Oslo, Norway, 24-26 November 2009

CONFERENCE PROCEEDINGS

ServDes.2009

DeThinking Service, ReThinking Design

Edited by

Simon Clatworthy, Janne-Valtteri Nisula and Stefan Holmlid

The 1st Service Design and Service Innovation Conference, **ServDes.2009** DeThinking Service, ReThinking Design

Edited by
Simon Clatworthy
Janne-Valtteri Nisula
Stefan Holmlid

N.B. citing work from this proceedings should be done using 2009 as publication year, e.g.

Akama, Y. (2009). The real practice of service design. In Proceedings of 1st Service Design and Service Innovation conference, ServDes.2009. Linköping Electronic Conference Proceedings, 59. Linköping, Sweden: Linköping University Electronic Press.

http://www.servdes.org/
http://www.aho.no/en/aho/news-and-events/service-design/

Linköping Electronic Conference Proceedings, 59
ISSN 1650-3740 (online)
ISSN 1650-3686 (print)
ISBN 978-91-7519-771-5
http://www.ep.liu.se/ecp_home/index.en.aspx?issue=059

Linköping University Electronic Press
Linköping, Sweden, 2012

History of ServDes.

The ServDes conference was born on a bridge in Pittsburgh U.S. during the Emergence 2007 Service Design Conference organized by Carnegie Mellon University. Professor Simon Clatworthy (AHO), Senior lecturers Virpi Kaartti (Laurea UAS) and Janne-Valtteri Nisula (Laurea UAS) decided to create a scientific multidisciplinary Nordic Service Design & Innovation conference. Soon assistant professor Stefan Holmlid (Linköping University) and professors Nicola Morelli and Christian Tollestrup from Aalborg University joined the initiative. ServDes founding members are: AHO, Laurea UAS, Linköping University, Aalborg University.

The first Nordic Conference on Service design and Service innovation was held in 2009 in Oslo, November 24th – 26th. It was divided into 3 days entitled business, crossover, and research. The conference did of course leave some digital footprints, most of which are collected on this page.

Business day

Themes of the first day included how service design can be used for public and tourist services, to encourage behavioural change, and transitioning from a product focus to a service focus. Speakers included Lavrans Løvlie from Live|work, Jay Parkinson from Hello health, Marc Stickdorn from MCI, and Richard White from User Voice.

Crossover day

The second day featured many interesting workshops and topics such as methods, education, design thinking and leadership, prototyping services, and how to capture customer input. Download material here.

Research day

On the last day, a lot of interesting presentations were given on topics with both applied and theoretical focus. Over 50 abstracts were submitted and the quality and relevance were high for the presented works. This was the first complete day dedicated to service design research and the result can be viewed here.

There was of course also a lot of things happening around the conference as well, a co-created tapas dinner, a visit to the beautiful opera-house, and an exhibition set outside the conference rooms.

DAY 1: BUSINESS AND INNOVATION DAY

The Government Design Competition 2010.
Nina Berre. Norsk Form

How Service Thinking through Design creates new service opportunities.
Lavrans Løvlie. LiveWork

Life in 2020.
Erik Kruse. Ericsson

The Horsepower Challenge. An insurance company, a hacked pedometer and changed lives.
Matt Cottam. Tellart

Service Montages: how services and storytelling create compelling service experiences.
Christian Palino. Adaptive Path

Hello Health - Innovative primary healthcare.
Jay Parkinson. Hello Health

Service Design in the UK. How the Design Council managed innovations in public services.
Marianne Guldbrandsen. The Design Council

Putting users at the centre of Innovation.
Richard White. User voice

Innovation in Tourism
Marc Stickdorn. MCI

Using Service Design principles in ICT projects.
Kjell Reenskaug. Making Waves

DAY 2: CROSSOVER DAY

I) Teaching/Service Design Education

Service Design at Elisava
Ariel Guersenzvalg, Barcelona

Developing International Expertise Services
Jukka Ojasalo & Rob Moonen, Laurea

II) Methods/tools - combined workshop

The Serpe prototyping tool
Aprile Walter

Best tools and methods for service design
Real, Perez & Orozco

Mobile tool for customer input along the service journey
Marc Stickdorn, Jakob Schneider

Trend forecasting as a tool for Service Design
Lee Hyang Eun

III) Systems thinking - understanding services as a system

Systems thinking as the foundation for service design (half day workshop/tutorial)
Kristian Astrup Nielsen, Jonas Astrup Nielsen

IV) Applying design thinking and methods to services

Applying design thinking and methods to services.
Stuart Bailey.

V) Challenges in digital services provision

Services in e-learning
Joyce S R Yee, Lauren Tan and Phillip Meredith

Designing Mobile Service Experiences, an exploratory study
Sarmento

Tibi and Dabo Robots: Service Design for Urban Settings
Jimenez, Castan Favaro

Service Design and the development of Secondbrain.com
Lars Georg Teigen, Johan-Christian Høgåsen-Hallesby

VI) Designing public services

Service Design - what do we want it to be known for
Ida Vesterdal

Innovation in health services
Francis D'Silva

The challenge of “not invented here” when designing public services
Kaja Misvær

Civic services on an infrastructure founded on search
Bjørn Tennøe and Kjersti Corneliussen

DAY 3: RESEARCH DAY

Participative, Co-operative, Emancipatory: From participatory design to service design
Stefan Holmlid, Linköping University

Warts-and-all: The real practice of service design
Yoko Akama, RMIT University

Beyond the Experience. In search of an operative paradigm for the industrialisation of services
Nicola Morelli. Aalborg University.

Bridging the gap between brand strategy and customer experience. The target experience tool
Simon Clatworthy. Oslo School of Architecture and Design, AHO.

Parallel session 1a: Service Design Thinking, Service Design Leadership and Service Design Management (Large Auditorium)

Exploring Overlaps and Differences in Service Dominant Logic and Design Thinking
Katarina Wetter Edman. University of Gothenburg

Service Design Leadership
Judith Gloppen. Oslo School of Architecture and Design

Managing Stakeholder Involvement in Service Design: Insights from British service designers
Qin Han. University of Dundee

Parallel session 1b: Prototyping and conceptualising services. (Small auditorium)

Exemplars in Service Design
Johan Blomkvist and Stefan Holmlid. Linköping University

Someone Else's Shoes - Using Role-Playing Games in User-Centered Service Design
Peter Kaario, Kirsikka Vaajakallio (TaiK); Vilma Lehtinen, Vesa Kantola, Kai Kuikkaniemi (HIIT).

Conceptualising services – developing service concepts through AT-ONE
Christian Tollestrup. University of Aalborg

Parallel session 2a: Visualisation during the Service Design process

Communicating through Visualizations: Service Designers on Visualizing User Research
Fabian Segelström. University of Linköping

Visualtiles - Communication tools for (service) design
Chiara Diana, Elena Pacenti, Roberta Tassi. Domus Academy

Exploring Service Blueprints for Multiple Actors: A Case Study of Car Parking Services
Thomas Wreiner, Ingrid Mårtensson, Olof Arnell, Natalia Gonzalez, Stefan Holmlid, Fabian Segelström. University of Linköping.

Parallel session 2b: Social Engagement and Co-Creation

Co-Designing Sustainable Solutions - Combining Service Design and Change Laboratory
Satu-Mari Korhonen and Juha Kronkvist. UIAH.

'Love Lewisham', improving stakeholder satisfaction in local government service: A case study of strategic public sector service innovation
Alison Prendiville. University of the Arts, London.

Clinicians as Service Designers? Reflections on current transformation in the UK health services
Valerie Carr, Daniela Sangiorgi, Monika Büscher, Rachel Cooper, Sabine Junginger. Lancaster University.

Poster presentations

Informal service offer: Peddling
Dilek Akbulut, Gazi University

Index of contributions

page

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Warts-and-all: the real practice of service design

Dr Yoko Akama
School of Media and Communication
RMIT University
GPO Box 2467V
Melbourne
Victoria 3001
Australia
Tel: +61 (0)3 9925 9807
Fax: +61 (0)3 9639 1685
e-mail: yoko.akama@rmit.edu.au
www.rmit.edu.au

Introduction

Service design practice, discourse and education are still nascent in Australia where most designers are trained in fields such as industrial design, architecture, communication design, and to a lesser degree, interaction design (a field that is equally nascent). Academic research on service design has so far been limited (Kimbell and Seidel 2008) and much of the knowledge generated from business contexts has been proprietary (Tether 2008). These factors have led to a lack of critical engagement in examining and investigating the complex contexts that surrounds service design projects. This also adds to the challenging obstacles for designers seeking to establish and embarking upon a service design-led practice in Australia.

The paper critiques service design case studies that are often documented and reported in a manner that abstracts and generalises the realities of this field as obstacles to understanding the 'real' practice of service design. Through attempts to clarify, systematise and advocate the benefit of service design, authors might gloss over the messy realities and the contextual knowledge grounded in action. This has resulted in practice-based knowledge being 'lost in translation'. This is a critical shortfall. It becomes a disadvantageous factor in developing learning frameworks for designers in similar contexts to Australia who are seeking models, methods, case studies and discourse on service design from established agencies and research institutions on service design across Europe. These case studies can, by default, construct an idealistic scenario of service design that omit issues such as relationship building, resources,

skill-sets and disciplinary boundaries that are integral to the realisation of projects and the adoption of a service design-led practice.

Within this context, the paper offers learnings drawn from a case study of a team of communication designers in Australia who attempted to undertake a project from a service design perspective. As practice-based research, reflection and critique was emphasised to reveal knowledge generated and situated in action. Numerous questions rather than answers have emerged from reflecting on the case study, which are presented as 'lessons learnt'. These lessons highlight logistical obstacles, issues of losing disciplinary identity and change management barriers that project stakeholders faced when embarking on service design projects. The discussion in this paper argues for the importance of documenting and reporting case studies that captures the grounded contexts as a way to facilitate knowledge generation and transfer. It also highlights the need to integrate knowledge from organisational theory and change management that examines, documents and addresses human-related challenges that are often omitted from service design discourse. These learnings are offered to the community of potential service designers who are broadening their current disciplinary practice and are seeking opportunities to create a service design practice. The aim is to provide 'signposts', particularly for communication designers intending to apply service design methods and thinking in their current or future projects.

One of the values of generating knowledge in service design and disseminating this as research is to assist and enable more designers to enter in this field. Our responsibility as design researchers is to apply service design thinking in the way we disseminate this knowledge to others. The unique knowledge situated and generated from service design context is complex, yet typical of practice-based design research. In comparison to those who argue for a 'clear consensus or an over-arching unifying framework' for service design (Saco and Goncalves 2008, p. 12), the paper argues that it can never be, nor should it be framed in such a way. If service design practitioners truly believe in its value and agency to companies, organisations and public institutions, then, accounts of the practice needs to be captured and articulated in ways that reflect the lived world.

Embarking on service design

Service design's strength lies in its resonance with fields such as industrial design, communication design, interaction design and experience design, as well as its overlap with service development, management, operations and marketing (Ainamo 2008; Holmlid 2007). This resonance enables designers, trained in other fields and disciplines, to embark on creating a service design-led practice with a degree of familiarity, as well as readily seize opportunities in undertaking service design. This paper reports from a case study of communication designers seizing an opportunity for broadening their design thinking through embarking on service design. These communication designers already had familiarity and knowledge of service design methods and discourse. Yet, typical of the design commissions that came through their studio door, the design project was not defined as service design by their client. Instead, the project in discussion began its life as a conventional web design brief. The client was a non-profit organisation that provides engineering knowledge, technical assistance and resources to communities in developing countries. The designers, whose main domain and experience lay in visual communication and interaction design, were commissioned to provide aesthetic and experiential guidance to the web-programming development that the clients had already initiated.

The discussion that follows will explain how the designers saw an opportunity to shift a project that had a technological, 'problem-solving' emphasis, to a holistic design approach to re-consolidate the activities, engagement and experience of an organisation and their stakeholders. In attempting to do so, the author reflects on key incidences and challenges that were encountered throughout the project duration, to reveal learnings that are situated in practice.

Project background

Upon discussion with the clients, the designers quickly realised that the project had potential to be a service design project. The website brief included developing functions of web software that would allow organisation members to share, organise, generate knowledge and disseminate information, in order to assist communities on the ground more efficiently. The designers saw potentiality for the website to be a 'hub' for organisational staff, members and communities on the ground to meet, discuss and work on-line. This was potentially a new service for their stakeholders that their current web system could not offer. In parallel, the organisation was transitioning its objective from a provider of engineering and technology advice, to an organisation that facilitates and provides resources to network, share and exchange specialized engineering knowledge for education and community development. As such, they were looking at the website as a catalyst and a vehicle to launch their re-branding and provide this new 'service'. The designers saw this as an opportunity to embark on a holistic design approach to re-consolidate the activities, engagement and experience of the organisation to align with its new brand and vision.

The project description occupies hybrid spaces of interaction design, communication design and system's design. For this reason, Stefan Holmlid (2007; 2008) and many other experts in service design who argue for a clearer differentiation between the various fields could insist that the ambiguity is problematic, and therefore the project does not fit their definitions of service design. Discussion on disciplinary boundary is salient and aspects of transitioning it are addressed in this paper. However, the author asks the readers to overlook the project's ambiguity of hybrid fields. The project was an attempt to *embark* on service design and to shift the focus *towards* it. It therefore does not claim that it was successful in being a service design project – in fact, there were many obstacles that had hindered this from happening.

A critique of 'simple recipes' and revealing 'warts and all'

In most service design case studies, what should manifest here is a discussion of tools, methods and interactions that were undertaken in order to design various services for the stakeholders. This would enable this case study to be nicely and neatly documented with novel insights for communication designers. However, in contrast to the 'neat and tidy' version, the author will reveal the 'warts and all' side of the story. The aim for this is to highlight the misleading potential of case studies that frame descriptions and discussion of tools, processes and systems generically. Generic description of tools are presented, for example, in Service Design Tools website (Tassi 2009) and an overview of methods and tools presented in Stefan Moritz's 'Practical Access to Service Design' (2005). The 'simple recipes' depicted here have lost the complex realities of design practice in its endeavor to promote 'toolkits' for service design. Service Design consultancies such as IDEO, Live Work and Engine use tools and techniques to enhance growth and provide differentiation for their clients, yet these consultancies have few distinguishing features based on service design methods alone. Snowden (2004, p. 148) cautions of 'management fads' from industrial best practice that are 'often over simplistic recipes put together in haste without

thought or awareness of theory'. Such 'fads' tend to claim universality in its effectiveness, 'driven by the business needs of consultancy firms and technology providers who evidence an almost evangelical zeal in their claims for the benefits of adopting the latest approach' (ibid). This points to an obvious omission in service design discourse – situated knowledge, experience and human contexts are also critical agents in service design. Methods and tools alone cannot enable agency for designers or stakeholders in a project – other human-centred and logistical issues are integral to the realisation of projects and undertaking a service design-led practice. These issues will be explored further within this paper.

Service design, by nature, is not easy to undertake. Germination of projects begins in many different ways, as the section above explained, and the reality of practice can often be a 'frankenstein' design of all sorts when a coordinated, well-communicated and well-prepared approach is not in place. The lessons learnt from the project reflections are summarised under themed headings below. These lessons are offered to the community of potential service designers intending to embark on a service design-led practice.

Lesson one: Challenges in shifting the project focus

When the designers realised that the project required a service design approach, they initiated discussions with clients to re-evaluate the focus of the project. The discussion attempted to move the project emphasis away from designing the technicality of the website to examining the project more holistically. In short, the discussion centred on re-writing the brief and modifying the end outcomes. Two key issues then surfaced – one issue was the re-negotiation of costs and timeline; the other issue was a re-definition of roles.

Personas and scenarios

Broadening the project scope necessitated the designers to have a greater understanding of the organisation's diverse members, staff, volunteers and community groups. Key to this understanding was to imagine what experience and relationship these stakeholders could have with the organisation and situating the website as a facilitator of interactions, experience and relationship building. These understandings was critical in designing the website, the brand experience and any potential interaction among the various stakeholder groups. The clients quickly recognised the value and centrality of this knowledge in driving the design process, however, the significance of this knowledge was not fully understood until a persona and scenario exercise was conducted with them. Due to lack of time and funds to conduct in-depth interviews with the variety of stakeholders around Australia and South East Asia, several staff who daily work with these stakeholders participated in a two-hour workshop. Working in groups, the staff pooled and consolidated the knowledge they had of their stakeholders. The persona-hypothesis exercise was a catalytic tool in mapping out who the variety of stakeholders are, what their role, motivations and concerns might be. Then, hypothetical scenarios were generated to capture what the personas relationship and interaction with the organisation could be, based on the organisation's new vision. This activity facilitated the designers and clients to share and agree on a common purpose for the project. This was a necessary conceptual shift that was required to re-write the website brief that was technical and functionality-driven.

The effective use of personas and scenarios are well-documented in service design as a way to re-frame and re-position the project brief and scope (see eg. Jégou & Manzini 2008; Parker & Heapy 2006). For this reason, it is of little interest to the author to discuss the

details of these tools, and instead, the following discussion reveals the poorly documented practical consequences of shifting project focus and boundaries.

The persona-hypothesis and scenario workshop was effective in communicating and clarifying how the project focus can be re-situated to manifest and facilitate the organisational vision. However, the client signaled reluctance in paying more for the project and pushing back the delivery timeline. They were a non-profit organisation with restricted funds. It was critical that the website was launched at their annual gathering of members. The clients perceived that the designers had 'instigated' the project shift that resulted in 'moving the goal posts'. As a result, the designers were asked to reduce their commission rate and work longer hours in order to deliver what was discussed. Despite the shortcoming, the designers still saw potential in continuing with the project. They saw value in delivering benefits to the organisation as well as the value to their learnings, experience and research. The root of the problem was the client's expectation for an outcome that they had not budgeted for, due to lack of experience and understanding of working with designers in such contexts. The client's lack of understanding will be discussed further in another lesson-theme. In the end, the project was predominantly funded through the university that the designers were associated with. Even though such compromises navigated the project through tricky waters, the issue of cost and time pressures dogged the project throughout its duration. In hindsight, it was naive and unsustainable to undertake a project of this scope and kind with such limitation on resources placed unfairly on one party.

Issues of re-framing a project scope and focus, and its associated fiscal and time-pressures are rarely discussed in service design, even though it's a common complaint conversed around the designer water cooler. Placing an emphasis on human-centred, experiential, holistic approaches to designing 'services' and systems are ideal models to strive towards. Established institutions and design agencies, such as EMUDE (Jégou & Manzini 2008; Meroni et al 2007) or ThinkPublic (2007) are exemplars of social innovation in providing inspiring visions for a better future. Yet, as this case study reveals, the ideal models are harder to manifest in reality even for well-intended, socially-focused organisation. Designers equipped with service design methods and experience can only go so far if the clients are unprepared and under-resourced in initiating changes they desire. The author argues for more explicit and candid accounts that detail how others may have negotiated these obstacles with their clients so that other designers may benefit from past experiences.

Lesson two: Transferability of skills and knowledge

The knowledge expertise and discipline-specific skills provide anchor to ground and inform designers, as well as provide them with confidence and identity. However, a service design project often requires more skills and knowledge-base that are covered within one disciplinary field alone. The complexities of service design projects require 'generalist' professionals with broad expertise (Koskinen 2009). Popular service design methods, such as card games, story-telling and mapping exercises are a mixture of tools originating from various fields such as ethnography, interaction design, industrial design and communication design. Multi-disciplinarity is often a characteristic of service design projects, yet some case studies (see eg. Koskinen 2009) do not discuss *what it means* and *how it feels* to move beyond the boundary of one's own disciplinary field. This aspect is an omission that neglects human-centred concerns of the designer, which contrasts with emphasis for the concerns of clients and other stakeholders in a design project. Multi-disciplinarity promotes the need for service designers to be a 'jack of all trades', when the majority have been trained to be 'masters' in

one disciplinary field. What skills and knowledge base can be transitioned to move into a service design 'space'? What can be acquired and what can be left behind? The project under discussion provided some illumination to these questions.

Transition of roles is a frequent and necessary part of a designer's skill, requiring agility and versatility in moving between negotiation, ideation, facilitation, production, collaboration, organisation, and so on. In this project context, one of the communication designers adopted a project-management role to coordinate and facilitate the project. In this role, visualisation skills was utilised to map each stage of the project. This skill was critical in documenting and capturing conversations, proposing alternative design directions, highlight structural, functional and conceptual holes of the project, and brief other team members who were absent from the discussions. Agile, lateral thinking skills, common to design, were also called upon when negotiating tricky problems. To add, familiarity with interaction design, experience design and human-centred design provided critical conceptual scaffolds in keeping the project true to its re-written brief, and prevent any design decisions and processes from falling back into technical, functional realms. The valuable role of such skills and knowledge background are commonly reported in many case studies in service design (see Jégou & Manzini 2008; Kimbell & Seidel 2008) so further elaboration will not be made here.

However, lesser-known and unrepresented skills are the ability to guide, facilitate, critique, propose, listen, communicate and accelerate discussion among project stakeholders. In a project-management context, these skills became invaluable. Interestingly, these were teaching and learning skills developed as an educator-researcher. In particular, the 'scaffolding' that designers create (Sanders 2002) and educators can provide (Bruner 1996) in co-creating a shared understanding and to build an open, learning, exploratory, discursive environment was significant in this project context. The project manager was constantly pursuing this role, summoning these skills and experiences in action research in order to navigate the project journey. Undertaking roles and tasks, as-and-when they were perceived to be effective, was a necessary requirement to intuitively 'feel their way' through the project.

This experience contrasts with graphic designers who were also on the project team. These designers were brought on the team to develop the new brand for the organisation. They had no experience and knowledge of service design, and hence, found the ambiguous qualities of designing a 'service' experience, problematic. Their prior training as graphic designers emphasised ideation, visualisation, crafting images, typographic treatment and production processes. Their confidence in re-branding lay in skills of visual identity design. Some tasks required these skills, however, the design process required them to 'let go' of the need to provide aesthetic solutions. It was important for them to open up their understanding of branding from designing 'things', to triggering experiences and generating potential engagements. However, they had found this task uncomfortable and confusing. The graphic designers had genuine passion in design through expressing their creativity visually. This was how they identified their role. Much of the confusion can be accounted to a lack of experience and preparation for undertaking a project of this kind. Yet their feeling of uncomfortableness highlights a significant obstacle from transitioning from one field to another, that is often obscured in service design literature.

Loss of identity

The move away from 'products' to 'services' signals a warning call to many designers who have defined their skills, experience and applied knowledge with the production of artefacts (eg. graphics, furniture, buildings, technology or fashion). It is an identity crisis that is

looming over the horizon. A designer's insecurity is also fuelled by the role of sustainability in service design that promotes the reduction or removal of 'things' (Jégou & Manzini 2008). Insecurity is also propelled by a cynical view towards service design that by losing their 'mastery', designers simply become a 'jack of all trades' (Poynor 2008)[1]. The removal of the artefact is akin to robbing a designer of their identity. They are no longer bound by the things they 'make'. This issue was causing anxiety and confusion among the graphic designers on the team.

In service design, designers are defined by what they can enable, not what they 'make'. Paradoxically, this definition compounds the confusion that had already existed on what design is and what it can provide. Tether (2008) explains such confusion as barriers that creative, innovation-related design practitioners face from businesses. Often, businesses demand relevancy of design through its cost, role and activities with clear, tangible rewards. However, Tether argues that design is a complementary asset that enhances the value of other assets. Design's contribution to a company's bottom line is a difficult quality and activity to demonstrate. Service design is an even harder value to 'sell' to new clients. This is due to design qualities being intangible and regarded as a complementary or potential asset. Designing for a future scenario also requires many months and years to manifest. The lack of understanding design's fiscal contribution echoes observation from the case study discussed earlier when the clients were reluctant to cover the cost, time and resource allocation in designing and implementing their desired service.

Issues of losing one's identity, loss of confidence and expertise that stem from stepping out of a specific disciplinary field are significant obstacles when embarking on service design projects. There is a sense of liberation as well as mourning when leaving one's disciplinary identity to adopt another. The usual and familiar expectations need to be re-negotiated within oneself, and those who work together on projects. Unless a designer is trained as a service designer and educated in a service design curriculum, it is assumed that they will embark on a project with their particular sets of disciplinary knowledge, training, experience, 'cultural' baggage and expectations, whether they are architects, industrial designers or graphic designers. These are complex challenges in crossing disciplinary boundaries and remain hidden and often undisclosed in service design discourse. Many of those practicing in service design, for example, Chris Downs from Live Work, or Clare Ryan from Seed Foundation or Ezio Manzini have backgrounds in industrial design. They have successfully transitioned from one field into another; yet, the signposts are not given for those who want to follow their path. As the discussion above highlights, a critical examination is required in order to illuminate how designers can make the transition from their field of expertise into a broader context.

1 Chris Downs from Livework presented one of their service design projects at conference on the future of communication design. Among the audience graphic designers, there was a mixture of anxiety and uncomfortableness. Many acknowledged that the projects by Livework represented the way the design industry was evolving. However, some felt that they were ill-equipped in making this shift, causing concern that they may be left behind. A well-known critic in graphic design, Rick Poynor, had commented on this incident on the Eye journal blog http://blog.eyemagazine.com/?p=73.

Lesson three: complexity of power dynamics and human relationships

The persona and scenario workshop undertaken by staff and designers was a key activity in sharing ownership, cultivating a common purpose and re-situating the project focus. Frequent meetings and discussions continued with two staff members, who were critical in communicating the progress back to the organisation. These two members of staff became the advocate for the organisation, informing the design process with knowledge of organisational activities, its culture, community and membership. Organisational values of inclusiveness, hands-on learning and empowerment were central qualities and experience of the website design and branding. These values were also reflected in the way staff members and designers conducted their meetings, due to a natural synergy and respect of each other's knowledge they brought to the team. These discussions were critical in building a collaborative working relationship among the team, fostering an open, informal, inclusive forum to air any concerns that surfaced during the project.

This collaborative process later ran into problems when early prototypes of the website and branding were presented to other staff in the organisation for their feedback. Even though the overall direction was considered effective and the feedback was positive, the director of the organisation signalled discontent with the project. What was most concerning to the team was the director's evaluation of the project purely based on personal tastes and expectations. The team initially assumed that the director had not been briefed thoroughly on project process and progress via the two staff members who were part of the team. However, upon initiating a meeting with the two staff members and the director, the team quickly realised that the director had held personal ideas of what the website should be. Instead of trusting his staff and the design team to continue with the progress made, he insisted on taking control, exerting his power as the organisation's director and demanded changes to be made to the website that he felt were important. What was most alarming was his lack of respect for the staff and designers who were perceived as being subservient to his position during this difficult meeting. The team acknowledged that his opinion was valid as a stakeholder, yet they raised concern that his desires could not over-ride the consideration of the broader stakeholder group that had been discussed and consolidated by this stage of the project.

Issues of power and control

This critical incident illuminated rifts within the management of organisation, the values that they espoused to have, and the director's resistance to change that impacted on the collaborative approach that was underway. Managers that do not trust their employees are commonly reported as one of the obstacles in creating an effective working environment (see eg. Best 2006; Jones 2003). Persons of authority can often be resistant or threatened by change, and outside consultants brought in to facilitate organisational change can also be easily dismissed by these figures on the grounds that the consultant 'did not really understand our situation' (Schein 2002, p. 37). Design teams in the past have navigated through politics and power dynamics that can potentially hinder ways in which people have input into a design process (see eg. Akama 2008). Furthermore, incidences of this nature can happen, even in non-profit organisations that are committed to inclusive, participatory and empowering values in their activities, mission and vision (Akama 2007). The director's intervention in this project context relates to the discussion earlier on the ambiguity and intangibleness that surrounds the value of design. His compulsion to take control could be

seen as a consequence of desiring tangible, immediate results from a design process that was still evolving and nascent in creating future services for the stakeholders.

Given that these power-dynamics are common challenges in working and designing environments, the team since reflected that the director should have been involved throughout the twists and turns of the project journey. Even though he participated in the personas and scenario workshop, the director was unable to attend any subsequent meetings due to other pressing commitments. This realisation highlights the significance of a service design team consisting of representatives who can inform and are valued by key decision-makers in the groups and organisations they represent. Building 'authentic trust' (Solomon and Flores 2001) among team members, between representatives groups and their organisations, is a vital process that cannot be taken for granted. It is a point argued by Solomon and Flores who explain that 'authentic trust' is a personal responsibility and commitment, requiring practice and action, rather than optimistic belief. Working with those with established relationships can somewhat circumvent these issues. However, without the presence of shared human qualities among project stakeholders, subsequent discussions, relationship building and any variety of service design methods cannot yield fruitful outcomes.

One can argue that a more informed and authentic collaborative process can begin once these issues have surfaced and have been discussed among project stakeholders. The designers have reflected on this project experience and discovered that there were significant shortfalls in communicating the value of the 'service' that was being designed, particularly to the director of the organisation. More could have been done to support and facilitate the changes among the staff and broader community. The project was poorly timed, poorly supported and poorly resourced. However, the wisdom of hindsight does not resolve the variety of challenges that this project encountered. These challenges include overcoming power-relational dynamics; identifying decision-making agents who can advocate and implement systemic changes; establishing authenticity of trust among project stakeholders and identifying conflicts in espoused value systems. Perhaps one could have come to know the real issues underlying the project *only* after the project had commenced – certain things may not be able to be predicted or circumnavigated. These human-related challenges are familiar and common occurrences in organisational theory and change management discourse (see eg. Schein 1996; 2002). Echoing the point made above, Schein (1996) discusses that initiating the intervention is the only way to learn the essential dynamics of systems within an organisation. Similar obstacles will surface in service design contexts because design interventions manifests within systems and organisational structures, impacting and filtering through to the behaviours, thought processes, feelings and values of every stakeholder.

In conclusion

Service design can, and does, offer innovative ways for re-shaping interactions that can occur among people. If one of the characteristics of service design is to facilitate organisations and communities to undergo a journey of transformation (Mager 2004), this journey of transformation needs to be *facilitated for designers* as well. This paper has only highlighted three lessons out of a myriad of experiences that had potential to be discussed here. Other experiences that were left out due to length of paper include relationship building workshops among team, negotiation between research-led and practice-led processes, agency of design in facilitating change management, and much more. Learning through practice is a perpetual

process that can enable designers to innovate as they encounter changing contexts and conditions. Experience of undertaking a service design project needs to be captured and articulated in ways that resonates with the realities of design practice so it can caution, highlight, provoke and provide rich descriptions of practice-based knowledge to designers. In comparison to service design agencies and practitioners who provide 'simple recipes' and proprietary methodologies that have little distinction, the paper argues that service design processes and methods should never be severed from its complex human and situational contexts. Design that is generalised, sanitised and exported out of its applied contexts loses its power and agency for potential interventions and transformations. Design researchers and practitioners need to heed caution from promoting service design methods in this way. If design practitioners truly believe in the value and agency of service design to organisations and public institutions through their contribution in addressing the social and environmental problems of our time, then, 'warts and all' of the lived world needs to be reflected in the accounts of their story-telling.

Acknowledgement

I would like to acknowledge Dr Miek Dunbar, Dianne Moy from the Victorian Eco-Innovation Lab, Melbourne University and Design Research Institute, RMIT University for their assistance in writing this paper.

References

Ainamo, A. (2008). Services innovation and operations: learning from services marketing. In L. Kimbell & V. P. Siedel (Eds.), *Designing for Services - multidisciplinary perspectives* (pp. 10-11). Oxford: University of Oxford.

Akama, Y. (2007). Designers' Agency: Human-centred Design in Communication Design Practice. *Design Principles and Practices: An International Journal, 1*(2), pp. 1-6.

Akama, Y. (2008). *Politics makes strange bedfellows: addressing the 'messy' power dynamics in design practice.* Paper presented at the Undisciplined – Design Research Society Conference, Sheffield, UK.

Best, K. (2006). *Design Management: Managing Design Strategy, Process and Implementation*. Lausanne: AVA Publishing SA.

Bruner, J. (1996). *The culture of education*. Cambridge, Massachusetts: Harvard University Press.

Holmlid, S. (2005, 12th September 2005). *Service Design methods and UCD practice.* Paper presented at the Interact, Rome, Italy.

Holmlid, S. (2007). Interaction design and service design: expanding a comparison of design disciplines [Electronic Version]. *Design Inquiries*, pp. 1-8,

Jégou, F., & Manzini, E. (2008).'Collaborative Services: Social Innovation and Design for Sustainability', Edizioni POLI, Milano, pp. 29 – 41.

Jones, M., & Samalionis, F. (2008). 'From small ideas to radical service innovation', *Design Management Review,* Winter, 19, 1, pp. 20-26.

Jones, P. (2003). Embedded values in process and practice: Interactions between disciplinary practices and formal innovation processes. *Design Management Journal, 2*, pp. 20-36.

Kimbell, L., & Seidel, V. P. (Eds.). (2008). *Designing for Services - multidisciplinary perspectives.* Oxford: University of Oxford.

Koskinen, J. (2009). *Service Design - perspectives on turning-points in design.* Retrieved 6th August 2009, from http://www.jarikoskinen.org/

Meroni, A. (ed) (2007). 'Creative Communities', People Inventing Sustainable Ways of Living, POLI. design Milano.

Parker, S., & Heapy, J. (2006). *The journey to the interface*. London: Demos.

Poynor, R. (2008). Rick Poynor responds to 'New Views 2': 'It's the end of graphic design as we know it.' (Vol. 69). Eye blog.

Saco, R. M., & Goncalves, A. P. (2008). 'Service Design: An Appraisal', *Design Management Review,* Winter 2008, 19, 1, pp. 10-19.

Sanders, E. B. (2002). Scaffolds for Experiencing in the New Design Space. *Information Design*.

Schein, E. H. (1996). Kurt Lewin's change theory in the field and in the classroom: Notes toward a model of managed learning. *Systems Practice, 9*(1), pp. 27-47.

Schein, E. H. (2002). Models and tools for stability and change in human systems. *Reflections, 4*(2), pp. 34-46.

Snowden, J. (2004). The landscape of management: Creating the context for understanding social complexity. *The landscape of management: Creating the context for understanding social complexity, 6*(1-2), pp. 140-148.

Solomon, R. C., & Flores, F. (2001). *Building Trust in Business, Politics, Relationships, and Life*. New York: Oxford University Press.

Tassi, R. (2009). Service Design Tools. Retrieved 5th July 2009, from www.servicedesigntools.org

Tether, B. (2008). Service design: time to bring in the professionals? In L. Kimbell & V. P. Siedel (Eds.), *Designing for Services - multidisciplinary perspectives* (pp. 7-8). Oxford: University of Oxford.

ThinkPublic. (2007). thinkpublic - we help people make things better. Retrieved 10th August, 2009, from http://thinkpublic.com

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

INFORMAL SERVICE OFFER: PEDDLING

Dilek AKBULUT

Gazi University, Faculty of Fine Arts, Department of Industrial Design

Abstract:

Informal sector, which is defined with several names such as disguised unemployment, illegal economics or marginal economics, emerges as earning opportunities outside the modern system which operates with limited resources. The term "informal sector" does not only imply the processes addressed to manufacturing, but services as well. Informal sector retailing act, which will be mentioned as "peddling" is regarded as an innovative service handled with small capital or none. Thus, the sector operates both in production and distribution of goods which will be mentioned as "catchpenny articles" sold on street peddles. The study introduces peddling as the retail service offered by informal sector and aims to investigate the qualities peculiar to peddling act.

I. Introduction:

The wide range of goods and services peculiar to informal sector are identified to be low-cost, labor intensive, unregulated, competitive and unrecorded. Falling outside the reach of government regulations, peddling appears as an immediate service offered by informal sector that responds a need whether identified or unidentified by the user. Peddling differs from formal marketing in various aspects such as the manner of expansion, in response to customer's demand, in warranty and product returns, in product range sold. As a retail service, peddling highly depends on presentation of the product. In formal sector any item launched to the market is supported with a certain presentation such as package, advertisement, promotion. Lacking such kind of supports, informal sector is forced to create its own solutions for presentation. Peddling tries to compansate this lack by street shows led by peddlers.

A service is regarded as an intangible product which is consumed as experiences rather then things. In this sense, services are differentiated from goods since the delivery and the

consumption of a service is immediate where the consumer and the service provider are present (Kaplan, 2008). Service design is concerned with designing the process that is led by the service provider, and that creates pleasing experiences in the customer. However a service cannot be totally separated from tangible products. A service may involve the consumption of both tangible and intangible components at the same time.

Service design operates in close contact with interaction and industrial design (Holmlid, 2007). Thus, manufacturing industry, which depends on high investments contributes to service sector with the production of tangible industrial goods. This is not the case in informal sector. In both manufacturing and service aspects, informal sector operates with limited resources and tries to compensate the gap between the formal sector. In informal sector, the items produced by small scale informal production units can only meet their customers on street peddles and the service provider, which is the peddler, tries to substitute the promotion act. Through the study, characteristics of peddling act with respect to services are aimed to be examined.

II. What is Informal Sector?:

Informal sector can be defined as a legitimate and an illegitimate income opportunity varying from street vendor to home industry which provides a wide range of unrecorded, low-cost, labor intensive, unregulated, competitive goods and services. The primary objective of informal sector appears to generate employment for the participants rather then to maximize profits (Lubell, 1991). In general, informal sector covers all the acts which cannot be identified with the traditional measurement methods of economics and which are partially reflected to the national income statistics. While formal sector large-scale enterprises are closely related to the state and regulations, informal sector gives a chance to the local entrepreneurial talent (Gilbert, Gugler; 1984).

Informal sector's appearence is discussed to be a result of modern sector's (particularly industry) inability to absorb a growing surplus of manpower. It was the ILO (International Labor Organization) report on Kenya (1972) which launched and popularized the concept of informal sector. The formal and informal sectors were identified by the mentioned ILO report, as shown in Table 1.

Table 1. Characteristics of informal sector in comparison to formal sector (Adapted from ILO report, 1972, cited by Gilbert and Gugler (1984)(p:73))

INFORMAL SECTOR	FORMAL SECTOR
Ease of entry	Difficult to enter
Reliance on indigenous resources	Frequent reliance on foreign resources
Family ownership of enterprises	Corporate ownership
Small scale of operation	Large scale of operation
Labor-intensive and adopted technology	Capital intensive and often imported technology
Skills acquired outside the formal school system	Formally acquired skills, often expatriate
Unregulated and competitive markets	Protected markets (through tariffs, quotas, and trade licenses)

Informal economy is defined in four sub groups by OECD:

» Underground Production; in which the economic legal acts are unrecorded to facilitate tax payment avoidance and tax evasion.
» Illegal Production; is whether the production, sales and maintenance of illegal products or the unauthorized production of legal products.
» Informal Sector Production; covers the acts led by small scale firms avoiding the corporate regulations.
» Household Production for own final use.

(Ercan, 2006)

III. Peddling as an Informal Service:

Types and services in the informal sector is divided into two parts as innovative service sector and illegal acts (Gilbert, Gugler, 1984). Peddling stands on the innovative service group tending to bring facilities with small capital or none (Akbulut 2008).

Peddling is an innovative service in terms of

INTERFACE: A service is always produced in a social and physical setting (Holmlid, 2007). This interface, is the meeting and contact point between consumer and the service provider and can be a source of innovation (Gallouj, 2002). In case of peddling, the interface is the street peddles where the catchpennies are displayed. As the owner of the peddle, the peddler reflects his creative responses in the organization and the demonstration of the goods. However peddling act does not allow work expansion with wider peddles, since this hinders

mobility and results in lack of accessibility. Consequently, work expansion is provided by increasing the number of individual peddles rather then expanding a single peddle.

SERVICE DELIVERY: The nature of interaction between customer and supplier depends on the unsteady nature of peddling. Supplier meets its potential customers on street. The interaction between them is informal and discontinuous. As mentioned before, service supplier, which is the peddler, also acts as the promoter of the catchpennies sold by leading street shows.

THE NATURE OF DEMAND AND SUPPLY: Peddler attempts to create the demand on catchpennies, or to answer a demand at an unexpected instance. He needs to be attentive and quick to catch the crack points in the market when the consumer demand is shifting.

THE PRODUCT RANGE: Many services are presented as combination of goods and services (Baida et.al. 2005). Peddling owed its success to offer goods ranging from luxury items to goods which are new and illicit (Fontaine, 1996). The success of a catchpenny does not only rely on its competitive price but also on its power to express itself on street peddles (Akbulut, 2009). A catchpenny can be produced whether by one of the subgroups of informal economy identified by OECD, or by formal sector enterprises. In fact, the product range on a peddle depends on certain determinants such as time, location of the peddle, the supplier of the catchpennies with whom the peddler is in touch. The product range on peddles changes due to national and religious days, weekends, end of working hours, even seasons. Likewise, different products are sold in different locations such as schools, hospitals, highways etc. The peddle on a specific location serves like a quick service for urgent needs, or the needs not considered until that time. The product supplier is another determinant for the product range. The catchpennies can be stock remainders, supplied from small scale production units or can be produced within home.

IV. Conclusion:

In general services are perceived as intangible products consumed as experiences. Although the peddling act offers tangible products, it appears as an innovative service by means of the products sold, the interface that the products demonstrated, the interaction between the customer and the supplier, and the supplier's attitudes against the changing market conditions. The limited resources of informal sector forces the peddler to quickly respond to the changing conditions and customize the retail act according to a number of determinants. Unlike formal sector services, peddling does not require a certain technology, manpower, cost or research and development. However the innovative approach of the peddler helps to provide a supply for a demand at an unexpected instance or to create and answer a demand not identified until that time.

References:

Akbulut, D. 2008. *Investigation of sources of creativity in catchpenny articles with particular focus on toys*, ICOVACS 2008 Proceedings Book, İzmir: İzmir University of Economics Publications.

Akbulut, D. 2009. *Geleneksel nesnelerin endüstriyel ürünlere dönüşümünde zanaat ve endüstri ilişkileri,* Tasarım ve ya Kriz 4. Ulusal Tasarım Kongresi 2009 proceedings book. İstanbul: Yavuz Matbaacılık.

Baida, Z., Akkermans, H., Gordijn, J. 2005. *Service Classification versus Configuration*. Workshop on product related data in information systems 2005. http://e3value.few.vu.nl/docs/bibtex/pdf/Baida2005ServiceClass.PDF.

Ercan, M. 2006. *Kayıt dışı ekonomive hızlı tüketim malları sektörü.* Ankara: Comart Uluslararası Organizasyon ve Tanıtım Hizmetleri.

Fontaine, L. 1996. *History of peddlers in Europe*. Durham: Duke University Press.

Gallouj, F. 2002. Innovation in services and the attendant old and new myths. *Journal of Socio-Economics.* 31 (2002): 137-154.

Gilbert, E., Gugler, J. 1984. *Cities, poverty, and development. Urbanization in the third world.* London: Oxford University Press.

Holmlid, S. 2007. *Interaction design and service design: expanding a comparison of design disciplines,* Nordic Design Research Conference 2007. http://www.nordes.org/data/uploads/papers/143.pdf

Kaplan, M. D. 2008. *Some insights on service design and brand integration*, ICOVACS 2008 Proceedings Book, İzmir: İzmir University of Economics Publications.

Lubell, H. 1991. *The Informal sector in the 1980's and 1990's.* Paris: OECD.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Exemplars in Service Design

Johan Blomkvist, Stefan Holmlid
Dept. of Computer and Info Science (IDA)
Linköpings universitet
581 83 Linköping
johbl@ida.liu.se

Abstract

Exemplars play an important role in applied service design but are largely overlooked in academic literature. So far, most design research in other fields has concerned how surface properties of exemplars are incorporated in the current design, but services are different from most other design disciplines in regard to material. To expand the understanding of how exemplars matter to service design, material from recordings and observations of design meetings have been analysed. We observed a pattern that exemplars, in this case, were introduced in communication in the format of micro-narratives that express emotional impact of service elements. This study shows that exemplars in the form of micro-narratives are retrieved in design discourse primarily from gathered data, common reference points, and personal experiences. They contribute to the collective understanding of the service concept and support the alignment of the service offering with customer expectations.

Introduction

Exemplars play an important but academically neglected, or set aside, role in design in general. In service design literature there is little mentioned about methods and practices that utilise the potential of exemplars. Exemplars can be used to inspire, explore, and analyse possible design solutions and are used extensively by design practitioners. For instance, benchmarking and similar activities (e.g. identifying the service landscape) are common practice in applied service design but still unexplored in service design research and literature.

The main focus of this paper is to analyse how exemplars are used during actual design discourse - their origin, structure, and for what purpose they are used. In other design fields, exemplars have been the focus of research from a number of perspectives (e.g. Herring et al., 2009; Eckert, 1997; Eckert & Stacey, 2003). In this paper we will start by giving an overview of what we mean by exemplars and from what perspectives exemplars have been analysed in previous research. Then we will point out specific features of services that might make the

study of exemplars different for the service design discipline. The *service concept* (Goldstein et al., 2002) construct will then be introduced to provide a framework for understanding how examples influence communication in observations and recorded material from two different service design projects.

To show how the material has been analysed we will then present an overview of design communication, and touch upon some elements of communication analysis that help us make sense of what really goes in the collected material. The findings and some implications for service design will then be provided.

Design and exemplars

As mentioned, service design literature reveals little about the importance of exemplars. There is however a general consensus that *examples* are used by designers, and that they are important in design processes. Under this consensus, techniques such as moodboards, competitive products, metaphors, personas, and others are mentioned as being "examples" of something. In this study though, we do not look at "examples" from that common-sense point of view but rather delimit the meaning to referential techniques that use existing elements and already existing design objects that are brought into the design process to benefit the result of that process. Schön (1983) calls these *exemplars*. As a consequence, this excludes techniques such as personas, that are referential of archetypical users, moodboards, that are referential to abstract qualities, etc from the study presented here.

Exemplars in other design fields

On the whole, designers use a wide set of tools and techniques of which a subset are referential techniques. Using different terms, it has been suggested that exemplars can be used to, e.g. help designers understand design languages (Rheinfrank & Evenson, 1996) and genres (Dearden, 2006). That they are used to inspire (Herring et al., 2009), and provide a repertoire of design solutions (Löwgren & Stolterman, 2004). Another theme that is common is reuse, which stretches back to Christopher Alexander and the development of design patterns. The ability to reuse prior work can be seen as a characteristic of a mature discipline (Hornsby, 2009), which also allows for adding and modifying previous elements and designs to fit the existing situation. For instance, the teaching of architecture is grounded in concrete exemplars and early in education students learn about the great genres and exemplars of history to understand the timeless components of design elements (Winograd & Tabor, 1997; Schön, 1983).

Though most other design disciplines have touched upon the use of exemplars, research has so far mainly concerned surface properties and explicit accounts of how exemplars are utilized in design practice (Herring et al., 2009; Eckert, 1997; Eckert & Stacey, 2003). In these cases the exemplars serve as common reference points that help designers co-ordinate activities and facilitate communication.

Distinguishing features of services

Some often mentioned features of services are intangibility, heterogeneity, inseparability, and perishability (for an overview and critique, see Lovelock & Gummesson, 2004). The most frequently mentioned feature is intangibility – services cannot be identified by reference to their colour, shape or weight. Services are also heterogeneous in the sense that they are made

up of several touchpoints that are mediated and delivered in the context of various materials and types of interaction. A single service touchpoint might be simultaneously available through, e.g. the Internet, telephone, newspaper, and from a traditional office. This makes services highly complex and all the constituent parts might need to be designed to provide the best possible customer experience.

Most other design fields focus on one type of material and touchpoint, such as a product or a user interface. Earlier studies have looked specifically at what makes services different for design. Service design and industrial- and interaction design for instance, are different in the areas of process, material, and deliverables (Holmlid, 2007). As a way of dealing with the service specific attributes, designers typically visualise services (Kimbell, 2008; Segelström & Holmlid, 2009). Another suggested distinguishing feature of the service domain is that it is customer-intensive (Pinhanez, 2009). The fact that services have unique features leads to specific consideration for the design of services:

> *"Incorporating the user as input, and respecting its impact on the process and its outcome, creates fundamentally new constraints in Service design that we believe is going to require new methodologies and practices" (ibid; p. 9).*

Despite this, there might be valuable lessons from other disciplines. Previous research has pointed towards transferability between, e.g. digital interaction design to service design (Holmlid & Evenson, 2007, Holmlid 2009), but the methods and principles developed in other design fields might be better suited for other design objects than services. This is why it is so important to think about the underlying assumptions of existing design methods before adopting them to a new discipline. Especially since the field of service design is explicitly said to apply existing design methodologies and principles to the realm of services (Holmlid & Evenson, 2006). Many of those methods and principles have been successfully developed in other fields (see Moritz, 2005). One theme of our work at Linköping university is looking at how well suited they are for the design of services (Holmlid, 2007; Segelström & Holmlid, 2009; Segelström et al., 2009).

Exemplars in service design

In our literature search we have found no literature within the service design field that explicitly talks about exemplars. In the online repository for Service Design Tools (2009), 38 different tools and methods are mentioned. None of them concern exemplars or associated activities. In his ambitious master's thesis, Moritz (2005) mentions 102 tools and methods put forth by the service design community. Four of these have a direct connection to exemplars:

» Try it yourself
» Inspirational specialists
» Benchmarking
» Mystery shoppers

Moritz's (2005) thesis is the most complete and comprehendible overview of contemporary service design. Most techniques he describes are variations of themes and there are many different terms for quite similar techniques. Inspirational specialists seem to be a valuable and common way of dealing with specific service elements. An example comes from The Mayo Clinic and their SPARK programme, where inspiration about how to handle the check-in process of the hospital came from the check-in process of the airline industry (Saffer, 2007).

Of the little that has been written of service exemplars, and the nature of services, it seems as if the referential examples that are most directly obvious as exemplars would be experiences of existing services. Even though there is knowledge about exemplars in other design disciplines, there seem to be a need for better understanding of the role of exemplars in service design.

Design as communication

Given the nature of services, and the service designer's reliance on co-design methods and visualizations (Segelström & Holmlid, 2009) the design process can be viewed as a communication process. Co-designing means involving different people with different backgrounds which might lead to communication problems. A way to cope with such problems is to use more universal ways of communicating, such as storytelling which is a way of involving non-designers in the design process (Strom, 2007). Vaajakallio (2009), among others, have called for more detailed observations of how people collaborate and communicate in co-design situations. Communication helps designers and teams to collaborate, and one approach to design is to see it as fundamentally a process of communication:

> *"It is useful to think about design as a process of communication among various audiences." (Erickson, 1995; p. 2)*

Design communication

As a way to communicate effectively designers use scenarios and prototypes as boundary objects (Johansson & Arvola, 2007). Physical exemplars are also used as boundary objects, and as such they make communication more effective (Eckert & Stacey, 2000). A similar logic can be applied to exemplars and prototypes since prototypes also facilitate communication (Erickson, 1995) but like exemplars, new challenges associated with services as design material arise:

> *"How do you prototype a service? You can't really. Services are about relationships, and relationships take time to develop – compare that with a consumer product where the process is test-refine-test – it's much harder to do a sticks and sellotape version of services." (Parker, 2009; p. 17).*

As with prototypes, exemplars of services cannot be described in reference solely to external aspects. Instead they must be described also as experiences and impressions of the relationship between the customer and the service provider. New tools for, e.g. visualisations, have been developed that address the temporal, complex, and intangible aspects of services, for instance design documentaries (Raijmakers et al., 2006) and customer journeys (Kimbell, 2008), but no similar methods or tools exist for utilising the potential of exemplars.

Service concept

A service concept is an abstract construct, a shared understanding of the service that is being designed. A service concept has been described as:

> *"the general description of the offering and the elements which communicate the service itself (service brand, identity and mood); these elements are translated in the particular aesthetic of the interaction stream (service encounters) and in the peculiar characteristics of the service*

evidences, like tools, environments, etc. or in the proprietary script of the interaction/dialogue with the service operators." (Maffei et al., 2005; p. 7)

Exemplars provide information about other services' interaction streams and characteristics that makes it easier to align the service with customer needs and expectations. As a tool in the design of services, it has been suggested that the service concept can 1) be the link between business strategy and service design and 2) that it can be used to measure the financial performance of a service (in Goldstein et al., 2002). Agreeing on a service concept is an important part of service design which allows the business strategy of an organisation to be aligned with the needs of customers.

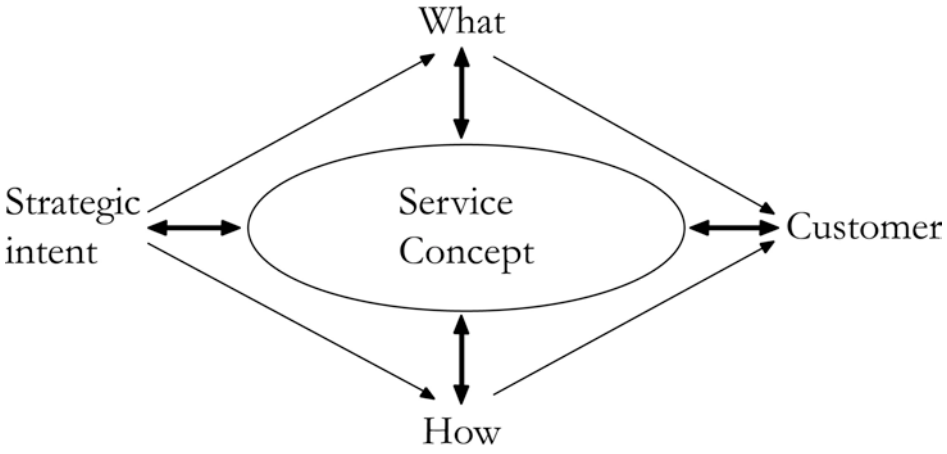


Figure 1: The service concept (adopted from Goldstein et al., 2002)

An analytical model of the service concept, seen in Figure 1, has four dimensions – *how*, *what*, *strategic intent* and *customer*. The concept is represented in the minds of designers and managers, but also the customers have certain expectations and needs associated with their understanding of the service. The *what* of the service concept roughly relates to the impression of a service as a whole, while the *how* is related to the way the service is delivered. In this study we will also look at the service concept as a way of explaining what goes on in discourse during actual, situated design practice.

Communication analysis

To understand communication in design one can find support in Clark's notion of *common ground* (Clark, 1996). In Clark's vocabulary, design is a joint activity and as such it is inseparable from communication. Like all joint activities design is goal oriented which means that the participants are trying to achieve both private and public goals on different levels. To do so, the design team must coordinate their activities and the accumulated knowledge that they have in common. In each given moment the participants in a joint activity brings previous information that partly converge with the information of other participants, e.g. information about exemplars and previous experiences. This shared information consists of mutual knowledge, beliefs, and assumptions, and those are the constituent parts of common ground (Clark & Brennan, 1995).

The initial common ground in a design project is the collective understanding of the information the participants share, and as the project progress they accumulate more and more *public events* that are separately remembered as *annotated records* and more abstract *outline records* by the participants. *External representations* such as the design documentation are also useful to understand the current state of a shared activity. To collaborate effectively in a

design process, participants need to be able to make references to exemplars and other points of reference (e.g. boundary objects). So, common ground allows participants of a joint activity to coordinate their actions based on their shared information about exemplars, representations, and other events. This also means that an exemplar that is not part of common ground cannot be used to coordinate joint activities. Such exemplars must first be *grounded* (Clark & Brennan, 1995) to be accessible.

Grounding refers to the process of adding information to common ground. During collaboration and communication people use different grounding strategies depending on the purpose, which is usually established collectively. If the purpose is to design something, grounding will happen in a special way that serves that purpose.

To analyse actual communication between members of a design team, this framework can be used to understand better what is going on in the collected data. First, one must then transcribe the material to make it more available to analysis. Then it will be easier to find trends and recurring patterns of communication in the material. The different communicative techniques employed by the participants become clearer and as the analysis continues it is possible to say something about how different situations are handled in the studied activity.

Looking at a service design process with a communication perspective allows us to contribute to a better understanding of what exemplars are in service design, and how they are used

Method

With the overarching goal of identifying origin, structure and purpose for incorporating exemplars in design communication we looked at the communication in two service design projects. Observations and audio recordings from projects at the Swedish Customs and the national meteorological institution (SMHI) were analysed. Communication within the design teams was analysed using theories from the field of communication analysis. A total of 454 minutes of audio recordings, collected during four separate design meetings, have been the core data source and excerpts from these recordings will be presented later on. A total of fourteen people, ranging from company staff to trained designers and developers, participated on different occasions. The meetings were held via conference calls and/or video conference calls, which made visual communication difficult or impossible. We did not take part in any way during the meetings but the participants were aware that we recorded their sessions.

Transcripts

To understand and make analysis of design communication possible most of the recorded material was transcribed. Transcription is the transfer of speech into writing to study the structure, form and content of communication. The transcripts were made in line with guidelines suggested by Linell (1994), which divides transcriptions into three levels depending on how the text should be analysed. The third, and least detailed level, has been applied in this paper which means that syntax and punctuation are used in line with regular writing conventions and things like mistakes, hesitations, repetitions, and so on are ignored. This level serves the purpose of revealing and analysing cognitive content (Linell, 1994). Unfinished sentences are signified by three dots (...). Comments or remarks made by the author are put within square brackets [pause]. Where episodes have been skipped it is

signified by this notation /.../. The excerpts should be read literally as service experiences, and not as metaphorical or analogical. The idea of a service concept will be used as an analytic framework here.

Result

The excerpt presented here comes from some of the more interesting sequences in the material where exemplars were mentioned. In this section we have underlined the example and the emotional response because those are the parts of the excerpts that are most interesting for the analysis. The excerpts were collected half-way through the design project at the Swedish customs, which also had implications for the content. The results have been divided into three groups:

» Behaviours
» Tangibles
» Gathered data

Behaviours

The focus of this kind of contribution is behaviour. As in this excerpt where a service element is discussed from an expectation viewpoint, excerpt 1:

> *"I think it feels like this; if you don't get [an email] for all [messages], then it feels to me like it is either-or, so that you don't get confused and trust that you get a notification to the mailbox every time you get a message in the portal, and then all of a sudden I don't get one. That could get a little confusing."*

As exemplars in this excerpt the participants use a behaviour – the first underlined bit of the excerpt. The behaviour is described in detail and serves as an example of inconsistency – which they fear may get confusing. The emotional level is added in the following elaborations about the behaviour. The concluding remark is where the (underlined) emotional response is finally clarified.

This was a common way of arguing for the how of the service concept. So what the designer is saying in this excerpt is actually that if the customer expects certain behaviour, i.e. feedback, then it would be bad if that was not fulfilled. Implicit in the excerpt is the assumption that similar elements in other services behave this way, which also makes it a good idea to customise the service accordingly.

In another context, a suggestion based on a previous solution is made. The structure is similar to other contributions where, in this case the behaviour, is first suggested and then the expected response. Excerpt 2:

> *"At the same time as a message arrives to the account, another message should be sent to their mailbox that 'you have a message'. It doesn't matter what was in the letter but it said that there was a new message to be read."*

The fact that last time this behaviour or function was implemented, customers only needed a confirming letter, makes it a good suggestion about how the this service element should behave. The behaviours discussed in these excerpts follow the same pattern as when tangible exemplars were used.

Tangibles

This type of contribution was made in reference to exemplars from common ground or personal encounters. The contributor here considers a "'1' within brackets" as part of what customers expect because they might have used similar services at the bank. Excerpt 3:

> *"Think about how it looks at the bank. There is usually a small '1' within brackets, on the... on the edge here... messages [pause] Then you see that something has changed."*

In this example it is the nature of the experience that is implicit, i.e. it is understood that it is good if you can see that "something" has changed. Together with the emotional response, the bank example creates enough understanding of the event for others in the design team to understand the impact on the service concept. In this way, some contributions involving exemplars become arguments for a specific solution.

The tangibles were sometimes also of a more personal nature, as in excerpt 4:

Designer: *"In my inbox there are terrible amounts of mail and that doesn't bother me because the new ones end up on top. The list goes on forever if you attempt to scroll down."*

Team member: *"Yes it does."*

Designer: *"But I don't think it's a problem actually."*

The "yes it does" is not meant as a counter-argument but rather as reinforcement of the designer's contribution. A previous experience serves as example and an anchor point for the contribution. The indifference to the potentially negative experience of having lots of messages in the inbox is a way for the designer to argue for a specific solution in connection with the service concept.

In this last excerpt concerning tangible exemplars, the existing main page is the example and here it is the information associated with the example that is in focus. Excerpt 5:

> *"I went online and clicked [the link] on the [existing] main page, and there you get, well, instructions about [another service] and this and that depending on your question. Now I don't know if that should be here too."*

Gathered data

Contributions that involved gathered customer data acted as powerful design arguments. As in this excerpt where a reference to how customers perceived some specific service evidence is made in excerpt 6:

> *"[The customers] were completely clear about the meaning of the word."*

This is followed by the immediate response:

> *"Okay, but that's good then."*

This saves time, because the team can rely on the gathered material rather than go on discussing the matter. When the response "but that's good then" comes, it's not only an acceptance but also a way to say "we can leave this topic for now". All these exemplars are about both the how and the what of the service concept, how the concept should be designed in order to align it with the wishes and expectations of the customers.

Observations from earlier design phases show that questions initially are more directed at the what of the service concept. Questions like "Who am I when I do this?" and "What do I want and how does that matter?" is more common and considerable effort is put into understanding what the service concept should be. In these earlier stages stories play a significant role, e.g. in building a shared service concept.

Discussion

A close examination of the collected data revealed how contributions involving exemplars were made. Regardless of how they were made there were always consequences related to both the how and the what of the service concept. Exemplars seemed to contribute both to the understanding of options and the value of choosing different solutions. Members of the design team added emotional responses to exemplars to express their value. This was sometimes done explicitly, as in excerpt 1: "that could get a little confusing" which was a straightforward way of saying that it was a bad solution, or implicitly as in excerpt 3: "Then you see that something has changed", which is meant to imply that it is a good thing that you can see if something has changed. The value of such implicit expressions is understood in the context of the situation. We were also able to identify the origin, structure and purpose of exemplars.

Structure

We observed a pattern of how exemplars were introduced in the observed design situations, roughly following this structure:

» Introduction of the exemplar
» Description of the surrounding context or behaviour
» Implicit or explicit referral to expected associated emotional response

We call this kind of contribution *micro-narratives* to distinguish them from related activities such as *planned storytelling*, where storytelling happens as a formal and deliberate activity during the design process, through techniques such as storyboards, scenarios and personas. These are planned and premeditated activities. That is, scenarios and role-play are prepared to perform a function in the process. During actual real-time discourse however, such techniques are not available and different strategies must be used. One common strategy is the enactment of ideas and concepts (Arvola & Artman, 2007; Vaajakallio, 2009). For instance Arvola & Artman (2007) explored how gestures are used and found that interaction walkthroughs and improvised role-play enable participants to describe dynamic, interactive features extemporarily. The presented study complements these studies by showing another way of envisioning ideas and concepts. During actual, real-time design discourse, situated stories are produced extemporarily, on the fly, by participants of the activity.

Purpose

Micro-narratives occurred dynamically and continuously. They are utilised for many different purposes (individual and shared goals) and comes from different sources. Shared goals support the collaboration, like informing the team (e.g. excerpt 1 and 5). Individual goals involve arguing for a specific solution, like in excerpt 4. An important point to make is that even though many references point directly to tangible aspects of exemplars, they implicitly concern events. Implicitly they also refer to the complete service experience for different audiences, since all the touchpoints in a service affect the overall service experience. So, when visuospatial elements are referenced in this way it says something about the how of the service concept, but also about the what. Implicit in the excerpts are the value for the new design (i.e. the impact on the service concept) and the situation. Similarly, the micro-narratives help designers go from analysis to synthesis. The exemplars are what Dubberly et al. (2008) would call a description of *what is*, and these are used to inform the work on *what could be*. This is supported partly by involving individual experiences collected during the initial stages of design. This is why individual experiences are so important and micro-

narratives allow individual design team members to contribute knowledge about service encounters, thus filling in the gaps of required knowledge.

Origin

Exemplars in micro-narratives were retrieved from the research phase (excerpt 6), common ground (excerpt 3), or personal experiences (excerpt 4). A closer look at how the different sources are adapted in new designs and the different impacts depending on source would be a good way to continue this research.

Exemplars that are introduced in micro-narratives also represent more than just the example itself. By saying, "Think about how it looks at the bank" (excerpt 3), it is also implied that a bank is similar in some sense to the current design, and that the bank genre is a potential model for it. Without this exemplar it would take a lot of time and effort to explain all the associated attributes of a bank, but instead the bank can be used as a common reference point. Collecting exemplars to use in design projects could be helpful, much like designers in other disciplines collect and storeexemplars. The service design exemplars would however need to be different in the sense that also temporal and emotional aspects of services would have to be stored.

Conclusion

Exemplars matter to design communication also on the level of analysis applied here. As common reference points, exemplars allow designers to communicate more effectively and understand the emotional level of service elements. At the same time exemplars makes communication more effective when they are understood in their socio-cultural context with associated attributes, values and so on. Micro-narratives are recurring in real-time design discourse and when these narratives involve exemplars they seem to follow a certain structure. The narratives provide a way of correcting and adjusting the service concept, and by doing so, aligning the business intent with customer expectations.

The results found in this study support the understanding of exemplars as a valuable resource in design communication. Since some of the exemplars are used for communicating insights from early stages of the design process they increase empathy for customers and contribute to a better understanding of the service context. However, more research in this area is needed to understand how the potential of exemplars can be better understood and ultimately benefit service design quality.

The aim of this paper is not to suggest a new method or technique, simply to add to the existing knowledge about what actually goes on during design communication on a more detailed level. Given the presented findings, and to harvest the potential of exemplars, new methods that address service specific attributes of exemplars could be developed though. In the same line of thinking it might be beneficial for service design if exemplars could easily be collected, stored and shared within the design team. This research has implications also for how to "set the stage" in collaborative design situations where a number of exemplars can be grounded in common ground initially (by viewing or experiencing them together) to benefit communication between participants of various backgrounds and skills.

Acknowledgments

The research was made possible by grants from VINNOVA, the projects SERV (2007-03444) and ICE (2007-02892)

Works Cited

Arvola, M., & Artman, H. (2007). Enactments in Interaction Design: How Designers Make Sketches Behave. Artifact , 106-119.

Clark, H. H. (1996). Using Language (6th ed.). Cambridge: Cambridge University Press.

Clark, H. H., & Brennan, S. E. (1995). Grounding in Communication. In L. B. Resnick, J. M. Levine, & S. D. Teasley (Eds.), Perspectives on socially shared cognition (pp. 127-149). Washington DC: APA.

Dearden, A. (2006). Designing as a conversation with digital materials. Design Studies , 27 (3), 399-421.

Dubberly, H., Evenson, S., & Robinson, R. (2008, March + April). The Analysis-Synthesis Bridge Model. interactions , 57-61.

Eckert, C. M. (1997). Design inspiration and design performance. Proceedings of the 78th World Conference of the Textile Institute (pp. 369-387). Thessaloniki, Greece: Textile institute.

Eckert, C., & Stacey, M. (2003). Adaptations of Sources of Inspiration in Knitwear Design. Creativity Research Journal , 355-384.

Eckert, C., & Stacey, M. (2000). Sources of Inspiration: a language of design. Design Studies , 21, 523-538.

Erickson, T. (1995). Notes on Design Practice: Stories and Prototypes as Catalysts for Communication. In J. Carroll (Ed.), Scenario-Based Design: Envisioning Work and Technology in System Development (pp. 37-58). New York: Wiley & Sons.

Goldstein, S. M., Johnston, R., Duffy, J., & Rao, J. (2002). The service concept: the missing link in service design research? Journal of Operations Management , 20, 121-134.

Herring, S. R., Chang, C.-C., Krantzler, J., & Bailey, B. P. (2009). Getting inspired! Understanding How and Why Examples are Used in Creative Design Practice. CHI2009 (pp. 87-96). Boston, Massachusetts, USA: ACM.

Holmlid, S. (2009). From Interaction to Service. In S. Miettinen, & M. Koivisto (Eds.), Designing Services with Innovative Methods (pp. 78-97). Keuruu, Finland: Otava Book Printing LTD.

Holmlid, S. (2007). Interaction design and service design: Expanding a comparison of design disciplines. Nordes. Stockholm.

Holmlid, S., & Evenson, S. (2006). Bringing design to services. Invited to IBM Service Sciences, Management and Engineering Summit: Education for the 21st century. New York: October.

Holmlid, S., & Evenson, S. (2007). Prototyping and enacting services: Lessons learned from human-centered methods. Proceedings from the 10th Quality in Services conference, QUIS 10. Orlando, Florida.

Hornsby, P. (2009, 06 22). UXmatters. Retrieved 08 16, 2009, from Reusing the user experience: http://www.uxmatters.com/mt/archives/2009/06/reusing-the-user-experience.php

Johansson, M., & Arvola, M. (2007). A case study of how user interface sketches, scenarios and computer prototypes structure stakeholder meetings. In L. J. Ball, M. A. Sasse, C. Sas, T. C. Ormerod, A. Dix, P. Bagnall, et al. (Ed.), People and Computers XXI: HCI...

but not as we know it, Proceedings of HCI 2007. The 21st British HCI Group Annual Conference. 1, pp. 177-184. Swindon, UK: The British Computer Society.
Kimbell, L. (2008). What do service designers do? Retrieved 07 01, 2009, from Designing for Services: http://www.sbs.ox.ac.uk/D4S/videoArchive/index.html
Linell, P. (1994). Transkription av tal och samtal: Teori och Praktik. Arbetsrapport från tema K 1994:9.
Lovelock, C., & Gummesson, E. (2004). Whither Services Marketing? In Search of a New Paradigm and Fresh Perspectives. Journal of Service Research , 7 (1), 20-41.
Löwgren, J., & Stolterman, E. (2004). Design av informationsteknik: materialet utan egenskaper (2:nd ed.). Lund, Sverige: Studentlitteratur.
Maffei, S., Mager, B., & Sangiorgi, D. (2005). Innovation through Service Design. >From Research and Theory to a Network of Practice. A Users' Driven Perspective. Joining Forces. Helsinki: Available online: http://www.uiah.fi/joiningforces/papers/Maffei_et_al.pdf.
Moritz, S. (2005). Service Design: Practical Access to an Evolving Field. Cologne, Germany: Köln International School of Design.
Parker, S. (2009). Social Animals: tomorrow's designers in today's world. Retrieved 08 16, 2009, from RSA Projects: Removing barriers to social progress : http://www.thersa.org/projects/design
Pinhanez, C. (2009). Services as Customer-Intensive Systems. Design Issues , 25 (2), 3-13.
Raijmakers, B., Gaver, W. W., & Bishay, J. (2006). Design Documentaries: Inspiring Design Research Through Documentary Film. DIS 2006 (pp. 229-238). Pennsylvania: ACM.
Rheinfrank, J., & Evenson, S. (1996). Design languages. In T. Winograd, Bringing design to software (pp. 63-80). New York, New York: ACM Press.
Saffer, D. (2007). Designing for Interaction: Creating Smart Applications and Clever Devices. USA: New Riders.
Schön, D. A. (1983). The reflective practitioner: How prefessionals think in action. USA: Basic Books.
Segelström, F., & Holmlid, S. (2009). Visualization as tools for research: Service designers on visualizations. NorDes 2009 – Engaging artifacts, Nordic Design Research Conference. Oslo.
Segelström, F., Raijmakers, B., & Holmlid, S. (2009). Thinking and Doing Ethnography in Service Design. IASDR, Rigor and Relevance in Design. Seoul.
Service Design Tools: Communication Methods Supporting Design Processes. (2009). Retrieved 08 17, 2009, from Service Design Tools: http://www.servicedesigntools.org/repository
Strom, G. (2007). Stories with emotions and conflicts drive development of better interactions in industrial software projects. Proceedings of the 19th Australasian conference on Computer-Human Interaction: Entertaining User Interfaces , 251, 115-121.
Vaajakallio, K. (2009). Enacting design: understanding co-design as embodied practice. Engaging Artifacts, NorDes 2009. Oslo, Norway.
Winograd, T., & Tabor, P. (1996). Software Design and Architecture. In T. Winograd (Ed.), Bringing Design to Software (pp. 10-16). New York, New York: ACM.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Clinicians as service designers? Reflections on current transformation in the UK health services

Valerie Carr, Daniela Sangiorgi, Monika Büscher, Rachel Cooper, Sabine Junginger

Valerie Carr, Imagination Lancaster, The Roundhouse, Lancaster University, LA1 4YW, UK

v.carr@lancaster.ac.uk

http://imagination.lancaster.ac.uk/

Summary

The British National Health Service (NHS) has been involved in profound transformation to keep pace with, and shape, changes in our society. Innovation has been driven by the necessity to transform old hierarchical and paternalistic models into a modern health system, moving care closer to home, mobilizing and tailoring services to individual patients' and their carers' needs through the introduction of radically new services. This paper explores a particular element of ongoing NHS reform: Practice Based Commissioning (PBC). Based on first findings of a research project called "Design in Practice. Change and Flexibility within Health Providers" funded by the EPSRC research centre HACIRIC, the authors argue that PBC formally recognizes important forms of grassroots service design, but also introduces additional challenges. The project is based on case studies within the North West Strategic Health Area (UK), and the study of PBC frameworks and everyday PBC practices in this specific context is explored and contrasted with concurrent efforts to bring service design into the public sector, which are focusing on co-design and experience-based design methodologies. It is suggested that these have the potential to help NHS providers address NHS policy demands to use patient feedback in transforming services (DH, 2009), and the authors reflect on possibilities for potentiation through the application of Service Design methods in this context.

Introduction

This paper introduces first results from an 18 months research project called "Design in Practice. Change and Flexibility in Health Providers". The project, funded by the EPSRC

research centre HACIRIC[1], aims to investigate a new framework for commissioning services in the British National Health Service (NHS), called Practice Based Commissioning (PBC). This new model formalizes and seeks to strengthen grassroots innovation practices and gives frontline clinicians a mandate for innovation and transformation of primary and secondary care services. A team of researchers from Lancaster University, Salford University and practitioners from the North West Strategic Health Area (NW SHA) is investigating how this new approach is being implemented, while exploring if and how creative and design methods and skills could support PBC activities.

In the first section we will summarise the main aspects of NHS reform related to our research, while in the second section we will report on how clinicians are currently working within the PBC framework in NW SHA. We will then provide more general reflections on the potential role of Service Design within PBC and anticipate our next research activities.

A Brief Introduction to the NHS

The National Health Service is a publicly funded, nationalised, healthcare system that provides medical care free at the point of access, within the UK. The NHS was introduced in 1948 as a means of providing equitable access to healthcare regardless of income or geography. This social healthcare system is widely utilised and supported in the UK and less than 8% of the population choose an alternative private healthcare provider. The structure of the NHS has, from the beginning, consisted of three strands: social care, provided mainly by local authorities; primary care with General Practitioners (or doctors) as the first point of contact; and secondary care (including acute and elective care) provided in hospitals. The NHS as a whole employs around 1.5 million people and is one of the largest employers in the world. As with most large public service organizations, the NHS is continuously changing under the pressures of providing better services to more and more people for less and less money. The aims of current innovation initiatives in the NHS are thus to either find and benefit from existing efficiencies, or to introduce new practices and procedures that promise to improve the ways in which healthcare is being delivered as cost-effectively as possible.

Figure 1. The structure of NHS in England.

[1] The Health and Care Infrastructure Research and Innovation Centre is a collaboration between existing research centres at Imperial College London and the Universities of Loughborough, Reading and Salford. HaCIRIC's focus is on the built and technical infrastructure for health and social care, and the interaction between this infrastructure and change and innovation in care services.

In 2000 the UK government set out an agenda to modernise the NHS through a 10-year plan with a focus on a health service 'designed around the patient' (The NHS Plan 2000). The vision produced for the 21st century NHS is to be, 'an NHS that gives patients and the public more information and choice, works in partnership and has quality of care at its heart' (DoH 2008a). With this in mind, the NHS also revisited the role of clinicians, who typically come most directly and most frequently in contact with patients. PBC is designed to give local clinicians opportunity to combine resources, through the formation of PBC consortia, enabling them to respond better to local needs, and commission new, context- specific services (DH, 2008). From a Service Design perspective, this is a noteworthy development, because PBC can be perceived as 'turning' clinicians 'into' service designers, in as much as it recognizes and supports previously unseen and taken for granted activities, while also formalizing the requirement for these.

NHS and Service Design

The NHS has long understood that it is in the business of designing services. However, only recently has it turned to design methods and practices from the field of design. With the foundation of the NHS Institute for Innovation and Improvement (NHSi) in 2005, the NHS began to explore design and design research as a resource for providing methods for service innovation. Recently, experience design methods have been tailored to the needs of the NHS in form of Experience-Based Design (EBD), developed in collaboration with the Public Service Design agency Think Public (Bate and Robert, 2007). Compared with traditional quantitative methods such as process mapping or surveys, EBD promotes understanding 'experiences' and shows that such understanding is essential to service redesign. In service design EBD is often further facilitated through close involvement of users in participatory or co-design of services. With a similar terminology the Department of Health is now calling for 'real involvement' (DH, 2008) of users and third parties at a range of levels. Such calls for experience-based design, participation and co-design bring great opportunities, but also significant challenges, for clinicians now much more formally charged with devising alternative healthcare service models through PBC.

Practice Based Commissioning

The framework for PBC was established in 2003, with the intention that the majority of GP practices would have mechanisms in place by 2006, and run the scheme by 2008. PBC has been set up by the Department of Health as the framework within which GPs will be expected to reflect on current provision of healthcare in their localities and redesign it where necessary, through engagement with their patients, and through application of their extensive knowledge and experience of patient needs. Significant service innovations are anticipated and encouraged as GPs consider how the current healthcare landscape might be improved, produce proposals and take responsibility for implementing their plans. Department of Health guidance published in 2005 suggests that, 'the freedoms and flexibility of practice based commissioning give front line professionals and managers the information, levers and incentives to improve services in response to the needs of their patients and local populations. It will facilitate clinical engagement, improve access and extend choice for patients and help restore and maintain financial balance.' GP practices are encouraged to

group together to form consortia, increasing purchasing power and influence, and reducing duplication of management structures.

The remit of PBC is to challenge entrenched approaches to the provision of healthcare services, and reshape the boundaries between primary and secondary care, providing the opportunity for a critical examination of patient pathways of care, with an emphasis on bringing care closer to home. The guidance produced for implementation of PBC at both PCT and GP level is deliberately 'light touch' to allow commissioning plans to respond to specific local health problems and needs.

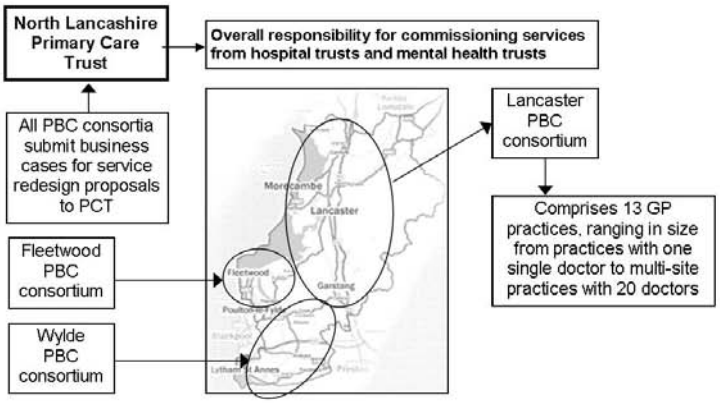


Figure 2: The place of PBC within the PCT

Discovering synergies in case studies

To obtain an in-depth understanding of PBC as it is being applied, and identify points of connection and synergy with service design, we are conducting three case studies in the North West Strategic Health Area (NW SHA). Challenges facing the NW SHA include addressing chronic health problems in the area which has the highest rates in England for deaths from heart disease and stroke, long-term mental health problems, and alcohol related hospital stays. Almost 10% of the population also claim incapacity benefit for what are perceived to be, in the main, preventable illnesses. Our case studies have focused on three PBC groups in NW SHA: Stockport PBC, Ashton, Leigh and Wigan PBC and Lancaster PBC. We interviewed members of these groups to explore different approaches to implementation of PBC and associated benefits and drawbacks.

These investigations were driven by the following questions:

1. What are the drivers that cause practices to engage and collaborate in PBC groups?
2. How do PBC participants collaborate and create structures of governance that transcend their own individual interests?
3. What are the skills and competencies they need and what support do they receive?
4. How are skills, competencies and actual practices of PBC, their success and failure related to existing infrastructures? How could these support PBC better?
5. How do participants create, share and combine knowledge of the efficacy and efficiency of existing services. How/Do they 'design' new ones? How could they be supported in their activities?

We sought answers to the first four questions by looking at structures of management and governance, and the way in which agreements with the respective Primary Care Trust were reached. The fifth question requires a deeper investigation into actual design practices and decision-making processes; this research is ongoing, focusing on a single case study with the Lancaster PBC group. This study touches more directly on the question of how and if clinicians work as service designers and how service design methods could support their work. Below we report on initial results for the first four questions, then introduce some preliminary discussion on the fifth.

General drivers for engagement in PBC

Clinicians have been attracted to engage into PBC groups mainly via three incentives and promises: financial support, professional development and wider control over healthcare service provision.

On a general level financial incentives provided to encourage GPs to sign up for the programme include a Directed Enhanced Service (DES) payment of 95 pence per patient to cover staff time, and the ability to retain 70% of any efficiency gains made (in prescription and referral charges, for example) to reinvest in further service improvement agreed with the PCT. Local PCTs may also supplement the DES with an LES (Locally Enhanced Services) payment increasing the financial value of involvement in PBC to the practices.

Indicative budgets for all PBC consortia have been agreed based on historic spend but are also due, (by 2009), to be based on 'fair shares', allocated according to specific health needs of the local population, giving those practices in areas of higher deprivation (with associated greater health needs) access to improved financial resources.

On the professional level, practical implementation of PBC innovations are also expected to provide facilities and expertise so that more surgery, testing and diagnostics will be performed in primary care settings, under the control of local clinicians. A Department of Health initiative is also promoting the use of GPs with Special Interests (GPwSI) who may take on new roles that have usually been the exclusive preserve of hospital consultants - particularly in the area of chronic long-term illness, although this is currently facing resistance from the hospital consultants

PBC groups have a lever for recognition of their role in recent Department of Health guidance which indicates that if PCTs do not support PBC and deliver on expectations, they will not achieve level 2 of World Class Commissioning, (a key government approval process giving increased autonomy to PCTs), and that both PCTs and SHAs will be held to account for effective delivery of successful PBC.

In considering different approaches to PBC, each of the three case studies below represents a particular model of implementation of PBC, with different levels of integration and support among GPs and within the PCT. They go from large overarching organisations with a high level of PCT involvement and support to loose agreements and smaller self-directed groups of clinicians.

Case Study 1 Stockport

Stockport is often presented as a 'best practice' example of how early uptake of PBC has led to innovation in both commissioning and providing new services. The Stockport PBC group has been driven by two visionary people, Dr. Ranjit Gill, chair of the PBC board, and Alison Tonge, the lead director for PBC and deputy chief executive/director of finance of

Stockport PCT, who together encouraged all of the 53 GP practices in Stockport to form one large commissioning group, giving greater influence and reducing the governance structures which might have proliferated with smaller PBC groups. Engagement exercises were facilitated by the PCT, which adopted a 'top down' approach to PBC implementation. Once formed, the PBC group elected to become an Industrial Provident Society, managing the whole PBC framework, and Stockport Managed Care (SMC), a charitable company, was formed in April 2007 with up to 45 staff from the PCT being seconded to SMC as business support. As such SMC have direct responsibility for almost all of the commissioning of health services within the PCT, managing a budget of £299 million for GPs with a patient base of 295,000 annually. Members of the society have developed a wide range of incentives and support structures for GP practices in the group, such as enhanced pension schemes, risk management and insurance, and even IT contracts. Membership of the Society is based on proportional representation, with larger GP practices having more representatives. Stockport Health Enterprise is a GP owned social enterprise subsidiary company of SMC, acting as the provider arm, managing the provision of estates. They are a national demonstrator site for the government Community Hospital initiative and will act as project managers for a new purpose built diagnostic and treatment centre in the area. Dr. Ranjit Gill clearly believes that PBC has improved patient care in the area, stating that, "[PBC is about] making health and social care for patients safer, faster, and more accessible, whilst making it more evidence based and cost effective for PCTs […] In the last 18 months, as a result of PBC, we've moved ECG (Electro-CardioGraph) recording, spirometry and ambulatory BP (Blood Pressure) monitoring over 24 hours into practices and we have redesigned the audiology service to shorten waiting times from two years to two weeks."

Case Study 2 Ashton Leigh and Wigan

As of July 2009, Ashton, Leigh and Wigan (ALW) PCT has six PBC groups with a patient list of around 50-65,000 for each group. The consortia self-formed around historical relationships and geographical boundaries. Activity of the PBC groups had been limited to some very small scale, local service changes with limited impact. Recently the ALW PCT have agreed to second some of their business management staff to particular PBC groups and now each group has a defined commissioning manager, commissioning assistant director support, public health support, finance, data and method management support. These are fully funded by the PCT as part of their support package for PBC. PBC groups have also now been provided with the services of an external consultant (Tribal Health Consulting) procured through the DoH Framework for External Support for Commissioners (FESC) programme, and this has been a catalyst for revitalising the PBC process. Each of the PBC groups has now been given a mandate to focus on one of the areas identified as priorities in the PCT local plan and six multi-disciplinary, multi-sectoral clinical service redesign panels draw members from primary and secondary care, local authority, community care, voluntary organisations and specific related patient organisations (such as Diabetes support groups) to examine patient care pathways and models of care. Only one of these pathways has so far produced a business case for service redesign, which will shortly be considered by the PCT, but other groups are following close behind.

Case Study 3 Lancaster

In North Lancashire, a 'hands off' approach has been taken to PBC where the PCT has left it to the GPs to organise themselves, and three PBC groups have formed around geographical boundaries. The Lancaster PBC which involves 13 GP practices and covers

Lancaster, Morecambe, Carnforth and Garstang is the one which the Design in Practice team will be working with. The Lancaster PBC operates a system where each practice is given one seat on the consortium board, but this is not allocated proportionally so, for example, Coastal Medical Group, who have a patient population of 32,000 have only one seat, the same as some small single-handed practices with populations of less than 5,000. This necessitates diplomatic negotiation between practice representatives to identify priority areas, common to the group, to focus their efforts for service improvement. The Lancaster PBC group have appointed their own business manager who is employed by the consortium, and have further (limited) data and business support provided by the PCT. The group came together with a philosophy of 'trying to expand the skills and capacity of every GP practice' so that they 'send less out of the practice, and send less into hospital care'. Proposals for service redesign in the PBC group have been led by what GPs in the consortium view as priorities - such as services which cost the practices the most money, (currently related to unscheduled hospital admissions), and specific interests of certain GPs, such as Chronic Obstructive Pulmonary Disease.

Skills, Competencies and support to facilitate innovation in PBC

As a mean of supporting GPs in producing business plans and commissioning new services, local Primary Care Trusts are expected to provide business support, including the provision of benchmarked data (which will allow each practice to compare referrals, prescribing and other patient related costs with other practices in the area and national figures), management support and skills training where necessary. The Department of Health have also provided an approved list of external consultant/ development partners with experience in PBC implementation through their 'Framework for the procurement of External Support for Commissioners' (FESC). These partners can be employed through the business budget for PBC to provide skills training and business support.

While in Stockport and Ashton, Leigh and Wigan PCTs the structure of PBC governance included training and business support, the PBC groups in North Lancashire have used their management budgets to employ their own dedicated business managers, who are provided with administrative support by the PCT. Data and financial support are provided by PCT employees, but this is hampered by the fact that these employees are not dedicated to PBC and struggle to find the time to provide adequate support to PBC. North Lancashire have also been slow to provide data on hospital admissions and referrals for the PBC groups (often because the hospital trusts have not provided adequate or coherent data to them). With limited internal business support, no current external development support, and the majority of control over commissioning and budgets remaining firmly in the hands of the PCT, the GPs in the group cannot really be said to be 'empowered' to commission new services.

Andy Maddox, a member of the Lancaster PBC group says: "we put business cases together. But that again is a skill on its own, I mean, as a GP I was never taught to write business cases. … it is actually quite a skill and obviously we have managers who are quite skilled but, again, this is new to them ... knowing you have to get in things like public health data you have to look at."

Two external influences contributing to innovation in healthcare service redesign may be said, therefore, to be roughly described in terms of Evidence-based Medicine and Experience-based Design. The provision of healthcare data and informatics, and process mapping, are important contributions of evidence-based medicine, which can be used to inform strategic development plans for healthcare services at national level, leading to large-

scale redesign of services to suit the majority or 'average' patient. However, it is recognised that it is the atypical patient and minority of Very High Intensity Users (VHIU) who cost the health services most money. Understanding the specific needs of particular patient populations and engaging them in service redesign is the province of Experienced-based design and the area in which design companies are most frequently involved. It often falls to Practice Managers to assimilate, interpret and prioritise the profusion of data, legislation updates, government guidance and examples of best practice which are sent in a continuous stream to practices each week. Finding the time and means in which to translate these in the best interests of the patient with regard to continuity of care, balancing and applying these in line with the daily clinical experience and expertise of patient needs locally, is a major challenge for most practices. There does seem to be a distinct lack of training at practice level which will give the clinicians and frontline staff the skills and tools to manage this challenge in a creative and innovative way.

Clinicians as Service Designers?

The case studies and the investigation into NHS reform and PBC have provided a partial representation of the current conditions within which clinicians operate and participate in the re-design of public services. As the research is still at an early stage, our answers are still partial, but they will become clearer as the investigation progresses.

The main question of the paper was if clinicians are or could work as professional designers and how this fits within the general transformations NHS is going through, PBC included. We acknowledge that the practice of designing is not exclusive to professional designers and that there are tacit practices of designing – that we call 'design in practice' (see silent design concept by Gorb and Dumas, 1987)– carried out by people that don't consider themselves as designers and that use different 'mind sets' and 'thinking modes' to approaching the development or improvement of health solutions.

Within healthcare governance these practices are now in a process of being formalised, bringing clinicians formally into commissioning roles. This provokes a reconsideration of the capacity of existing processes and structures for innovation, the adaptability and applicability of existing knowledge in new forms of decision making and the evolution of existing competencies to accommodate increasingly complex demands. With these challenges, is it possible that clinician's roles can be reformulated and transformed so that they recognise their function as that of designers developing new creations?

We would say that

1. Most clinicians already participate in service redesign at practice level, adapting their services in line with patient and government demands. What is changing is the levels of agreements/negotiation and scale of interventions that are dealt in PBC groups (bringing more clinicians together) and the manner in which this role is now more formalised. This process, in some cases, seems to bring closer alignment between PBC and PCT activities and skills,, generating an intermediate group of discussion between clinicians and PCTs, or, on another level, it may bring more managerial and design skills to the practice level, improving existing innovation processes; in either case the aim is to deal with local issues in a more informed, integrated and, at the same time, visionary way.

2. Clinicians seem to transfer only part of their familiar 'evidence based medicine' approach from a micro to a macro level in the consideration of healthcare services. Clinicians design clinical paths built on statistical and historical data provided by the PCT as well as best-

practice advice from central NHS agencies, often based on the pressing need to reduce costs and augment effectiveness. This approach doesn't necessarily include consideration of more qualitative approaches that look at individual patient experiences. Services, in this respect, are described as processes/operations and less as experiences.

3. Clinicians participating in PBC discussions may recognise the significance of their roles in wider change interventions, but these processes seem to be detached from daily discussions and negotiations about service improvements and re-design at practice level where daily issues of patient-staff interactions and service provision are dealt with. GPs, nurses, district matrons, etc. don't necessarily see themselves as contributing to design processes and don't recognise, accept, or have the time to consider, their involvement in broader issues of patient engagement or wider issues such as public health management. In this respect it is a matter of perspective and perception of roles, power, control and visibility.

In this process of formalisation of the role of clinicians in the commissioning and envisioning of new services we therefore advocate, on one side, the importance of making the existing 'design' processes at practice and PBC levels more explicit, visible and shared and, on the other side, creating a synergy between more 'evidence based' approaches with 'experience based' ones and also leveraging clinicians' tacit knowledge about their patients and territories. In doing so we acknowledge the potential role of service design skills and tools such as storytelling, scenarios and outside in and visionary approach as described in the following section.

The role of Service Design

What emerges from the description is the level of pressure, complexity and amount of interlinked problems clinicians need to deal with and how many stakeholders are directly or indirectly involved in the decision making process. Clinicians face the difficulty in negotiating priorities among several issues, and PCT structures demand business cases which evaluate in advance the impact of the service redesign proposals. Given this level of uncertainty and complexity clinicians look for evidence based solutions and datasets that can support their decisions as well as managerial and financial skills to create sustainable models. We have seen how PCTs have provided, or will provide, this support through training, consultancy and by introducing new professional roles into PBC.

What is not mentioned, as part of these support packages, are skills and methods related to user involvement, to make tacit knowledge explicit and usable during designing processes as well as related to the capacity to imagine and visualise radically new solutions. Tom Pickering, Business Manager of Lancaster PBC, recognised how the richness of knowledge doctors have about their clients ('1 millions of visits every year') and local community often remains implicit or only manifested as a general concern; he suggested that this makes it difficult then to evaluate if the concern is coming from a real need of users or from a personal interest of GPs (or a mix of both). The richness of their experience doesn't remain unused, but it is *ill-captured, not shared or exchanged,* reducing the power and influence they could bring into discussion tables as well as in the shaping of common visions.

The power of storytelling has been proved (Erickson, 1996; Bate and Robert, 2007) to be a relevant resource for design, to generate ideas and improvements and to challenge fundamental assumptions. Our questions are therefore: how can clinicians tacit knowledge be accessed during day-to-day activity and brought meaningfully into PBC meetings? How can it be used in a complementary way with more quantitative data? And how it can be

integrated in a systematic approach to generate ideas, set up priorities or generate business models?

PCTs are now required to make arrangements to involve users in planning, developing and delivering health services (DH, 2008). PBC groups, however, are not under any obligation, but still it is considered as 'a powerful tool for redesigning services, for providing innovative care and for making the best use of our resources. Most importantly, […] will help to deliver an NHS more responsive to patient's needs' (Hutton 2005). All PBC groups we interviewed are producing innovations at different levels, but it is not clear to us still how these ideas are generated and what are the sources of information they use. Both Stockport and Wigan seem to have developed ways to engage local communities and third parties to their commissioning activities as it has been integrated into their governance model. Lancaster PBC misses a clear plan for user involvement that perhaps reflects their less structured governance model. We argue that this is not necessarily a limitation as Lancaster PBC seems to have a strong commitment to the community and a belief in a bottom-up approach that manifests in its looser connection with PCT. We therefore argue that, given the richness of links with the community and of the knowledge of clinicians and community servers (i.e. district nurses and community matrons), it could be valuable to explore how clinicians could better make use of this knowledge in commissioning activities. The applicability and relevance of tool kits for 'creative thinking' (developed by NHSi 2007, Thinking Differently) and methodologies for EBD might be explored with PBC groups to investigate how these may be adapted in practice.

At the same time the case studies have shown how time needed to reach agreements among different stakeholders is often under estimated. This is amplified when the role and position of the PCT is not clear, or when contrasting interests reduce willingness to collaborate. A good driver for convergence is again the generation of a narrative, a vision or, in design terms, the building of a scenario (Carroll, 2000). Scenarios and storytelling are often interconnected methodologies that have the powerful potential to facilitate convergence on distant futures and in complex projects if employed in a participatory approach (Jegou, forthcoming; Raijmakers, forthcoming). The NHS North West has been applying scenario building to provide directions and inspirations to their Local Authorities (NHS North West, 2008); this process lasted one year based on 107 interviews and five scenarios building workshops, focusing on future healthcare landscapes. The same approach could be used at a smaller scale to support convergence and direction.

Considering the call for systematic approaches to innovation, our last question is about the degree to which the commissioning process is based on incremental changes arising from emerging concerns, as opposed to a process driven by a wider strategy. Again Stockport and Ashton PBC groups (as much as we could see) seem to have developed (or have been developing) a structured approach to innovation. Lancaster PBC has developed a common vision for 'a continuous expansion of capacity, personnel and skills of the Primary Care Health Team to manage as much care as possible within that team' (Lancaster PBC Business Plan, 2009/2010), but apparently a less structured approach to innovation. Both have strengths and weaknesses. While the unstructured approach can be viewed as a strength, as it can provide the space to work more closely with the local community in a more flexible way, it still requires coordination, methods and techniques to facilitate that.

Service Design consultants have been said to "view the service as a fluid arrangement of human and non-human artefacts, rather than a fixed intangible entity" by elaborating new 'value propositions' that unsettle existing configurations and generate new potentials for businesses (Kimbell, 2009). Service Designers have their own sets of methods that they constantly adapt to the situation and they have an outsider perspective. We ask how much

people within the system, can maintain that openness of imagination, without falling into existing situations or battling against conflicts of interests. And how much providing tools and a more structured approach to innovation can really increase the capacity to look at things in different ways. Service Design studios such as Engine or IDEO are famous for the development of interactive games that support organisations to reflect on their practice and think in different ways. This link between insider and outsider perspectives and their possible interconnection could be explored as well.

What next?

This paper has presented some first insights into PBC framework as it has been implemented in North West of UK. We started posing and answering key questions about the way PBC has been implemented to commission and co-design new services at a local level, showing the diversity of models of governance, support and collaboration.

The development of an effective mode of collaboration between PCT and PBC groups and among different stakeholders within the PBC groups themselves that could balance issues of control, resources and skills is still a big challenge. It seems that highly structured and PCT driven solutions are more effective, but probably weaken local control and real participation by clinicians.

A recent report by the King's Fund (2009) illustrates ongoing problems with practical application of PBC at local level where business cases are taking around 25 weeks to gain approval from the PCT (when guidelines state 8 weeks), then a further 25 weeks to actually become practice. Fifty two percent of PBC clinicians nationally said that they did not feel that their PCTs are making a real effort to engage them at decision-making level.

At the same time clinicians, because of limited managerial skills, resources and time, ask for support and for a clear vision from PCT to be able to deliver what they are asked to. In North Lancashire PCT, Jim Gardner, Medical Director of North Lancashire PCT, admits that, 'GPs have been disappointed that PCTs have often not seemed as willing to help and sort it out as they can ... it's about practicalities, about all the other things that are going on in the system. All the targets in fact, that as a health economy we have to achieve ... and they get in the way of some of this other redesign stuff that colleagues would like to do.'

This difficulty of balancing roles and contributions is mirrored by the low percentage of practices that think PBC has improved patient care; in quarterly results published by DoH the percentage of practices who think that PCB has not improved patient care sits at around 31% consistently, only around 16% believe patient care has improved.

From the Service Design point of view, we believe clinicians could benefit from using service design tools and service design can benefit by learning how to take the synergy between evidence based medicine and experience based design more seriously. Clinicians would benefit from expressing and using their knowledge about their communities in more designerly ways. Clinicians and PCTs consider statistical data as the main source for motivating and imagining services, missing out an extremely rich source of knowledge that comes from daily work of doctors and nurses. Modes to engage patients and to record and communicate their understanding and experiences should be integrated into commissioning activities and training packages to compliment organisational development approaches. This would help to improve GP's role in the negotiations processes and result in better quality briefs for new services.

The Design in Practice team are involved at two levels within North Lancashire PCT, working with the Lancaster PBC group and, specifically, with Coastal Medical Group in Morecambe. The focus of the current research will be the exploration of modes of connection between practitioners and patients (particularly those from typically disenfranchised groups) as well as how to acknowledge, communicate and bring into commissioning groups existing knowledge and daily experience of clinicians and community carers such as district nurses and community matrons. We will explore how these insights into patients needs might be integrated into practice development at GP level, and into commissioning of services at PBC level as well as how they might generate radical visions for the future of health services.

References

Bate, P. and Robert G. (2007), Bringing User Experience to Healthcare Improvement. The concepts, methods and practices of experience-based design, Radcliff Publishing, Oxford.

Carroll J. M., (2000), Making Use. Scenarios-based design of human-computer interactions, The MIT Press, Cambridge

Department of Health (2000) The NHS Plan: a plan for investment, a plan for reform. Available from: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/DH_4002960

Department of Health (2008a) High Quality Care for All: NHS Next Stage review. Available from: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085825

Department of Health (2008) Real Involvement. Working with people to improve health services.

Department of Health (2009). Understanding what matters. A guide to using patient feedback to transform services

Erickson, T. (1996). Design as story-telling. interactions, July/August 1996.

Gorb, P. and Dumas, A., 1987. Silent design. Design Studies 8, p. 150

Hutton, J. (2005) Speech by Rt Hon John Hutton MP, Minister of State (Health), 1 March 2005: Practice Based Commissioning. Available at: http://www.dh.gov.uk/en/News/Speeches/Speecheslist/DH_4105543

Jegou, F. (forthcoming). Participatory scenario-building at „La Cité du Design".In Meroni A. and Sangiorgi D. (Eds.) Design for Services. Gower publishing

Kimbell, L. (2009). The turn to Service Design, in Gulier, J. and Moor, L. (eds.), Design and Creativity: Policy, Management and Practice, Oxford: Berg.

NHS North West (2008) Healthcare and Wellbeing: What Might the Future Hold? Four Scenarios.

Raijmaker, B. (forthcoming), Designing empathic conversations about future user experiences. In Meroni A. and Sangiorgi D. (Eds.) Design for Services. Gower publishing

Wood, J. Curry, N. (2009) PBC two years on – Moving Forward and making a difference? Kings Fund Publication, London available from: http://www.kingsfund.org.uk/applications/research/index.rm?filter=publications

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Bridging the gap between brand strategy and customer experience in services: the target experience tool.

Simon Clatworthy

Oslo School of Architecture and Design (AHO), Oslo

simon.clatworthy@aho.no

www.aho.no and www.service-innovation.org

Summary

This paper describes work in progress for the development of a structured process that helps cross-functional development teams to bridge the gap between a company's brand strategy and experiences for customers. The process is aimed to assist and structure the very early stages of the service development process, the fuzzy front end. Further, it describes a tool that has been developed that can be used to assist this transformation, by scoping the 'target experience' for a proposed service. The tool uses role-playing, using professional actors to improvise upon key experience words such that behaviours and customer experiences are explored. The paper describes the theoretical basis for this work, the process and the tool itself, together with early reflections upon its use.

Introduction

One of the challenges of new service development (NSD) is to channel and transform the brand strategy of the service provider into service design experiences such that the strategic brand identity is reflected in the final customer experience. This is described as the semantic transformation (Karjalainen 2004) and is a difficult phase of a design process.

When a new service development team is created, there can be quite different knowledge and views within the team regarding brand and the company's brand strategy. This can lead to a poor fit between the designed new service and the intentions communicated by the brand.

In this paper we focus upon the early design phase in which high level design decisions are made. We base the paper upon the semantic transformation in the design process as described by Karjalainen (2004). This is further developed to fit into service development processes that can be used by cross-functional teams as described by Denison et al (1996).

The research questions covered in this paper

This paper presents research that explores and attempts to answer the following two questions:

» How can a cross-functional project team transform a companies brand strategy into relevant customer experiences for new services

» How can a team describe a desired experience for a service at the early stages of new service development (NSD)

To answer these two questions, existing models for the process of converting brand strategy into customer experiences were examined, and an adapted model created that specifically applies to service development. Based upon this, several tools to assist the process have been developed. This paper describes the theoretical basis for the model, and one of the tools that resulted from it - the target experience tool.

The context for this work

At the fuzzy front end of the innovation process

The work presented here focuses upon innovation at the early stages of the service development process. This has often been termed the fuzzy front end (Smith & Reinertsen, 1998) and describes the phase at the start of the NSD (New Service Development) process. The earliest phases of the development process offer the greatest opportunity for transformational innovation, and 66% of life-cycle costs are decided during this phase, whilst only about 5% of development costs are utilised (Berliner and Brimson, 1988). 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) and is 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 today. Such teams include relevant stakeholders, representing different functional areas within an organisation, and diverse disciplines. The process and tools described in this paper are aimed at assisting cross-functional development teams, where the team, together with designers, explore the brief and develop ideas together, through workshops. The cross-functional approach is described by Gladstein et al (1992) and Sethi et al (2001).

The AT-ONE project

This work is part of the AT-ONE research project. AT-ONE is developing process support for the NSD process, and tools that can be utilised in the workshops for each letter. This maps, ideates and conceptualises potential new services through workshops. This is called the AT-ONE method (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 provide the service

T - Coordination and development of TOUCH-POINTS

O - An understanding of what the service is actually OFFERING

N - The NEEDs that the service satisfies

E - The EXPERIENCE that the service gives the customer

Designing for customer experiences

Since services are intangible, time-based, and simultaneously produced and consumed, they are strongly experiential in nature (Hollins and Hollins, 1991, Fitzsimmons (2006) Looy et al, 2003). The design of the customer experience is considered important to service success and is now incorporated in major service development approaches, for example Grönroos (2000).

Marketing has for many years focussed upon the Experience Economy (Pine and Gilmore, 1998) or Experiential Marketing (Schmitt, 2003), Emotional Branding (Gobe, 2001) and 4D branding (Gadd, 2001). Customer behaviour and emotional aspects of this has recently come into focus (Hansen and Christensen 2007, Ratneshwar and Mick 2005).

In Design, Interaction Design and HCI the area of user-experience design (referred to by some as UXD) has increasingly focussed upon the user-experience (Hassenzahl and Tractinsky (06), Desmet & Heckert (2007), Shedroff (1997). Within this area, the major focus is upon understanding emotions and experience and measuring emotions or experiences.

There is little research related to how to design for emotions or experiences and a particular lack of research looking at the design of experiences for services. There is a clear need for more research that looks into the process by which design strategy is transformed into service experiences.

Work in progress

This paper describes work in progress. The process has been developed over several years, whilst the tool described is still being developed. The process and tools developed in the project are used in realistic service design projects in two iterations per year.

Semantic transformation through design

The transition from strategic brand identity to tangible objects is termed the semantic transformation (Karjalainen, 2004). Although an important part of the development process, this has received little research attention. Karjalainen is one of the first to research the transition process, and has contributed knowledge about the process, related to case studies in the product design domain. He has developed a model for how this process occurs in the design of products based upon case studies from Nokia and Volvo. He describes the result of a successful semantic transformation in this way: “In and ideal case, the process results in a solution that involves total congruence between strategic brand associations and physical product manifestations” (p207). This is visualised in figure 1.

Karjalainen describes how product manifestations from a company help convey brand associations, and describes a positive circle in which “Physical product manifestations and brand associations are fused in dynamic mutual interaction” (p207).

This occurs when the expression of brand identity, in the form of products (in Karjalainen’s case) help cement the image and reputation of the organisation within customers and culture, which in turn help strengthen the internal identity of the organisation. This interaction, helps align the organisation to the brand, and therefore forms a strong start-point for new development processes. Karjalainen shows

how this occurs in the form given to Volvos new car series in the 'revolvolution' process, and through the design of Nokia handsets 'Definitely yours'.

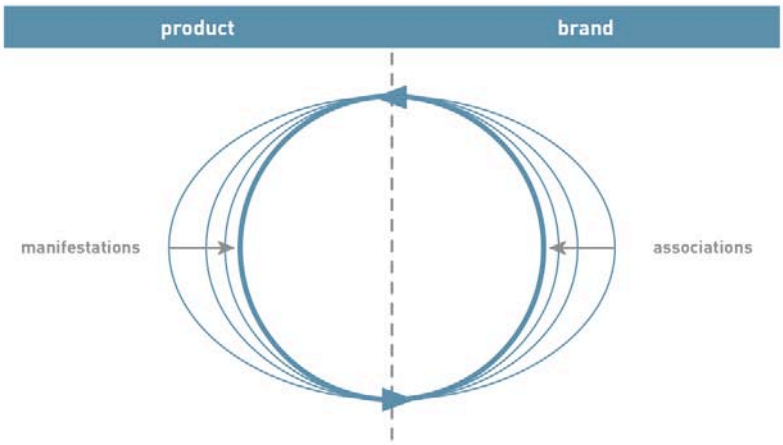


Figure 1: Karjalainen sees the result of a perfect semantic transformation as congruence between strategic brand associations and physical product manifestations. (From Karjalainen 2004 p207).

It is clear from his work that the tangible elements of a product should communicate the desired associations based upon the values and position of the company. Karjalainen's view is that the transformation of associations into product, strongly contribute to the image and reputation of the organisation.

Semantic transformation for services

Does Karjalainen's work also have relevance for services? As has already been mentioned, services exhibit some major differences from products, and therefore branding services is different to branding products. The specific aspects of services branding are described and discussed by De Chernatony (2003):

» Employee behaviour is central to delivering the brand promise
» The majority of service brands are monolithic
» The delivery process is more important
» Services have an increased number of contact points between customer and the brand making the service multi-tangible

The conclusion of De Chernatony's work is that there is a clear difference between services branding and product branding, and that this difference primarily relates to the form of service delivery. De Chernatony adds, that there is a lack of research regarding service branding and its implementation. However, his work highlights the importance of linking the companies focused position and values to a consistent brand promise delivered through behaviours, processes and contact points. De Chernatony points to the importance of organisational culture and staff behaviour for brand success, and states:

"Successful services brands thus evolve from a unique culture which is revealed both in the brand and in the attitude and behaviour of staff as they represent the brand to consumers" (p1107). Further, "successful services brands are characterised by organisations with core values which are deeply embedded" (p1110).

When comparing services brands as described by DeCharnatony's research to Karjalainen's product brand research, there are clear similarities in the strategic brand approach. The main difference between services branding and product branding is the delivery. DeCharnatony highlights organisational culture, staff behaviour and the multiple points of contact of a service, whilst Karjalainen focuses upon the product as main point of delivery. It is clear therefore that the semantic

transformation for services requires a transformation into multiple touch-point behaviours, which again are the platform for customer experiences. The question of how to do this is however not described within service branding research, and we have therefore chosen to adapt processes for service transformation from the product branding domain, as described by Karjalainen.

The process of semantic transformation

We have chosen to base ourselves upon process descriptions that are primarily aimed at product-based branding and have chosen to merge two similar process approaches:

» The process model described by Karjalainen (2004), which has a strong design basis
» The process model described by Ellwood (2002) which is a more generic brand management process
»

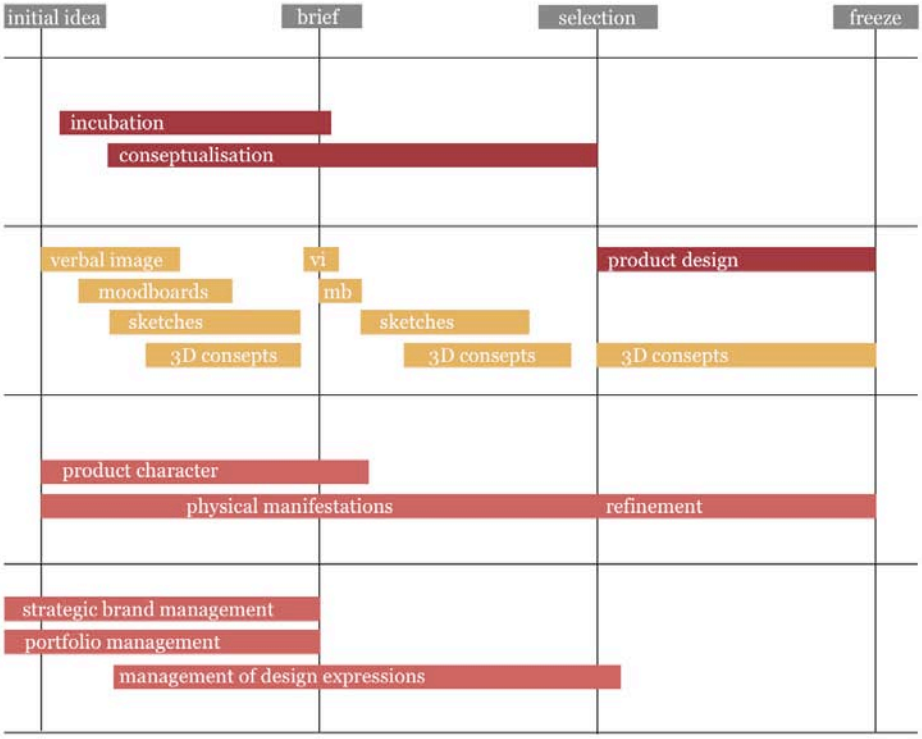


Figure 2: Karjalainen's visualisation of the semantic transformation process

Karjalainen (04) uses a transformation process model that is divided into three phases (see figure 2):

» The strategic brand identity is communicated to the project team as desired strategic associations. In Karjalainen's cases, these are generally communicated in text form, but also are clearly ingrained within the organisational culture through the design heritage of the organisation.
» The strategic associations are developed into product character through what he terms visual images (e.g. mood-boards).
» The visual images are transformed into physical manifestations such as sketches and 3D concepts for new products.

During this process, a parallel strand of strategic brand management occurs, which has a role in managing design expressions. It is implied that this is a quality assurance process, although this is not explicitly explained.

Karjalainen does not go into detail regarding these phases in terms of a suggested process, nor does he suggest in what way the product character should be produced. According to Karjalainen, stages 2 and 3 are iterative and are cycled through several times before a range of concepts are suggested.

Ellwood (2002) uses a similar 3 stage process model that is more generic and does not specifically relate to design activities, or to a specific development process. He describes three stages, and uses slightly different terminology. His three stages are:

» Description of brand DNA. His use of the term brand DNA can be described as very similar to Karjalainen's strategic brand identity (in fact Karjalainen uses the term DNA also).
» Development of media neutral brand elements (brand theme, brand name, brand identity), also termed brand personality.
» Development of media specific brand elements such as packaging, product, etc.

Common to both of these is the transformation from a core brand identity (mostly words, visual identity and culture) through the development of a project specific personality or character (visual representations), to sketches of how the final design might be.

For use in services, we have adopted much of the terminology used by Ellwood, and included elements from the process as described by Karjalainen. This, we feel, has given us a process that is relevant for service development, and cross-functional teams. We consider the term brand DNA as a good means of communicating the essence of a brand within a project team. We feel also that the term personality fits well with the application of brand to services, since personality and behaviour are closely linked. The use of the term brand personality, also communicates well within a service design project team, since it underscores the importance of behaviours in service provision.

Brand personality

Brand personality is defined as "the set of human characteristics associated with a brand" Aaker (1997 p347). Brand personalities are often characterised using analogies to people, objects and services. By giving the brand DNA associations with tangible and experiential things, this helps understand the brand, communicate the brand internally and helps the designer when aligning the finished design to the Brand DNA. Aaker has developed a theoretical framework of the brand personality construct and has determined the number and nature of dimensions of brand personality. She found five dimensions (sincerity, excitement, competence, sophistication and ruggedness) and 42 traits, linked to these dimensions. We consider the combination of dimensions and traits are a good start when designing a service, since they assist linking the Brand DNA to tangible personalities, which can then be linked to objects and services. In a workshop setting, or in a project team, the brand personality is a very good means of forming a common understanding of the company brand in respect to a new service.

The process model utilised in AT-ONE

In the AT-ONE project, we have developed a project specific model that combines process elements from Ellwood and design aspects from Karjalainen, to take account of service specific aspects, such as behaviour, as described by De Chernatony. We call this model, the brand megaphone.

The model (see figure 3) takes the brand DNA of the organisation, and uses this as a basis to describe the brand personality that is desired for the service being developed. Once this has been described, examples of behavioural touch-points are prototyped, based upon this personality. Examples of such touch-points are telephone conversations, point of sale assistance etc.

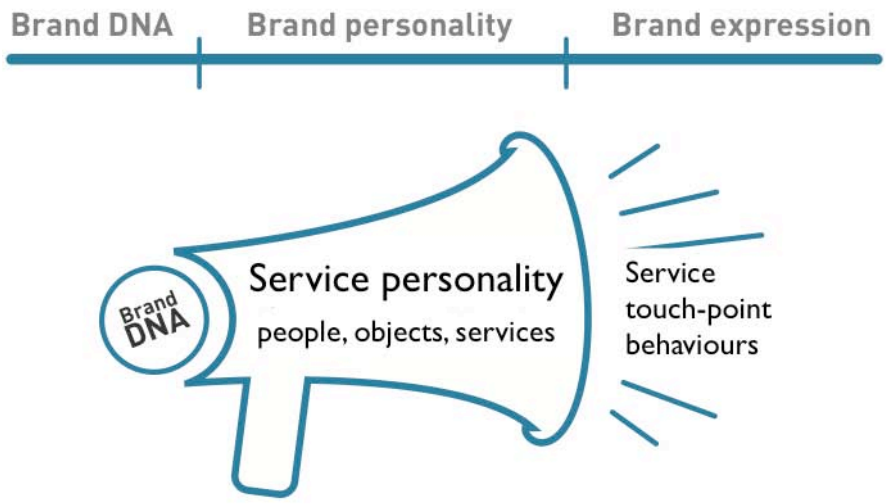


Figure 3: The brand megaphone model used in the AT-ONE project

This model forms the structure to assist the project team in the early stages of the NSD process. To assist with the process, several tools have been developed that cover different facets of service design, with focus upon the customer experience. Some of these are idea-generation tools, others help in the scoping and specification of a desired experience. The next section describes one of these, the target experience tool.

Describing a target experience

During the design process, decisions are made that will have influence upon the customer experiences once the service is launched. The designer aims to design a holistic service with service elements that consistently give a pre-defined experience to customers. However, the customers meet a service once it goes live, and after considerable development time and money has been invested. It is therefore important in a project to be able to understand the customer experience as early in the design process as possible. Jane Fulton Suri from IDEO introduced the term experience prototyping to describe this: "Increasingly, as designers of interactive systems (spaces, processes and products for people), we find ourselves stretching the limits of prototyping tools to explore and communicate what it will be like to interact with the things we design." Buchenau and Fulton Suri (2000, p424). Since then, this idea of experience prototyping has been developed further by service-designers in diverse forms.

Introducing the customer experience at the start of the project

In the AT-ONE project, we are introducing the idea of starting a project by defining the desired experience that a company wishes to give its customers, and then working backwards to decide how such a service can be produced - what should the offering contain, which touch-points should be utilised and how should they be designed? This is a form for reverse engineering based upon the

experience. The problem that we are attempting to solve in the project is "how can service experiences be scoped during the early stages of the design process, before the service design is even chosen". The tool presented here is one of the AT-ONE tools for doing this, and is based upon role-playing as a means of scoping a desired experience.

Experience prototyping based upon role-playing a service

The goal of experience prototyping is to "allow designers, clients or users to 'experience it themselves' rather than witnessing a demonstration or someone else's experience" (Buchenau and Fulton Suri 2000 p425). Suri describes methods as varied as probing, bodystorming and rapid prototyping. Since then, several methods for experience prototyping have been developed based upon acting out scenarios (Burns et al. 94, Buchenau and Fulton Suri 2000, Boess 2006, Boess et all 2007, Boess 2008).

In our case we are most interested in creating a common understanding within a project team regarding the relation between strategic brand and customer experience. Additionally we want to assist the team create a target experience, that can be documented. When initially using role-playing to assist this, we found that using project team participants to play the roles was interesting but did not give sufficiently detailed and nuanced experiences - we were basically not good enough at acting the nuances required for experience scoping. In addition, during the very early stages of development, many different service directions are still open. Solutions could be anything from self-service, virtual, mobile, fixed, bricks and mortar. Role-playing is often used to explore these alternatives and is effective in doing so. However, we wanted to find a way of describing and refining the kind of experience that was relevant to the brand, no matter what service direction was chosen later on in the process. We were not prototyping "the" experience, rather specifying a target experience. This is where our method diverges from traditional role-playing based experience prototyping. Traditional methods are aimed at exploring or evaluating an interaction or series of interactions for a specific service, rather than scoping a desired experience. We have therefore developed a tool that helps express brand strategy as target experience. To do this, we found that we needed to nuance experiences and required professional acting assistance.

Our usage aims specifically to help scope a target or ideal for how the brand strategy should be experienced, not to design the experience itself. Ideally, the results of our work would form part of a design brief that defines the desired experiential outcome, in terms of an experience target for the service, and presented as an experience (that can be experienced).

The target experience tool

The tool is described in step-by-step detail in appendix 1. It has the following 3 steps, which relate to the semantic transformation model described earlier:

» Transforming brand DNA into a project relevant brand personality
» Transforming the brand personality into target experience words and emotional take-aways
» Enacting situations based upon experience words to develop, refine and describe an experience target

At the project level, step one sometimes has been completed within the organisation prior to the project start. However, we have found this activity to be a good means of gaining a common understanding of the importance of the brand strategy for the project.

The tool combines visual references in the transformation, but also behavioural or experiential references also. During step 1, mood boards are developed, together with other references that help develop a project specific brand personality. These references rely strongly upon use of analogy and

metaphor. In addition to this, the personality traits, as described by Aaker (1997) are used to choose words relevant to the organisation and project. Together these examples are used together to describe the personality that the service should have. The result of this activity is a shared understanding within the project team of the personality that the service should have.

Once this is complete, this personality description is used to choose key experience words. These words are based upon a set of words developed for desirability work at Microsoft (Benedek and Miner, 2002). Together with the key experience words, we note down the desired associations we would like the customer to receive, based upon the experience (see figure 4).

Experience word:	**Desired take-away:**
Romantic	Dreamy, excited, warm, (sentimental), special, chosen, moved.

Figure 4: The experience words are enhanced by noting the associations related to the word

This then forms the basis for working with a professional who can act out scenarios based upon these words. We have found that it is a good idea to choose a reasonably wide spread of words at first, and then through successive iterations, nuance these, based upon the experience that each gives when played out. The ability to rapidly iterate and adjust the experience words and subsequently played experience, allows for the development of increasingly nuanced expressions. The team can then choose the experience term or terms they consider is best suited for the project. A typical workshop session to achieve this takes about a half day, provided preparations are made. We film the iterations, and edit the chosen film section(s). The combination of the experience words, accompanying associations and film, supported by the brand personality deliverables together create a target for experience that can form a specification for a project at the early stages. This forms a target, or guiding light for all later development work.

Discussion

So far, the process has been trialled using internal workshops and externally with one service provider. This section presents our experience with the model for the semantic transformation process and specifically the target experience tool. It discusses the tool in relation to other methods of enactment and suggests further areas for research and usage.

The research questions that we sought to answer through this work were:

» How can a cross-functional project team transform a companies brand strategy into relevant customer experiences for new services
» How can a team describe or scope a desired experience for a service at the early stages of new service development (NSD)

Does it assist cross-functional design teams with the semantic transformation?

The early stages of a project are phases in which the project is scoping its direction. It has a strategic mandate and explores alternative ways in which this mandate can be realised. To be successful in its context, the process for semantic transformation for cross-functional groups has to fulfil the following criteria:

» It should lead to a high degree of congruence between brand strategy and service experience

» It should address service-specific aspects, such as multiple touch-points, behaviours and organisational development
» It should lead to a shared understanding of process and result

Regarding the first question, we have not yet trialled the process in projects that have resulted in launched services. We have only partial data therefore to review this criterion. The process has been used several times as part of the research project together with external organisations. However, each organisation has utilised the process to develop concepts rather than to launch services. The feedback from workshop participants, received from discussions and questionnaires do, however, point to promising results. This also raises major methodological questions, which as yet remain unanswered. How is brand congruence measured, and who judges it? This question is not covered by Karjalainen, and in the case examples he uses, it is the designers and not the customers that are interviewed and who make the judgements. Without a brand congruence measurement tool it is difficult to assess the process we have developed.

In terms of the second question, there are strong indications that the process does provide an articulation of customer experiences that are specifically relevant to services. The process focuses upon behaviours and touch-points specifically as part of the procedural steps and results in examples of customer behaviours and their related experiences. In relation to organisational change, Karjalainen describes semantic transformation as a means of strengthening the brand and brand heritage within an organisation. In the AT-ONE project it is early days to say, since such changes take a long time. Organisational change is a slow process and difficult to measure. In addition, the organisations we are working with are large, and we interact only with a small subset. Indications are however positive, although indirect. Evaluation questionnaires completed after each workshop give positive feedback, and each organisation we have collaborated with, is now working on implementing AT-ONE as part of its development process. This indicates that the organisations involved see a positive reward from using this structured process and wish to implement it across the organisation. Should this happen, then the likely result would be a strengthening of brand and brand heritage within the organisation and improved congruence between service and brand.

Does the tool help scope a target experience for the service?

The tool aims to create a target for the customer experience, based upon the brand strategy of the service provider. This target can then be used to guide development later in the design process, independently of the final solution that is chosen. Does it do this?

To be able to evaluate this requires two criteria to be met:
» That the tool manages to successfully transform brand strategy into relevant experiences
» The tool manages to communicate the experience internally within the project team and externally, during the whole project process.

Our initial evaluations of the tool suggest that both criteria are met, but further work is required to understand this in more detail. Feedback from brand managers who have used the tool suggest that the tool assists in the transformation of brand strategy into a relevant target experience. Further, discussion within the project team regarding the nuances of experience, suggest that the tool does indeed scope experiences as a form for target. However, the tool has received limited evaluation and a long-term evaluation has not been possible due to the constraints of the project. We have been unable to follow a NSD process from start to conclusion using this process or tool, and cannot therefore conclude as to its value later in a development process.

So far, we have had best results from enacting telephone conversations or simple single touch-point interactions rather than whole processes. This is because it allows us to focus upon understanding nuances of experience without having to choose the specific direction that the service should take. In

the fuzzy front end, multiple directions are being explored, and it is not possible to explore both multiple directions and multiple experiences within the time frame of a workshop. When we have moved from conversations to behaviours involving touch-points, we find that the tool rapidly becomes traditional bodystorming, in which the focus is upon exploring alternative directions or solutions, rather than the experience itself. The tool therefore changes from being a scoping tool, to becoming an idea generation tool, thus fulfilling a different role.

Is it different to other existing methods?

We consider this approach to be different to existing experience prototyping methods, and complimentary to them. Informance/bodystorming/role-playing approaches explore different situations and are focused upon exploring alternative service solutions - what the service could offer and how it could be offered. This tool has a different focus, it looks at the transition from a strategic brand to service experience at a high level, and results in an experience ambition or target that is independent of the final chosen service design. It explores nuances of experience and fine-tunes this. It is this fine-tuning through iterative steps that we consider to be unique to this tool and complimentary to existing methods.

Broader applicability as part of a brand handbook

Although aimed at assisting projects with scoping and way finding at the fuzzy front end of projects, we see that the tool may have a broader applicability in terms of communicating brand strategy internally within an organisation. At present, brand identity is presented mostly visually in a handbook and through brand heritage and behaviours are often not communicated. We feel that this limitation has historical roots in product-based organisations and is that there is potential to use service experiences as part of brand handbooks for services. The tool offers an opportunity to explain and show how brand transforms through personality into experiences. We feel that the target experience tool could therefore be a supplement to a brand handbook in addition to a tool for a project team. This is a direction we would like to explore in the future.

Further work

The process and tool described in this paper are work in progress towards a holistic approach to service innovation at the fuzzy front end of new service development. The process itself is central to AT-ONE, whilst the tool is one of many tools being developed. Both the process and tool show promise, although several areas require further development and evaluation.

The process has been utilised in several projects and over several iterations as part of a research project. This has given valuable input to its development, but has prevented its use in fully realistic development projects. Long-term evaluation of the process as part of strategic development projects would be the real test of the process, and we hope that this will occur before the end of the project. Of particular interest is the evaluation of whether the process helps a project team towards achieving brand congruence. More specifically, we would like to achieve a greater understanding of how the process can assist a team:

» Gain an increased understanding of how brand relates to service
» Gain an understanding of the link between brand strategy and customer experience
» Gain an understanding of the consequence the customer experience has upon service perception by customers
» Understand nuances in customer experiences and the consequences of this

The tool itself needs to be trialled in more projects to gain a greater understanding of its strengths and limitations. It also needs to be trialled over a longer process, to understand its value further downstream in the development process. We would also like to explore the use of the tool as part of an expanded brand handbook for a service organisation. This offers an interesting further development, and we consider it might become complementary to a project-based version. We would also like to explore the boundaries of the tool and understand the situations in which it changes from being a scoping tool to becoming an idea generation tool. At present, this boundary is unclear.

Conclusion

The transformation of brand strategy into service design is a phase that is not well documented or described in the research literature. The process and tool described here offer a structured process that helps a project achieve such a transformation during its early stages. Initial evaluations suggest that the tool assists with the semantic transformation from brand strategy to target experience, although further work is required to validate this. Additionally, the process seems to assist a project team create a common understanding of strategic branding, customer experience and to a certain extent design, early in a project. Further work is required to explore the use of the process and the tool, particularly over the long term.

References

Aaker. D. (2000). Brand leadership. The free press.

Aaker. J (1997). Dimensions of Brand Personality. Journal of Marketing Research. Vol. 34 (August), pp. 347-356

Andersson Joacim (2005). Design as a way of bringing a service brand to life: the design dimension in brand development. Proceedings of the Nordic Research Conference, May 29-31 2005, Copenhagen.

Benedek and Miner (2002). Measuring Desirability: New methods for measuring desirability in the usability lab setting. Proceedings of the Usability Professionals' Conference, 2002.

Berliner and Brimson (1988). Cost Management for Today's Advanced Management. Harvard Business School Press.

Boess (2006). Rationales for role playing in design. Proceedings of the 2006 Design Research Conference. Lisbon. Design Research Society.

Boess et al (2007). When is role playing really experiential? Case studies. Proceedings of TEI 07. Baton Rouge, USA. ACM.

Boess (2008). First steps in Role Playing. Proceedings of CHI 2008. ACM.

Buchenau and Fulton Suri (2000). Experience prototyping. DIS 2000. ACM

Burns et al (1994). Actors, Hairdos and Videotape - Informance Design. Proceedings of CHI94. Boston Massachusets.

de Chernatony and Segal-Horn (2003). The criteria for successful services brands. European Journal of Marketing Volume: 37 Issue: 7/8 Page: 1095 - 1118

Clatworthy (2008). Innovations in service experiences; the AT-ONE method. Proceedings of the 6th Design and Emotion Conference. Hong Kong Polytechnic and Univeristy, Hong Kong.

Denison, Hart & Kahn (1996). From Chimneys to Cross-Functional Teams: Developing and Validating a Diagnostic Model. Academy of Management Journal Vol.39 No.4, pp1005-1023

Desmet, P. M. A., & Hekkert, P. (2007). Framework of Product Experience. International Journal of Design, 1(1), 57-66.

Ellwood (2002). The Essential Brand Book. 2nd Edition. Kogan Page. London.

Fitzsimmons 06 Service Management (5th ed) McGraw Hill

Gadd (2001). 4D Branding. Pearson Education, London

Gladstein et al (1992). Demography and Design: Predictors of New Product Team Performance Organization Science, Vol. 3, No. 3, Focused Issue: Management of Technology (Aug., 1992), pp. 321-341

Gobe (2001). Emotional Branding. Allworth Press New York

Grönroos 00 Service Management and Marketing. Wiley

Hansen and Christensen (2007) Emotions, Advertising and Consumer Choice. Copenhagen University Press

Hassenzahl and Tractinsky (2006). User experience - a research agenda. Behaviour and Information Technology, vol 25, No.2 pp91-97

Hollins an Hollins (1991). Total Design; Managing the design process in the service sector. Pitman London.s

Karjalainen (2004). Semantic Transformation in Design. University of Art and Design Helsinki

Lind et al (2008) Co-Design as social constructive Pragmatism. Proceedings of the AIS Interest group on Pragmatist IS Research. Paris December 2008

Looy et al 03 Services Management, an integrated approach. Prentice-Hall

Martensen and Dahlgaard (1999). Strategy and planning for innovation and management - supported by creative and learning organisations. International Journal of Quality and Reliability Management Vol. 16. No.9, pp878-891

McDonald et al. (2001). Corporate marketing and service brands - Moving beyond the fast-moving consumer goods model. European Journal of Marketing Volume: 35 Issue: 3/4 Page: 335 - 352

Muniz, Jr. and O'Guinn 2001. Brand Community. The Journal of Consumer Research, Vol. 27, No. 4 (Mar., 2001), pp. 412-432

Oulasvirta et al. (2003) Understanding contexts by being there: case studies in bodystorming . Personal and Ubiquitous Computing, 2003 - Springer

Pine and Gilmore (1998). The experience economy. Harvard Business School Press. Boston.

Ratneshwar & Mick (2002). Inside Consumption: Consumer motives, goals and desires. Routledge

Sanders and Stappers (2008). Co-creation and the new landscape of design. In CoDesign, Vol.4 Issue 1. Taylor and Francis

Schmitt (2003). Customer experience management. John Wiley

Sethi et al (2001). Cross-Functional Product Development Teams, Creativity and the Innovativeness of New Consumer Products. Journal of Marketing research Vol. 38 pp.73-85

Shedroff (2001). Experience Design. New Riders Press

Smith & Reinertsen (1998) Developing products in half the time. (2nd ed). John Wiley

Appendix 1: Description of the target experience tool

Participants

The workshop participants are the project team and two (or more) designers. The team can be added to, if needed to ensure relevant stakeholders are represented. We recommend that the workshop is facilitated by a designer with good facilitation skills. Alternatively, an experienced facilitator can be used, but they have to have an understanding for design thinking and design

Facilitator  Cross functional team  Actor/Actress

We have used an actress who is trained in improvisational theatre, but are unsure how important this is.

Planning the workshop

 Preparatory documents

Preparation for the workshop entails collecting as much Brand DNA information as possible. General strategy, vision and mission documents will have been used during the earlier workshops and will be reasonably well known by this point. The goal here is to focus upon the brand and its transition to experience.

The outputs from the Offering workshop should be built upon, particularly any mapping or defining results.

 Place

The only requirement is a room large enough for workshops with adequate space for acting out scenarios. This method does not require specific props to create realism. It is important to have a printer available very close to the workshop room, since multiple scripts will be produced and edited. We have used video as a recording technique, and recommend using a directional microphone to record the actor's voice.

 Stage one - Summary of brand personality

The facilitator introduces the company brand personality through descriptions and visual examples. The examples should show personality through the following means:

» examples of successful touch-points from the company that represent the personality
» examples of products, people, images or services that represent the personality
» the personality described in words, using the dimensions of brand personality (Aaker 97)
» If these examples are not available, then the group should produce them together in the workshop.

 Output

A written and visual summary of brand personality that can be used later in the design process.

Stage two - From brand personality to experience words

Based upon the brand personality from stage one, the group chooses experience words that they feel represent the brand as it should be experienced by customers. The group should be encouraged to take a broad approach at first and choose 5-6 different experience words that stretch the brand, yet are still faithful to the personality and DNA of the company.

We have based our experience words upon a list initially created by Microsoft for their desirability toolbox (Benedek and Miner 2002). They list 118 words and we have supplemented these and translated into Norwegian. Examples of our experience words and the full set of Microsoft words are presented in Appendix 1.

Many of the words do not describe experiences in themselves, so we have started to describe the desired experience we want the customer to 'take away' from the service encounter. This is done by simply creating a table (see example below):

Experience word: Romantic	Desired take-away: Dreamy, excited, warm, (sentimental), special, chosen, moved.

Figure x: Example of experience word and desired 'take away' from a project with the Norwegian Lottery.

Output

A set of experience words together with desired experience/emotional take-away, presented in table form.

Stage three: Role-playing and scripting (iterative)

This is an iterative stage, in which role-playing and scripting are cycled through. We find it worth jumping straight into role-playing to get a feel for some of the words and how they work. This results very quickly in the need for a script and sometimes some primitive props.

The scripts need to be carefully worded to be precise enough to express the chosen words and take-aways.

This stage cycles through several phases as a spiral of playing then adapting the script. We find that once the experience words have been played or attempted, that they become nuanced a level. Some become merged, some removed as being irrelevant, and some become more precise. During this stage, we use the printer continuously, printing out new updated scripts, playing the script and adapting.

Below are example scripts simulating a telephone call informing of a medium sized lottery win. The experience word is shown in bold, and the script that is related to it below. Note, these are translations from the original in Norwegian, and some of the meaning has been "lost in translation":

Pragmatic

Hello, I'm calling from the Norwegian Lottery to inform you that you have won 100 000 kroner in this weeks lottery draw. The money will be transferred to your bank account within two to three days.

Personal

Hi John, this is Anne calling from the Norwegian Lottery, and I have some great news to share with you. You have just won one hundred thousand kroner on your lottery ticket and we congratulate you warmly.
John, I will transfer the money to your account and it will be with you within a couple of days. Enjoy your evening.

Enthusiastic

Hi, is that John?
I have fantastic news for you. You're this week's winner of one hundred thousand kroner in the lottery. Isn't that amazing? There are so many things you can do with that money - imagine the possibilities. John, the money will be right with you and you will be able to blow it in a couple of day's -Congratulations!

We film this stage, and an edited video forms part of the final deliverable.

The group uses the iterations as a means to collaboratively focus and end up with one "target" word or word set.

 Output

This stage outputs video footage of the role-playing, together with numerous sets of scripts, with final chosen experience words and scripts.

 Stage 4: Final deliverable

This phase is tailored to the project but generally consists of putting together the brand personality result, together with the experience words and an edited video. Our experience is that a video showing the final chosen expression plus some of the 'near misses' works best to express the ideal experience and how this is different from other similar situations.

 Output

The final deliverables from this part of the workshop are:

» documentation of the brand personality, desired experience and experience take-aways
» edited video
» scripts supporting edited video
»

Appendix 2: Dimensions of Brand personality

The five main dimensions:

- Sincerity (down-to-earth, honest, wholesome, cheerful)
- Excitement (daring, spirited, imaginative, up-to-date)
- Competence (reliable, intelligent, successful)
- Sophistication (upper class, charming)
- Ruggedness (outdoorsy, tough)

More detailed descriptions of each traits characteristics:

- Down-to-earth = down-to-earth, family-oriented, small-town
- Honest = honest, sincere, real
- Wholesome = wholesome, original
- Cheerful = cheerful, sentimental, friendly
- Daring = daring, trendy, exciting
- Spirited = spirited, cool, young
- Imaginative = imaginative, unique
- Up to date = up to date, independent, contemporary
- Reliable = reliable, hard working, secure
- Intelligent = intelligent, technical, corporate
- Successful = successful, leader, confident
- Upper class = upper class, glamorous, good looking
- Charming = charming, feminine, smooth
- Outdoorsy = outdoorsy, masculine, Western
- Tough = tough, rugged

From: Aaker 97: Dimensions of Brand Personality. Journal of Marketing Research. Vol 34 pp. 347-356

Appendix 3: The Microsoft Experience words (originally used for product reaction cards).

The complete set of 118 Product Reaction Cards				
Accessible	Creative	Fast	Meaningful	Slow
Advanced	Customizable	Flexible	Motivating	Sophisticated
Annoying	Cutting edge	Fragile	Not Secure	Stable
Appealing	Dated	Fresh	Not Valuable	Sterile
Approachable	Desirable	Friendly	Novel	Stimulating
Attractive	Difficult	Frustrating	Old	Straight Forward
Boring	Disconnected	Fun	Optimistic	Stressful
Business-like	Disruptive	Gets in the way	Ordinary	Time-consuming
Busy	Distracting	Hard to Use	Organized	Time-Saving
Calm	Dull	Helpful	Overbearing	Too Technical
Clean	Easy to use	High quality	Overwhelming	Trustworthy
Clear	Effective	Impersonal	Patronizing	Unapproachable
Collaborative	Efficient	Impressive	Personal	Unattractive
Comfortable	Effortless	Incomprehensible	Poor quality	Uncontrollable
Compatible	Empowering	Inconsistent	Powerful	Unconventional
Compelling	Energetic	Ineffective	Predictable	Understandable
Complex	Engaging	Innovative	Professional	Undesirable
Comprehensive	Entertaining	Inspiring	Relevant	Unpredictable
Confident	Enthusiastic	Integrated	Reliable	Unrefined
Confusing	Essential	Intimidating	Responsive	Usable
Connected	Exceptional	Intuitive	Rigid	Useful
Consistent	Exciting	Inviting	Satisfying	Valuable
Controllable	Expected	Irrelevant	Secure	
Convenient	Familiar	Low Maintenance	Simplistic	

From: Benedek and Miner (2002). Measuring Desirability: New methods for measuring desirability in the usability lab setting. Proceedings of the Usability Professionals' Conference, 2002.

Appendix 3: Examples of experience words, as used by AT-ONE

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Visual*tiles*

Communication tools for (service) design

Chiara Diana, Elena Pacenti, Roberta Tassi

elena.pacenti@domusacademy.it

http://darc.domusacademy.com

http://www.servicedesigntools.org

Summary

Taking into account the importance of visualization within service design discipline due both to the limited visual appearance of services and to the heterogeneous group of figures involved in their conception and construction, this research paper proposes an investigation of the representation paths that could help the comprehension and use of visualization during the design process (1). This research topic has been studied from a design perspective and from a design culture background, in order to provide a contribution to the service discipline in the broad sense.

The analysis of the representations in terms of level of iconicity (abstract vs. realistic) and relation with time (synchronic vs. diachronic) brings to the identification of four main visual archetypes (maps, flows, images and narratives) described with reference to their own different purposes, features and languages.
The result is a deep reflection on the existing visual tools, pointing out the opportunities that could be further investigated with respect to their use in supporting service design and design processes in general. Moreover the analysis helps in eliciting some thoughts concerning crucial points, such as the communication of the service aesthetic, that haven't yet been solved but regarding what the visualization could play a fundamental role.

The background of this paper is represented by a research thesis (2) further developed with the aim to sediment some knowledge around the topic of tools used in service design. Several case studies were taken into analysis, in parallel with the examination of the existing literacy and the interviews with both academic and non-academic experts (3).
Although the analysis comes from a design perspective and is permeated with our design culture, the ambition of this work is to become a resource for the multiplicity of subjects that are part of the service field. Thinking at the design community, the purpose of the research is the improvement of the actual practices and the development of new tools for a more effective use of visualization; thinking at the other professionals, this paper provides a useful systematization, leading to a more conscious use of the tools that support -or could support- their work.

Why thinking of service visualization

Services are performances supplied by complex systems -made of people, artefacts and organization- that have very limited visual evidence (4).
This lack of *iconogenia* (5) emerged as one of the most critical issues since the raising of service design as a discipline, in the communication around the services to the final user as well as in all the phases of the design process.

As for product design, once the functional complexity of products has grown, the need of representing the product in use, its performance and the user experience brought to look for new visualisation tools and methods. The design process in all application fields has become a complex activity involving a growing number of stakeholders, experts, competences, as well as involving users. (6)

Visualization has thus taken on an even more crucial role: as it could make the ideas more tangible, complexity more readable and alternatives shareable, it applies quite well to support the communication between all the actors involved, the development of the process itself and its outcomes.

Planning and producing the communication of the services' complex and intangibles aspects to the mainly undifferentiated group of both interlocutors and users requires a deep understanding of the existing visualization tools and of the opportunities given by representation.

The web resource Service Design Tools (7) is conceived as a contribution to the service design discipline in this direction. It aims to sediment the existing knowledge around the topic of tools used in the design practice, collected and classified according to variables that are relevant in terms of communication purposes and choices, such as: the design activities they support, the kind of representation they produce, the recipients they address and the contents they can convey. Taken the main steps of a generic design process as a ground, the proposed taxonomy tries to address the visualisation needs for service representation and development at each process phase, from concept generation to practical implementation.

The identification of two basic parameters (iconicity and time), and the related opposite polarities (abstract-real and synchronic-diachronic) allows to group, comment and describe all the representation types of a design process. This interpretation represents a critical key guiding the comprehension and use of visualization within service design discipline.

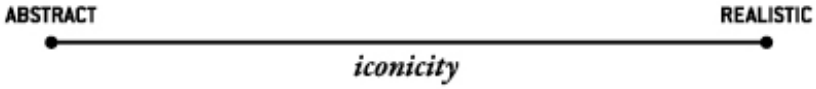
All the mentioned tools are also quoted in the Service Design Tools website, where descriptions, case studies with images and bibliographical references are collected for each one of them.

Representation types

To start the discussion about the representation of complex intangible objects like services, in the following we point out the basic notational principles we have identified as the main variables concerning visualization: the *level of iconicity* and the *relation with time*.

When talking about the *level of iconicity* (8) the focus is the coherence between the representation of an object and the real appearance of the object itself. A pictogram, for instance, is further from reality than a photographic picture.

On one side we are in front of abstract forms of representation, as symbols and diagrams are: their visual synthesis is often based on a symbolic language or a codified set of signs and is mainly used for technical aspects and notational purposes. On the other side the representation is a realistic replication of the original object: all the photographic and cinematographic techniques have this high level of iconicity, as well as the most accurate prototypes and the simulations of experiences in action.



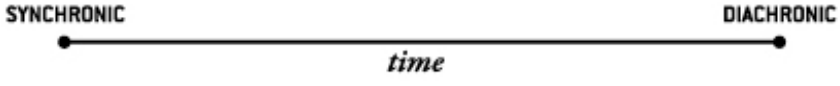
During the design process, designers continuously shift from abstract and synthetic to realistic visualizations and vice versa according to the different needs, choosing among alternatives with experience and practice, but it's possible to reveal some recurring criteria.

The level of detail in the representation has a relation with the progressive development of the idea: in early stages of the project it's more alike to keep the appropriate level of abstractness, to represent the idea and the concept behind, to avoid misleading messages (solutions like) and leave space enough for imagination to work (9).

The abstract and synthetic representations can support the description of systems, relations and processes. Their visualizations are simplified in the early stages of the design process and become more articulated then, together with the progressive refinement of the idea itself. At first they are oriented to the exploration and sharing of the possible alternative solutions, later on they become important tools for the specification of every functionalities and relations involved in the service implementation and delivery.
Also the realistic representations can be used throughout the different design stages with appropriate languages and levels of details. Initially images and narratives could be helpful for supporting the critical analysis of the state of the art as well as for working on ideas and sharing projections about the experience and its atmosphere, afterwards they could offer an advanced envision of the service idea and the opportunity to test some of its features and collect feedbacks.

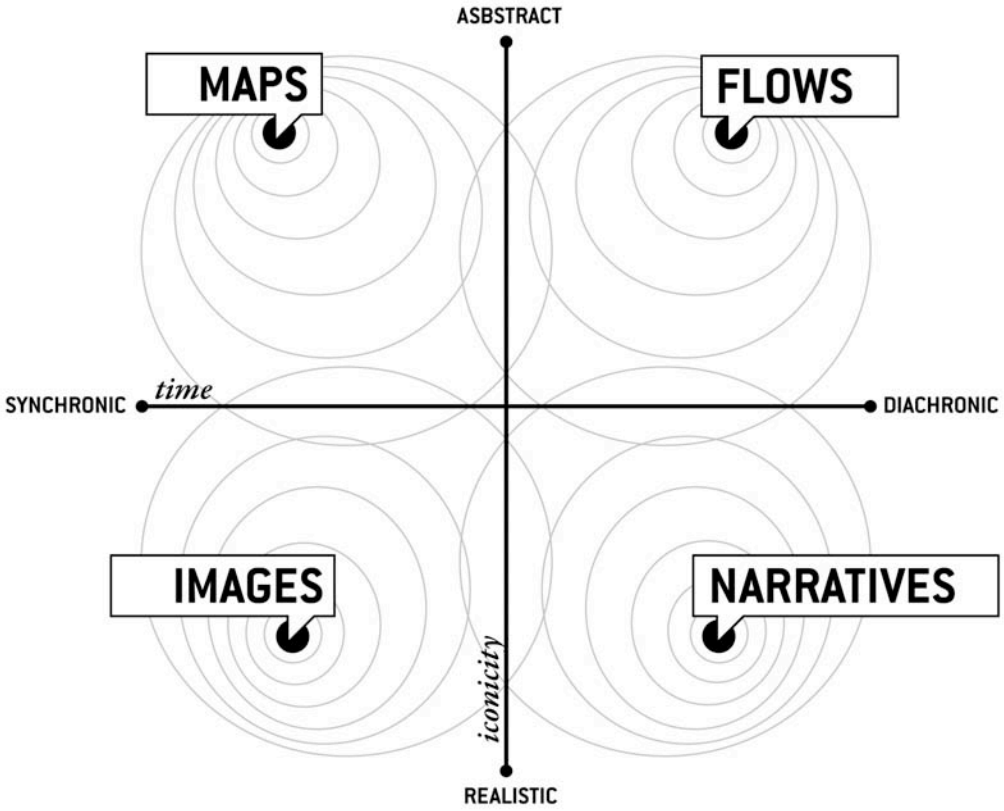
The relation with the time value is the other aspect to be examined in order to have a complete understanding of the way in which we use visualization tools as support for the project development, sharing and implementation.

Time turns up as an inner quality of any kind of experience, process or interaction, becoming an essential parameter also for the service description. The representations can give an instantaneous picture of the service –synchronic– or can either visualize the sequence of actions and stages that compose the service experience –diachronic–. In the first case the path of reading is included in the representation itself: the meaning can be found in the links among the elements that constitute the whole representation. In the second case the meaning emerges from the sequence: the attention is in the narration, as a tool for projecting the reader in living an experience or even impersonating the user.



The intersection between the two axis represented by time and iconicity defines the representation fields: the following graph shows the wide spectrum of possibilities generated

by the two axes. All the visual representations can be potentially located in these fields – just a few of them representing the extremes.



In the area of the abstract visualizations the maps and the flows emerge as two main directions: the maps are one shot –synchronic– representation while the flows are based on oriented sequences –diachronic–.
In terms of realistic visualizations we identified images and narratives as important models for giving the perception of the atmosphere or either of the experience, considering the synthetic power of images and the potential of narratives.

Maps

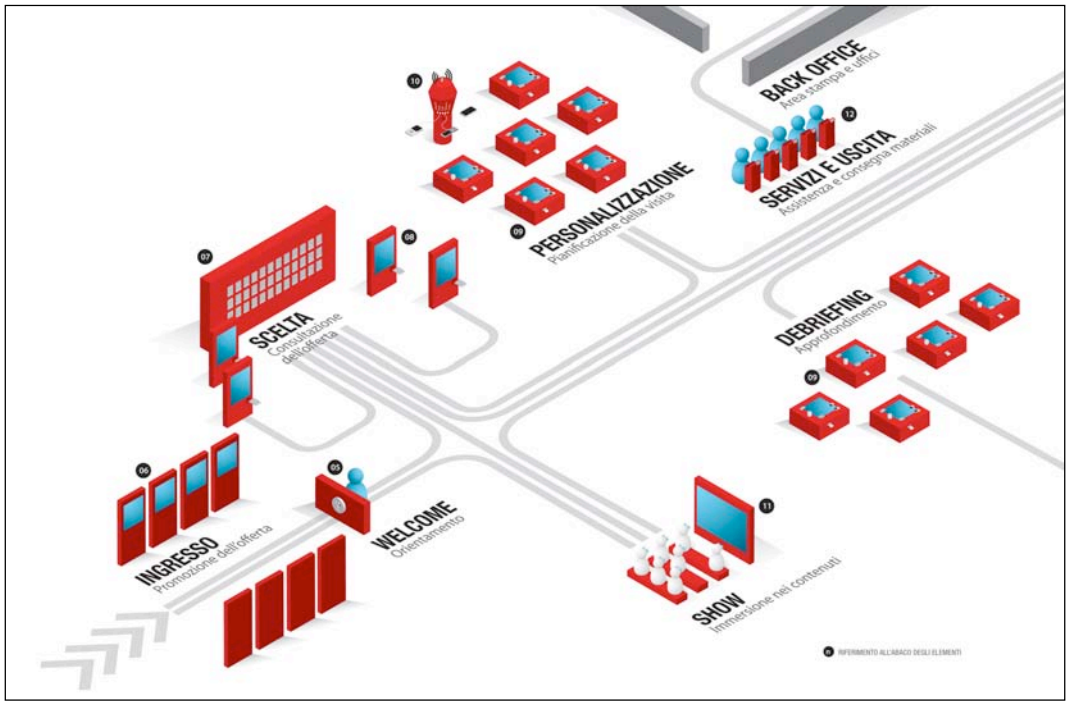
As abstract and synchronic representations aimed at giving a systemic and overall view, maps are mainly used for describing the structure that lies behind the service, for representing the actors and the devices involved, for articulating the offering and for eliciting the connections between all those objects according to the existing relations, hierarchies and exchanges.

The *system map* for example puts together in the space of the visualization all the elements that participate to the service delivery: the organization and the staff working in the back and in the front office, the stakeholders, the providers, the users, the devices, the infrastructures and the artefacts. The map shows how all those elements are connected, making the fluxes – of information, values, money, etc. – visible.

Maps can be rough sketches such as the *mind maps* –drawings facilitating the elicitation of ideas-, dynamic graphs such as the *affinity diagrams*– significant aggregations of thoughts-, or

either accurate representations such as the *service ecologies* -detailed descriptions of the system of actors involved-.

Exploring the techniques coming from the world of information visualization could lead to a more conscious use of this kind of tools and a deeper knowledge around the graphical languages and codes that help in organizing information into meaningful forms. (10).



Representation of the service system and functionalities, project *Porta d'accesso a Roma Archeologica*. DARC, Domus Academy Research & Consulting for Camera di Commercio di Roma, 2007

The definition of a graphical set of elements –a sort of visual abacus or library– could be really helpful: the defined elements could be arranged and rearranged according to the specific needs, giving a homogeneous appearance to all the abstract forms of representation used for a project, reducing the time spent in drawing maps and flows and increasing their readability for any recipient, once he has learnt the visual codes the first time.

Nevertheless, these graphical elements can't leave aside the specificity of the single project they are used for: we are not aiming at the creation of any universal language, being aware of the risk that also abstract visualizations have in losing information and the relation with the specific context and subjects.

Flows

Flows are abstract representations with an explicit orientation that determines the reading path. In the service design practice their importance is due to the need of facilitating the visualization of the process, of the steps of the interaction and of the phases of the experience.

The well-known example of service flow is the *blueprint*, the oriented diagram that describes step by step the process of interaction between the user, the front line and the back office. The blueprint, born as an engineering and strongly operational tool aimed at the service

implementation and maintenance, has preserved its technical language and its potentially endless degree of detail.
The service blueprint is able to provide a complete and detailed description of all the steps composing the interaction: this makes the representation good for the technicians who have to build the service but doesn't support other activities such as, for instance, sharing synthetic information and ideas about the process of delivery, that would require a simplification of the complexity according to what is recognized as prominent.

Similar kinds of flows are increasingly used to provide schematic descriptions of the experience in order to facilitate the dialogue with the stakeholders and the development of the idea within the design team. Those tools often merge some features of the technical flows (like the blueprint) with some features typical of the storyboards –integrated small pieces of illustrations for example- in order to improve their readability and extend their communication capability.

The *customer journey maps* follow exactly this direction giving more emphasis to the service touchpoints and using them to structure the representation. The focus is on the physical devices and on the generated fluxes of information to convey the description of the whole process and experience phases. This kind of synthesis could also become an input for other phases, for example for all the situations that require a sharing of the service delivery process, not just between designers and stakeholders but also between stakeholders and service providers, or service staff and users.

Interaction flow describing the process of delivery of the service *LaborLab*.
DARC, Domus Academy Research & Consulting, for ARIFL Regione Lombardia, 2007.

Images

Realistic representations of a concept can be provided by the use of images, taking photograph of the most immaterial and emotional aspects of the service.
The evocative potential of images is really helpful to make imagination work, recall

atmospheres and project themselves in future or possible situations.
Images are able to fix some intangibles aspects -such as the perception of the service inside a group of people- that are very difficult to be described by words.

One of the most evocative uses of the images is given by the *moodboards*: representations that collect several visual references in a composition of pictures and materials proposing an atmosphere by giving the generic perception of it. Moodboards allow for example to imagine and describe the aesthetic of a service in terms of visual appearance and sensations that are generated from a mixed number of mainly intangible elements.

Another example is provided by what we call a *service image*, a unique picture that is able to give in one shot an immediate idea of the main features of a service concept. The service images are aimed at supporting the dialogue with the stakeholders, bringing them envision the service, but also at supporting the discussion around concepts, facilitating the elicitation of the prominent aspects of every ideas and the comparison between them.

The envisioning could be supported by images recalling general atmospheres and projections as well as by images describing punctual elements, as the service had already existed. This technique is called *evidencing* and is mainly used in the advanced stages of the design process. Evidencing means creating images that explore the way a proposed design innovation will feel and work through its touchpoints. The realism of these images, that show the service evidences as they were existed, has the capability to put the audience directly in front of the solution, observing it from a different and more external point of view.

The *tomorrow headlines* and the *posters* -based on the evidencing model- are fictional articles or advertising images published on magazines or journals that could be composed by projecting themselves in the future and trying to understand what kind of impact the service will have on the society. This brings the designers ask themselves how the service will be presented to the potential users and what reactions it will determine; the images allow then to share this thoughts with the whole team or with the other stakeholders.

Image representing the concept *Phone Battle* for a new service aimed at the comparison inside consumer electronics stores. The idea was developed during the workshop *V-tail*, lead by DARC, Domus Academy Research & Consulting, for the Master in Interaction Design of Domus Academy, 2009

Narratives

Narratives are diachronic representations based on a strong realism: their meaning is given by the sequence of the proposed images more than by each single frame. Narratives are mainly used for the representation of the user experience, which needs realism –it's difficult to visualize the experience in an abstract way- and that requires a temporal construction. The narratives comprehend all the visual storytelling techniques, from the illustrated storyboards to the cinematographic simulations.

The *storyboarding* techniques support the design process in all its phases, assuming different configurations, languages and points of view according to the specific purposes and recipients. Quick and sketched storyboards are used in the problem setting and first ideas generation in order to facilitate the sharing of thoughts and the participation within the design team. Those first drawings could generate illustrated sequences useful for presenting the concept to the organization and then could become more and more detailed together with the refinement of the idea. Accurate storyboards are also the basis for the development of interaction scripts, if required, and finally they could become a significant tool for the communication with the service staff and final users. Storyboards –designed with the appropriate visual language- could explain pieces of complex processes in a quick and effective way, facilitating the relation between operators and users and so the comprehension and interaction with the service itself.

While the storyboarding is more oriented to the description of the experience in terms of process of interaction, there are also tools that try to answer the need of representing the experience in terms of perception, performances, behaviours and feelings: the most intangible sides of the experience that are very difficult to be described apart from their existence.
Filming the interaction with models could generate these kind of narratives, but the creation of models itself is quite difficult when the object is a service, and also re-enacting a situation that doesn't exist is not so simple. It could require a large amount of time and money other then specific resources like actors.

Low-cost examples that allow showing some features of the user experience and verifying some aspects of the interaction are based on the use of prototypes together with acting techniques as role-playing.

Working in this direction, the *experience prototype* consists in a simulation of the experience that foresees some of its performances through the use of some specific touch-points – mock-up or low-fidelities models- and possible customer journeys.

The *service prototype* is an interesting tool because is one of the closest to reality: the interaction with the service is observed and recorded reproducing the place, situation and condition in which the service will actually take place. The 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. The service prototype could be simulated also with projections on the wall, creating the fictitious situation in which some characters act pieces of the service experience.

Sustainable everyday project: representation of “The Handyman shop” scenario, Ezio Manzini and François Jégou, 2003

Conclusions

The mix of techniques and visualization tools that are used in the actual service design practice is mainly focused on the need of representing and managing the complexity of the elements composing the service systems and processes.
This is why the design and creation phases require both abstract representations –as maps and flows– supporting the description of that complexity as well as realistic representations –as images and narratives– giving visibility to other equally intangible and fundamental aspects such as the atmosphere and the experience.
Our exploration underlines the importance of balancing between the different techniques according to the specific phases and purposes, but also leads to reflect on some unsolved aspects that are crucial for the service design and implementation.

1. Do the visualization tools effectively communicate the service?

None of the existing tools really matches the need of representing what a service is into a synthetic and unique view (such as the sketch of any tangible products does). Service images partially works when service evidences are tangible enough to give the idea of the overall experience (the service place plays the most important role); simulation techniques, such as fake advertising or so, partially work as service description even when the service is totally intangible (like a financial service). Similar techniques –to be inspired by communication tools of services to clients and from advertisings– should be further investigated in order to merge the lack of *iconogenia* of the service also within the design process and the implementation of the idea.

2. The aesthetics dimension of the service experience is represented?

Most of the visualization tools used for service design are actually focused on time dimension and oriented to the representation of the interaction between the system and the user. This demonstrates once again the relevance of the user experience into the overall service design issue and also proofs the strict interconnection between two disciplines - service and interaction design - in terms of methods and tools.

From the point of view of the representation, what the narratives are still really missing is the aesthetic dimension of the interaction, if any. Are these representation tools effective for showing the qualitative aspects of the experience such as attractiveness, atmosphere, soft qualities? Is it possible to make the aesthetic of the specific service visible?

On the other side, certain kinds of images and static representations - such as *advertising, posters* and *moodboards* – are able to bring the aesthetic dimension of the experience by simulating the visual identity and tangible evidences of the service.

3. Is it possible to visualize and represent human behaviours?

Person to person interactions are still the most uncertain element in any service design and management. The *scripts* guiding the front-office personnel are good examples of design tools for managing the relationship but they are usually linked to managerial culture and still far from experimenting visual languages.

Filming techniques are sometimes useful into grapping the behavioural aspects of the interaction, they are used into training programs but they are not suitable for supporting the interaction in real time.

Investigating the potentiality of visualization for representing the behaviours of both front-line personnel and user can make a point towards the identification of original visualization tools for service design.

(1)
The service design community has revealed an increasing interest around the topic of visualization and similar explorations have been done in the last years, see for example the work of structuring the existing methods done by Fabian Segelström: Segelström F. & Holmlid, S., *Visualization as tools for research: Service designers on visualizations*, Nordes, Nordic Design Research Conference, 2009.

(2)
Design della comunicazione e design dei servizi. Il progetto della comunicazione per la fase di implementazione (Communication Design and Service Design. Implementing services through communication artefacts), thesis by Roberta Tassi, tutors Paolo Ciuccarelli and Elena Pacenti, Politecnico di Milano, 2008.

(3)
Subjects interviewed: Ezio Manzini (Politecnico di Milano), Nicola Morelli (Aalborg University), Stefan Moritz (Aegis Media), Sean Miller (Live|Work) and Toke Barter (Radarstation).

(4)
In her Phd thesis "Designing service interactions" (1998), Elena Pacenti refers to Prof. Butera and De Michelis definitions of services as "activities that people perform for the benefit, the satisfaction and utility of other people", as well as considering the relational aspects of the performance as the unique characteristics of all services.
F. Butera, introduzione a, D. Barassi, *La service idea*, Sole 24 Ore, Milan, 1988; De Michelis, G., *Le Istituzioni pubbliche di fronte al servizio: uno sguardo radicale*, Documento, 1996

(5)

As lack of iconogenia we mean the weak predisposition to representation. For a deeper understading of these concepts refer to: Anceschi, G., "Choreographia universalis" in *L'oggetto della raffigurazione*, ETAS Libri, Milano, 1992

(6)

"We live, it seems, in an age in which the long-standing and pleasingly crisp distinctions between what constitutes a "product" and what a "service" are beginning to break down. Even in the early days of this evolutionary shift, we can already see that the implications for both individual designers and the profession of design as a whole are likely to be deep and lasting."
Adam Greenfield, *On the Ground Running: Lessons from Experience Design*, posted the 27th June 2007 on http://speedbird.wordpress.com

(7)
Service Design Tools (http://www.servicedesigntools.org) is the result of the research activity done by Roberta Tassi during her graduation thesis in Industrial Design, further developed within the framework of the cooperation between DensityDesign research group at INDACO Department - Politecnico di Milano- and DARC, Domus Academy Research & Consulting. The website is an open and dynamic collection of tools used in design processes that deal with services or other complex systems.

(8)
Anceschi, G. *L'oggetto della raffigurazione*, ETAS Libri, Milano, 1992
Botta, M. Il design dell'informazione. Tassonomie per la progettazione di sistemi grafici autonomatici, Valentina Trentini Editori, 2006

(9)
Munari, B. *Disegnare un albero*, Zanichelli editore, 1977

(10)
Tufte, E. Envisioning Information. Cheshire: Graphics Press, 1999.
Ware, C. Information Visualization. London: Academic Press, 2000.

References

Anceschi, G., (a cura di), Il progetto delle interfacce. Oggetti colloquiali e protesi virtuali, Domus Academy, Milano, 1992

Anceschi, G., "Choreographia universalis" in L'oggetto della raffigurazione, ETAS Libri, Milano, 1992

Butera, F. introduzione a Barassi, D., La Service Idea , Sole 24 Ore, Milan, 1988

Butera, F., Il castello e la rete, F. Angeli ed. , Milano, 1990

De Michelis, G., Le Istituzioni pubbliche di fronte al servizio: uno sguardo radicale, 1996

De Michelis, G., Ripensare la partnership, relazione presentata al convegno internazionale "Impresa sociale,cooperazione, partnership", Milano 14-15 dicembre 1995

Eiglier, P.; Langeard, E., Il marketing strategico dei servizi , McGraw- Hill, Milan, 1988

Erlhoff, M.; Mager, B.; Manzini, E., (a cura di), Dienstleistung braucht Design, Luchterhand Verlag, Berlin,1997

Herdeg, W., Graphic diagram: the graphic visualization of abstract data, The Graphic Press, Zurich, 1979

Joe, P., Visualisation, Design Council, 2006

Laurel, B., Computers as Theatre, Addison-Wesley Publishing Company, New York, 1991

Manzini, E., Lo scenario del prodotto-servizio, in "Area", n°14, 1993

Manzini, E., Il Design dei Servizi. La progettazione del prodotto-servizio, in "Design Management", n°7, giugno, 1993

Montefusco, P., Multimedialità digitale ed evoluzione del panorama dei media: artefatti comunicativi e strumenti progettuali, tesi di Dottorato di Ricerca in Disegno Industriale, VIII ciclo, aprile 1993 – ottobre 1995

Morelli, N., New representation techniques for designing in a systemic perspective, in Design Inquires, Stokholm, 2007

Pacenti, E, Il progetto dell'interazione nei servizi, tesi di Dottorato di Ricerca in Disegno Industriale, X ciclo, 1998

Pacenti, E., Service Design fur altere menschen, in Erlhoff, M.; Mager, B.;Manzini, E.(a cura di), Dienstleistung braucht Design, Luchterhand Verlag, Berlino, 1997

Pacenti, E., Design dei servizi, in Manzini E., Bertola P. Design Multiverso. Appunti di fenomenologia del design, Ed. PoliDesign, 2006

Pacenti, E. (2009). Designing service interaction. Chapter in Meroni, A., Sangiorgi, D. (eds) Design for Services, Gower Publishing.

Segelström F. & Holmlid, S., Visualization as tools for research: Service designers on visualizations, Nordes, Nordic Design Research Conference, 2009.

Tufte, E., Envisioning Information, Graphic Press, Cheshire, 2002.

Tufte, E., The Visual Display of Quantitative Information, Graphic Press, Cheshire, 2003.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Service Design Leadership

Judith Gloppen
The Oslo School of Architecture and Design
judith.gloppen@aho.no
www.aho.no

Summary

The service sector is now the dominant part of many western economies – and seems to be growing in importance. To differentiate their offerings, service providers need to be innovative to meet conscious and unconscious user needs. The innovation process to improve and redesign the way organizations deliver services demands collaboration from multiple sources, of which two are competence in design and in strategic leadership. The variety of services offered in the market raises cross-functional internal and external service leadership issues. How businesses understand and organize design activities can have a profound impact on the innovation process and outcome. Organizational leaders are often not designers. However, they are part of the design and innovation process in creating the vision and by making design-related decisions to obtain the envisioned future. The emergence of the service economy calls for rethinking within leadership. Thus, the term *service design leadership* is introduced in this paper to reflect a new attitude towards leadership in the service economy in response to the characteristics of services.

Introduction

Research shows there is a growing consciousness of the value of design and design management (Borja de Mozota, 2003; Cooper & Press, 1995; Press & Cooper, 2003, Norwegian Design Council, 2009[1]) and the value of design as a strategic tool, which may unlock innovation in business.[2] In addition, the value of design in the innovation process has been experienced by businesses and described in numerous case studies communicated in both business and design literatures, like *Harvard Business Review*, *BusinessWeek*, and *Design Management Journal*. However, many of these studies are based on *product* design, and business leaders may be less conscious of the value strategic design may bring to the process of creating visionary service strategies and the actual design of innovative *services*. The value of specifically service design as a strategic resource for service organizations still remains to be broadly researched.

The field of design has undergone considerable change and development in line with shifts from an industrial economy to a service economy. However, there seem to be a gap between the change that has taken place within the design field and the understanding in business about how to take advantage of designers' skills and competence when the aim is to develop innovative services.

The design of efficient and useful services takes place in a complex and holistic context. This means that every detail that is designed may affect others and has an impact on overall customer experience. Even though there is a growing understanding of the value of design in business in general, the effectiveness of service design depends on business leaders' openness to include, and learn from, design thinking in order to develop a visionary and effective service design leadership role.

This paper addresses conceptual concerns about service design leadership and its implications for the service economy, informed by both research and literature from a variety of disciplines. The characteristics of services are located as part of a holistic system context. The paper aims to shed some light on how design thinking may contribute to business thinking and to a new mindset and attitude towards service design leadership.

Definitions and premises

Before progressing to the matter of service design leadership, some premises underlying this discussion are given.

The emergence of the service economy calls for rethinking within the leadership of service design to develop innovative services. In response to the characteristics of services, organizations increasingly recognizing the need for service innovations and the value of design-inspired innovation, the term *service design leadership* is introduced here to reflect a new attitude towards leadership in the service economy (Fig. 1).

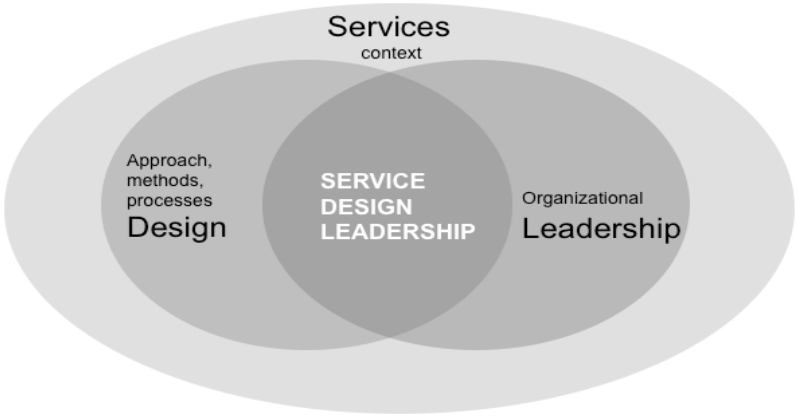


Fig. 1. Service Design Leadership

In the context of this paper Service Design Leadership is introduced as an approach where leaders in service organizations understand and use the power and value of design and design thinking's contribution to a visionary strategy process intended to create innovative services. Service design leadership involves a multidisciplinary and interdisciplinary synthesis approach to problem solving and innovation.

The *leadership* approach adopted here draws on Kotter's (1996:71) explanation that leadership creates 'a sensible and appealing picture of the future' (vision) and creates 'a logic for how the vision can be achieved' (strategy). *Design leadership* draws on the definition by Turner that 'design leadership is about helping organisations to envision the future and to ensure design

is used to turn those visions into reality' while 'design management is about delivering successful design solutions in an efficient, cost effective way' (Turner, in Best 2006:186). Further, in the context of this paper, the term *design* refers to methods and processes used by trained designers while *Service Design* broadly refers to a combination of tangible and intangible 'products' that require multi-disciplinary design and leadership in order for customers and participants to access them effectively and to make use of them enjoyably. Service designers apply design processes and methods to the development of services.

Service design may be used to create service *innovations* that are considered (by the service organization or the market) to be either incremental (small improvements) or radical. Both the terms *service provider* and *service organization* are used for organizations providing services and includes both 'pure' service providers and manufacturers offering value-added services to their core products.

Services are designed in a system of touchpoints where one element influences the other along the customer journey. *Touchpoints* refer to the multiple contact points between service providers and their customers. The sum of touchpoints and interactions between service provider and customer together constitute a *Customer Journey* – or a *Service Journey*.

Design thinking refers to an approach to creative problem solving based on a human-centred design process. Brown's argument that 'design thinking can be practiced by everybody' and should 'migrate outward into all parts of organizations and upward into the highest levels of leadership' (Brown, 2009:149) echoes the view of the author of this paper. The term design thinking will be further explored below. However, this paper merely aims to offer an indication of what the term may include in a service design leadership context. Further research to obtain empirical data may contribute to the need to unpack the term design thinking further as a topic within service design leadership.

Applying a service design leadership approach to creating innovations may help service providers achieve market leadership within the targeted market.

As both service design and service design leadership are emerging 'disciplines' and not much research has been conducted on the topics in a holistic perspective, it seems relevant, therefore, to draw on research and knowledge from related areas as design, strategic design management and design leadership. In addition, although rarely linked to design, services are discussed in literature and research in a service management and service marketing perspective. Both these disciplines are important for service design leadership. Marketing strategy as an essential part of organizational leadership and partly forming the basis for design briefs when developing innovative services, justify building on the marketing discipline. Also, the interest of studying service-specific issues emerged first among marketing researchers (Grönroos, 1994).

The growing number of new education programmes combining design thinking and business indicate a growing awareness of the value of integrating these competences.[3] Appropriate mechanisms to develop design leaders still remain to be established, according to Turner and Topalian (2002). Given that this applies also to design leadership, we need a better understanding of how to develop and support service design leaders in particular and their roles in the developing field of service design as part of the evolving service economy.

Designing Services – collaboration between multiple disciplines and competences

Services consist of multiple contacts points, or touchpoints, between service providers and their customers. Examples of touchpoints are brochures, internet, the environment in which a service is provided, and the service provider's employees to whom the customer is exposed. Each touchpoint can affect the overall customer experience. According to Shostack (1987) these various forms of perceived experiences also affect market position. Thus, each touchpoint has to be designed in a customer-centric way. As 'the basis of any service positioning strategy is the service itself' (Shostack, 1987), designing innovative services becomes an important part of organizational leadership.

Design and design-inspired innovation has become part of today's business strategy and management. As any other competence areas within business, the discipline of design has to be managed holistically in order to create value for customers, the organization's employees and the organization's return on investment. The discourse of design management has developed on strategic, tactical and operational level (Cooper and Press, 1995; Borja de Mozota, 2003). At the strategic level, the term 'design leadership' is used by some practitioners and scholars (Turner and Topalian, 2002; Topalian 1990, 2002). This development is not at present linked to services. However, in the same way that design of products has become central to management and leadership, we may expect the same to happen to design of services. While traditional product-based organizations are now also offering value-added services, designing services may or may not include designing products. However, to design services that aim to be experienced by customers in coherent and selective ways across multiple touchpoints, a wide spectre of design disciplines need to work together. To obtain the aim of a perceived coherent and desirable service experience, these design disciplines need to be linked to and managed in a strategic context at the service provider's leadership level – and combine design thinking with business thinking (Gloppen, 2008).

Characteristics of Services

Several characteristics of services may have an impact on service design leadership in the process of designing innovative services.

An organization's offering often includes both tangible goods and intangible services (Hollins and Hollins, 1991). Kotler and Armstrong (2006) list four special characteristics of services: intangibility, inseparability, variability, and perishability. By service *intangibility* they mean that 'services cannot be seen, tasted, felt, heard, or smelled before they are bought.' In service *inseparability,* 'services are produced and consumed at the same time and cannot be separated from their providers.' Service *variability* acknowledges that 'services may vary greatly, depending on who provides them and when, where, and how.' Finally, service *perishability* refers to the state that 'services cannot be stored for later sale or use.'

The distinction between product and services may be vague as a tangible product is often part of an intangible service. However, there are differences that may influence the leadership role, for example divergences related to inseparability and variability in interactions between service provider and service receiver. Interactions may be either between persons, or between persons and machines. In contrast to customers' relation to manufactured products, the service experience may be influenced by the fact that services often require greater interactions between service provider and the customer, or the

customer's interaction with other customers while 'consuming' the service. (Hollins and Hollins, 1991; Gustafsson and Johnson, 2003; Normann, 2007; Pine and Gilmore, 1999).

From a marketing perspective, the characteristics of services influence the elements that are traditionally focused on in a marketing strategy. Booms and Bitner (1981) proposed the idea of adding three new elements to the traditional marketing mix for use by service organizations. The four elements (4 Ps) in the traditional marketing mix, as described by Kotler (1994:98) are: *Product, Price, Place and Promotion*. The new elements suggested by Booms and Bitner are: *Physical evidence* (environment)*, Participants and Process*.

The expanded marketing mix clearly acknowledges the role of the service provider's employees, the environment in which interactions between service provider and customers (and sometimes between customers) take place, and the system of activities the process of delivering services require at different organizational levels. The three Ps are particularly important in services, which are provided by people more than machines.

Although Booms and Bitner make no links to design, the expanded service-marketing mix framework (amounting to 7 Ps) may serve as a framework in the process of developing service innovations that aim to be perceived as valuable by the customers. As a consequence, this framework may also form part of a platform for service design leadership.

In their research Voss and Zomerdijk (2007) discovered that innovation takes place in five distinct design areas that directly or indirectly influence the customer experience. These are the physical environments, the service employees, the service delivery process, fellow customers and back office support. Their findings thus echo the value of the new three Ps in strategy development.

Leadership strategy and perceived customer experience – closing potential gaps

Service quality, as perceived by the customer, is created during the different interactions - or touchpoints - between service provider and the customer. Normann (2007) coined the term 'moment of truth' to focus on each of these interactions' influence on the total customer experience. In a service delivery system there are many 'moments of truth' between service providers and their customers. Thus there may be perception gaps between the service provider's strategy for desired customer experience and the customer's actual perceived experience. Parasuraman, Zeithaml and Berry (1985) have identified five gaps, from a service quality perspective:

Gap 1: Consumer expectation – management perception gap.

Gap 2: Management perception – service quality specification gap.

Gap 3: Service quality specifications – service delivery gap.

Gap 4: Service delivery – external communications gap.

Gap 5: Expected service – perceived service gap.

Closing potential perceived service quality gaps belong in discussions at the leadership level as part of the service strategy. Consequently, they are an important focus area in a service design leadership role. In addition, service designers are in a position to contribute with their human-centred design process and research methods, to which we will return below. According to Topalian (2002), design is a strategic resource 'because it has a critical influence on the conception and delivery of products and services that match closely with customers' needs and aspiration.'

Collaborative design of the customer's service journey

Services are at times produced jointly by the service provider and the customer and the interaction influences the experience on both sides. Both parties control only parts of the service production process. Shostack (1984) introduced the *service blueprint* to create a context in which service providers may control every step of the service process. Shostack's blueprint method describes the interrelated parts of a service production and delivery process. In service design, a method of mapping all touchpoints and interactions between the service provider and the customer are employed in order for each touchpoint to be designed with the customer at the centre. In the language of service designers the term for this system of touchpoints that influence each other are Service Journey or Customer Journey. Observations (and reflections by the author) may suggest that the process of mapping the Customer Journey is best done in collaboration between service provider and service designers. Doing it together creates shared understanding and benefits from the competences of both service provider and designers. People from different levels and business areas of the organization are valuable informants and discussion partners in this mapping process. In addition to a common understanding of the service offering, seen from the customer's perspective, the learning outcome for the organization by cooperating with service designers may be valuable also on a strategic level. This may be achieved through the shared use of design methods and processes that may in turn contribute to a new mindset and attitude towards service design leadership.

Designing services is often based on knowledge gained from many fields and disciplines as it often includes both tangible goods and intangible services. Thus, service design leadership involves considerable interaction among different specialists. Design categories like graphic design, interaction design, industrial design, interior design, and design of uniforms, to name some, may all be part of designing services. For example, they all come into play when developing transportation services, restaurants or education institutions. In order to create a beneficial and coherent customer experience, service design leadership needs to be approached in an integrated, multi-disciplinary way, where all the 7 Ps of the expanded service-marketing framework are designed to deliver customer value.

The role of leadership and designers in service innovations

Gaynor (2002) argues that leadership may be seen as a state of mind. It may also be argued that designerly ways of thinking and doing (Lawson, 2006; Cross, 2007) may have influence towards a leadership attitude that acknowledges the value of design in the innovation process. Topalian (1990, 2002) argues that design leadership is one of the most powerful means of generating new ideas.

Kotter (1996) distinguishes between leadership and management. He describes leaders as 'people who can create and communicate visions and strategies'. Further, he argues that 'management deals mostly with the status quo and leadership deals mostly with change' (Kotter 1996:165). In business settings the relationship between management and leadership is critical. Without it the shaping of innovation and maintaining growth is difficult to achieve. Leadership in innovation does not require being a multi-disciplinary specialist. However, innovation leadership requires listening to what other specialists bring to the table, as innovation does not take place in isolation (Gaynor 2002:195). 'Leadership defines what the future should look like, aligns people with that vision, and inspires them to make it happen despite obstacles' (Kotter 1996:25). This has implications for the translation of service strategy to service design in the strategic operations of businesses but also in the

organization's own orientation to changing perceptions and activities concerning the designing and delivery of service innovations in a customer-centric way.

Design leadership and design management – mutual dependency

To better understand service design leadership in particular, we now look into how design leadership draws on design management, and particularly strategic design management.

The development of new services requires strategic direction. The fuzzy front end of innovation is where leadership by strategic thinking and decision-making take place. Service design *leadership*, therefore, belongs at the starting point of innovation strategy. Service design *management* then comes into play in the subsequent implementation phase.

'Design management is the business side of design', according to the Design Management Institute (DMI). 'Design management sees to link design, innovation, technology, management and customers to provide competitive advantage across the triple bottom line; economic, social/cultural, and environmental factors.'[4] Several researchers link design management to business management and leadership issues (Borja de Mozota, 2003; Press and Cooper, 2003; Cooper and Press, 1995; Dumas and Mintzberg, 1989; Gorb and Dumas 1987). These studies often focus on the value of design for business and on influences on decision-making by different stakeholders.

As there is not much research on design leadership in a service context, we may build on research on strategic design management and the transfer value this research may bring to the characteristics of services. In the same way, we may draw on theories of service management and relate the value of design, according to findings from design management and design leadership research in order to form part of a service design leadership role.

As with other disciplines, like marketing, design is active at three levels in organizations: strategic, tactical and operational. Design leadership belongs at the strategic level. Design management on the tactical and operational level. Adopting the distinctions of the different levels made in Best (2006) this means that the overall policies, missions and agendas are defined at the strategic level. Processes and systems of specific business units or functions come into play at the tactical level. At the operational level, decisions taken at the strategic and tactical level are implemented and 'design manifests itself in the physical and tangible products, services and experiences' (Best, 2006:17). However, a critical obstacle to establish design management's credibility as a rigorous business discipline is the lack of consensus on what design management encompasses (Topalian, 1990, 2002).

Today *design management* is used to describe what in the past was called design project management, while the term *design leadership* is used to describe a more strategic level related to the vision for how design might be used within an organisation to achieve corporate goals (Borja de Mozota 2003). The terms design 'leadership' and 'management' exists to differentiate between these two approaches in design (Best 2006). However, there is 'a move to change the name of design management to design strategy or design policy, with the aim being to locate design at the heart of new business development' (McDermott 2007:85).

Both design leadership and design management are necessary to get optimal value from service design. Design leadership is needed to know where the business is going. Design management is needed to know how to get there (Turner and Topalian, 2002). However, as Hollins states,[5] organizations in the service sector have 'only recently realized that a conscious effort in applying design techniques to services can result in greater customer satisfaction, greater control over their offerings and greater profits'.

Research on characteristic variables of design management indicates that there are three approaches to design management and how design creates a competitive advantage among design-oriented product companies. These approaches focus on design as a managerial, resource, and economic competences (Borja de Mozota, 2003). Although the research is based on product-oriented companies, these approaches are most likely applicable to service organizations as well. One such recent contribution is an exploratory research project 'Designing for Services'[6] initiated by the Säid Business School that explored service design from multidisciplinary perspectives. The project produced a collection of perspective essays both by academics and researchers, and by participating service designers.

Further research within multidisciplinary perspectives may inform the area of service design leadership and may have implications for the design of valuable services.

The design field in the service economy

As a profession, design is evolving from a product-based practice born of the industrial age to a process driven practice in the service economy. The different roles for the industrial designer and typical statements on design from the 1950s have changed from designers being seen as artists to designers being acknowledged as innovation drivers and participants in the creation of corporate vision (Valtonen 2007).

A variety of design disciplines may work in collaboration in the field of service design. One such design discipline is interaction design, which has influenced the development of services both in the meaning of digital interaction design (Holmlid, 2007, 2009) and in the meaning of how human beings relate to other human beings (Buchanan, 2001). For Buchanan, concepts of interaction emerge as a new domain of design thinking, where human interactions take place in systems and environments, a development Buchanan introduces as fourth-order design. He argues that developing an understanding of this fourth-order design will transform the design professions and design education. His argument is based on his idea of the "Four Orders of Design" framework, which includes graphic design, industrial design, interaction design, and environmental design (Buchanan, 2001). These disciplines may all be relevant in service design.

Although the domain of service design is relatively new, it is expanding rapidly. Examples of pioneering design companies offering service design are LiveWork, IDEO and Engine service design. However, an increasing number of companies now offer service design as a resource to businesses and organizations to help them adapt to changing markets, and the needs and desires of their customers. Service design is a response to the service industries' recognition that their customers are now looking for a 'totality' of services of high quality (McDermott 2007). McDermott points out that service design attempts to offer greater efficiency, profits and ease of customer use to the service industries. She also makes the point that there is a growing understanding in business that a key component for economic growth is precisely design of services.

Some design companies have moved beyond products, services and customer experiences to an attempt to help organizations to design a culture to foster greater innovation themselves by learning from the way designers think and work (Utterback et al, 2006:8; Brown, 2008, 2009).

Service Design Leadership – combining approaches from business and design in a service context

To analyze what make successful leaders, Martin (2007) argues that focusing on what leaders *do* is a misplaced focus and that a more productive approach is to look at how successful leaders think. Martin found that most successful leaders are *integrative thinkers*, meaning 'they can hold in their heads two opposing ideas at once and then come up with a new idea that contains elements of each but is superior to both'. He builds the term *integrative thinking* on this process of consideration and synthesis. The notion of synthesis, meaning 'the creation of a coherent harmonious whole emerging with integrity from a collection of specific design choices', is fundamental in design as well as in business strategy (Liedtka, 2000).

For analytical business consideration, Boland and Collopy (2004) propose a *design attitude* toward problem solving. By design attitude, they refer to an attitude where decision makers make an effort to create a better solution than what has so far been suggested as opposed to a decision attitude that choose from among the alternatives already at hand.

Borja de Mozota's (2003) research on design-oriented European SME's (small and medium-sized businesses) found that business managers view 'imagination' as the most important skills designers have. Other key skills relevant to service design leadership, also included capacity to synthesize and to generate a vision.

Non-designers in Service Design Leadership roles

The process of designing services involves people at different levels in a service provider's organization. Leaders have a critical role to play here though this may not be explicit in terms of design. Leaders of these organizations are often not professionally schooled designers. However, they are part of the design and innovation process through their involvement in creating visions and strategies, and making design-related decisions to obtain the envisioned future. These design leaders influence the design process, often in unacknowledged ways.

Gorb and Dumas (1987) coined the term *silent design* to describe this activity. They define silent design as 'design by people who are not designers and are not aware that they are participating in design activity' (Gorb and Dumas 1987:150). The term silent design has been taken further by Dumas and Mintzberg (1991) to address how the role of *manager as designer* can have a profound impact on innovation. Managers and leaders practice silent design by the many decisions taken when they enter into the design process, whether they or others are unaware of their impact. Dumas and Mintzberg (1991) argue that 'this role of manager as designer is hardly mentioned in the literature, and barely acknowledged in business practice'.

The importance of 'silent designers' resonates with Topalian's (1990, 2002) statement that 'business executives make up the most powerful body of 'designers' in the world'. He argues that the outcomes of design projects, and how solutions are presented to the market, always rests with these executives.

Enlightened understanding of the context for design within an organization may turn unconscious 'silent designers' into conscious strategic 'design thinkers', meaning a leadership attitude that acknowledges the power and value of design, and include design thinking in their service design leadership approach.

Design thinking and design attitude

The terms design thinking and design attitude are associated with designer's mind-set and approach to problem solving, problem finding, and design methodology used to designing experiences and organizations in addition to the process of designing innovative services. In the service industry they may be connected to an empathetic user-focused approach to problem solving and service innovations.

Recently, the discourse of design thinking and design attitude (Boland and Collopy, 2004, 2008) has been extended into discussions of how design thinking and design attitude can create value in an organizational and management context (Buchanan, 2008). Design-inspired innovation (Utterback at al., 2006) is being recognized and has contributed to raising the present interest of the business world in design and design thinking.

Design thinking in a business context is defined by Brown (2008) as 'a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity'. Although Brown is pointing to designer's sensibility and methods, he also argues that design thinking is not the exclusive territory of designers, but a skill that can be learned to achieve successful innovation. He states that design thinkers are not necessarily created only by design schools. Brown's experience is that many non-designers have a natural talent for design thinking, which the right development and experiences can unlock.

For non-designers, educational development may take place by attending one of the joint programs at the intersection of design and business education. Another way of developing design thinking skills may be by working in close collaboration with designers and learn by observing the ways designers approach designing services, not just as problem solving but through 'designerly' ways of problem finding and arriving at solutions (Cross, 2007; Lawson, 2006). In their approach, designers make use of visualization, ethnographic research, divergent idea generation, synthesising, and their empathic skills, to mention some methods and processes generally associated with designers. Brown (2009) states that at the centre of a human-centred design process are field observations, prototyping, and visual storytelling. Junginger (2007) argues that a key skill for designers is learning to empathize and that visualizing plays a significant role in designing, as do prototyping.

According to Brown (2008:85) 'thinking like a designer can transform the way you develop products, services, processes – and even strategy'. Some of the characteristics he lists to look for in potential design thinkers are: empathy, integrative thinking, optimism, experimentalism and collaboration. One of Brown's characteristics, *integrative thinking*, echoes the findings of Martin (2007) in his study of what characterize successful leaders.

The process that supports design thinking is generally described in terms of phases, such as inspiration, ideation and implementation, according to Brown (2008, 2009). Applied to the customer-centric approach, most design processes begin with analytical processes of insight and understanding of customers' conscious and unconscious needs and the possibilities for innovations in an organizational context. Conceiving of change, innovation and strategy and setting it in motion may be understood as designing service design. However, the move from inspiration through to implementation depends hugely on how design management is involved and the roles leaders play in this process – the role of service design leadership.

Towards a changing mindset in both business and design

In line with the change from an industrial economy to a service economy management perspectives have emerged from scientific management to service management (Grönroos,

1994). Normann (2007:58) stresses the importance of adopting a holistic approach to what he calls *service management systems*. The basic conceptual framework of this inter-related system consists of five main components; 1) the market segment, 2) the service concept, 3) the service delivery system consisting of the sub-components personnel, client, technology and physical support. 4) the image and 5) the culture and philosophy.

Service management is a market-oriented approach and a management approach geared to the characteristics of services (Grönroos, 2007). Further, Vargo and Lusch (2004) argue that we are now able to adopt a service-dominant logic of customer value co-creation approach. In this approach the 'logic' is to situate marketing according to a dominant logic where 'service provision rather than goods is fundamental to economic exchange.' Bringing in service designers to this service-dominant logic may then enable new perspectives and possibly a more human-centred view to be developed with respect to the conceptual service management system. Thus, this framework may contribute to a holistic approach to service design leadership.

Design-inspired innovation is recognized as important by a growing number of organizations aiming to maintain a high brand value (Utterback et. al., 2006). The scope of design management has changed as a result of changed understanding both by businesses and designers (Borja de Mozota, 2006). The attitude towards the value of design change as the businesses climb the 'learning ladder' and reach a strategic level of design leadership based on coherence of the design system in organizations that think of management as an art of collective action, according to Borja de Mozota (2006).

Although the value of design is appreciated from different perspectives, few organizations appear to understand how to manage design as a strategic marketing tool (Kotler and Rath, 1984). With the aim to study optimal use of design thinking in an organization's marketing strategy, Kotler and Rath (1984) propose a 'Design Sensitivity Audit' and a 'Design Management Effectiveness Audit' to indicate the role design plays in the marketing decision-making and to rank how well management uses design. Borja de Mozota (2006) proposes to use the Balanced Score Card, known from business management, as a measuring tool for design managers. The tools proposed by Kotler and Rath and by Borja de Mozota appear relevant in a continuous learning process as part of the basis for developing a platform for service design leadership because they facilitate the development of a design attitude, which is needed in management practice and education today, according to Boland and Collopy (2004). In addition, these tools may contribute to Topalian's (1990:47) argument that 'design leaders should convey a vision of what is possible through a professional approach to design in order to broaden perceptions of the contribution design makes to corporate performance.'

Conclusions

Service Design Leadership – leadership informed by design in a service context

Research on service design is now being published in a variety of contexts. Attention to the design part of service design still remains largely unarticulated in the domain of marketing. This makes it all the more important to locate and distinguish between services, design and leadership as they impact on service design and the roles of leadership therein, as well as service design leadership in strategic organizational operations and innovations.

Designing services from a desirable and integrated customer experience view asks that we focus on the interrelationships of the different touchpoints of a service journey in addition

to designing an experience that is perceived as being valuable at each touchpoint. This approach demands leadership and multi-competence collaboration and their relations to the perceived experience of customers. One way of pursuing an experience-oriented customer strategy is to link design thinking with traditional business training to form a platform for service design leadership.

This paper has identified that the role of design in business is broadening and moving towards a more strategic level in addition to the process of designing the variety of touchpoints that in sum constitute a customer journey in a service context.

At the same time, society has moved towards a service economy and thus may require a different approach from both designers and leaders of service organizations. We may expect leaders in service organizations to want to broaden their understanding of how they may collaborate and take advantage of designers' skills and competences on both strategic and operational levels.

This paper has identified some of the characteristics of services and some basics that may build up the basis for a framework for service design leadership. From the discipline of marketing, the expanded service-marketing mix (the 7 Ps) and the focus on potential gaps between service organizations' service strategy and perceived customer experience of the service present elements to be considered when making improvements or radical innovations. It may be argued that design management and design leadership are mutually dependent in a service design context in the same way it does in management and leadership in general. Even if research and knowledge are drawn from the discipline of design management, the focus in this paper is on the design leadership level and how design may inform leaders in service organizations. Enlighten organizational leaders may be done by designers being discussion partners on a strategic level as well as by the practical designing of services in close collaboration between service providers and service designers. It may be argued that designing successful, holistic services needs to be approached in an integrated, multi-disciplinary way that includes most design disciplines in addition to visionary leadership.

Leadership involves making decisions, including decisions that influence design processes and outcomes. However, leaders may not be aware of their impact on the design and innovation process and it may be argued, therefore, that leaders may benefit from adopting a design attitude. Designing services as collaboration between service designers and service organizations may lead towards leaders of service organizations adopting a design attitude. It may be claimed that successful leadership and strategic design may not be far from each other in attitudes towards problem solving. Both seem to have the capacity to be integrative thinkers and to synthesize. The notion of synthesis, fundamental in design as well as in business strategy, may lead to the claim that the main areas informing service design leadership are the approach, methods and processes of design in combination with organizational leadership strategies.

An open-minded collaboration between organizational leaders and service designers, with a shared aim of developing benefits and value for customers at every touchpoint, may necessitate a new mindset and a new attitude towards leadership in the service economy in order to utilize design-inspired service innovations. Arriving at this new attitude towards service design leadership demand a mutual understanding of the way of thinking and working within design and business.

With the service sector now being the major part of many leading world economies, it may be argued that the need for service design leadership is rising when aiming to develop innovative services in a strategic business context.

Further research

The issues involved in service design leadership are numerous. By no means does the above discussion encompass all of the subjects relevant to a platform for service design leadership. However, the knowledge developed in this paper may be built on further by case studies exploring how methods and processes of design may inform and inspire visionary leadership in service organizations and possibly lead to service innovations that are perceived as valuable by relevant stakeholders.

Further research, for example, may be informed by and conducted in a Systems Theory view. For instance, considering that none of the touchpoints in a service journey work in isolation, the complexity of the service system leads to a need for a holistic view on service design leadership. This view may also inform increased task complexity for service designers. As a result, linking the framework of the service journey to systems thinking may be an area to research to further develop the service design leadership role. For example, in the context of organizational learning and innovation, Senge (2006) argues that a holistic view of a larger system allows us to better understand the different sub-subsystems and their links. Such a view would perhaps be fruitful to apply to service design leadership.

The link to service design leadership might also be made by way of a model of service management system (Normann, 2007). This could help us connect the internal and external aspects of the organization, market, delivery system and culture and service provision. Without such an approach to the wider system relation, service design leadership may all too easily miss an overall customer centric view. Also, adding design thinking to the service management system as described by Normann (2007) and to the expanded service-marketing mix framework, may contribute to a platform for service design leadership for developing innovative services by design.

The knowledge developed in this paper may be a starting point for exploring how a close collaboration between service providers and service designers may influence the attitude towards leadership in the service economy. Further, exploring the synthesis of design and organizational leadership by use of an innovative service design method may contribute to the future of service design leadership.

Acknowledgements

My thanks to my supervisor Professor Andrew Morrison, Professor Simon Clatworthy and the research seminar group at the Institute of Design, Oslo School of Architecture and Design, Professor Alison Rieple, University of Westminster, and the reviewers for constructive comments and suggestions. My PhD is part of the AT ONE project, which is funded by the Research Council of Norway.

Bibliography

Best, K. (2006). *Design management: managing design strategy, processes and implementation*. Lausanne: AVA Publ.

Boland, R. J., & Collopy, F. (2004). Design Matters for Management. In R. J. Boland & F. Collopy (Eds.), *Managing as Designing* (pp.3-18). Stanford: Stanford University Press.

Boland, R. J., & Collopy, F. (2004). *Managing as designing.* Stanford: Stanford University Press.

Boland, R. J., Collopy, F., Lyytinen, K., & Yoo, Y. (2008). Managing as Designing: Lessons Organizational Leaders from the Design Practice of Frank O. Gehry. *Design Issues*, 24(1), pp.10-25.

Booms and Bitner (1981). Marketing Strategies and Organization Structures for Service Firns. In J.H. Donnelly & W.R. George (Eds.), *Marketing of Services* (pp. 47-51). Chicago, Ill.: American Marketing Assosiations.

Borja de Mozota, B. (2003). Design and competitive edge: A model for design management excellence in European SME's. *Design Management Journal.* Vol. 2, pp.88-103.

Borja de Mozota, B. (2003). *Design management: using design to build brand value and corporate innovation.* New York, NY: Allworth Press.

Borja de Mozota, B. (2006). The Four Powers of Design: A Value Model in Design Management. *Design Management Review*, Vol. 17(2), pp.44-53.

Brown, T. (2008). Design Thinking. *Harvard Business Review*, 86(6), pp.84-92.

Brown, T. (2009). *Change by design: how design thinking transforms organizations and inspires innovation*. New York: HarperCollins Publishers.

Buchanan, R. (2001). Design Research and the New Learning. *Design Issues*, 17(4), pp.3-23.
Buchanan, R. (2008). Introduction: Design and Organizational Change. *Design Issues*, 24(1), pp.2-9.

Cooper, R., & Press, M. (1995). *The design agenda: a guide to successful design management.* Chichester: Wiley.

Cross, N. (2007). *Designerly ways of knowing.* Basel: Birkhäuser.

Dumas, A., & Mintzberg, H. (1989). Managing Design/Design Management. *Design Management Journal,* 1(1), pp.37-43.

Dumas, A., & Mintzberg, H. (1991). Managing the Form, Function, and Fit of Design. *Design Management Journal*, 2(3), pp.26-31.

Gaynor, G. H. (2002). *Innovation by design: what it takes to keep your company on the cutting edge.* New York: AMACOM.

Gloppen, J. (2008). Perspectives on Design Leadership and Design Thinking and How They Relate to European Service Industries. Paper presented at the International DMI Education conference, April 14-15 Paris. Forthcoming in 2009 issue of *Design Management Journal.*

Gorb, P., & Dumas, A. (1987). Silent design. *Design Studies,* Vol. 8(3), pp.150-156.

Grönroos, C. (1994). From Scientific Management to Service Management. A Management Perspective for the Age of Service Competition. *International Journal of Service Industry Management*, Vol. 5(1), pp.5-20.

Grönroos, C. (2007). *Service Management and Marketing. Customer Management in Service Competition* (3rd. ed.). West Sussex: John Wiley & Sons Ltd.

Gustafsson, A., & Johnson, M. D. (2003). *Competing in a service economy: how to create a competitive advantage through service development and innovation.* San Francisco: Jossey-Bass.

Hollins, G., & Hollins, B. (1991). *Total design: managing the design process in the service.* London: Pitman.

Holmlid, S. (2007). Interaction design and service design: expanding a comparison of design disciplines, Nordes 2007. Design Inquires. 2nd Nordic Design Research Conference May 27-30. Stockholm.

Holmlid, S. (2009). From interaction to service. In S. Miettinen & M. Koivisto (Eds.), *Designing Services with Innovative Methods* (pp. 78-97). Helsinki: University of Art and Design.

Junginger, S. (2007). Learning to design: giving purpose to heart, hand and mind. *Journal of Business Strategy, 28*(4), pp.59-65.

Kotler, P. (1994). *Marketing management: analysis, planning, implementation, and control.* Englewood Cliffs, N.J.: Prentice-Hall.

Kotler, P., & Armstrong, G. (2006). *Principles of marketing.* Upper Saddle River, N.J.: Pearson Education.

Kotler, P., & Rath, G. A. (1984). Design: A powerful but neglected strategic tool. *Journal of Business Strategy*, 5(2), pp.16 - 21.

Kotter, J. P. (1996). *Leading change.* Boston, Mass.: Harvard Business School Press.

Lawson, B. (2006). *How designers think: the design process demystified.* Oxford: Architectural Press.

Liedtka, J. (2000). In Defense of Strategy as Design. *California Management Review,* 42(3), pp.8-30.

Martin, R. (2007). How Successful Leaders Think. *Harvard Business Review*, Vol. 85(6), pp.60-67.

Martin, R. L. (2007). *The opposable mind: how successful leaders win through integrative thinking.* Boston, Mass.: Harvard Business School Press.

McDermott, C. (2007). *Design: the key concepts.* London: Routledge.

Normann, R. (2007). *Service Management: Strategy and Leadership in Service Business* (3rd. ed.). Chichester: John Wiley & Sons Ltd.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing,* Vol. 49(4), pp.41-50.

Pine, B. J., & Gilmore, J. H. (1999). *The experience economy: work is theatre & every business a stage.* Boston, Mass.: Harvard Business School Press.

Press, M., & Cooper, R. (2003). *The design experience: the role of design and designers in the twenty-first century*. Aldershot: Ashgate.

Senge, P. M. (2006). *The Fifth Descipline.* The Art & Practice of the Learning Organization (Rev. ed.). USA: Doubleday.

Shostack, G. L. (1984). Designing services that deliver. *Harvard Business Review,* 62(1), pp.133-139.

Shostack, G. L. (1987). Service Positioning Through Structural Change. *Journal of Marketing*, Vol. 51(1), pp.34-43.

Topalian, A. (1990). Design Leadership in Business: The Role of Non-Executive Directors and Corporate Design Consultants. *Journal of General Management*, Vol. 16(2), pp.39-62.

Topalian, A. (2002). Promoting Design Leadership through Skills Development Programs. *Design Management Journal*, 13(3), pp.10 - 18.

Turner, R., & Topalian, A. (2002 *). Core Responsibilities of Design Leaders in Commercially Demanding Environments.* Inaugural session (pp.1 - 10). London: Design Leadership Forum, organized by Alto Design Management.

Utterback, J. M. (2006). *Design-inspired innovation*. Hackensack, N.J.: World Scientific.

Valtonen, A. (2007). *Redefining Industrial Design. Changes in the Design Practice in Finland.* Doctoral dissertation. University of Art and Design Helsinki, Helsinki.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing,* Vol.68, pp.1-17.

Voss, C. & Zomerdijk, L. (2007). *Innovation in Experimental Services.* London Business School and Aim Research: London

[1] Norwegian Design Council commissioned a quantitative survey among 515 Norwegian businesses. The quantitative survey was based on a qualitative survey and conducted by Synovate in June 2009. 'Designdiagnose 2009. Norske bedrifters bruk av design.' ('Design diagnosis 2009. Norwegian businesses' use of design'). The research will be available at www.norskdesign.no shortly.

[2] Design Council has an overview of relevant research in their 'The Impact of Design on Business,' Design Council, http://www.designcouncil.org.uk/Documents/About%20design/Facts%20and%20figures/DesignCouncilBriefing_TheImpactOfDesignOnBusiness.pdf (accessed October 8, 2009). See also 'Value of Design Factfinder' http://www.designfactfinder.co.uk/ (accessed October 8, 2009) and the UK 'National survey of firms 2008', which shows an increase in the importance of design in 2008 compared to similar research conducted in 2005 http://www.designcouncil.org.uk/About-Design/Research/Value-of-Design-Factfinder/ (accessed October 8, 2009)

[3] BusinessWeek, 'The World's Best Design Thinking Programs.' Business Week, http://www.businessweek.com/innovate/NussbaumOnDesign/archives/2009/10/the_worlds_best.html#more (accessed October 8, 2009)

[4] Design Management Institute (DMI), 'What is design management?' DMI, http://www.dmi.org/dmi/html/aboutdmi/design_management.htm (accessed August 11, 2009)

[5] Design Council, 'Service design,' Design Council, http://www.designcouncil.org.uk/en/About-Design/Design-Disciplines/Service-design-by-Bill-Hollins (accessed May 28, 2009).

[6] For more on this project, including essays, images and video, see: http://www.sbs.ox.ac.uk/D4S/index.html (accessed May 28, 2009).

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Managing Stakeholder Involvement in Service Design: Insights from British service designers

Qin Han

School of Design, DOJ, University of Dundee,

q.z.han@dundee.ac.uk

www.designgeneralist.com

Abstract

The global shift towards a service-based economy has led many organisations to rethink their operations and strategies from a service-centred point of view, which is intangible, customer-oriented and relational (Vargo and Lusch, 2008). Professionals and scholars from different disciplines have subsequently pioneered practices and research in the field of service. As a response, Service Design, with its creative- and people-centred nature emerged as a distinct discipline.

Designing a service system requires input from all stakeholders, which include internal stakeholders from the different organisational functions, as well as external stakeholders such as user groups and supply teams. When design specialists are involved, they are expected to bring skills and approaches that not only balance complex stakeholders' requirements but also create embodied solutions to meet these needs. Consequently, to achieve the best solution, acknowledgment and input from multiple stakeholders are essential to designer's decision-making.

This paper reports emerging insights from some British Service Design practitioners who were interviewed as part of the empirical studies of an ongoing PhD research project. The project initially asked, 'How do designers, as external consultants, manage multiple stakeholder involvement in Service Design projects?'

In this paper, the theoretical and empirical contexts are briefly reviewed, which lead to three specific research questions. A three-stage qualitative research approach is then introduced of which two have so far been carried out. Two case studies are introduced, which lead to two emerging categories of designers' approaches to multiple stakeholder management, namely *leading* and *facilitating*. In order to develop these emerging categories, further study is required, which forms the final stage of this research project and which is detailed at the end of this paper.

Introduction

The emergence of Service Design has encouraged a wide range of new design practices in multi-disciplinary collaborative projects in both the private and public service sectors. There are two drivers behind this emerging design phenomenon. The first is the fast-growing service sector in the current socio-economic environment where the experience-focused and knowledge-intensive nature of services necessitated a service-dominant logic (Vargo and Lusch, 2008), in order to understand the human factors in both business operations and public policy making. The second driver came from the design profession's internal development. Designers, as a profession, had been developing implicit practical knowledge about integrating experience and technologies, but now recognised their value in contributing and sharing knowledge from Design explicitly with experts from other disciplines to develop services. As a result, an emerging profession has developed rapidly over the past decade, consisting of people from different design-related backgrounds who share the ambition of introducing design methods and approaches to service development and innovation. Collectively, they call themselves 'service designers'.

In the UK, Service Design practice can be traced back to the early 1990s, when Bill Hollins and colleagues started using the term Service Design as part of their business consulting practice (Hollins and Hollins, 1991). Since 2001, an increasing number of design consultancies have been established, entirely or partly devoted to the practice and the exploration of Service Design in different contexts, scopes and emphases. Some design agencies quickly developed into businesses, with approximately 15 designers from different backgrounds who would team up to work on projects to deliver design solutions that covered multiple media, from printing to web content. Meanwhile, some design agencies remained as a core team of two or three people, working with clients as facilitators at certain stages of the service development process. The client bases of these design practice varies from regional development agencies to local schools, from global financial service providers to start-up local businesses.

Working in this relatively young but fast-growing new profession, service designers are constantly pushing the boundaries of what they do, how they work and with whom they work, by experimenting with the design techniques and the people-centred approaches in the context of New Services Development (NSD). Although the academic studies of NSD can be traced back to the 1970s and 1980s when marketing researchers, such as Shostack (1977; 1984) and Normann (1984), began to study the science behind service development, both theoretical and practical developments on this subject are primarily generated in the field of Management Science rather than Design. Thus, when designers take part in NSD activities, their first intention is to explore the environment in which their design solution might be implemented, often by managers. They ask fundamental questions that had been long overlooked by service managers who made their own assumptions, for example 'What is the customer's day-to-day experience of using your service?' This exploratory nature of many Service Design projects makes it inevitable for the designers to engage as many people as possible, in order to paint a whole picture of the different faces of a service.

Current socio-economic changes have placed multiple demands on all aspects of the service development process. To achieve the best solution, this process requires input from all stakeholders, including internal stakeholders from the different organisational functions as well as external stakeholders such as user groups and supply teams. Because the implementation of service design often relies on primary stakeholders' efforts, engaging with multiple stakeholder groups, not only clients or end users, becomes an important feature of the service designer's practice.

When design specialists take part in a service development process, their task is often to bring in tools, techniques, strategies and knowledge that not only balance complex stakeholders' requests but also create embodied solutions to meet these needs. In order to understand how service designers could achieve this, the research project was initiated with three interconnected questions:

» Who is involved in a Service Design project?
  Some of the primary stakeholders might interact directly with designers, however, some stakeholders can be difficult to identify, or reach without assistance. Due to the scope and limited resources, this research project focused on primary stakeholder groups, who are important to designers.
» What is the designer's role while interacting with different stakeholders?
  As suggested earlier, designers' activities are often part of a more general NSD process, along with many other parallel processes that influence the way the designer relates to stakeholder groups in the project. Thus, it is important to understand the designer's role in this multiple stakeholder environment.
» How do designers engage a range of stakeholder efficiently and effectively at different design stages, within the time and resource limits?
  Designers do not passively respond to the stakeholder dynamics in the project. Instead, they actively propose approaches to working with different stakeholders under different conditions. This research project does not specifically study the tools and techniques used by designers, rather, it explores the reason why certain techniques are favoured by service designers in order to reveal the embedded strategy behind the use of these techniques.

Research Context

Extant research has concentrated on understanding the influence of all stakeholders on an organisation's operation and development. Initially Freeman (1984) proposed the stakeholder as being, 'any group or individual who can affect or is affected by the achievement of the organisation's objectives.' This proposal fundamentally challenged the managerial emphasis on *share*holder in the 1960s and 1970s, and suggested that an organisation is, and should be, operated in response to other internal or external needs such as customers or government. Thus, stakeholders are often categorised then analysed from a management perspective. However, the current stakeholder theories 'have moved away from an entirely corporate-centric focus in which stakeholders are viewed as subjects to be managed towards more of a network-based, relational and process-oriented view of company-stakeholder engagement.'(Andriof and Waddock, 2002).

According to quantitative research conducted on stakeholder impacts on project success, clients and end users are significantly more important than any other stakeholders (Karlsen, 2002), even though most primary stakeholders are considered as influential in determining the project's success (Cleland, 1998; Jergeas *et al.*, 2000; Elias *et al.*, 2002; Karlsen, 2002). Karlsen (2002) suggested that stakeholders holds different powers that affect the result of a project. The client often has control over the information and resources, while the user makes the decision of whether the project is a success or not. These power relationships form a complex and changing network, within which the project management operates. Ignoring, misunderstanding or mismanaging key stakeholder groups could cause unexpected problems to the project's progress and increase the risk of failure. Therefore, understanding

stakeholder needs, interests, and powers becomes an increasing requirement for the management of any type of project, including NSD projects.

Interestingly, the literature of NSD has a different but connected origin in Service Marketing. In the early 1980s, with the expansion of the service economy, marketing managers and scholars were the first to observe, and create solutions for, the many service failures and inefficiencies experienced by customers (Fisk and Grove, 2009). With the proposals of key concepts, such as 'moment of truth' (Normann, 1984), 'service blueprint' (Shostack, 1984) and Gaps Model for controlling service quality (Zeithaml and Bitner, 1996), the studies of NSD quickly developed an emphasis on one particular stakeholder group: service users. This shared recognition of customer-centred NSD approach gave birth to several NSD models that claimed to deliver successful service solutions by putting user/customer at the heart of the design process.

Although these theories and models are important in understanding how service had been developed traditionally within an organisation, there is no general acknowledgment of the contributions from service designers at strategic decision-making level. Early research in NSD recognised the importance of utilising customer perspectives in service development, however, the methods they employed to understand customers relied heavily on traditional marketing tools such as focus groups, interviews, satisfaction surveys and benchmarking. The use of design was limited to the presentation of a service to fulfil tactical problem solving in areas such as advertising, packaging and interior design. As a result, designers are only engaged in the very last stages of the NSD process, which was dominated by managers from different departments.

Nonetheless, the world of practice provides some vivid demonstrations of how design professionals may be a powerful force to not only encourage new perspectives and new thinking but also to integrate different stakeholder needs through co-design in NSD processes.

As part of this fast growing young profession, British service designers are gradually developing experience, practical knowledge and skills, and establishing client relationships in the area of service development and innovation over a range of private, public and charity sectors. The practice is becoming more diverse and larger in scope thanks to a raised recognition of Service Design. Early studies in this research project suggested that some design agencies develop systems and processes to manage Service Design projects more formally, while others rely on intuition to navigate their path among different stakeholder groups. The empirical knowledge of how designers work with people from different backgrounds and motivation in complex project environments, however, is not clearly articulated in Service Design. Although many designers have been actively presenting at conferences, sharing their experience on project websites or personal blogs, these reflections have never been collected, synthesised and conceptualised, or even theorised. A systematic investigation of how designers manage Service Design and how the tacit knowledge from these practices can be linked to existing theories is noticeable by its absence.

The Search for Service Design Stories

The rapidly growing Service Design practices in the UK provide a rich empirical basis for a more inductive approach for this research. Grounded theory, as a well-established qualitative research methodology (Glaser, 1978; Corbin and Strauss, 1990; Charmaz, 2006; Flick, 2009), provided key inspirations for the design of the exploratory studies. Therefore, rather than

setting up a hypothesis to begin with, empirical data was analysed simultaneously with the process of data collecting to allow theoretical categories to develop from the 'ground'.

The major empirical investigation adapted a multiple case study research design (Yin, 2003, 2009), which involved the participation of five British based Service Design agencies. One case study was carried out as a pilot study and the research results came mainly from the remaining four case studies.

By employing a multiple case studies design, the four studies captured the richness of the empirical context of Service Design, which was dynamic and full of completely different projects carried at differently scopes with different clients. As an exploratory research, this project did not aim to exhaustively represent all possible types of stakeholder management in Service Design practice. However, by investigating as divers cases as possible, within the scope and resources available, the results could offer demonstrations of existing ways of managing stakeholder involvement, and potentially identify gaps overlooked in current Service Design practice and research from a designer's perspective.

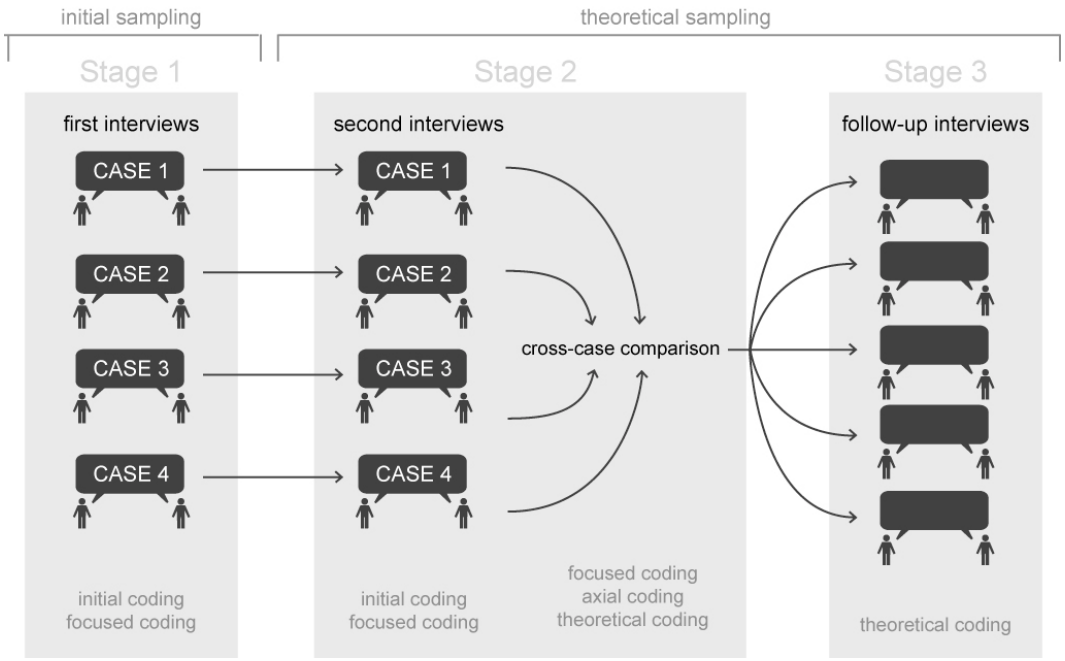


Figure 1, Research design for empirical investigation

With each case the empirical investigation consisted of three major stages (see Figure 1):

1. Initial sampling was carried out by collecting descriptive reflections on a selected service design project from the participants. Each participant selected and described one project from their experience as a Service Design story. The method used at this stage was episodic interview (Flick, 1997), along with tools that were designed to help participants to produce a visual narrative during the interview (see Figure 2). The data, from both interview transcripts and the visual narrative, were analysed separately for each case study after the first interview.

Figure 2, Examples of visual narrative produced by participants

2. A second visit to the same participant focused on questions raised from the comparison between the narrative map produced by the participant and a conceptual framework developed on the basis of a selection of Service Management theories (Han, 2009). This semi-structured interview allowed the discussion to centre on certain aspects of their particular case. The data from the second interviews were analysed and summarised separately, in the form of a case report. All four case reports were sent back to the participants for comment. At the same time, a cross-case analysis was carried out to compare the results from each case study. The cross-case comparison allowed some initial categories to emerge from the grounded data.

3. At the time of writing, the project is moving from stage two towards stage three. The plan for stage three is to arrange follow-up interviews in order to develop the emerging categories and to complete some properties of each category. Compared to the initial four case studies, the follow-up interviews are expected to cover a wider range of service designers according to the specific category that needs to be developed.

The diversity in current Service Design practices, in both scope and number of client segments, makes the search for four Service Design stories an insightful journey. Some projects took place in completely different contexts, yet they share many similarities; while others looked similar at first glance but ultimately took separate paths. As one of the participants argued, there is no 'typical' project in their practice – each project is unique in its own right. However, from each Service Design story, there are lessons that can be learned and shared.

Due to the limited space in this paper, only two of the Service Design stories are presented here, derived from different clients in different scopes and by two design agencies with different structures, yet their approaches to involving stakeholders in the process had significant similarities.

Service Design Story 1

This story comes from Live|work, a London based Service Design consultancy set up in 2001 by Ben Reason, Chris Downs and Lavrans Lovlie. It is one of the first design consultancies that claim to devote specific effort to Service Innovation and Design and now employs 13 people in two offices and a portfolio of projects from both the public and private sectors. Their client list includes the BBC, Experian and the NHS.

Ben Reason, the director of the London office, told the story of a project called 'Make It Work'. The design team worked with Sunderland City Council, a group of end users, and a

range of people working for local service providers, so as to develop services to help jobless people from that community to get back to work. Over 400 people were involved in the design process, although not necessarily all directly with the designers. The design process had two major stages but within each stage there were iterations which were constantly developed and refined into a service prototype and the model. The first stage built a methodological foundation and a business plan for a pilot to be carried out on a larger scale at the second stage. A community of 'activity coalition' was built during the one-year pilot. In the second stage, the designers ran workshops with local service providers and helped them to develop individual service blueprints that suited their own operation and segment. The knowledge generated collectively within this process was again distributed back to the community, by working with stakeholder groups and designing customised solutions with the people who delivered the services.

Ben suggested that this project followed a formal project management process introduced by the client. The designers had a clear vision of the key stakeholders involved in this project at the beginning of the project. A major emphasis was place on interacting with users and the extended stakeholders, who were managers and delivery staff from the local service providers. The designers, as part of the service development team, led the development of the earlier stages. They then acted as facilitators during the later stage to allow other primary stakeholders to take on the major responsibility of generating and diffusing the new service solutions with secondary stakeholders who did not have the opportunity to interact with the core design team.

The complex interactions among different stakeholder groups suggested that there was the need for a consistent knowledge transformation process that supported these interactions. Producing visual narratives helped to stimulate and record the knowledge transformation, however, the key to truly affect the way services are operated at local level, was to understand the motivation and the culture that drives different forms of stakeholder interactions.

Service Design Story 2

Story 2 comes from We Are Curious, a design studio established in 2005 by two young graduates from Glasgow School of Art, Florence Andrews and Esme MacLeod. Interestingly We Are Curious does not explicitly claim that they practise Service Design. For them, Service Design is not a label with which to impress a client but the underlying principle of their people-centred design approach.

Florence Andrews shared a Service Design story of developing a voluntary service that brought different community arts and the local people together in Whitecrook, Clydebank in Scotland. Although the designers did not declare their practice as being Service Design to the client, their people-centred engagement with all the primary stakeholders led to a successful community event, which was visited by over 700 people and to a business plan, which brought the client over £100,000 in funding, so as to continue the service for the subsequent three years.

The client, Community Arts Open Space (CAOS), was a newly established group of six voluntary members, thus, the project was mostly led by the designers. Rather than wait to be told who could be involved in the design process, the designers actively reached out to meet the primary stakeholders face-to-face, the latter including local residents, local community arts service providers and local interest groups. Apart from using normal research methods such as interview and observation, the designers created events on a small scale, with the help of some service providers, to actively engage with the local community. For example,

they facilitated a workshop for the local youth club, getting children and young people to draw pictures of where they lived and the things that were important to them. With these children, the designers also made a short film telling stories of the lives and the hopes of the local youth. These highly interactive events not only gained the designers collaborative relationships with the service providers and the local interest groups but also provided rich inspiration and ideas of how these services could be more widely recognised by the public of Whitecrook. As a result, apart from the client and the designers, this project managed to involve a large number of stakeholders from the general public, local community arts service providers, local interest groups and local schools, as well as other artists and designers.

The designers constantly switched roles between project leaders and workshop facilitators in parallel, something which makes this story complex but interesting. For the client, the designers led the project by demonstrating design methods for conducting research, managing PR, and prototyping user test events. Yet, for most other stakeholders, the designers' inputs mainly lay in helping them to propose what they could do as part of the events and to develop proposed activities with them.

Most of the user interactions in this project happened in real time via face-to-face interaction and both formal and informal conversations. However, the designers' skills in visualisation and using experimental means had a positive influence in motivating stakeholder participation and stimulating creativity among people from non-design backgrounds.

Emerging Insights

Live|work and We Are Curious have completely different backgrounds in practicing Service Design. One is a design company with international offices and well-known clients like BBC and Orange. One, on the other hand, is a studio-based partnership run by two young design graduates with a special focus on community-based projects. Yet, the approach they employed to work with multiple stakeholders have two clear similarities.

Firstly, supporting the client's decision-making was considered fundamental. In both studies the designers suggested the importance of having the client's appreciation of putting user experience at the centre of a service system and experimenting with new ideas with different stakeholder groups. In return, designers shared their knowledge and techniques to ensure that the design solution supported the client's decisions in this project and even in the future. The client was regarded as not only being the one who control the resources, but also the one who would learn what design approach means to NSD in order to replicate it if necessary. As Ben suggested, designers must be aware that they would not be running the services for the client. Large amounts of work might be done by designers in the beginning, but the client and their stakeholders would be the ones who eventually deliver the services on a daily basis. Therefore, in both projects, the design team were keen on clearly communicating their process and taking the client through the learning curve. In this sense, the designers led and even mentored the design process with support from clients and other primary stakeholders.

Secondly, by embracing the culture, resources and existing operational structure in the local situation, the design solution became more sustainable. The need for a flexible operational structure has encouraged many organisations to reach out for more network-based supply and delivery systems, internal or external, in order to respond to sudden changes in the market or policy areas. The two cases both embraced this need, by allowing different parts of the design solution to be localised by certain stakeholder groups. The operational power was

distributed, along with the recognition of Service Design. In both case studies, the designers acknowledged that it is essential to facilitate the local service providers to find their voice and claim ownership in the service system, for the purpose of supplying, delivering, or both. For example, in Story 1, the designers hosted different workshops for stakeholders from each individual services provider that took part in the pilot stage, in order to develop their own service blueprint and touchpoints for their particular service. The purpose was to build '[…] a coherent service without forcing them all to turn into part of the same thing' (Reason, 2009). At this stage, the designers became invisible facilitators who gave stakeholders the confidence to express their own needs and develop their own ideas.

Interestingly, although the designers in both examples undertook two basic roles in the whole project, as leader and as facilitator, how they managed to switch between the two represents a significant difference. In Story 1, the designers focused on leading the project then moved on to a facilitating approach to a wider range of stakeholders in the later stage. In Story 2, however, the designers constantly switched between the two approaches throughout the project, according to the needs of the different stakeholders. Hypothetically, there are both internal and external factors that cause differences in stakeholder involvement. The internal factors came from the designers' capability, knowledge and confidence in managing different stakeholder groups. These factors influence with whom designers choose to have direct involvement and how designers would prefer to interact with them. Then, there are external factors which include the scope of the project, organisational culture and existing structure within the service provider organisation/network, the capability and confidence of the client, and also the motivations of the stakeholder groups to engage with designers.

Amongst these factors, how knowledge is generated and diffused among all stakeholders and designers seemed highly influential. The intangible nature of service makes the NSD process knowledge-intensive, which means the tacit knowledge embedded in individuals or groups has an increasingly significant impact on the shaping of a service system. Compared to the traditional centralised development model, the increasingly network-based supply and delivery system makes the knowledge generation and sharing process more complex than ever. In both cases, the service designers were closely involved in the process of knowledge generation and diffusion in a collaborative manner. However, how the knowledge flowed among the different stakeholders and in what order or structure, seemed to guide the way in which the designers chose to engage these stakeholders in the process. For example, in Story 1, although there was no mention of a knowledge management policy *per se* to the designers, the relatively rigorous NSD project management required a rather focused and controlled way to diffuse the knowledge created in the business plan to different local service providers. Thus, the designers took the leading approach, in order to generate new knowledge around user experience first, and then distributed it back to the delivery system by facilitating new knowledge generation at a smaller scale. In Story 2, the grassroots nature of the voluntary sector encouraged bottom-up knowledge generation structure, therefore, the designer successfully weaved the facilitating approach into the process of leading and mentoring their client simultaneously.

In summary, both stories demonstrated that the service designers, intuitively or purposefully, selected leading or facilitating approaches to manage multiple stakeholder involvement in the project environment. However, if the situation changed, the designer-stakeholder relationship would change accordingly, which may lead to a change in the designer's approach. So far, the study recognises the need to manage knowledge generation and diffusion as a being a key factor that influences the designer's decision-making in leading and facilitating stakeholder involvement. Yet, this discovery requires further investigation in both

literature and empirical studies, in order to clearly articulate properties that explain the conditions, expressions and consequences of leading and facilitating approaches.

Further Development

On the basis of the two Service Design stories described here, two basic approaches for managing multiple stakeholder involvement are recognised, namely 'leading' and 'facilitating'. The project investigated four Service Design stories and, in addition to the two approaches described here, proposed a third approach namely 'producing', which is not discussed in this paper. The three approaches were treated as initial categories and their properties are still under development.

The next stage of this study serves the purpose of developing these categories in further depth. Participants in the four case studies will be contacted again, to discuss the implications of the three categories. A list of questions will be sent out to a wider range of service designers via the internet, so as to stimulate discussions regarding the factors that influence the service designer's approach to different stakeholder groups. Furthermore, literature regarding Knowledge Management in innovation projects will be reviewed, in order to gain a holistic understanding of the relationship among organisational culture, structure, and knowledge generation and diffusion among the different stakeholders.

Research Implications

Service Design has always been characterised with its concern for people and their experiences. However, the discussion seemed to have been largely focused on service users, who are one of the primary stakeholder groups with whom service designers need to engage in their practice. So far, little discussion has been carried out regarding the means whereby service designers manage their relationships with the other stakeholder groups such as delivery agencies, although they play equally important roles in developing and implementing the design solution. This study recognised this gap in understanding how Service Design is operated in practice, and relied on grounded data collected from practicing service designers who have rich tacit knowledge and experience in managing multiple stakeholder involvement in different projects. As a result, the aim was not only to explore and to capture a vivid image of Service Design practice, but also to offer insights that seem to have been overlooked in both research and practice.

The preliminary findings suggested a holistic approach to perceive Service Design as a process of knowledge generation and diffusion in a social context, which involved a complex network of stakeholders. Within this context, designers select or mix, intuitively or purposefully, different approaches in order to maximise the impact of the design techniques they employed in the process. Thus, a better understanding of how these approaches worked so far offers the opportunity to assess, improve and plan for Service Design practice in the future. Furthermore, understanding how multiple stakeholder involvement in Service Design projects could provide inspiration for design education to recognise some new qualities required in the increasingly complex future practice and to prepare new designers accordingly.

In addition to the benefit to design practice, linking Service Design with literature from disciplines such as Service Management, Stakeholder Studies and potentially Knowledge

Management, provides references for these disciplines to recognise the contributions of Service Design in the development of Service Knowledge (Fisk and Grove, 2009). Consequently, the tacit knowledge embedded in the various practices could provide inspiration for the continuing study of service development and innovation from all disciplines.

As an exploratory research project, this PhD study also served as a source of inspiration for developing qualitative research in emerging design practices. The research methodology demonstrated a wealth of knowledge embedded in this new design profession, which allowed rich concepts to be developed and connected to developments in a wide range of various disciplines outside design. Despite the fact that Service Design is relatively immature in its theoretical development, it is highly active in experimenting with new ideas, new tools and new approaches to working in complex contexts. Therefore, the constantly changing social and economic environments in which design is operated needs design practitioners, researchers and educators to learn from what has happened and is happening in Service Design and to generate useful knowledge that would benefit future generations of new design professionals. As Richard Buchanan (2007) stated in the Emergence Conference:

'[…] be careful about trying to put Service Design into too tight a box. It serves for a while to keep our attention focused, but we're going to breathe out again. It's another one of those terms that's going to come and go. We want to gather the learning we can now, affect the discipline and move ourselves forward.'

References

Andriof, J. and Waddock, S. (2002) Unfolding Stakeholder Engagement. IN Andriof, J., Waddock, S., Husted, B. & Rahman, S. S. (Eds.) *Unfolding Stakeholder Thinking: Theory, Responsibility and Engagement.* Sheffield, Greenleaf.

Buchanan, R. (2007) Richard Buchanan Keynote - Emergence Conference 2007.

Charmaz, K. (2006) *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis,* London, Sage.

Cleland, D. I. (1998) Stakeholder Managment. IN Pinto, J. K. (Ed.) *Project Management Handbook.* Jossey-Bass Publishers.

Corbin, J. and Strauss, A. (1990) Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology,* 13, 3.

Elias, A. A., Cavana, R. Y. and Jackson, L. S. (2002) Stakeholder Analysis for R&D Project Management. *R&D Management,* 32, 301-310.

Fisk, R. P. and Grove, S. J. (2009) The Evolution and Future of Service: Building and Broadening a Multidisciplinary Field. IN Spohrer, J. C., Maglio, P. P. & Kieliszewksi, C. A. (Eds.) *Service Science Handbook.* New York, Springer.

Flick, U. (1997) *The Episodic Interview: Small Scale Narratives as Approach to Relevant Experiences*, accessed 20 October 2009 <http://www.lse.ac.uk/collections/methodologyInstitute/pdf/QualPapers/Flick-episodic.pdf>.

Flick, U. (2009) *An Introduction to Qualitative Research,* London, Sage.

Freeman, E. (1984) *Strategic Management: A Stakeholder Approach,* Marshfield, MA, Pitman.

Glaser, B. G. (1978) *Theoretical Sensitivity,* Mill Valley, CA, The Sociology Press.

Han, Q. (2009) *Mind the Gap: Theories and Practices in Managing Stakeholders in the Service Design Process*, Re-public, accessed 22 August 2009 <http://www.re-public.gr/en/?p=1304>.

Hollins, G. and Hollins, B. (1991) *Total Design Managing the Design Process in the Service Sector*, Pitman.

Jergeas, G. F., Williamson, E., Skulmoski, G. J. and Thomas, J. (2000) Stakeholder Management on Construction Projects. *AACE International Transaction.*

Karlsen, J. T. (2002) Project Stakeholder Management. *Engineering Management Journal,* 14, 19-24.
Normann, R. (1984) *Service Management,* New York, NY, Wiley.
Reason, B. (2009) Interview (Personal Communication).
Shostack, G. L. (1977) Breaking Free from Product Marketing. *Journal of Marketing.*
Shostack, G. L. (1984) Designing Service That Deliver. *Harvard Business Review,* Jan-Feb.
Vargo, S. L. and Lusch, R. F. (2008) Service-Dominant Logic: Continuing the Evolution. *Journal of the Academy of Marketing Science*, 1-10.
Yin, R. K. (2003) *Case Study Research: Design and Methods,* London, Sage.
Yin, R. K. (2009) *Case Study Research: Design and Methods*, Sage Publications.
Zeithaml, V. A. and Bitner, M. J. (1996) *Services Marketing*, McGraw-Hill.

Acknowledgements

The author wishes to thank Professor Tom Inns and Professor Bill Nixon for their suggestions and guidance on this research, as well as all the support from her colleagues at the University of Dundee. She would like to acknowledge the contributions from all the participants, especially service designers from Aptide, Live|work, Engine, Plot and We Are Curious, for sharing their experience and insights. She also wants to thank the two in-nominate reviewers for their insightful comments that helped to improve this paper.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Participative, co-operative, emancipatory: From participatory design to service design

Stefan Holmlid
Dept. of Computer and Info Science (IDA)
Linköpings universitet
581 83 Linköping
steho@ida.liu.se

Abstract

In the discourse of service design, terms such as platforms, transformation and co-creation have become part of what seems to be an emergent lingua franca. In the participatory design discourse, and the surrounding design traditions, related terms and ideas were developed. The development of the discourse of participatory design, during the last three decades of the 20th century, influence the way we understand the provisions for and possibilities of service design. The analysis is performed along three themes collected from the development of participatory design, and examples of how the legacy of participatory design has been appropriated are given. We conclude that the two disciplines share a basic structure consisting of involvement techniques, cooperative approaches, and emancipatory objectives. Moreover, some areas of future research for service design are identified.

Introduction

In current service design practice, as well as in the service design discourse, terms such as platforms (Sangiorgi 2009), transformation (Burns, Cottam, Vanstone & Winhall, 2006), co-creation (Prahalad & Ramaswamy, 2004) etc. are widely used. Examples of service design projects that carry characteristics of this discourse are the Gulliver project in Cologne, where homeless people were involved in a design process and created a help to self-help centre; the ActiveMobs concept developed by the RED-group in England as a care structure for lifestyle related health conditions, and Engines project in setting up a Social Innovation lab in Kent County. In these, and similar projects, there have been developed user involvement techniques based on collaborative ideals. These are strong, in e.g. their emancipatory objectives, as well as rich in their co-operative approaches (see e.g. Cottam & Leadbeater, 2004; Parker & Heapy, 2006). A common starting point, to build an understanding of these projects, is by viewing the development processes as *participatory*. The participatory design tradition is sometimes referred to in the aforementioned projects (Burns, Cottam, Vanstone

& Winhall, 2006). The outcome of a service design or development process is in itself a process, where value is co-created between customers and service organisations. This is an important and distinguishing character of the design object of service design (Holmlid, 2007). This difference is not highlighted within Participatory Design or digital interaction design. Even though the term "service" is common in digital interaction design discourse, there has been little attention paid to the customer experience beyond the user experience, or the use experience outside the digitally mediated service touchpoints. In order not to mix design processes and design process outcomes we will focus on the character of the design *processes*.

Participatory design, or cooperative design which it is sometimes called, has had a long tradition in Scandinavia (Schuler & Namioka, 1993; Greenbaum & Kyng, 1991; Bjerknes, Ehn & Kyng, 1987). In the participatory design traditions the involvement of users and building on their activity and participation is a well develop technique. Interestingly, the outreach of these design traditions seems to have had little impact on service development, even in Scandinavia. But, it seems as if service design has been able to revitalize participatory design.

In this paper we investigate the connection between participatory design and service design, and show how the legacy of participatory and co-operative design can inform service design, and vice versa. We relate current service design objectives to that of the participatory approaches of digital interaction design established during the 70's and 80's.

To do this we utilize three themes; user involvement, co-operation and emancipation. These reflect three of the issues that have dominated the PD discourse throughout the years; that users should be involved, who should cooperate towards goals, and the higher visions and goals as driving forces.

LEVERAGE FROM LEGACY

The design tradition which is often broadly referred to as Participatory Design,[1] started out during the 70's in Scandinavia. While it's roots in design theory might be traced back to William Morris (1891), over Paulsson (1919), and Paulsson and Paulsson (1957), to participatory practices in urban planning of the 60's it earned itself a uniquely important position within systems development and human-computer interaction, and later within interaction design. The discourse within PD has been dynamic, radical and critical for well over 30 years. It has contributed to a wide array of insights, and have created important impact, of which we today experience the results. Only recently the first full-scale field trials have been performed, reported in a project with the Swedish Police (Räsänen, 2007; Räsänen, Thuresson & Wiberg, 2005). This is an indication of the long term thinking that is needed in these areas of research.

User involvement

Kensing and Blomberg (1998) point to three issues dominating the discourse of PD. Two of these issues are the nature of participation and methods. They state that PD mainly has had a

[1] There are several terms used for this tradition. In the Swedish discourse the term co-operative is favored over participatory. In this paper though, cooperative will be used for other purposes than describing the "deltagande design" tradition.

focus on creating provisions for executing individual projects with user involvement. These provisions include involvement techniques, ways if directing projects, etc.

Carroll & Rosson (2007) identify a moral premise of the participatory design movement, that users have the right to participate in projects developing technology for their future work place. The moral premise does not, however, prescribe how their right should be operationalized, who would be responsible for making this right possible, etc.

In the Scandinavian approaches (see e.g. Bjerknes, Ehn & Kyng, 1987; Greenbaum & Kyng, 1991; Schuler & Namioka, 1993; Kyng & Matthiassen, 1997), during the 1970s and 1980s the rationale for user participation was partly based on the fact that system developers rarely, if ever, met the real users, or the end users as they were called. The developer mostly met the managers or the technical personnel, who were not the primary users. One of the main arguments for using PD was the idea that end-users best would know how to change practice, not management. In the tradition that developed from PD, end-users were given the possibility to participate in and contribute to the design together with the developers. As PD evolved, workers as well as managers were involved in the projects, and local resources as well as technical/organizational alternatives and developing organizations for action were important goals (Bødker, 1996).

The practicalities of involving users in PD projects have taken on many different forms, many of which were taking advantage of a design perspective. Methods and techniques used were e.g. that users participated in building prototypes and mock-ups of systems as well as work processes, they were performing role-plays, and designers and system developers were apprenticing with users to understand and empathize with their work, (Grønbæk, 1991; Ehn & Kyng, 1991; Pape & Thoresen, 1992). These methods allow designers and users to easily and engaged experiment with variations of future possibilities (Kensing, 1987; Kensing & Blomberg, 1998).

In the development of PD the figures of thought for involvement expanded to include the wider realm of design as well as the political realm. A long range of techniques have followed since the 70's with an even stronger design orientation; design probes (Mattelmäki, 2006 ; Gaver, Dunne & Pacenti, 1999), design games (Brandt & Messeter, 2004), make-tools (Sanders, 2000), Situated and Participative Enactment of Scenarios (Iacucci, Kuutti & Ranta, 2000), etc. These were developed with a heritage based in the PD projects, the groundbreaking work of David Kelley Design and ID Two, and the movement of bringing design to software (Winograd, 1996; Winograd & Flores, 1987). The mentioned methods adapts older methods or develops new, to deal with issues such as motivating users to participate, or building on users' capacities and willingness to share. Some of these were not conceived as part of the participatory design arena, but identified and adopted similar ideals.

Luck (2007) identifies the importance of skilled facilitation by designers when involving users in participatory processes. Skilled facilitation leads to better engagement of users, and potentially to better knowledge exchange between users and designers. PD also invites views where users act as designers and questions approaches where the designers act as users (Reich, Konda, Monarch, Levy & Subrahmanian, 1996)

Cooperation

In PD there has been some discussion on who should be involved in the cooperative projects. Gärtner (1998) highlights the importance of the relationships between the actors involved in a development project, such as the consultant, customer and client. Moreover, Gärtner views the relationship between the service organisation and the client as a separate

project. Although authors acknowledge the importance of including organizational issues and involving management, they do not elaborate further on it, and sometimes even exclude it from the analysis (Holmlid, 2004; Buur & Bødker, 2000; Gärtner, 1998; Gärtner & Wagner, 1996; Kensing, Simonsen & Bødker, 1998). In one paragraph Kensing and Blomberg define the audiences of PD research work as "(1) the workers and other organizational members who will benefit from the design project and (2) design professionals who may adopt participatory design agendas and approaches. In addition, policy makers and decision makers at the organizational and national level also are important recipient groups for PD research." (Kensing & Blomberg, 1998, p178).Ffurther on they only discuss the cooperative components of the first two groups as part of a joint interest in a system development. Bødker (1996), on the other hand, states that there was a development of the PD projects where initially local resources and unions were in focus, where later projects included managers as well as employees. Other approaches have suggested that the designers should team up with procurers, managers and process developers, instead of focusing on development of tools and systems (Artman et al, 2009; Holmlid & Artman, 2003).

One of the original approaches in participatory design was the Collective Resource Approach (CRA). It was developed partly as a critique of socio-technical systems design approaches. CRA in a design context assumed that technology and development is not value and power neutral. If certain objectives were sought through design, such as social objectives, the Collective Resources Approach wanted to create a process and environment that increased the mutual and collective understanding of the given design situation, through involvement of the different specialized and situated expertise and competence that could contribute to this understanding (Bjerknes & Bratteteig, 1995). Vimarlund, Eriksson & Timpka (2001) shows how knowledge asymmetry within such situated design work exists and can be minimized.

When reviewing PD, more general approaches, such as ethnography (Suchman, 1989; Segelström, Holmlid & Alm, 2009), the engagement with users (Mattelmäki, 2006; Wentzel & Holmlid, 2009) and critical perspectives (Gaver, Dunne & Pacenti, 1999) occur.

Emancipation

The discourse of the cooperative movement was concerned with emancipating users by having them participate with systems developers in system development processes. Or to contribute to the understanding of how users themselves drove the development of IT-support as part of their professional development. That is, the politics of participation, which is the third issue raised by Kensing & Blomberg (1998). Some of the early work within cooperative design was aimed at improving workplace democracy (Bjerknes et al, 1987). Some authors (Luck, 2003) even argue that the ideology of inclusive design is similar to the ideology of participatory design.

In Bødker (1996) the development of PD is described, and in the projects during the 90's conflicts in organizations are seen as starting points for constructive design work. Moreover, the scope of emancipation had grown from developing local resources for action, over exploring alternatives futures of an organisation or its technology, to developing capacity and ability to empower the organisation to achieve local action.

The emancipatory objectives were not easily accomplished in early PD projects. When PD refers to change it is the kind of change that comes from the bottom up that is referred to. In an interesting academic debate Kyng (1994) shows that even though the early PD projects had been successful in the sense of involvement and cooperation, and with some of the

emancipator objectives, still a lot of work seems to have remained to reach the utopias envisioned by PD researchers. For example: "It seemed that one could only influence the introduction of the technology, the training, and the organization of work to a certain degree. From a union perspective, important aspects like opportunity to further develop skill and increase influence on work organization were limited." (Bjerknes et al, 1987, p32)

The collective resource approach also allows for working with organisational issues and management. Holmlid (2009a; 2006) identifies challenges for management of interaction design, and argues that design should be viewed as part of an organisation's operating core rather than a support process.

The legacy of PD in User-Centered Design

In User-Centered Design for systems development the legacy of PD has encountered some frictions in transfer. Some of the problems with the transfer are held forward by Holmlid (2009b; 2005). One of these is that the system developers have become the powerful player deciding what it means that a system is well designed, and have at the same time monopolized user involvement. A consequence of this is that the cooperative and participative nature have been reduced and institutionalized under a logic of technology development (Spinuzzi, 2002; Holmlid, 2002). Carroll & Rosson (2007) make a difference between a pragmatic premise of participatory design and a moral premise. The pragmatic premise state that direct inclusion of users' input will increase the probability of a design outcome that is successful. The moral premise is that users have a right, and possibly an obligation, to be directly involved in the processes of development. UCD has been focusing on the pragmatic premise, which means that UCD have a focus on gathering input from users and using lightweight design exercises.

INVOLVEMENT AND SERVICE

In service innovation and design a set of different projects are examples of how participation, cooperation and emancipation have been at centre stage in the design processes. It is important to note that in service design, unlike digital interaction design with which participatory design mostly have been associated, the resulting design objects might have participatory, cooperative and emancipator characters. This is in line with the general differences and similarities between service design and interaction design (Holmlid, 2007; Holmlid & Evenson, 2008; Holmlid, 2009c). Here we will mainly look at the character of the design *processes*, and less on the outcomes of these processes.

User involvement

In the report "Journey to the interface" (Parker & Heapy, 2006) there is an argument about traditional market segmentation techniques, stating that they emphasize a model where the supplier knows best; it creates a sense of involvement that isn't actually there. This is similar to the critique towards user-centred design put forward by Carroll & Rosson (2007). As a contrast to this Parker & Heapy (2006) argue for starting out where the customer is, seeing the service as the customer sees it. In practice this means starting out looking at the service as a service journey and how this is made up of touchpoints through which values is co-created. In the value-creating sense users are already involved in performing the service. The knowledge of these users, and of the frontline personnel, only from their experiences from

service performance, is a valuable asset. Involving them to share these experiences in a design process, can be done with fairly simple techniques (Parker & Heapy, 2006; Moritz, 2005).

Many of these techniques engage customers and personnel in ways that build on their capacities. In the Baltic Art centre project (Miller & Hamilton, 2008) frontline personnel were creating small prototypical tests of things that they wanted to change. A lot of these methods rely on a co-creation approach (Prahalad & Ramaswamy, 2004). In the project Greta & Torsten (Arvola, Holmlid, Nygard, Segelström & Wentzel, 2008) a technique for situating interviews was devised as part of a weekly walking quiz (Segelström, Raijmakers & Holmlid, 2009). In the Ludinno-project several different techniques were used, among them generative design innovation techniques together with Ericsson (on Personal Area Mediators) and Sveriges Television. Other methods in common use are design probes (Mattelmäki 2006), design games (Vaajakallio, 2009) and experience prototypes (Buchenau & Fulton Suri, 2000).

Co-operation

In the report HEALTH: Co-creating Services (Cottam & Leadbeter, 2004), the authors write about communities of co-creation, in order to *"build up the knowledge and confidence of the users to take action themselves in new partnerships with professionals"*. The cooperative processes in service design projects are so infused that practically all projects set up different cooperative team structures. In projects such as Engaging Fathers, Tippelzone, Gulliver, and OpenHealth customers as well as frontline personnel, management, policy makers, and surrounding organisations are cooperating towards common goals.

One important issue that was identified in the Baltic Art project by Live|Work was that to start innovation work and sustain it, the involved users has to feel that they have a permission to change things (Miller & Hamilton, 2008). In practice this means that there are pre-requisites for cooperation, which is set by management even though they might not cooperate in the specific design work. So, legitimacy of participation may be a prerequisite for the success of participation program.

Finally, a quote that describes one co-operative approach, based on the idea of providing platforms for co-creative design

> *Services are jointly designed by users, frontline workers and professionals through a process of dialogue that goes beyond the initial perspectives of any one party. Co-creation is not a one off event, like a referendum in which the community decides what should be done. Developing services that promote health will take more time. Nor is co-creation just a question of formal consultation in which professionals give users a chance to voice their views on a limited number of alternatives. It is a more creative and interactive process which challenges the views of all parties and seeks to combine professional and local expertise in new ways. (Cottam & Leadbeater, 2004, p22).*

Emancipation

In Bolton the Design Council based do-tank RED helped redesign health services for managing Diabetes II, and in Kent to deal with chronic diseases of an ageing population (Murray, Burns, Vanstone & Winhall, 2006; Cottam & Leadbeater, 2004). The basic emancipatory objective was that people in peer-based collaboration would take charge over their own health, instead of relying on medical identification of symptoms and clinical treatment strategies.

Other projects with obvious emancipator objectives are The Gulliver project in Cologne, where homeless people were involved in a design process and created a help to self-help center, and the projects Engaging Fathers, Social Innovation Lab in Kent, Tippelzone, Make it Work, and the list grows each month.

In service design the figures of thought on knowledge asymmetry is taken one step further, including asymmetry in emancipation, and a larger amount of actors involved. All actors and organisations have their own goals for emancipation in these projects. A demand that is put on the outcomes is that solutions allow for open exchange of knowledge in the process of service assembly, and that this is performed in a collaborative way. Identified challenges include, open-systems approaches, distribution of resources, building on capacity, and collaboration (see e.g. Burns, Cottam, Vanstone & Winhall, 2006). That is, the complexity of emancipation in service design surpasses the emancipation of participatory design.

One central emancipatory objective of service design is transformation (Burns, Cottam, Vanstone & Winhall, 2006). This seems to be an objective more easily argued for with a service design approach, than some of the PD objectives. But as with PD in the 80's it is too early to judge the sustainability of the outcomes.

Supporting the case for PD in service

Interestingly, within the service management and service quality fields research supporting the ideas and implementation of PD have been performed. In a series of studies and analyses it is shown that 1) there is a risk that users involved in development projects become technology advocates rather than user representatives, 2) that users willingly share ideas and solution, and 3) that users can be more innovative than business innovators (see e.g. Matthing, Sandén & Edvardsson, 2005; Magnusson, Matthing & Kristensson, 2003).

The experiences from PD projects show similar concerns, but that involvement does not have to lead to the situations as identified above. Or, that other archetypical situations occur, such as that the users involved become hostage within a development project, that the users involved become professional user representatives, that the users involved are not regarded as experts on utility of technology. In PD it is precisely avoidance of these situations that contribute to foundational figures of thought and assumptions,

An important aspect to understand here is that the involvement tradition within service management and quality is new. One consequence is that the way these areas treat user involvement is similar to the way that user-centered design have; institutionalized in the sense described in Holmlid (2002; 2009b), limited in the idea of equality that Parker & Heapy (2006) shows in "The journey to the interface", and focused on the pragmatic premise of Carrol & Rosson (2007). Moreover, there is an assumption that it is a negative effect that users, when they get involved, learn how the service organization works or what technology can achieve. In these studies, as well as in some of the applications of von Hippel's ideas on open innovation (von Hippel, 2005), there is a fear of a Midas Touch effect; whatever user we involve will be more technology oriented. Maintaining a distance and an asymmetry, is a foundational figure of thought in these areas.

Participatory design and service design carries counter arguments to this. Participatory design, and the collective resource approach, shows that there is an asymmetry in knowledge in both directions, and decreasing this asymmetry can be used as a strength for innovativeness. Service design shows that by setting up user involvement in particular ways, where, e.g., users and frontline personnel are provided with generative tools and techniques, they can produce innovative services. On the other hand, in the work of von Hippel (2005)

users and user communities are pin-pointed as sources for innovation, with at least the same power of innovation as professional product or service developers.

In practice based research, as e.g. the ICE project at Linköpings universitet, as a first step towards better co-operative approaches and more open-systems thinking, we state that not only is it necessary to involve users in service development projects, it is also a necessary key practice that service developers get involved in the realities that their services are supposed to contribute to.

INFORMED BY DISCOURSE

There seems to be a fair amount of overlap in the discourses between service design and participatory design. Both disciplines share a strong focus on engaging people in design and transformation processes, and the objective to create sustainable transformative structures. Engagement is created through the reliance on hands-on techniques, letting cooperative teams work with the envisioning of alternative futures. These techniques also promote the competence, influence and ideas of each individual participating, and on sharing knowledge within teams. From the analysis we identified three central areas of overlap; emancipatory objectives, cooperative approaches and involvement techniques.

Failures in participation

There is a common sense opinion and a figure of thought saying that with user participation there comes a limitation in innovativeness. From the experiences of participatory design, the wider design participation projects at the end of the 20th century, and the development in service design, this seems to be falsified. This falsification is also supported by von Hippel (2005) and the experiments in service development (Matthing, Sandén & Edvardsson, 2005; Magnusson, Matthing & Kristensson, 2003). The limitations in innovativeness when involving users should be understood as failures in setting up appropriate participatory design processes, not as a failure of participatory design *per se*.

From PD to service design

The service design projects have a strong sense of putting the individual's competence and ability as a primary power for development of services. This resembles the values of the Collective Resource Approach from Participatory Design. It would be useful for the service design field to make a short journey in history, and collect the experiences and the critique of CRA to be able to embrace this in the way that projects are performed. Too often today, in research and development, the recency of a source has a large influence on what sources of knowledge that are used. Not because we look for the most recent source, but because the tools we use happens to promote recent work better than origins, or trails of knowledge development. Service designer would be helped in reading some of the overview articles or books on participatory design referenced.

The socio-cultural traditions is a strong theoretical tradition within participatory, through e.g. Activity Theory. Sangiorgi & Clark (2004) is an attempt to use and identify challenges in using Activity Theory in the service design domain. This is a trajectory that could be further pursued, in parallel with exploring other theoretical frameworks. One such attempt was the papers presented at the IASDR conference in the special session on service design, where methods of ethnography, subversive cultures and management theories were discussed

(Singleton, 2009; Cautela, Rizzo & Zurlo, 2009, Penin & Tonkinwise, 2009, Junginer & Sangiorgi, 2009, Segelström, Raijmakers & Holmlid, 2009).

From service design to PD

One of the shortcomings of PD is the seemingly strict focus on computer mediation. This restricts the design work to those things that can be expressed or changed by the means of computers. In early PD projects the idea was to work with the users as if the computer was viewed as their professional tool, and the designers as tool-makers. There is a "tool" perspective in the PD discourse that is very strong. What service design brings, as a complement, is the pluralism of how to achieve a specific value in cooperation with others, through several parallel and sequential channels, through opportunistic switching between service offers and channels, etc (Holmlid 2010a; 2010b, 2008). It is not an unfamiliar figure of thought for PD, but it is seldom used as a point of departure in the research.

Another strength of service design, that would bring leverage to the ideas behind PD, is the neutrality towards different actors and their goals. It does not have to be inherent in projects that users and trade union goals should be promoted at the cost of demoting management and business goal. Rich cooperative approaches should be able to embrace all these. Service design projects seem to embrace the figure of thought that cooperation between actors sharing capacities and resource will leverage every actor, in the process, and toward their own and their shared goals.

Moreover, service design is a design discipline utilizing visualizations in analysis and modeling (Segelström & Holmlid, 2009; Segelström, 2009; Kimbell, 2009). Some PD projects have a strong visual component, but learning from service designers about choosing visualization techniques and how to use them could reinvigorate parts of the PD processes.

Finally, in comparison to the early participatory design projects, service design has been able to go beyond the idea of developing tools for workers. The focus on the end product as co-creation of value should be brought into the participatory design arena, where e.g. storytelling could be one way forward (Blomkvist & Holmlid, 2009).

Call for continued work

Given its short history service design hosts a wide set of publicly available examples of projects that manifest user involvement strategies, cooperative approaches, and emancipatory objectives. As a research effort, in a descriptive design research tradition, it would be an important contribution to study these as design exemplars and make a thorough analysis on the design processes, the design concepts and the design outcomes. By providing these analyses the field would be able to develop both a language to talk about design, and a critical discourse.

There are also traditions that connect to the development of PD and service design that would be important to explore further as a means of bridging between PD and service design. One underexplored area of attention is the traditions from cognitive science.

Situated cognition (Suchman, 1987; Kirshner & Whitson, 1997) has as its basic premise that knowing is inseparable from doing. As a consequence, in a service situation, the knowledge with which a certain action is performed, is construed *in situ* and co-determined by the agents and the context. Based on the figure of thought behind a service-dominant logic this can be a relevant way of understanding why services are performed in the way they are under the circumstances. When understanding processes and actions in this way, what we choose to

study and how we study these things, will be different than if we study the same actions under the assumptions of theory of reasoned action.

Communities of practice (Lave & Wenger, 1991) are groups of people with a shared interest. In the process of sharing experiences and information the members learn with and from each other. In this process individuals participate in a continuous creation of opportunites for development, with which they engage. Understanding tha actor networks necessary for a service performance as a community of practice, allows researchers to study phenomena such as peripheral participation, identity in micro and macro-processes, etc. As the design object for a service designer is a process, and the possibilites and action spaces for participating actors in that process, and the actual service experience, as well as the result of a service, is co-created by these actors, the theories of communities of practice could be helpful to understand some of these issues.

The basic premise of embodied cognition (Lakoff & Johnson, 1999) is that all aspects of human cognition, such as thinking and decision making, are construed as a consequence of the human body. For research on design of services this would influence the way we understand how, e.g., metaphors of services are used and construed. Moreover, it would be influential on the variation betwenn how human intensive services and technology mediated services are expereinced. This, in turn, has consequences on services that are hybrids of these.

The distributed cognition framework (Hutchins, 1995) tells us, e.g., that cognitive processes can be distributed across individuals, that coordination between external actions and internal cognitive processes is a distribution of cognitive processes, and that processes are distributed over time. Especially in some service performances, where the distribuiton is made across individuals that are temporarily involved, understanding how the process of becoming involved is structured, would be of importance for service experiences. Some of these issues are exemplified in Holmlid (2010a; 2010b)

CONCLUDING REMARKS

The small piece of work presented in this paper indicates that participatory design and service design share some common, and central, areas. Both base their argumentation on emancipatory objectives; be they democratic, power-driven or sustainability-laden. Both set up and organise co-operative approaches. And finally, both use engaged involvement and pluralistic participative techniques to operationalize these. Working across, and consciously on all, these multiple levels, as strategic, tactical and operational levels, is a unique and distinguishing practice of these design disciplines.

At the moment only few actual research studies have been made in the intersection between design as phenomena and service as phenomena. There exists ongoing work, and we hopefully will see even more, that will be presented in arenas where insight and impact is at centre stage. It urges me to call for more research studies of design of services. These studies need to span the whole spectrum of research approaches, descriptive, critical, experimental, theoretic and reflective studies.

Acknowledgments

I wish to acknowledge Fabian Segelström and Mattias Arvola for valuable comments on drafts of this paper. The research was made possible by grants from VINNOVA, the projects SERV (2007-03444) and ICE (2007-02892)

References

Artman, H., Holmlid, S., Lantz, A., Lindquist, S., Swartling, A., Dovhammar, U. (2009). Acquisition of usable IT: Acquisition projects to reflect on. Technical Report, HCI-66, Royal Institute of Technology.

Arvola, M., Holmlid, S., Nygard, S., Segelström, F., & Wentzel, J. (2008). Greta & Torsten: Två personas för äldre användare av hälsans nya verktyg (Greta & Torsten: Two personas for elderly users of new tools for health). Project report. Linköping: Santa Anna IT Research Institute AB and Hälsans Nya Verktyg. In Swedish.

Bjerknes, G., Bratteteig, T. (1995). User Participation and Democracy: A Discussion of Scandinavian Research on System Development. Scandinavian Journal of Information Systems, 7(1):73–98

Bjerknes, G., Ehn, P., & Kyng, M. (1987), Computers and Democracy - A Scandinavian Challenge. Aldershot, UK: Avebury

Blomkvist, J., Holmlid, S. (2009). Exemplars in service design. In proceedings from Nordic Service design confernece, nov 2009, Oslo.

Brandt, E. and Messeter, J. (2004) Facilitating collaboration through design games, In the Proceedings of Participatory Design Conference 2004 (PDC'04), Toronto, Canada

Buchenau M, Fulton Suri J (2000) Experience prototyping. Proceedings of DIS2000 424–433

Burns, C., Cottam, H., Vanstone, C., Winhall, J. (2006). RED PAPER 02: Transformation Design. Design Council, London. Available at http://www.designcouncil.info/mt/RED/transformationdesign/

Buur, J., Bødker, S. (2000). From Usability Lab to "Design Collaboratorium": Reframing Usability Practice. In Proceedings from DIS '00, pp297-307. New York, ACM

Bødker, S. (1996). Creating Conditions for Participation: Conflicts and Resources in Systems Development. Human-Computer Interaction, 11(3):215-236.

Bødker, S and Grønbæck (1991). Cooperative prototyping: users and designers in mutual activity. International Journal of Man-Machine Studies, 34(3):453-478.

Carroll, J., M., and Rosson, M., B. (2007). Participatory design in community informatics. Design Studies 28:243-261

Cautela, C., Rizzo, F., Zurlo, F. (2009). Service design logic: an approach based on the different service categories. IASDR 2009, Seoul.

Cottam, H., Leadbeater, C. (2004). Health: Co-creating services. Red paper 01, The Design Council. Available at http://www.designcouncil.info/mt/RED/health/REDPaper01.pdf

Ehn, P., Kyng, M., (1991). Cardboard Computers: Mocking-itup or Hands-on the Future, In: Greenbaum, J., Kyng, M., (1991) Design at Work: Cooperative Design of Computer System, Lawrence Erlbaum Associates.

Gärtner, J. (1998): Participatory Design in Consulting, Computer Supported Cooperative Work – A Journal of Collaborative Computing, 7(3-4):273-289.

Gärtner, J., Wagner, I. (1996). Mapping Actors and Agendas: Political Frameworks of Systems Design and Participation. Human-Computer Interaction, vol. 11, pp. 187–214.

Gaver, B., Dunne, T., Pacenti, E. (1999). Cultural probes. interactions, 6(1):21-29.

Greenbaum, J., Kyng, M. (eds) (1991) Design at work: Cooperative design of computer systems. Hillsdale, NJ: Lawrence Erlbaum Associates.
Grønbæk, K. (1991). Prototyping and active user involvement in system development: Towards a cooperative prototyping approach. Ph.D. dissertation, Computer Science Department, Aarhus University, Denmark.
von Hippel, E. (2005) Democratizing Innovation. Cambridge, MA: MIT Press.
Holmlid, S. (2002). Adapting users: Towards a theory of use quality. Linköping Studies in Science and Technology, Diss. No. 765. Linköpings universitet, Sweden.
Holmlid, S. (2004). Issues for cooperative design: A procurement perspective. In Proceedings from Participatory Artful Integration. Interweaving Media, Materials and Practices, Participatory Design Conference PDC 2004, Toronto.
Holmlid, S. (2005). Service Design methods and UCD practice. In Proceedings from User Involvement in e-Government development projects, workshop at IFIP conference Interact, Rome.
Holmlid, S. (2006). Interaction design and design management: Challenges for industrial interaction design in software and system development. Wonderground, Design Research Society International Conference, november 2006, Lisbon.
Holmlid, S. (2007). Interaction design and service design: Expanding a comparison of design disciplines. Nordes 2007.
Holmlid, S. (2008). Towards an understanding of the challenges for design management and service design. Design Management Conference, Paris.
Holmlid, S. (2009a). Managing interaction design and business innovation: Understanding interaction design as a key activity of the operating core. Aesthesis, International journal of art and aesthetic in management and organizational life.
Holmlid, S. (2009b). An active procurer: Advancing cooperative design. In Artman, H., Holmlid, S., Lantz, A., Lindquist, S., Swartling A., Dovhammar, U. (eds). Acquisition of usable IT: Acquisition projects to reflect on. Technical Report, HCI-66, Royal Institute of Technology.
Holmlid, S. (2009c). From Interaction to Service. In S. Miettinen, & M. Koivisto (Eds.), *Designing Services with Innovative Methods* (pp. 78-97). Keuruu, Finland: Otava Book Printing LTD.
Holmlid, S. (2010a). There's more to services than interaction. Chapter in Meroni, A., Sangiorgi, D. (eds) Design for Services, Gower Publishing.
Holmlid, S. (2010b). Design och designledning på vägen mot väl designade e-myndigheter. Chapter in Lindblad-Gidlund, K., Ekelin, A., Eriksén, S., Ranerup, A. (eds) Förvaltning och medborgarskap i förändring: Etablerad praxis och kritiska perspektiv. Lund: Studentlitteratur.
Holmlid, S., & Artman H. (2003). A tentative model for procuring usable systems. In Proceedings of HCI International 2003.
Holmlid, S., Evenson, S. (2008). Bringing Service Design to Service Sciences, Management and Engineering. In Hefley, B., Murphy, W. (eds) Service Science, Management and Engineering: Education for the 21st Century, Springer Verlag, pp 341-345.
Hutchins, E. (1995). Cognition in the Wild. Cambridge, Mass.: The MIT Press
Iacucci, G, Kuutti, K, Ranta, M (2000). On the move with a magical thing. DIS 00, pp 193-202.
Junginger, S., Sangiorgi, D. (2009). Service Design and Organizational Change: Bridging the Gap Between Rigour and Relevance. IASDR 2009, Seoul.
Kensing, F. (1987): Generation of Visions in Systems Development – A Supplement to the Toolbox. In P. Docherty et al. (eds.): Systems Design for Human Development and Productivity: Participation and Beyond. Springer Verlag.

Kensing, F., Blomberg, J. (1998). Participatory Design: Issues and Concerns. Computer Supported Cooperative Work – A Journal of Collaborative Computing, 7(3-4):167–185.
Kensing, F., Simonsen, J. and Bødker, K. (1998). MUST - a Method for Participatory Design. In Human-Computer Interaction, 13(2).
Kimbell, L. (2009). Insights from Service Design Practice. 8th European Academy of Design Conference, pp. 249-253). Aberdeen.
Kirshner, D. & Whitson, J. A. (1997) Situated Cognition: Social, semiotic, and psychological perspectives. Mahwah, NJ: Erlbaum
Kyng, M. (1994). Collective resources meets puritanism. Scandinavian Journal of Information Systems, 6(1):85–95
Kyng, M., Mathiassen, L. (eds) (1997). Computers and design in context. Cambridge, MA: MIT Press.
Lakoff, G., and Johnson, M. (1999) Philosophy In The Flesh: the Embodied Mind and its Challenge to Western Thought. Basic Books.
Lave, J., & Wenger, E. (1991). Situated Learning: Legitimate Peripheral Participation. Cambridge: Cambridge Univ. Press
Luck, R. (2003). Dialogue in participatory design. Design Studies 24(6):523-535.
Luck. R. (2007). Learning to talk to users in participatory design situations. Design Studies 28(3):217-242
Magnusson, P., Matthing, J. and Kristensson, P. (2003), Managing User Involvement in Service Innovation: Experiments with Innovating End-Users, Journal of Service Research, Vol. 6, No. 2, pp. 111-124
Mattelmäki, T (2006). Design Probes. University of Art and Design Helsinki, Helsinki.
Matthing, J., Sandén, B. and B. Edvardsson (2005). New Service Development: Learning from and with Customers. The International Journal of Services Management.
Miller, S., Hamilton, R. (2008). Service Innovation and Change from Within. Service Design Network Conference, 2008, Amsterdam. Available at http://conference08.service-design-network.org/shop_content.php?coID=20&XTCsid=ij5f8urmjhlcp283e9drheo0u4ff7n8o
Moritz, S. (2005). Service Design: Practical Access to an Evolving Field. Cologne, Germany: Köln International School of Design.
Morris, W. (1892). News from nowhere: or, An epoch of rest : being some chapters from a utopian romance. 3. ed. London: Reeves & Turner
Murray, R., Burns, C., Vanstone, C., Winhall, J. (2006). RED REPORT 01:Open Health. Design Council. Available at http://www.designcouncil.info/mt/RED/health/
Pape, T. C., & Thoresen, K. (1992). Evolutionary prototyping in a change perspective: A tale of three municipalities. Information Technology & People, 6(2-3), 145-170.
Parker, S. and Heapy, J. (2006) The journey to the interface: How public service design can connect users to reform. London: Demos. ISBN 1-84180-164-X. Available at: www.demos.co.uk.
Paulsson, G. (1919). Vackrare vardagsvara. Edited by the Swedish Society of Arts and Crafts, Stockholm. [More Beautiful Things for Everyday Use]
Paulsson, G., Paulsson, N. (1957). Tingens bruk och prägel. Stockholm: Kooperativa förbundets bokförlag. [The use and qualities of things]
Penin, L., Tonkinwise, C. (2009). The Politics and Theatre of Service Design. IASDR 2009, Seoul.
Prahalad, C.K., and Ramaswamy,V. (2004) The Future of Competition: Co-creating unique value with customers, Harvard Business School Press.
Räsänen, M. (2007). Islands of Togetherness: Rewriting Context Analysis. Doctoral thesis, TRITA-CSC-A 2006: 29, Royal Institute of Technology, School of Computer Science and Technology.

Räsänen, M., Thuresson, B., Wiberg, A. (2005) Samhörighet på Distans: Slutrapport från ett forskningsprojekt om videomedierad kommunikation på en distribuerad arbetsplats. Technical report NADA, CID.325.

Reich, Y., Konda, S., L., Monarch, I., A., Levy, S., N., Subrahmanian, E. (1996). Varieties and issues of participation and design. Design Studies 17(2):165-180

Sanders, E. B. N. (2000) Generative tools for CoDesigning. In Collaborative Design, Scrivner, S. Ball, L. and Woodcook, A. (eds) Springer-Verlag London Limited 2000

Sangiorgi, D (2009) Building up a framework for Service Design research, 8th European Academy Of Design Conference, Aberdeen, Scotland

Sangiorgi, D. & Clark, B. (2004) Toward a participatory design approach to service design, Artful Integration. Interweaving Media, Materials and Practices, Participatory Design Conference PDC 2004, Toronto

Schuler, D. & Namioka, A. (1993). Participatory design: Principles and practices. Hillsdale, NJ: Erlbaum.

Segelström, F (2009). Communicating through Visualizations: Service Designers on Visualizing User Research Accepted to DeThinking Design, ReThinking Services – First Nordic Conference on Service Design and Service Innovation, 2009, Oslo.

Segelström, F., Holmlid, S. (2009). Visualization as tools for research: Service designers on visualizations. Nordes, Nordic Design Research Conference, 2009, Oslo.

Segelström, F., Holmlid, S., Alm, B. (2009). Back to the Roots: A Case for a New Ideal for Ethnographic Research for Design. In proceedings from IASDR 2009, Rigor and Relevance in Design, Seoul.

Segelström, F., Raijmakers. B., Holmlid, S. (2009). Thinking and Doing Ethnography in Service Design. IASDR 2009, Seoul.

Singleton, B. (2009). Services Design in New Territories. IASDR 2009, Seoul.

Spinuzzi, C. (2002). A Scandinavian Challenge, a US Response: Methodological Assumptions in Scandinavian and US Prototyping Approaches. In Proceedings of SIGDOC '02, pp208-215 Toronto, Canada, ACM.

Suchman, L. (1987) Plans and Situated Actions: The Problem of Human-Machine Communication. Cambridge: Cambridge University Press.

Suchman, L. (1989) Notes on Computer Support for Cooperative Work, WP-12, University of Jyväskylä, Finland: Department of Computer Science

Vaajakallio, K. (2009). Enacting design: understanding co-design as embodied practice. Engaging Artifacts, NorDes 2009. Oslo, Norway.

Vimarlund, V., Eriksson, H., Timpka, T. (2001).Economic Motives to Use a Participatory Design Approach in the Development of Public-Health Information Systems. In MEDINFO 2001, pp.

Wentzel, J., Holmlid, S. (2009). Speed sketching with designers: User inspired brainstorming. In Proceedings from Designing Pleasurable Products and Interfaces 2009, DPPI 09, Compiegne, France.

Winograd, T. ed (1996). Bringing design to software. ACM, New York:NY.

Winograd, T., Flores, C. F. (1996). Understanding Computers and Cognition: A New Foundation for Design. Ablex Publishing.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Someone Else's Shoes - Using Role-Playing Games in User-Centered Service Design

Peter Kaario, Kirsikka Vaajakallio (TaiK); Vilma Lehtinen, Vesa Kantola, Kai Kuikkaniemi (HIIT)

University of Art and Design Helsinki Finland

Hämeentie 135 C

00560 Helsinki

Finland

(firstname.lastname@taik.fi), (firstname.lastname@hiit.fi)

Laugh and enthused voices fill the big lecture room when four groups around the room play a Character Game; a game that combines elements from role-playing and personas. We have decided to share the user study results in a service design project within multidisciplinary group of people from three companies [designers, managers etc.] by playing a design game, a game in which the participants should step into someone else's shoes. We, the researchers who have developed the game, have been anxious about peoples' reactions but now we start to relax; the game seems to work after all. The atmosphere feels relaxed, the participants have taken the character's roles and vivid discussions and stories evolves as the game goes on. But will they gain the inspiration and empathy as we have wished for?

Through the Looking Glass – Introduction

In order to create positive service experiences, it is necessary to identify users' needs and wishes through user-centered design (UCD) processes and tools. However, in UCD, it has been noted that written user research reports do not meet the designers' need for inspiration in addition to information. Face-to-face meetings between users and designers, as well as creative user study methods, such as empathic probes, have been suggested as ways to overcome this challenge. (e.g. Mattelmäki 2006) Unfortunately, in many design projects it is not possible to involve the whole multidisciplinary design team to conduct user studies, but still everyone should adapt user insights in their work. This leads to two challenges: firstly, how to bring user perspectives into design / designers, and secondly, how to facilitate creative collaboration among different practitioners.

We are not the first ones to tackle with these challenges of finding approaches which support design empathy, ideation and decision making in UCD. For example *Experience prototyping* (Buchenau and Fulton Suri 2000) has been utilized to deepen designers' understanding about other people's experiences by trying things out by themselves. Similarly

many theatre methods, such as Forum Theatre, have been adapted to design processes (e.g. Mehto et al. 2006; Brandt and Grunnet 2000) to combine props and drama as a means to explore new design opportunities. Brandt (2006) proposes *exploratory design games* to build a common ground for collaborative design activities. According to her, the exploratory design games can be used to, for instance, conceptualize design, change perspectives, negotiate, and build scenarios. Besides using the notion of design games to create co-design sessions, many authors have underlined contextual approaches, either taking the collaborative events into the context under study (Binder, T. 2007) or conducting design experiments on the fly while users perform their everyday practices (Iacucci and Kuutti 2002; Vaajakallio and Mattelmäki 2007). While many methods rely on face-to-face meetings between designers and potential users, there are some methods that try to bring users alive in other ways. For example, *personas* (Cooper, 1999) are visual and textual descriptions of potential user characteristics, lifestyles, needs and limitations, and are often used to share user understanding within a design team.

In this paper, we present a new method for tackling these challenges, focusing on facilitating emphatic understanding of users in multidisciplinary projects. We are inspired by the use of game-like methods in design (Brandt 2006; Johansson 2005; Brandt and Messeter 2004), and Cooper's (1999) personas for sharing user data. In addition to design games and personas, we take advantage of a previously not often utilized source of innovation: tabletop role-playing games. We find the storytelling structure and role-taking in role-playing games promising for service design: the storytelling structure of the game evokes new scenarios and service opportunities as the story evolves, and role-taking provides an empathic approach to the user data.

The challenge of collaboration was evident in the particular service design case for which the method was developed. In addition to involving professionals from distinctive fields, the case concerned representatives from diverse stakeholder organizations. We consider that a role-playing approach provides a way to ease the articulation of different views. Moreover, stepping into users' shoes and seeing the whole service ecology from their perspective, helps to discover collaboration opportunities between different stakeholders in a service design project.

During the development of the Character Game, we had user data from an interview and observation study, which was conducted by a project partner company, KONE. In this paper, we provide one example of how the user data can be shared through the Character Game. The findings discussed in this paper are based on two Game sessions. A Game session has three main stages with an optional fourth stage for idea generation: 1) Introduction to the topic; 2) Warm-up exercise and game world creation; 3) The Character Game; and 4) Idea generation.

Our experiences show that the Character Game gives good motivation to dig in to the original ethnographic material of user studies in an emphatic and inspiring way. For service designers, the special benefits of the Character Game lie in bringing stakeholders around the same table, understanding users by highlighting empathy and inspiration, and finding relevant issues to inform design. The realization of the method presented in this paper can be creatively adapted to purposes of different projects. The development of the method was part of the on-going project called Extreme Design – developing extreme service design methods (2008-2010), which studies how design games and drama methods can support multidisciplinary service design.

The Blue Pill or the Red Pill – Inspired by Role-Playing Games

One of the earliest definitions of role-play was "*A game of character development simulating the process of personal development commonly called life*" (Perrin et al. 1980). Since then it has gone through redefinitions without ending up being just one thing. There are many forms of role-playing games ranging from massive multiplayer online games to tabletop games. But they have some things in common: *The character*, which the player uses to interact with the game world, a *game master* who controls the game world, a *game world* in which the characters live in and *interact* with. They usually also have a strong *narrative* compared to other games. (Hitchens et al. 2009)

Role-playing has several forms; two examples of this variety are live role-playing and tabletop role-playing. Live role-playing resembles somewhat drama methods used in UCD (Brandt and Grunnet 2000) and service design (Holmlid and Evenson 2006) as it emphasizes bodily interactions. Tabletop role-playing games, instead, do not demand as much bodily engagement, since the players sit around a table, and the story is acted out mostly verbally. This was one of the reasons why we applied a tabletop format; we assumed that it provides easier framework for the participants to relax, and act in a new role. This could diminish the need for long warming-up tasks before the actual game.

Role-playing games in general have some features that we find promising when sharing user data among various participants, especially their narrative structure and role-taking. The narrative structure of the game evokes new scenarios and services as the story evolves. By taking roles everyone plays someone else than themselves - thus being able to express views and ideas that extend beyond one's professional role. The roles the players have in the Character Game illustrate possible users or 'characters' somewhat similar to personas. However, our focus was to evoke empathy towards users, not to present "hard facts", even though the characters were created based on the user study material, mainly interviews. In any case, role-taking makes the participant actively process the user data for the requirements of the game. This can be argued to provide a deeper understanding to the service needs of the users than a simple presentation of a user study.

We use the following concepts, derived from role-playing vocabulary, to describe the features in the Character Game: The concept of a *game session* includes the whole event, in which user perspectives are processed, and collaboration among the participants facilitated. In a game session, after a briefing to the topic, the participants *create a game world*: they use the image and text material provided to create a mind map that describes the environment where the game takes place. After that the Character Game is played. The last phase aims to build discussion around the presentation of either generated ideas or discovered themes.

From Chaos into Order – Preparations for the Game Session

Sorting the user study material for creating the Character Game.

Interviews and observations as source of user data

The case, in which the Character Game was developed, focused on senior houses and moving in and around the building. Thus, the user data utilised in the game focused on the same theme. The data was gathered by usability experts from our partner company, KONE, during February of 2009 and consisted of 28 interviews of people living in 7 different senior houses. The interviews were done as contextual inquiries, which were taped. Video cameras were not used to keep it more informal. In addition, in every house someone who knew the house well, e.g. a janitor, was questioned about the house itself. The recorded interviews were transcribed into a 40 page long document. The data was not produced specifically for the purposes of the game development, but for other occasions as well. One project researcher was present for 4 interviews. The houses were owned by SATO and were situated in Helsinki, Finland. The service level of the houses varied a lot; some of them were close to ordinary apartments while some were in the same space as a nursing home and thus had staff in it around the clock. Also, the physical health of the residents varied a lot, as their need for services; from people unable to move unassisted to active and healthy seniors.

Sorting Things

Before designing the actual game, the project researchers familiarised themselves with the material and break it down to smaller, more manageable pieces. In the first meeting, the usability experts, who had mainly conducted the interviews, and the project researchers discussed about the material and meaningful themes that it evoked. Going through the data gave insights of the content, as well as a rough understanding what could be made out of it. In the second meeting, three project researchers together with one designer from KONE started to dissect the material for creation of the game. In order to manage the huge amount of the material, everyone focused on different aspects of it; for example, social practices, encounters, surroundings, problematic situations and new ideas. These were written up on post-it notes and affinity diagrams were created from them. The affinity diagrams were further developed as the 'bases for the character templates' and other materials written for the game, such as, the opening scenes and the weekly schedules (described later).

As a parallel process to going through the material was the creation of the game rules and mechanics. In practice this meant that the project researchers together with representatives from KONE had several meetings; some focused on processing the data while others concentrated on the actual game and how it could turn out; what kind of roles players could have, what game pieces would support the game, how it would proceed, what was the beginning and the end of the game, etc. As an outcome from this process we, the project researchers with some help from the representatives from KONE, created a Character Game which main idea was to allow participants step into senior's shoes to experience the world from user's perspective. To support role-taking we provided quotes from the interviews, pictures from the environment, and weekly schedule about happenings in the senior houses. Moreover, we created character templates, which illustrated different seniors living in the senior houses but were open for the participants to come-up the personal details. These game materials, game rules and the two game sessions are described in more detail below.

Rules of Engagement - Game Rules and Material Description

The following is a list of materials that was created for the game and what they were used for.

Game rules describing the game and its mechanics. Also, it contained a short description about the senior house the characters live in the year 2012. It was transported away from modern day to give room for re-imagining happenings and technologies. This document was mainly a hand-out for the facilitators. It also contained a first scene which the facilitator reads out aloud to help the participants to get the ball rolling.

6 different character templates were created, which included traits and background, such as habits, personalities, disabilities and quotes from the interviews. There was a place for a picture and underneath a brief text that described a character and his / her motivations in life. Things excluded from the templates were gender, careers, family ties and other personal information that were left to the participants to decide in the beginning of the game. To give some randomness to the character creation eight random factor cards were created based on the background material. These were dealt to the participants when the game started. They contained some secret background to their character: "You have won the lottery" or "You have a bypass surgery scheduled in two months."

Cards with images of elderly people were given to choose from as an image to represent the character. These cards had a place to write the name of the character on them. They were placed in front of the player on the table to remind about who your character is. After the game the images were placed on the character templates to complete the character.

Images and quotes to build a game world of senior housing. This phase aimed at paving the path for actual game by visualising context, senior houses, and opening the discussion about the themes and issues related to senior housing. The created mind map may work as a game board or as a reminder during the game. Materials not used in the mind map exercise were left on the tables for the group to use as inspiration during the game.

The weekly schedule that presents possible situations that may take place in the senior houses. Aim of this document was to drive the happenings in the game. It also tells about the service level of the senior house the characters live in. Two different schedules were created with a large variety in service level.

Filling out the character template during a game session.

The First Game Session

The first character game was arranged in March 2009 and had participants from three companies (an elevator manufacturer, a construction company, and a housing manufacture). The venue was a large conference room. 17 participants were divided into four groups with a facilitator from Extreme Design project. The session was recorded with four video cameras for later analysis. The game aimed at; 1) bringing representatives from three companies together to find out possibilities for future service networks; 2) sharing gathered user data in an inspirational and empathic way; 3) identifying meaningful themes from the participating companies' as well as seniors' point of view; and 4) finding design openings related to the service design case. Tangible outcomes from the game session included several character templates filled by the participants and a list of concepts that could involve all the participating companies. Furthermore, we hoped it would be a memorable event that would gather different professions towards a common goal. Altogether it took three and half an hour including a brief sensitising task to tell a short personal story involving seniors and end discussions.

The Game

The sequence of the game is presented below. The players are divided into groups of 4-6 in a way that every group has people from different organisations and one facilitator.

1. The game starts with facilitator explaining the brief and the game.

The character templates are distributed. The participants are free to choose the one that interest them most. When this is done the random factors are given out to the players.

The players are given some time to make up their character; name, age, past, nature etc. and pick an image that illustrates her / him. It is not necessary to have every little detail filled in. There is time to do that during the game.

2. The players present their characters to the other players at the table.
3. The facilitator sets up the first scene.
4. The game continues so that everyone is the *director of the scene* at least once.
5. The game continues until the time comes to an end or the facilitator ends it.

The Director of the Scene

The director (not the same person as the facilitator) is in charge of *framing the scene* and deciding when to move on to the next one. Every one has their turn as a director. The director should follow the Weekly Schedule if he does not come up with a follow up scene. If the player does not come up with something for the scene then the turn is passed on to the next one. If it looks like no one comes up with anything then the facilitator should give a helping hand for the director. The director also decides what the possible non-player characters introduced to the scene, such as nurse or seniors' relatives. If required the facilitator can step in to be a non-player character.

Framing of the Scene

The framing should not be too difficult or elaborate. An important thing is to have an ending to the scene. As an example of a framing could be like: *"Ella and Aleksi are going to the pharmacy to get their medication. When they arrive at the elevator they notice it is broken. They try to figure*

out who to notify. The scene ends when they figure out who (for example a janitor) it is". The next framing could be something in line of *"Ella and Aleksi tries to find a phone to contact the janitor. They do get hold of him and he promises to come and see what is happening".*

Playing the Scene

After the framing is set the scene is played. The players describe their character's actions to fulfil the framing. The director decides when the scene is over and the turn is given for the next person to be the director and frame the next scene. The facilitator should ask clarifying and supporting questions.

Documentation

For research purposes, i.e. developing the game further, the session was documented with one static video camera in the corner for every group. For design purposes, i.e. supporting recall and further development of the ideas discussed during the Game, after the session project researchers created a visual booklet with still images from the session, identified themes and generated ideas. The booklet was delivered to the participants. The content in the booklet came mainly from the facilitators' notes and the filled character templates.

After the game: Participants showing their characters.

Forward March - Game Session Facilitation from the Trenches

The second Character Game session was arranged with mainly the same game material, only a few changes were made based on our first observations. These changes are described and discussed below. The aim was besides sharing the user data within the KONE to learn more about the game setting and playing the game. Besides the facilitators, seven participants from Kone and two Extreme Design members participated in the game. The two facilitators of the game were the same as in the earlier workshop so they were more familiar with the material this time. Again the session was video recorded for further exploration.

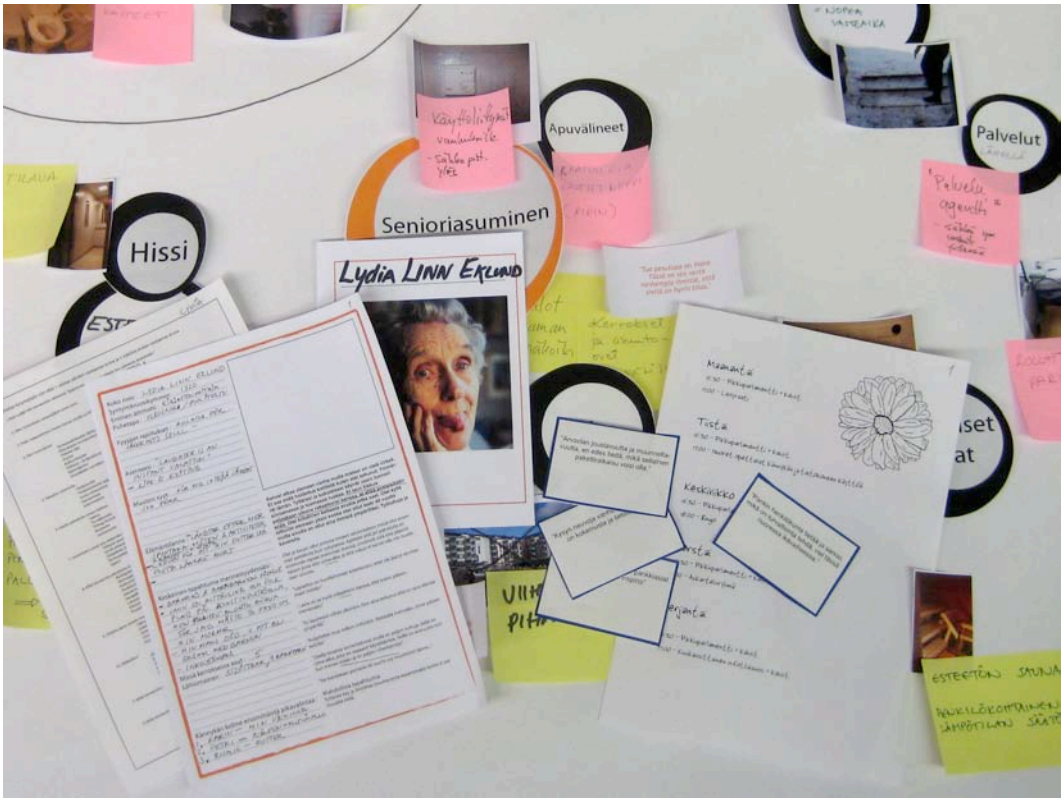
Improvements made to the second game session

During making of the mind map everyone was told to stand up next to the material which was set up on a different table. This was done in order to activate every member of the group. In the first workshop there was a too much of delegating things in order to make the most out of the creation. The groups were so much different that no absolute truth can be said but from what we saw it had a positive effect on the activation of the group members. To speed things up the main headings were already put up there with a blue tack, and the amount of images was reduced from about one hundred to half of that.

In the first game session we had the *character name cards* as blank A5 cards where the participant could glue a picture cut from newspaper to present his character. There were some problems with this approach; mainly that the suitable images from newspapers tend to be small. For the second game we improved on this by printing images on cards that the participant could choose from. This way every group had the same amount of images to choose from. Also printing them two sided might have supported the role-playing; we noticed that people tend to turn their cards over every now and then to remind themselves how their character looks like or their name.

After the first game we were wondering how much the opening scene effected to the game. Thus, for the second game session we added a new opening scene to see how it would change the game. Now one group started with a dramatic scene involving a fire and the other one a social scene involving a get-together. Based on our observations we came to the conclusion that it did have some effect on how the players viewed the world through the character. Mainly it seemed to affect the topics that appeared to be meaningful for the characters; when the opening scene was about smoke in the corridor, safety became a central issue discussed throughout the game.

Even though framing of a scene was very rewarding it was hard for the players. As a solution for this we made *Situation Cards* for the second game. They were cards that were drawn before every framing to help come up with ideas for the scene. They were left very vague in order to leave room for interpretation. For example, "There is a stranger among you" or "A rapid change in your life". These were just aides; the framing did not have to come from these. 13 cards were made for variation which equals 2-4 rounds of framing turns on the table. This seemed to help the framing since now many framings were based on the situation cards.



Game material used in the Character Game.

After the Dust Settles - Feedback and discussion

Feedback from the sessions was gathered as email questionnaires with more than a dozen open questions. The questionnaire covered participants' familiarity with co-design and their opinions on usefulness of the game session for their work. For example we asked them to describe the game session with three words. Nine from roughly twenty participants returned their answers. In addition to participant feedback, there were several discussions between the project researchers and facilitators in which the game sessions were analysed and written up in memos. In this chapter we first discuss the participants point-of-view based on the answers given in the questionnaire, and then we will concentrate on the researchers' observations.

From the participants point-of-view

All returned questionnaires indicated that game sessions involving co-operation between different organizations and professionals were considered meaningful. Overall, the participants were familiar with working in workshops but only a few had experience with role-playing games. However, their answers to the questionnaire did not stand out from the non-gamers. Thus it seems that the Character Game may be equally demanding and rewarding for gamers and non-gamers.

The overall attitudes towards the game session were positive. The way the players described the overall feeling of the game sessions varied from being "relaxed", "open", "inspiring", "eyes-opening" and "positive". We didn't ask them to be more precise about what effected on the feeling; other players, earlier knowledge, facilitator's ability to lead the game, own professional role etc.

Even though senior housing was very familiar topic to most of the people involved in the sessions, the participants reported that they have not had many casual discussions about the subjects that emerged during the game and only a few had taken advantage of these in their work. One of the challenges of UCD mentioned in the beginning is how to bring user data to a design team. Some of the participants felt that they had learnt several new aspects of senior living while some didn't. This wide range of answers can be explained by a wider base knowledge of the subject: there were participants who had studied senior living before. Anyway, based on the questionnaires, the game was experienced more inspiring than just a presentation they were used to.

The framing of the scenes were considered the most difficult part in the game, even though we tried to ease in the second session by providing the random factor cards. Providing more input and guidance from the facilitator or making the framings as a group could make the task easier. In any case, we consider the framing as an integral part of the game since it forces the participant to process the events from the characters point-of-view. Therefore, we don't want to give the participants ready-made scenes, but instead, we encourage them to come up with the scenes they find relevant and interesting to play. In any case, the balance between the players input and the facilitator's guidance needs more consideration in the future games.

From the creators and facilitators point-of-view

Even though the participants came from different companies and professions, everyone was able to participate in an equal manner in a game session. Since the Character Game involves story telling, everyone can take distance from their day to day personas. Also, the game

session forced the participants to change their point-of-view by looking through the lenses of a senior. A Character Game opened up the participant to the world of users, their values, needs, and problems. However, since almost every participant had an idea what senior living is like, more detailed analysis is needed to be able to say to what degree prejudice and assumptions were played out in the Character Game. Anyway, the characters didn't become over acted caricatures but felt credible everyday people. When role playing, the participants can get out of the role which they play in the organization, thus supporting possibilities to propose ideas other than those excepted for a person in a particular position.

Although the character game is easily duplicated, creating the material for the first time takes resources. For the senior living case an estimate would be 60+ working hours, divided between several workers and several days. This excludes the time used for the interviews and transcribing those. This will, of course, go down with experience and ready templates. We assume that if the creator of the character game would be an active participant in the user study, it would speed up the game design, since then he would be familiar with the material from the beginning. Since one character template was built up from one interviewed person, the number of interviews could be cut down to minimum, meaning the amount of needed characters in the game. This would diminish the time needed to interpret the user data.

From the facilitator's point of view the character game was two folded. On the one hand it gave a structure and tools to lead the session. On the other hand it demanded sensibility to realise when to stop the game, how to encourage the participants to take new roles, and ability to maintain the flow when it was reached. However, the game rules and material supported facilitation; in all of our games, both more experienced facilitators as well as the ones without any experience, managed to do it well.

Summary: Service Design through Role-Playing

We have developed a table-top role-playing game for the purposes of service design, to support, firstly, the sharing of user data for developing an understanding of users to inform design, and secondly, to discover collaboration opportunities within diverse stakeholders. The strengths in the role-playing approach, compared to exploratory design games or personas, are the storytelling structure and role-taking. The tabletop format further provides a tangible approach to user data. The character game forced the players to take a new perspective on the subject by highlighting users' point-of-view. The observation that different opening scenes led different discussions, proposes that the first framing should be considered carefully. This is not a surprise nor is it a weakness if we are aware of it when planning the game and when analysing the outcomes from it.

The *storytelling structure* of the game and active processing of the user data enforced the players to think the service needs of the users from several angles and also outside of their own profession, thus revealing new service networks. When the participants generated stories that were partly based on their own past experiences, and partly prompt by the game material, the co-created stories included several design openings; new scenarios and services were "produced" as the story evolves. Many themes such as feeling safe, me and others, and aesthetic usability were identified as starting points for the new concept ideas and service opportunities. Since the project didn't end up with any design outcome (yet), we can't say if the character game effected on the actual design or not.

Acknowledgements

We are grateful to Eero Tuovinen for creating Zombeja! Ovella! (Zombies! At the door!), the role-playing game that inspired us. The project is funded by TEKES, with much appreciated support from KONE, OP-Pohjola, Idean, and Palmu Inc. The development of the character game has greatly benefited from collaboration with our project partners SoberIT and KONE. A warm thanks also to Anu Kankainen, Petri Mannonen and Mikael Runonen.

References

1. Buchenau, M. & Fulton Suri, J. (2000). Experience Prototyping. In Proc. DIS 2000 conference, Designing Interactive Systems, New York: ACM Press, pp. 424-433
2. Brandt, E. (2006). Designing Exploratory Design Games: A Framework for Participation in Participatory Design? In Proc. Participatory Design Conference 2006, ACM Press, Italia
3. Brandt, E. & Grunnet, C. (2000). Evoking the future: Drama and props in user centered design. In Proc. Participatory Design Conference 2000. New York, USA
4. Brandt, E. & Messeter, J. (2004). Facilitating Collaboration through Design Games, In Proc. Participatory Design Conference 2004, ACM Press, Canada
5. Buchenau, M. & Fulton Suri, J. 2000. Experience Prototyping. In Proc. DIS 2000 conference, Designing Interactive Systems, New York: ACM Press, pp. 424-433
6. Cooper, A. (1999). Inmates are Running the Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity, SAMS, A Division of Macmillan Computer Publishing
7. Hitchens, M. & Drachen. A. (2008). The Many Faces of Role-Playing Games, In International Journal of Role-Playing, Issue 1. http://journalofroleplaying.org/
8. Holmlid, S. & Evenson, S. (2006). Bringing design to services. Invited to IBM Service, Sciences, Management and Engineering Summit: Education for the 21st century. New York, October
9. Johansson, M. (2005). Participatory Inquiry – Collaborative Design. Doctoral dissertation, School of Engineering, Blekinge Institute of Technology 2005. Sweden
10. Mattelmäki, T. (2006). Design Probes. University of Art and Design Helsinki, Publication series A 69, Finland
11. Mehto, K.; Kantola, V.; Tiitta, S.; Kankainen, T. (2006). Interacting with user data: Theory and examples of drama and dramaturgy as a method of exploration and evaluation in user-centric design. In Interacting with Computers, Volume 18(5) September 2006, pp.977-995.
12. Perrin, S. Turney, R. Henderson, S. & James, W. (1980) Runequest 2nd ed, Albany: Chaosium.
13. Vaajakallio, K. & Mattelmäki, T. (2007). Collaborative Design Exploration: Envisioning Future Practices with Make Tools. In Proc. DPPI07, University of Art and Design Helsinki, pp. 223-238

Appendix 1: Creating a Character Game

The Character Game is a method for sharing knowledge and empathy from user study results. It also helps in creating personas and scenarios. It is useful when you need to communicate user perspective to a group of people. Every group needs a facilitator and 4-6 players.

The Character Game is a played in a game session that has the following steps:

1. Introduction

2. Warm-up

3. Create the game world

4. Play the Character Game

5. Reflect

6. Analyze

This guide is divided into chapters based on these steps of the game-session. In every step there is description of the needed materials.

The material that can be used to create the game can be gained by many ways e.g transcribed interviews.

Remember to give enough coffee breaks between steps, this can be a exhaustive session.

1. Introduction

As the first step the topic is introduced to the players. Also have the participants introduce themselves in order for them to feel more relaxed and get to know each other.

Material: A video or powerpoint containing visual material from the research. It sets the mood and helps with giving the participants a common starting point for the rest of the steps.

2. Warm-up

The participants are divided into groups of 4-6 and have an facilitator assigned to them. The first step as a group they present a short story or anecdote relating to the topic. Every player writes these their own story on a paper or post-it note and they are put up on a wall so everyone can see them.

Material: Pen and paper or post-it notes.

3. Create the game world

The game world is a combination of a mind map and a mood board. It is constructed from images and quotes that are pre-selected from the background material. This is a group task that helps setting the environment where the happenings take place. It also tells about the common values of characters and their surroundings.

Material: This map should be visible to the participants during the whole session so the images used should be large enough to be seen from across the table or if constructed on the wall then from there. Constructing it on a big sheet of paper makes it much easier to take away and analyze later. The amount of material that is pre-selected should not be too much; otherwise it is too difficult to sort through it. To speed up the step many ready keywords can be placed on the sheet to guide the creation. Blue tack, tape, sharpies and scissors are also required.

4. Play the Character Game

4.1 Materials

Here is presented the materials needed for the game itself. These are the basic ones needed but depending on the subject other materials can also be incorporated to guide game play, like in game schedules or questionnaires.

4.1.1. Brief

A short text describing the game rules. It will also tell about the world and surroundings. It is good to transported away from modern day to give room for re-imagining happenings and technologies. This is meant only for the facilitator

4.1.2. Character Sheets

6 different character templates are created based on the material from previous studies with room for interpretation. The template contains a short description about attitudes, traits and background.

The first couple of lines on the character should be enough to tell who it is, these are read aloud before distributing them.

4.1.3. Character Name Cards

Every group should have a pile of cards with images of possible characters on them. An area for writing their name on them should also exist. It is good to make them as big as possible and have some kind of a stand they can be put on so everyone can see them. The images can be from the background material or from some other source, main thing is that everyone around the table knows every character by appearance and by name. It helps if the name is written with a thick sharpie so it can be seen across the table. Also if these are created by computer every group can have the same images instead of seeking out and cutting them from magazines. If possible, make them two sided with the same image on both sides. Then the player would not have to flip the card every time he wants to look at it.

4.1.4. Random Factors

Randomness and a playful element is added with Random Factor cards. They are cards that are dealt to the participants after they have chosen their character to play. They can contain personal things that can affect how the character sees the world, for instance a sickness or lucky happening no one else knows.

4.1.5. First Scene

As the first scene is directed by the facilitator, it is good to have it written on the brief. The aim of this is to give an example how it is done and ease the participants into the game. It should be something that easily involves every character and gives a happening that they can discuss later on in other scenes. It can be in nature for instance dramatic or social.

4.1.6. Situation Cards

Situation cards exist to help the framing of scenes. A card is drawn before every framing. They should contain hints about possible happenings and steer the game in a direction wanted by the facilitators. It should be very vague in describing the scene and only hinting at something in order to give room for interpretation. These are drawn but the framing does not need to be from them. 12 should be enough, it equals 2-3 rounds.

4.2 The Game Rules

At least 90 minutes should be reserved for the game. This equals 2-3 rounds.

1. The game starts with facilitator explaining the brief and the game rules.

2. The character sheets are distributed. They may be changed between players at this time. When this is done the random factors are given out to the players. They draw them at random but may discard and draw new ones until satisfied.

3. The players are given some time to make up their character, their name, their past, their appearances, their nature and so on. It is not necessary to have every little detail filled in. There is time to do that during the game.

4. The players go around and present their characters to the other players at the table.

5. The facilitator sets up the first scene from the brief.

6. The game continues from that with the turn to be the director of the scene going clockwise. Remember to pick up a Situation card.

7. The game continues until the time or story ends.

4.2.1 The Director of the Scene

The director is in charge of framing the scene and deciding when to move on to the next one. Every one has their turn as a director. The director should follow the Weekly Schedule. If the player does not come up with something for the scene then the turn is passed on to the next one. If it looks like no one comes up with anything then the facilitator should give a helping hand. The director also decides what the non-player characters does during a scene. If required the facilitator can step in to be a non-player character.

4.2.2 Framing of the Scene

The framing should not be too difficult or elaborate. As an example of a framing could be like:

"Ella and Aleksi are going to the chemists to get their medication. When they arrive at the elevator they notice it is broken. They try to figure out who to notify. The scene ends when they figure out who it is". The next framing could be something in line of "Ella and Aleksi tries to find a phone to contact the janitor. They do get hold of him and he promises to come and see what is happening"

4.2.3 Playing the Scene

After the framing is set the scene is played. The players describe their characters actions to fulfil the framing. The director has the final word in disputes. He also decides when the turn is over and the turn is for the next person to be the director and frame the next scene. The facilitator should ask clarifying and leading questions.

5. Reflect

This step can be handled in several ways depending on how much time is at your groups disposal. Here are two ways presented.

5.1 Structured discussion

If you are pressed on time during the game-session a fast way to do a structured discussion is to give every participant three post-it notes and instruct them to write on every note a new thing or topic they learnt. "What new information did you learn today, new insight to the topic. What do you want to tell everyone else." After this the participants presents their findings one at a time around a large sheet of paper and make a affinity diagram on the fly. If there are a lot of participants then this can be done in smaller groups of 10-15 persons, but the people that played together are broken up so different viewpoints come up.

5.2 Idea Generation

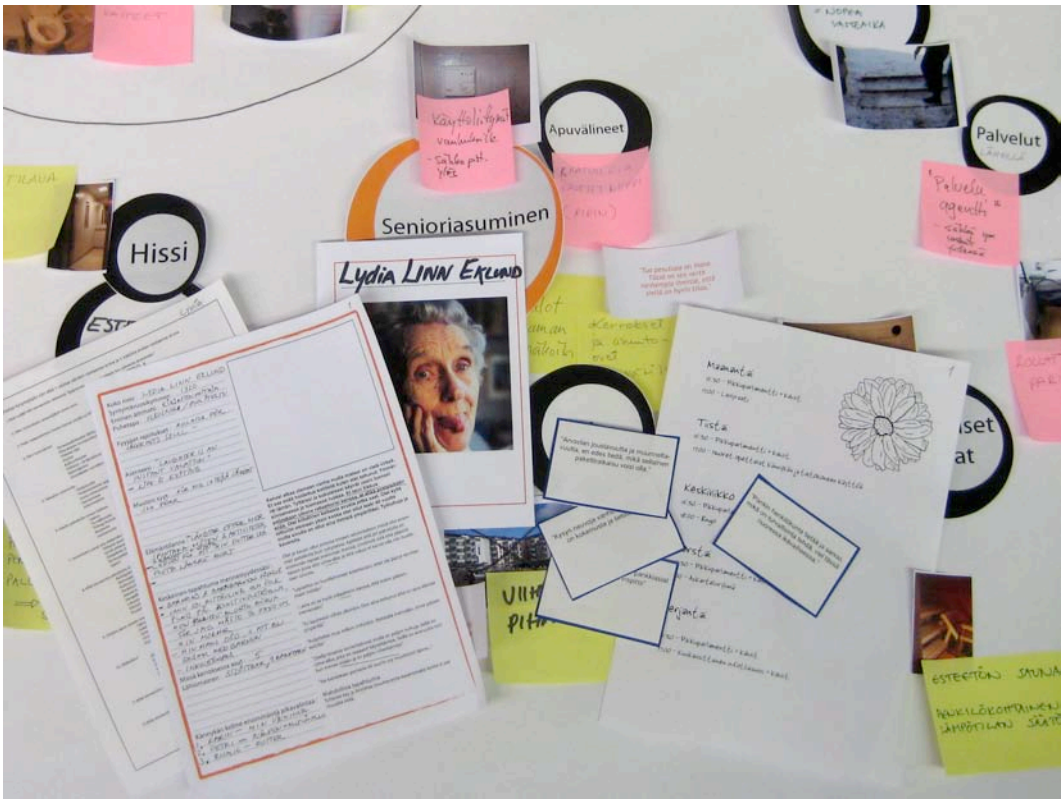
If the group is very diverse and you have time at your disposal a task to create new concepts from what you have just learnt is a good option as a last step. The groups stay together and think of three different topics or problems that came out during the game session and then try to create some kind of a concept to remedy it. If the group is made of people from different companies then a restriction that the solution has to involve every company is preferred. It opens up the participants to think of solutions that can be solved through a joint effort.

5.3 Wrap up

A final discussion is preferred, as is in every workshop.

6. Analyze

Analyzing the game session should be done within a couple of days of the event so to remember things better. Good methods for this is affinity diagrams or writing out the stories and characters created. These can later on be created into scenarios and personas quite easily. If these findings are presented to the same people that participated it is good to incorporate as much material from the game as possible to get them to reflect on the game session even later on.



Used game material

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Co-Creating Solutions - Combining Service Design and Change Laboratory

Juha Kronqvist
Service Designer, Doctoral Student
University of Art and Design Helsinki
juha.kronqvist@taik.fi

Satu-Mari Korhonen
Senior Project Manager
Theatre Academy, Education and Development Services
satu-mari.korhonen@teak.fi
http://www.teak.fi/kouke

Abstract

This paper is an introduction and reflection of a method integration project in a service development context. In the project, two complementary methods were used to co-create new service offerings and improve the work activity in a ferry line restaurant. The research aim was to test the integration of two different development methods, service design and the Change Laboratory. The assumption behind the work was that new service development requires methods for both creating new concepts and for successfully implementing them in the organization. By combining these methods, the project was able to expand the scope of service design from the creation of service concepts towards implementing them as a part of a process of organizational learning.

1. Introduction

During recent years, service design and design thinking have been pushed to the front line of new business development methods. The methods promise to deliver new ways for innovating through placing the customer needs and practices at the center of development and offering a way for creative ideas to develop into innovations. Service design is based on the expertise developed in the sphere of industrial design and interaction design, and

complemented by methods derived from ethnography, psychology and management sciences among others.

By definition, service designers provide value through the ability of visualizing, formulating and choreographing solutions to problems (Mager 2008). New services are created through the careful observation of the behaviour of customers and interpretation of requirements for the service. The strategical deliverables can be in the form of service blueprints, customer journey maps and service ecology maps. These types of solutions operate on the strategical level of the service provider organization. However, because the quality of a service relies on the people who deliver it, implementing solutions from top-down can be very difficult. Just delivering a vision for the management does not ensure a good customer experience on the ground level. In order to bridge the the gap between visions and excecution, it has become common to involve service staff members in the design process in co-design sessions (Fullerton 2009). At the basis of co-design lies the assumption that through empowering workers as co-creators, they will be motivated to engage in creating new service solutions.

When working together with service staff, it is important to realise that their motivation for creating and implementing new services is a result of personal, social, cultural and political factors. The activity that guides the service delivery process is formed historically and can resist change attempts. Often the need to sustain the status quo overrides the need for change, especially if the latter requires extra effort from the personnel. In order to address this challenge, a deeper understanding of the social and communicative processes needs to be integrated into the design process (Maffei & Sangiorgi, 2006). If the motivation for development does not intristically exist and the designer lacks understanding on how to support change processes, the outcomes of co-design sessions cannot be guaranteed.

In this paper we present a service development case during which service design methods were combined with the Change Laboratory methodology. Through this integration we were not just able to provide the organization with tools for improving existing practices and developing new services, but also guide the staff towards implementation via a process of organizational learning. During the process we were able to combine the expertise of the staff with the insights gained from customers. This created a positively self-reinforcing cycle, during which new ideas were generated and further developed. The staff became motivated to take responsibility of their work environment and customer experience.

2. Context Description

The service provider Viking Line has recently renovated its restaurant services on their ferry vessels operating between Finland and Sweden. The earlier high-end restaurant facilities Á la Carte and Barbecue were remodelled to include three restaurants working side by side: an á la carte restaurant, a family restaurant Ella's and tapas bar Tapas&Wine. This caused a need to change the way services were delivered and increased the amount of customer seats to be served. In addition to the change in concept, a few years earlier the revenue model of the restaurant was changed so that income was increasingly generated through additional sales of wine bottles, side dishes and merchandise. In order to accomodate these developments, the company wanted to generate more flexible work practices by expanding working pairs into larger teams of three to four waiters. These changes have generated a challenge of renewal for the personnel who work according to existing routines based on several years of service experience. They had to adjust to operating three different restaurants, increasing their sales efforts and all the while maintaining consistent service quality.

Before the start of the development project, the service staff had been hesitant to change their behaviour to accomodate the new model. Many wanted to continue work relying on the same practices as before. Before, customers were served through a system of collaborating waiter pairs, many of which had been working together for a number of years, thus working under seamless collaboration. For the waiters working in such way, knowing how their pair worked and behaved helped to forecast actions and adjust their own work accordingly. On the other hand, throughout their collaboration, the pairs had formed routines whose efficiency was not proved. Another problem was that the management culture of the ship was hierarchical and interaction between the service staff situated in different departments was limited. Service development took place in the top management with little contribution from the front-line staff.

Service employees were frustrated by the ongoing redesigns of their workplace and therefore change was not something looked forward to but seen as even intimidating. Through initiating this project the company wanted to address problems created by the changed circumstances. The ship M/S Amorella, sailing between Turku, Finland and Stockholm, Sweden, was chosen as the pilot site. Our challenge was to encourage the personnel to create innovative bottom-up solutions and to transform their work permanently to accomodate the new restaurant concept.

Figure 1. Customer service situation at Tapas&Wine Bar.

3. Methods Used

Parantainen (2008) presents a rather simplified model for the productization of expertise services. According to him, it means the development of existing or attainable competence into service products that serve the needs of customers. Productization is one way of addressing the development of services. What he fails to address, however, is how to critically approach existing services and to transform them into entirely new service concepts. When renewing existing services, the company faces at least the following challenges: 1) How to attain knowledge about the (changed) customer needs, 2) How to gain the motivation for re-envisioning the old, 3) How to encourage the ground service-staff into creating solutions?

Assuming that services are produced through complex organising of activities between the producer and customer, we approach the development of services through a system-theoretical point of view. Based on Sangiorgi (2008), the development was carried out

moving on three different levels: the human interaction level, interface level, and the contextual level. The first level of human interaction is based on the concrete customer service situations, created through the interaction of staff and customers. This level is characterised by personalities, moods, communication, rhythm and other aspects of personal interaction. The next level is formed by the service interface – a platform which consists of tangible objects, the capabilities and roles of the people involved and the information guiding participator interaction (Sangiorgi & Clarke 2004). The third level, namely the contextual, is often unseen to both sides. It is formed by the activity systems (Engeström 1995) guiding the behaviour of both customers and staff. On the other hand the activity system of the provider sets certain preconditions for the service offering. The activities of the employees are guided by their objective, i.e. their perception of the customers and their needs to be served. If a restaurant's concept is redesigned as a reaction to changed customer needs and yet the restaurant employees still serve customers as before, the work community will experience problems and disturbances in their work. The customer's activity system has an impact on how the service is received and can it satisfy their needs or fit into their practices (Korkman 2006).

This third level has been studied in depth within the field of developmental work research and formalized into a development method called the Change Laboratory, which aims at facilitating organizational change through the reinterpretation of the object of activity.

3.1. Change Laboratory and Developmental Work Research Methodology

The Change Laboratory (CL) is a tool for developing work practices through engaging participants (members of a work community) in a dialogue with each other, their management, with their clients and the facilitator. It is based on the assumption that human behaviour is dependent on the surrounding cultural artefacts and the social relationships of her/his community. Change in individual behaviour occurs when these artefacts and relationships, which create the socio-cultural practices, are changed. (Mäkitalo 2005.) In CL the participants are guided through a cycle of expansive learning, which results in establishing a new way of working for the organization as a whole. In this project, the Change Laboratory provided the facilitators with the theoretical understanding of organizational change and methods for incorporating the new service concepts into the daily work activity of the community. This chapter provides a brief descprition of its background and elaborates on some of the key concepts in the methodology.

The Change Laboratory concepts and methods are based on theories of expansive learning and developmental work research (Engeström 1987; 1995; 2004; Virkkunen, Engeström, Pihlaja & Helle 1999). The theory and methodology of developmental work research was first published in Yrjö Engeström's dissertation “Learning by Expanding” in 1987. The first version of the Change Laboratory method was developed in the 1980's through the collaboration between various researchers and HRD-practitioners who were interested in utilizing the activity theoretical approach in organizational development. Since then many projects have been conducted in various industrial fields. During this time, CL developers have gathered and analyzed empirical data of their interventions and published results of their method development in academic papers and dissertations. Between the years 1997 and 2006 over fifty Change Laboratory projects have been carried out in various companies. (Virkkunen 2007.)

Expansive Learning

The aim of the Change Laboratory method is to support organisational change through creating an environment that enables expansive learning to take place (Engeström, 1987). First the expansive learning cycle (see Fig. 2) is used to clarify the state where the community is at the moment (=development challenge). Secondly, the cycle is used to guide the planning of the individual workshop sessions and discussions. The cycle consist of several learning acts: *questioning* present work practices, *analysing* historically the causes that have created problems in daily work, modelling and *searching* for a new form of activity, *testing* and changing the activity and practices during the experimental phase and finally reflecting on the process and *implementing* and *generalising* the final concept of the activity (Engeström, 1987; 1995). All learning acts are set up during the Change Laboratory process step by step. CL offers no ready-made process, so the concrete tools are always customized to fit the development challenge.

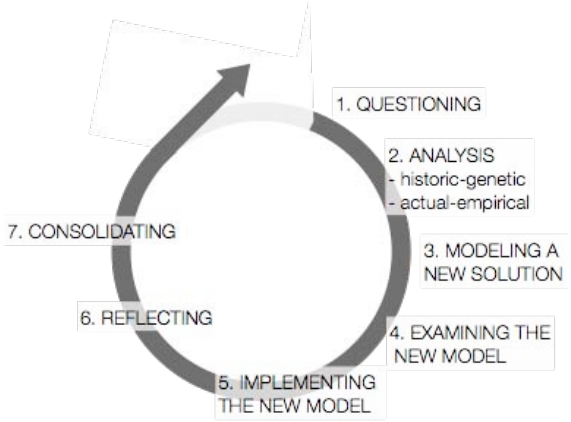


Figure 2. Expansive learning cycle (Engeström 1987; 1995).

Mirror data

The process starts with encountering the problems that are tied to the present activity model and practices. Laboratory sessions are filled with empirical data analysis from actual work and feedback and actions of the customers. The issues are concretized through the gathering of mirror data on work situations, mostly in the form of experienced disturbances and proposed solutions (see Fig. 3). Problems are not analysed as mistakes made by the employees but instead viewed as systematically embedded in the practices of the organisation and historical results of earlier organizational development. (Engeström, 1995.) The gathered data will be analysed in several laboratory sessions held together with the employees. As a result, the work community will be confronted with the challenges and prompted towards creating solutions to problems.

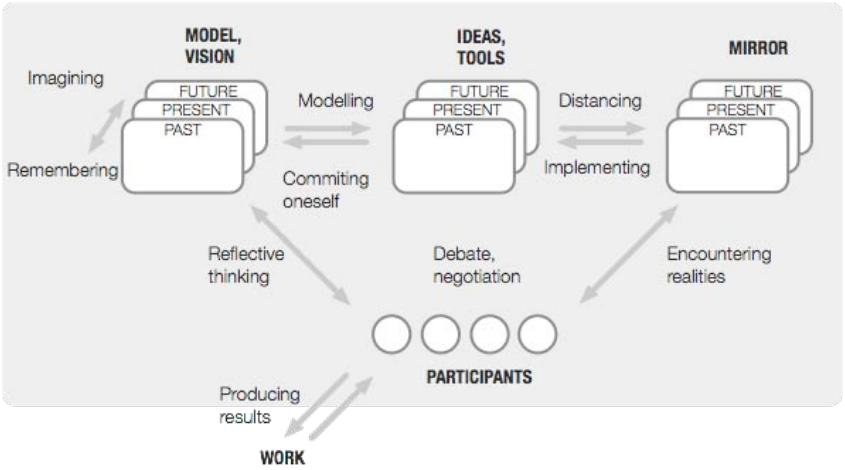


Figure 3. The Change Laboratory setting.

Double bind

The expansive learning theory works as a tool for an interventionist to plan and execute the workshop tasks. Van de Veer and Valsiner (1991, 169) says:

"The actual workshop sessions are planned by using the guideline double bind. The subject is put in a structured situation where a problem exists (…) and the subject is provided with active guidance towards the construction of a new means to the end of a solution to the problem."

The logic of double bind makes participants to rase questions: "Why are we/am I doing this?" or "What is it that we should in fact do?" (Mäkitalo 2005). By asking these questions and answering to them employees personal sense and collective motives that are bound to historically formed activity starts to externalise and question. Questioning the object of activity can shift the community towards the construction of a new object with a new collective motive. The new constructed object of activity must be tested in real life situations. (Mäkitalo 2005.)

Activity system model In CL projects the unit of analysis and development is called activity, which is seen as collective work practice (see Leontjev, 1978; Engeström, 1995). In the development process, the basic analytical tool is an activity system model, used for illustrating the present activity and the envisioned one (see Fig. 4).

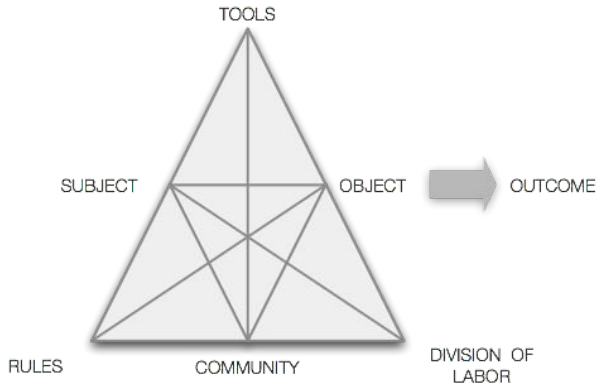


Figure 4. Activity system model (Engeström, 1995).

Collaborative work is mediated by different tools, schemas and theories (Vygotsky, 1978). Activity is always object-oriented, partly given and partly interpreted (Vygotsky, 1978). This means that service producers construct a certain conception of their customers and their needs which they proceed to serve. The actions of customers determine and influence this construction. If the conception is not accurate, it can lead to problems due to the discrepancy between how the employees are behaving and what the customers are expecting them to do. In addition to the object, activity is regulated by rules, a division of labor and the rest of the community who contribute to the working conditions (Engeström 1995). For a service concept to become a properly functioning system, it needs to be embedded within the practices (tools, rules, division of labor) of the providing staff.

The strength of developmental work research is that both service and work are being analysed through a broader perspective than just acts produced by individual workers in distinct situations. Present activity is historically defined and affected by developmental contradictions. If a restaurant's concept and management system is redesigned as a reaction to changed customer needs and yet the restaurant employees still serve customers as before, the work community will experience disturbances in their work, as had happened in this case.

The Change Laboratory method is mainly used for improving work activities. The method has not been applied directly to service development aims, although in many of the executed projects the element of service has been present. In many cases there has been collection of interviews and ethnographical data on customers' activity, but the main aim has not been in creating new service concepts. However, some researchers have applied a customer activity-oriented approach in their academic dissertation (see Hyysalo, 2004). Furthermore, Korkman (2004; 2006) has studied family cruises and made a conclusion that companies often miss out on new markets due to a lack of customer orientation. According to him, in developing services the marketing function focuses too much on the organisation, often leaving aside their customers' practices (Korkman, 2004; 2006). There is an interest within the CL community to develop the method towards applying a more customer-centric point-of-view.

3.2. Integrating Service Design

Service design and Change Laboratory share some common history in earlier methodological research. Activity theory, on which the Change Laboratory method is based on, has been widely researched in the context of interaction design method development (Nardi 1997, Kaptellin&Nardi 2006). In addition, the interaction design community has recently engaged in discussions about alternative paradigms for human-centred design in which activity theory is seen as one approach (see Norman 2005). So far we have found only a few instances where the overlap between the methodological approaches has been explored in the context of service design – most notably research conducted by Daniela Sangiorgi (2004, 2006).

In this project, service design (SD) as a method was positioned according to the approaches of human-centred design and participatory design. The methods used in the process were gathered from the existing service design literature and based on experience gained during service design education organized at the University of Art and Design Helsinki. Additionally, some of the customer interview and data analysis methods were following the method of contextual design (Meyer & Holtzblatt 1998). This chapter outlines some of the guiding principles that were used from the service design methodology.

Service as a Process

In contrast to physical products, services are interactive processes during which the employees and customers are creating value over time (Holmlid 2009). In service design, this process is approached from the customer's point of view by constructing a customer journey which is a chronological representation of the activities of the service participants in a given service situation. Service interfaces are seen as an interaction platform which consists of tangible objects, the capabilities and roles of the people involved and the information guiding participator interaction (Sangiorgi & Clarke, 2004). The success or failure of service is determined by the expectations of the customer and the experience during the process or usefulness of its result. Following these views, the central object of service design is the creation or modification of the customer journey, constituted by its touchpoints. Methods such as customer journey mapping (Saffer 2007), service blueprinting (Shostack 1984) and storyboarding (Vertelney&Curtis 1990) are used to visualise the processes that take place during a service encounter.

Human-Centered Design

In service design, the needs and practices of the people involved take center place in the development. The development commences with finding out latent needs and current practices of the customers through interviews and ethnografic methods. The aim is to understand how customers experience services and how this experience can be improved. Theatre-based methods such as bodystorming or role playing are often used to visualise human interaction during a service encounter. Typical service design methods adopting a human-centered approach include design probes (Mattelmäki 2006), customer personas (Cooper 1998) and storytelling (Erickson 1996).

Participatory Design

Service design is also set apart from product and interaction design by the aspect that they are produced and consumed at the same moment – by people with people. This means that the front-line service employees both retain much information about the current state of the service and play a key role when implementing the final design. Therefore to ensure best possible results, the employees are often included as co-creators in a participatory design process. (Fullerton 2009.) In the sessions the designer takes on the role of a facilitator, and rather than focusing on creating solutions, presents information and frameworks to guide the process. Often participatory workshops are designed to follow the process of first processing and thinking about the data that was produced, then going into a divergent process of ideation and afterwards converging on service concepts and prototypes to be tested and improved.

Generative Methods

Service design is a creative endeavour from its core as it concentrates on thinking how existing services could be made better or how entirely new concepts can be formed. Often the best and most innovative solutions are not found using a analytical-rational thinking process, which is good at solving problems with pre-set solutions, but rather with intuitive-experiential thinking which suits open-ended problems. Various excercises and processes have been developed for training and utilizing creative thinking under the umbrella of lateral

thinking (de Bono 1967), design thinking (Brown 2008) or integrative thinking (Martin 2007). Within the scope of this project, the creative thinking process followed the steps described by Moritz (2005): discovery, generation, synthesis and enterprise.

4. Process of Development

The context of a ferry line provided us with a suitable platform for testing the method integration. The ferry line's customers spend a certain amount of time using the services and facilities of the ship and create their individual experiences and service journeys. Developing the service experiences required indepth study into the needs and practices of the customers in order to find out how the quality and scale of the offering would have to increase. At the same time, the personnel posed us with the task of assisting them in improving their work practices and challenging them to reflect on their practices from a customer's perspective. We approached this task through combining the two methods, one to provide the customer's perspective and the other for developing work activity. In the project CL was used as a wider frame because of it provided us with a theoretical understanding of organizational change. This frame was parallelled with concepts and methods from service design (see Fig. 5). This chapter provides a short chronological description of the development process. The development work was organised into a background study phase, data analysis and a workshop phase.

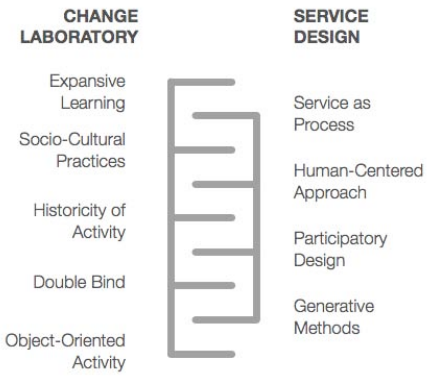


Figure 5. The frame for the development activities.

Background Study

The first step of the development process was to gather of data from customers and employees. The phase aimed at providing an in-depth perception on the operations on the ferry, its service offering and customer needs and practices. The methods were inspired by enthnographic techniques and involved observing service interaction situations, interviewing customers and participating in actual service work. The observation was carried out in front and inside of the restaurants and recorded in field notes which described customer and staff behaviour on the ferry. Observations concentrated on customer-employee interaction, the usability of service touchpoints and gathering of cultural practices. Interviews were held for three groups of subjects: customers, service staff and management. The customer inverviews (over sixty persons were interviewed in total) concentrated on customer journeys, expectations for restaurants, needs and practices on the cruise and suggested improvements.

The whole staff of the restaurant was also interviewed. In these interviews they were asked among other things sentiments regarding their work, disturbances in work flows and perceptions of their work roles. In addition, three managers were interviewed in order to gain an oversight on the ferry line's service offering.

Data Analysis

The second step was to construct hypothesises about the developmental challenges of the work community, restaurant's practices and services and to create descriptive information artefacts such as customer personas, customer journeys and issue lists to be fed into the workshop co-creation process.

Customer data was analysed to construct the main service challenges and formulated into personas and issue lists. The analysis clarified the development challenge of the restaurant and provided mirror data for the workshops.

The first hypothesis presents the contradiction between the old activity model and a new one (see Fig. 6). Even though the new revenue model, which includes additional sales, had been in place for a while, the personnel viewed working according to it as a challenge. They viewed it as less rewarding because in addition to providing good service their performance is measured increasingly through sales activities. The rules and organisation of the new model had not yet been generalised among the staff. This had lead to a situation where the employee's operation and expectations for the management were still guided by the old model, but the rewards and rules of the workplace were already operation according to the newer model. The situation caused continuous disturbances in work situations and dissatisfaction among the staff. The construction of a new model and transition towards it became a central aim for the workshop.

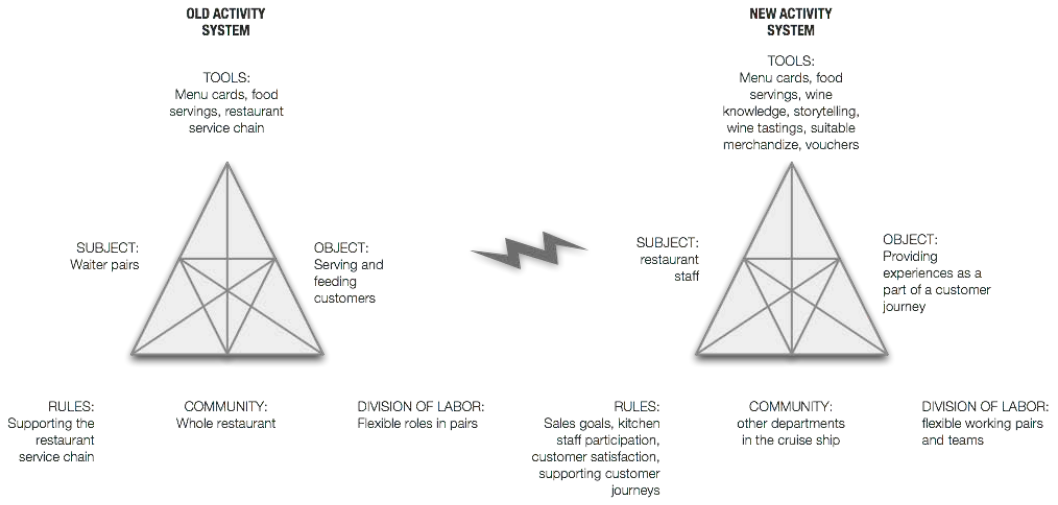


Figure 6. Contradiction between the old activity system and new one.

Secondly, we noticed that the service providers in the different departments lacked a shared object for activity (see Fig. 7). The ship is set up as a functional organisation, which consists of different departments: entertainment, conference, restaurant, tax free shop, hotel and so forth. The objectives of the departments have been set up according to their functions, i.e. restaurants serve food, tax free sells products and entertainment keeps passengers engaged.

This has led to a situation where the service staff are not informed about how the services of their ship interlink. They are not able to guide the customer to the next service or advise them about the services of other departments. Cooperation between different units takes place among function chiefs so the ground-level staff is often unaware of the activities in the other departments. Because of this, the customer experience has become scattered and visitors are often wandering on the corridors looking for the next service or activity. Introducing the customer journey as a mental tool and encouraging inter-department communication would assist in solving this problem.

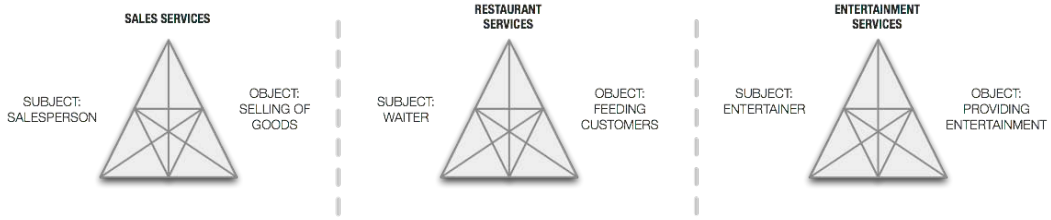


Figure 7. The lack of a shared object makes co-operation between functions difficult.

The third hypothesis considers the need for more engaging services offered to a wider customer base. At present, the service offering of the ship caters for selected customer segments and provides services for elementary needs such as entertainment and shopping. Many customers found their trip somewhat uneventful and desired more engaging and social activities. The ship has many hidden services, such as the lending of board games or whiskey tasting events, which are not actively promoted and thus out of reach for many customers. If these services were communicated more clearly and made easily available to a larger customer base, they could be utilised to create eventful experiences. Furthermore, bundling positive experiences with appropriate merchandise can create more memorable experiences for the customers and lead to increasing sales. In this way, the service offering of the ferry would provide a platform for active customer interaction instead of providing for one-off services.

Workshop Phase

CL provided the framework for the workshops through the concept of expansive learning. The learning acts were used to guide the goals and methods of individual workshops (see Fig. 8). The waitors and waitresses formed the main group participating in the sessions in which information on work and customers was analysed and new ideas were gathered and discussed. The workshops were facilitated as learning processes so that the facilitators guided the activities and fed the discussion. Members from other departments were included in two workshops, which discussed the services of the restaurant department in relation to the whole offering of the cruise ship. All together there were seven two-hour workshop sessions and a day-long concluding seminar, in which the implementation of service concepts was discussed.

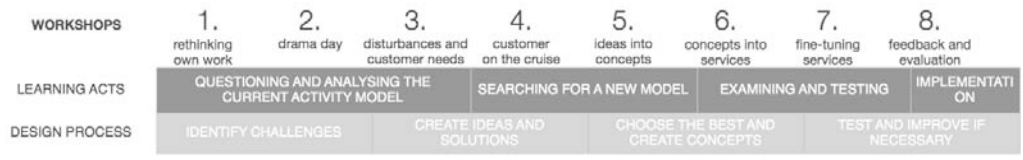


Figure 8. The workshop process.

The workshops started with a session in which the historically formed practices of the restaurant were analysed. During the analysis, we emphasised that problems are not viewed as mistakes made by employees, but as practices that are historical results of the development of the organization. In this way, we guided the participants towards thinking about there work as a set of rules, tools or processes within the restaurant and prevented them from reeling into emotionally charged arguments. After this, the personnel listed positive and negative experiences, which were reflected onto a matrix contrasting the old and emerging ways of working. These represented the choices that were available for the employees to take and the work challenges present in either one. By choosing the preferred one, the employees bound themselves to making an effort towards achieving the change. Theatre-based methods were utilized in the start for questioning present practices of the restaurant staff and to study their conceptions of customers. Questioning current ways of doing things on a systematic level created the motivational groundwork needed to activate thinking on how to do things in a different way.

After the initial motivation was achieved, we introduced categorised data made of disturbances and ideas based on the interviews held with the personnel. The aim was to review the ideas and to create new ones to solve disturbances. Next we introduced customer personas and their needs and practices on the cruise. After that we introduced service design methods to inspire new ideas for services and for creating a new activity model. During this time, the development process was split into two parallel activities: creating solutions to problems within work settings and new service concepts to meet discovered customer needs or practices. The aim of the process was expansion, i.e. the shift towards a new form of activity, consisting of new service concepts. The activities followed standard concept design methods, but were supported with analytical tools from the Change Laboratory. First, we presented the participants with identified disturbances and insights in work activity and customer service. Customer data was modelled into personas describing practices, needs and customer journeys on the cruise. Data was made as visual and concrete as possible to encourage empathy on behalf of the employees. After this, new ideas were created via brainstorming activities. To feed and support ideation, we taught creative thinking techniques (brainstorming, back-casting, role-playing) and held excercises for lateral thinking (e.g. de Bono 1967). Early concepts were created by combining produced ideas using affinity diagramming, which were then evaluated using commonly created criteria.

Two of the workshops were open for invited visitors from other departments. The decision to include outsiders into the process was based on the need to break barriers between the departments in order to support cooperation. During these sessions the participants created ideas for both supporting interaction between departments and service concepts that would span accross the organization.

Next, we initiated a prototyping and testing phase. During this phase the employees created service concepts via storyboards, simplified service blueprints and feature descriptions and proceeded to test service prototypes in practice. The employees came up with a new way of offering wine tasting, vouchers for guiding the customer to the next service and storytelling excercises for selling merchandize and wine. In a similar way, new rules, tools and practices were tested out within the organization. The employees formed new discussion forums with the kitchen staff and started to collect improvement ideas into an idea booklet for later refinement. The successes and failures of these experiments were gathered together and discussed as a group. Based on this discussion, the new concepts were embedded into the working practices of the organisation.

5. Discussion

With the project described in this paper, we integrated service design and Change Laboratory methods to produce a change in the work activity of the organization and in customer experience of its services. In the project, the Change Laboratory provided a theoretical background on which service design methods were placed. This allowed for systemical understanding about change processes and how they affect the development of services. This chapter presents the results of the project based on, feedback during the final seminar, interviews with the staff, the reflection of the authors and some statistical information gathered from the restaurant.

- The employees managed to significantly improve existing services from the customer's point of view, such as the redesign of Tapas signs or wine tasting events. This was reflected as a rise in the revenue in the sales statistics and, based on the feedback of the employees, the customers have expressed satisfaction at the new services. Experienced problems are now viewed increasingly through "customers eyes" and the employees understand their role in providing customer experiences.
- New work practices were generated for improving work in the restaurant and between departments, which helped the organization to move towards a new activity system. Work has become easier both by one self and in a group. The working pair system has mostly given way to group work, although some insist on working as pairs.
- The working athmosphere has improved significantly and the employees express a desire to continue developing the work and services of their organization. It was noted that this project was the first one, which included the staff in rethinking issues at the workplace. We as facilitators became trusted partners through a collaborative effort. The assignments given to solve between the workshops were seen as major factors in community building. During development management allowed for more freedorm to test new practices and concepts.
- The employees possess the appropriate skills for identifying problems and creating solutions. Instead of contemplating issues on the level of own work, many mentioned that they now consider problems holistically. Solving assignments required constructive discussions and required collaborative problem solving skills. Changes and sales objectives coming from the upper level are now viewed as a challenge which is taken on by the whole community. During the process, over sixty development ideas were created and documented, which serve as a concrete basis for future development work.
- A major challenge was how to keep the restaurant managers informed of the process. During this process the management applied a "hands-off" attitude towards the development. While this allowed for significant freedom within creating and testing new concepts, it left the managers outside the development process. Fortunately, towards the end of the project a new restaurant manager started work and took active interest in the results of the project.

What surprised us what the amount of effort that went into discussing our methods and argumenting decisions over what activities to undertake and when. During the project we also had to concentrate on the integration process at the same time as we were learning about each other's methods. As a hindsight, the integration could have been driven further into developing services holistically without the separation between work activity and customer experience. Especially at the start of the process, this separation had a small effect in the motivation of the participants, who felt that developing work was helping them and

developing services was work for the employer. Towards the end of the project the differences had evened out as the employees found activities such as prototyping very motivating. The participatory nature of the project was essential in winning over the trust of the personnel. During the start the employees expressed reserve towards us as developers based on their earlier experiences, but this changed as soon as we expressed true interest in their work.

One issue to consider further is how to further strengthen the customer involvement in the method. By including some customers as workshop participants, we could have been able to break the employees' preconceptions earlier in the process and create a space for more creative service ideas. Often we felt that the most innovative ideas were held back due to the fear of extra effort. Similarly, many ideas seemed guided by incremental improvements to existing practices. Development was also limited by the scope of one restaurant within a cruise service offering. The customer experience could be developed more holistically by including employees from all departments. In this way it would be possible to place the whole cruise customer journey, from entry to exit, as the object of development instead of a single unit's service. Unfortunately the current scale and focus forced us to concentrate more on the producer than on the customer.

The methods and their processes seemed to fit each other relatively well. Service design was initially thought to be used as a method for gathering and analysing data about the customer experience and as a way to provide an operational framework for co-designing new service concepts. However, during the process it provided valuable methods to address questions about work activity raised by the Change Laboratory. At some point when the CL was not creating new ideas, the SD activities gave a needed push. In this way, the exploratory nature of many SD methods complemented the analytical approach employed within the CL framework.

In the light of the aforementioned results, the simultaneous development of service concepts and work activity is seen as possible through the described integrated method base. Relying solely on the Change Laboratory methods, it would not have been possible to create new service concepts and, on the other hand, design service methods do not provide enough basis for the renewal of an activity system. We hope that this integration experimentation can provide a basis for further research into how service design can benefit from concepts and methods developed within the scope of the Change Laboratory and activity theory.

References

Brown, T. (2008). Design Thinking. *Harvard Business Review* 86(6):85-92.

Cooper, A. (1999). *The Inmates Are Running the Asylum*. Sams, 1 edition.

De Bono, Edward (1970). *Lateral thinking: creativity step by step*. Harper & Row.

Engeström, Y., Virkkunen, J., Helle, M., Pihlaja, J. & Poikela, R. (1996). The Change laboratory as a tool for transforming work. *Lifelong Learning in Europe*, 1(2):10-17.

Engeström, 1995. *Kehittävä työntutkimus. Perusteita, tuloksia ja haasteita.* [Developmental Work Research. Elementals, Results and Challenges.] Helsinki: Hallinnon kehittämiskeskus.

Erickson, T. (1996). Design as Storytelling. *interactions* 3(4):30-35

Fullerton, B. (2009). Co-creation in service design. *interactions*, 16(2):6-9.

Holmlid, S. (2005): Service Design methods and UCD practice. In Proceedings from User Involvement in e-Government development projects, workshop at IFIP conference Interact, Rome.

Holmlid, S. (2009). From interaction to service. in Miettinen, S., Koivisto, M. (Eds.) *Designing services with innovative methods*, 78-97. Helsinki: TAIK

Kaptelinin, Victor, and Nardi, Bonnie A. (2006). *Acting With Technology: Activity Theory and Interaction Design*. MIT Press. Cambridge, MA.

Korkman, O. (2006). *Customer value formation in practice: a practice-theoretical approach*. Series A: 155, Helsinki: Swedish School of Economics and Business Administration.

Leontjev, A. N. (1978). *Activity, Consciousness, Personality*. Englewood Cliffs, NJ: Prentice Hall.

Maffei, S. & Sangiorgi D. (2006). From communication design to activity design. in J. Frascara (Ed.) *Designing Effective Communications: Creating Contexts for Clarity and Meaning*. Allworth Press, New York.

Mager, B. (2008) Service Design. in Erlhoff, M. & Marshall, T. (Eds.) *Design dictionary: perspectives on design terminology*. Basel: Birkhäuser Verlag.

Martin, R. L. (2007). *The Opposable Mind: How Successful Leaders Win Through Integrative Thinking*. Boston: Harvard Business School Press.

Mattelmäki, T. (2006). *Design probes*. Doctoral Dissertation. Helsinki: TAIK

Moritz, S. (2005). *Service Design - Practical access to an evolving field*. lulu.com.

Mäkitalo J. (2005) *Work-related well-being in the transformation of nursing home work*. Doctoral Dissertation. Acta Universitatis Ouluensis Medica D 837.

Nardi, Bonnie A. (ed.) (1996). *Context and Consciousness*. MIT Press. Cambridge, MA.

Norman, Don (2005) Human-centered design considered harmful. *interactions*, 12(4):14-19.

Curtis, G. & Vertelney, L. (1990). *Storyboards and Sketch Prototypes for Rapid Interface Visualization*. Tutorial. In CHI'90, Seattle, Washington.

Saffer, D. (2007). *Designing for Interaction. Creating Smart Applications and Clever Devices*. Berkeley: New Riders

Sangiorgi, D. & Clark, B. (2004). *Toward a participatory design approach to service design*. Artful Integration. Interweaving Media, Materials and Practices. Participatory Design Conference PDC 2004, Toronto

Sangiorgi (2008). *Service Design as the Design of Activity Systems*. Presentation slides. International Service Design Northumbria ISDN3. Newcastle

Shostack, L. G. (1984). Designing Services that Deliver. *Harvard Business Review* 62(1):133-139.

Virkkunen, J. (2007). Collaborative Development of a New Concept for an Activity. *@ctivités*, volume 4 numéro 2. <URL: http://www.activites.org/v4n2/virkkunen-EN.pdf> (27.7.2009).

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Beyond the experience. In search of an operative paradigm for the industrialisation of services

Nicola Morelli
School of Architecture and Design
Aalborg University, Aalborg, Denmark
Email nmor@aod.aau.dk

Summary

After many years, in which service design occupied some blurred areas in different disciplines, this activity is now creating its own ground and consolidating both practice and research. The increasing number of conferences and publications on service design, the growing number of cases and the emergence of new education programs are contributing to raise service design to the status of an independent disciplinary area.

The contributions to the definition of a *disciplinary corpus* for service design come from two main directions: the first concerns the definition of a methodological framework for service design. This area is developing methodological tools for analysing, designing and representing services. The second area focuses on real cases, developing projects that are advancing the practice of service design and making service design visible to private business and public administrations.

The two areas mentioned above are developed along different disciplinary traditions; the first area refers to studies in management, organisation and engineering (Bitner, Booms, & Tetreault, 1990; G. Hollins, Hollins, Bill, 1993; Ramaswamy, 1996; Zeithaml, Bitner, & Gremler, 2006). This area emphasised technical and organisational aspects in designing a service, looking at a service as a production system. The second area has been inspired by interaction design studies (Pacenti, 1998; Sangiorgi, 2004), however the specific theme of service design has been developed in some schools and teaching programs beyond the traditional domain of Interaction design, focusing on experiential issues related to a wide range of product-service systems. The focus of this area is the *service encounter*, i.e. the physical or virtual space in which the service provider(s) come in contact with the customers.

The parallel and asymmetric development of the two areas led to separate methodological approaches. This paper will illustrate such a development with the aim of emphasising the gap between the two areas and exploring possibilities to develop a broader operative paradigm for the design of services

The earliest development of service design.

The evolutionary path of service design starts from the intersection between design disciplines, in particular industrial design, and management and engineering science.

For several decades, marketing, management and engineering disciplines have considered service development and management as an integral part of their discipline. Design disciplines instead, started focusing on service design with some contributions in the 90's (Erlhoff, 1997; Manzini, 1993a, 1993b; Morello, 1991).The debate among designers concerned the relevance of (immaterial) services for a discipline traditionally focused on material products, the role of designers in the development of new services (in relation to other professional roles) and the methodological tools designers can use to design services.

One of the corner stones for this debate is Shostack´s work (Shostack, 1982, 1983, 1984). Although Shostack's contribution is well rooted in marketing studies on services, her call for a *blueprint* as a fundamental step in the activity of service design is the beginning of a range of new contributions in several disciplines, including engineering, industrial design and interaction design. However, given the variety of aspects involved in the development of a service, such studies have not generated any solid definition of a blueprinting technique.

The aim of Shostack was to suggest that service development can be treated as a production system and their design can be appropriately communicated across the production process by using a specific notation. Obviously Shostack was very aware about the characteristics of services and the differences from the traditional material production processes. Indeed she suggested that service blueprints should specify time dimensions, main functions and tolerances (Shostack, 1982).

Shostack's work was also the starting point for the area of service design studies referring to interaction design, where a blueprint is essential for defining the characteristics and qualities of service encounters.

From this starting point the studies on service design have been developed along two directions: a first direction has explored design issues in an area that was very close to management and engineering science, the second direction explored issues in an area influenced by interaction design. Although the two directions had several intersections, the contributions coming from them are quite different in nature and content. For this reason this paper will illustrate them separately.

Services as production processes: the contribution from management and engineering

Management studies have included service design and management as a parameter to control the business quality and customer relationships (Bitner, B. H. Booms, & Tetreault, 1990; Gronroos, 2000; Levitt, 1976; Ramaswamy, 1996; Zeithaml et al., 2006). Engineering studies have also considered service design as an integral part of a *total* production process (G. Hollins, Hollins, Bill, 1993).

Ramaswamy borrowed methods from Total Quality Management; he used Quality Function Deployment (QFD) as a tool for the definition of services' components. The author used the *house of quality* to evaluate possible incongruence between different components, and to compare different perspectives (users, designers, service providers, competitors)

(Ramaswamy, 1996). This approach gives the designer a chance to control the design process from the details to the systemic aspects.

A similar approach is possible by using the IDEF0 (Integration definition for function modelling), a method designed to model the decisions, actions, and activities of an organization or system. Morelli (Morelli, 2006) proposes the use of this method for the progressive definition of a service system, from a general level to the details of the single operations. Hollins, (B. Hollins, 2006; G. Hollins, Hollins, Bill, 1993) stresses the need to present blueprinting on a time base, in order to show parallel phases, concurrencies and possible bottlenecks in the activities included in a service. For this reason he proposes the use of Just in Time (JiT) techniques to reduce waiting time for customers, thus improving the customers through-put; he also proposes the use of capability planning techniques to manage the variations in time for services demand and offer.

The analogy between service design and product manufacturing management was clearly a good inspiration to develop methodological insights concerning the organisation of service systems. However it was also very evident that this could not be the only source of inspiration. Indeed the intrinsic characteristics of services, such as the impossibility to store them (Eiglier, 1977), the relevance of time components (unlike products, service do not exist *before* nor *after* the moment in which the customer meets the service) and the high level of personal intensity of services (Normann, 1991) are elements of service design that are not present in traditional production processes.

Furthermore a new generation of services is emerging, in which the participation of customers is critical and represents a factor of big uncertainty. This characteristic has been emphasised by Richard Norman, who focused his studies on customers' involvement in services (Normann, 1991). In later publications(Ramirez, 1999) (Normann & Ramirez, 1994) such an involvement was emphasised as a major breakthrough in the process of value production, in which the customer was no longer *consuming* the value created during the production process, but rather *co-producing* value. The contribution of Norman and Ramirez in this sense was in fact opening a new horizon and calling for a radical revision of the existing approach to service design: the question arising from such a new scenario is whether the existing systemic methods borrowed by production techniques are able to manage the large margin of uncertainty that customers' behaviour implies. Existing methods may prove very effective when the level of predictability of a product-service system is quite high; in this case the service can be described through a clear sequence of processes. When users become an integral part of the production system, though, a large number of qualitative and quantitative parameters should be considered, to evaluate the service quality (e.g. users' preferences) and service processes (e.g. sequences of events).

Furthermore the focus on customers' participation moves the centre of service processes much closer to the customers. The reduction of the gap between customers' expectations and the existing service offering is an issue that links the research on service design to the debate on mass customisation. The direct participation of customers in the definition of new solutions can support an extreme level of customisation, thus stretching the present capabilities of industrial systems beyond the existing limits of mass customisation (Morelli & Nielsen, 2007). This approach however, raises strategic and methodological questions: the strategic question concerns the adequacy of present management attitudes towards the new kind of offering[1]; the methodological question concerns the existence of methods and tools that can really integrate users in the service design and development process.

[1] Von Hippel recently discussed this question in the MCPC07 conference (Eric Von Hippel, 2007) and in his book *Democratising Innovation* (Eric Von HIppel, 2005). The topic was also discussed in the

Service design and the interaction paradigm, the contribution from Interaction design studies.

The definition of the specific nature of services, and therefore a specific and legitimate workspace for design in the development of new services, was the centre of service design research in the last decade (Sangiorgi, 2009). A perspective suggested by key studies in this area (Pacenti, 1998; Sangiorgi, 2004) was focusing on service as interactions. Pacenti (Pacenti, 1998) proposed that service design focus should be the interaction between service and users. Unlike the *traditional* view that defined services within the framework of normal production processes, this new perspective was suggesting that services be considered as complex interfaces. Sangiorgi (Sangiorgi, 2004) developed this perspective by connecting it to previous studies focusing on the *service encounter* (Czepiel, Solomon, & Surprenant, 1985) (Czepiel et al., ; 1985) and to *activity theory* (Kaptelinin & Nardi, 2006). She suggests the service encounter as the centre of service interaction and proposes a model for a systemic view of interactions in service design.

Those contribution clearly distinguish the space for service design as an autonomous area from management/ engineering studies and from industrial design, furthermore the emphasis on the *interaction paradigm* (Sangiorgi, 2009) in service design introduces an area of service design studies that is strongly influenced by interaction design.

Although service design and interaction design still keep their own autonomous characteristics[2] the proximity to this area leads the design activity towards a stronger focus on the quality and intensity of the involvement of users in the service interaction. Since the success of a particular service rests on the quality of the customer's subjective experience, the nature of this experience is the critical determinant of the success of the service (Solomon; et al., 1985). The design of such experience can take inspirations from dramaturgical metaphors and use *scripts* to regulate the role customers are supposed to play. The analogy between those scripts and Shostack's blueprint is quite evident. Unlike shostack's blueprints and dramaturgic scripts though, the design intervention refers to a participatory story in which each users is given more space to move and behave according to his/her own individual needs, cultural background and behavioral attitudes. In this context service design consists of scripting a story that would result incomplete without customers' participation. (Pine & Gilmore, 1999).

The script is supposed to guide users through a journey of critical encounters that take place over time and across different interaction channels (face to face, world of mouth, telephone, internet, text messages, marketing). Each encounter is a touchpoint in which users interacts with the service in different forms and with different intensity. The interaction includes information/communication between the service and the user, as well as participation and different forms of value co-produciton. The concept of the service journey enables the design team to create a rich picture of how service experiences play out in the context of everyday life. The objective here is not to understand and optimise operational processes but to determine the best experiential journey for the users of a service.(Parker & Heapy, 2006).

It is worth noticing that, although this approach may prove to be very effective in designing new users' experiences and in encouraging user participation, it often focuses to the front

---

same conference by Tapscott, who was mainly referring to his book *Wikinomics* (Tapscott & Williams, 2006).

[2] Holmild (Holmild, 2007), points out that those disciplines can still be clearly distinguished on the basis of the characteristics of their process, their nature (material) and deliverable.

office area, whereas the area beyond the line of visibility, the back office, where services are organised and produced, is often overlooked.

Interesting implementations of the perspective suggested by the interaction paradigm have been proposed by some design schools, such as the Interaction Design Institute in Ivrea, Domus Academy and the recently open CIID in Copenhagen. Those schools have informed the work of some service design studios, mainly UK based, which consider service design as the activity of designing touch points that shape user experience and support users' participation in the interaction process. Finally, this approach has generated several design cases of public services in UK (Cottam & Leadbeater, 2004a; Parker & Heapy, 2006; Tackara, 2007). The common aim of those projects was to propose a new strategic direction for solving emerging problems, related to major social, demographic, economic and cultural changes that are challenging the public sector. This strategic direction is inspired to the emerging phenomenon of open innovation in many economic sectors (Tapscott & Williams, 2006) (Eric ; von Hippel & von Krogh, 2003) and proposes an active and direct participation of citizens to the definition of the new service (Cottam & Leadbeater, 2004a, 2004b; Vandenbroucke, 2003). The most known case studies privilege the direct contact with customers, rapid prototyping of services, and a sort of "designing by doing" process.

Those projects, mainly developed by practitioners have generated a line of intervention in service design that proved to be quite effective in several cases, but has hardly been *codified* in any methodological framework. Yet the complexity of such cases is big enough to require a range of different skills, from ethnographic skills to technical knowledge and some methodological question inevitably raise: how can knowledge from other disciplines be integrated in this approach (e.g. can ethnographic or sociologic methods be slavishly imported, or they need a *designerly* adaptation to the tasks at hand?);

The gap

A comparison of the two approaches mentioned above clearly reveals a double asymmetry: the first approach focuses on processes, thus emphasizing the relevance of a proper organization of the back office, but it appears weaker when facing the need to *break* the line of visibility and introducing customers into the production process. The second approach, on the contrary, focuses on the logical space in front of the line of visibility, thus emphasizing user experience and participation, but the lack of a methodological framework reduces those cases to a taxonomy of *craftsmanship* cases.

In order to bridge the gap between the two asymmetric approaches a new *operative paradigm* needs to be developed, which links the practice of service design to a solid methodological approach provided by existing studies. According to Arbnor and Bjerke (Arbnor & Bjerke, 1997) an operative paradigm is developed by incorporating, develop and possibly modifying some previously existing techniques in order to adapt them to a specific study area. In other words an operative paradigm is a sort of methodological toolbox for operating in a specific study area, given a specific methodological approach.

When talking about service design, and more remarkably when dealing with an approach that privileges users' activation and participation, an operative paradigm should include methods and tools that allow the development team to:

» **accurately study the social and human components of the service**, services are social constructions, this requires social skills to be a critical competence for service design: studies on user-driven innovation, user-centred design, participatory design,

among others, become essential for the definition of methodologies for an *operative paradigm* for service design. The rationale for the introduction of such methods in the design process is to increase the level of users' involvement beyond the traditional marketing research.

» **discover new methods for designing services**, the production of service is a complex process involving a network of heterogeneous actors, including customers. This requires design strategies to deal with such complexity and to accommodate the actors' different agendas and motivations.

» **explore new communication techniques that allow customers to be an active part of the value co-production process,** if customers and new actors are becoming an integral part of the production process, the communication among the different actors must take into account the extreme diversity in languages, cultures and competences. Here below an overview of those tools will be provided

Methods and tools to understand and involve actors

Beside the traditional marketing research, new tools are being proposed, which aim at elicit qualitative data about users, possibly through their direct involvement in the analytical phase of data elicitation and interpretation.

The tradition of ethnographic and social studies offers very good insights on how qualitative data could be collected. However the short product realisation cycles often require ethnographic methods to be adapted to increase time efficiency, i.e. the capability to provide a reasonable understanding of users, while reducing the duration of ethnographic investigations. Interaction design studies have developed several methods in this regard. *rapid ethnography* methods tend to specify research questions before entering the field work, use multiple observation techniques and use computerised and collaborative methods to interpret data. (Millen, 2000)

The same need to increase time efficiency has been seen as crucial in service design. Some studies have focused on this problem, proposing a more operative approach to user analysis. Lindsay and Rocchi, for instance, propose a simplified method to analyse users' behaviour in their own context (Lindsay & Rocchi, 2003); Gaver, Dunne and Pacenti elicited users data and personal reflection upon the design theme; Buur proposed video observation of users' behaviour (Buur & Soendergaard, 2000), whereas recent PhD studies are investigating strategies to support direct participation in workshops in the early phases of the design process[3].

Although those methods are inspired social and ethnographic studies, their translation into the design discipline is sometimes quite distant from an orthodox application of such methods in the original disciplines. While ethnographers and sociologist aim at a deep understanding of the observed phenomenon, desigers' ultimate aim is to bring about change in a certain reality. For this reason designers need to focus on specific issues, understand operative links and identify opportunities for change. While the ultimate aim of the original disciplines is to build a *logical map* of a reality, rendering the complexity of situations and conditions, the ultimate aim of a designer is to find *grips* in this reality to handle and manage change.

[3] This is part of a PhD study being developed by Louise Møller Nielsen, at Aalborg University, the study investigate the use of basic prototypes (such as lego bricks) to stimulate the development of personal and shared meanings which should be the ground of a design process.

In order to emphasise such grips for design opportunities some studies have reconstructed customers routines or everyday life in narrative modes using timelines to emphasise relevant patterns (Morelli, 2009), other studies have been based on the direct involvement of users in the interpretation of video observation, through a *video-card* game, which supported the dialogue between users, designers and other relevant actors (Buur & Soendergaard, 2000).

New design methods

The perspective that integrate customers in the value co-production process requires that existing methods borrowed from system engineering and management be integrated with tools that consider the complexity of some emerging services. The limits of the existing management approach emerge when observing that its methods are considering users as the "receiver" of the service, thus confining them to a "passive" role.

Several service design practitioners, on the other hand, have organised design interventions on the basis of active users' participation. However the small scale of those projects represents the main limit to this approach. The need to generate larger scale projects instead, requires service design to be organised according to criteria that derive directly from the tradition of industrial production: the industrialisation of services would require designers to:

» seek economy of scale (or economy of scope),
» define the subdivision of work (roles, competences, knowledge holders and processes) and
» find forms of communication of knowledge (from blueprinting to sketching).

The methodological work developed to bridge the existing gap focuses on different scales: from the macro-scale of the definition of platforms to organise modular service architectures to the micro-scale of the analysis of the interaction and its supporting mechanisms.

The macro scale: solution platforms

At the macro scale the design of a service requires that actors, interactions, economic, material and information flows are identified. The blueprint should specify roles and rules to organise those elements, thus providing not a fixed and final outcome, but rather a *solution platform* (Manzini, Collina, & Evans, 2004) that allows for the detailed definition of several service configurations, depending on the specific interaction between the actors. Engineering designers are familiar with the concept of product platform in product design. Industrial production is often structured by platforms, which organise production systems around modular elements that support flexible configurations from which different products and families of products can be generated. While the modular elements in manufacturing systems are material products, the modules in a solution platform are formed around *knowledge holders* (i.e. service providers, local actors, or customers), whose role, competences and task is specifically defined. Solution platforms can be observed from different perspectives, thus specifying front and back office at the systemic level. (Figure 1)

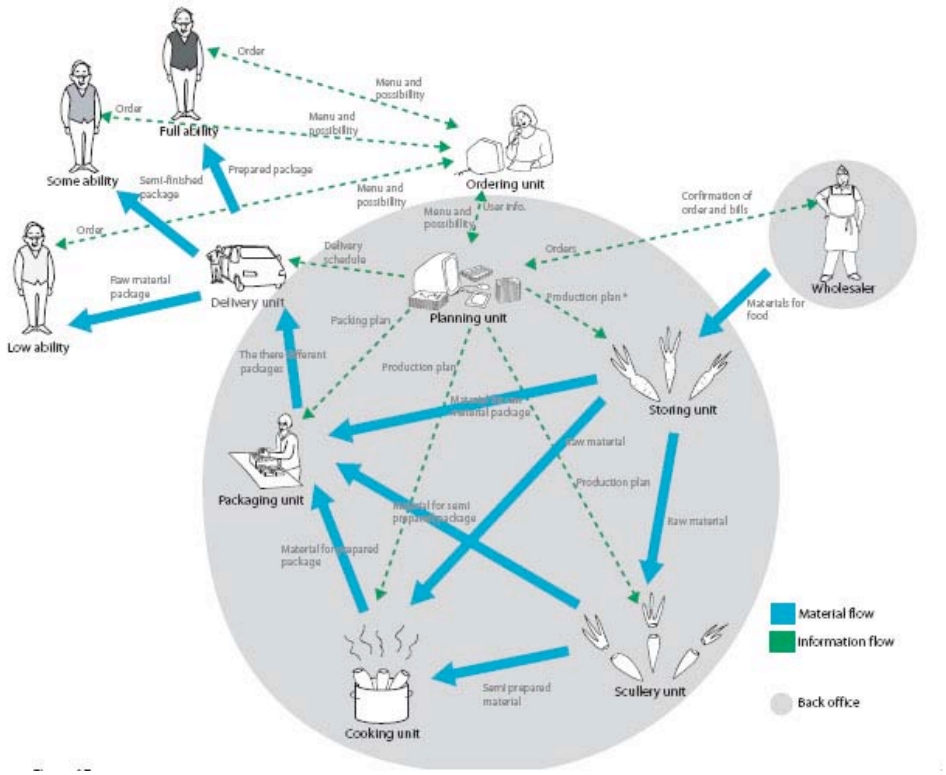


Figure 1 *Delight Assist.* A systemic view of an "open" meal service for elderly people. The shaded area represent the back office. Source (Nilsen, Ohana, Svarrer, Thomassen, & Vestergaard, 2006).

Platforms could also regulate physical, information and money flows, specifying the logical sequences of the interactions between the actors as in Figure 2.

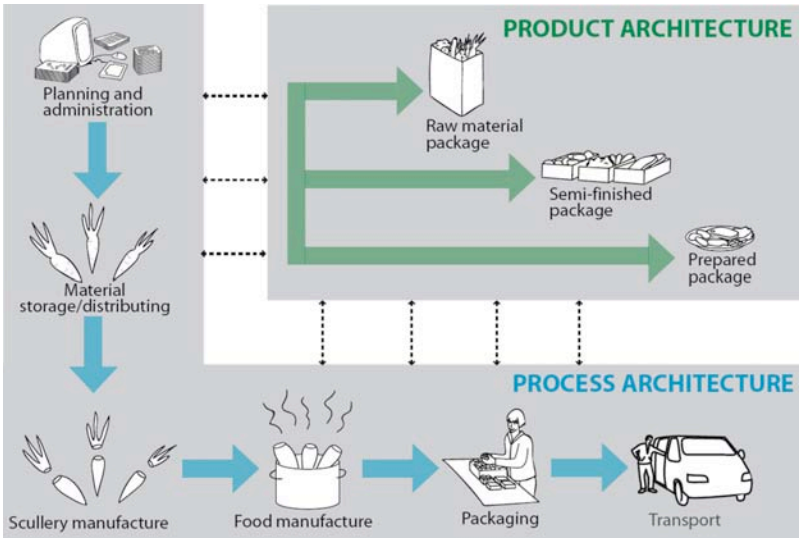


Figure 2 *Delight Assist*, information, physical and money flows.

Finally a solution platform may describe the architecture of a service system, specifying the main functional modules, as in Figure 3.

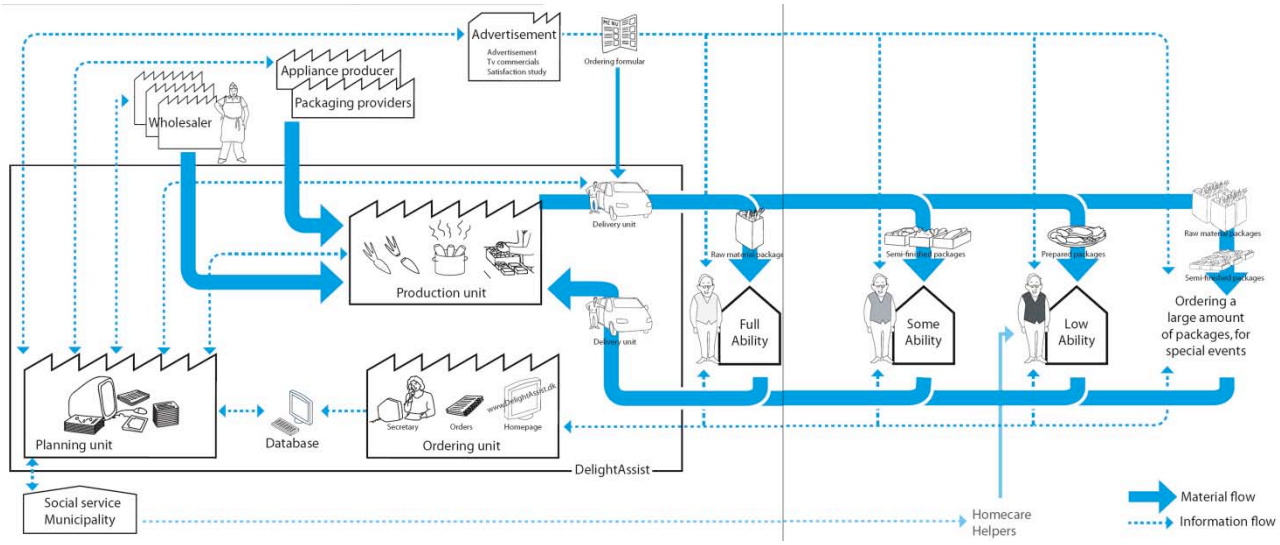


Figure 3 *Delight Assist:* the architecture of the service system

Solution platforms allow for an *open* definition of the system, which can be used as a mediation tool for local actors to negotiate their role and responsibility. Furthermore the possibility to identify specific modules (food providers, logistic companies, packaging units, meal preparation, in the case in figures 1,3,4 in the architecture of solution platforms would make the system reproducible in different local contexts, and for specific target groups, provided that the essential modules could be created by local actors. By doing this, an economy of scope[4] can be created. Furthermore such a distributed system would reduce the financial commitment of larger companies (i.e. IT providers, large service organisations) and public organisations (i.e. regional and national administrations) which are working across different local contexts. At the same time the modular architecture would allow for local actors to be directly involved in the production process. This approach would also identify and valorise local resources, create a higher sense of ownership of the service and bring about the most adequate solutions for each local context.

Because of their complexity and the high number of actors and competences involved, solution platforms require specific tools to support a negotiation process, such as the *motivation matrix* (Manzini et al., 2004), which lists the actors mutual interests and expectations from the collaboration in a local project.

The micro scale: use cases.

At the micro-level the method of use cases, used in software engineering to elicit software requirements, have been borrowed and adapted to analyse interactions in the services. While use cases in information science are only emphasising sequences of events and logical links, the same technique can be used in service design to work out a broader amount of service specification, concerning physical or virtual spaces in which the interaction is developed,

[4] While *economies of scale* focus on the *supply-side*, seeking the highest target group for a certain product, *economies of scope* work on the demand-side, thus offering the highest value (in terms of product and services) to a specific target group or individual.

physical movements and the specification of actors working in the front and back office. Use cases emphasise the correspondence between the user experience in the interaction with the service, described in timelines or in form of storyboards (front office), and the *mechanism* that allows service systems to support such interaction (Back office).

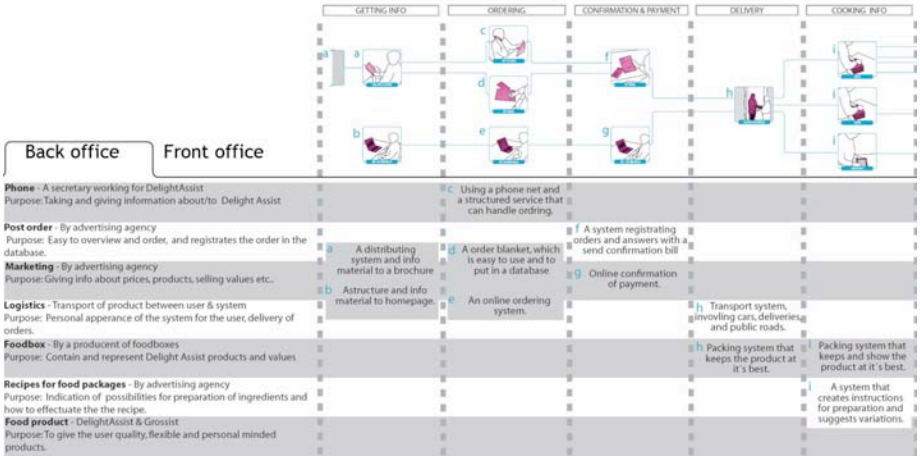


Figure 4 Use Case in service design, the storyboard in the upper part describes the interaction in the front office, the lower part of the diagram describes the working *mechanism* in the back office

New communication techniques for service design

Services do not exist before the customers come into play (Eiglier, 1977; Ramirez, 1999), therefore if the communication is not appropriate to reach and instruct customers, the service does not exist at all. An appropriate communication strategy is particularly relevant in services in which customers are actively involved in the co-production of value.

When involved in the design of co-produced services, designers have to face two kinds of challenges concerning representation and communication techniques

The first challenge concerns the representation of some core features in service processes. Although designers are very familiar with representation techniques, the design discipline's focus on product design does not provide enough valid tools to deal with features such as time and interaction.

The second challenge concerns the communication between designers and industrial companies and the actors that are actually producing the service. In the most usual form of cooperation between design and industrial companies, communication channels can use highly codified and specialised languages, that work very well among experts. When service production involves local actors and final users, instead, those languages cannot be given for granted. New representation tools are needed for designers to communicate the new systemic solutions to a broader audience of actors. The clarity of those tools is critical: likewise engineers and technical people in the production departments, all the other actors, including customers must understand what their role is in the system and what they are expected to do. At the same time, each individual actor should be able to contribute to the value creation system by proposing her/his ideas, solution strategies and tacit knowledge. If communication is not effective, there will be no final solution.

In using the design tools outlined in the previous sections designers have to find adequate representation and communication strategies to address the following questions:

Who are designers communicating with? Different actors talk different languages and use different communication techniques. For example IDEF0 may be a very effective technique to describe a service to organisation experts, but it may prove to be very hard to understand for local actors or final customers. Scenarios, scripts, storytelling techniques can be used to communicate to those actors in a service design process (Morelli & Tollestrup, 2007) .

What is the content of the communication? An overall description of the system or a detailed description of products, events and infrastructures? A prescriptive procedure or a scenario? TQM and just-in-time techniques, for instance may be the most effective communication tool for automated services or for processes in which the role of the actor is very well defined, whereas co-produced services could be better supported by use cases, because they generate realistic pictures.

What is the level of definition in the representation? The earliest concepts and the final solutions require different communication tools. Mapping techniques and motivation matrix, for instance, are very useful in the early project phase, whereas system platforms are a good organisational tool for design phases.

Finally new representation techniques are becoming more user-friendly and can be used to generate lifelike sketches of the service. Nowadays, for instance, the presence of a camera even in mobile phones and the availability of user-friendly video editing software allow designers to create video or photo-sketches and prototypes. Sketches and prototypes can be used as an integral component of scenarios or use cases, in order to integrate tacit knowledge and users' solution strategies[5]. Those techniques can be supported by commonly used media, such as computers presentations or web pages.

The development of a methodical procedure to integrate such techniques into the design discipline is still in its earliest phases (Lahlou, Jegou, & Jeune, ; Morelli & Tollestrup, 2006), but few interesting examples have already been developed in design education and research projects[6].

Conclusions

Although service design is a relatively young disciplinary area, there are several contributions to the definition of a disciplinary corpus and an operative paradigm. However the gap between management and engineering contributions, that are mainly theoretical and methodological, and contributions from design practice, that have hardly been codified in a methodological perspective emphasizes the need for a comprehensive methodological framework. The two existing perspectives present a double asymmetry: one of them focuses on back office operations, proposing methods that may not support emerging cases of services based on user's participation and value co-production. The other perspective is based on interesting and innovative insights from design practice. This perspective

[5] Some examples of using those techniques for integrating users' knowledge has been proposed in the *Ludinno* research project. The project focused on user-driven innovation. In one of the workshops video sketching was used to generate scenarios in cooperation with users. Some of the video-sketches are now available at the URL http://ludinno.wikispaces.com. (last visited 01.11.2009)

[6] Education institutions that have worked on new representation techniques for service design include, among others Politecnico di Milano (Italy), Domus Academy and Interaction design Institute (Italy) and Aalborg University (Denmark), some research projects have also discussed this techniques, such as the above mentioned HiCS , Ludinno, and the Sustainable Everyday Project (info on both project is available at http://www.sustainable-everyday.net/).

emphasises the need for design strategies that enable users' participation, but sometimes do not offer solid links with the organizational machine in the back office, that would support new forms of interaction.

This paper emphasizes the need for a new toolbox for service designers, including three categories of tools: analytical, design and representation methods and techniques. As any other young discipline, service design is still an open ground for theoretical and methodological confrontation. The toolbox proposed in this paper can be a framework to organise such confrontation.

Bibliographic references

Arbnor, I., & Bjerke, B. (1997). *Methodology for creating businesss knowledge* (2nd ed.). Thousand Oaks, Calif. ; London: Sage.

Bitner, M. J., B. H. Booms, & Tetreault, M. S. (1990). The Service Encounter: Diagnosing Favorable and Unfavorable Incidents. *Journal of Marketing, 54*, 71-84.

Buur, J., & Soendergaard, A. (2000). *Video Card Game: An augmented environment for User Centred Design discussions.* Paper presented at the Designing Augmented Reality Environments (DARE 2000), Helsingør.

Cottam, H., & Leadbeater, C. (2004a). *Health: Co-Creating Services*. London: Design Council.

Cottam, H., & Leadbeater, C. (2004b). *Open Welfare: designs on the public good*. London: British Design Council.

Czepiel, J., Solomon, M., & Surprenant, C. (Eds.). (1985). *The Service Encounter*: Lexington books.

Eiglier, P., Langeard,P. (1977). *Marketing Consumer Services: New Insights*. Cambridge, Mass. Marketing Science Institute, 1977. 128 P.

Erlhoff, M., Mager, B, Manzini, E (ed). (1997). *Dienstleinstung Braucht Design*. Berlin: Luchterhand Verlag.

Gronroos, C. (2000). *Service management and marketing: managing the moments of truth in sevice competition*. Toronto: Lexington Books.

Hollins, B. (2006). Why don't We Design Out the Wait? *Engineering Designer. The Journal of the Institution of Engineering Designers, 32*(4), 26-30.

Hollins, G., Hollins, Bill. (1993). *Total Design : Managing the design process in the service sector*. London: Pitman.

Holmild, S. (2007). *Interaction Design and Service Design: Expanding a Comparison of Design Disciplines.* Paper presented at the Nordes, Stockholm.

Kaptelinin, V., & Nardi, B. A. (2006). *Acting with Technology : Activity Theory and Interaction Design*: MIT Press.

Lahlou, S., Jegou, F., & Jeune, R. Clipscape: a Challenging Format for Multimedia Presentation. Retrieved 19.12.2007, 2007, from http://www.solutioning-design.net/li/pdf/SOL_034.pdf

Levitt, T. (1976). The Industrialization of Service. *Harvard Business Review*.

Lindsay, C., & Rocchi, S. (2003, 12-15 October 2003). *'Highly Customerised Solutions' - The Context of Use Co-Research Methodology*. Paper presented at the Innovating for Sustainability. 11th International Conference of Greening of Industry Network, San Francisco.

Manzini, E. (1993a). Il Design dei Servizi. La Progettazione del Prodotto-Servizio. *Design Management*(4), 7-12.

Manzini, E. (1993b). Lo Scenario del Prodotto-Servizio. *Area*(14), 30-37.

Manzini, E., Collina, L., & Evans, S., (Ed.). (2004). *Solution Oriented Partnership. How to Design Industrialised Sustainable Solutions*. Cranfield: Cranfield University. European Commission GROWTH Programme.

Millen, D. R. (2000). *Rapid Ethnography: Time Deepening Strategies for HCI Field Research.* Paper presented at the 3rd Conference on Designing interactive Systems: Processes, Practices, Methods, and Techniques.

Morelli, N. (2006). Developing new PSS, Methodologies and Operational Tools. *Journal of Cleaner Production, 14*(17), 1495-1501.

Morelli, N. (2009). Service as Value co-production: reframing the service design process. *Journal of Manufacturing Technology and Management, 20*(5 (Special Issue on Product Service Systems)), 568-590.

Morelli, N., & Nielsen, L. M. (2007). *Mass Customisation and Highly Individualised Solutions. Stretching Mass Customisation Beyond the Traditional Paradigm of Industrial Production.* Paper presented at the MCPC 07. The 2007 Word Conference on Mass Customisation and Personalisation, Boston, Montreal.

Morelli, N., & Tollestrup, C. (2006). *New representation techniques for designing in a systemic perspective* Paper presented at the Engineering & Product Design Education Conference.

Morelli, N., & Tollestrup, C. (2007). *New Representation Techiniques for Designing in a Systemic Perspective.* Paper presented at the Nordes 07. from www.nordes.org/upload/papers/108.pdf

Morello, A. (1991). *Design e Mercato dei Prodotti e dei Servizi*. Milano: Politecnico di Milano, Dottorato di Ricerca in Disegno Industriale.

Nilsen, S., Ohana, M. S., Svarrer, S. C., Thomassen, N. G., & Vestergaard, J. (2006). *Delight Assist. Project and process Report 7. Semester ID*. Aalborg: School of Architecture and Design, Aalborg University.

Normann, R. (1991). *Service management : strategy and leadership in service business* (3rd ed.). Chichester ; New York: Wiley.

Normann, R., & Ramirez, R. (1994). *Desiging Interactive Strategy. From Value Chain to Value Constellation* (1998 ed.). New York: John Wiley and Sons.

Pacenti, E. (1998). *La progettazione dei servizi tra qualità ambientale e qualità sociale.* Politecnico di Milano, Milano.

Parker, S., & Heapy, J. (2006). *The Journey to the Interface - How public service design can connect users to reform*: Demos.

Pine, B. J., & Gilmore, J. H. (1999). *The experience economy : work is theatre & every business a stage*. Boston, Mass.: Harvard Business School.

Ramaswamy, R. (1996). *Design and management of service processes*. Reading, Mass.: Addison-Wesley Pub. Co.

Ramirez, R. (1999). Value Co-Production: Intellectual Origins and Implications for Practice and Research. *Strategic Management Journal, 20*, 49-65.

Sangiorgi, D. (2004). *Design dei Servizi come Design dei Sistemi di Attivitá.* Politecnico di Milano, Milano.

Sangiorgi, D. (2009). *Building up a Framework for Service Design Research.* Paper presented at the 8th European Academy Of Design Conference, .

Shostack, L. G. (1982). How to Design a Service. *European Journal of Marketing, 16*(1), 49-63.

Shostack, L. G. (1983, 1984). *Service Design in the Operating Environment.* Paper presented at the Developing New Services, Villanova University, Villanova, Pa.

Shostack, L. G. (1984). Design Services that Deliver. *Harvard Business Review*(84115), 133-139.

Solomon;, M. R., Surprenant;, C., Czepiel;, J. A., & Gutman, E. G. (1985). A Role Theory Perspective on Dyadic Interactions: The Service Encounter. *Journal of Marketing, 49*(1), 99-111.

Tackara, J. (2007). *Would it be Great if...* London: Dott07.

Tapscott, D., & Williams, A. D. (2006). *Wikinomics. How Mass Collaboration Changes Everything*. London: Atlantic Books.

Vandenbroucke, F. (2003). *Promoting Active Welfare States in the European Union*. Paper presented at the Lecture at the University Of Wisconsin from http://eucenter.wisc.edu/Conferences/OMCnetOct03/VandenbrouckeLecture.htm.

Von HIppel, E. (2005). *Democratizing Innovation*. Cambridge, Massachusetts London, England: The MIT Press

Von Hippel, E. (2007). Toolkits for Collaborative User Innovation. Retrieved 09.11.09, 2009, from http://www.youtube.com/watch?v=-_SmLsvpDzs

von Hippel, E., & von Krogh, G. (2003). Open Source Software and the "Private-Collective" Innovation Model. *Organizational Science, 14*(2), 209-223.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing : integrating customer focus across the firm* (4th ed.). Boston: McGraw-Hill/Irwin.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

'Love Lewisham', improving stakeholder satisfaction in local government service: A case study of strategic public sector service innovation

Dr. Alison Prendiville,
Faculty of Design
LCC, University of the Arts London,
London SE1 6SB
a.prendiville@lcc.arts.ac.uk

Abstract

This paper will present a case study on how the London Borough of Lewisham is creating 'pull' services using technology to address specific community problems relating to the local environment by opening up new communications channels between residents, council staff and other local government stakeholders. The focus will initially centre on how the service design has been effective strategically, impacting internally on the organisational culture within Lewisham's Environment Office and, at the same time, involving residents in the service provision thus providing a feedback mechanism and voice of local residents. The paper will then explore the specific nature of 'Love Lewisham' through service marketing literature and discuss how the environment office has enhanced its relationship with the community through this service touch point.

Introduction

In Heapy and Parkers' DEMOS report 'Journey to the Interface' (2006), Sue Goss is quoted from 'The reform of public service reform, Renewal 12, no 2/3' (2005), for recognising the need to engage the public in addressing pressing social issues.

> *Many of the priorities – 'respect', an end to 'binge drinking', 'recycling', 'improved public health'- cannot be achieved by a smart government delivery machine; they require changes in the behaviour from the public. This means not simply recognising how to deliver using public or even private resources, but how to access the 'free' resources of public energy, engagement and action.*

Hothi et al (2008) also examine the role that local authorities are able to play in empowering neighbourhoods and communities through their community engagement and working

practices, with the aim that greater well-being will result for the residents. Without over simplifying what is in fact a very complicated area, the report recognises that the function of local government and public institutions becomes even more critical when influences on our well-being are out of control. In order to address this, the Local Government Act of 2000 provides local authorities with the discretionary power to do anything they consider likely to promote the economic, social and environmental well-being of their area. The purpose of the act, according to Hothi et al (2008), 'was to encourage innovation and closer joint working between local authorities and their partners to improve the communities quality of life.

Government attention now focuses on how public services can be improved by the people that use them in their design and delivery. The emphasis has shifted from the service providers to service users, with a re-evaluation of the issues that have previously driven public service provisions, such as choice and target to ones that now focus on the needs of the people that use the public services (Strategy Unit, Building on Progress: Public Service 2007). Furthermore, in order for these changes to occur, the House of Commons Public Administration Select Committees report on 'User Involvement in public services' (2007-08) recognises that for public service transformation to occur the use of information technology will play a key role.

In the NESTA report 'Transformers: How local areas innovate to address changing social needs' (2008), social innovation refers to new ideas (products, services and models) created to satisfy un-met social needs. What shape the social innovation takes is not fixed and may result in a new service, initiative organisation or, an original approach to service delivery. In the case of 'Love Lewisham', the social innovation occurs not just in terms of providing a new service initiative but also fulfils Goss' expectation of behaviour change, through public engagement and energy, to improve the local area. This paper will provide an analysis of the innovation behind the 'Love Lewisham' service and its success in engaging end empowering the local community.

The following information has been compiled from a proposal document from Lewisham Council entitled 'Love Clean Streets', IT documentation, government reports and also interviews and discussions with Lewisham's Environment Officer, Nigel Tyrell. The case study will describe the nature of the service and discuss its uniqueness in terms of public service innovation.

Love Lewisham: Public Sector Service Design Innovation

In 2004 the 'Love Lewisham' site was launched through a need to address specific community problems such as environmental crimes and to introduce the use of new technology to address this. The council recognised that the reporting process and communication channels for residents and stakeholders needed to be simplified. Prior to 'Love Lewisham' the process was one directional, whereby residents would make a call to the council's environment call centre where it would be logged. This method had a number of shortcomings, firstly it could not quantify the size of the reported incident, it was limited in not providing any feedback to the resident who had taken the time to report the incident, and there was time delay between reporting a job and the street cleaning teams remedying it.

Front Stage (what customers experience)

The 'Love Lewisham' Campaign and website are front stage of the service as they raise awareness and communicate the service process to residents. Initially, they were set up to deal with graffiti but were extended to include other environmental issues such as fly-tipping and fly-posting. The uniqueness of the technology is it offers a 'simple one-click solution, no email, no attachments' (Delivery Transformation Group 2006) for reporting environmental crimes whereby local residents can photograph incidents in the community and send it immediately to Lewisham environment staff via a mobile phone. This touch point proves the co-production of the service, as it requires the co-operation and participation of the residents. The software used is unique to 'Love Lewisham' as it provides the user with the ability to up-load 'before' and 'after' images to the web site and not just report it. To make the communication process two-way, the resident may also request feedback on their particular report. In order for this to be achievable, specialist software has been developed in parallel with the website which enables the user to record the exact location of the incident via GPS mapping services and to receive progress reports automatically. This use of technology moves what used to be a back stage process for dealing with environmental crimes to the front stage line of interaction via the website, whereby the physical evidence of the reporting and feedback creates active citizenship.

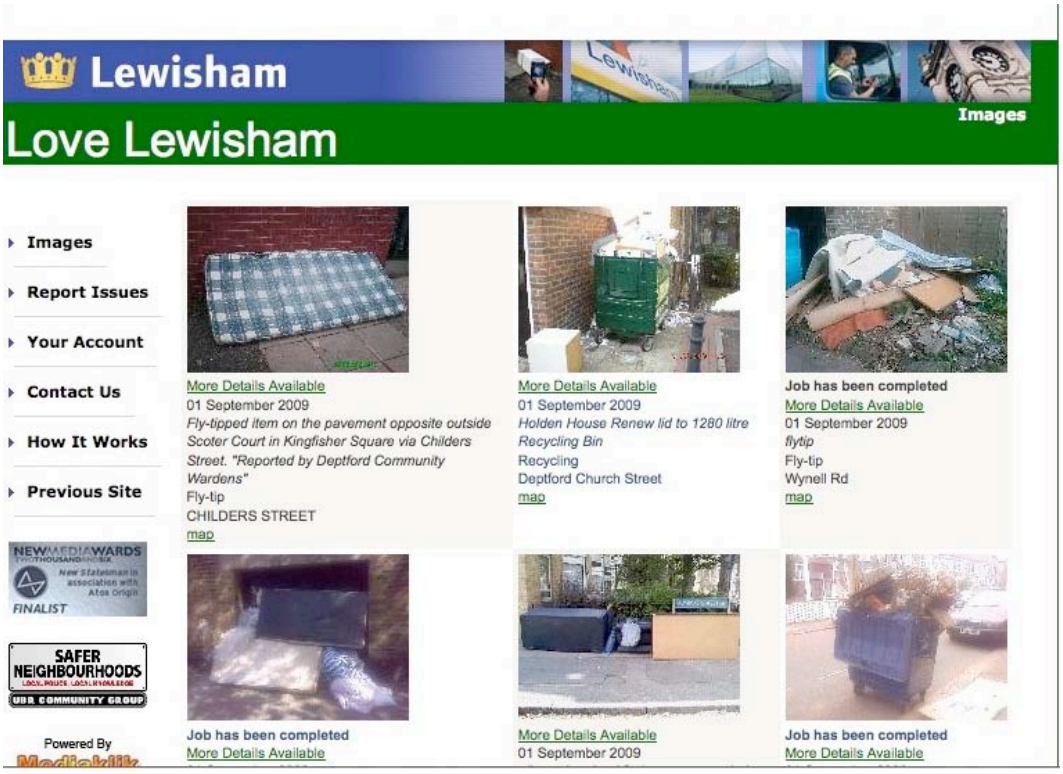


Figure 1.0 Image of the 'Love Lewisham' website and reported environmental crimes.

The 'Love Lewisham' website is also used as a blog which is in online 'word of mouth' (Lovelock, Wirtz, Chew 2009) that forms a place of social interaction for residents to leave comments and engage in discussion on issues relating to Lewisham, the environment and keeping the borough clean. This web site is about engendering civic pride, despite the early concerns that people would abuse the system, these have proved unfounded.Branding is used strategically in the service design of 'Love Lewisham'. The 'Love Lewisham' Mediaklik application for the publics' use was launched on Valentines Day in 2004. Lovelock et al

(2009) states that a successfully managed company has a recognisable brand that also has meaning for its customers. Vincent Harris (2008) write on the use of the emotional epithet 'love' on the Lewisham web site and how it galvanizes citizens to report problems and makes them aware of how they are affected by the actions of others.

Backstage (support processes and technology)

'Love Lewisham' is a scheme that uses mobile devices, smart phones and pocket PC's to send images and comment straight to a live web frot-end, for rapid action by Lewisham's environment staff. A Cam2web application, created by Lewisham's Head of Environment Nigel Tyrell, was originally intended for use by staff and local politicians. According to the Transformational Government Report (2006) the system was developed on Microsoft's Not NET Environment. Cam2web captures images and other information on a mobile device and sends them to a database for viewing and up-dating on standard web enabled PC's or other wired devices. The report explains how 'Love Lewisham' was later extended for use to members of the public using MediaKlik- a software professionally developed by 'bbits' Mobility, and although similar to Cam2Web, provides access for a broad range of devices without the need for residents to download software; instead they can use MMS to send 'Love Lewisham' an image from any camera-enabled phone.

'Love Lewisham's' innovation has improved efficiencies and workflow within the council's environment office. Before the website was in place, the time delay to log a graffiti complaint and to pass it on to the cleaning team for it to be cleared, took on average three days. In addition resources were often wasted, as the size of the problem could not be accurately gauged from a telephone report. Frequently, graffiti clean-up teams would be presented with only a small offence on a lamppost. With the introduction of 'Love Lewisham', the interactive map allows members of the cleaning team to pinpoint the exact location of the graffiti and the size of the problem resulting in a single member of the team or one of the managers to remove the item, or to send a team for larger incidents. Once the job is finished

the member enters a job number and sends it in to the system, which automatically up-dates the web site. Any positive feedback from the public when they have been informed of the clean-up is also up-loaded on to the website. Council workers have greater job satisfaction when they get positive feedback from the public.

The refuse and cleaning teams are now clearly engaged in the environment department's management processes with the introduction of the 'Love Lewisham' service. The mapping and categorization plus the visual reference, enables the graffiti team to judge the size of the offence more accurately, resulting in greater efficiency within the department and service delivery. Furthermore, the refuse collection teams have also been issued with digital cameras to photograph random fly-tipping and graffiti which they can instantaneously report back, empowering them to be pro-active in their jobs; they can also visually record any actions that may impact on the service delivery for example, skips or cars blocking entrances to flats or streets. Now, when there is a break-down of service delivery, the public can be visually and accurately informed of the reasons behind any disruptions, resulting in great transparency and trust between the residents and the council.

The software used for the 'Love Lewisham' web site allows all the data that comes onto the site from the public and the employees to be recorded and stored. This visual record of incidents together with the satellite mapping allows monitoring for any trends. This has proved in-valuable when addressing vandalism in neighbourhoods.

Impact of 'Love Lewisham' on the Downham Neighbourhood

The impact of success of the Love Lewisham website can be seen within the Downham neighbourhood. Within this area, the Downham Safer Neighbourhood Team (SNT), saw graffiti as a major contributor to anti-social behaviour for residents, business owners and faith group leaders. Within the neighbourhood 27% of residents rated graffiti as the second most important issues to tackle, as it degraded their environment and created a climate of fear. The aim of the plan was to rapidly remove graffiti 'tags' within 24 hours, ideally as soon as they were noted. The use of the 'Love Lewisham' technology was seen as critical to the success of reporting, speed and accuracy of locating and removing the graffiti within the neighbourhood. Using the 'Love Lewisham' web site and the mapping technology, the cleaning process very quickly outstripped the graffiti's appearance; this discouraged taggers as well as assisting the police to re-schedule their patrols to those areas that were frequently vandalised and targeted.

The following quotes are from Lewisham street-cleaning staff and taken from council documentation on the success of the Love Lewisham site:

> *"Only three areas that were cleaned have been vandalised again"*. Downham Police Community Support Officer (PCSO).
>
> *"Sometimes a job I report is done before I get back to the yard"*. Refuse driver
>
> *"I am still using the excellent 'Love Lewisham' site, a wonderful interactive resource for generally improving the neighbourhood"*. Resident blog.

Council reports also show that local residents in Downham are more proud of their surroundings with the advantage that there is a decrease in the fear of crime that the vandalised environment created.

Service efficiencies resulting from Love Lewisham

Since the introduction of the web site a number off efficiency benefits for the council can be attributed to its introduction. The following figures have been taken from council documentation on 'Love Lewisham'.

- In the first quarter of 2003 a total of 1,140 jobs were reported to Lewisham Council, which took an average of 2.87 days to complete.
- In the first quarter of 2005 there were 2,209 jobs reported to the Council (more or less double), which took an average of 0.89 days to complete.
- In the first quarter of 2007 a total of 6,500 jobs were reported. These were dealt with in under a day and within the same budget.

According to a recent report on 'Mobile Technology and the development of public services', published by the government Delivery and Transformation Group (http//development.cabinetoffice.gov.uk/uploads/assests/www/cabinet.gov.uk/mobilemater061130.doc) Lewisham is held as an example:

> *The public get a quicker response, leading to cleaner streets. Employees have improved workflow and reduced paperwork. Council operatives have increased job satisfaction in responding to environmental issues rapidly and capturing evidence before and after use. Lewisham resident satisfaction levels for street cleaning rose from 49% in 2002, 53% in 2003 and 56% in 2004 to 60% in 2005. This 8%is above the London average.*

A DEFRA report 'Achieving improvement in street cleansing and related services' (2005) highlights the importance of the quality of the local environment and in particular the need for high levels of street cleansing; the public use this evidence as a means to gauge how well an area is being managed and its attractiveness as a place to live, work, visit or bring up a family. The report further explores the need for efficiencies with improved service delivery and quotes the elected mayor of Lewisham in 2005 Steve Bullock.

> *It is not just how much is spent on local environments management, but how well it is spent. The public have every right to expect that we spent their money efficiently and we make sure that services are excellent civic leaders.*

Love Lewisham: A Service Design Analysis

Prior to the arrival of the 'Love Lewisham' service the presence of tangible clues of the local environmental services and their delivery were minimal; the customer interactions limited and the communication channels weak; its intangibility, both physically and mentally, resulted in a lack of ownership over the service for the local residents.

In the last eighteen years, key authors on service marketing such as Lovelock, Vandermerwe, Booms and Bitner have all addressed the unique nature of services and the need to recognise and co-ordinate different element of the service experience. Services frequently depend on customer involvement in the co-production of the service, which requires the design of touchpoints and interactions to be considered from a user participatory perspective. In the case of 'Love Lewisham', the website and technology create a holistic public sector service experience by bringing the act of supplying the service, its physical evidence and its interactions and processes visibly close to the community.

Local Residents as Co-producers

The local residents' participation in 'Love Lewisham' is central to the creation and production of the service. Bitner et al (1997) identify how the degree of participation of users in a services' delivery may vary and be categorized into three broad levels: Low level participation, moderate participation and high-level participation. With a high participation level, customers work with the provider to co-produce the service (Lovelock, Wirtz 2007). 'Love Lewisham' would be categorized as high-level participation as the service cannot be created and delivered without the residents' active participation. According to the authors Lovelock and Wirtz, if the customers fail to assume their role effectively and don't engage in the key production tasks they will undermine and lower the quality of the service outcome. Love Lewisham is reliant on local people to report environmental crime visually using their own technology, be it a mobile phone or pda together with other stakeholders such as the council staff. The use of self-service technologies to achieve this level of stakeholder involvement is paramount to the success of the service delivery for Lewisham. Lovelock and Wirtz state:

> *"The ultimate form of involvement in service production is for customers to undertake a specific activity themselves, using facilities, or systems provided by the service supplier. In effect, the customers' time and effort replaces that of a service employee".*

Schneider and Bowen (1995) suggests that customers be viewed and treated as partial employees and this change in mindset alters the service encounter. They suggest that customers who are offered an opportunity to participate at an active level are more likely to

be satisfied; according to the authors, customers like to be offered a choice even if they choose not to participate in the service.

In order to motivate customers to become co-producers, participants need to be reassured that they will be rewarded for performing (Lovelock and Wirtz 2007). 'Love Lewisham' provides essential feedback for the reporting efforts of the local residents through notification, acknowledgement and providing information on the clean-up. The improved response time for dealing with environmental crime and the knock-on effect this has on the local communities perceptions of safety and quality of environment all contribute to local residents sense of ownership and motivation in the service delivery.

Figure 2.0 diagrammatically shows how 'Love Lewisham' has shaped service design from an anonymous, partially invisible service experience to one that actively engaged the residents and results in greater levels of community satisfaction. The use of technology ties and creates a tangible touchpoint for the community, creating a coherent public sector service.

Mental intangibility defined by Lovelock, Wirtz and Chew (2009) is described as a customer's difficulty in visualizing the experience in advance of purchase and to understand what will be delivered. Although referring to private sector consumer services, mental intangibility also exists with public sector services. To reduce the perceived risk for customer the authors recommend that the service provider documents performance, provides information on what to expect, and what was done and why.

Mental intangibility is reduced with 'Love Lewisham' through its very public presence and the collective responsibility of the community and their involvement in reporting graffiti and fly-tipping. The frustration with lack of know-how over process and the common feeling that can often arise with public sector services of disengagement 'that no-one will listen' or 'no-one will act on my report' are overcome in the up-loading, acknowledgement and the rapid notification processes that inform the reporter of the clean-up. For the cleaning teams the positive feedback from individuals acknowledges their efforts and makes the process more rewarding and transparent.

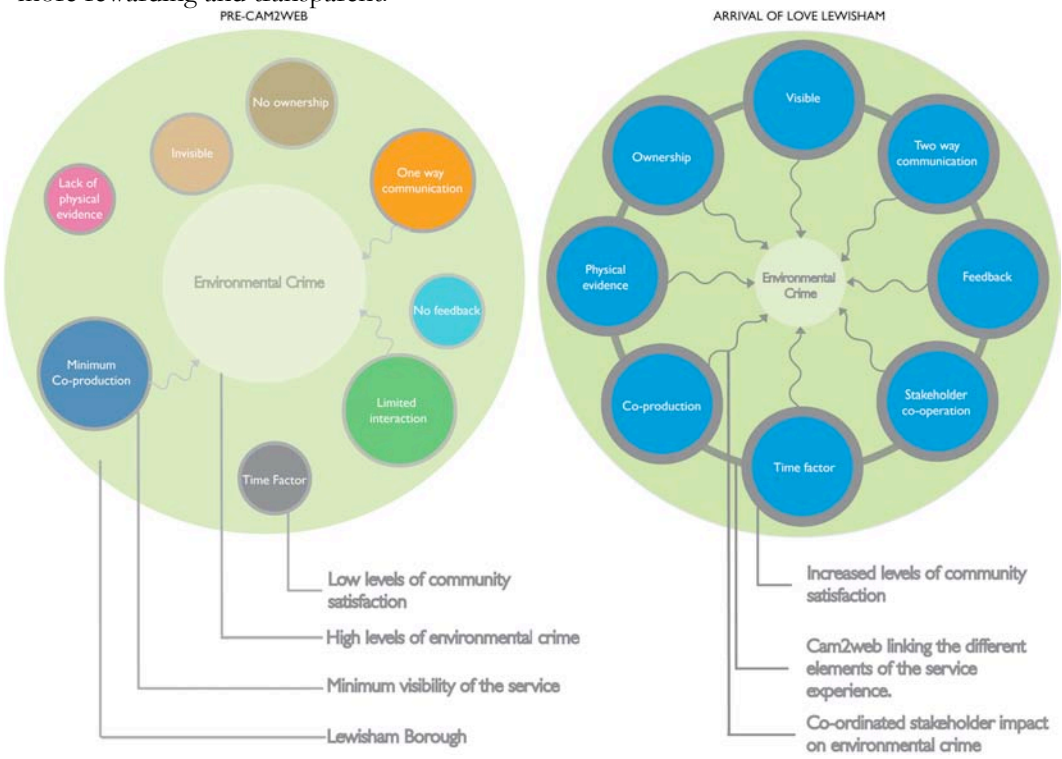


Figure 2: Shows how 'Love Lewisham' has shaped the service design

According to Thaler (2008) the best way to help humans to improve their performance is to provide feedback, 'well-designed systems tell people when they are doing well and when they are making mistakes'. In the case of 'Love Lewisham' the web site provides feedback not just on the progress of the street-cleaning teams' work but also through the efforts of the community in reporting environmental crimes.

Social Capital and 'Love Lewisham'.

According to Harvard Professor Robert Putnam (2000) social capital is:

> *"…….networks, norms and trust that enable participants to act more effectively to purse shared objectives."*

These shared objectives and activities may be broad in purpose for example, a sports club or community centre, however, they have in common an ability to create social networks. In the report Neighbourliness+ Empowerment=Wellbeing, Hothi et al (2008) refer to our sense of belonging relating 'to how much we feel as though we are part of a group or community.' 'Love Lewisham' empowers local residents to take a collective responsibility for their local community. The website, providing a catalogue of all environmental incidents and their status, allows people to view the efforts of all the stakeholders in working towards a cleaner and safer community and results in a stronger local identity that is essential for increasing social capital.

Conclusion

The innovative use of technology for reporting fly-tipping and graffiti, once treated as an invisible complaints process to the council's Environment Office, is now an community effort which has empowered the local citizens to take ownership of their environment with the result of higher levels of satisfaction amongst residents for their local public sector environmental services. The use of Cam2web technology in 'Love Lewisham' has allowed the frequently disparate and often invisible elements of a public sector service to become a visible touchpoint for Lewisham, where all stakeholders' contributions are recorded and acknowledged in dealing with environmental crimes.

The 'Love Lewisham' site and process provides a key co-produced touch point whereby the local resident take responsibility for their own community via the use of mobile technology. The website provides a tangible communication touch point for residents who are able to see galleried, their efforts for reporting fly-tipping. Furthermore, the acknowledgement and quick response time in dealing with the offence by the council clean-up teams creates a much appreciated but frequently overlooked communication feedback mechanism for the residents; internally this has also resulted in more effectives management of resources for Lewisham.

'Love Lewisham' provides a case study on social innovation from a number of perspectives; it was started locally, encourages all stakeholders to co-produce the service, it provides a touchpoint that creates a coherent service experience with feedback and it has driven efficiencies internally within the department and reduced the levels of vandalism within the borough.

References

Parker S., Heapy, J. (2006). The Journey to the Interface: How public service design can connect users to reform. DEMOS.

Goss, Sue., (2005). The reform of public services reform, Renewal 12, no. 2/3.

Hothi, M., Bacon, N., Brophy, M., Mulgan, G., (2008). Neighbourliness & Empowerment=Wellbeing. Is there a formula for happy communities?

Building on Progress: The Role of State. Prime Minister's Strategy Unit, Cabinet Office, Government Policy Review. (2007).

User Involvement in Public Services. Sixth Report of Session 2007-08. House of Commons Public Administration Select Committee.

NESTA. (2008) Transformers: How local areas innovate to address changing social needs.

Delivery and Transformation Group. (2006). Using the mobile telephone to develop public services effectively. Cabinet Office, Transformational Government.

Lovelock, J., Wirtz, J., Chew, P. (2009). Essentials of Services Marketing. Prentice Hall.

Bitner, Mary Jo., Faranda, William, T., Hubbert Amy R., Zeithamal, Valerie A., (1997). Customer Contributions and Role in Service Delivery. International Journal of Service Industry Management, 8, no 3: 193-205.

Lovelock, J., Wirtz, J., (2007). Services Marketing: People, Technology, Strategy. Sixth Edition, Pearson International Edition.

Vincent, J., Harris, J., (2008). Effective use of mobile communications in e-government. How do we reach the tipping point. Communication and Society. 1468-4462. Volume II, issue 3.

Thaler, Richard H, Cass., R, Sustein (2008), Nudge. Improving decisions about health wealth and happiness. Yale.

Putnam, R., (2008). Bowling Along. New York: Simon and Schuster.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Communicating through Visualizations: Service Designers on Visualizing User Research

Fabian Segelström

Department of Computer and Information Science, Linköpings Universitet, 581 83 Linköping, Sweden

fabse@ida.liu.se

http://www.ida.liu.se/~fabse/

Summary

Visualizations are commonly seen as one of the distinguishing features of service design, yet little research has been done on the topic. Building on questions raised by recent research (Segelström & Holmlid, 2009) this paper analyses the results from 14 interviews with practicing service designers. The interviews focus on user research. The analysis is aimed at answering why service designers visualize their material. It is found that the various visualization tools all serve the purpose of communicating user data to different recipients. Additionally the results points towards that there is a set of basic techniques, such as customer journeys and personas, which are almost universally used, as well as a long tail of techniques only used by a few companies. Finally, it is found that service designers to a large extent let the nature of the user data decide the form of visualisation together with the intended audience of the visualization.

Introduction

When talking or listening to service designers one quickly notices the importance various visualizations are given by the practicing community. Still, there has been little academic interest in how visualizations are used within service design this far. This paper reports on an interview study, aimed at exploring service designers' attitudes towards user research. The focus of the analysis was how and why visualization techniques are used, building on recent research (Segelström & Holmlid, 2009).

Background

Although various visualization methods used by service designers, such as service blueprints (Shostack, 1982; 1984; Kingman-Brundage, 1991), have been known and adapted (Mager, 1997) since the early days of service design, visualizations have received little interest by the academic service design community. In early academic writings on service design, visualizations were mentioned in passing by (Erlhoff et al, 1997), if at all (Mager, 2004).

Instead it was the practicing community which took the leading role in highlighting the use of visualizations. Case studies by service designers prominently feature visualizations of various types and for different stages of the design process, from the current situation to a preferred future. Examples include personas in 'The Diabetes agenda' (Burns & Winhall, 2006), scenarios in 'Activmobs' (Vanstone & Winhall, 2006) and stakeholder mappings as well as future customer journeys in 'Dear architect' (Engine, 2007). The extensive use of visualizations has also transcended into projects in product-service systems, such as 'Transitioning Stigma' (Radarstation, 2008). As a final example, 8 out of the 21 research methods mentioned on Engine's website are visualization techniques (Engine, n.d.).

The community writing about service design has somewhat responded to this, and recent texts often include references to the widespread use of visualizations within service design (Mager, 2008; Mager & Gais, 2009; Saffer, 2007; Moritz, 2005, and several authors in Miettinen & Koivisto, 2009). Holmlid (2007) draws the conclusion that service design is a highly visual design discipline. In her work on service design tools, Tassi (2009) lists a number of visualizations under the heading of "Representations". A typical formulation on visualizations can be found in Maffei et al, (2005):

> *'The main and distinctive focus of service design tools concerns the design, description and visualization of the user experience, including the potentials of different interaction modes, paths and choices (Flow Diagrams, Storyboarding, Use Cases, Customer Journey, Video Sketching, Video Prototyping, Dramaturgy, etc). Other tools try to support the representation of the complexity of service organization like Blueprint, Service ecology, Service system map, Social network mapping, etc.' (p. 6)*

However, most written ventures into visualizations within service design are still performed by practitioners, writing short chapters in books by academics, such as Samalionis (2009) and Winhall (2009) in Mager & Gais (2009), or being interviewed for books, such as the founders of live|work in Moggridge (2007). Visualizations are often mentioned as one of the main strengths of service designers in texts written to convince companies to invest in service design, such as 'Transformation Design' (Burns et al, 2006) and 'Journey to the Interface' (Parker & Heapy, 2006) – texts which are, once again, written by practitioners.

Few academics have done research on or involving visualizations in service design, among the little research which has been done, the focus has often been service blueprints, such as in Wreiner et al (2009) and Sparagen & Chan (2008). As a part of the documentation for the 'Designing for Services'-project Jennifer Whyte wrote a short section titled 'Visualization and the design of services' (Whyte, 2008). She focuses on potential future research on visualizations and how meaning is created, as well as its implications for design education. The video documentation (Kimbell, 2008) from the same project provides some insights on visualizations however, especially in the section 'Making the services tangible and visible' (starting at 4.13) in which the frequent use of visualizations is identified as one of the three characteristics which define service designers' work in comparison to other design disciplines. Lucy Kimbell (2009) later elaborated on her findings, stating that one of the main goals behind visualizing is to make the servicesses tangible. She also noted that different companies used different techniques.

Froukje Sleeswijk Visser (2009) uses visualizations frequently in developing a framework for transferring user knowledge from researchers to designers. She developed her framework in relation to products as well as services, and uses visualizations as a tool to communicate the three aims in the knowledge transfer; enhancing empathy, providing inspiration and support engagement. She focuses her research on which mechanisms drive the knowledge transfer rather than how the tools (such as visualizations) should be formed.

However, Sleeswijk Visser (2009) does explore some issues on visualizations, in regard to the look and feel of the visualizations and its effect on the knowledge transfer. The case study ('I prefer real photos over cartoons') which deals the most with visualizations is directed towards the two aims of creating empathy and inspiration in regard to the morning rituals of families. Creating empathy with users is often held forward as one of the key goals of user research in service design (Segelström et al, 2009; Voss & Zomerdijk, 2007; Parker & Heapy, 2006). Sleeswijk Visser (2009) found that designers prefer 'real' material over sketched and that the visualization tools storylines and personas support a quick immersion, where storyboards serve as inspiration.

Segelström & Holmlid (2009) explored the uses of visualizations as tools for research for service design. The focus of the study was uses of visualization in the research stages of the design process. In Segelström & Holmlid (2009) the Analysis-Synthesis Bridge Model (Dubberly et al, 2008) is used to position the findings. Due to the focus of the study, the visualizations that interviewees in the study mention are primarily used in the design phase where research is interpreted. A categorization of the found visualization types placed in the Analysis-Synthesis Bridge Model, gave the image shown in Figure 1 (where the size of the bubble indicates the amount of interviewees who mentioned a technique of the category). The full list of methods mentioned throughout the interviews is available in the appendix of Segelström & Holmlid (2009).

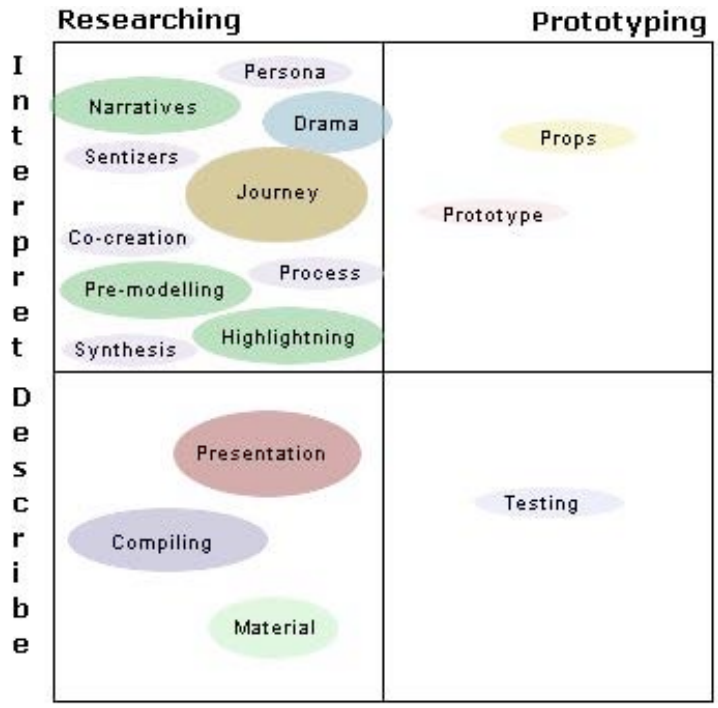


Figure 1 - Categories of visualizations found by Segelström & Holmlid (2009), when focusing on visualizations for user research. The size of the bubble indicates the number of mentioned techniques included in it.

Segelström & Holmlid (2009) point to the different characteristics of the various categories for visualizing the input from the user research; some serve to highlight the time-based nature of services (such as journeys), the co-creation of value between people (such as personas) and yet others highlight the relationship between various stakeholders (such as co-creation). Furthermore it is suggested that the nature of services lead to the frequent use of visualizations in the research stage (an opinion echoed by Kimbell (2008; 2009)). Segelström & Holmlid suggest that "the visualization techniques suggested by the designers are not used as simple tools to map and describe what is, but rather serve the purpose of interpretation and understanding" (2009, p. 6). For future research, studies into the underlying goals of the visualizations are suggested.

Method

The data used in Segelström & Holmlid (2009) was re-analysed, focusing on the reasoning service designers provide regarding to why they visualize and on which grounds they build their visualizations. The method section is divided into two parts; the first one describes the data collection whereas the second one describes the analysis which was performed.

Data collection

The data used for this study has been collected by interviewing practicing service designers. All agree that they are doing service design, although a few prefer other professional titles such as "user experience designer". A total of 14 interviews were conducted. Ten interviews were face-to-face and four were performed over telephone/Skype. 13 of the interviews were conducted by the author and one by a second interviewer. Most of the interviews were conducted with a single interviewee, but in four interviews two persons were interviewed.

The interviews were conducted between October 2008 and January 2009, with a majority done during the Service Design Network conference week in Amsterdam in late November 2008. The primary workplaces of the interviewees were in seven different countries at the time of the interviews.

The companies in which the interviewees worked ranged from world-leading to newly started companies; from large design firms to small service design firms; from commercial and public to social innovation firms; some were multi-national and others were national. All interviewees but one worked as consultants.

The overall focus of the interviews was to collect data about service designers' attitudes and opinions towards the user research phase of the design process. The interviews were semi-structured and focused on four main themes, with each theme consisting of a number of related questions. Notes were taken during the interviews and 13 of the interviews were recorded. The interviews lasted for a total of 13h:42 min, with a median of 55 min:56 sec.

The data used as a basis for this paper concerns what the designers say about methods and techniques for visualizations. This information was gathered primarily from questions regarding visualization, but also from their comments on ways of visualising the data in answers to other questions. The more explicit questions were:

- How do you present the results of your data collection? Internally as well as externally?
- Do you visualize the data you have collected? How?
- Do you choose type of visualization depending on the data you have collected or do you look for certain types of data to be able to fit it in to a preferred way of visualizing?

Data analysis

The collected material was analysed to try to find answers to the research questions suggested as future research in Segelström & Holmlid (2009). The questions for the analysis were articulated as follows:

1. For which reasons are visualizations used in service design?
2. Which factors influence the choice of visualization type?
3. Are there any patterns in choices of visualization type based on the underlying reason for visualizing?

The first two research questions were answered through analyzing and mapping the reasoning by the interviewees in regard to aspects of all three questions. The third research question was answered by comparing the results from Segelström & Holmlid (2009) with the findings from the first two questions.

Results

The results from the research are presented below, in connection to the research questions which helped answer them.

Motivations for visualizations in service design

To find the main reasons for professional service designers to use visualizations, the reasons stated throughout the interviews were analyzed and placed in groups depending on their line of argument. A total of 20 different lines of arguments were found in the interview material. Figure 2 below list these arguments, sorted in three categories of reasoning.

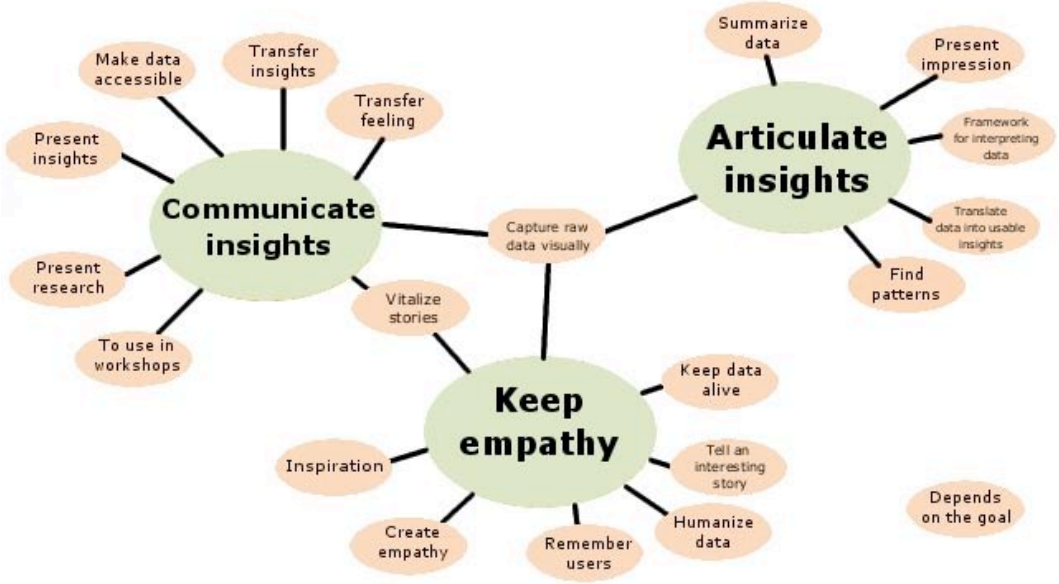


Figure 2 - List of arguments for using visualizations sorted in categories according to type of reasoning. A tabulation of the results is available in Appendix 1.

As the figure shows, three main reasons emerged from the data: to help the service designers formulate insights from the user material collected, to communicate these insights to their clients and as a way of keeping the data 'alive'. Out of the 20 reasons to visualize, 17 could be mapped directly to one group; two were connected to more than one group. These two were 'Vitalize stories', which relates to both keeping empathy and communicating insights and 'Capture raw data visually' which relates to all three groups. The final argument can be seen as a summarization of the other 19: 'It depends on the goal'.

Influences on the choice of visualization type

When it comes to what influences the choice of visualization type, the interviewees give two main reasons; the nature of the data collected and the goal of the visualization. The goals vary in various ways as can be seen in Figure 2 above. The two reasons may be broken down even further as the communication of insights might be to the client organization just as well as to participants in co-creation workshops. Interviewees also stress the difference in nature of the visualization in regard to whether they are meant to be viewed by external persons or to facilitate the process within the design team. Visualizations directed towards external persons are usually made simpler and more aesthetically appealing, than internal visualizations which are often left complex and crude in their style – it may be as simple as a wall of post-its.

The nature of the data influences in multiple ways as well – different projects leads to different ways of collecting user input. Some projects may support recording of video material, whereas others not – something which naturally has a major impact on how the data later is visualized. The other way is related to the content, rather than the shape, of the data. When improving on an existing service, making a service blueprint of the current situation might help understanding the context as well as identifying design opportunities, whereas creating a new service requires other approaches, such as future scenarios.

Patterns in choice of visualization type

When investigating the visualization techniques used, it was found that the interviewees universally claimed to let the data and the goal of the visualization influence how user input was visualized, rather than falling back on preferred way of doing things.

However, a look back at the tabulation of visualization techniques listed in Segelström & Holmlid (2009), gives the impression of there being a basic set of visualization techniques for service designers. A renewed and expanded look at the categories of techniques further strengthens this impression.

If the number of companies who mentioned a techniques within a category is added one can see that there seems to exist a few basic techniques which most companies use, such as customer journeys and personas. Additionally a long tail of types of visualizations which are only used by a small number of companies exists.

An adaptation of the appendix from Segelström & Holmlid (2009), with the tools used for prototyping removed, is presented in Table 1 below. The table is also extended by information on the number of companies who mentioned a technique within each category.

Category	Total	Comp.	Category	Total	Comp.	Category	Total	Comp.
Journeys	17	11	Highlighting	5	5	Co-creation	2	2
Narratives	12	8	Compiling	4	3	Pre-modelling	2	2
Personas	10	9	Synthesis	4	3	Sensitizing	2	2
Media	10	6	Drama	3	3	Process	2	2
Presentation	6	4	Material	3	2	Props	2	1

Table 1 - Visualization techniques for research interpretation, total number of times they were mentioned and the number of companies mentioning them. Adapted and expanded from Segelström & Holmlid (2009).

Discussion

The interviews conducted reveal that there are two main influences which affect the choice of how to design a visualization of service design research; intended audience of the visualization and the nature and content of the research data. That the audience of the visualization is very important for how it will look can also be noted in the fact that 'communicate insights' to clients is one of the three main reasons for creating visualizations, whereas the two other reasons are mainly direct at the design team.

Looking at which kind of visualization types are used by the service designers, one can see that there are a few types which are used by most interviewees, whereas most types are only used by a few. Journeys, narratives, personas and the use of data collected through visual and/or audio media seem to be the basic visualization techniques of service design. Visualizations outside these groups are usually developed and used by solitary firms. A key difference between the basic visualization techniques and the proprietary ones is that the basic techniques can be used to achieve more than one of the goals, for which visualizations are created whereas the proprietary usually only achieve one of these goals. Personas, for example, is a technique which can be used to achieve all three goals behind visualization and thus becomes an effective technique (in light of this it is not surprising that persona was the single most cited technique in the interviews).

If one reflects on the role the three reasons to visualize have in the design process, one sees that they have distinct places in various parts of the design process. Creating visualizations to articulate insights helps members of the design team to externalize the results of their sensemaking (see Krippendorff, 1989) of the design process, and thus creating a common ground (see Clark, 1996) on the insights from the research within the design team. This helps the team to define the design space available for the particular project at hand. In other words, the 'articulating insights'-reason for visualizing can be seen as *communication within the design team*.

Service designers also create visualizations with the aim of keeping empathy. This is a way of making sure that the user input is not forgotten throughout the design process. That knowledge collected is forgotten over time has been known for a long time, just like the fact that people tend to remember information which fits their world view better (a classic example is Bartlett's (1932 [1995]) experiment with the tale of Native American ghosts). If designers do not keep in touch with user input, there is a risk of ending up with self-centered rather than user-centered design (Pruitt & Adlin, 2006). Thus, being able to remember user

data the way it was initially understood is important so that the designs created always suit the users' needs and wishes. In other words, the 'keep empathy'-reason for visualizing can be seen as *communication with one's memory*.

As noted in regard to the influences on the choice of visualization type, there may be various different types of receivers of information outside the design team (such as clients, workshop participants and authorities). The information directed towards these different groups may also have various aims (aims which can or cannot be met in a single visualization) – creating, and showing, visualization for clients might be a way of showing progress just as well as a way of grounding the design suggestions that are made at a later stage. In other words, the 'communicate insights'-reason for visualizing can be seen as *communication with stakeholders outside the design team.*

Put together, this means that the different visualizations of user research all serve the purpose of communicating the information collected, but with different recipients. In fact, Clark (1996, p. 153) states that: "To communicate is, according to its Latin roots, 'to make common', to make known within a group of people". And that is just what visualizations do in translating user research insights into new service designs.

Implications for service design education

The findings from this paper and Segelström & Holmlid (2009) together imply suggestions for how service designers should be trained at universities around the world. It is crucial that students are thought how to translate the intangible nature of services into tangibles which can be used as a basis for discussions with colleagues, clients and the end-users of the service. Students should learn about the basic techniques, such as customer journeys and blueprinting, as well as learning how to find new solutions to visualizing a service offering when needed. The ability to communicate research findings and, in later stages, new service suggestions are necessary for a successful service design project and thus should be treated as one of the basic foundations which need to be thought to new service design students. Students also need to be thought to reflect on the nature and qualities which visualizations they create have and what they communicate to whom.

Implications for service design research & future research

This study has made the implicit knowledge about visualizations for user research which exists in the service design community explicit, and analyzed the nature and underlying motivations for visualizing user research. This gives the academic service design community a basis to build further research on visualizations on.

The results herein describe how service designers talk about using visualizations in their work. For future research, an analysis of actual visualizations from service design projects would be of much interest, to further describe how visualizations are used within service design.

The paper also highlights the need for more research on visualizations in general. Very little research has been done on specific visualization techniques from a service design perspective. The research which exists on the visualization techniques is usually done within a different domain, such as service marketing or interaction design. Studies which focus on visualizations as a part of delivering new service design suggestions, as well as comparisons to whether there are any differences in the nature of visualizations in different stages of the design process.

Conclusion

The interviews reported on in this paper all point towards the fact that visualization techniques serve as tools for communication within service design. The difference between different types of visualizations depends of the nature of the data they are based on as well as the intended recipients. Many interviewees state that visualizations directed towards external stakeholders are simplified and made with more concern to aesthetical aspects, whereas internal visualizations may be as simple as a wall full of post-its. The research also points out a group of basic visualization techniques within service design, as well as revealing that there is a long tail of different techniques used by a small amount of companies.

Overall, the paper presented here answers some of the questions raised by Segelström & Holmlid (2009). Put together the two papers give a description of how service designers use visualization techniques to make sense of user research and communicate this to the stakeholders in their design projects.

Acknowledgements

We wish to acknowledge Johan Blomkvist who performed one of the interviews. We want to thank all 17 interviewees that took their time to share their experiences. The paper has benefited from comments by Stefan Holmlid, Johan Blomkvist and Johan Åberg as well as a reviewer. The research was made possible by a research grant from VINNOVA, the SERV project, Service Design, innovation and involvement, ref no 2007-03444.

References

Bartlett, F. C. (1932 [1995]). *Remembering - A study in Experimental and Social Psychology.* USA: Cambridge University Press.

Burns, C., & Winhall, J. (2006). *The Diabetes Agenda.* London: Design Council.

Burns, C., Cottam, H., Vanstone, C., & Winhall, J. (2006). *Transformation Design.* London: Design Council.

Clark, H. C. (1996). *Using Language* (6th edition.). Cambridge: Cambridge University Press.

Dubberly, H., Evenson, S., & Robinson, R. (2008). The Analysis-Synthesis Bridge Model. *interactions* , March + April, 57-61.

Engine. (2007). *Dear Architect.* From Our New School: http://www.ournewschool.org/assets/pdf/Dear_Architect.pdf. Accessed 29/6/2009.

Engine. (n.d.). *Service Design Methods.* From Engine Service Design: http://www.enginegroup.co.uk/service_design/methods/ Accessed 23/2/2009

Erlhoff, M., Mager, B., & Manzini, E. (1997). *Dienstleistung braucht Design - Professioneller Produkt- und Markenauftritt für Serviceanbieter.* Berlin: Hermann Luchterhand Verlag GmbH.

Holmlid, S. (2007). Interaction design and service design: Expanding a comparison of design disciplines. *NorDes 2007.* Stockholm.

Kimbell, L. (2008). *What do service designers do?* From Designing for Services: http://www.sbs.ox.ac.uk/D4S/videoArchive/index.html. Accessed 1/7/09.

Kimbell, L. (2009). Insights from Service Design Practice. *8th European Academy of Design Conference*, (pp. 249-253). Aberdeen

Kingman-Brundage, J. (1991). Technology, Design and Service Quality. *International Journal of Service Industry Management , 2* (3), 47-59.

Krippendorff, K. (1989). On the Essential Contexts of Artifacts or on the Proposition that "Design Is Making Sense (of Things)". *Design Issues , 5* (2), 9-39.

Maffei, S., Mager, B., & Sangiorgi, D. (2005). Innovation through Service Design. From Research and Theory to a Network of Practice. A Users' Driven Perspective. *Joining Forces.* Helsinki.

Mager, B. (1997). Dienstleistungen als Gegenstand der Gestaltung. in M. Erlhoff, B. Mager, & E. Manzini, *Dienstleistung braucht Design - Professioneller Produkt- und Markenauftritt für Serviceanbieter* (pp. 87-102). Berlin: Hermann Luchterhand Verlag GmbH.

Mager, B. (2004). *Service design: A review.* Köln: KISD.

Mager, B. (2008). Service Design. in M. Erlhoff, & T. Marshall (Red.), *Design Dictionary: Perspectives on Design Terminology* (pp. 354-356). Basel: Birkhäuser.

Mager, B., & Gais, M. (2009). *Service Design.* Paderborn: Wilhelm Fink GmbH.

Miettinen, S., & Koivisto, M. (Eds). (2009). *Designing Services with Innovative Methods.* Keuruu, Finland: Kuopio Academy of Design.

Moggridge, B. (2007). Services. In B. Moggride, *Designing Interactions* (pp. 383-447). The MIT Press.

Moritz, S. (2005). *Service Design: Practical Access to an Evolving Field.* Cologne, Germany: Köln International School of Design.

Parker, S., & Heapy, J. (2006). *The Journey to the Interface.* London: Demos.

Pruitt, J., & Adlin, T. (2006). The Persona Lifecycle: keeping people in mind throughout product design. China: Elsevier.

Radarstation. (2008). *Transitioning Stigma.* Denmark: ReSound Concept Innovation.

Saffer, D. (2007). *Designing for Interaction: Creating Smart Applications and Clever Devices.* USA: New Riders.

Samalionis, F. (2009). Die Zukunft des Service Design. In B. Mager & M. Gais, *Service Design* (pp. 138-145). Paderborn: Wilhelm Fink GmbH.

Segelström, F., & Holmlid, S. (2009). Visualization as tools for research: Service designers on visualizations. *NorDes 2009.* Oslo.

Segelström, F., Raijmakers, B., & Holmlid, S. (2009). Thinking and Doing Ethnography in Service Design. *IASDR, Rigor and Relevance in Design.* Seoul.

Shostack, L. (1982). How to Design a Service. *European Journal of Marketing ,* 161, 49-63.

Shostack, L. (1984). Designing Services that Deliver. *Harvard Business Review , 62* (1), 133-139.

Sleeswijk Visser, F. (2009). *Bringing the Everyday Life of People into Design.* Delft: Technische Universiteit Delft.

Sparagen, S. L., & Chan, C. (2008). Service Blueprinting: When Customer Satisfaction Numbers are not enough. *International DMI Education Conference. Design Thinking: New Challenges for Designers, Managers and Organizations.* Cergy-Pointose, France.

Tassi, R. (2009). Service Design Tools | Communication methods supporting design processes: http://servicedesigntools.org/ Accessed 10/8/2009.

Vanstone, C., & Winhall, J. (2006). *Activmobs.* London: Design Council.

Voss, C., & Zomerdijk, L. (2007). Innovation in Experiential Services – An Empirical View. In DTI (Red.), *Innovation in Services* (pp. 97-134). London: DTI.

Whyte, J. (2008). Visualization and the design of services. In L. Kimbell, & V. P. Seidel (Eds.), *Designing for Services - Multidisciplinary Perspectives: Proceedings from the Exploratory Project on Designing for Services in Science and Technology-based Enterprises, Saïd Business School* (pp. 47-48). Oxford: University of Oxford.

Winhall, J. (2009). Design für öffentliche Dienstleistungen. In B. Mager & M. Gais, *Service Design* (pp. 78-86). Paderborn: Wilhelm Fink GmbH.

Wreiner, T., Mårtensson, I., Arnell, O., Gonzalez, N., Holmlid, S, & Segelström, F. (2009). Exploring Service Blueprints for Multiple Actors: A Case Study of Car Parking Services *First Nordic Conference on Service Design and Service Innovation*, Oslo.

Appendix 1

Appendix 1 consists of a tabulation of Figure 1. The reasons for visualizing user research which connect to more than one group are placeat the lower end of the table.

Table 2 - List of arguments for using visualizations sorted in categories according to type of reasoning.

Articulate insights	**Keep empathy**	**Communicate insights**
Summarize data	Inspiration	Transfer feeling
Present general impression	Create empathy	Transfer insights
Framework for interpreting data	Remember users	Make data accesible
Find patterns	Tell an interesting story	Present insights
Translate data into usable insights	Humanize data	Present research
	Keep data alive	To use in workshops
	Vitalize stories	
Capture raw data visually		
Depends on the goal		

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Conceptualising services –developing service concepts through AT-ONE

Christian Tollestrup, Associate Professor
Oesteraagade 6, 9000 Aalborg, Aalborg University, Denmark
Cht@aod.aau.dk
www.aod.aau.dk

Summary

What are service design concepts in AT-ONE and how is the workshop process supporting the generation of these concepts?

Based on the ongoing AT-ONE project this paper will outline some of the main methodological and theoretical foundation for generating concepts for services seen from a design perspective. Through the use of a combination of the Vision-based approach (Lerdahl, 2001), the systems perspective and concept definitions (Keinonen & Takala, 2006) a service design concept definition is proposed. The main methods and approach from a design perspective regarding clustering (Tassoul & Buijs, 2006) and approach towards design are summarized to describe the overall approach towards conceptualization. The AT-ONE approach regarding the support tools for moving from ideas to concepts is reviewed. In the discussion the workshop results are compared with the Service Concept definition and AT-ONE workshops possibility to support the process of generating concepts. Furthermore the challenge of divergence in both process and content sets a challenge for process of clustering towards conceptualization. Together this points towards the limitation of the workshop setting being the ability to sets out directions for further conceptualization rather than actual concepts.

Concept development

Services – a multitude of perspectives and aspects.

Services and product service systems poses a complex design "object" and can be approached with a variety of perspective focusing on different aspects of the service. A short review of some of many the aspects and approaches demonstrates the variety in level of abstraction, point of view and focus:

Focusing purely on the actions in the service, a main aspect could be service delivery and business management, where one *blueprint* the service (Schostack, 1984) and design the flow of actions and define the line of visibility – thus the front- and back office defining what the customer sees and what the support functions and actions are.

Focusing more on the tangibility of the service, the design and development of the included products can be a focus point for applying more traditional product development models. Expanding the view towards whom are involved, one could map the actors, their relations and the flow of the service and good, such as the system diagram in HiCS project (Manzini et al. 2004).

Including the user-oriented view point into the business strategy, the focus is on the alignment between the primary user needs and the primary offer of the service (Edvardsson and Olsson 1996) and subsequently aligning with the process of the company and the support systems.

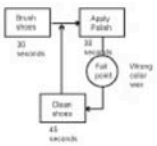
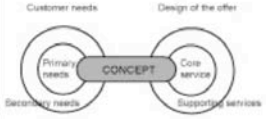
Focus	Service delivery	Products	Actor network	Offer and needs
Primary Service design aspect	Flow of actions Management point of view (p.o.v.)	Touch point - user p.ov. Functions - technical p.o.v.	Relations, flow and organisation. Management p.o.v.	User needs and primary offer of service. User p.o.v. & Business p.o.v.
Method/Model	Blueprinting 	Product development 	System diagram 	New service development 
Reference	Schostack	Ulrich & Eppinger 1995: "Process and Methods" Broe et al. 2003: "Car service"	Manzini et al. 2004	Edvardsson and Olsson 1996

Figure A. Examples of approaches towards designing services, from service delivery, to products, to mapping the system and aligning needs and offer.

The AT-ONE project is by using 5 aspects and focus points of approaching the development of new services (Actors, Touch points, Offering, Needs & Experience) attempting to cover some of the main aspects of services.

Concept development – the design approach

The methodological approach to develop concepts are not necessarily related to the subject of what is developed, i.e. it may not be too relevant to distinguish between product and services on all levels of the development. Looking at the overall philosophy of approaching ideation and conceptualization of new solutions two main principles are evident:

The emotional approach – where the value and the experience of users are the focus of both divergent and convergent activities. The guideline is the vision, rather than the specifications. Examples on this approach is found in the Vision in Product (Hekkert 1997) and Staging for creative collaboration (Lerdahl 2001).

The rational approach – where a systematic development focus on the functionality and structure as a guide for divergent and convergent activities. Specifications are in focus for a systematic combination, such as morphological development, where the object is broken down into part functions and structure for development. The most common representative for this approach is the "Product Design" by Ulrich & Eppinger (1995).

Neither of these approaches are purely ascetic and does involve the other aspect to some extent. And a design approach needs to build a bridge between the two in order to design a holistic concept, where emotional and rational arguments are aligned and integrated into the concept. However concepts can be defined and used on many different levels of abstraction and used for a multitude of purposes as unfolded by Keinonen and Takala (2006); concept design for product development, innovation, shared vision, competence and expectation management.

There are some common features of concepts when one combine an abstraction level view, a system view and a context oriented view. In Lerhdals Vision pyramid (Lerdahl 2001) which is a further development of the Vision in Product approach (Hekkert 1997), the conceptual description is on a principal level, above material, but below the emotional aspects. However they are strongly connected (Tollestrup 2004) and the intended "role" and behavior" of a product can be linked to its functions and principles for their implementation. These principles can be seen as rules for characteristics or behavior of a product or service, which in itself can be seen as a Product Service System (Morelli 2003). Looking at this from a system approach, it is defined by its purpose, behavior or characteristics and it comprises of elements with internal relations and will always contain a view point (Andreasen 1980, Churchman 1968). In other words, a concept description will include the elements (not in detail) and their internal relations (structure), the purpose of the concept and an inherent view point.

Combining this with the context view the focus will first of all be the user point of view, users being the main objective for the design (Krippendorf 2006) and creation of value, and therefore also will be the means of evaluation for other stakeholders, such as the client/manufacturer. Regardless of the purpose for developing the concept Keinonen and Takala (2006) points towards 4 defining characteristics in a concept; Anticipatory (pointing toward the future), Well-founded (linked to user-needs and technology available), Focused (concentrating on main characteristics that differs the concept from others) and Understandable (to all stakeholders and usually using 3D, sketches, story boards, metaphors, etc.) and possibly summarizing this in a descriptive name for the concept.

A service concept based on these aspect can thus be defined as a coherent strong idea for a future desired state that contains:

» A focused value statement – linked to strategies and users
» Clear main principles – for functions, structure and actions
» Clear main characteristics – for actors, offers and products
»

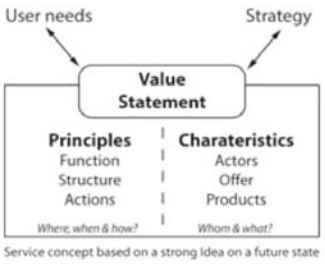


Figure B. A service design concept embracing the aspects of where, when and how by defining main principles and whom and what, by defining main characteristics.

All together expressed in a colloquial way using e.g. scenarios , service journeys, sketches, models, etc. to illustrate the above points.

The strong sense of direction for development allow for unfolding ideas and details following the same overall intention and value that is represented in the concept.

Clustering as main tool for generating concepts

Generating ideas is an relatively easy task that can be supported by numerous techniques for opening the process for more divergent ideas. Many ideation phases result in a large number of ideas present at the conceptualization phase. This presents a well known challenge of convergence, narrowing down the number of ideas to continue with in the design process. The activity used in AT-ONE at this point is clustering (Tassoul & Buijs 2006), a bottom up process of letting the material "speak for itself" allowing the participants to search for patterns, similarity and familiarity without using predefined solution space or categories, but encouraging the use of metaphorical names for the clusters capturing the essence of their characteristics. Tassoul and Buijs suggest 4 different ways of clustering a set of "isolated ideas"; Object clustering, Morphological clustering, Functional clustering and Gestalt clustering. This covers the aspects from outlining the area covered by types (objects), subsystems (morphological), offers and actions (functions) and potential combinations supplementing each other (Gestalt).

It is about building a shared understanding and making sense of the material. Combined with predefined criteria, objectives, strategies and knowledge on user needs and context one can move from clusters to sorting out which ideas seems most relevant. This can be supported by reducing redundancy and creating representative ideas for a cluster before choosing relevant directions for further exploration and development.

The combination of a bottom up approach with an emphasis on characteristics is in line with the Value oriented aspect of the concept definition; "what characterizes the concept", i.e. pointing towards the significance that sets this concept apart from others.

In the process towards conceptualization to main aspects of design approach is important to stress; abductive reasoning and reflective action.

First of all as Roozenburg and Eekels (1991) argue design reasoning is abductive. It is not hypothesis testing (deductive reasoning), nor a large set of inquiry forming a basis for arguments (inductive reasoning), rather designers starts with connecting apparently unrelated facts armed with a hunch that they may be related and both the solution and hypothesis derive as a result of connecting these facts. As Pierce introduced abductive reasoning the explained the difference as "Deduction proves that something must be; Induction shows that something actually is operative, abductive mere suggest that something may be" (Pierce in Cross 2006). This abductive approach of relating seemingly unrelated aspects is inherent in the clustering approach, especially in the Gestalt version and can also be explained with the designer connecting facts or aspects that are related on a higher level of abstraction, i.e. representing the same style of interaction or relation to the end-user, and therefore are aligned with each other, such as unfolded in the Vision and Value-based methodology (Lerdahl 2001, Tollestrup 2004).

The other significant aspect of the approach is the reflective action, as introduced by Schön (1983), where the designer engages in a dialogue with the material. In a team setting this implies the dialogue must be externalized; sketches or models for materialization, the material being the current suggestion for a solution. And precisely this solution to be representation is an inherent part of the design approach as Bryan Lawson explains in "How Designers Think" (Lawson 1980): "...designers learn about the problem as a result of trying out the solution." And in this sense it is a double loop learning process (Argyris & Schön, 1978) prompting reflection through actions.

The abductive reasoning and reflective action approach sets a scene for conceptualization where the mindset for entering the process must be open to the extent that ideas are not taken for face-value but allowing for interpretation for higher level value or significance. And focus is both on trying out configuration as well as reflecting on the potential value of that particular configuration, along with possibilities for further development and change. All together a framework that is open-ended and forward looking.

AT-ONE is a cross disciplinary setting and therefore this design oriented approach must be adapted and made explicit for non-design participants. And the challenges of sketching and visualizing services (Morelli & Tollestrup 2007) must be met in a way that all participants can engage in the process. In the AT-ONE project, the main tool for materializing ideas has so far been sketches, but there are no methodological restrictions for the use of modeling, video sketching or other ways of documenting ideas. The limitation is merely practical, however favorable for participants with experience in expressing ideas through drawings. Therefore designers and design students usually are present for supporting the documentation process.

So far a number of methods and tools have been used in the AT-ONE process trying to link the ideation processes of each aspect to a later conceptualization phase.

Tools and methods in AT-ONE

Approach and process

The AT-ONE process is scalable from 2day workshop to a long term project. Applying the AT-ONE has so far been in a workshop format, either as a 2 day intense workshop or workshops for each of the 5 AT-ONE aspects successively. Following the ideation phase a workshop for conceptualisation is applied to define initial concepts that a smaller work group can develop and mature outside the workshop format. The tools and methods described here are concentrated in the conceptualisation workshop, where the shift from pure ideation towards identifying concepts occurs.

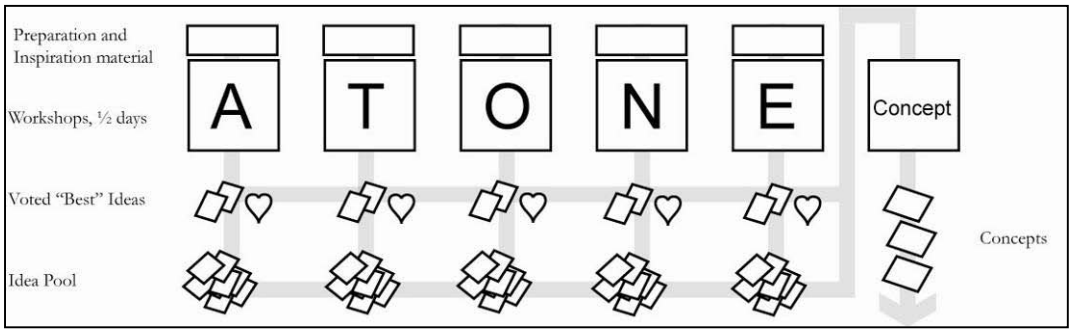


Figure C. For each workshop a number of ideas is produced and some are voted the best. However all ideas are used as a basis for the concept workshop.

Templates for ideas, insights and concepts

During the Ideation part of the process a number of ideas were produced. For ideas to later be used in conceptualisation they must be documented and for that purpose a template were used to create Idea cards. Beside the documentation objective, the templates included aspect

of relevance and significance. Furthermore Insight-templates (also as cards) has been added to capture insights and learning points during the ideation workshop, that are not directly applicable to a solution, but rather a result of a reflection of trying out solutions. This is following the reflective action approach of the method.

For the conceptualisation part of the process, a Concept-template has been used also materialised as a card, but with 5 pages. The structure for the concept template itself is inspired by the aspects within AT-ONE, thus covering Actors, Touch Points (products), Offering (the service itself and the value it produces), Needs (of users) and the Experience (service journey). Besides these aspects, the template includes self-evaluation according to main objectives of the client in relation to the assignment, Name and keywords characterising the concept. The combination of describing structure and main elements of both actors and products with user needs and service journey (storyboard) together with a descriptive Name and highlighting the key value aims at covering the aspects of a Service concept described earlier.

Rating, voting and selecting

The AT-ONE process involves several steps of rating, voting and selection of ideas. The first step is a self-rating on the Idea template, where the creator of the idea rate the idea through 5 ratio-oriented evaluations of generic character such as "value for user" and "match to Brand". This prompts the creator for reflective action and points towards different aspects of the context for the idea. Part of the evaluation of ideas throughout the ideations phases are plenum voting activities and in addition to the pre-defined categories a number of hearts (1-5) are given to the "best" ideas. This very loose definition fits the abductive nature of the process (Roozenburg & Eekels 1991) and provides participants with an instrument of expression even if they cannot put it into words or the predefined categories.

The next step of evaluation is inherent in the concept template were 3 bullet-eye frames prompts the creator(s) to identify the degree and position of the concept proposal in relation to objectives stated by the company in relation to the assignment. The introduction of the objectives at this stage aims at preparing the conceptualisation process for the defining the value for stakeholders, as well as sharpening the focus (Keinonen and Takala 2006)

Clustering and sorting processes by post-it's

Part of the initial conceptualisation is the clustering as described earlier. Some of the AT-ONE processes consist of full day workshops for each of the 5 aspects producing up till 200 ideas entering the clustering process.

In the process idea cards from all the previous workshops are placed in various piles and Post-it is used for naming clusters. As suggested by Tassoul and Buijs (2006) this process can be repeated through several runs and representative ideas put up front in order to make the ideas more accessible.

Throughout the process ideas that are to shallow in description or value can be sorted out reducing the number of ideas to manage for the team.

Building the concept

As described in the clustering process, there is a short overlap between clustering activity and conceptualisation. The best way to describe the difference is probably the level of awareness of what connects the material, in other words the ability to make the abduction explicit.

Taking a point of departure in one or two strong ideas can be a starting point for building the concept configuration, either through developing the initial idea into all 5 aspects. Or by combining the initial idea with other ideas from the pool to form an even stronger idea (much like the Gestalt clustering activity).

Either way, the team must observe that they do not take the ideas as face value, but keep the focus on what could be, as they move forward trying to define and build the essence and focus point for the concept. In this phase having the material accessible is necessary for browsing through the remaining ideas for inspiration to expand or change the concept.

The intention of using templates for the concept is to facilitate the move from loosely connecting ideas towards a clearer and more focused activity. The relation to needs and strategy is introduced to ensure the concept is proposing a useful value for the main stakeholders. At the same time the limited space is to promote focus on main elements and characteristics.

Using the AT-ONE tools and methods

The process; variety and abundance

In the following examples from 2 cases are used. One is with one of the project partners in AT-ONE, the other with design students from the School of Architecture in Oslo (AHO). In the company case the long version of AT-ONE is used and a large number of ideas are produced (Fig D). The series of workshop performed with a company through sessions of approximately ½ day each produced 144 ideas total. The variance of the output of from the different focus was relatively small; A: 23,5%, T: 18,8%, O:25,0%, N: 16,0%, E:16,7% suggesting almost even production for each aspect.

Figure D. Design Students at AHO revisiting the large pool of ideas produced during ideation workshops before commencing the clustering process.

Having produced such a large number of ideas made the clustering process slow and long, taking a large part of the conceptualization phase. In the AHO workshop 2½ day was allocated to conceptualization and about half the time went with clustering and sorting ideas.

Separation in time between generating the ideas and using them as basis for concepts means that the team must invest time in re-understanding the idea before putting it into a cluster. Even though all ideation sessions were closed with a plenum rating selecting the top5 ideas by voting with "hearts", id did not seem to make any difference in the sorting and clustering process.

Templates; time vs. depth

Part of the clustering activity is spend with understanding what the sketch and notes are about, both content wise and target wise. What is it and who is it for? Sketches created in few minutes in one setting on the background of one discussion, may prove difficult to understand later on in another setting and with a different objective.

Many idea cards contain a shallow description of the idea and with no or very little context information (see Fig.E).

Figure E. Examples on diversity level and description intensity in Ideas that shall form the basis for conceptualisation through clustering. Ranging from text based only to just a simple drawing with no contextual reference. Examples are from a company workshop and blurred for confidentiality. The first page of the 5 page template was used, the rest was more or less ignored.

Furthermore the overall assignment that aims towards a broader frame for innovation means that ideas can be in many different product and service categories and within very different aspects of ways to organize the service, major new products, minor details in existing offerings, new type of offering, roles and actions, etc. A natural consequence of opening the AT-ONE aspects in the ideation phases.

Testing the concept cards in a 3 hour workshop with one company proved that besides the time issue of revisiting the ideas, the 4 page concept cards were not filled out. The focus was mainly on the front page .

Workshops with AHO students supports this tendency of focusing on the front page and service journey, almost reducing the concept description to the level of the idea card, but with a stronger link to strategy and emotional keywords.

Strategy and emotional arguments as clustering objective

The clustering activities used in the AT-ONE can be difficult for the participants to perform, partly due to the sheer number of ideas, partly because of the above described problem of variety in abstraction, content and target.

To counter that issue in the AHO workshop a stronger emphasis on strategies was introduced to provide focal points for developing concepts. In an attempt to gestalt cluster a linking exercise was used to link strategies for the company, both stated strategies from the company itself and strategies proposed by students based on the activities in the previous workshops, with emotional arguments for users to engage with the company. Finally this should be linked to concrete principles for what the service should do, thus making a basis for a screening of the ideas identifying fits between concrete idea, principle, emotions and strategy (Fig. F). This follows the alignment logic of the Vision based model (Lerdahl 2001), but is not a bottom up clustering. When pointing towards the main principles, the ideas was to enable the students to abstract from the ideas and not use the ideas "as is" (face value) but focusing on what "could be". Furthermore the explicit way of linking is a way of promoting a joint reflective activity in the team as part of the design process of learning about the problem, in this case the potential directions and emotional argument to meet the target group.

Even though the linking attempts to reduce an intuitive task to logical reflective steps, it is still very much a matter of interpretation and depends on participants to be familiar with and capable of dealing with several things; the various level of abstraction, the ability to interpret (not to take an idea for face value) and a strong sense of value for the user and other stakeholders.

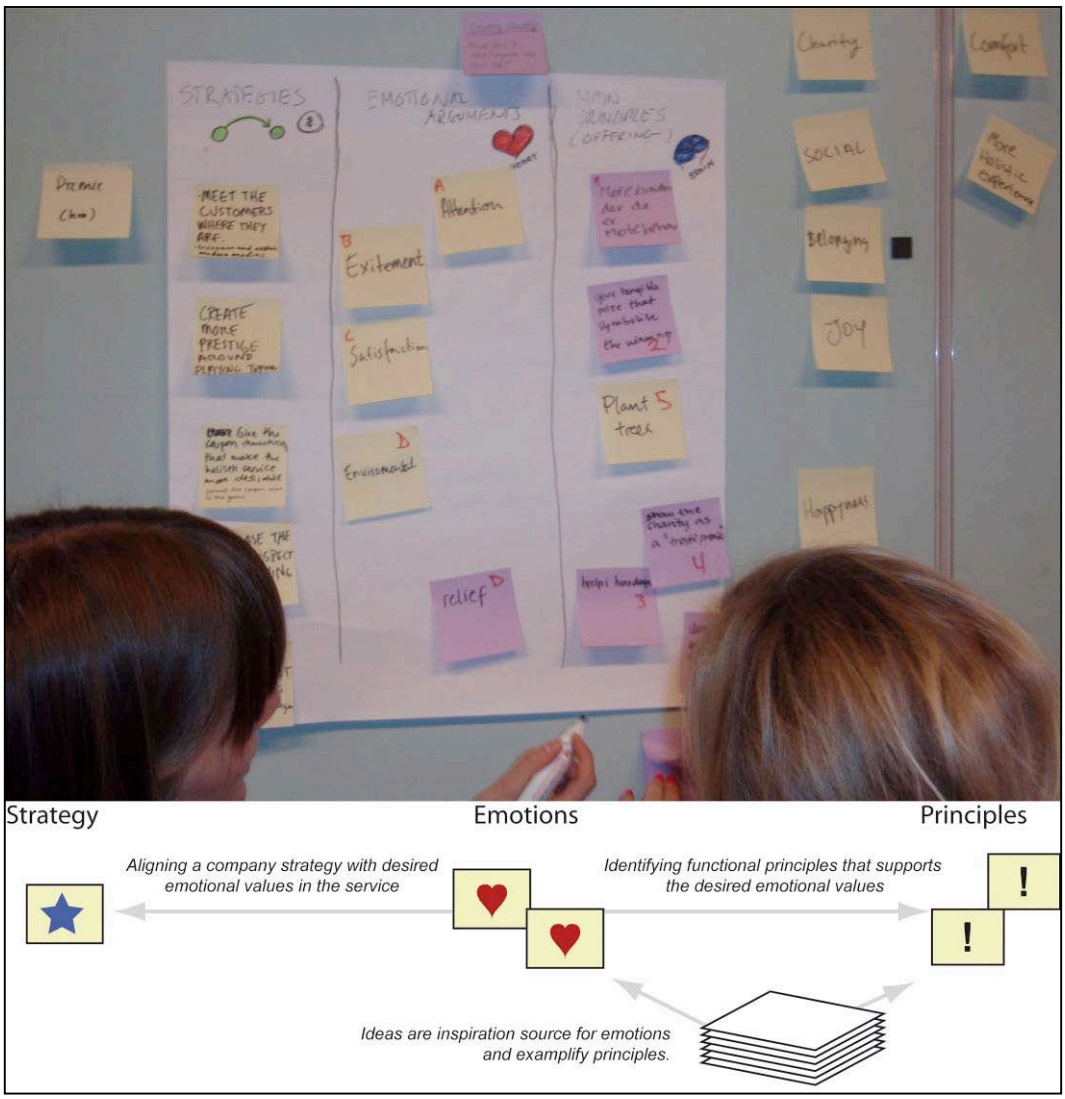


Figure F. A matrix for connecting Strategy, Emotional arguments and main principles of the service.

Building concepts in a short period of time is difficult

In the workshop settings so far the work done on concepts is limited to navigating ideas against strategies and identifying the best ideas, their key value and potential working principles. Nor the templates, free sketching or attempts to enforce a step-by-step concept development has proven successful in creating fully described concepts at the end of the sessions. Several reasons could influence this; the difficulty in creating concepts in a team setting as a plenum activity, the complexity of a service description, the in-experienced participants - either inexperienced design students or participants with no design experience.

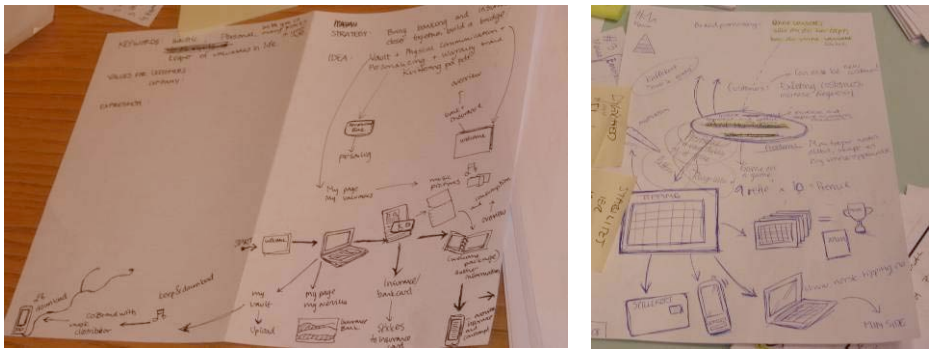


Figure G. Examples on the level of description of concepts reached in a concept workshop (from AHO, Oslo).

Also the circumstances of having a very broad and sketchy defined assignment may not provide the teams with adequate sense of "right or wrong" in the company context, finally insight into users and their values is essential for every reflective step along the process in order to establish an understanding of the potential of an idea.

The output of the workshop session on concepts are more like ideas from the Idea Cards with keywords for value and strategy added and described with a few more details, rather than actual concepts (Fig. G). They provide the initial links between strategies of the company, which make it relevant and anticipatory, to the emotions and value of the users, providing foundation, and with the main offering and key principles providing a focus.

However not reaching fully described concepts, the participating researchers, companies and students still express satisfaction with the results in terms of identifying potential concepts.

Discussion

The AT-ONE approach provides a solid basis for ideation including many of the different aspects in the describing a service, as well as providing numerous ideas as foundation for creating concepts.

Revisiting the definition of the service concepts and comparing it to the results of the workshops there seems to be a gap. A concept workshop does not produce well articulated and described concepts, rather stronger ideas that suggest a direction of development. Having defined the Service Concepts as containing a focused value statement, clear main principles for functions, structure and actions, and further describing clear main characteristics for actors, offers and products – it seems as the concepts produced in the workshops only cover some of these areas. Linking emotional arguments to strategies can be seen as a way to focus the value statement, this can be found in the Naming of the concept and the keywords used to describe it. The clear principles and characteristics are however not present in a large scale, suggesting that it takes more time, development and consideration than provided in the workshop setting. As defined earlier the abductive nature of design (Roozenburg and Eekels 1997) sets a scene for conceptualisation where the purpose (and problem) as well as the content simultaneously can be changed and reconfigured. A process that may require more time to reflection than provided in the AT-ONE workshops. Other issues such as skills and competencies may also be important factors, but since the AT-ONE approach is trans disciplinary, the setting for conceptualisation should aim to involve non-designers on an equal basis. Perhaps the step between the ideation phases and conceptualization should aim at identifying potential directions in which concept could

emerge. Thus in a less time consuming matter start the gestalt clustering activity trying to understand the focus for a possible concept, naming the "headline" for that direction. In other words trying to identify the focus and some key characteristics for a direction one could take an idea. The focus point and part of the value or key characteristics may be enough to set a basis for a later concept development, an activity not suited for a large plenum activity.

Another main challenge is aspect of divergence within ideas and as activity (free ideation) combined with separation in time and space creating a large number of very diverse ideas as a basis for the clustering process. It requires time and effort to revisit and understand the ideas in order to cluster them. The ideas may be only related to one aspect of the service, e.g. the actors or a simple product, or they may be larger, more inclusive and strategic oriented ideas. This is a challenge in the clustering process combined with the divergence in objective for the ideation and the open innovation approach setting a stage for potential change and reconfiguration on many different levels of abstraction.

Together with difficulty in moving from ideas to concepts due to the time constraints it seems that the short AT-ONE workshops are not able to generate full concepts, but can support the generation of potential directions for concept development that can be used in the later phases of the AT-ONE process where there is more time for development and detailed descriptions.

The key factors in conceptualization

Summarizing the key factors in the conceptualization in AT-ONE from a design perspective there are a tool and a process emphasis.

The tool emphasis is about tangibility for both process and content. The tools are strengthening the ability to involve and communicate with all the stakeholders, which is necessary in developing services as a complex, cross disciplinary design object. Templates can be used to ensure the main aspects of the service are included, requiring both rational and emotional key words. A visual clustering process where ideas are positioned and linked allow for an analysis and synthesis including non-rational aspects.

The process emphasis is about defining the core and strength of an idea before developing it into a concept. Linking the key offer and value statement to the primary needs as a key to evaluate the potential of the idea and concept. Without the understanding of the essence of the idea, the definition of the key principles and key characteristics seems an overwhelming task. Understanding this strength also prompts a reflection for the user needs and strategy of the client, thus preparing the idea for conceptualisation.

The key in conceptualisation lies in the link between the abstract, relevant values and the concrete coherent principles and characteristics.

Acknowledgement

The author would like to thank the partners in AT-ONE project, and Professor Simon Clatworthy from AHO, Oslo for collaboration, fruitful discussion and co-development of methods and tools.

References

Andreasen, M.M. (1980): Syntesemetoder på systemgrundlag, Lunds Tekniska Högskola.

Argyris, C. and Schön, D. (1978).Organizational Learning: a theory of action perspective, Reading, Mass., Addison-Wesley Co.

Broe et al., (2003), Transcity, Product report, 7th semester Industrial Design Program, Department of Architecture & Design, Aalborg University, Denmark

Churchman, C.W. (1968): "The Systems Approach", Delacorte Press, New York

Cross, N. (2006). Designerly Ways of Knowing. Springer-Verlag: London, UK

Edvardsson, B. and Olsson, J. (1996). Key Concepts for New Service Development. Service Industries Journal 16(2): 140-164.

Hekkert, P., (1997). Productive designing: A path to creative design solutions. Paper given at the European Academy of Design Conference, Stockholm.

Keinonen, T. and Takala, R. (2006). Product Concept Design, A review of the Conceptual Design of Products in Industry, Springer Science +Business Media, Germany.

Krippendorff, K. (2006). The semantic turn – a new foundation for design .NY: CRC Press/Taylor and Francis Group.

Lawson, B. (1980). How Designers Think - the design process demystified. Architectural Press: London, UK

Lerdahl, E. (2001), Staging for creative collaboration in design teams, Ph.D. Thesis, NTNU, Trondheim; Department of Product Design Engineering,.

Manzini, E., Collina, L. and Evans, S. (2004). Solution oriented partnerships. Cranfield, Cranfield University.

Morelli, N. (2003). Product-service systems, a perspective shift for designers: A case study: The design of a telecentre. Design Studies(24): 73-99

Morelli, N. and Tollestrup, C. (2006), New Representation Techniques For Designing In A Systemic Perspective. In proceedings from Engineering and Product Design Education conference 2006, Salzburg, Austria.

Roozenburg, N.F.M. & Eekels, J. (1991). Product design: fundamentals and methods. John Wiley & Son Ltd: London, UK

Shostack, G. L. 1982. How to Design a Service. European Journal of Marketing 16(1): 49.

Schön, D. (1983). The Reflective Practitioner, New York, Basic Books.

Tassoul, M. and Buijs, J.A. (2006). Clustering, from diverging to converging in CPS process. In MK STASIAK & J Buijs (Eds.), Transformations (pp. 111-130). Lodz: Wyzsza Szkola Humanistyczno-Ekonomiczna.

Tollestrup, C. (2004). Value- and Vision-based methodology in Integrated Design. Ph.D. Thesis, Department of Achitecture & Design, Aalborg University, Denmark.

Ulrich, K. and Eppinger, S. (1995). Product Design and Development". McGraw Hill College Div.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Exploring Overlaps and Differences in Service Dominant Logic and Design Thinking

Katarina Wetter Edman

Katarina Wetter Edman

PhD Candidate, MFA Industrial Design

Business and Design Lab

HDK/School of Business, Economics and Law

University of Gothenburg

e-mail: Katarina.w.edman@gri.gu.se

http://www.handels.gu.se/design

Abstract

Design tradition takes the user as a starting point and focuses on his or her needs, wants and expectations. Recently, within the service marketing/management area, the user has been highlighted not only as "the king", but as the only one to determine value. This new logic is termed Service Dominant Logic.

Some of the key principles underlying Service Dominant Logic (SDL) and Design Thinking (DT) are strikingly similar. Even if the two concepts stem from different backgrounds, both are deeply concerned with the creation of value and the importance of understanding the users/customers. This similarity could be a fruitful ground for further intellectual discussion concerning the development of the service concept. This paper presents the characteristics of SDL to the design community and compares SDL with the central characteristics of DT. The aim of this paper is to explore possible connections and overlaps between SDL and DT. The paper suggests the connections to be complementary, and some practical implications of the use of SDL for design thinking and service design practice are proposed.

Introduction

Everything is service! That is the bottom line of the service dominant logic paradigm that was launched by Vargo and Lusch in 2004. The underlying thought behind SDL - to reduce or even erase the distinction between products/goods and services - was not new (Normann & Ramirez, 1993). Value is determined in and by the customers' use situation and not accumulated by refining raw material in a production process. Normann and Ramirez (1993) called this the 'company's offering' and proposed that the value arises from a "value constellation" rather than accumulates in a value chain. In SDL, the service (in the singular) provided by a company/organization may, and often does, include both goods and services, which makes the distinction between material and immaterial products obsolete. The idea that the value is determined in use – value-in use – changes the business logic and enhances the importance of understanding the use situation and the user. However, SDL lacks processes for the construction and implementation of service.

The SDL perspective has strong implications for design and the position that design has within the company. Industrial design has been a victim of the value chain perspective because the holistic customer perspective is difficult to integrate into the sequential logic of the value chain. Design has often been added at the end and has thus been difficult to integrate into the management of the companies (Johansson & Woodilla, 2008). The SDL perspective that takes the customer's position throughout may seem simple at first, but the managerial implications are quite large from a provider perspective. SDL demands that more people throughout the organization are involved and understand the customer. Designers, who take the customer as their starting point and are trained in understanding and solving "wicked problems" (Buchanan, 1992), might be a valuable resource for making this transition.

Designers in a service context constantly move between the design of a service and the business model, seeing the design of the service as intertwined with the business strategy (Kimbell, 2008). Designers then need to be aware that different design decisions impact the organisational differently.

Because service design is concerned with the design of services, in practice and in research, it makes sense to compare the design discipline with SDL. In this paper, however, I have chosen to explore SDL and design thinking (DT) rather than SDL and service design. The main argument for this is that SDL includes both services and goods in the notion of service. This entails that several design disciplines are involved in the design of service, e.g. service design, interaction design and industrial design. Design thinking is what the different design disciplines have in common, i.e. the characteristics mentioned below. Therefore, I find it relevant to explore the main characteristics of DT and SDL rather than one design discipline per se.

Design thinking – how designers go about thinking and doing things (Kimbell, 2009) is on its way to becoming a hype (Rylander, 2009). Two directions can be traced in design thinking: one quite recent within the business and management field, and the other rooted in the practice and theories of design going back to the 60's. The first consists largely of the arguments about the effects of design thinking that have been observed outside the design arena. Mainly, these arguments treat design thinking as valuable for innovation and how design thinking affects management and organisations (Boland & Collopy, 2004; Brown, 2008; Buchanan, 1992; Kelley, 2001; Martin, 2004). The second direction highlights the

characteristics of diverse design practices. This includes framing/reframing on abstract level, visual skills, people-focused and iterative processes that attempt to envision possible futures (Kelley, 2001; Lawson, 2006)

Given these diverse notions of design thinking, in this paper design thinking (DT) is defined as an approach based in design practice and designerly ways of thinking (Cross, 2006; Rowe, 1987). The thoughts behind SDL and DT have similarities, the main one being the user's experience of value. The need to understand how use value is created is crucial in both DT and SDL. However, while DT stems from practice, SDL lacks practical methods and techniques, which has implications if the desired paradigm shift from goods dominant logic to service dominant logic is to happen.

Can methods from design/service design be applied here? Is the concept 'value-in-use' the same within the two? Another concept is the movement away from a traditional value chain perspective to new more complex suggestions on how value is created and by whom. How do these concepts affect the possible impact of design? Co-creation is yet another concept that is strong within both SDL and DT, but the understanding of co-creation is different within the two discourses. Of course, different disciplines and discourses develop their respective languages – which is part of the building and framing of the specific area. Due to this there is an apparent risk that they stay unconnected because the separate vocabularies risk creating distances instead of bridges.

This paper addresses the following questions:

» How is the concept of co-creation and value-in-use understood in Service Dominant Logic and Design Thinking?
» DT as well as SDL focus on the customer/user /human involvement and his/her role in the process. Are there implications for practice based on the different understandings in these traditions?
» The notion of *service* as the overall offering from the company, including both products and services as the foundation of SDL resembles Simon's (1996) broad approach to design. Are these similarities illusionary or do they rest on a common understanding?

The paper is divided into five sections: The first two trace the background and characteristics of service dominant logic and design thinking, respectively. The third section compares their key concepts, followed by reflections on this comparison. The final section discusses Service Dominant Logic and Design Thinking as complementary and implications for research and practice.

Service Dominant Logic – background and characteristics

Background

Service marketing is often considered to have started with Shostack's (Shostack, 1977) article arguing that Kotler's marketing logic with its product focus was not suitable for service companies. During the following decade the goods and services dichotomy was the academic focus (Matthing 2004) and IHIP emerged as the best known model to define and describe services (Zeithaml, Parasuraman, & Berry, 1985).

IHIP stands for **I**ntangibility – services are not tangible, therefore they cannot be judged before consumption, for example, compare a sweater with a bus trip; **H**eterogeneity – the people that take part in the service delivery process, provider and consumer, are unique at each occasion, therefore it is not possible to reproduce a service; **I**nseparability of production and consumption – services are consumed and produced at the same moment, hence the planning and development process must be different; **P**erishability – service cannot be stored or saved (ibid.).

The IHIP model is widely accepted and used. But the model has been critiqued, and the main critique concerns services being described in relation to products, which means the focus easily becomes what services are not which might block important aspects. Another critique is the fact that the IHIP model does not account for what services are in practice. Many services are a) dependent upon tangible products – sms on mobile phone, b) homogenous – internet services, c) are produced and consumed at different occasions – educational programs, d) are storable – many software. (Examples from Kristensson (2009) author's translation) From this critique, new ideas of how to describe the nature of services emerged (Matthing, 2004), where emphasises were on service as a perspective rather than a replacement of products, the role of the customer and how the value creation processes were constructed.

The consumer as the definer of the value of the proposition/offering from the company/organisation, and the offering as a whole being viewed as service(s) were both widely acknowledged (Grönroos, 2000; Gummesson, 1995), before Vargo and Lusch (2004) launched what they called "Service Dominant Logic" in the Journal of Marketing.

The central characteristics of SDL

Service Dominant Logic is aimed at solving the dichotomy between service and product with knowledge instead of products being the core, and where value is realised by consumers, not the producing company. The position that the value of a service (or product) is realized at the moment it is consumed is now established, in contrast to the traditional view that value is accumulated in a production process (Vargo & Lusch, 2004).

The development of the Foundational Premises in SDL

The foundational premises (FP) of SDL have been developed and elaborated since they were first described in 2004. In the first article on SDL by Vargo & Lusch there were 7 FP's. These were then developed to 9 and a 10th was added in 2008. Some of the foundational premises overlap and to some extent they are at different levels.

The emphasis of the foundational premises is to clarify how value is created and to stress the important role of the actors as co-creators involved in these processes. With the appearance of FP10 in 2008 there is an additional focus on the contextual nature of the creation of value in use (Vargo & Lusch, 2004). Vargo & Lusch are also moving towards a more pure "service" perspective, as seen below in Table 1 describing the development from the original foundational premises with their comments.

Table 1 Service-dominant logic foundational premise modifications and additions

FPs	Original foundational premise	Modified/new foundational premise	Comment/explanation
FP1	The application of specialized skill(s) and knowledge is the fundamental unit of exchange	**Service** is the fundamental **basis** of exchange	The application of operant resources (knowledge and skills), "service," as defined in S-D logic, is the basis for all exchange. Service is exchanged for service
FP2	Indirect exchange masks the fundamental unit of exchange	Indirect exchange masks the fundamental **basis** of exchange	Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent
FP3	Goods are a distribution mechanism for service provision	Goods are a distribution mechanism for service provision	Goods (both durable and non-durable) derive their value through use – the service they provide
FP4	Knowledge is the fundamental source of competitive advantage	**Operant resources are** the fundamental source of competitive advantage	The comparative ability to cause desired change drives competition
FP5	All economies are services economies	All economies are **service** economies	Service (singular) is only now becoming more apparent with increased specialization and outsourcing
FP6	The customer is always a co-producer	The customer is always a **co-creator** of value	Implies value creation is interactional
FP7	The enterprise can only make value propositions	The enterprise **cannot deliver value, but** only offer value propositions	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but can not create and/or deliver value independently
FP8	A service-centered view is customer oriented and relational	A service-centered view is **inherently** customer oriented and relational	Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational
FP9	Organizations exist to integrate and transform microspecialized competences into complex services that are demanded in the marketplace	**All social and economic actors are resource integrators**	Implies the context of value creation is networks of networks (resource integrators)
FP10		**Value is always uniquely and phenomenologically determined by the beneficiary**	Value is idiosyncratic, experiential, contextual, and meaning laden

Words in bold type represent changes in wording from the original FPs (Vargo and Lusch 2004a, 2006).

Table 1: Development of SDL Foundational Premises and Comment from Vargo & Lusch, Continuing the Evolution in Journal of the Academic Marketing Science (2008) 36:1-10

Design thinking – background and characteristics

Background

During recent years an increasing interest for design in the context of innovation has developed. There is currently almost a hype around the concept of Design Thinking (Johansson & Woodilla, 2009; Rylander, 2009). There seem to be different understandings of the term 'design thinking' depending on contexts. The practice-based understanding of DT

goes back to Shöön's (1983) thoughts about reflection-in-action and emphasises the tools and methods used by designers. In this context specifics for design thinking are empathy, intuition and iterative processes between the whole/the detail and practice/theory (Rosell, 1990; Rowe, 1987; Wetter, 2007). Different kinds of visual thinking and presentation skills used to describe possible future solutions are highlighted as especially important (Brown, 2008; Lawson, 2006; Rosell, 1990). Buchanan (1992; 2001) argues for four orders of design based in the designed object. In a very simplified description these are: 1) symbols, 2) things, 3) action and 4) thought. These orders roughly correspond to the disciplines graphic design, industrial design, interaction design and system design, but Buchanan explicitly points out that the disciplines should not be seen as separate, but as design thinking, and this connects very well with the foundation in SDL.

> *In fact, signs, things, actions, and thoughts are not only interconnected, they also interpenetrate and merge in contemporary design thinking with surprising consequences for innovation. (Buchanan 1992)*

The current hype is constructed from "an outside in" perspective, and describes the possibilities when design tools or methods are used by non-designers (Dunne & Martin, 2006). With its roots in Simon's definition of design presented in the "Science of the Artificial": *'Everyone designs who devises courses of action aimed at changing existing situations into preferred ones'* (1996, p. 111) DT is most often used in superficial and undefined ways '*approaching managerial problems as designers approach design problems*' (Dunne & Martin, 2006, p. 512). In effect this means taking designers ways of thinking and acting into another context. This construction is mainly highlighted in the management and business literature. (Boland & Collopy, 2004; Martin, 2004) Even if the user is in focus, the capabilities to work with wicked problems and an iterative process are pointed out as key features. The hype discourse of "design thinking" in management does not take into account the true complexity and benefits of Design Thinking. I agree with Jahnke (2009) that this notion rarely takes into account "design's more critical, subversive and visionary track record," which reduces the possible impact of design.

Comparison of key concepts and notions of SDL and DT

The aim of this comparison is to understand SDL from a design perspective so it may be used within the design discourse and so that design might align some vocabulary and processes in order to achieve greater synergy. The overlaps are intertwined on a conceptual level and circle around value, the user and co-creation. In order to make sense of these, a brief description of how they are treated in SDL and DT respectively is presented.

How value is described and understood

In SDL, value is defined by the beneficiary (see FP10) at the moment of use, which is called value-in-use. This notion of value creation is differentiated from the notion of value creation as a sequential process, value in exchange. Value in exchange, according to Vargo and Akaka (2009), is based in goods dominant logic, and the value is thus destroyed when consumed If the value is defined by the user in use, the actual physical situation of the person is of importance. This is called value-in-context and highlights the time and place dimensions and network relationships as key variables. Vargo and Akaka (2009) thus treat three different

ideas of how and where value is created, but only accepts value-in-use and value-in-context as valid concepts.

Value as a stand alone concept is rarely treated explicitly in the design literature. Design has instead focused on generating solutions that are clear, meaningful and effective for the user (Ramírez & Mannervik, 2008), which could be interpreted as valuable. Further, the temporal aspect and the importance of the physical environment are treated (Holmlid, 2007). A definition of service from a design perspective is *"Experiences that reach people through many different touch-points, and that happen over time"* (Moggridge, 2007), which emphasizes the temporal aspect and puts focus on the touch points. This definition connects well to the concept of value-in-context.

How co-creation is described and understood

In SDL value is co-created through the combined efforts of firms, employees, customers, stockholders, government agencies and other entities related to any given exchange, but is always determined by the beneficiary (user) (Vargo & Lusch, 2008). Co-creation is then considered as co-creation of value and the user is always involved in this co-creation.

The concept of co-creation is used within DT, but it is most often used to refer to the co-creation of ideas and concepts in early phases in order to understand what user needs, wants and expectations create value. This process is also often known as co-design. The process often, but not necessarily, involves users; it may as well be a co-design project with two or more designers or other stakeholders involved in the service delivery process.

How experience is described and understood

In SDL, Vargo & Lusch have deliberately chosen the word phenomenological instead of experiential when defining FP10 (Vargo & Lusch, 2008). The reason for this is that they claim that 'experience' is often understood as a "Disneyworld event" (ibid.), especially in the experience economy (Pine II & Gilmore, 1998). Instead they stress the notion of a more subtle understanding of experiences departing for the first-person point of view. This view of experience connects to the traditional designerly view on users and the methods developed to understand their needs and desires by taking as starting point the use situation. These views are expressed in the ideas of participatory design (Ehn, 1992), empathic design (Leonard & Rayport, 1997) or experience prototyping (Buchenau, 2000). Battarbee, (2004) points at the social interaction in the creation of experiences, which in SDL terms would be defined as co-creation.

Actors, systems and people

In FP 9, it is stated that all actors are resource integrators. This is further developed by Vargo and Akaka (2009) and implies that neither the firm nor the customer has adequate resources to create value either independently or interactively in isolation. These resource-integration networks are called service ecosystems. A similar vocabulary is used to name a method - *Service ecologies mapping* technique developed by British service design consultants livework, to "…*create sustainable service ecologies, where the actors involved exchange value in ways that are mutually beneficial over time*"(Moggridge, 2007, p. 412). The relational aspect is treated in the service design discourse by Holmlid (2007), and Sangiorgi uses activity theory to describe the systematic and complex nature of service design. (Sangiorgi, 2009) In addition Morelli (2009)

describes different kinds of techniques for visualizing the system, the actors and the situations.

Reflections on overlaps and differences

As mentioned earlier, the concepts and ideas in SDL and DT are intertwined. In the following reflections I attempt to sort them and describe the overlaps on three levels; 1) no overlap, 2) somewhat overlapping and 3) full overlap, as illustrated in Table 2 below. Overlaps are considered when meanings overlap, even though the vocabulary differs.

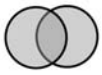
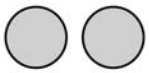
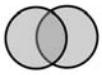
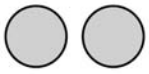
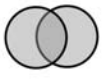
Ideas of value, experience and networks somewhat overlap

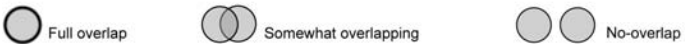
The basic idea of value-in-use overlaps, even though explicit ideas on value are not expressed, are clear in DT as in SDL. DT has traditionally focused on the user experience as such, where the notion of value is implied. The SDL concept of value-in-context is equivalent to the focus of design on touch-points and different visualization techniques developed to communicate temporal and intangible aspects. I nevertheless position them as somewhat overlapping since they treat the ideas of value in different ways.

The idea of experience as denominate of value is present in the two theories, but explored and expressed to different degrees, whereas the focus on experience as subtle and departing from the user overlaps.

The most consistent overlap is found in the understanding of networks. Both SDL and DT acknowledge complexity and treat it extensively. The common metaphor of service ecology is in SDL used for conceptual descriptions whereas designers name a specific tool used to interpret and visualize these complexities.

Table 1 Degree of overlap SDL/DT

CONCEPT	DEGREE OF OVERLAP SDL/DT	COMMENTS
Value		The concept of 'value' is not explicitly treated in the design literature, the focus is rather on if the output is perceived as meaningful by the user. As such there is an overlap in meaning but not in vocabulary
Co-creation		Used with different meanings and at different stages.
Actors & Systems		The most prominent overlap is found in the understanding of complexity and networks.
People		SDL defines customers and beneficiaries. DT defines users as humans in context.
Experience		The suttle experience is emphasized in both SDL and DT. Within DT the understanding of the experience is explored to a higern degree



Meanings of co-creation and vocabulary about people differ

SDL talks about customers, beneficiaries, actors and operant resources denoting people and their knowledge from a top down perspective. DT talks about users as human beings and customers in their context, with the starting point in the user's individual situation. Further the concept of co-creation is used within the two, but denotes different things.

Discussion and implications

Whereas SDL was formulated and "launched" by Vargo and Lusch in 2004 as a new way of understanding value creation, the understanding of what DT is has grown from descriptions of practice and accounts of success when this approach is used in managerial settings. The backgrounds of SDL and DT are different not only in regard of the discourses in which they are rooted, but also from what perspective they are articulated. This probably partly explains the lack of full overlap in the above comparison.

SDL as a conceptual framework has difficulties achieving implementation. Conversely, Design Thinking is rooted in practice and experience-based descriptions and has difficulties reaching managerial and strategic levels. With the hype of DT in the business literature in recent years some doors are being opened wider than before, resulting in the risk that some of the main characteristics of design become dispersed in the transition phase.

This overview of Service Dominant Logic and Design Thinking identifies a lack of a full overlap of terminology; however, it also shows several overlapping key characteristics. Thus it may be more fruitful to discuss their complementary nature rather than overlaps and differences.

SDL describes and prescribes; DT interprets and visualises

The main focus of SDL is to describe how value is created, where in the process, and by whom. SDL also prescribes a new logic for organisations to look at their business offerings, eliminating the distinction between the material and immaterial.

One of the main critiques of SDL is that as a mindset it provides few guidelines on concrete development and implementation of service. It has proven difficult to fully integrate this holistic view of service in service-providing companies and organisations. DT and design practice may offer tools and methods that facilitate the development of service.

Design thinking based in practice has developed methods and tools to understand the user's situations, i.e. the users experience, by posing questions on how, why and what trigger these experiences (Holmlid & Evenson, 2008; Morelli, 2009). Trying to capture the users 'true' wants, needs, attitudes and desires in early stages by, for example, probes (Mattelmäki, 2006) or different types of prototyping (Leonard-Barton, 1991). The prototyping is not used for validating, but for developing the value propositions as such, the prototyping is then a tool for evoking and stimulating the user to express the perceived value (Jones & Samalionis, 2008). The findings are visualized and interpreted by the use of diverse visualization techniques (Segelström & Holmlid, 2009).

Following this reasoning, my recommendation is that DT should acknowledge the basic foundations of SDL and attempt to align some of its vocabulary to get the ideas across.

Implications for research and practice

Taking the argument to its conclusion, the SDL model of thinking makes the distinction between tangible and intangible products obsolete. This suggests that the distinction between tangible and intangible design also may become obsolete. This idea is to some extent supported by Kimbell (2008), who notes the practice of the service designers observed is similar to that of other designers, and the designers themselves easily move between the tangibles and intangibles. Is it important to distinguish yet another design discipline? I

question the need to classify service design as does Buchanan in his keynote at the Emergence conference of 2007:

> *"I want to ask you, throughout the conference, did you find a definition of service design? [...] I didn't find much, and I'll tell you, I wasn't bothered by that. I think we're making a big mistake if we're anxious to define service design. I'm been troubled by efforts to define graphic design, to define industrial design, to define systems design even. I'm troubled by those efforts. I'm interested in design. A definition of design itself …that I like. But the definition of the sub-branches, to me is of less value. Precisely because of the cross-overs and the boundary ambiguities."*

Both researchers and practitioners have an increasing interest in understanding how the business/management perspective of service and design disciplines perspective of service are related and possibly could merge. At a recent conference Cautela, Rizzo, & Zurlo (2009) presented a paper proposing a 'service design logic', drawing on a more extended definition of service dominant logic than I draw on in this paper using exclusively Vargo & Lush's definitions. Also, the service design consultant livework has developed a framework called Service Thinking, based on experiences from years of practice, which they presented in a keynote at the NORDES conference in Oslo 2009, and on their webpage (http://www.livework.co.uk/articles/service-thinking, 2009). This framework combines the founding ideas of SDL and Service design.

My contribution to the discourse of service design is to understand how the foundational characteristics of Service Dominant Logic and Design Thinking overlap. Finding the key characteristics complementary, rather than overlapping, this paper points at a gap and shows potential for mutual development.

References

Battarbee, K., Soronen, A., & M, F. (2004). *Living in a zoo: bringing user experiences with technology to life*. Paper presented at the Proceedings of the third Nordic conference on Human-computer interaction.

Boland, R. J., & Collopy, F. (2004). *Managing as designing*. Stanford, California: Stanford University Press.

Brown, T. (2008). Design Thinking. *Harvard Business Review*(June), 1-11.

Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues, 8*(2), 5-21.

Buchanan, R. (2001). Design Research and the New Learning. *Design Issues, 17*(4), 3-23.

Buchenau, M., Fulton Suri, J. (2000). Experience prototyping. In *DIS '00: Proceedings of the 3rd conference on Designing interactive systems* (pp. 424--433). New York City, New York, United States, ACM

Cautela, Rizzo, & Zurlo. (2009). *Service design logic: An approach based on the different service categories*. Paper presented at the IASDR 2009.

Cross, N. (2006). *Designerly Ways of Knowing*. London: Springer Verlag London Ltd.

Dunne, D., & Martin, R. (2006). Design Thinking and How It Will Change Management Education: An Interview and Discussion, *Academy of Management Learning & Education* (Vol. 5, pp. 512-523): Academy of Management.

Ehn, P. (1992). Setting the Stage for Design as Action : artifacts for participatory design in theory and practice. In *Nordisk arkitekturforskning* (Vol. 1992 (5:4), s. 49-59): Nordisk arkitekturforskning Aarhus : Nordisk förening för arkitekturforskning, 1992-.

Grönroos, C. (2000). *Service Management and Marketing. A Customer Relationship Management Approach.* . Chichester: John Wiley & Sons Ltd.

Gummesson, E. (1995). Relationship Marketing: Its Role in the Service Economy. In W. I. Glynn & J. G. Barnes (Eds.), *Understanding Services Management*. New York, USA: John Wiley & Sons.

Holmlid, S. (2007). *Interaction design and service design: Expanding a comparison of design disciplines*. Paper presented at the NORDES 2007.

Holmlid, S., & Evenson, S. (2008). Bringing Service Design to Service Sciences, Management and Engineering. In *Service Science, Management and Engineering Education for the 21st Century* (pp. 341-345): Springer US.

http://www.livework.co.uk/articles/service-thinking. (2009). Service Thinking. Retrieved 2009-10-22, 2009

Jahnke, M. (2009). *Innovation through design thinking,* : Business & Design Lab, GRI.

Johansson, U., & Woodilla, J. (2008). *Towards a better paradigmatic partnership between design and management*. Paper presented at the International DMI Education Conference.

Johansson, U., & Woodilla, J. (2009). *Towards en epistemological merger of design thinking, strategy and innovation.* Paper presented at the 8th European Academy of Design Conference.

Jones, M., & Samalionis, F. (2008). From Small Ideas to Radical Service Innovation. *Design Management Review, 19*(1), 8.

Kelley, T. (2001). *The Art of Innovation: Lessons in creativity from IDEO, America's leading design firm* (first ed.). New York: Doubleday.

Kimbell, L. (2008). Service design: a 21st century interdsicipline? In L. Kimbell & V. Seidel (Eds.), *Designing for Services - Multidisciplinary Perspectives:* (pp. 53-54). Oxford: University of Oxford, Said Business School.

Kimbell, L. (2009). *Design as practice in design thinking*. Paper presented at the European Academy of Management.

Kristensson, P. (2009). *Den tjänstedominant logiken - Innebörd och implikationer för policy*. Stockholm.

Lawson, B. (2006). *How Designers Think: The design process demystified* (4th ed.). Oxford, UK: Architectural Press.

Leonard-Barton, D. (1991). Inanimate Integrators: A Block of Wood Speaks. *Design Management Journal, 2*(3), 61-67.

Leonard, D., & Rayport, J. F. (1997). Spark innovation through empathic design. *Harvard Business Review, 75*(6), 102-113.

Martin, R. (2004). The design of Business. *Rotman Magazine*.

Mattelmäki, T. (2006). *Design Probes*. University of Art and Design, Helsinki.

Matthing, J. (2004). *Customer Involvement in New Service Development*. Unpublished Ph.D. diss., Service Research Center - Karlstad University.

Moggridge, B. (2007). *Designing interactions* Cambridge, Mass.: MIT Press.

Morelli, N. (2009). Serviceas Value co-production:reframing the service design process. *Journal of Manufacturing Technology Management, 20*(5), 568-590.

Normann, R., & Ramirez, R. (1993). From Value Chain to Value Constellation: Designing Interactive Strategy. *Harvard Business Review, 71*(4), 65-77.

Pine II, J. B., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*(July-August), 97-105.

Ramírez, R., & Mannervik, U. (2008). Designing value-creating systems. In L. Kimbell & V. Seidel (Eds.), *Designing for Services - Multidisciplinary Perspectives:* (pp. 35-36). Oxford: University of Oxford, Said Business School.

Rosell, G. (1990). *Anteckningar om designprocessen*. Stockholm: Kungliga Tekniska Högskolan.

Rowe, P. G. (1987). *Design thinking*. Cambridge, Mass.: MIT Press.

Rylander, A. (2009). Bortom Hajpen - designtänkande som epistomologiskt perspektiv. *Research Design Journal, 1*(1), 20-27.

Sangiorgi, D. (2009). *Building up a framework for service design research*. Paper presented at the 8th European Academy of Design Conference.

Schön, A. D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. London: Basic Books Inc.

Segelström, F., & Holmlid, S. (2009). *Visualizations as tools for research: Service Designers on visualizations* Paper presented at the Engaging Artefacts 2009, NORDES.

Shostack, L. G. (1977). Breaking Free from Product Marketing. *Journal of Marketing, 41*(2), 73-80.

Simon, H. (1996). *The Sciences of the Artificial* (3rd ed.): MIT Press.

Vargo, & Akaka, M. (2009). Service-Dominant Logic as a Foundation for Service Science: Clarifications. *Service Science, 1*(1), 32-41.

Vargo, & Lusch. (2008). Service-dominant logic: continuing the evolution. *Journal of Academic Marketing Science, 36*(1), 1-10.

Vargo, S., & Lusch, R. (2004). Evolving to a new dominant logic of marketing. *Journal of Marketing, 68*(1), 1-17.

Wetter, K. (2007). *Industridesign i Multidisplinära team, problem & möjligheter*: Business & Design Lab.

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and Strategies in Services Marketing. *Journal of Marketing, 49*(2), 33-46.

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th–26th November 2009

Exploring Service Blueprints for Multiple Actors: A Case Study of Car Parking Services

Thomas Wreiner, Ingrid Mårtensson, Olof Arnell, Natalia Gonzalez, Stefan Holmlid, Fabian Segelström

Department of Computer and Information Science, Linköping University, 581 83 Linköping, Sweden

thomas.wreiner@gmail.com

http://www.ida.liu.se/divisions/hcs/ixs/

Summary

Service blueprints are usually included in listings of standard methods within service design. Still, little research has been conducted on service blueprints. The case study at hand explores how blueprints can be applied in a situation with three key actors, all with different motives and wishes. The case study is within the domain of car parking, a service which at a first glance may seem simple, but is rather complex when scrutinized. Three ways of blueprinting the situation are presented and discussed in the paper. Finally issues which arose from the blueprinting process are discussed in regard to implications for people creating blueprints.

Introduction

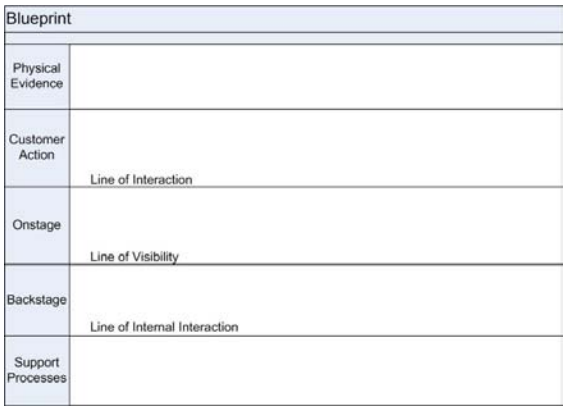
The use of various types of visualizations, such as service blueprints, is often held forward as one of the key characteristics of service design. However, little research has been done on how visualizations are used in service design (Segelström, 2009). In a joint project between Linköping University and the service design consultancy Transformator it was noted that the key service involved three main actors, which were clearly distinct from each other. As the research was visualized in form a service blueprint, it was found that it did not encompass the complexity of the situation. Explorations into new ways of including various types of data and the layout of the blueprint were made throughout the project. This paper reports on some of these variations on the blueprinting concept, highlighting the pros and cons with the various alternatives.

Background

Blueprinting was introduced as a service development tool in the early 1980's by Shostack (1982, 1984), writing in the field of service management. The creation of the service blueprint technique introduced the possibility to design services and experiences with closer attention to detail than previously. There was a need for methods and quality tests that would ensure that the outcome would be of high quality and the aims for the service reached. Service blueprints are detailed mappings of (all) actions and interaction of a service. Like traditional blueprints they can be used to describe an existing service or to model a new. Service blueprints are created to visualize all actions which are needed for a service to function, those which are visible to the customer as well as those which aren't. In her introduction to the blueprinting technique, Shostack (1982, 1984) emphasises the need to map the aspects which aren't perceived by the customer as well as the ones which are. She split the blueprint into two sections; onstage and backstage. Onstage activities were activities which are perceived by the customer, whereas backstage activities happen out of sight. The two sections were divided by a 'line of visibility'. The methodology was later picked up, and developed, by several authors in the field of service management. Influential writers in various stages of the development of the blueprinting technique have been Jane Kingman-Brundage (Kingman-Brundage, 1991; Kingman-Brundage, George, & Bowen, 1995) and Mary Jo Bitner (Zeithaml & Bitner, 2000; Bitner, Ostrom, & Morgan, 2008).

The 2008 article by Bitner, Ostrom & Morgan can be seen as a summary of the development of the service blueprinting technique up to that point. Their version has evolved substantially from the initial descriptions by Shostack. Figure 1 outlines the sections included in the blueprint suggested by Bitner, Ostrom & Morgan (2008):

Figure 1 - Model of blueprint as suggested by Bitner, Ostrom & Morgan (2008).



From Shostack's original blueprint with two sections (frontstage and backstage), the model has evolved to include five sections, or layers; Physical Evidence, Customer Actions, Onstage, Backstage and Support Processes. Customer action and Onstage are separated by the Line of Interaction, Onstage and the Backstage are separated by the Line of Visibility and, finally, Backstage and Support processes are separated by the Line of Internal Interaction (Bitner, Ostrom & Morgan, 2008).

Bitner, Ostrom & Morgan (2008, p. 70) describe a service as "intangible, variable, and delivered over time and space, people frequently resort to using words alone to specify them, resulting in oversimplification and incompleteness". It's important that roles and responsibilities of both customers and service providers are clarified. The result of a blueprint is a visual representation of the service process that everyone can see, and is therefore very useful in the development of the service. This is probably one of the main

reasons why blueprints were picked up early by the service design community (Segelström, 2009), as the design community became interested in services as a design object (as described in Segelström & Holmlid, 2009). Mager (2008) also describes the development of the blueprint as one of the first, and most important, steps in helping service designers transforming the intangible nature of services to a visible design object in an easy manner.

Blueprints have become one of the basic tools of service design, and features in various listings of methods for service design (Miettinen & Koivisto, 2009; Moritz, 2005; Mager & Gais, 2009; Engine, n.d.). However, little research has been done on blueprints, or visualizations in general (Segelström, 2009), by the service design community.

There has been a recent surge in articles on adaptations of the basic service blueprint to include new dimensions, and to code complex relationships. Spraragen & Chan (2008) investigated ways of integrating an emotional view of the customer's experience and expectations in the blueprint. Lee & Forlizzi (2009), propose a way of showing how the service evolves over time in a blueprint. Polaine (2009) explored ways of expanding the contents of service blueprints into what he calls Blueprint+, including emotional and cost aspects. They also suggest a change from the traditional stages to mapping according to characters.

The case; car parking

This paper reports on the findings from a service design project, which was a collaboration between Linköping University, the design consultancy Transformator and EuroPark, one of the industry leaders in the car parking sector in Sweden.

The research approach of this study was ethnographically inspired, using semi-structured interviews with the various stakeholders in the service offering as well as exploratory observations of several car parks around Sweden. Interviews were held with employees of a car park operator, car park owners and motorists. The services were observed first hand with detail paid to the experiences throughout the customer journey.

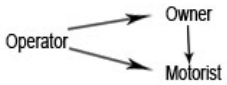
The service offering 'to park a car' consists of three main actors: The car park operator, the owner of the parking facility and the car parking clientele (henceforth referred to as motorists). The owner of the parking facility usually hires a car park operator to manage the car park. This is done because the owner doesn't have the time, the know-how or the interest to efficiently run a car park. Managing the car park involves duties such as fee control, surveillance and providing information signs in the facility. The car park operator's responsibilities also often include cleaning and maintenance of the parking facilities. As a result the car park owner can take on a passive role in the parking service, if he so wishes.

As car parking, in Sweden, to a large extent is a self-service service it is crucial for the success of the business that the motorist wants to and is able to use the service. Providing that little extra might persuade motorists to park at a specific car park instead of at a competitor's. For the car park operator, it is also important, to be able to deliver on their obligations towards the car park owner in such a good way to maintain current and new customers.

What complicates this three-part relationship is the varying degree that car park owners involve themselves with the day to day running of the car parks and whether or not the owners have direct contact with any motorists. Some owners choose to be responsible for certain aspects of the motorists' service experience, such as cleaning or maintenance. As motorists usually are unaware of the business arrangements behind a car parking, the motorists might (possibly erroneously) call the car park owners to file complaints as both the car park operator's and the car park owner's numbers are listed on the contact information.

The relationships behind a car park service is thus rather complex, although the service superficially seems rather trivial; the car park operator provides a service to both the motorists and owner, where the service to each of these have different goals. Further, the owner is, depending on the level of involvement to the car park, also involved in the service experience to the motorists provided by the operator. They could range anywhere from a second service provider down to not being involved at all in the motorists' service experience. Figure 2 below illustrates the relationship between the three main stakeholders in the service offering 'to park a car'.

Figure 2 - The relationships between the stakeholders. Arrows indicate direction of service provided.



With the rather complex relationship between the various stakeholders in mind, we wanted to map the service experience of the existing service. As the service is of a self-serving nature, with much of the work by the service provider(s) being done backstage, service blueprinting was seen as an appropriate tool.

Alternative blueprinting

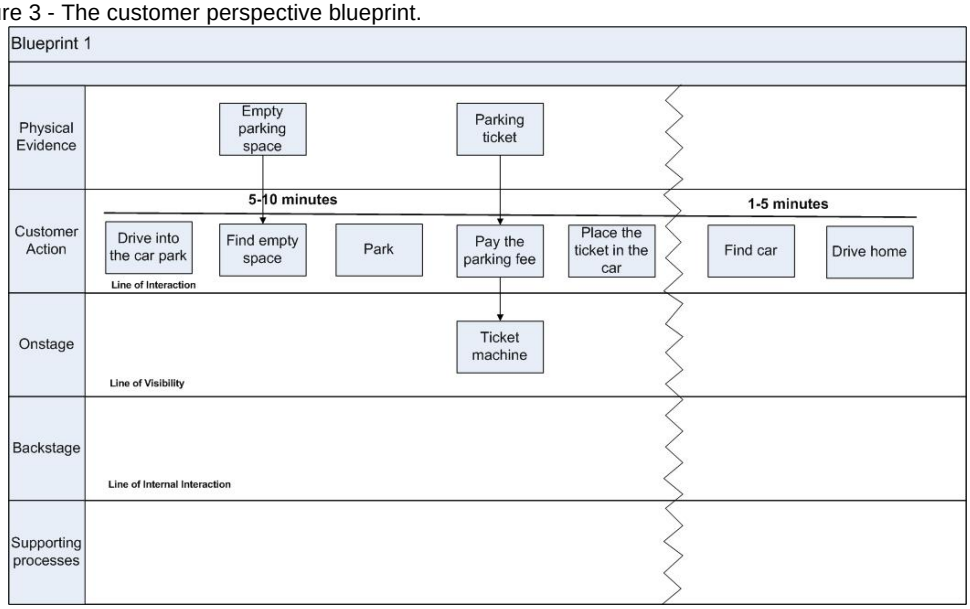
The blueprints in this paper are based on the blueprint structure described by Bitner, Ostrom & Morgan (2008). All in all three blueprints are presented to explore different ways of showing the service process. They were all created as a way of making sense of the existing service offering.

All the service blueprints were made with a slightly different focus. Here the three blueprints are described and an overview is given of their different strengths and weaknesses.

Blueprint 1: The customer perspective

For the first blueprint we used the customer perspective, and focused on the individual motorist's action. It can be seen in Figure 3 below.

Figure 3 - The customer perspective blueprint.



This blueprint describes the service as being trivial. The customers enters the car park, drives around, finds a parking space and pays, locks and leaves the car, then gets back after a designated time, and drives away. The ticket machine is the only touchpoint that a motorist interacts with inside the car park. Even when introducing fail points, such as "no empty parking space" or "ticket machine does not work", the actions are simple and straightforward. Even more serious fail points such as failing or skipping to pay the fee, causes straightforward actions, and the fact that a ticket inspector checks the car is not caused by the failure to pay the fee. The time spent in the car park by the customer is short and effective.

There are several challenges we gather from this blueprint. One is that the customer perspective taken does not easily allow for introducing some of the events that are going on, such as the ticket inspectors. Many of these events are not meant to be visible to customers, but are still physically performed onstage. Another challenge is that the co-production of the service between the different actors is hard to show. The interaction between the different actors is more complex than the layers presented by the model. There is an assumption behind the creation of this blueprint, e.g., that there are other customers in the car park, that co-produce the service experience of an individual.

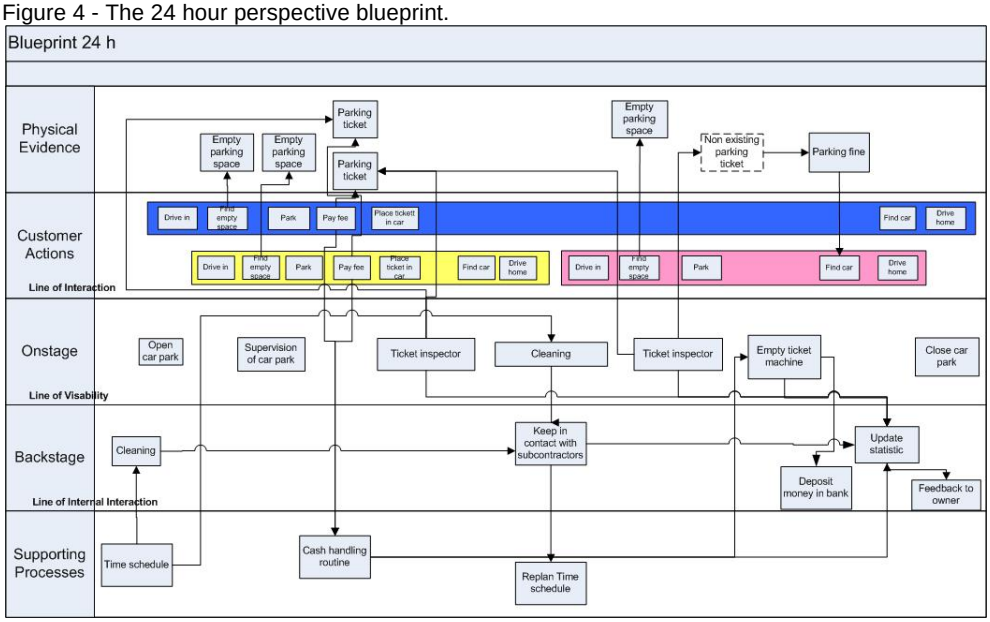
One obvious shortcoming of the blueprint is that the events that construct the service experience actually happen while the customer is away from the car. It could be viewed as a service ellipsis that contains no customer actions (Holmlid, 2006; Holmlid & Hertz 2007; Holmlid, forthcoming).

In order to capture this, we decided to create a blueprint that shows a 24h view of the service events of the car park. This meant that we turned away from the individual customer, and viewed the car park as a resource to be utilized on a "mass" customer basis.

Blueprint 2: The 24h perspective

The second blueprint contains more or less the same customer actions as the first blueprint, but with multiple customers performing at various times, and with different actions and timeframes. This means that some motorists will see and interact with ticket inspectors and cleaning staff, whereas others won't. This means that some actions that are onstage might be perceived as backstage by some motorists. The blueprint is presented in Figure 4 below.

Figure 4 - The 24 hour perspective blueprint.



When modelling the service process from a 24h perspective, the service visualization looks like a kind of mass-market service or a service resource available for usage. In the end this allows for showing differences between parking clients, and the assumption that there are other clients in the car park, become visible. In effect, one might now, through induction, show that the car park might be full, and the assumed fail points of the first blueprint are realities. In this blueprint, it is also possible to introduce the ticket inspectors fully, their schedule and that they are checking whether there are cars that do not have a parking ticket. They are in fact looking for missing service evidence. This highlights the car as a touchpoint, and the two variants of compositions that are possible; one with a ticket, and one without a ticket.

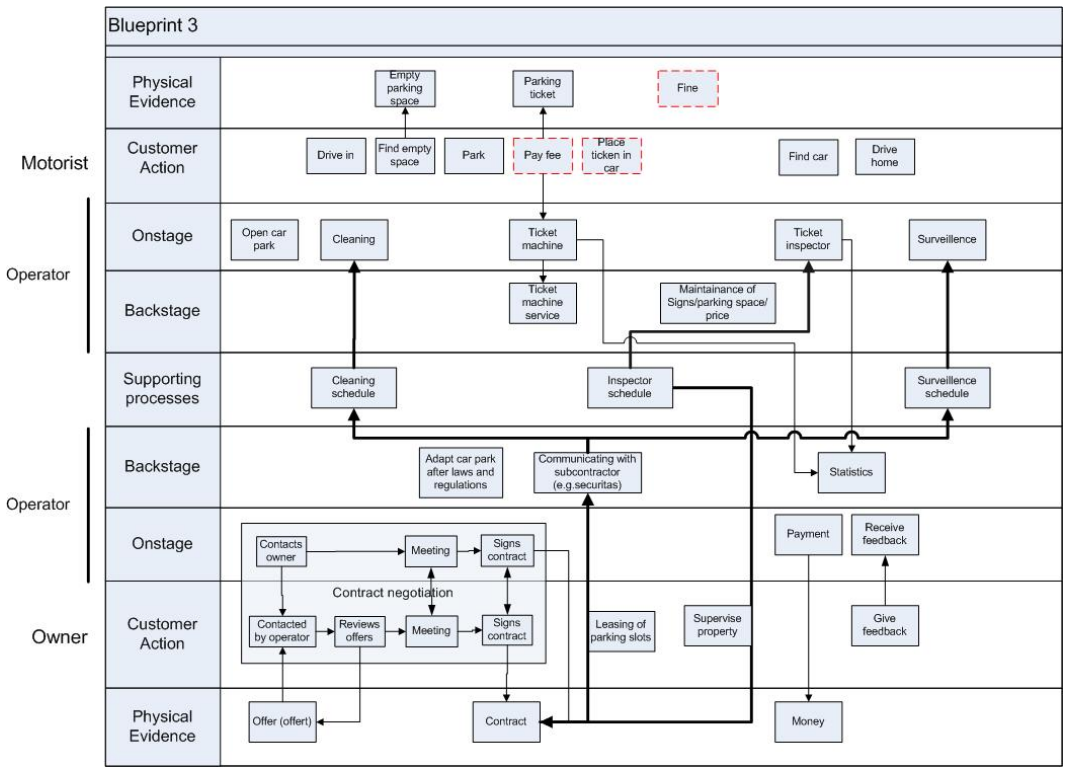
As a consequence of introducing more backstage activities and support processes, the challenge of co-production becomes even more evident. A parking service is often, as we stated earlier, a service co-produced by at least two business partners. A challenge with the 24h blueprint is that there is little support in distinguishing between what the parking operator handles and what the owner handles.

In order to try to deal with this we sketched on yet another blueprint. In the clear cut cases one could use colors, but sometimes actions are performed by several actors, and then a coloring scheme would not work well at all.

Blueprint 3: The multiple front-ends perspective

In the third blueprint we experimented with two front ends. This was an attempt to show all the different actions between all the actors that had been identified earlier. Figure 5 depicts the third blueprint.

Figure 5 - The multiple front-ends perspective.



At the top row are the customer actions. Further down there is the onstage and backstage actions performed by the operator. As we have seen in this service the operator provides a service to the motorist but at the same time there's a business to business relationship with the owner. This relationship is placed at the bottom of the blueprint, which also becomes a front end for the business relationship.

As the car park operator was the partner which initiated the research, it was seen as important to distinguish their and the owners' roles in regard to the customer. In the car park service the responsibilities and distribution between what the owner and the operator does in terms of e.g. cleaning and surveillance vary a lot between cases and depends on the contract between those two.

In the blueprint it is possible to show how actions of the operator as well as actions of the owner directly can influence the onstage experience of the motorist. These actions are marked by bold lines in the blueprint above.

One challenge with using a blueprint in this fashion is that the timelines and sequences are different for the different relationships. It would therefore be good to have a possibility to swap between these timelines. Another challenge is that this blueprint is no solution to showing actions performed by several actors.

It is also a challenge to show the complexity of the parking ticket. Not only is the discovery of missing evidence the cause of actions (issuing parking fines) with effect on the service experience, the parking ticket has two functions. It is a physical evidence for the motorist, that she can park her car until a certain time. It is also a touchpoint (in combination with a parked car) between the motorist and the ticket inspector. The interactive and dynamic nature of the ticket is difficult to capture in a blueprint.

Moreover, the motorist seems to have a subordinate role in both the second and the third blueprint, which feels awkward from a user centred design standpoint. On the other hand, it might be the case that the greatest design challenges lies in the B2B relationships rather than in the C2B layer.

For example, during research we discovered that the feedback between the operator and owners wasn't sufficient. The owners often wanted more feedback on the day to day operations then they received. When feedback was given, it was often explicitly asked for by the owner, or when a service failure had occurred.

Discussion

As we conducted design research to create an understanding of the car parking domain, the need to visualize quickly arose. The initial blueprint helped us analyze and structure the information gathered, but there still remained some problems. As the standard blueprint had been done, we realized that there was more information which needed to be included, such as relationships between actors and events. As a consequence, making blueprints of different kinds, it was required of us to work with the collected material, which in turn developed our understanding of the service further. On the surface, a parking service may look trivial and simple but underneath it all, it is a highly complex structure which makes the service work properly. A three way relationship exists between the car park owner, the car park operator and the motorist using the car park. The three way relationship in this service makes for a more complex service structure with relationships, which are hard to encompass in traditional blueprints.

Five main issues, or challenges, which emerged from our blueprinting work will be discussed here in terms of aspects to consider when creating blueprints.

Invisible on-stage actions

Design decisions on a service could include deciding that some actions that are physically performed onstage in the servicescape should not be visible to customers. In the parking case this can be exemplified with cleaning staff. The modelling tool does not give consistent advice on how to deal with such activities.

One reason for this might be that it is developed as a service management tool, where the intent of modelling is to be able to device an organisation, distribute responsibilities, divide labour to deliver service efficiently and effectively, and that is managed and directed easily and with precision.

Missing service evidence

In the parking case the parking ticket serves two purposes. The first is as physical evidence that one has paid and thus has earned the right to park. The other purpose is carried out when the ticket is combined with the car, to show the parking inspector that the motorist has paid the parking fee. This is fairly straightforward to model. But the role of the parking inspector is to look for "broken" physical evidence. That is, that the parking ticket is missing, or that the time-span has passed. For the customer this equals that she has no physical evidence. And that an important part of the business of the service relies on that parking inspectors are looking for missing physical evidence.

Customer perspective

When stating that one is taking a customer perspective, it is necessary to state how this perspective is constructed. In the blueprints made here we used a single customer perspective, and one kind of mass-customer perspective. Other perspectives that could have been used are the multiple archetypical customers, where blueprints are devised for a set of typical customers and customer scenarios, and a mass-customer perspective where all the customers are viewed as being possible to describe as one.

For different services, different ways of handling the timelines for the variety of customers is necessary, and the chosen perspective will direct this. In the car park a lot of actions are simultaneously happening onstage, and the sequences overlap. Capturing this in a blueprint can be done, but might make the blueprint more complex, especially when the regularity of actions have different time durations.

Complexity

An issue that arose from adding extra motorists, potential fail points and the B2B relationship was complexity. Several solutions could be applied, such as doing several different blueprints or defining blueprint overlays with different foci.

In a parking service, where the customer is away from the onstage most parts of the service performance, the B2B relationship underlying the B2C relationship becomes very important; it is a (B2B)2C service. Blueprinting such a service, might require one time duration from the customer perspective, and another from the business perspective. Doing this for the parking service it was possible to show most of the actions, but not the exact time when they occur,

nor their timing. For the B2B relationship there's a total time duration consisting of months but for the motorists' actions the total time is at most a few hours or a whole day. Disregarding temporal aspects becomes a necessary consequence if we want to incorporate both the motorist and B2B relationship in a single blueprint since the B2B relationship have actions that doesn't happen as often as the motorist actions.

After incorporating the B2B relationship, we were able to map some of the actions made between the owner and the operator and show where it connects with the motorists actions. Even if the different timelines for the owner and operator correlated it was possible to show the underlying structure of the service, especially the B2B relationship. What also contributed to complexity was that some physical evidence was directly connected to different actors in the service performance.

Non-presence

In the second blueprint we tried to show what can (and often happens) when the motorist is not present in the car park. Normally the ticket inspector controls the tickets, but it may also be other motorist actions, cleaning and small maintenance of the car park. With three motorists instead of one, we could cover more actions from different parts. We could also show that some people will see the onstage actions carried out by e.g. the cleaners and the ticket inspector but some won't ever see them. It was even possible to show when the actions occurred and that some of them could take place several times in one day. We also wanted to show that the length of the service (especially the time between when someone leaves the car and comes back) can differ quite a lot, without that being considered a service failure by the customer (compare with Shostack's 1984 article in which temporal limitations were seen as crucial).

Future research

In future research it would be interesting to see how fail points and cases where problems occur, can be integrated into blueprints. E.g. in this case we saw that the communication between the operator and the owners was not at the level and frequency as the owners wanted it to be.

It would also be of interest to see computer software to help in the creating of blueprints being developed. This would also be an opportunity to create interactive blueprints with the possibility to change timelines, switch the perspective and scaling abilities.

Conclusion

Service blueprints are powerful tools in aiding service designers to articulate insights, defining areas of investigation and analyze service processes. However, there are still many aspects which need to be investigated further, which is evident from the research presented here and the recent surge in adaptations of service blueprints. This also indicates that service blueprints are seen as a valid and important tool in a service designer's tool box in the future, although the concept needs to be adapted and improved to fully cater for the complex design situations which service designers face.

There is an assumption in blueprints that a service performance is structured in layers and that the service experience can be modelled as active actions in a partially ordered sequence.

As a design tool this assumption limits the degree of innovation that can be achieved from blueprints to things that might be expressed under these restrictions.

Given that the value of services often are produced in value constellations, it is not given that the relationship between the actors can be represented in clear cut layers, nor that the relationship between the client and the different actors can be layered. This limits the use of blueprints, or demands that there are simplifications made.

There is an assumption in the blueprint structure, that service evidence is something that the client gets or holds as evidence of a service offered to her. Even though it is not impossible, it is not evident how evidence shared by several actors across layers, with different communicative intents and surrounding action structures should be dealt with.

Finally, as has been pointed out elsewhere (Holmlid, 2006; Holmlid & Hertz, 2007), the representation format of a blueprint excludes the representation of e.g. inactivity, even when that might be the part most decisive for the service experience.

Acknowledgements

We would like to acknowledge designers Erik Widmark and Gustav Gullberg at Transformator, and their client EuroPark for their work in the project. We would also like to acknowledge the different parking facilities and the local operators and owners that have been visited and who participated in interviews and workshops. This research was made possible by a grant from VINNOVA, the SERV project, "Service Design, innovation and involvement", ref no 2007-03444.

References

Bitner, M. J., Ostrom, A. L., & Morgan, F. N. (2008). Service Blueprinting: A practical Technique for Service Innovation. *California Management Review , 50* (3), 66-94.

Engine. (n.d.). *Service Design Methods.* Available at: http://www.enginegroup.co.uk/service_design/methods/ Acessed 23 2 2009

Holmlid, S. (2006). Introducing white space in service design: This space intentionally left blank. *Emergence conference. Emergence 06 - Service design*, Carnegie Mellon.

Holmlid, S. (forthcoming). There's more to services than interaction. Chapter in Meroni, A., Sangiorgi, D. (eds) *Design for Services*, Gower Publishing.

Holmlid, S., & Hertz, A. (2007). Service-scape and white space: White space as structuring principle in service design. *European Academy of Design conference, Dancing with disorder: Design, discourse & disaster*, Turkey.

Kingman-Brundage, J. (1991). Technology, Design and Service Quality. *International Journal of Service Industry Management , 2* (3), 47-59.

Kingman-Brundage, J., George, W. R., & Bowen, D. E. (1995). "Service logic": achieving service system integration. *International Journal of Service Industry Management , 6* (4), 20-39.

Lee, M. K., & Forlizzi, J. (2009). Designing Adaptive Robotic Services. *IASDR 2009 Proceedings.* Seoul: IASDR.

Mager, B. (2008) Service Design. In M. Erlhoff & T. Marshall (Red.), *Design Dictionary: Perspectives on Design Terminology* (pp. 354-356). Basel: Birkhäuser.

Mager, B., & Gais, M. (2009). *Service Design.* Paderborn: Wilhelm Fink GmbH.

Miettinen, S., & Koivisto, M. (Eds.). (2009). *Designing Services with Innovative Methods.* Keuruu, Finland: Kuopio Academy of Design.

Moritz, S. (2005). *Service Design: Practical Access to an Evolving Field.* Cologne, Germany: Köln International School of Design.

Polaine, A. (2009). Blueprint+ : Developing a Tool for Service Design. *Service Design Network Conference 2009*. Madeira.

Segelström, F. (2009). Communicating through visualizations: Service Designers on Visualizing User Research. *DeThinking Design, ReThinking Services – First Nordic Conference on Service Design and Service Innovation.* Oslo.

Segelström, F., & Holmlid, S. (2009). Visualization as tools for research: Service designers on visualizations. *NorDes 2009 – Engaging artifacts, Nordic Design Research Conference.* Oslo.

Shostack, L. (1982). How to Design a Service. *European Journal of Marketing* (161), 49-63.

Shostack, L. (1984). Designing Services that Deliver. *Harvard Business Review , 62* (1), 133-139.

Spraragen, S. L., & Chan, C. (2008). Service Blueprinting: When Customer Satisfaction Numbers are not enough. *International DMI Education Conference. Design Thinking: New Challenges for Designers, Managers and Organizations.* Cergy-Pointose, France.

Zeithaml, V., & Bitner, M. J. (2000). *Service Marketing.* New York: McGraw Hill.

Conference committee

Simon Clatworthy
Stefan Holmlid
Satu Miettinen
Nicola Morelli
Janne-Valtteri Nisula

Sponsors

Accenture
AHO
AT-ONE
Cirrus
Forskningsrådet
Making Waves

DeThinkingService
ReThinkingDesign

First Nordic Conference on
Service Design and Service Innovation
Oslo, 24th-26th November 2009

Linköpings Universitet

Linköping University