argues, need to reflect not only on how to conduct transformative processes, but also on which transformations they are aiming to, why, and in particular for the benefit of whom.

**KEYWORDS:** transformative services, transformation design, Design for Services

## Introduction

At its onset Service Design has been looking at services as a different kind of ‘products’, exploring modes to deal with the differentiating service qualities (originally thoughts as deficiencies) such as Intangibility, Heterogeneity, Inseparability, and Perishability.

The design debate then made one step forward when acknowledging the nature of services as complex and relational entities, that include products, and that can’t be fully designed and pre-determined (Sangiorgi, 2004). The focus on service interactions has been opening up to considering interactions within and among organisations, working on systems and networks, while designers have been increasingly approaching issues of organisational and behavioural change (Sangiorgi, 2009). In this evolution Design for Services, instead of Service Design,

has gained more credibility, reflecting the interdisciplinary and emergent qualities of this discipline (Meroni and Sangiorgi, forthcoming; Kimbell, 2009).

In the last years a further shift seems to be happening as services are not anymore conceived as an ‘end’ in itself, but are increasingly considered as an engine for wider societal transformations. Services are less discussed as a design ‘object’, but as a ‘mean’ for supporting the emergence of a more collaborative, sustainable and creative society and economy. Particular emphasis has been given to collaborative service models and co-creation (Meroni, 2007; Cottam and Leadbeater, 2004).

This evolution is mirrored in the debate around the role of services in developed countries’ economies. Together with a growing acknowledgment of the role of services for the development and growth of economy and employment, services have revealed a different model of innovation that is now inspiring manufacturing; this is ill represented by linear positivistic models of innovation and is ‘*more likely to be linked to disembodied, non-technological innovative processes, organisational arrangements and markets*’ (Howells, 2007: 11). The main sources of innovation in service industries are employees and customers (Miles, 2001) and new ideas are often generated through the interaction with users (user-driven innovation) and through the application of tacit knowledge or training rather than through explicit R&D activities (Almega, 2008).

Moreover service innovation is increasingly viewed as an enabler of a ‘*society driven innovation with policies at national and regional level that are ‘using service innovation to address societal challenges and as a catalyst of societal and economic change*’ (European Commission 2009: 70). Tekes, the Finnish Funding Agency for Technology and Innovation, positions service innovation as a core lever for transformative changes in areas such as health and wellbeing, clean energy, built environment, and the knowledge society (Tekes, 2008).

Finally in a recent study the Arizona State University’s Centre for Services Leadership collectively identified a set of global, interdisciplinary research priorities focused on the service science (Ostrom et al., 2010). Among ten overarching research priorities, a significant area in this respect emerged titled as ‘Improving well-being through transformative service’. Laurel Anderson (a leader in this field from Arizona State University) described the emerging area of Transformative Service Research as ‘*service research that centers on creating uplifting changes and improvements in the well-being of both individuals and communities*’ (*ibid*: 6). Services, being deeply embedded and diffused in social ecologies, have the potentials to impact individuals, families and communities by suggesting new behavioural and interaction models. This area, even if extremely relevant today, has been given little attention so far.

## From Transformative Services to Transformation Design

Design has been recently increasingly investigating the transformative role of services as a way to build a more sustainable and equitable society. Main fields of research have been related to the exploration of the role and impact of creative communities and social innovation (Meroni, 2007; Jegou and Manzini, 2008; Thackara, 2007) and the wide debate on the redesign of public services and the welfare state (Cottam and Leadbeater, 2004; Parker and Heapy, 2006; Parker and Parker, 2007; Bradwell and Marr, 2008; Thomas, 2008).

The first area has been looking at existing examples of inventiveness and creativity among ‘ordinary people’ to solve daily life problems related to housing, food, ageing, transports and work. Such cases represent a way of “*living well while at the same time consuming fewer resources and generating new patterns of social cohabitation*” (Manzini, 2008: 13). Defined as ‘collaborative

services' they have the potential to develop into a new kind of enterprise, a 'diffused social enterprise', which needs a supporting environment to grow.

The contemporary debate on the re-design of public services has similarly emphasised the role of co-production and collaborative solutions. The co-creation model, suggested by Cottam and Leadbeater (2004), looking at the open source paradigm as main inspiration, implies the use of distributed resources (know-how, tools, effort and expertise), collaborative modes of delivery and the participation of users in '*the design and delivery of services, working with professionals and front-line staff to devise effective solutions*' (*ibid*: 22).

What is a transformative service then? In order to be transformative services need to propose more accessible, usable and equitable solutions on one side, but also suggest new models of service co-production where citizens are not perceived as passive users but active collaborators in the solution and where organisations factually release some of the control to users in order to achieve this. The transformation required here is therefore twofold: not only citizens need to take a more active role in their life, but also organisations need to change their model and culture to generate new partnerships with the population. The need for this twofold transformation has pushed designers to change their practice as well.

Design research has been recently exploring design's transformative role in both organisations (Buchanan, 2004; Junginger and Sangiorgi, 2009; Junginger, 2008; Bate and Robert, 2007a and 2007b) and communities (Thackara, 2007). Service Design practitioners have been moving from providing solutions to specific problems, to provide organisations with the tools and capacities for human-centred service innovation. Examples are the work of Engine Service Design group with Kent City Council to develop a Social Innovation Lab (Kent City Council, 2007) or the work with Buckinghamshire to define a methodology for the engagement of local organisations and citizens (Engine Service Design, 2007).

Similarly NHS Institute for Innovation and Improvement has developed the Experience-Based-Design (EBD) approach and toolkit in collaboration with thinkpublic (a London based service design studio) to co-design more accessible, usable and effective services. They have then organised a series of training workshops and pilot projects to support adoption on a wider scale. Since its launch in 2007, the EBD approach, consisting in experience-focused participatory design exercises, has been piloted in different hospitals with the aim to activate a large-scale cultural change in NHS.

This evolution within design has been intuitively defined in its emergence as Transformation Design by Burns et al. (2006). The concept of Transformation Design suggests that '*because organisations now operate in an environment of constant change, the challenge is not how to design a response to a current issue, but how to design a means of continually responding, adapting and innovating. Transformation design seeks to leave behind not only the shape of a new solution, but the tools, skills and organisational capacity for ongoing change*' (Burns, 2006: 21).

What are then the principles and practices of this significant transformative role of designers and of the services they co-create? Some considerations have started to emerge as for new roles of design and design principles and tools (see Design Council: Public Services by Design), but they consciously or unconsciously rely on other disciplines and fields of practice that have been working with transformational aims for a longer period of time. A call for a more interdisciplinary approach to Design for Services have already come from within (Kimbrell, 2009) and from outside the discipline as with the 'service science' constitution. Designers need to work closely with other disciplines to gain useful knowledge and provide peculiar contribution to this field. The author has been in particular looking at work carried out within Public Health Research on the topic of health inequalities and public engagement and on the growing area of Transformative Consumer Research with a focus on Community

Action Research. These areas share similar concerns and principles and provide interesting insights on the need and constraints of working with communities and public health aims. Given the contemporary relevance, complexity and ethical implications of the concept and practice of Transformation Design and Transformative Services, the author urges to seriously discuss and define design and ethical principles to support and guide practitioners and researchers in their work. Participatory Design, in its original form, gave shape to guiding principles that were linked to its democratic aims. Shuler and Namioka (1991) listed them as: 1) *cooperative design* as both users and designers bring useful competences in the process 2) *familiar resemblance* of situations and design tools to existing work context and practice 3) *understanding practice* as starting point of each design 4) *experiment the future* simulating new artefacts and practices 5) *learning and transcending* as part of the design process. Today Participatory Design is stretched to cover different contexts and objectives and needs a further elaboration. The next section will then briefly summarise key characteristics emerging from the comparison of literature between Design, Public Health Research and Transformative Consumer Research. These could be further articulated by linking with multidisciplinary research into organisational and social change and with a direct evaluation of transformative practices. The authors would like these characteristics to act as basic materials for an initial reflection on methodological and deontological principles for transformative design activities.

## Transformative practices and principles

### Active citizens

The key ingredient for transformative practices is the understanding of citizens as ‘agents’ and their active role in the creation of wellbeing. As Bentley and Wilsdon argue, the key to unlock the potential to offer better and more personalised services is to understand that value is created, and not delivered (2003). At the same time ‘participation’ has been motivated as being the basic right of democracy, a process leading toward better citizens and as a way to generate more efficient and effective programmes and policies (Cornwall, 2008).

In the design debate about public services transformation, participation is seen as a key resource to deeply change the traditional hierarchical model of service delivery and the perception of citizens themselves. Cottam and Leadbeater (2004) proposed an alternative approach to the Welfare System defined as Open Welfare. The authors suggested an open model to public services delivery based on ‘*mass, participatory models, in which many of the ‘users’ of a service become its designers and producers, working in new partnerships with professionals*’ (p 1).

In line with this perspective, the reform of healthcare services calls for “Creating a Patient-Led NHS” (DH, 2005). The claimed aim here is to change the whole system so that ‘*there is more choice, more personalised care, real empowerment of people to improve their health*’, ‘*move from a service that does things to and for its patients to one which is patient-led, where the service works with patients to support them with their health needs*’ (p 3).

‘Participation’ can have though different levels of implementation and motivations at its starting point. When participation is pushed to its extremes it meets other agendas generally named as community or citizens ‘empowerment’ and it’s linked with more ‘transformative’ aims: participation here becomes a mean and an end in itself (White, 1996).

A recent review (Marmot, 2010), combining reflection on health inequalities and community engagement, suggests that, to really reduce health inequalities, a strong emphasis must be

given to individual and community empowerment, creating the conditions for people to take control over their lives. This requires, on the local service delivery side, increasing the opportunities for people to participate in the definition of community solutions, enabling a real shift of power:

*Without citizen participation and community engagement fostered by public service organisations, it will be difficult to improve penetration of interventions and to impact on health inequalities (ibid: 151).*

Primary care services are asked to ‘develop and adopt inclusive practice that seeks to empower patients and develop their health literacy’ (ibid: 157). Research has shown how, moving from a patient information or consultation approach toward more inclusive and participatory methods, that support a real shift of power and participation in health decisions, may lead to better health outcomes (Attrie and French, 2007). An increase in participation can lead to more appropriate and accessible services, while increasing social capital and people’s self confidence and health-enhancing attitudes (Popay, 2006).

### **Building capacities and project partnerships**

Participation has therefore in itself, if carefully supported, the potential to be transformative. As Cornwall claims though, ‘participation’ to be effective:

*[...] requires changes in organisational culture, as well as in the attitudes and behaviour of state officials and service providers. It also demands processes and structures through which citizens can claim voice, and gain the means to exercise democratic citizenship, including acquiring the skills to participate effectively.’ (p 14)*

In Public Health Research ‘participation’ and ‘public involvement’ are better seen as ‘building relationships’ (Anderson et al. 2002) and about creating ‘involving organisations’ (DH, 2008a) where patient engagement is integrated in decision-making processes. The emphasis is therefore not only on developing external ‘mechanisms of involvement’, but also on implementing internal ‘mechanisms of change’. This comes from the awareness that for any transformation to be sustainable and effective in the long term, there needs to be a change of cultures and attitudes by building trust and on-going dialogues. One-off interventions in a constantly changing political and socio-technical environment cannot generate significant results in terms of reduction of health inequalities and service improvements (Bauld et al., 2005). It is therefore fundamental to create a ‘culture’ of participation and involvement that can last beyond changes in political objectives and strategies.

Community Action Research, a methodology applied in Transformative Consumer Research, has three guiding principles (Ozanne and Anderson, 2010): 1) include multiple partners from the community in the research process and generate a research partnerships 2) be guided by locally-defined priorities and committed to social justice 3) aim at community education and empowerment by encouraging people to learn new skills, reflect on their social and economic conditions, and act in their own self interest.

Transformation Design has similarly inherited the Participatory Design principle (Shuler and Namioka, 1991) of *learning and transcending* meaning a reciprocal learning process between designers and project participants leading to transformative understandings. If though Participatory Design focuses on providing tools for an adequate participation to guarantee shared ownership of the final design outcome, the transformational perspective aims also at the final ownership of the process and methods themselves.

When Design encounters Organisational and Behavioral Change pilot projects become vehicles for knowledge exchange within longer transformational processes. As an example Thinkpublic, working on dementia as part of DOTTO9 programme, hosted a Skills Share Day with a camera trainer from the BBC (British Broadcasting Corporation) to provide training for filming and interviewing to a user group; as a secondary outcome key stakeholders participating to the project acknowledged how the communication skills they acquired during the project were transferred into daily professional lives (Tan and Szeboco, 2009). When, though, is knowledge exchange conducive to real transformations?

### Redistributing power

Participation in a design process doesn't depend necessarily on the set of methods used, but on the actual redistribution of power happening in the design decision process. Arnstein (1969) in his famous reflection on citizens participation, talks about eight rungs in the 'ladder of participation'; these moves from non-participation – called as 'manipulation' and 'therapy' - to tokenism - defined as 'Informing', 'Consultation' and 'Placation' - to Citizen Power, articulated as 'Partnership', 'Delegated Power' and 'Citizen Control'. Non-participation is associated with attempts to 'educate' and persuade the population of existing plans and programmes, while tokenism gives citizens a 'voice' that has though no power to guarantee its follow-through; Citizen Power suggests situations where citizens are actually given the structure, skills and support to really participate in decision processes.

In a similar way, Popay (2006) reporting on the practices of 'community engagement' suggests four broad approaches that are mainly differentiated by their engagement goal: the provision and/or exchange of information; consultation; co-production; and community control. As she underlines '*these approaches are not readily bounded but rather sit on a continuum of engagement approaches with the focus on community empowerment becoming more explicit and having greater priority to the right of the continuum where community development approaches are located*' (ibid: 6-7).

Bate and Robert (2009) suggest an ideal move in the continuum of patient influence from 'complaining' and 'giving information' toward 'listening & responding', 'consulting & advising' and 'Experience-based Co-design'; co-design here is intended as '*more of a partnership and shared leadership, with NHS staff continuing to play a key role in leading service design alongside patients and users*' (ibid: 10). Here professionals maintain the lead in the change process, while patients represent experts on their own experiences.

In this continuum the role of researchers or professionals gradually change. A first consideration relates to what each project participant brings to the process; researchers are said to bring their expertise mainly in methods and theories, while people from the community contribute with insights into 'theories-in-use', their capacities and needs, and with their implicit understanding of community social and cultural dynamics (Ozanne and Anderson, 2010). Skidmore and Craig (2005), in their celebration of the role of community organisations for citizens activation, talk about 'civic intermediaries' as actors that don't have necessarily a predefined aim, but work with 'communities of participation' to enhance their skills, willingness and capacities to contribute to whichever public or semi-public spaces they engage with. In the design field there is a growing consent about the role of designers as 'facilitators' of change processes, but there is a division as who is actually directing the process, moving in-between design-driven or use-driven (or led) change processes.

## Infrastructures and enabling platforms

When the final aim is a ‘transformative’ one, not only the process, but also the outcome needs to better consider people’s participation and engagement. Public Services have emphasised the concept of ‘co-production’ as the key strategy for more effective and personalised services (Horne and Shirley, 2009). Considering people’s role in shaping and contributing to the service ‘delivery’ and constant ‘redesign’ requires thinking not only at the role of users in the design ‘before the use’, but also in the design ‘after the design’ (Elle, 2010). Pelle Ehn, reflecting on the evolution of Participatory Design practices, suggests:

*Rather than focusing on involving users in the design process, focus shifts towards seeing every use situation as a potential design situation. So there is design during a project ('at project time'), but there is also design in use ('at use time') (ibid: 5).*

At project time then the object should be open to controversies that could support new products and practices to emerge. Using a Leigh Star concept, Ehn talks about ‘infrastructuring’: *‘an infrastructure, like railroad tracks or the Internet is not reinvented every time, but is ‘sunk into’ other sociomaterial structures and only accessible by membership in a specific community-of-practice.’* (ibid: 5).

In a similar way when describing the relevance of community organisations to support people participation and engagement, Skidomore and Craig recall the capacities of these organisations to build:

*‘a platform capable of sustaining diverse and sometimes even incoherent sets of activities [...] The result of taking the platform model seriously is that it can become very difficult to know where the boundaries of organisations start and finish. Embedded in a web of relationships of varying types, it makes more sense to think of organisations in terms of the networks through which they work.’* (p 48)

The concept of designing services platforms is also part of the Transformation Design language. When project participants become co-creators of the service, designers can’t design fixed entities and sequences of actions that allow little adaptation and flexibility. Platforms made up of tools, roles and rules delineate the weak conditions for certain practices and behaviours to emerge (Winhall, 2004; Sangiorgi and Villari, 2005). At the same time, when designers are confronted with the need to diffuse and scale up creative communities’ promising solutions, their contributions take the form of ‘enabling solutions’ meaning *‘a system of products, services, communication and whatever is necessary, to improve the accessibility, effectiveness and replicability of a collaborative service’* (Manzini, 2008: 38).

## Community as intervention size

A further characteristic of transformative practices is the focus on communities as intervention size. In Public Health, the prevention of lifestyle illnesses, to be effective, require large-scale community participation and measures (Blumenthal and Yancey, 2004). At the same time the design of future healthcare services is increasingly connected to integrated and community-based solutions (DH, 2008b).

Moreover communities are considered as the right size to activate large-scale changes. Meroni promotes the concept of a Community Centred Approach *‘where the focus of attention shifts from the individual “user” to the community as the new subject of interest for a design that is more conscious of current social dynamics’* (Meroni, 2008: 13). Communities or the dimension of “some” are described as the dimension of change: *‘elective communities (defined by interest, geography, profession or other criteria) are sufficiently larger than the individual to impose moral restraints that transcend the individual will, but still small enough to be recognised as representative of individual interests’* (ibid: 14)

## Enhancing imagination and hope

Designers are generally appreciated for their capacity to think ‘out of the box’, providing new visions for the future. As Meroni reminds us, mentioning the work from Bateson (*Mind and Nature*, 1979), evolution is different from ‘epigenesis’, which is *‘the development of a system from a previous condition using the capabilities it already possesses’* (Meroni, 2008: 5). If ‘epigenesis’ means predictable repetition, which grows from within, evolution requires instead exploration and change. Designers are considered to act at this second level as they can work from the outside in and guiding more systemic interventions if needed. Enhancing the capacity to build new shared and ‘orienting’ visions is a fundamental quality in transformation processes (Manzini and Jegou, 2003).

Together with the vision though, communities need to trust their actual capacity and power to implement it in the future. As Skidmore and Craig (2005) claim *‘without the hope that animates social networks [...] social capital can go to waste. The networks people have are only as valuable as what they believe they can accomplish through them’* (ibid: 61). This combination of social networks and collective optimism, has been called by the American sociologist Robert Sampson as ‘collective efficacy’ (2004: cited in Skidmore and Craig, 2005).

Activating ‘collective optimism’ through shared and orienting visions, needs to be supported by the creation of adequate infrastructures and effective power distribution strategies.

## Final considerations

This paper has been looking at a small selection of literature working on similar considerations related to the practice and theory of transformative practices. Developing Design profession as contributing to society transformative aims is extremely valuable, but it carries with it also a huge responsibility. Design for Services has been, since its onset, oriented to bring sustainability and people at the centre of service provisions. It has been attracting, since then, enthusiastic young generations of practitioners and researchers that see in Design for Services, in particular for the public sector, a more meaningful way to apply their skills and profession. As this societal transformative aim is now becoming increasingly explicit, designers need to become more ‘reflexive’ as for what concerns their work and interventions. Design for Services needs to reach a more mature state, developing shared methodological and deontological principles to guide its development looking also at how other disciplines are working and theorising on similar issues.

With different backgrounds Consumer Research has been calling for a change in their practice as historically their work has been driven by the theoretical and substantive interests of academics; their new call for a Transformative Consumer Research practice focuses upon making a positive difference in consumers’ lives (Bettany and Woodruffe, 2005). A way to do this, it is suggested, relies on introducing ‘reflexivity’ in their work as a way to address power and control issues in each research encounter, understanding their influence on the research and its results (ibid). This reflexivity should be part of Design for Services individual and collective practice, including also a careful, short and long-term evaluation of projects and intervention programmes as part of the design activities. Adding the adjective ‘transformative’ to Design for Services requires therefore a reflection, not only on how designers can conduct transformative processes, but also on which transformations we are aiming to, why, and in particular for the benefit of whom.

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# Spicing up public journeys – Storytelling as a design strategy

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## Abstract

The paper is based on an ongoing research that aims at studying how storytelling approaches can be applied in designing public customer journeys and service environments. It first introduces briefly how storytelling has been applied in designing service experiences then introduces the research project Spice and its context and approach. Finally, the paper describes and reflects upon an example case and, how storytelling has been applied in gathering and creating stories as well as creating concept ideas.

**KEYWORDS:** storytelling, customer journey, metropolitan railway systems

## Introduction to storytelling in service design

Customer journey and total customer experience are among the concepts used in service business and service design. Instead of looking at an environment as an architectural entity or an individual system, they recognize both the larger units and the fine details in them. This complexity poses a challenge for designers and decision makers to envision and prototype services. One of the IDEO leaders Bill Moggridge (2008) suggests storytelling as a potential solution for prototyping: *"When you put all these things together, with elements from architecture, physical design, electronic technology from software, how do you actually prototype an idea for a service, and it seems that really, it's about storytelling, it's about narrative."*

Jensen's "Dream Society" (1999) and Pine and Gilmore's "Experience Economy" (1999) suggest that the drivers of the current industry are based on stories, experiences and emotions. Information can be conveyed in different ways, but it seems engaging and compelling to tell a story that explains facts (as well as fictions) in an attractive, inspiring and involving way, one, which triggers the imagination and transmits meanings and values.

The importance of stories lies in elements in which others can relate to and, recognise the situation in terms of emotions and experiences. In the visual world, from advertising to art

we face storytelling too, through clues that express, or hint something. However, the story often remains to be guessed and imagined, or, it is consciously expressed in various ways.

Mossberg and Nissen Johanssen (2007) describe how to apply storytelling in service context. Their examples such as hotels, restaurants and leisure centres are places in the core of experience economy as described by Pine and Gilmore (1999). It is tempting to claim that storytelling is related to brands and thematic concepts such as Hard Rock Café restaurant chain. However, we believe that storytelling is more. Storytelling is very basic part of human life. It is engaging; it allows individual interpretations and triggers imagination. It is about identities and meanings and about joining individual details together into a larger entity. The examples given by Mossberg and Nissen Johanssen are creative, humorous and experiential. The hotels where you can feel, hear or even see ghosts, the environments that are attractive because of famous books, stories, historical events or people, are part of the storytelling for service experiences. In these examples stories are created by brainstorming meaningful or triggering signals from the history of the setting, as the following example describes.

Stora Hotellet I Fjällbacka is placed in small community that is mostly populated by tourists in summer time. The hotel needed a story to attract more customers. The story was created around a sea captain Charles Klassen, who was found to be the first owner of the building in which the hotel was later established. Although very little was known about this Klassen, a story about his adventures at the seven seas and various exotic harbours was born in the minds of the service experts. The interior design as well as the whole concept was created to express his exciting life, with different themes according to various harbours in each room. The concept was extended to cover all the touch points including the websites. According to the authors, the formerly summer season hotel turned to be successful throughout the year with this new concept. (Mossberg and Nissen Johanssen 2007)

Saco and Goncalves (2008) also suggest that customer journeys can be designed in an experiential way by applying storytelling professionals such as theatre and movie specialists. The example given is Ritz-Carlton worldwide hotel chain that wants to consider “the total guest experience”. The Ritz experimented using scenographers to direct the scenes and to communicate those with workbooks. The workbooks introduced the “localized service scenes and outlined the key scenes using a series of photos that told an evocative story” (p14). The key objective was to communicate the Ritz brand principles without directing the solutions for each local hotel. The guiding and framing story remains open enough to be interpreted and applied to suit the specific location, context, local service as well as remain sensitive to people involved.

The examples above are about creating memorable hotel experiences. However, similar strategies could be experimented with other services, environments and customer experiences too. The objective of this paper is to introduce an ongoing research in which the main objective is to study how storytelling approaches can be applied in designing urban public experiences. We will first introduce the research project titled Spice and then discuss the context, i.e. metro environment, the case and the approaches we have worked with. Finally, we will describe the preliminary findings.

## Spice- spiritualising space project

Spice-spiritualising space project is an ongoing research project in which the main objective is to study how storytelling approaches can be applied in designing public customer journeys including spaces with experiential character and spirit. We are aware that there are various

lines of research on storytelling. However, the concept of storytelling in Spice project has been quite flexible to start with. Gabriel (2000) argues that ‘stories open valuable windows into emotional, political and symbolic lives in organisations’. (p. 3). Furthermore, stories can be said to be ‘part of the sense making process’ and that ‘the truth of the stories lies not in the facts, but in the meaning.’ These quotes form a relevant reference to how we understand storytelling: it is about meanings, lives and sense making. Our aim is to experiment with various ways on how to integrate storytelling or storytelling-inspired approaches in design. Since the research team consists of multidisciplinary professionals from design, scenography, screen writing and sociology the research combines approaches from all of these. We aim to experiment with various applications and characteristics of storytelling during the project.

Spice project looks into stories and storytelling approaches as a tool and strategy for designing public services, focusing particularly in metro (i.e. metropolitan railway system) environment. Helsinki metro system is currently expanding into, and influencing new environments. This provides a fruitful ground for research. As an example of similar context, metro stations in Paris have specific characters of their own. Without reading written signs the traveller knows where he is at simply by the spirit and aesthetics of the environment. On the contrary, Helsinki metro stations carry a rather anonymous and neutral image. They are not designed according to the local spirit of the neighbourhood or reflecting meanings that could trigger people’s imagination and, at best help to create the mental map of the area. Whether at east or west the feeling is the same, although the surrounding environments carry rather different images. Therefore, storytelling approaches have potential in producing unique public service environments.

Spice project starts with a hypothesis that daily urban railway systems have not been recognised as an opportunity to create new uses and environments that support place identities. The objective of storytelling approaches thus, is to identify, strengthen and create a strong place identity in which inhabitants and travellers can relate to. It is also about urban branding, defining the spirit of a place, and building a better place to live. (Fleming 2007) According to Kevin Lynch (1981) the diversity and authenticity of a city emerges from narratives of history and personal memories. Thus, stories and storytelling can help to shape the quality of urban experiences while creating a sense of place. Furthermore, most of the metro areas are lacking a sense of “**good life**”, which could be transmitted and felt through other or supplementary services as well as aesthetic qualities such as sound, illumination, dynamic interactions and other potential design interventions. Storytelling as a design strategy can be utilised to spice up metro experiences. It can also help to map the quality of service touch points and refresh the total customer experience.

As the starting points for experimenting with storytelling we had identified three reasons for considering stories in design. First, stories are gathered from users to inform and inspire design. Often, also interpretations of user data are communicated to design through narratives that leave openness for new interpretations (Mattelmäki et al 2010). Thus, in Spice project, one of the tasks is to gather stories about the local identity to influence design and storytelling, and furthermore, investigate the experiential aspects of public spaces as described by the local people to uncover the local identity.

Second, storytelling is used for prototyping services. It is used as means to formulate design drivers that facilitates the style and overall design of a service system. A story connects as a red thread various details together from architecture and environment design to communication, marketing and customer experience. The logical argument behind the solutions and their connections to the story is not always needed. It can partly remain to be read between the lines but nevertheless storytelling supports making sense of the complex systems. Thus, in Spice project one of the tasks is to investigate what elements in public

spaces can be influenced by storytelling and, what existing and potential design elements and their connections to the stories are. This starting point indicates to service design approach that looks holistically of different elements that create the service experience and service as a process and a system. It looks at architecture and functional issues such as way finding.

Third, storytelling supports creating and managing contexts in which experiences happen. Storytelling is a tool to differentiate from other similar services and to create and maintain an attraction, an experience that triggers imagination. It also focuses on emotionally loaded elements, such locality and how people are attached to it, i.e. ‘this is my home station’. Thus, in Spice project one of the tasks is to create and communicate concept ideas that reflect the local identity. We aim at solutions that inspire, that are of aesthetic quality and that support good life.

### Metro cityscapes: observations and experiences

To make sense of the context we started by investigating metropolitan railway systems. Observing and experiencing different metro stations in Helsinki and in other countries formed a better understanding of the notions of usability, visibility, imageability and cultural landscape (Lynch 1960). The metro stations differ greatly: there are stations designed to have user-friendly and appealing architecture; or designs of standardized architecture and distinct interior designs of good quality; others are unique and fascinate designs by different architects, designers and artists. Or, one can find impressive metro stations designed as ‘palaces for the people’ with valuable materials; some others are museum-like stations with remarkable collections of public art.

An excellent example of such is observations in Berlin metro stations. Some of the metro stations were designed around the same time with Helsinki metro, however, the use of colourful surface materials, illumination and sculptural forms give many of Berlin metro stations a particular style and feeling. The stations are vivid and designed in a unique way; they also are vibrant of dynamics and interactions of people at various supplementary services around, such as flower kiosks, grocery stores, bars and restaurants.

Another example is the Underground of London. In the early 20<sup>th</sup> century the public service provider wanted to promote a sense of “us underground users”. Instead of only providing transportation usage, strong design drivers and beliefs were put into action for making a place for all users rich in experiential elements and consistent with a readable cultural landscape and life-enhancing experiences. Usability related solutions were improved, an overall reduction of advertisements and commercial products were made. Underground posters were added and their message in the style of architecture and interior of stations were delivered. Works of art and exhibitions at the stations created new experiences including pleasant sensorial qualities. As an example, an over ground station was turned into the style of a willow-pattern plate. (Watson and Bentley 2007).

Observation in Helsinki mapped design elements in metro environments including the architectural scenes of the stations, illumination, shadows, furniture, details on ceilings and walls, art works, as well as the relationships between the neighbourhood’s physical surrounding and the station design. In addition, navigation, functionalities, the use of sounds and advertisements, accessibility, interactions and services were investigated. Illumination solutions for example were found to highlight specific places, and to make them memorable.

The observations could be summarised to three main categories. The first one deals with designing clear cues and contextual signs for way finding. The second deals with means for producing a vivid image of place, a legible cultural landscape rich in essence and local

identity. These two are regarded as drivers for producing “good life”, pleasant, coherent, stimulating urban service context. The third category illustrates the customer journey and metro system touch points including tangibles and intangibles. Mapping small details and bigger elements of the service process and experience facilitated better comprehension of the experiential and design solution space. In the following we will present the example case in which the findings above were applied.

## The case: Otaniemi metro station

In addition to understanding the potential applications of storytelling, and studying metro environments Spice project aims to explore and produce a variety of alternative concepts. They are not meant to be implemented as such, but to serve as research through design approach and as a communication platform. Thus, as the Helsinki metro is expanding to the west with seven new stations, one of the future stations, Otaniemi, was selected to be the focus of the research and design activities.

The district is formerly known as the campus of Helsinki University of Technology. Currently it is the biggest campus of Aalto University (i.e. union of three universities: Helsinki School of Economics, Helsinki University of Technology and University of Art and Design Helsinki.) This was the reason to focus on Otaniemi area, and our research questions followed that: how technology, art and design, and economics can be integrated in a service environment that emphasizes holistic customer experience as in service design? How to identify meaningful stories that reflect the local identity? And furthermore, how to concretise meaningful stories in the design of the new metro station and customer experience?

Extensive amount of references exist regarding approaches that consider storytelling methods. Nevertheless, the objective of this paper is to discuss storytelling as a strategy that is applied in various forms throughout all phases of the design process, not to evaluate the applied methods as such. Gathering, interpreting, and working with stories served different purposes as will be explained in the following.

### Gathering stories

Mossberg and Nissen Johanssen's (2007) examples rely on creating the stories based on creative imagination or already existing stories. However, we approached the district of Otaniemi with an application of user-centred design, where the key components for the future design are based on user studies, i.e. understanding user and the local identity. In addition, also more subjective observations, studies on cultural history, and imagination were done. Thus, the outcome of the field and user study intertwined with insights from other sources such as books and experiences of personal journeys.

The first reason for considering storytelling in design, as explained earlier, is to collect stories, i.e. insights, meanings, memories etc. from users that inspire and inform design. We applied several methods for gathering stories about the district of Otaniemi, and the metro service environment. We wanted to obtain authentic stories, anecdotes and viewpoints to the local identity, to services, and urban customer journeys. Utilising different methods and perspectives aimed at a diversity of personal and social experiences in relation to Otaniemi and the metro environment. The people, i.e. users engaged were selected based on the mixed uses of the area from students, people working in the industry and research areas among others, and inhabitants in the district. The main approaches applied were:

**The story-card tool** was applied by the researcher who had background in industrial design. The method is an application of make tools as described by Sanders (2002) and it aims at triggering opinions, stories and meanings with the help of illustrated cards. The story-card tool was used together with a map of the area. It helped to link the actual experiences and visions of the area with the physical environment. People illustrated their current and ideal journey, actions, and characteristics of surroundings, the quality of offerings, and the emotional relation to the conception of Otaniemi.

The gathered data covered topics from activities at the local area, to sociability, access and linkages between the places. Pitfalls in traffic, transit usage, and pedestrian activities were discovered, relating to accessibility, convenience, connections and continuity that play important roles for improving the university campus. Sociability was found to be essential not only for inhabitants and students, but also for visitors and working people. Individuals emphasised the need of third places, and other complementary services that could help to revitalise the area and bring new dynamics, and diverse and welcoming environments. Associations about comfort and image of the place were also key attributes; here the main character of stories were the students' lifestyle in the campus, the use of sauna as a habitual happening and as part of the legible cultural landscape of Otaniemi. Overall, the story-card tool and the map of the area helped to uncover significant touchpoints, experiences at various environments and people's ideal conception of the place.

**Interviews** were applied as the screenwriter's approach. Screenwriting and screenplays are key elements in film, television and entertainment, and storytelling as well. Screenwriting is a process including envisioning, planning, drama, narration and actual writing. The interviews aimed at looking for themes that can be interpreted as one unifying subject for the main plot, or then as various sub plots for building one story about the local identity of Otaniemi. The screenwriter's interviews followed an open theme dealing with emotions, feelings, experiences and thoughts about the past, present and future of Otaniemi, and focusing on associations, memories, and impressions.

The associations to Otaniemi were various from the uniqueness of students' life to the green colour that represents the local landscape; and to the red bricks relating to landmark architecture. Memories arisen from Otaniemi included childhood experiences in the forest and adventures at the pond. The impressions and description about the place concerned safety issues, activities and services in the area, sense of community and the natural scenery.

**Design probes** (Mattelmäki 2006) were applied by the sociologist's data collection approach with the perspectives of customer journey and urban practices. On one hand, the method looked into the essence of routes and paths people use and on the other hand, at the habituated ways of the customer journey. The participants were encouraged to make a story of their own by photographing and by reflecting and verbalizing their daily trip to Otaniemi.

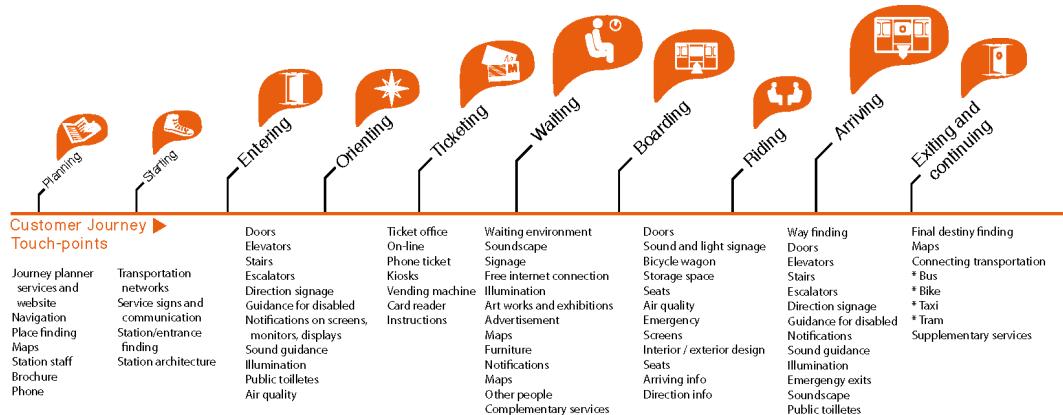
The collected material helped to discover elements, both large units and details, in the urban transit environment and in Otaniemi area that aesthetically, affectively and imaginatively communicate to people. These day stories were rich in narrative, illustrating transportation selection, value of services in the journey, relevant touchpoints and places, identities, and finally, own view about them.

### Working with stories

Since the main objective of Spice project is to study how storytelling approaches can be applied in designing public service environments, working with stories occurred in various ways. Besides identifying the essence of the area, the gathered stories helped to uncover

public services pitfalls. They provided information about functions, contexts, local identity, characteristics and lifestyle of people related to Otaniemi. In the following we will describe how we worked with the stories.

The stories gathered from users and researchers' observations were used for creating an overall understanding, and a visualisation of the customer journey at Helsinki metro system and its service touch points (see figure 1). They also served for painting a picture of the identity of Otaniemi. Furthermore, they helped to map experiences that occurred in local area including functions, activities, accesses and linkages. This was fundamental for inspiring the design of alternative concepts for the future Otaniemi metro station environment.



**Figure 1. Customer journey and service touchpoints of metro system.**

Stories were also developed further and new ones were created inspired by the outcomes. Interpretations of users' stories were, for example, communicated through utilising persona descriptions. They were further developed by using a fictional fire camp like gathering talks in which participants internalise one persona for creating new scenarios in Otaniemi, focusing on the future metro environment.

Experimenting with storytelling continued with creating various narratives, combinations and summaries of stories gathered earlier. During creative teamwork sessions designers and scenographers worked with re-writing stories, i.e. taking the user stories and other materials as inspiration and creating short stories that took place at Otaniemi. The stories were further transformed into design and artistic language, emphasising characteristics and arrangements of stories in the space, the constitution of elements such as colours, forms, material, motion, illumination, interactions, sound, and so on.



**Figure 2. Mockups that experimented with concretising story inspired solutions.**

Stories were thus transformed into design ideas through several workshops and individual reflections. Transforming the stories in a tangible and explicit way was accomplished in two- and three-dimensional means (see figure 2). The former was done through collage making: visual descriptions for outlining existing and potential design elements and their connections to local identity. The latter happened by composing various materials in the small-scale model of the station. These exercises helped to frame the focus of the study and recognise

experiential opportunities of stories as a strategy in design, Otaniemi metro environment. The sessions were fruitful for transferring textual stories into visual images of design and art.

Finally, as the screenwriter's way of working with the stories, he created his interpretation of the gathered and interpreted stories and about place through writing. He summed up the material into one main story with three sub-stories. This story becomes vivid through rich vocabulary and metaphors and, the ability to form a coherent narrative, complex enough to include all key findings of the local identity of Otaniemi. The outcome was a written script titled 'Take your time' that created a concept plan for Otaniemi metro station. It is a story open enough for interpretations, but including elements that could serve as the red thread for the overall design that was mentioned earlier in this paper.

### Concept ideas

Various strategies in how to apply storytelling were observed during the concept creation phases, too. In the following we will introduce some of the created concept ideas and explain their relationships to stories.

The scenographer's concept idea originated from a transformation of a re-written story into a visual collage. The story was inspired by the anecdotes from the user studies and it combines elements from historical characters and the natural and cultural landscape of Otaniemi, located by the sea and surrounded by nature. The main character in the story is the lady of the Otaniemi manor, who enjoys biking in the woods. The metaphor of the bicycle connects the technological and mechanical side of the university that is located in the area, with the green nature and cultural history. The concept idea becomes experienced in the metro station platform (see figure 3). It covers a variety of units in the overall space, wall and roof elements, interactive features, to trashcans and lightning design.



**Figure 3 illustrates concept idea of Otaniemi metro station platform.**

Another concept idea by the design researcher addresses usability, way finding, and mental mapping. It connects the existing physical surrounding around the station with the local identity, including landmarks of the local architecture, sea scenery and, the technological image of the campus. Here, story descriptions and the map of Otaniemi can be seen as cues on both sides of the platform's exit doors until the hallways. One way takes to the heart of the university campus where significant landmarks can be appreciated. The concept reflects the vigorous and red brick surrounding in the passage until the hall (see figure 4). The other exit path exposes signs of the sea and natural landscape (see figure 5). The contrasting ideas for the station reflect local identity and orients people in the space. The concept connects themes from user stories with observation on metro environments.

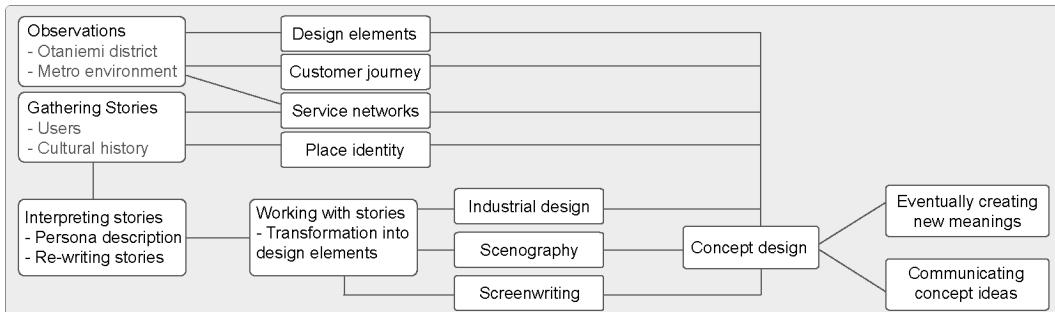


**Figures 4 and 5 show concepts about local identity and way finding at the station.**

## Discussion and reflection

As stated earlier, this paper describes an ongoing research project in which storytelling has been applied as a design strategy. Through the experimenting and based on the reasons for storytelling presented earlier and experiences in the Otaniemi case, we have identified a path that visualises the steps in which storytelling approach appeared or, can be applied in the design process of public service experiences (see figure 6).

First, stories, i.e., memories, meanings, and descriptions were gathered from users to inform and inspire design. Simultaneously, observations with sensitivity to storytelling related elements were carried out. The findings addressed narratives, associations and scenes in which experiences take place. They also supported the mapping of service networks, customer journey and service touchpoints. These activities helped to uncover what people value in the context under study; to understand the quality of existing services, to suggest improvement for existing ones; and, to map opportunities for new service networks. Moreover, elements that are part of the local identity were recognised.



**Figure 6 illustrates the path of storytelling as a design strategy.**

Second, the stories and information gathered were interpreted and re-interpreted into new stories in creative sessions. Working with stories was also conducted in collaboration sessions with Spice project team members, i.e. industrial designers (i.e. design researchers), scenographers and screenwriters among others. In addition, the team members worked with stories to form various concept ideas individually. In service design context multidisciplinary collaboration is valued. In this project storytelling as a design strategy set a new stage for the application of scenography and screenwriting for design.

Third, storytelling in design was applied for creating and communicating concept ideas. It triggered imagination, which allowed creative design ideation. Storytelling approach was useful in communicating design ideas that have time-related and experiential components.

When starting the project we wanted to experiment how storytelling can be applied in different phases of the project. We did not want to narrow ourselves to define precisely what we mean by storytelling. Loosely, we related it with meanings, experiential and emotional resonances and sense making without necessity for reasoning and facts. We have identified that story-inspired approaches raised our awareness to address aesthetic, emotional and experiential elements and solutions for all the senses. This is rather radical in public service environment in which the focus typically is in functional and generic solutions. Furthermore, storytelling approaches besides functioning as a strategy in different phases of the design process also served as a tool to create and manage the overall image of service contexts.

We have also identified critical concerns when focusing on storytelling approaches. First, storytelling is an open concept that can be applied and interpreted in various ways. How and at what stages these ways are connected to the design processes need to be studied. Second, we have also experienced that people have different strategies in how they consider storytelling as a starting point for design. For a scenographer creating a story is a novel approach, since their work normally starts with an existing story. For an industrial designer, writing an appealing story for brainstorming design ideas is not an easy task while for a screenwriter it is the core competence. Despite of the critical concerns, we see that storytelling strategy has relevance for designing services because stories can address and work with both intangible and tangible qualities of service experiences. A question for further research is how the service users can interpret ideas based on storytelling approaches.

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# The concept of value in design practice – an interview study.

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## Abstract

Use and the value thereof are implicit in the design discourse and therefore rarely explicitly spoken of, although they are at the core of design practice. With the recent turn to a service dominant logic perspective, the service marketing discourse opens up for understanding value as value-in-use and value-in-context. This paper empirically explores and describes ways in which professional designers themselves express “value-in-use”. The findings suggest that professional designers do not focus explicitly on value as a standalone concept, but conceptualize value-in-use through contextualization and an extensive use of emotions.

**KEYWORDS:** S-D logic, service design practice, value-in-use

## Introduction

The design practices involved in the design of service interact with the service management and service marketing functions within a company (Bitner in Ostrom et al., 2010; Sangiorgi, 2009). Historically, designers of products and digital interactions and interfaces have mainly had contact with the product development department, but in the design of service, new disciplines and competences are involved. Often the stereotypes between business and design are emphasized (Liedtka, 2010; R. Martin, 2007), which is particularly relevant for design of service.

Design practice and design thinking are brought forward as beneficial for innovation, and implicitly for value creation (Leavy, 2010). Both in business and design research, there is a growing recognition that design focused on providing superior experience and value for users is instrumental for business success (Boztepe, 2007). There is a demand for further research on how designers deliver user value,

and particular research is needed for developing design practice tools and methods that would enable designers to be active in enhancing value creation (Boztepe, 2007)

The service dominant logic perspective proposed by Vargo and Lusch(2008; 2004) suggests we should understand value as value-in-use rather than value-in-exchange. Further, value is understood as co-created by the customer and the service organization (Grönroos, 2008), and expanded to value-in-social-context (Edvardsson et al., 2010). Further, a S-D logic perspective proposes that everything is seen as service in the singular, and that goods are means for service provision. These sources, however, bring forward the *view and understanding of value* and are vague about the actual content of value-in-use and value-in-context. When the value is co-created and the actual use situation is in focus rather than the exchange, methods and approaches used to interact with customer and users needs adjustment (Jaworski et al., 2006; Ostrom et al., 2010).

A perspective on value which emphasizes the use situation rather than the exchange is in line with the value creation in design (Heskett, 2009).Value, described as value-in-use and value-in-context, has been found to be almost absent in the design literature (Wetter Edman, 2009)). Still the author argues that, with regards to meaning, the understanding of value in design is an overlapping concept with the concept of value-in-use in S-D logic. One reason for the absence of a discussion of value-in-use is probably that in design, value connected to use, is implied and therefore seldom articulated.

However, the above sources bring forward value as a core concept but fail to be precise about the actual concept of ‘value’. There seem to be an assumption that the concept of value is well defined and it is therefore expanded without questioning the core concept, for example in concepts such as ‘value in use’, ‘value in context’ and the ‘co-creation of value’.

Discussions on value and theories thereof are present in many fields. Taking an anthropological perspective, Graeber (2001)identifies and discusses the following streams of value definitions; 1) the notion of value as conception(s) of what is ultimately good, 2) in an economic sense, 3) value as meaning and meaningful difference, and 4) value as action. In line with Graeber’s definitions, this paper is situated mainly in an understanding of value and value-in-use ‘in an economic sense’.

Both service marketing and service design need to better understand what constitutes value-in-use. Service dominant logic puts emphasis on value-in-use, and thus the situation of use per se. In their everyday practice designers of service work with the development and design of these situations of use, and thus the situations of value creation according to service dominant logic. But how do these designers understand and talk about value and value-in-use?

This paper explores how value is conceptualized in design practice using interviews and recording of meetings with eight designers as participants. It describes how these service designers talk about value and their perspectives on value-in-use. Through this empirical investigation the study adds knowledge to the discussion on what constitutes value in design.

The paper consists of five sections; following the introduction there is a brief overview of perspectives of value in design and the concept of value-in-use. Third comes the method section and, fourth, presentation of the findings with quotes and reflections. Finally the discussion session treats implications and directions for future research.

## Perspectives on value

Value is a broad concept, present in many different fields, from economics to philosophy, sociology, anthropology and psychology and many others (e.g. Ramirez, 1999; Woodall, 2003). In this paper I rely on Graeber – an anthropologist who has identified three historical streams of thoughts of value. These are: 1) Value as the conception of doing good, which implies a notion of a universal system, 2)

Value in the economic sense; this means the notion of desirability and how much someone is willing to sacrifice to get something, and 3) Value as a sign, building on the linguistic structuralist tradition where value is a meaningful difference within a system. Graeber also suggests a forth direction, Value as action. The three first definitions are focusing on the exchange and distribution of either goods or social relation. Value as action brings focus to the combination of the two. Using Graeber's definition, this paper discusses value-in-use as understood within the economic paradigm.

### The relations between design and value

Service design in its own right is rarely discussed in relation to value. One of the few examples is the design firm Livework's service usability index, constructed from a combination of qualitative and quantitative data. The index includes the description of three tools with the aim to argue for the value they create (Lovlie et al., 2008). The third tool presented, the *service usability index*, is a measure to understand design quality and possible improvements to 'release value'. The value in focus in this model is value in the perspective of the customer.

Following the same line of argument, the focus of interest for researchers within the design management field has been to argue for the value of design for company performance (e.g Johansson, 2006; Veryzer et al., 2005). These studies have mainly focused on the impact of industrial design. This research does not take a particular interest in the value created for the customer by or through design, but focuses on the value created for the business. Implicitly this focus draws on the ideas of design role for innovation.

Design's value for organizations is also brought forward under the label of Design Thinking as a valuable resource for innovation. Often design thinking is described as having potential for innovation through the way designers 1) use and are advocates of abductive thinking (Martin, 2009) or 2) are drivers of group creativity and user involvement (Brown, 2008). An argument for value innovation has been explored through expanding Martin's rhetoric (Leavy, 2010) and claims abductive thinking as key.

Suggestions for the designers' role in value creation include designers' interpretative and propositional role in and for innovation as proposing new meanings, instead of fulfilling needs (Verganti, 2009) and the designers heightened understanding of the users' context (Boztepe, 2007). "Apart from styling, what matters to the user (in addition to the product's actual functionality) is the product's emotional and symbolic value – its *meaning*." (Verganti, 2003, italics in original)

### Value for the customer, in use, in context

Value is a broad concept, present in many different discourses (e.g. Ramirez, 1999; Woodall, 2003). Traditional dominant economic theories use rhetoric that first and foremost sees value as monetary value for the firm.

Adopting an S-D logic perspective gives that everything is seen as service in the singular, that goods are means for service provision – goods derive their value when actually used<sup>1</sup>. This notion of value-in-use has been present in earlier work. Heskett (2009) reviews major economic theories and their impact on the understanding of value created by design. Critical to the neo-classical theory that has shaped the mainstream marketing theories of the 18<sup>th</sup> and 19<sup>th</sup> century the author highlights the so-called Austrian School<sup>2</sup>. Key principles are that value is situated, individual, and conceived as value-in-use, in these aspects very similar to the key concepts of S-D logic.

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<sup>1</sup> See FP3 in Vargo & Lusch 2008.

<sup>2</sup> The Austrian School was founded by Carl Menger (1840-1921), and further developed by Friedrich von Wieser (1851–1926). For a more developed overview see Heskett, 2009. According to Heskett (*ibid.*) Peter Drucker has been strongly influenced by these notions in his understanding of quality.

The concept of value-in-context was introduced 2008; emphases is now not only the particular moment of use, but the entire context in which it takes place (Vargo et al., 2008). The environmental settings in which services takes place has been researched with regards to behavioral aspects, and the impact on both customers and employees in the area of service-scapes (e.g. Bitner, 1992). The concept of value-in-context has recently been expanded to include a social constructionist perspective (Edvardsson et al., 2010).

The understanding of value as created in use and in context, rather than accumulated in an production process, has been present in the Australian School of economics, as mentioned above, and other researchers have in several writings explored the co-production of value, as well as its contextual nature (e.g. Normann et al., 1993). In line with the concept of value-in-use, consumer value has been defined as “an interactive relativistic preference experience” (Holbrook, 1999, p. 5) This definition points both to the experiential and relational nature of value, as well as its creation in the interaction, i.e. co-creation.

Although the emphasis is on value as value-in-use and context, little is written on what actually constitutes this value concept. Prior to S-D logic, in 2003, Woodall (2003) deconstructed and reconstructed *Value for the customer* in an extensive conceptual paper. He distinguished five ‘primary forms’, where three are related to monetary value and two includes other aspects as: 1) the derived value for the customer understood as *use/experience outcomes* and 2) marketing value for the customer understood as perceived product attributes. The derived value for the customer is further described through the *nature* of the derived value, with aesthetic value, emotional value, social value, and play value being five out of the 17 mentioned values.

### Emotions and aesthetics

Emotional value is often neglected in the service management literature, though Woodall (2003) mentions emotional value as one derivate of value-in-use. It is difficult to measure emotions, and the tradition has for long been to measure perceived service quality and even perceived value in a quantitative manner (Berry et al., 1993).

The concept of value- in-context increases the motivation to look at the situations that make up this context, specifically the complexity of people, experiences and emotions. Another approach to how to treat emotions is taken by Cook et al. (2002) in discussing the relationship between emotions and needs. They propose a needs-based approach to be potentially useful, arguing for the core needs of security, fairness and esteem. The authors connect these needs to the extreme emotions of delight and outrage, which they suggest guide design work. They associate these notions to aesthetics, whereby exemplifying by beauty brings delight to mind, while ugliness connotes outrage. They further propose that there might be a need for fun and need to experience beauty; in terms of value this can be connected to ‘play value’ and ‘aesthetic value’.

Play and aesthetics are two of the characteristics of emotional value, one of the four types of consumer value defined by Holbrook (1999), the other three being utilitarian, social and altruistic value. Woodall (2003) does not define or discuss aesthetic value per se, but regards it as a derived form of value for the customer.

Aesthetics might be understood as ‘an artistic work of aesthetic value’ or ‘responsive to or appreciative of what is pleasurable to the senses’<sup>3</sup>, an understanding that connects directly to the senses and preferable refers to the artistic domain. Buchanan argues for an extended, or in his words, the original understanding of aesthetics; “the appropriate and harmonious balancing of all user needs

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<sup>3</sup> <http://www.merriam-webster.com/dictionary/aesthetic> 2010-06-03

and wants within technical and social constraints.” (Buchanan et al., 1995), as being the core of design practice.

### Summary of theoretical background

In the service marketing discourse value-in-use is explained in terms of where and how value is created. The focus is on the *change* from value-in-exchange to value-in-use, but the understanding of ‘value’ is not discussed, and neither is the understanding of ‘use’. In conclusion, we can see that the theoretical discussions on value-in-use have been derived from the existent literature on customer/consumer value. This literature is placed within the marketing discourse, and thereby placed in the understanding of value from an economic perspective. This view implies that value is seen as the measure of desirability in combination with the (monetary) sacrifice someone is willing to make.

In design, the discussion about value is related to:

- 1) the business value that design creates, as in innovation capability or impact on business performance
- 2) the ways that designers understand the end users needs, wants and expectations
- 3) the ways designers create new meaning

The second discussion seems to be intimately related to the value-in-use/context situation, to use service marketing terminology. However it is not articulated in this way, although the design of service is all about understanding and articulating this interaction. The value of design seems to be both in the way that the designers *understand the context, and how they propose and articulate new service propositions* i.e. provide customer value.

So how do the practitioners talk about value, in what ways do they perceive that they take part in the value creation, and do they attend to the concept of value-in-use? The following study set out to describe in what ways designers of service talk, reflect and understand value-in-use/context and their role in the creation of value.

## Method of empirical study

### Context

The interviews that form this paper’s empirical material are part of a broader ethnographic study exploring professional design practice in a service context. The larger study follows a design company and two of their service design projects with respective clients (see fig. 1). I have conducted fieldwork shadowing different persons in their daily work in both the design and client companies, participated in meetings and workshops, and conducted both formal and informal interviews. The interviews analyzed in this paper are part of data collected from an interview study with three different design consultants with the aim to broaden the material beyond the main consultant. The themes for the interviews were not value or value creation per se; however the topic emerged in the material.



Figure 1 Layout of ethnographic study

## Sample

Interviews were with 8 designers employed at 3 different Swedish design consultants. The aim was to include experienced designers, while their individual experience of design of service could differ. The companies range from the first (A) mainly focusing on product and interface design, the second (B) with an explicit focus on design strategy, and the third (C) with a wide range of design competencies in the organization but with the roots in product design, moving towards service design through interaction design and design management. For more details on the sample see Appendix 1

## Material

The empirical material consists of 5 interviews and 1 recorded meeting session. The interviews were semi structured and open ended. An interview guide depicting the themes was used by the interviewer, focusing on rather broad themes, inspired by Kvale (1997), such as the character of service design and in what ways they see users and their professional experience in the field. All the interviews were conducted at the design consultant's premises. Two of the interviews were held with two respondents in a more conversation-like setting, whereas three were single respondent interviews; in addition a recording was used from one designer-client meeting with two designers present. In total 5 interviews were held, lasting between 45 minutes to 2,5 hours, for a total of eight and a half hours recorded material. Two interviews were held in English and the remainder plus the meeting in Swedish. The interviews were conducted, recorded, listened through and transcribed by the researcher. The printed material consisted of approximately 100 pages.

## Analyses

The material was read through and coded to find themes relevant for the research questions, following the steps in thematic analyses (e.g. Hayes, 1997) and inspired by content analyses (Lundman, 2004). First, items were found in the material and grouped into proto-themes, followed by final coding using redefined themes.

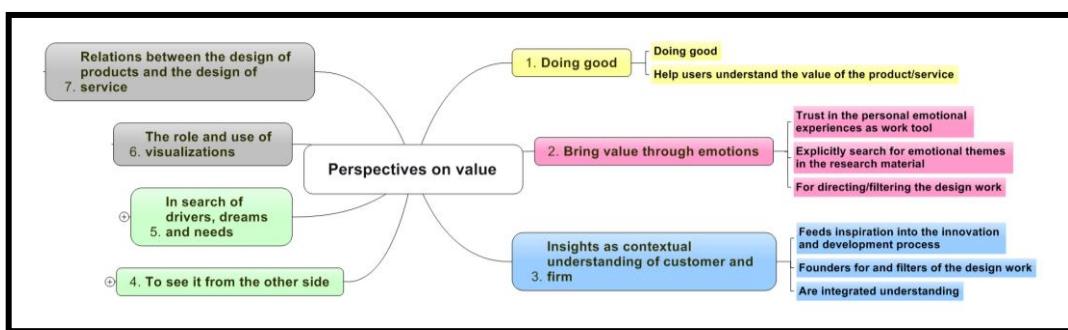


Figure 2 The seven developed themes. The three themes judged relevant for this paper and their sub-themes are expanded.

In all 24 proto-themes emerged: ones with fewer than four of the sources were discarded, leaving 17 proto-themes. In line with thematic analyses, the proto-themes were then developed and refined and developed into seven themes, see fig 2. The themes numbered 1-5 all have connections to the designers understanding of value-in-use. However the 4<sup>th</sup> and 5<sup>th</sup> are related to *in what ways* design practice is accomplished to understand value creation, e.g. accounts of what they do, rather than the conceptualization of value-in-use. Three themes were identified and judged as interesting and relevant; 1) Doing good, 2) Bringing value through emotions, 3) Insights as contextual understanding of customer and firm. These themes conceptualize value-in-use since they concern topics central for *what* drives this practice.

The reworked themes selected for the scope of this study were present in 6 or more of the transcriptions and each theme include sub-themes that cover different aspects of the main themes. For details on the themes, subthemes, and coverage in sources, etc. see Appendix 2.

The researcher assigned respondents attributes with regards to experience as designers, experience of service design projects, and size of firm. The aim was to bring light to the previous experiences and understandings the individual designers have when responding to the interviewers themes and questions, rather than for making statistical relations which was not the aim of the study, especially with a small number of respondents. The attributes were intended give a background for how to relate and interpret their answers. NVIVO7, software for quantitative analyses, was used.

## Designer's concept of value

This following section presents the three selected themes through quotes and reflections on these under these respective headlines; Value in helping others, Value is in the contextual understanding and The role of emotions in designer's creation of value (for the customer and company), the section ends with a summary.

### Value is in helping others

*"But we always have a strong ethical compass in what we do, good can be done in other ways than just preventing peoples arms to fall off. It can be that a product that is better from an environmental aspect is chosen instead of another one. Or in other ways, like the people in that little village could keep their jobs instead of the production being moved to another place." Designer B2 (quote translated from Swedish by author)*

This designer, based within strategy and service, distances himself from the Scandinavian industrial design tradition with the dominant aim to improve the physical work environment by physical ergonomics. Still, there is 'a strong ethical compass', which means that he transforms the idea of 'doing good' to embrace other issues, for example, to get someone to select something – a solution, a service – that has better implications for the environment. This connects to semantic issues and in what ways designers work consciously or unconsciously to promote and support certain behaviors. In addition, this quote embraces notions of social responsibility and social value when referring to a project where the aim was to keep the production in the country and thus save jobs. Implicitly included is the value for the client company when the project turned out to be successful.

It still seems to be a basic assumption amongst designers in the study that 'doing good' is part of their mission. In the design of service their aim is to help people understand the service better, and using service as strong parts of improving people's lives.

What is lacking in the material is an articulated understanding of the implications this position has when the design in question, as in design of service, is a social interaction and experience instead of handles of a hammer. The variation of, for example, the size of a hand is quite small in comparison with the variation of cultural patterns, individual experiences and patterns of social interaction. And thereby the question of what is ultimately good for someone in a particular situation increases immensely in complexity.

### Value is in the contextual understanding

*"We usually separate what is information and what is insight. Information is like raw data, insights are when we have worked with that information, processed it, sorted it and evaluated it and sort of created an understanding of the situation." Designer C3 (quote translated from Swedish by author)*

Practicing designers seem to increasingly use insight to characterize the outcomes from the early research phases. In this material six of the eight designers across all firms talk about insights as the core of the value they bring to the client company.

This emphasis on insight touches a big area, again with focus on the process. The differentiation between information and insights points at awareness of what constitutes this process, and that there are crucial differences between the two. The information mentioned above is information from and about the customers, the client company, and other relevant areas such as technology and trends. This process has been related to abductive thinking and sense-making by Kolko (2010).

The expressed focus here is to *create an understanding of the situation*, as the context where the use takes place. Exactly how this is done is only captured in vague terms, but activities such as sorting, processing, and valuating are mentioned. It is seen as a truly creative activity evoking the idea of empathic ability, where the designer wants to understand the situation in order to be able to act on it. Throughout this creative work designers use their emotional capacity to guide the work.

Further, an understanding of insights as ‘integrated understanding’ was shared by five of the six respondents. Such understanding might be coupled to the understanding of ‘epistemic value’ that the designers add in transforming information and data collected in the early phases into actionable knowledge for the design of new service. Through the insights designers add contextual understanding on several levels to the client company’s previous understanding. By making the value creation situation explicit to the client company, they add value to the client company.

*“And then discussions about packaging occur, apparently packaging is important then. So then I attempt to discover what kind of knowledge they have that I can bring into the project. And that is really the starting point for innovation. I come to the company without knowing what the problem is, if I already knew what it was, then I haven’t added any value, and then I’ve actually prevented innovation.” Designer B1 (quote translated from Swedish by author)*

In this quote the designer reflects upon where and when he, as an individual, adds value, suggesting an implicit assumption that he, as a professional designer, should add value, and explicitly in form of innovation capability. Contradictory to the idea of the hero designer – who creates fabulous items seemingly out of nothing – this statement tells another story about the designers practice. In this situation the designer emphasizes listening, uncovering of existing knowledge, and sees this as starting point for innovation. He sees himself as a catalyst rather than the one who comes with all the brilliant ideas. The value he adds is in helping the group to see the possibilities, or re/formulate the problems. It should also be noted that he says that he looks for knowledge that ‘*I can bring to the project*’. This implies that he will bring something individually, separate from the group, to the existent project that will become part of the insights, outcomes of a more closed process. This quotation both supports and contradicts the theory of design driven innovation (Verganti 2009).

Even though the designers stress that customer research is not exclusively the foundation of the insights, the ability to take on perspective of the other, to have strong empathic skills, seem to be important in this process. Such understanding is not isolated to a specific use situation, but rather is used to express the customer’s dreams, drivers and needs in a framework that is relevant to the client company. The insights include future trends, technology and the customer findings. And once the insights are developed, presented and selected in cooperation with the client, they guide the design work that follows.

### The role of emotions in designer's creation of value (for the customer and company)

*"These people [within the client organization] are used to talk to each other... this year the turn over should be this and this much, it is a lot of talk in that direction, but when an industrial designer enters then 'who is the customer, have you found out who the customer is', when they do research it is based on numbers, while a designer talks about the emotions..." Designer C3(quote translated from Swedish by author)*

There is a strong emphasis in the *explicit search for emotional themes* in the research material from each designer as a way to understand, interpret and even communicate with the client. Emotions are not traditionally accepted as evaluation criteria by the managers the designers work with. The managers are most often trained in mainstream economical theories where value to the business is expressed in economic values, not in emotional themes. Value for the customers is expressed in numbers, and information about the customer is often gathered from an inside-out perspective, based on statistics that are difficult for designers to work with. Instead designers search for actionable knowledge about the customers. *Who is the customer?* is a real question, asking for detailed information, almost in terms of flesh and blood and certainly expressed in emotional themes, not numbers. The interest in emotions reflects the designers search to find out what really matters in the customers' context.

*"I think a job as a design researcher, it is about emotions, and personal interpretation and we distill the information as we go, and it is a lot of grey levels, I guess of objectivity. Not having a personal opinion at that point. It's just sucking in the information and not having the interest of the client, cause some of the findings is not what the client wants." Designer A1(quote in English)*

This quote touches on many subjects and exemplifies another way that emotions occur in this material, the context of the designer's trust in his own emotional experience. The complexity of personal emotions, interpretation and objectivity is expressed here as simultaneously existing and as part of the processing phase. He brings forward the role of emotions and the importance of using and trusting the individual person for distilling the information. Then, in the next part of the statement, he places himself as an almost neutral receiver of information, withdrawing from any personal opinions. This can be seen in the perspective where he refers to the client company, and that his role is not to tweak results to make the client happy. Another important aspect is that he expresses clearly that it is not his personal opinion as designer, but what has come out of the findings of the research phase. In effect, evaluation and interpretation through individual emotions are trusted in order to understand the drivers, dreams and needs – as differentiated from mere opinions.

## Discussion

This study set out to describe how designers of service talk about value. The answer? Well, they don't! The designers in this study hardly ever used the 'v'-word, suggesting that the idea of talking about value-in-use is just absurd. They seemed to be quite comfortable talking about emotions and their personal interpretation of skills instead of conceptualizing customer value. However, in light of the theoretical overview we can see that they were implicitly conceptualizing value in various ways.

Value connected to the use situations, value-in-use, was even less openly pronounced. Because use is the core of design practice, the situation of use was implicit in all their doings. They appeared to take for granted that the value is in the use. Instead of discussing the phenomena as such, the designers expressed themselves in terminology that focused on insights allowing them to understand the contextual situation, thereby articulating how they make sense of the material as a value creating activity. They added value by understanding the situation through a creative integrative process.

The designers explicitly searched for emotional themes in understanding the value creation. That emotions are a part of customer value is defined in both Holbrook's (1999), and Woodall's (2003) frameworks. The designers expressed themselves both on a personal level and as a tool in the design practice in ways that can be connected to the framework developed by Woodall (*ibid.*). The designers talked about how they used their personal emotions as a tool that they used extensively as part of their professional practice. This aspect of the use of emotions is omitted from the conceptual frameworks on value within the service design and service management. This omission might partly be explained by the having had the intention of giving a *raison d'être* for a service design discourse in development, and profitability measures in the other one. Fisk (in Ostrom et al. 2010) draws the connection to the arts as to a field where emotions are worked with in practice. A recent conference paper (Rylander, 2010) explores professional design practice role for innovation through the lens of Dewey's aesthetic practice . More research in this direction would certainly benefit the discussion about the ways designers add value and hence the value in design.

The designers explicitly talked about social and ethical value, in addition to ways they as individuals created value. Four respondents, across all three firms, represented the ethical pathos of 'doing good' or helping the users in one way or another. Such helping was directed towards helping the client companies and the users, both customers and employees, to understand better what they should do. This belief fosters both the designer's self-esteem and the idea of design as a profession with ethical standards. Broadening the perspective to Graeber's (2001) definition of value as doing good, this implies a belief in something universally desirable in human life, as mentioned earlier. In industrial design, when the usage of the product should not harm the user, a belief in 'doing good' can be seen as a good ethical practice. Now these designers are (re)constructing people's behavior. An important question to ask becomes, in what ways does this belief in a common good affect the design of service? And how to make sure that it is not harmful for the people involved in the long run?

### Directions for further research

This paper is descriptive, attending to what the designers articulated in the interviews and meetings. A future step could be to interpret the material through a search for examples of underlying patterns and assumptions. Another suggestion is to relate and discuss the material in light of the various 'streams' of value suggested by Graeber (2001), and an interesting direction could be to discuss the concept of value-in-use from the perspective of value as action. The question arises, is it possible to fully understand value-in-use from the literature of customer/consumer value? However, it is the author's conviction that both design research and research related to the service dominant logic would benefit from opening up to other perspectives on value, especially in the understanding of value-in-use/context.

There is an interest in integrating design perspective into the service marketing. In an article pointing out 10 research priorities for the science of service, Ostrom and colleagues (2010) integrate 'design thinking' into service practices processes and systems. Researchers interested in service design from a design perspective would equally benefit from integrating these perspectives.

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## Appendix 1

Although the sample of companies are from a restricted geographical area, 2 of the designers were educated in USA, 2 in UK and several had work experience from other countries. The size of the companies differs in number of employees from 5 – 40, but all work with global clients.

All but one of the interviewed designers are educated industrial/product designers and with a work experience exceeding 5 years. The eight designer is trained and educated in graphic design. Three of the designers also had education in design management. Further all but one designer are male since these were the persons assigned from each organization.

## Appendix 2

Name		Sources	References	Created
<b>PERSPECTIVES ON VALUE</b>				
<b>Doing good</b>	<b>6</b>	<b>15</b>		
		Sources	References	
Doing good		2	3	
Help people understand the value of the service		3	3	
In what ways the designer add value		3	7	
<b>Insights as contextual understanding of customer and firm</b>	<b>6</b>	<b>25</b>		
		Sources	References	
Are integrated understanding		5	8	
Feeds inspiration into the innovation and development process		2	7	
Founders for and Filters of the design work		3	7	
<b>Bring value through emotions</b>	<b>6</b>	<b>15</b>		
		Sources	References	
Explicitly search for emotional themes in the research material		4	5	
For directing and filtering design work		3	6	
Trust in the personal emotional experiences as work tool		2	4	
<b>In search of dreams, drivers and needs</b>	<b>7</b>	<b>21</b>		
		Sources	References	
Co-creation for understanding value creating processes		6	9	
Observation of staged events		2	2	
Observation of naturally occurring events		3	5	
Prototypes as enactment of value creating processes		3	4	
<b>To see it from the other side</b>	<b>5</b>	<b>18</b>		
		Sources	References	
Attempt to understand the whole flow-experience		3	9	
Use of emphatic ability to understand the users situations		5	9	

# Ten Strategy Paradoxes in Service Innovation and Design

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## Abstract

Many service designers like to think, speak and work in terms of attributes and benefits. By designing user-centric solutions that are useful, usable and desirable the service provider can help users fulfil their functional and emotional needs. Let's call this approach "designing for attributes and benefits".

While service designers like to speak about attributes and benefits, many service providers prefer to speak about ROI, value creation, revenue generation, cost savings, productivity gains, brand building, etc. Innovation and design projects should achieve an acceptable ROI and create corporate value. Let's call this approach "designing for ROI and corporate value".

According to my experience, neither the "designing for attributes and benefits" approach nor the "designing for ROI and corporate value" approach provides enough information, inspiration and direction in the fuzzy front-end of service innovation and design projects.

A third approach, "designing for strategy dichotomies and paradoxes", may be the answer. Inspired by dichotomies and paradoxes in strategic management literature, I have developed a theoretical framework for ten service strategy dichotomies and paradoxes. The dichotomies and paradoxes have been carefully selected to reflect strategic perspectives, issues and mega-trends in service management, service marketing, service innovation, and service design.

This is an explorative study. The findings need to be validated by further research.

**KEYWORDS:** service innovation, service design, service strategy, strategy paradoxes, strategy dichotomies

## Introduction

According to my experience, many service designers in Sweden and the UK tend to focus on *customer-facing touchpoints* throughout the customer journey or service delivery system. Some service design firms even define service design as a range of interconnected touchpoints over time (e.g., Live|Work 2010, Transformator 2010). In other words, according to this point of

view, service design seems to be primarily about interactions, physical evidencing, and branding.

In keeping with the touchpoint theme, many service designers like to think, speak and work in terms of *attributes and benefits* – such as usefulness, accessibility, usability, reliability and desirability (see e.g., Merholz 2002). By designing user-centric solutions that are perceived to be useful, usable and desirable, the service provider can help users fulfil their functional and emotional needs. Let's call this approach “designing for attributes and benefits”.

Unfortunately, this approach is not ideal in the fuzzy front-end (FFE) of service innovation and design projects with its emphasis on identifying strategic opportunities, framing strategic problems, and making strategic decisions (e.g., Koen 2002). In my view, attributes and benefits are better suited as *evaluation criteria* (to compare and assess ideas, concepts, prototypes, solutions, etc.) rather than *guiding principles* (to inform, inspire and direct the development and design process).

While service designers like to speak about attributes and benefits, many service providers prefer to speak about ROI, value creation, revenue generation, cost savings, productivity gains, brand (equity) building, etc. (e.g., Merholz 2002, McCormack 2006). Innovation and design projects should achieve an acceptable ROI and create corporate value. Let's call this approach “designing for ROI and corporate value”.

However, this approach is not ideal either in the FFE of service innovation and design projects. Corporate objectives and project goals tell us what service providers ultimately want to achieve but provide precious little guidance on how to achieve it. And many designers do not have the inclination or ability to translate gut-level understanding of value creation to solid financial arguments (e.g., Merholz 2002, McCormack 2006).

## Designing for Strategy Dichotomies and Paradoxes

So is it possible to come up with another approach that is potentially more useful for service providers and service designers in the FFE of service innovation and design projects? “Designing for strategy dichotomies and paradoxes” could be the answer.

Dichotomies (bipolar opposites) such as “globalisation versus localisation” and “centralisation versus decentralisation” are not uncommon in strategic management literature (Hamel and Prahalad 1994, de Wit and Meyer 1998, Mintzberg et al. 2008). Each dichotomy highlights two opposing, and seemingly contradictory, strategic perspectives. Accordingly, most people tend to treat dichotomies as trade-offs (implying a range of possible solutions), as dilemmas (implying two possible solutions), or as puzzles (implying one solution). (de Wit and Meyer 1998) An analogy I like to use is the volume control slider – by pushing it to either side you are either increasing or decreasing the level.

However, some management strategists like de Wit and Meyer (1998) argue that it is potentially more valuable to treat dichotomies as paradoxes. A paradox is a situation in which two seemingly contradictory, or even mutually exclusive, factors are held to be true at the same time. The strategist should accept the conflict between the two opposites but search for ways to reconcile them. (de Wit and Meyer 1998) Returning to the volume control slider analogy, the equivalent would be to duplicate the slider and push both sliders in opposite directions at the same time. The audio level is perceived to be both high and low simultaneously – a paradox.

Originally inspired by de Wit and Meyer (1998), I have developed a theoretical framework for service strategy dichotomies and paradoxes that can inform, inspire and direct the FFE of service innovation and design projects. Since key FFE activities such as opportunity analysis, opportunity identification, idea generation, idea refinement and idea selection are often experimental, ambiguous, chaotic, unpredictable and unstructured, specific methods and tools for improving and “unfuzzying” the FFE are sorely needed (Koen et al. 2002).

My framework has been designed to reflect strategic perspectives, issues and megatrends in service management, service marketing, service innovation, and service design (see e.g., Grönroos 2000, Normann 2000, Lovelock and Wirtz 2007, Lusch and Vargo 2006, Thackara 2006). For reasons of clarity, the framework is presented as a list of ten strategy dichotomies but each and every one can also be treated as a paradox (just substitute “vs.” with “AND”).

### The Bau Framework for Service Strategy Dichotomies and Paradoxes

<i>Strategy Dichotomy</i>	<i>Main Perspective*</i>
Designing for Inclusion vs. Designing for Exclusion	Who, What, How
Designing for Simplicity vs. Designing for Complexity	What, How
Designing for Consistency vs. Designing for Flexibility	What, How
Designing for Tangibility vs. Designing for Intangibility	What, How
Designing for Interdependency vs. Designing for Independency	Who, What, How
Designing for Authenticity vs. Designing for Simulation	What, How, Where
Designing for Ephemerality vs. Designing for Longevity	What, How, When
Designing for Acceleration vs. Designing for De-Acceleration	What, How, When
Designing for Stakeholder Productivity vs. Designing for Resource Productivity	Why, Who, How
Designing for Evolution vs. Designing for Revolution	Why, What

\* Service innovation and design projects typically cover new or redefined *service concepts* (what, for whom, by whom, why) and *service delivery systems* (how, who, when, where). (Adapted from Lovelock and Wirtz 2007)

The Bau Framework for Service Strategy Dichotomies and Paradoxes can specifically be used in the FFE of service innovation and design projects to (inspired by Koen 2002):

- » Assess/benchmark existing customer offerings in the marketplace.
- » Identify and learn from best practices in other industries.
- » Identify and analyse strategic opportunities.
- » Identify and (re)frame strategic problems.
- » Generate, enrich and screen strategic ideas.
- » Define concepts and value propositions.
- » Dispel design-related myths and half-truths, such as “keep it simple”.

The Bau Framework could potentially improve the FFE in four overlapping ways:

1. The dichotomies and paradoxes can encourage development and design teams to explore open-ended problems by switching between relevant perspectives, identifying other points of view, challenging assumptions, contextualising problems, generating alternative problems & solutions, and so on. This will arguably facilitate and enrich key FFE activities such as opportunity identification, idea generation and concept definition. (Inspired by de Bono 1990, Koen 2002.)
2. The dichotomies and paradoxes can encourage development and design teams – which ideally are multi-functional, multi-disciplinary and multi-cultural – to create a common frame of reference, build a project vocabulary, and think more strategically. This will

arguably facilitate and enhance not only key FFE activities but also overall knowledge creation, sharing, storage and transfer. (Inspired by Sveiby 2000, Hackett 2000, and Bumbo and Coleman 2000.)

3. The dichotomies and paradoxes can encourage development and design teams to align innovation and design efforts to mission statements, long-term objectives and corporate strategies. This will arguably help bridge or close potential gaps between corporate strategy and service strategy, between strategy and creativity, and between strategy and execution. (Inspired by Gorb 1990.)
4. The dichotomies and paradoxes can encourage development and design teams to broaden the scope of innovation beyond service concepts and delivery systems to include the questioning and rethinking of business models, guiding principles, strategic collaborations, backstage systems and processes, customer service charters, and so on. (Inspired by Lovelock and Wirtz 2007.)

I will now briefly present the first five of the ten dichotomies/paradoxes in the Bau Framework (unfortunately not all ten due to space limitations). I am assuming that the reader is knowledgeable about the fundamentals in service management and service marketing theory (see e.g., Grönroos 2000, Normann 2000, Lovelock and Wirtz 2007).

## Designing for Inclusion vs. Designing for Exclusion

The inclusion-exclusion dichotomy is primarily about the degree of stakeholder accessibility and engagement in the co-development, co-production and co-delivery of any service. Who should be involved, to what extent, and why?

While *designing for inclusion* may sound rather similar to *inclusive design* (designing mainstream services that are accessible to and usable by as many people as reasonably possible [British Standards Institute 2005]), the concept of inclusion can be extended to encompass areas such as *co-creation* (companies and customers co-creating products, services, experiences and value [Prahalad and Ramaswamy 2004, Lusch and Vargo 2006]), *self-service* (designing and implementing solutions to increase customer control [e.g., Heskett et al. 1997]), and even good old fashioned *mass marketing* (going after the whole market with one offer [e.g., Kotler 1984]). In addition, service providers can increase the level of inclusion by improving the affordability and availability of their offerings (inspired by Lovelock and Wirtz 2007).

Interesting examples of inclusion include: Skånetrafiken, the Swedish public transport company (making their busses and trains accessible to people with reduced sensory, cognitive and motor capabilities); My Starbucks Idea (inviting customers to submit, share and discuss ideas for improvement); Friskis&Svettis, the Swedish non-profit chain of keep-fit clubs (attracting people that do not feel comfortable in pretentious, elitist gyms); the self-service bicycle scheme Cyclocity from the outdoor advertising company JCDecaux; the Swedish street fashion brand WeSC (enticing users to become brand ambassadors and “activists”); and Baker Street Dental Group (providing round the clock dentistry in London).

The opposite of inclusion is *exclusion*. While many services tend to exclude users for all the wrong reasons – inadequate feature sets, poor availability, excessive lifecycle costs, language issues, physical barriers, and so on – designing for exclusion can actually be a sound and viable strategy for some providers if executed well. Services that are designed to address the needs and desires of specific segments, target groups and individuals, or services that deliber-

ately limit access and availability in different ways, may very well be perceived to be highly desirable, meaningful and aspirational. (E.g., Kotler 1984, Foroohar 2007)

The telecom company Orange develops offerings to match the needs of specific customer segments, as manifested by the five packages Canary, Dolphin, Racoon, Panther and Monkey (a segmentation-based tariff approach for pay monthly customers in the UK). Other examples of exclusion include: loyalty-based offerings and services (Hilton HHonors, IKEA Family); super-premium services (private asset management, global 24/7 concierge services); and services for seclusion and privacy (VIP areas in public spaces, adult-only resorts, members-only clubs with hidden entrances, invitation-only credit cards, rental of private hideaways, anonymous browsing on the Internet).

The inclusion-exclusion dichotomy poses a strategic challenge for service providers and designers. Should you design for inclusion? Should you design for exclusion? Or should you design for reconciliation – trying to achieve both extremes at the same time? An example of reconciliation is Islamic banking services offered by High Street banks in the UK such as HSBC. On the one hand, Sharia-compliant financial products for Muslims can be seen as narrowly targeted offerings. [Exclusion] On the other hand, people whose faith had prevented them from using standard High Street products can now gain access to financial services. [Inclusion]

## Designing for Simplicity vs. Designing for Complexity

The simplicity-complexity dichotomy is primarily about the degree of usability and intricacy in the co-production and co-delivery of any service. Simplicity seems to be one of those unchallenged mantras in the business and design world; brands, products, services and interfaces should be easy to understand and use (e.g., Maeda 2006, Norman 2002). Yet complexity can also add value.

The potential in most industry sectors to provide simpler-to-understand, simpler-to-buy, and simpler-to-consume services is simply huge. Users seem to find many services frustrating to understand, configure, order, purchase, learn, consume, modify, upgrade, modify, and terminate. This may be due to any number of reasons – such as poor marketing material, unsupportive staff, unnecessary queuing, bewildering choices, confusing interfaces, and lock-in contracts. (Inspired by Lovelock and Wirtz 2007.)

Good examples of services that are specifically designed for *simplicity* include the hardware and software platform Amazon Kindle (making it easy to buy, store and read e-books without a computer or Internet connection); the multi-room music system Sonos (making it easy to listen to music all over the house); the Swedish B2B video-meeting service Skiptrip (making it easy to book and conduct virtual business meetings); and Staples' range of Easy services (making it easy to replenish office supplies).

In this context, the opposite of simplicity is *complexity*. While this may sound counterintuitive, complexity is actually a sound and viable service strategy in many industry sectors. Providers that stage rich, challenging and sophisticated experiences can help users increase their levels of physical, emotional, intellectual and spiritual wellness. This can be achieved by helping users to challenge beliefs and assumptions, see things from other perspectives, explore new worlds, break down barriers, master new skills, transform themselves, and so on. Examples include EF Language Travel (summer language and activity programs abroad for students between 7 and 18), National Geographic (media products, brand stores and in-store services)

and ABCya! (educational computer games and activities for kids and elementary students). (In parts inspired by Pine and Gilmore 1999, and Johnson 2006.)

Another way of increasing the level of complexity is by staging intellectually stimulating experiences full of irony, parody, quotation, intertextuality, self-referentiality, in-jokes, double coding, juxtaposition and so on (e.g., Brown 1995, Johnson 2006). This is arguably not normally found in service design – with a few notable exceptions, like communist-themed restaurants. However, interestingly enough, complexity is not an uncommon trait in popular culture; well-known examples include intertextual, self-referential and narratively complex TV shows (*Lost*, *Seinfeld*), movies (*Matrix*, *Kill Bill*) and advertising campaigns (Diesel's multiple award-winning "Successful Living" in the 1990's).

The simplicity-complexity dichotomy poses a strategic challenge for service providers and designers. Should you design for simplicity? Should you design for complexity? Or should you design for reconciliation – trying to achieve both extremes at the same time?

## Designing for Consistency vs. Designing for Flexibility

The consistency-flexibility dichotomy is fundamentally about the degree of standardisation and adaptability in the co-production and co-delivery of any service. On the one hand, standardised service concepts and delivery systems can (in theory) help companies maintain consistent quality levels. On the other hand, customisable, adaptable and responsive services can (in theory) better fulfil the specific needs of target groups and individuals. (E.g., Lovelock and Wirtz 2007, Christopher et al. 1991, Pine 1993, Peppers and Rogers 1993)

Service providers often find it difficult to maintain consistency, reliability and service quality. The quality of operational inputs, processes and outputs tend to vary over time (compared to, say, the manufacturing of physical goods). One of the main reasons is the people factor in service co-production and co-delivery, i.e., poor task execution by either employees or customers or even both. Inspired from the world of manufacturing, many service providers try to standardise service delivery systems to minimise service quality gaps. (Lovelock and Wirtz 2007, Christopher et al. 1991)

Providers typically try to increase the level of *consistency* by developing and enforcing brand standards (Hilton); by cultivating a customer-focused corporate culture (Zappos); by setting quality standards based on customer expectations (the NatWest Customer Charter, Virgin); by productifying customer offerings (McDonald's); by designing the service delivery system for simplicity and failure-proofing (Dell); by designing appropriate service recovery procedures (TUI); by educating and training users (YO! Sushi restaurants with "How to YO!" instructions to so-called YO! Virgins), and, finally, by automating services and taking staff out of the equation (self-service check-in kiosks, self-service solarium centres, self-service car rentals). (In parts inspired from Lovelock and Wirtz 2007, Christopher et al. 1991, and Pine and Gilmore 1999.)

In this context, the opposite of consistency is *flexibility*. While consistency is important, providers that stage highly flexible experiences can help users fulfil their functional, emotional and self-expressive needs. Providers can increase the level of flexibility by offering co-design, customisation and personalisation services (NikeID, Build-a-Bear Workshop, Moonpig); by unbundling services (like airlines, tour operators and consultancies have done); by offering responsive, adaptable and interconnected services (TomTom); by offering contextual and location-aware services (iPhone apps such as Tube Deluxe and Urbanspoon); by staging

experiences that repeatedly create customer surprise and suspense over time (Disney theme parks); and, finally, by developing systems and processes that identify individual users, capture preferences and behaviour over time, anticipate needs and desires, and suggest tailor-made solutions (Amazon.com's personalised recommendations). (In parts inspired from Lovelock and Wirtz 2007, Pine and Gilmore 1999, and Peppers and Rogers 1993.)

The consistency-flexibility dichotomy poses a strategic challenge for service providers and designers. Should you design for consistency? Should you design for flexibility? Or should you design for reconciliation – trying to achieve both extremes at the same time?

## Designing for Tangibility vs. Designing for Intangibility

The tangibility-intangibility dichotomy is fundamentally about the degree of visibility and abstraction in services. Service attributes and user benefits are often perceived as inherently intangible, which makes it difficult to appreciate from a user point of view and differentiate from a service provider point of view (e.g., Lovelock and Wirtz 2007).

Providers can increase the level of *tangibility* by using multi-sensory cues and physical symbols (the Abercrombie & Fitch signature scent, the “nerdy” dress code of Geek Squad, the fleet of specially designed Minis for UK estate agents Foxtons); by communicating through metaphors and analogies (the animals of Orange UK); by productifying and sub-branding customer offerings and service delivery systems (Orange UK, Amazon Prime); by highlighting and sub-branding out-of-sight service recovery systems and backstage functions (Genius Bar in Apple stores); by opening brick-and-mortar stores and other physical outlets (Swedish insurance company Länsförsäkringar); by providing better information and wayfinding systems (Schipol Airport’s signage system, Lufthansa’s wayfinding iPhone app); by redesigning hospitality elements (waiting facilities, washrooms, transport, etc.); by encouraging user reviews and references (guest/visitor books, TripAdvisor, Sanningslinjen from the Swedish insurance company “if...”); by offering opportunities to capture, edit, store and share memories (the travel guide website Reslust.se from Fritidsresor); by designing and offering desirable memorabilia (Disney); and, finally, by developing conceptual marketing campaigns (HSBC’s classic “The World’s Local Bank”, Accenture’s infamous “Go on. Be a Tiger.”). (In parts inspired by Lovelock and Wirtz 2007, and Pine and Gilmore 1999.)

The opposite of tangibility is *intangibility*. Intangibility can be a sound strategy for providers that struggle to differentiate their offerings and add value in a homogenous marketplace. Providers can increase the level of intangibility by improving or adding supplementary services (payment, consultation, safekeeping, etc.); by improving intangible elements (frequency, duration, availability, etc.); by improving customer service (NatWest, Home Depot); by educating users for better service performance (Fiat’s EcoDrive helps customers to drive economically and sustainably); by introducing or improving service recovery systems (TUI); by digitising and dematerialising real-life events, physical goods and information products (Second Life, Match.com, RadioTimes); by improving or adding digital channels (Amazon’s iPhone app, BBC iPlayer); and finally, by encouraging rental instead of ownership (the pay-as-you-go rental car service Streetcar). (In parts inspired by Lovelock and Wirtz 2007, Pine and Gilmore 1999, and Negroponte 1995.)

The tangibility-intangibility dichotomy poses a strategic challenge for service providers and designers. Should you design for tangibility? Should you design for intangibility? Or should you design for reconciliation – trying to achieve both extremes at the same time?

## Designing for Interdependency vs. Designing for Independency

The interdependency-independency dichotomy is fundamentally about the degree of connectivity and reciprocity for service providers as well as service users. Should providers make themselves more or less dependent on other companies in the marketplace? Should providers make users more or less dependent on each other? Should providers make users feel more or less dependent on them?

From a provider point of view, companies can increase *interdependency* by making service concepts and delivery systems compatible with existing eco-systems, information systems, networks, channels, offerings, devices, etc., in the marketplace. Samtrafiken, who is responsible for overseeing the public transport network in Sweden, offers a range of services to competing public transport companies to encourage collaboration and co-opetition. Other ways of increasing interdependency include just-in-time, outsourcing, co-creation, open source innovation, co-branding and alliance marketing.

From a user point of view, providers can help users increase their level of interdependency by enabling and empowering them to build relationships with individuals, communities and organisations (Facebook, Shelfari, Authonomy, Timebanks); to join forces for common purposes (Kundkraft, Facebook, Pissed Consumer); to share something with someone (Flickr, MapMyRun, TripAdvisor); to use or enjoy something that other people possess (Pirate Bay and other P2P networks); to exchange something for mutual benefit (TimeBanks, GumTree); and, to co-create and co-produce something (SimLife, GoogleDocs).

In this context, the opposite of interdependency is *independency*. From a provider point of view, providers can increase their independence levels by developing closed systems, “walled gardens” and security solutions that regulate and restrict access for external companies and other stakeholders. Apple’s closed system allegedly allows them to offer a seamless user experience (and make more money) (e.g., Lyons 2010). Providers can also increase their independence levels by being less reliant on external stakeholders such as lenders, suppliers, distributors, consultants and, yes, designers (the rather recent trend of design embedding is a sign of this).

From a user point of view, providers can help increase the level of independency by helping users to make unbiased and informed choices (PriceRunner, CNET, TripAdvisor); by enabling users to produce and consume services whenever, however and wherever they want (self-service, 24/7 availability, etc.); by empowering users to do and achieve things they could not have done before without outside help (NHS in the UK promoting and supporting self-care in homes for people with long term conditions); by screening users from other people in public areas (gated communities, VIP areas, limo services); by isolating and insulating users from the outer world (rental of private islands, Good News Gazette); by protecting and enhancing personal wealth (private asset management services); by protecting personal information and property (Apple’s Find my iPhone with tracking and remote wipe services); by protecting and enhancing personal health and safety (Boots’ symptom checker WebMD); by helping users gain access to otherwise unobtainable and impossible-to-book services (the 24-hour global concierge service Quintessentially); and, finally, by helping users terminate unwanted and difficult-to-cancel relationships, memberships, subscriptions, contracts, etc. (CancelWizard).

The interdependency-independency dichotomy poses a strategic challenge for service providers and designers. Should you design for interdependency? Should you design for independency? Or should you design for reconciliation – trying to achieve both extremes at the same time? An interesting example of reconciliation is the social networking health site

PatientsLikeMe. On the one hand, the site enables and encourages its members to share information about personal symptoms and treatments. [Interdependency] On the other hand, the site makes members feel more in control of their condition and improves their ability to cope with problems in life. Members also become more involved in treatment decisions, upsetting the traditional doctor-patient relationship. [Independency]

## Final Thoughts

According to my experience, neither the “designing for attributes and benefits” approach nor the “designing for ROI and corporate value” approach provides enough information, inspiration and direction in the FFE of service innovation and design projects.

A third approach, “designing for strategy dichotomies and paradoxes”, may be the answer. Inspired by dichotomies and paradoxes in strategic management literature, I have developed a theoretical framework for service strategy dichotomies and paradoxes.

This explorative study has several inherent weaknesses. Firstly, my theoretical framework is based purely on an extensive literature review, my personal experience of service innovation and design projects, and client and student feedback from lectures, workshops, meetings and client projects since 2006. My final list of dichotomies and paradoxes is by no means exhaustive or definitive; research is needed to determine the validity and reliability of the framework. Secondly, I have discussed strategy dichotomies and paradoxes in isolation from other FFE-related methods and tools such as applied ethnography (e.g., Koen 2002), futuring (e.g., Koen 2002), and systems thinking (e.g., Jones 1992). It would have been valuable to discuss the relative merits of these methods. Thirdly, I have discussed strategy dichotomies and paradoxes in isolation from other approaches to design knowledge representation, such as heuristics (Long and Dowell 1989), pattern language (Alexander 1978), and design perspectives (Hult et al. 2006).

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# Exploring networked innovation; Results of an exploration and the setup of an empirical study

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## Abstract

The growing complexity of societal problems and the increasing need to co-design contexts together with the service or product, force companies to collaborate in innovation. This networked innovation requires people to design together, who not only come from different disciplines, but also come from different organisations and companies. The collaboration in networked innovation therefore adds another level of complexity in addition to the (better known) collaboration in mono- and multidisciplinary teams and introduces new issues.

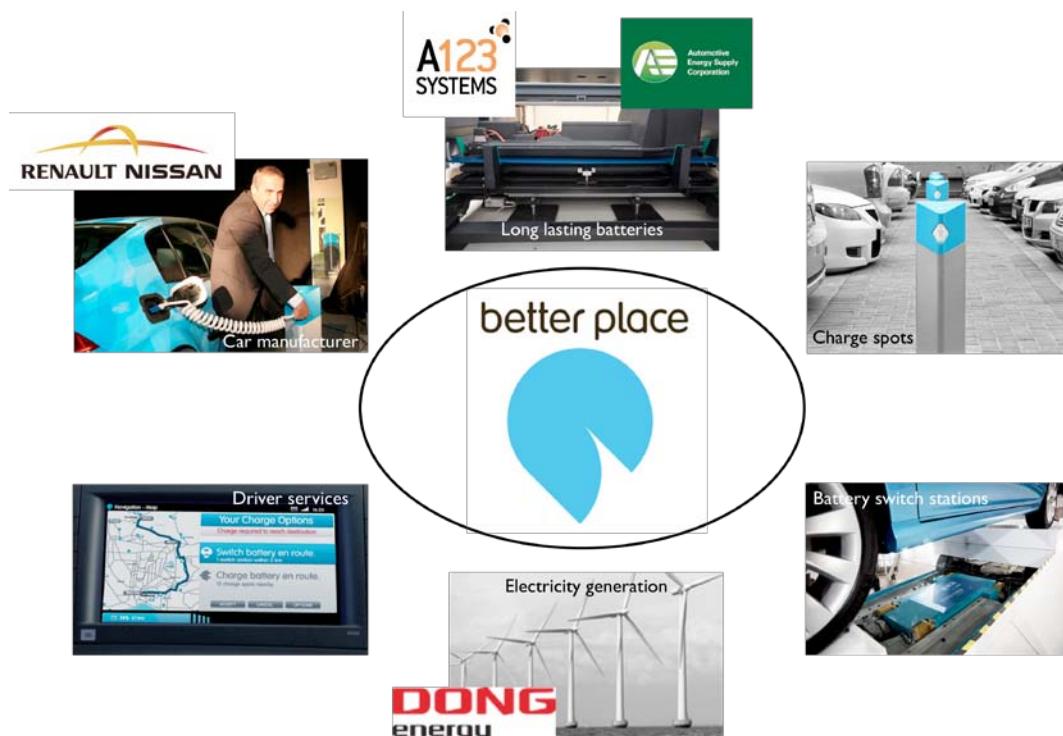
This paper describes a literature review of existing knowledge on networked innovation. It also describes a first explorative study in which we investigated in what way networked innovation differs from ‘normal’ innovation projects. Finally we describe the set up of an empirical study that we will execute in the near future.

**KEYWORDS:** networked service innovation, collaboration, knowledge sharing

## Introduction

Society is faced with a number of developments that can lead to serious problems. For example, the growing aging population requires an additional growth in health employees of 450.000 in the Netherlands in the coming 10 years. Also the shortage of traditional energy supplies needs new ways of energy exploitation and changing behaviour in energy consumption. These types of issues demand breakthrough innovations; not only creative solutions are needed for new products and services, but the systems and contexts also need to be re-designed at the same time (Green 2007, Valkenburg 2010). Finding real solutions for societal problems needs the combined knowledge and experience of various parties both hardware and services. Also profit and non-profit organisations need to collaborate in innovation to find solutions that go beyond the scope of their current activities (Den Ouden and Valkenburg 2010, Han 2009). It is expected that social innovation will further accelerate, which is a challenging development (Mulgan 2006).

Let us show some of the challenges for this by means of the development of electric vehicles. Electric mobility is a needed solution for several social issues, such as pollution and costs. It is also technologically possible because of the increasing availability of alternative energy sources. *BetterPlace* is a global provider of electric vehicle networks and services. They provide services for enabling confident adoption and use of electric vehicles in which they build and operate the infrastructure and systems to optimize energy access and use. To enable a successful and therefore compelling service in the end, *BetterPlace* needs to provide an integrated solution to electric transportation. *BetterPlace* works together with governments, businesses and utility companies, like A123 Systems, Renault and the Automotive Energy Supply Corporation to accelerate the transition to sustainable transportation (see Figure 1).



**Figure 1** BetterPlace is an example of a complex networked innovation project

Not only is there a need to develop electric cars, also long-lasting batteries, charge spots, battery switch stations, driver services, additional electricity generation, and transmission or communication systems need to be designed (betterplace.com, June 2010). A complex network of stakeholders is needed: a car manufacturer, a battery developer, but also an operator for battery charge stations, and local government support. All members of the network need to work together, depend upon each other, need to be fully committed to develop a sustainable solution and, in the end successful implementation of electric mobility.

Hence, collaboration is an important condition to develop breakthrough and valuable social innovations. While collaborating, knowledge is shared and integrated and new knowledge is created. There is an understanding of the sharing, integration and creation of knowledge in multidisciplinary teams, but there is lack of knowledge about this process in networked innovation teams. Therefore, this paper aims to create knowledge on how to collaborate in innovation networks to create solutions larger than the sole product of service. The paper first describes how networked innovation differs from ‘normal’ innovation projects and it describes a literature review about collaboration challenges in multidisciplinary teams. We used the knowledge gained from these reviews, for setting up an empirical study in which we investigated what additional collaboration challenges actors faced while executing a networked innovation project for a product service system. Finally we describe the research questions that we formulated based upon this first study and the research set up for conducting future research.

## Towards Networked Innovation

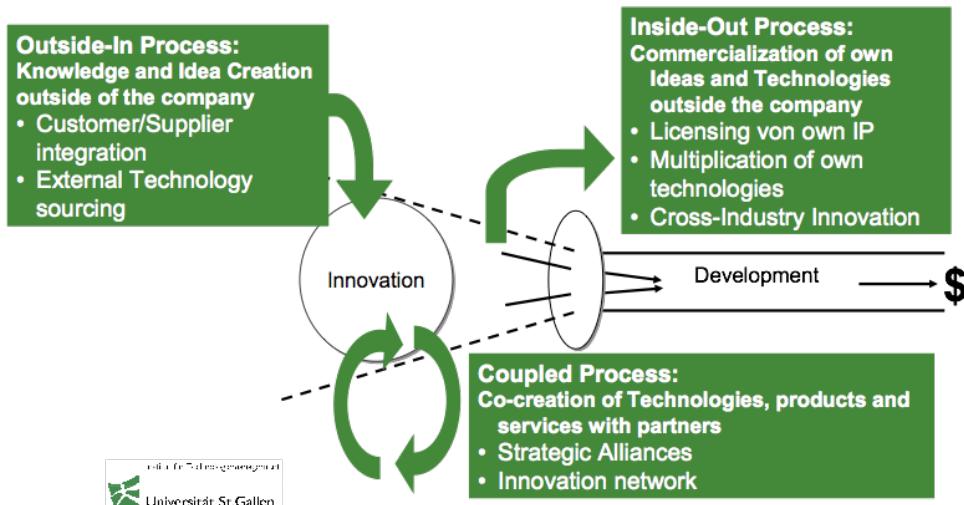
This research addresses networks of companies that decide to open up to outside relationships to innovate together. The approach as such is not new, but it has recently been popularised under the label of ‘open innovation’ (Chesbrough 2003).

Open innovation, as described by Chesbrough (2003), means that valuable ideas can come from inside or outside the company and can go to market from inside or outside the company as well. The societal changes described in the introduction are often the driver for these ideas. This approach places external ideas and external paths to market on the same level of importance as that reserved for internal ideas and paths to market during the closed innovation era (Chesbrough 2003). Open innovation is the use of the purposive inflows and outflows of knowledge to accelerate the internal innovation, and expand the markets for external use of innovation, respectively (Chesbrough et al 2006). However, new ideas are not always driven by the market. Therefore, a distinction should be made between inbound and outbound innovation (Chesbrough and Crowther 2006, Lichtenthaler 2009). Inbound open innovation refers to inward technology transfer. It describes the practice of leveraging the discoveries of others because firms need not rely exclusively on their own R&D. Outbound open innovation refers to outward technology transfer, and it suggests that firms can look for external organizations with business models that are suited to commercialize a technology exclusively or in addition to its internal application. In this context, Enkel e.o. (2009) describe three kinds of processes (see Figure 2)

- » The outside-in process of open innovation: enriching the companies own knowledge base through the integration of suppliers, customers, and external knowledge sourcing.
- » The inside-out process of open innovation: earning profits by bringing ideas to market, selling IP, and multiplying technology by transferring ideas to the outside environment. Companies that establish the inside-out process as key, focus on externalizing their

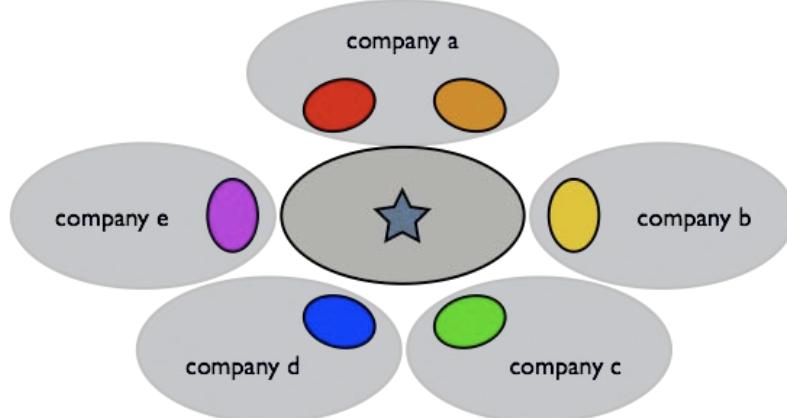
knowledge and innovation in order to bring ideas to market faster than they could through internal development.

- » The coupled process: co-creation with (mainly) complementary partners through alliances, cooperation, and joint ventures during which give and take are crucial for success. Companies that establish the coupled process as key combine the outside-in process (to gain external knowledge) with the inside-out process (to bring ideas to market) and, in doing so, jointly develop and commercialize innovation.



**Figure 2 Three kinds of processes (Enkel, 2009)**

We are interested in this coupled process. With the upcoming stream of service design and social design as described in the introduction the knowledge in such a process could be extended with other aspects needed in the development, for example user insights, market data etc. In the development of services and social innovation the different partners have the knowledge to come to innovation together, where all partner have values to give and take. They jointly develop innovations. In literature the term open innovation often focuses on the innovation project itself, whereas we are focusing on the collaboration. To emphasize the collaboration networks that we investigate, we decided to use the term networked innovation. Figure 3 shows the types of networks that we investigated and will investigate in the future.



**Figure 3 A networked innovation team**

## Factors that influence collaboration in multidisciplinary teams

In order to get a first grip on factors that influence collaboration between people in networked innovation projects, we did a literature review on multidisciplinary innovation. Badke-Schaub (1999) researched what factors influence teamwork within a company in engineering practice. The most important factors they found are: (the lack of) experience, the communication, the demand for quality, the availability of information, the coordination of duties, the novelty of the task, the group climate, time pressure and power.

A lot can be learned taking collaboration more specific and looking at the barriers and enablers for integrating knowledge between actors in multidisciplinary design teams. For integrating knowledge, a design team needs a shared understanding (Kleinsmann, 2007) and common knowledge (Grant 1996, Hoopes and Postrel 1999). Similarity in languages (Bucciarelli 2002, Kleinsmann 2007), the commonality of vocabulary and the effectiveness of (design) communication (Grant 1996) influence the creation of this shared understanding. Design communication is often jargon laden and is therefore difficult to understand for outsiders. It is different from speaking a foreign language, since the actors are familiar with the words. Even so, the meaning of the same words may differ when used by actors from different disciplines. During design communication, these differences have consequences for tuning processes between the actors, for appointments about which tasks they have to do, for the view actors have of the status of the project etc, etc (Kleinsmann e.o. 2007). Since design communication is about an object that does not exist yet, it is about representing possible future realities. Representing reality inherently means that reality is abstracted. In service design this is mostly done by drawings. Whether drawings represent a spatial configuration, a static topology, or the dynamics of a flow process, they are symbolizing only the essential features of whatever they try to convey. Actors from different disciplines need different forms of abstraction in order to transfer their domain knowledge properly (Bucciarelli 1996) (Saad and Maher 1996). The correct reading of drawings requires both knowledge of the jargon that the drawer uses as well and an understanding of the context and the moment in use. This could be difficult since actors may have different mental models. Badke-Schaub e.o. (2007) show that there exist five different types of mental models; on the task, the process, the team, the competences and the context. Different mental models will hamper the creation of a shared understanding because each team member refers to his/her own background. They are unaware of doing that and they are unaware of each other's backgrounds. Other personal characteristics that influence knowledge integration are: variation in routines (Grant 1996), shared behavioural norms (Grant 1996), the styles in which people organize their thinking and action (Dougherty 1992) and negotiation skills (Chiu 2002).

Also aspects within the team can influence the integration of knowledge, such as the active approach and involvement of subteams (Kleinsmann 2007), group sizes (Grant 1996, Chiu 2002), multiple groups (Hoopes 1999), the active use of minutes of meetings and efficient data management systems (Kleinsmann 2007). Also the quality of project documentation, the division of labour, the rigor of project planning, the controllability of product quality (all Kleinsmann 2007), as well as, IP management (Enkel e.o. 2009) influences knowledge integration.

Finally literature shows that also organizational aspects have an impact on the sharing and integration of knowledge. They are the organizational culture (Grant, 1996), company hierarchies (Grant 1996, Hoopes 1999), organizational routines (Enkel e.o. 2009, Grant 1996) bureaucracy (Grant 1996), organization context (Dougherty 1992), the organization of resources and the allocation of tasks and responsibilities (Kleinsmann 2007), horizontal or vertical subdivisions (Chiu 2007) and environmental circumstances (Grant 1996).

This section showed a condensed summary of the literature review executed on factors that influence collaboration in multidisciplinary teams. Most research focussed on teams that operate within one company. We expect that a lot of these aspects also have an influence on the sharing and integration knowledge in teams with members from different companies with different backgrounds, goals and perspectives. Next to these, we expect other factors will occur in networked innovation teams due to the growing complexity in organisation of the network as well as the content to be designed. This knowledge, however, cannot yet be found in literature. Therefore we conducted an explorative study in practice. We interviewed practitioners that executed networked innovation projects in practice recently, to identify the issues and differences in practice.

## Empirical exploration

In this project we explored how networked innovation is practiced and what factors are added to this way of working compared to the known ways of innovation. The goal of the study is the validation of the existing knowledge from literature and the further definition of the research questions. The main focus of this study lies on: What is the starting point for innovation and how does the collaboration manifest itself?

On the network level we also would like to know what kind of people join the team. Is this still a multidisciplinary team or is it a coherent group of for example designers, engineers or marketers. It is not a marketing manager collaborating with an engineer, but a marketing manager of company A, with the marketing manager of company B. People with the same function (in the name, according to the content it can be questioned again).

We expect that teams experience similar barriers and enablers for collaboration and the sharing and integration of knowledge as in multidisciplinary teams, but it can be expected there are other barriers and enablers as well.

To see how similar networked innovation teams are compared to multidisciplinary teams and to define research questions for future research, a series of exploratory interviews have been conducted with ten senior practitioners from different networked innovation projects in industry, representing various key disciplines. Three of the projects are about the collaboration between a consumer electronic brand and a fast moving consumer goods brand. Together they developed a hardware product that can be used with the help of a fast moving consumer good. One of the interviewees was the program director of an organization facilitating networked innovation. They facilitated several networked innovation projects the last years. Another interviewee was the founder of an innovation agency, responsible for a range of strategic programs and new business development. They set up a collaboration with different partners to develop innovations.

In these semi-structured interviews we asked them about their experience with networked innovation, knowledge integration, the knowledge they shared and the performance of the teams. These interviews lasted between ninety minutes and two hours and were transcribed for further analysis.

## Collaboration issues in networked innovation

The interviews gave a lot of interesting insights. A few examples will be given.

The first examples are from different people working on the development and the introduction of a product developed by a consumer electronic brand (EB) and a fast moving consumer goods brand (FMCGB);

*"EB is hierarchical, very structured. I am not sure if I can say, but I have got the impression, that they work less process oriented than the hardware companies. For sure EB was more process oriented than FMCGB was in this project."*

The different companies had different orientations during the development process. The fast moving consumer good brand was experienced less process oriented as the electronic brand.

*"What I learned from this collaboration is that you can agree on the interests in the beginning, but in the end they will often differ. At a certain moment the EB wants to profit from the hardware while the FMCGB will make money with the FMCG."*

In this project the different partners agreed on the interest in the beginning and during, but at the end of the process it became clear that they had different interests;

*"From the beginning we had, well not really distrust, but there was an enormous prudence to reveal what we really knew."*

In the beginning of the process the partners did not really trust each other and were not willing to share everything with each other.

Another example of a professional working in different function at an electronic company about sharing knowledge in collaborations between team member coming from different companies;

*"We are speaking a different languages, we were all speaking English, but if we are talking about positioning you need to keep on asking what they actually mean by positioning. It can easily happen we all leaving the room with different ideas. You need to come to the same level of communication. Giving the same content to a term."*

As in multidisciplinary teams the different team members speak different languages. Shared understanding is necessary in this process.

From these examples we can learn that the people working in a networked innovation project experience issues while collaborating and sharing knowledge. Comparable with issues experienced in multidisciplinary teams, but other issues as well. More extensive studies are needed to elaborate on the issues they experience.

The founder of an innovation agency, responsible for a range of strategic programs and new business development, said:

*"A big and a small company or three big and two small companies will not work. The relation is very disparate. They all need to be big or all need to be small. Otherwise the cultures are too different to match."*

In her opinion companies need to be of the same size to innovate in networks successfully. He also said:

*"We really believe in multi-disciplinary teams, but then within a company. If you are collaborating with other companies the team has to be mono disciplinary. Sales, marketing, product management, market research and communication can work together, but those are related fields."*

Within a team the different team members (from different companies) need to have similar backgrounds to function.

An employee from an electronic consumer good company working in a project with a fast moving consumer goods company explained:

*"Well, I think the project with FMCGC was a good project although it did not lead to worldwide introduction. We learned that the innovation was not the right one and we learned a lot from the fast moving consumer goods market. Yes, we learned a lot."*

This example explains that the measurements for success used in the literature are not convincing in all situations.

To conclude the insights from the interviews the program director of an organization facilitating networked innovation said:

*"This way of working is relatively new and it is still experimental. There is no knowledge."*

From these interviews we gained additional factors influencing the collaboration and the communication on the company and team level in networked innovation projects. From the interviews the following question appeared that needs further elaboration. On the organization level:

- » What is the effect of the different orientations of the organizations?
- » What is the effect of the different interests for success between the organizations?
- » What is the effect of difficulties with trust and knowledge sharing between organizations?
- » What is the effect of differences in company sizes in collaboration?

Within the team these different backgrounds also influence the communication:

- » What are the effects of different languages and the level of communication?
- » May multi-organisational teams better be mono-disciplinary?
- » Is learning an important success factor in open innovation?

In the interviews issues at the actor level were not mentioned. Therefore the focus will be on the organization and team level.

## Conclusion and future research

From the exploration it became clear that additional issues are experienced in networked innovation projects related to collaboration. With the input from this exploration, we can define research questions for our next study;

- » How do networked innovation projects start, how is the network formed, who is the initiator and what is their reasoning to start an innovation project?
- » Who are the team members and organization collaborating, what are their backgrounds, expertise and experience?
- » How do the team members collaborate, what barriers and enablers do they experience in sharing, integrating and creating knowledge on team and organization level?

To answer these questions we are setting up case study research. We are researching this in networked innovation teams working in the fuzzy front end to realize breakthrough innovations (products and/or services).

The following selection criteria for the selection of the cases were formulated:

- » It has to be a networked innovation team where all kinds of knowledge is exchanged to jointly develop innovations.
- » The team is developing a product, a service or the combination of a product and service.
- » The team is starting or has just started to gain insight in their motivation of starting the team and thereby still in the fuzzy front end of the project.

To gain insight in the possible differences between teams we would like to have:

- » Two teams originating from multinationals with projects starting from a corporate view,
- » Two teams originating from intermediaries with projects focusing on social innovation,
- » Two teams originating from knowledge or technology institutes to develop shared knowledge.

With six teams fulfilling the criteria mentioned above we would like to observe the teams over an extended period of time without participating in the projects. During this period we will conduct several interviews with the team members to get their input and triangulate the data. Having access to the documents of the team the observations can be validated with a third method.

During the observation the learnings from the literature with respect to networks, knowledge integration in multidisciplinary will be taken as a basis to find similar and additional barriers and enablers to networked innovation teams.

With this research we would like to gain a better understanding of the interesting field of networked innovation.

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# The design value of business

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## Abstract

In this small essay I will explore the notion of *the design value of business*. Interpreted as merely a play with words, such a statement may be regarded as a bearer of little value. But, taken as seriously as the more common question, what the business value of design is, it turns into a critical examination of basic conceptions of what design is for. It also paves the way for the critical claim that design value precedes business value

**KEYWORDS:** design, value in use, business, strategy, embodied cognition, situated cognition

## Introduction

Certainly you have heard the call for explaining, or even have been asked to define, the business value of design. At first glance this might seem as a valid and relevant question. Under certain assumptions it is; but assumptions can always be altered.

The idea to paraphrase the question “what the business value of design is” started out as a figure of thought, based in a critical stance towards how conceptions of phenomena become institutionalized. This figure of thought turned into a valuable criticism of taken-for-granted hierarchies and a forefronting of experience, value and context. In this essay I will therefore start the exploration of the notion of *the design value of business*.

In order to do this I will first state some preliminaries that are the basis for this exploration, ending with a critical claim. This critical claim then will be discussed through examples from research and finally criticized on its own premises in the tradition of hermeneutics and critical theory.

## Preliminaries

If we want to explore notions of design and its value we have to uncover some of the basic premises on which arguments about design artefacts and humans are made. These will be the basis for constructs of the reasons given, for the judgments of precedence, because these arguments will characteristically appeal to values and norms, and thus will reveal the underlying conceptions of value and precedence. In this essay we will rely on two theories.

According to the theories of situated cognition (Dourish, 2001) (Merleau-Ponty, 1989) (Merleau-Ponty, 2002) knowing is inseparable from doing, and it is claimed that all knowledge is situated in activity bound to cultural, social and physical contexts.

According to the theories of embodied cognition (Clark, 1997) (Hutchins, 1995) (Lakoff & and Johnson, 1999) our capabilities of experiencing and our cognitive abilities are tightly coupled.

*To say that cognition is embodied means that it arises from bodily interactions with the world. From this point of view, cognition depends on the kinds of experiences that come from having a body with particular perceptual and motor capacities that are inseparably linked and that together form the matrix within which memory, emotion, language, and all other aspects of life are meshed. (Thelen, Schöner, Scheier, & Smith, 2001)*

Human experience and human activity thus are primary. If we agree on these aspects of being, more specifically there are three things that form a basis

- » Purposeful action
- » Shared activities
- » Embodied experience

If we agree on these premises, a consequence of this would be to claim that *design value precedes business value*.

## Discussion

We will present three examples drawn from other research projects, in order to form an understanding of how the critical claim plays out as a concept.

### Design as driver

In the work on procurement of usable IT-systems Artman, and others (Artman, 2002) (Holmlid, 2004), design and discuss a method for procurers of IT-systems. In this method procurers take responsibility for the usability of the IT-systems, instead of assuming that the system developer can, will have time and possibility to manage usability issues. In effect it means that the procurer assumes that expressing the requirements for an IT-system in a way that includes use and usability, and not only technical requirements, will eventually lead to a better system.

Markensten (Markensten, 2005) suggests a model where interaction design activities are included in the preparation of the request for proposals. The documentation in his model contains personae, evaluated lofi prototypes, and scenarios. This can of course be understood and analyzed in many ways (see e.g. (Lantz & Holmlid, 2010)), but in this context I would like to highlight one specific issue.

If we look at it as a general model of practice, instead of a specific way of procuring IT-systems, it is an example of how businesses, in Markensten's case a system development company, have to formulate the design value of their proposals. That is, it's as if the procurer is saying, "here is a design, show me how your business can bring value to this design". The embodied experience, constructed through meaningful activities, is the basis for at all talking about making business.

In Markensten's case this would also mean bringing design value to the procuring organization's clients, customers and employees. This in turn would bring business value to the procurer's organisation.

The practice that is suggested by these researchers is a way of making design value precede business value.

### Practical presence

The presence of objects, and the acceptance of construing their meaningful presence in our daily lives, has been discussed by Redström and Hallnäs (Hallnäs & Redström, 2002). They are distinguishing between use, which is a construct mainly concerned with functional features in their view, and presence, which is the existential essence of a thing in relationship to a lifeworld of someone. That is, we don't primarily relate to and describe the chair in our kitchen with its functional features, but with its existence. And the same goes for a whole range of things:

*Even the old bike I have at our summerhouse and only use once a year certainly has a place – and a presence – in my life although I rarely even think about it. (Hallnäs & Redström, 2002, s. 108)*

With this perspective the embodied experience and shared activities construct a meaningfulness that goes beyond the business value of any singular thing. And in that existential perspective there is no business value for the individual, only design value that is construed over time. It's a real challenge to sell that experience of the bike in the quotation above, especially as a lifelong experience. Clearly design value precedes any business value conceivable here, and business will have to struggle to present their propositions as possible to integrate in those meaningful life worlds of people. They have to demonstrate the design value of their business proposal.

### Value created in use

One of the foundational premises in the service-dominant logic (Vargo & Lusch, 2008) states that the customer is always a co-creator of value, and another that the enterprise cannot deliver value, only offer value propositions.

Design and value in this way of thinking are co-constructs, in the sense that value is emergent in embodied experiences and understood through shared activities and purposeful actions. As a consequence artefacts, services, systems, etc, all need to be designed in order to become part of this process. In contrast to the other two examples the businesses in this case are continuously participating in the creation of these values, in a process of co-determination. As this process is directed by people, mediated by touchpoints, the design value relies on understanding these actors as resourceful. As a consequence design value precedes business value, and business has to show it's design value for customers to co-create value.

## Critique

The critique presented here will take as its starting point a critical claim; *design value precedes business value*.

The way in which critique is developed here, as part of the exploration of the ideas and conceptualizations, it avoids becoming a distanced and uninterested reflection (Blanchot, 1963). By combining a hermeneutic approach with a critical theory reflection (Alvesson & Sköldberg, 1994) (Bourdieu, Chamboredon, & Passeron, 1968/1991) a small set of questions will be used as drivers of critique; do the critical claim reproduce or reinforce the claim it is a critique of?

### Does the precedence of design value reproduce that business value is primary?

Depending on the business logic one is using a business value either 1) increases as value is added in a value chain, 2) the value is expedited in a purchase, or 3) the value emanates from use, or context. The third logic was discussed above.

Under the goods logic if design value is regarded as primary, and that business has to explain its design value, it might be argued that in order for any value to exist some value has to be added to a baseline. In this logic it is indifferent whether this value is a monetary value, a technical value or a design value. That is, the precedence of design value does not reproduce that business value is primary under this logic.

Under the second logic the value of what is sold is taken as a granted, and the customer judges in the situation of the purchase whether the values expressed and explained fits her. Those judgments are not based on the business value construed before the moment of purchase, but emanates from the premises stated in the preliminaries section. That is, a company that does not manage to present a product/service proposal that a customer judges to become a part of some meaningful future, will not generate sales. It is rather the case that this logic reproduces that design value precedes business value.

### Does the precedence of design value reinforce that business value is primary?

If one adheres to a value chain logic of business, the precedence of design value can be used to reinforce business value, but does not render business value to be primary. As a matter of fact, under such a logic there is no such thing as value before the start of the value chain is identified. So, if the start of that value chain is the identification of design value, the precedence of design value reinforce the importance, but not the primacy, of business value.

## Concluding remarks

Postulating that design value precedes business value, and the corresponding demand that business explains its design value, seem to be supported theoretically, through existing studies as well as by different frameworks of business logic. There seem to be some intrinsic dependence between the two, and thus one might want to view them as co-determined rather than separated constructs.

In essence, the question what business value there is to design should be countered with the question what design value there is to business, because design value precedes business value.

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# Adapting service design tools to facilitate interdisciplinary research collaborations

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## Abstract

This paper describes an ongoing multidisciplinary research project which is developing and prototyping a new food service for older hospital patients. This is a multi-faceted project combining the skills of designers, food sensory scientists, dietitians, medical sociologists, ergonomists and technologists with a diverse group of end users and stakeholders to map the existing food service and identify opportunities for re-design. This paper describes how three design methods/tools conventionally used by designers have been adapted and used to collaborate with colleagues from different non-design disciplines.

**KEYWORDS:** multidisciplinary, design methods, design tools

## Introduction

Six out of ten older people are at risk of becoming malnourished or their situation becoming worse in hospital (Age Concern, 2006) and those aged over 80 admitted to hospital have five times the risk of malnutrition than those aged under 50 (BAPEN, 2003). Malnourished patients stay in hospital longer, are three times as likely to develop complications and have a higher mortality rate (BAPEN, 2003). The toll of malnutrition on healthcare costs is estimated to exceed £7.3 billion per year, half of which is expended on those aged 65+ (Age Concern, 2006).

A multi-disciplinary group of researchers in the UK is working towards addressing this issue through a three-year project funded by the cross-Research Council New Dynamics of Ageing (NDA) programme (NDA 2010). The overall aim of the project is to address the crisis of malnutrition by designing a new food service prototype based on qualitative evidence, that considers foods, products, people, environments and procedures and which is amenable to becoming embedded in practice with the intention of reducing malnutrition and enhancing quality of life.

In order to fully address the problem, all stages of the food journey, from preparation to consumption, are being considered: these include the type of food product and its preparation, the maintenance of the quality of the food in the journey from preparation to patient, the environment and conditions in which the patient eats, incentives to eat, and the monitoring of food and nutrient intake.

## Multidisciplinary team

The multi-disciplinary team includes the following specialisms: nutrition, dietetics, medical sociology, food sensory science, design, ergonomics, computer science, and elderly care medicine. This multi-faceted project would not be possible to conduct within any one of the single disciplines involved. Previous research into malnutrition has tended to focus on single issues in isolation, whereas this project deals with all the people, procedures, places and products concomitantly.

User participation in the development of the new service will enhance the impact of the outcomes. The project's user group includes representation from a 'food family' (FF) (a diverse group of end users including food producers/caterers, nursing staff, ward volunteers, dietitians, speech and language therapists, physicians, carers and older adults), relevant key stakeholders (KS), and charities. The project steering group includes representation from KS including the NHS, professional associations, and charities such as National Patient Safety Agency (NPSA), Age UK and BAPEN.

## Tools for collaboration

In addition to design research activities, there is also a role for the designers in facilitating communication and understanding of the design process between the diverse disciplines in the research team. This enables a 'joined-up' approach towards solution generation and structures forward thinking.

In order to do this, the designers have employed design tools widely used by the service design community and adapted them to allow them to be used collaboratively by non-designers. The tools permit the sharing of knowledge and ideas and demystify the design approach for the rest of the research team. This is distinct from the design tools which have been used with the FF and KS at interactive workshops (e.g. personas, storyboarding and service prototyping). Where previous research highlights the value of these tools for engaging users in design projects, this paper proposes that the same tools can be adapted to facilitate non-designers within the core research team to collaborate in the design process.

What follows is a discussion of the tools used, details of how they have been adapted or naturally evolved for interdisciplinary use and a discussion of the resulting benefits for collaboration within the research team.

## Tool 1: Visual mapping

The objective of initial fieldwork conducted by the team's research sociologists was to determine the 'status quo' of the existing food service and practices through a series of

interviews and field surveys. The understanding of this status quo was compiled through a series of visual maps which converted the fieldwork data into information graphics as an aid to communicating this both within the research team and also with the FF and KS in its consultation workshops.

The fieldwork which provided the data for the visual mapping process was undertaken by researchers from each of the main disciplines:

- » Qualitative data obtained from ethnographic observations of the food journey by the sociologists. This formed the bulk of the data, and was written up as notes in a rich, narrative style.
- » Quantitative data collected by the food sensory scientists. This included temperatures, food journey times and food preparation processes.
- » The results of sensory food tasting sessions undertaken by the food scientists which compared the hospital food before and after the food journey.
- » Observational notes and sketches by the designer detailing user research undertaken at mealtimes in the patient eating environments.
- » Input from the FF and KS was included as a map of key themes from interview data analysed by the sociologists.

The narrative style accounts were analysed by the designers and translated into visuals which mapped people, products and processes onto locations in the food journey. The quantitative data were mapped onto a timeline to allow comparison of the different catering systems and processes. This was supplemented by photographs of all stages in the food journey, including products, environments and foods.

#### **How was this approach adapted to involve non-designers?**

This visual mapping approach was made accessible to non-designers by involving them from the early stages. We began this process with a meeting of key research team members, for which the designers prepared simple sketches of the system to begin the discussion. The sociologists and food sensory scientists were able to explore the sketches, making corrections, adding information and answering questions that arose. Layers of information were built up until the maps became rich representations of the service. Following this initial meeting the designers circulated the updated maps. The maps were then iteratively and collaboratively developed until the research team were confident that they represented an accurate and complete picture of the food service.

#### **How did this tool benefit collaboration?**

By collaboratively creating the maps the research team developed a shared understanding of the system which benefited from the perspectives of each different discipline. The sociologists and the food sensory scientists found the process engaging and insightful.

## **Tool 2: The workshops**

Following the initial ethnographic study and mapping of current systems, a series of workshops with the FF and KS were held to validate the findings and initiate ideas for the re-designed food service. Subsequent workshops/focus groups will be held to evaluate the new service prototype as part of an iterative development process. The workshop activities and outcomes are fully described in a separate paper by the authors (Macdonald et al 2010).

The workshops can also be thought of as a tool for collaborative *interdisciplinary* (as distinct from multidisciplinary) working within the research team. To date the research team have

designed and delivered two very successful workshops; the results have formed the basis of a new service concept currently in development.

The activities and their intended outputs were designed to meet the requirements of multiple disciplines. The delivery of the workshops also involved the entire research team, therefore it was essential that they fully understood and embraced the participative approaches proposed.

#### **How was this approach adapted to involve non-designers?**

Each of the workshop activities were fully scripted to assist the facilitator assigned to the activity and to ensure that all relevant and essential points were covered. Through the iterative development of the ‘workshop script’, the designers were able to facilitate the process of successful interaction between the different research specialists represented in the team. This document made the process of workshop design, development and delivery accessible to non-design disciplines.

The script served to: clearly define the purpose and desired outcomes of each activity to ensure all team members had confidence in the activities and their role in participating/facilitating them; allocate roles and responsibilities and specify the resources required; familiarise the team with the workshop materials prior to the event and provide a ‘running order’ for the day.

The designers avoided the use of design terminology as this tended to be off-putting and led to misunderstandings. The iterative development process also served to test the scripted explanations of the activities which would be delivered to workshop participants, filtering out any unclear design terminology that was not picked up by the designers.

#### **How did the workshops benefit collaboration?**

Supported by the detailed workshop scripts, the non-designers gained confidence in an approach which was outside of their usual professional ‘comfort zone’. They embraced new methods and benefited from witnessing and participating in the approach first hand. In addition, the collaborative delivery of the workshops was an opportunity for the research team to be co-located for several days; working intensively built strong team relationships.

### **Tool 3: Service narratives**

The research team are collaboratively developing a set of service narratives which illustrate the role of each of the people, products, places, infrastructure and procedures in the new service concept. This approach is a natural extension of the persona and storyboarding techniques which have been introduced to the research team, FF and KS through workshop activities.

To fully appreciate how the service works for all concerned, the service narratives have been developed around a set of particularly challenging or problematic nutritional issues for three vulnerable groups of patients. This set of narratives is intended to illustrate improvements over the status quo and how the new food service proposal meets the project’s objectives.

Each narrative introduces the patient with any relevant background information and follows them through typical days in their hospital stay: from admission to discharge. The narratives describe the patient’s main nutrition-related events, excluding details of medical interventions and regular nursing care. Alongside this description we highlight the system actions and product interactions required to achieve this. The narratives also demonstrate

staff and carer/family interactions with the patient and the system. The completed narratives will form the basis for future work such as storyboards, service blueprints and design briefs.

#### **How was this approach adapted to involve non-designers?**

The service narratives were created as simple text documents, which enables them to be edited by all members of the research team remotely. The service narratives were introduced to the research team with a short summary of their intended scope and purpose.

Rather than simply being a tool for the designers, the dietitians and food scientists have adopted the tool as an opportunity to specify the technical requirements for new foods and build in an understanding of the protein and calorie intake throughout the day.

#### **How has this tool benefited collaboration?**

The ‘service narratives’ have proved to be a very effective tool for collaboration. The narratives have helped the research team determine any problematic issues in the conception of the service and any elements which may have been overlooked. Detailed narratives will help specify the various service elements and help in the briefing of designers and technologists involved in producing prototype elements. They will also be used in selected interviews with FF and KS to validate the concept prior to the service prototype development.

## **Conclusion**

The designer’s toolkit is extremely useful in a multidisciplinary research project. While care must be taken to explain the scope and purpose of the tools and ensure design terminology is removed from the process, the methods developed for participative service design can be adapted into accessible tools for collaboration within a multidisciplinary team.

The tools have allowed a greater collective synergy between the disciplines and have provided the means for separate disciplines normally inclined to stay within their own discipline ‘silos’ to work together and exchange knowledge. In a multidisciplinary project where the primary outcome has a design focus, we have found that it is the designers’ responsibility to drive this process, and innovate or adapt tools to enable interdisciplinary collaboration.

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# SVID CITY MOVE

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SVID – Swedish Industrial Design Foundation

## Case background

SVID City Move Interdesign is the main activity in a project about how to relocate people and societies in a positive way, despite unwanted reasons. City Move Interdesign took place in Gällivare from March 22 to April 4, 2009. City Move Interdesign was arranged by SVID in cooperation with Icsid, the Gällivare Municipality, the County Administrative Board of Norrbotten, the Swedish Ministry of Enterprise, Energy and Communications, LKAB and the European union/European Regional Development Fund.

SVID arranged this workshop connected to a region in great change, in the very north of Sweden. The project runs over three years in order to establish a centre to collect and develop knowledge around a specific theme: "What is important when you have to re-establish or move a city/village/society to a new place". The has run in cooperation with local municipalities, organisations, universities and companies. The City Move Interdesign was the most important single activity to collect and to create new ideas for the relocation of cities like Kiruna and Gällivare. It will also be the start of the knowledge center about how to move a city.

Challenges among other matters were the following: How can the needs of people be taken care of and explored when moving from one place to another and how can the people be involved in the development? How can both old and new physical conditions and identities be used in the best way to influence the planning of the new society? How can sustainable factors contribute to a new and better environment for the inhabitants than the one they are leaving? Identify and develop processes and competences that renew a society in the best way to make people want to work, visit and live there. How can design processes contribute to a positive change. Can the process to create a new society become an attraction in itself and create tourism and positive good will for the society and companies established there? How can we in the best way describe and spread the knowledge and experiences about the subject to other people and organisations over the world?

## **Take home**

The City Move Interdesign was the main activity in a project about how to relocate people and societies. The project looked at the possibilities of creating new spaces for people both in a human and technological way where homes, workplaces, tourist attractions and meeting places have to be left behind or relocated.

SVID, The Swedish industrial Design Foundation knows that design processes and design competences are important sources of creativity and constructive new thinking. A combination of different design competences and other specialists can together create solutions of great value. Not only value for one single location but suggestions that work as examples for other people in other parts of the world. The user focused service design process is a creative way of finding solutions from a holistic point of view. An Interdesign is a great forum to use these methods to create exiting ideas for new developments.

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# Case: Hälsokollen. Design methods for creating services that supports longterm behavioural change.

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## Case background

The Swedish pharmacy Apoteket has launched a new health service, "Hälsokollen", in co-operation with the Swedish service design agency Doberman. "Hälsokollen" includes an assessment tool for peoples risk profile for heart diseases, advice from a trained health advisor, a meeting application and a wide range of tools for self-support. The goal is to inspire people to live a healthy life.

The case presents two perspectives – the client's and the agency's. The case covers general principles as well as specific learnings, mistakes and success factors, shown by hands-on examples.

The starting point of the case is the huge challenge the project was facing: how to create a long term change in daily behaviour towards a more healthy life? The rational behind the project was the following:

1. Insight about ones health status (in reality the risk for heart diseases now and at the age of 65) plus
2. Insight about the relation between the risk profile and the persons daily behaviour plus
3. Identification of the most relevant and feasible way to change ones behaviour toward a healthier daily life plus
4. A toolbox of motivating tools to support behavioural changes gives
5. Establishment of a sustainable healthier lifestyle

These steps may seem easy and logical, but raised a number of challenging questions: How to transfer the measurement of the risk for heart disease to a understandable view of the health status? How to transfer this insight to motivation to behavioural changes? How to transfer motivation into action? And how to transfer these actions into routines, to support a sustainable change in daily life?

The design process was built upon five foundations:

- A. Theoretical knowledge. Despite this being a practical and commercial project, knowledge built from scientific theories was an important foundation. Health science,

behavioural science and sociological and market theories were “in use”, via reports, involvement of experts and the participants academic background.

- B. Cross-disciplinary team. Involved in the projects were different health experts, interaction designers, visual designers, system developers, pharmacists and business developers.
- C. On-going innovation. An on-going innovative climate was created by a number of workshops, visualisation of ideas, shared hypothesis and prototypes.
- D. Self involvement. In contradiction to the notion of “you are not the user”, we did instead involve ourselves extensively, by introspection and using ourselves as the basis for both idea generating and evaluation: “What would help me to change my life?” and “Would I really use this?” We also tested the whole customer journey ourselves, including the real health test. The result of self involvement: Passion!
- E. Empirical studies. During the project we used a mix of different research methods: Focus groups, interviews and prototype tests in different phases of the project.

The case will share our learnings from design process: Both success factors and difficulties and experiences about overcoming these difficulties. We will cover all five different foundations as well as the relation between them.

## Take home

After listening to our case, the audience will be able to take with them

- Methods for how service design projects can take insight from theory and empirical studies into practical use for guiding design decisions – and know the challenges in doing this.
- Best practices for involving a broad spectrum of competences in a creative, idea-generating and problem-solving work

# Case: Innovating implementation and design of services within the public sector

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## Case background

By its nature, traditional product design results in the delivery of a fully formed artefact - one that can be used, more or less, out of the box. With service design projects however, designers hand over a far less tangible service proposition and it is hoped that the client has the skills and wherewithal to implement the service provision outlined in the service blueprint. Others in the field of service design (Vesterdal, 2009; Marsh, 2009 for example) have touched upon this dilemma but it is difficult to find explicit examples from which to learn from. This case study uses projects, undertaken for the public sector organisation Skills Development Scotland (SDS) by the Product Design department at the Glasgow School of Art (GSA) over a two-year period, to explore the challenges addressed within SDS in the implementation of service design projects and highlights lessons learned.

Implementing service provisions from within a large organisation demands as many political and organisational skills as design skills, however design can support this process and should come from within. As discussed by Taylor & Tofts (2009) the ability to deliver innovation in services depends on compromises between implementation, policy goals, cost of delivery and the combination of staff and technology resources required to deliver the service. Service design consultancies can support implementation but it can be an expensive option for the client and may not achieve the necessary outcome due to self-imposed barriers within the organisation. These barriers can be a measure of an organisation's *design readiness*, or lack thereof. An organisation's absorptive capacity is the ability to "assimilate and make use of the transferring technology" (Halverson, 2005: p3), but it is not difficult to extend this to include the transfer of design thinking and knowledge. Design readiness, or absorptive capacity, develops cumulatively and represents a long-term investment. The projects shared by SDS and GSA highlight a number of areas where obstructions may arise; from employee reluctance and management restraint to political and media pressures; and where design can help work around these obstructions. Some examples of innovation explored within SDS included employing design interns, developing in-house service design talent, raising design awareness within staff, and departmental reorganisation. Projects also highlighted the need to empower employees and encourage a flexible approach; some of the points discussed by Taylor & Tofts (2009).

Of particular interest is the way that the SDS engaged with the projects. Dissemination of a design approach was aided by the involvement of design students, and staff within SDS were often more open to learning with students what was, to some, a new approach to their working practice. When external media coverage made the organisation more sensitive to

criticism, the flexibility with which the students could engage with SDS was affected. This highlighted the importance of innovation opportunities being allowed to take shape and to be prototyped as well as the need for senior management to be open to this - bottom-up innovation being as important as top-down management (Halvorsen, 2005; IDeA, 2005).

## Take home

It is easy to hand over a service design and expect the client to be able to run with it. However, experience shows that there are many factors internal to an organisation that can hinder the implementation of these service designs. With a range of projects and experiences to draw upon, this presentation will illustrate how an organisation might prepare to implement new service propositions - for design readiness. In particular,

- The value of the design of internal communication.
- Visualisation and prototyping of the proposed service implementation.
- Understanding the needs of the workforce involved in delivering the service to an end-user.
- Developing strategies to improve the ability to innovate implementation of service provisions within the organisation.

It is intended that the points discussed here and in the presentation can be taken away and adapted by management, and service designers alike, to identify potential organisational barriers to service innovation and implementation. By providing examples of how one public sector organisation (SDS) tackled these hurdles, it is hoped that others will be able to take a similar design approach to their own particular situation.

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# Service Design: social innovation is our motivation

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## Case background

This case is about a community called Wyndford in the North West of Glasgow, ranked the 18th most deprived area in Scotland(1). Until September 2009, the people of Wyndford had never worked or met with designers who didn't focus on a physical output of the design process. That changed when Getgo, a collection of designers from the Masters in Design Innovation course from the Glasgow School of Art, began work for Audi's Sustain our Nation competition in the area.

Getgo used techniques and skills adopted from the service design process to create a 'social enterprise' for the community that tackled the issue of crime. The way in which the project was conducted relied heavily on visualisation skills, co-design, user centred processes and systematic thinking.

The enterprise is a service, designed with people, in order to create a valuable proposition for both community members and local stakeholders. Throughout the project, community members, local stakeholder staff, management and politicians were all involved in the project, echoing the sentiment of service design with all users at the heart of the process.

The project saw designers question their role in such a heavily co-designed proposition; If this is service design, then what are we actually designing? Are we just facilitators of a creative process?

The project highlighted gaps in students' skills in terms of creative facilitation, direct user contact and business knowledge to name but a few. Further to this, it highlighted exciting ways of working with people and pushed the boundaries of the typical level of involvement for designers. In this instance, Getgo challenged new methods of consultation and funding models within the area, and has been the catalyst for many exciting prospects for replication in other areas.

In an increase of these types of projects dealing with 'social innovation', service design has become the 'go to' for designers to understand how they can 'do something good' with their skills. Service design, and its open attitude to sharing methods, techniques and 'tools' on such sites as servicedesigntools.org and leading consultancy websites has become a lifeline to students who are trying to grasp what this is all about. These tools bring a tangible way to understand the complex landscape of 'social design and innovation'.

With a new league of eager students keen to 'do something good' with their design skills,

how can we use service design to promote a pragmatic and skilful way of undertaking projects that promote social innovation? Getgo did it. We won £20,000 for the community of Wyndford.

But, as a discipline, are we ready to ready to step up to the hype service design has created and lead a responsible way forward?

## Take home

This community cohesion scheme proves that expertise in Service Design can help create social change. We want everyone to leave ServDes believing this!

This case demonstrates the key service design approach of working in collaboration with the users, rather than imposing a solution on them. All the tools we implemented are tools that the community can use after the service designers have gone.

This Glasgow scheme really makes you think about the process of social innovation. In this case the result was not only a satisfied service user, but motivated staff and a fulfilled service designer too.

In particular, we want people to leave knowing:

- 1.What students, graduates and junior service designers might need in terms of guidance in live Service Design projects
- 2.What responsibility students AND tutors have in running live projects both ethically and in terms of safety
- 3.How Service Design can be used as a process for community development
4. How to 'end' projects well – what happens when the service designer leaves?
5. How to go into a community as a stranger and excite, motivate and inspire the people who live there to change things for themselves.

(1) BBC, author unknown (2003, 02 27). Glasgow tops 'most deprived' list, Retrieved 11 15, 2010, from BBC News website, Scotland:  
<http://news.bbc.co.uk/1/hi/scotland/2804895.stm>

Wyndford is discussed in the article as a ward. This means that Wyndford is the 18th most deprived ward out of 1222 in Scotland.

This case will be presented by Sarah Drummond  
The excerpt was co-written by Lauren Currie and Sarah Drummond

# Towards a practical application of innovation theory for financial services firms – a quick step from academy to tooling

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## Case background

This presentation proposes an approach for better practical service innovation management, applying established innovation theory. This will be illustrated by how work can be improved with the support of a software tool.

Innovation is emphasised as a key driver for corporations to survive. We hear in the press and corporate mission statements about the need to be innovative. Sometimes it is difficult to understand what is meant by being innovative: should we change a little or should we try to do totally new things?

Managers in companies should also keep track of multiple sources of innovation. They need to look out for new technologies, listen to customers, collect ideas from employees, follow rules and regulations and find ideas in other markets and other industries (eg Dosi, 1982 and von Hippel, 1988). The skills needed to manage innovations are different depending on the type of innovation (eg Benner & Tushman, 2003 and Henderson & Clark, 1990).

It could be expected that approaches to innovation management are well advanced in practice. However: a recent study from the financial services industry (Freij & Sköld, 2009 and Sköld & Freij, 2010) suggests that it is not clear which types of innovations are produced, and how they should be prioritized. With the basis in over 40 service innovation cases, a test was made of how a tool could improve service innovation management.

The cases are based on data from a collaborative research study (Werr & Strannegård, 2010). The financial services industry was selected since there is a potential for finding interesting cases – this industry produces a constant flow of new service offerings. The researchers also had good access to situations where research data could be collected. Semi-structured interviews were performed with 20 executives in operative positions working with service design and development. A rigorous sampling model was employed to select the firms that participated in the study. A qualitative research approach was selected to generate new insight in a developing research field (eg Eisenhardt, 1989).

In order to test how a tool could improve the management of the above innovations, the following worksteps were performed:

- 1) Categorization of the cases in two dimensions: a) innovation types according to a tentative classification using Henderson & Clark, 1990, b) a business management structure (from IBM)
- 2) Linking of the cases to (one or more) innovation sources
- 3) Attaching various base information, such as cost, completion rate, business benefits, etc
- 4) Production of selected management reports for illustrative purposes

Based on this exercise it is suggested that organisations would benefit greatly from using a tool based approach for managing innovations. The structure of the tool revealed a number of clear patterns in the innovation portfolio that was not seen from the “raw data”. Using such an approach will improve decisions on which services the firm should prioritize, as well as which innovation portfolio should be promoted given the structure of a particular part of the industry (Jacobides et al, 2006 and Pisano & Teece, 2007).

## Take home

This case presentation aims to show that academic service innovation theory can be applied to practical management work. This step is shorter than it might appear, and that the benefit of bridging this gap is potentially great for both fields.

If organisations approach the management of innovation in a structured way the benefits of categorization and tooling will be harvested. These benefits will range from quantifiable to more intangible:

- Better focus of investment budget
- Conscious decisions on which projects to pursue
- Decreased resource use in the innovation administration process
- Better linking to the organisations core skills
- Possibility to be more foresighted – acting instead of reacting

There is usually no silver bullet in the practical world of service innovation... there are some clear challenges that organisations should manage in order to achieve these benefits:

- A tendency to focus on short term costs and not long term benefits
- Innovation organisations tend to be less persistent than operational and / or project organisations
- There are some training time needed to appreciate the use of a structured way of working
- Service innovations are intangible, and hence difficult to put focus on

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# Health and social care services for people with complex needs: The importance of context in the design process

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## Case background

Our overall aim was to improve the design process of a service which integrates health and social care for a client group with complex needs in a UK region. We use this case study to illustrate contextual influences in the stages up to the definition of the service objectives. Our work included analysis of national and local policy documents, a set of observations (n=6), interviews (n=10) with service staff and document analysis in order to piece together the service design behaviours over the last 10 years.

Many guidance documents have been issued on design approaches in health and social care services (NHS Institute for Innovation and Improvement 2006, 2007, 2009; NHS Integrated Service Improvement Programme 2006; Institute of Public Care 2010) but our investigations suggest they have had little impact on service design behaviour. This indicates acknowledgement of the merits of a more design-focused approach but raises the questions what impedes its uptake. We found that the guidance pays little attention to contextual issues such as exploring the service environment and we did not find any steps which would address the tacit components, such as organizational routines, customs, cultures and power structures. However, from our experiences and the innovation literature (Greenhalgh et al. 2004; Repenning & Sterman 2001) we know that these are essential factors which need to be addressed. Our work suggests that including stakeholders, particularly internal ones, early on in the service planning could help mitigate this.

Public services are usually driven by the imperative of better performance (Smith & Fischbacher 2002). What constituted better performance varies across the large number of stakeholders. This made even defining the design objectives a complex task. Our case study supports the view that these have to be defined, refined and negotiated as part of the service design project. We suggest the current process could be innovated through established design processes (Pahl & Beitz 1988; Design Council 2007, p.6) where design starts with an exploration of need which leads to a specification of service objectives (requirements).

From the empirical work we observed a series of ad hoc ‘design processes’, rooted in custom and tradition, with little evidence for structured design approaches that would be present in other industries. Although consultations had taken place, frontline staff felt they had not been given a voice and were commenting repeatedly on unresolved cultural differences between health and social care staff as well as between front line staff and management. Service design was part of several job descriptions within the organization but in practice it

seemed to lie with a particular manager who had most experience in this field. It was unclear if there was a defined service design process. The manager did have valuable pertinent implicit and tacit contextual knowledge. However, management approaches treated knowledge as explicit. This causes problems because codifying implicit and tacit knowledge can be difficult or even impossible and transmission is short range. Our work suggests that better use of contextual knowledge would improve the design of the service; how this should be achieved is the focus of the on-going research.

## Take home

Our empirical data suggests that there is the need for a design process which takes into account contextual factors. This might include an exploratory phase to set situation-specific service objectives as well as accommodating different types of knowledge. More research into how, for example, managerial constraints shape design processes would be an important research contribution as ‘designers’ are constantly faced with these constraints when developing and implementing public services.

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# Service Design for tourism SMEs - The concept of service design and its application on the Alpine Zoo in Innsbruck, Austria

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## Case background

Tourism is a service-intensive industry that is dependent on the quality of customers' service experiences and their consequent assessments of satisfaction or dissatisfaction. The recent development of online customer reviews through social media causes an evident reorientation of company resources from classic one-way advertisement towards a mutual communication and proper service quality (Stickdorn & Zehrer 2010, Stickdorn & Zehrer 2009, Egger 2005, Buhalis 2003). Therefore, the management of service quality is of crucial importance to the tourism industry and the adoption of a so-called 'service orientation' by service businesses has thus become of increasing interest in recent years as an important factor in the enhancement of profit, growth, customer satisfaction, customer loyalty, and employee satisfaction (Zehrer 2009; Lytle & Timmerman 2006; Fitzsimmons & Fitzsimmons 2001; Lynn et al. 2000). In an attempt to ensure that service orientation is consistent with the overall strategy and environment of the service provider, the approach of service design gains interest in the tourism literature. The concept of service design is an interdisciplinary approach, which can be outlined along five basic principles: user-centred, co-creative, sequencing, evidencing and holistic (Stickdorn & Schneider 2010). Since the tourism industry is dominated by small and medium sized enterprises - 94% of European tourism companies have less than 6 employees – it is questionable if service design methods are financially and organisationally feasible for most companies in this sector (EC 2003). The purpose of this paper is to present a short case study on the applicability of service design methods for the tourism industry, in particular to appraise prospects of success for the predominant SMEs.

During the case study a group of tourism management students who had no distinctive knowledge on designing services worked in teams of 3-5 people on the case of the Alpine Zoo in Innsbruck, Austria. The aim was to appraise if the student teams were able to come up with realisable concepts and if the board of the Alpine Zoo recognizes potential for a further implementation of these. Students only received minimal instructions during three one-day workshops and faced the very limited time frame of 6 weeks for the whole project besides their full-time studies. During the workshops, students became familiar with the basic concepts of service design thinking including the iterative process and a few methods and tools, such as Stakeholder Maps, Personas, Customer Journey Maps, 5 Whys, Service Blueprints, Storyboards, Service Prototyping, etc. (Stickdorn & Schneider 2010). Both the feedback from the board and the realised components of the students' concepts indicate the significance and applicability of service design thinking for tourism SMEs.

## Take home

The case illustrates the importance - if not even the need - of service design thinking for the tourism industry and in particular for its predominant small and medium sized enterprises. Social media forces companies to increasingly draw attention to customers' experiences and thus shift resources from advertisement to the customer-centric development of services and their perceived quality. Furthermore, the findings of this case study show the applicability of a service design approach for tourism SMEs, since even a basic understanding and knowledge of service design methods and tools very likely has an impact on the service quality and thus the resulting customer satisfaction.

This paper reports a single case study and thus certain limitations need to be taken into account when considering the results of the study and its contributions. However, findings imply to develop a self-help toolkit focusing on small and micro sized companies which are unable to finance service design consulting. Furthermore and foremost the case shows the importance to adopt service design thinking in tourism degree programs – even if only on a basic level. However, further research is needed to complete the overall picture and a broader survey with a comparative service company would be most valuable to evaluate these findings.

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# Plan, Design, Explore & Reflect – Customer relevance in bank services through action research

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## Case background

We would like to present at ServDes2010 the incredible force in using service design methods when developing new offers. In order to create relevant and profitable services you have to truly understand the user's situation, need, mindset and driving forces. We would like to share our experiences of involving and interacting with the customer in the business development process in order to ensure that the end result has customer relevance. This is a excellent way for the service provider to learn a great deal about his own business by looking at it from a different perspective. We will talk about our experiences of the difficulties and possibilities in using service design by using examples from a case with SEB. We will discuss:

- Tools to make people talk. How the right conditions can help the customers speak their mind.
- How to listen to the customers and what to listen for. If you think you know what you are looking for you will probably miss the essentials.
- Understanding the customer's context. Understand what role your service offer play in the life of the customer.
- The power of the customer opinion. How strong customer insights can create a foundation for change.
- Using the customer's language and logic. What is straight forward for the service provider is not always obvious for the customer.

## Take home

Within service design the end user is always considered as the mayor stakeholder within the service offering. Therefore it is essential when creating new services to get the end users opinions about the service offering and its different touch points. On the other hand it is seldom discussed in which context this input should be acquired, in this case study we found it extremely fruitful interviewing people within the context of which the service should be delivered. It is our conclusion that this helped us in getting people to want to talk about

these things since the environment itself acted as a trigger during the interviews. From this data set we could go on and create a service offering completely tailored after the customers' needs and desires. So the thing we would like people to take with them from this is how much the context in which you are interviewing people influence the answers they are giving. And of course the confirmation of how important it is to take the customers point of view when designing new service offerings.

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# Alternate reality games and participatory storytelling beyond entertainment: new and more effective ways of triggering and creating communities.

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## Case study

Designing experiences and complex systems blurs the lines between research, design and prototype ideally bringing designers, stakeholders and users to the same table at the same time. In this scenario the sandbox within which all these processes happen appears to be decisive in getting a positive output from the design work and building the base for future traction.

This case intends to bring into the service design community the practise of alternate reality games and participatory storytelling as tools for user triggering, community engagement and co-creation by drawing concepts and best practises from a case study. Working in conjunction with a television broadcaster and a game publishing company I faced the challenge of creating a new entertainment format that needed to merge together traditional television fiction with the new possibilities of online social gaming and transmedia storytelling.

Alternate reality games are interactive narratives that literally use the real world, both physical and digital, as a playground where players can interact with each other and with the stories themselves affecting directly the evolution and the outcome of the experience. Riddles, cyphered messages, enigmas, real time interactions and pervasive actions are all elements that the game designer uses in order to engage and trigger the players.

ARGs have been recognized in recent years as sophisticated marketing and promotion tools but with this project I discovered how powerful they can be as instruments of problem solving and co-creation. During an air time of three months with weekly episodes players tended naturally to create a strong and collaborative community capable since the first days of acting as a hive mind. More than 1000 active players generated by the end of the game about 60000 messages solving in a few minutes stories, games and enigmas that took months to be scripted and developed.

## Take home

From this project I drawn the idea the ARGs can be more than entertainment and can become one of the tools of service design. I want to introduce service designers to a particular kind of games they might be unfamiliar with. I want this case to inspire service designer in thinking about different, creative and maybe controversial ways to approach end users/customers and bring them in the design process.

The case study introduces both the genre and dynamics of Alternate Reality Games and a specific overview of the design and production phases of the game in order to provide the participants with a general workable framework and some insights of the time, effort and profiles needed for creating similar experiences.

Beside giving practical information on the design process of an ARG the aim of this case study is to generate a discussion among designers and practitioners on if and how these games can be integrated in the design process.

# Service Design Research: Which direction do we want it to take?

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## Case background

Being a fairly young research topic, the structure and directions of research on service design is not definite. Service design research is currently evolving from the early efforts to establish the discipline towards a wide range of areas of inquiry. Blomkvist, Holmlid, & Segelström (2010) have provided an overview of peer-reviewed research publications published in 2008-2009 and identified two main approaches to service design research:

*"There seem to be two main approaches to this early research on service design. One is to widen the scope of service design and integrate practices and ideas from non-design fields, such as marketing, leadership and engineering. The other is to challenge and explore the basic assumptions in service design and the methods inherited from other disciplines." (Blomkvist, Holmlid, & Segelström, 2010)*

Furthermore, Blomkvist, Holmlid & Segelström (2010) have identified five trends in research in service design. The trends were used to contrast recent research with older research which focused mainly on arguing for service design in its own right. The five trends are:

- » **Design theory:** Exploring the fundamental questions of service design, the language of service design and co-creation.
- » **Management:** Learning from and integrating with existing thought on services within services management/marketing.
- » **Systemic approach:** Focusing on product-service systems with an engineering perspective.
- » **Design techniques:** The tools and techniques used in service design projects.
- » **Case studies:** The practice of service design researched through case studies.

A similar interpretation can be found in Sangiorgi (2009), and in suggestions for research needed (Holmlid, 2009; Kimbell 2009).

The workshop will introduce the participants to the frameworks above. After this the workshop participants will work collaboratively with identifying important research topics and directions, and to suggest a roadmap for service design research. The workshop invites practitioners and academics alike, in its discussions on which directions are desirable for future research on service design.

## Take home

The participants will leave with an improved knowledge about current service design research, to be applied or built upon.

They will contribute to a joint research roadmap. The created road map will be a good source of reference for new research on service design and could be used as a starting point for further research cooperation and development projects. It will also visualize the current state of service design research in a clear way to those not participating in the workshop.

For researchers it will be a valuable opportunity to identify streams of research to follow in their future work. It also provides a particularly good opportunity to find new collaboration partners with similar research interests.

For practitioners it gives an easy and accessible way of getting up to date with current efforts in academia, and also influence researchers in their search for new fields of inquiry through their active participation.

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## **Workshop**

### **“Service design for social innovation: a strategic approach to strengths and weaknesses”**

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## **Abstract**

The workshop will focus on the challenges of service design for social innovation. Starting from the participants experience in research, practice/action research and education, the workshop will be aimed at brainstorming about which *skills, methods and role* could respond to the weaknesses of design pointed out by different actors working within the field of social innovation.

## **Case background**

Around the world there is a strong movement where design is used for developing social innovation. In Europe this movement is mainly driven by service design studios like live|work, Engine, Think public and Participle in the UK but also the Desis network lead by Ezio Manzini as well as IDEO in the USA<sup>1</sup>. There is also strong forces promoting that design should be used for social innovation, for example the Design Council (Burns, C. Cottam, H. Vanstone, C. Winhall, J. 2006) in the UK. Service design is considered to be a useful tool for social innovation for reasons like:

- *holistic approach*, both services and social innovation are complex systems formed by different stakeholders. Service design is a useful method to bring together different views to build a common perspective as a base for new robust solutions.
- *people based*, as Sophia Parker says: “...Services are intangible, their value being created only in the moment of interaction between a person and a service. It is only deep immersion in this experience that service designers can capture the latent and tacit dimensions of the experience, as well as its more visible aspects...” (Parker, 2009). This knowledge that service design brings can be used to develop social innovation since it is also dependent on peoples behavior and interactions.

But now voices are also heard that points at the weaknesses in using design for social innovation. Geoff Mulgan (2009), the director of the Young Foundation, listed strengths and weaknesses in a working paper for a SIX Teleprescence conference which was highlighted in a blog by Stéphane Vincent (2009), the director of the French social innovation organization La 27e Région that uses service design for social innovation. These weaknesses are concerning with, for example, lack of skills in implementation (regarding economics and organization) and “reinventing the wheel” by ignoring evidence and field experiences. Mulgan recently repeated this critique at the DMI conference in London (DMI, 2010 and McCullagh, 2010).

In addition to this, Sophia Parker, who before working for the Design Council in the UK was a civil servant, has highlighted shortcomings in design education for students that want to get involved in social issues. Design education is not giving students: “...the language and techniques to enable them to operate effectively in context where not all solutions come in the form of 3D-products, or packages that can be bought, sold and delivered to passive customers...” (Parker, 2009).

## Workshop

In the frame of the general theme of the conference “Exchanging knowledge” we are proposing to discuss the challenges of service design for social innovation, with the aim of exploring strategies to overcome the critiques recently raised against the use of design in social innovation. Starting from the participants experience in research, practice/action research and education, the workshop will be aimed at brainstorming about which *skills*, *methods* and *role* (designer’s responsibilities in a project) could respond to the weaknesses pointed out by different actors working within the field of social innovation.

The workshop will be organized in these phases:

- 1) Workshop introduction. The facilitators will present a short summary of the strengths and weaknesses that have been pointed out in different articles. After, according to the number of participants, working groups (4-5 people) will be created in relation to their main professional interests (researcher, practitioners/action researchers, educators/teachers) (15 minutes)
  - 2) Responding to the weaknesses. The groups will receive the workshop material which consists of a set of large sheets, each of them with a quote about a particular weakness. In addition they will also get three different types of empty cards (one for the skills, one for the methods and one for the role) where, starting from their own experience, they can write possible strategies that could help overcome the issue. (10 minutes x 6)
  - 3) Final discussion. The large sheets will be hanged on the wall and the different strategies proposed will be discussed together. The proposed solution would be clustered in groups according to their typologies and if they can be considered long or short term strategies (15 minutes).

Tools: each group will be provided with large sheets with quotes about weaknesses and three different types of empty cards.

## Take home

The aim of the workshop is to reflect on the weaknesses of design for social innovation and brainstorm about what kind of strategies could be used to overcome them. This knowledge will be collected in a report that will later be sent to the participants and eventually be further developed in a paper.

## Notes

1. To learn more about these initiatives visit: <http://www.desis-network.org>. Retrieved 11 15, 2010  
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# Service Architecture Review Method

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## Case background

This workshop will give participants a practical introduction to Service Architecture Review Method, a method for evaluating competing service designs drawn from methods widely used in the world of software systems architecture.

It involves collective development of an evaluation context, creating a set of service scenarios related to a Service Quality Model, and documenting the interest in these of the various service stakeholders. The participants also assess the impact in the event that the chosen service design fails to satisfactorily deliver each scenario. This context sets the scene for solution design, but does not in any way dictate the service design methods used. The review method is not a design method, but rather a method for design evaluation that can complement any service design method. It provides particular insights when there are several competing service designs, the strengths and weaknesses of which need to be explored.

Once a number of design options have been developed to sufficient detail that they can be well understood, an evaluation workshop is conducted that will explore the competing design options using the context created at the outset. The evaluation workshop participants conduct a trade-off analysis, enabling them to better understand the solution options from the perspectives of the service quality characteristics in the Quality Model, and the service stakeholders (who, in a real review, should be represented among the participants).

Three distinct steps are involved, and can be condensed to fit into the conference to give participants an understanding of how the method works:

1. Creation of the evaluation context, with scenarios and stakeholder analysis
2. Development of a set of competing service design options
3. The trade-off analysis workshop

Step 2 is not part of the review method but is, of course, the creative act necessary to give the trade-off analysis workshop a set of solution options to analyse.

The preference is for Steps 1 and 2 to be conducted as interactive activities during the Unconference. I will propose Step 1 as an early Unconference activity, and encourage those with an interesting approach to Service Design to offer up Unconference activities to develop solution options for the scenario / context developed in Step 1. Subject matter can be discussed online ahead of the conference. The trade-off analysis workshop can then take place as the formal Workshop activity as part of the main Conference on Day 2 or Day 3.

The trade-off analysis workshop opens with a description of each of the proposed solution options. It is vital that all participants have a good understanding of these designs so that participants can contribute their views during the trade-off analysis.

The trade-off analysis commences by reviewing all of the scenarios that were created to form the evaluation context. Each scenario is considered by the participants for each solution option, and following open discussion, the participants agree on a level of likelihood that the solution option will satisfactorily deliver the desired scenario. The discussion moves on to the next solution option, and when levels of likelihood have been agreed for all the proposed solution options for that scenario, the team move on to consider the next scenario.

The information captured in this way is combined with the impact assessments agreed earlier to form a risk matrix. Each solution option can be seen as representing a particular set of trade-offs. These can be examined by the participants at the level of the scenarios, or at the higher level of the service quality characteristics in the Quality Model.

The stakeholder analysis conducted initially is also used to provide participants with another trade-off perspective, illustrating how the stakeholders will be differently affected by the competing solution options.

By the end of the workshop, participants gain greater understanding of the competing solution options, are well placed to choose a preferred option, and to initiate some further actions to mitigate some of the risks that will remain for that option.

## Take home

Participants will gain a practical introduction to the application of a design review method, currently being piloted in two UK government departments, that has been developed to facilitate the evaluation of competing service designs.

Participants will learn how a Service Quality Model can aid the evaluation of service designs, and see the insights gained from conducting a trade-off analysis. This is a new approach, still being piloted, so participants will be encouraged to discuss the strengths and weaknesses of the approach and its underlying Quality Model.

If conducted in the ideal circumstances, evaluating competing designs developed during the Unconference, the review may also reveal some valuable insights into the designs that are considered by the trade-off analysis.

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