Designing Services with Innovative Methods

SATU MIETTINEN / MIKKO KOIVISTO (EDS.)

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Tekes

Leverage from the EU 2007–2013

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This book presents the emerging and increasingly important field of service design. Birgit Mager, Köln International School of Design and Service Design Network, Ezio Manzini, Politecnico di Milano, and Stefan Holmlid, University of Linköping, discuss how: ***Design thinking and innovative methods work as tools for co-creating services and desirable value propositions. Service design is a tool for designing a more sustainable society. Interaction design offers us insight into creating more user-oriented services.*** *Design practitioners Fran Samalionis from IDEO, Arne van Oosterom from DesignThinkers and Paul Thurston from thinkpublic share their service design thinking and the benefits of the service design process for both companies and for the public sector. Various service design case studies from different business areas and different cultural contexts are presented and described in detail, and this book opens the discussion on designers' methods and approaches to developing services.*

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PREFACE

EIJA VÄHÄLÄ

This book is the outcome of a service design process. The editors of this volume Satu Miettinen and Mikko Koivisto interviewed service managers, design editors, service designers and design students in order to create user profiles of the book. *These service design profiles were Academic: what is the emerging field of service design about? Practical: what are the tools and methods used in service design? Benefit: is service design a new tool for creating appealing value propositions for customers?* The profiles assisted the authors in their writing process, and the resulting articles seek to answer these questions. We want to thank the people who were interviewed for this process: Lea Lehtinen, Assistant Vice President of Service Innovations from KONE Corporation, Katja Lindroos, established design journalist, service designers, and design students at the Savonia University of Applied Sciences, Kuopio Academy of Design, and at the University of Art and Design Helsinki.

Service design is an emerging field. This book is one result of a research project called "Experiencing Well-being – New Service Platforms and Mobile User Interfaces for Leisure" funded by the Finnish Funding Agency for Technology and Innovation. As director of the steering committee for this project, *I see the book as good learning material for service design education and a channel to communicate methods and processes related to service design development to various companies.* Here, I also want to thank Tekes, the Finnish Funding Agency, for funding our research and development work and the other steering committee members: Ilkka Vartianen from Kuopio Innovation Oy, Jaakko Nousiainen from Nokia Oyj, Harri Sulku from Hudle Oy, Raisa Leinonen and Satu Miettinen from the Kuopio Academy of Design and Katriina Lahti from Kunnonpaikka for contributing their expert knowledge and best efforts to the project.

This publication has significance for the future and how this field will evolve. The authors of the book are paving the way for service design to become increasingly established and show its extensive meaning in our society. When reading the articles one realises how much service design affects our environment and our everyday.

EIJA VÄHÄLÄ, L.Ed, is director of the Kuopio Academy of Design. She works as Head of R&D in the programme of culture, Savonia University of Applied Sciences. Her research interests lie in the creative process and its effects on the welfare of human beings.

DESIGNING SERVICES WITH INNOVATIVE METHODS

SATU MIETTINEN

“Enjoying the co-creation process with the users is one of the most important qualities of a service designer” King (2009). This same passion started this book production process. Interviews with the users and later on receiving proposals for the book from the users. Creating profiles of the users. Now writing the editorial, the idea of which is to fill in the central terms and methods that are repeated in the articles in order to ease the reading of the book. And finally bringing out some ideas that are discussed in each part of the publication.

Iteration and co-creation are processes that connect the otherwise broad field of service design. An iterative design process is based on a cyclic process of prototyping, testing, analysing, and refining work in progress. This applies well in a service design process where prototyping tools are in active use. Innovating opportunities for new co-creation processes between the client and the user is part of the service designer's everyday working life. Prahalad and Ramaswamy (2004) discuss co-creation experiences as new ways to create value. The focus on value in business transactions has shifted to experiences, and experiences are increasingly created through services. Consumers are co-creating value with the firm. *Co-creation allows the customer to co-construct the service experience to suit her context, and the service design process offers methods to enable this.*

Value creation and interaction processes are thus central to service design. Manzini, in fact, proposes service design as a tool for designing a more sustainable society in this publication. Service design that focuses on the public sector, for example, acts as an innovation tool for creating new service systems where the governmental sector, NGOs (nongovernmental organisations) and citizens are co-creating services together. The value is constructed through human interaction and co-creation. Thackara (2008) describes a similar process where designers transform public services and work with local communities in a co-creation process. These designers have co-developed and prototyped the ideas with the community, and later these ideas have been tested and launched.

Thurston writes about his work with the NHS (National Health Services, UK) and using service design methods to create more personalised services, in this publication. Value can be constructed when changing the frontline person-to-person service processes.

The NHS is also making creative connections with other industries. The organisation has the ambition to achieve a more patient-centred approach to healthcare; experience-based design helps the NHS to get there (Maher 2008).

In this publication Mager discusses design thinking and innovative methods working as tools for creating desirable value propositions for services: working in multi-disciplinary teams, using visual and creative thinking as a source of innovation in the research and creation process. This perspective is common to many service and interaction designers and researchers: Stefan Holmlid, Stefan Moriz, Oliver King, Lavrans Lovlie. A value proposition is a clear statement of the tangible results a customer gets from using your services or why your customers will want to do business with you. Osterwalder (2004) discusses strategic objectives and value propositions more academically as parts of the company's business model. The value proposition gives an overall view of the target customer, the product and service offering, and the unique and valuable position targeted by the firm. It defines what choices and trade-offs the firm will make. Osterwalder (ibid.) has proposed a "journey model" in "The Business Model Ontology – a proposition in a design science approach" that intends to provoke the most change and takes a company to a completely new business model.

Another business term that is introduced in the context of service design is USP (Unique Selling Point), which refers to any aspect of a product that differentiates it from similar products. King (2009) explains that service is a Unique Selling Point that cannot be duplicated and cannot be produced anywhere else in the world. *Services are relational and need knowledge, context, and history that are shared between a company and its customer.*

Service design terminology is encountered more and more in the media: service design, service ecology, customer journey and touchpoints.

SERVICE DESIGN PROCESSES

Also in this publication, design practitioners Fran Samalionis and Aarne van Oosterom share their service design thinking and the benefits of the service design process for companies. Aarne van Oosterom proposes a five-phase service design process that includes Discovering, Concepting, Designing, Building and Implementing. This is similar to both Engine's three phases, Identify, Build and Measure (Engine 2009), including several sub-phases, and Mager's four-phase process, Discovery, Creation, Reality Check and Implementation (Mager 2009).

The identification and discovery phase is about understanding the service context and the users as well as the business environment of the client. The building, concepting and creation phase is about visualising, co-creation, participatory design and prototyping. Reality Check and measuring deal with comparing service prototypes, using monitoring tools to see what the profitability of the service would be and if the created services are valuable to customers. Mager (2009) and Oosterom both also introduce an implementation phase where the IT process, development and training take place. Moritz (2005) in turn presents a service design process with six phases: service design understanding, thinking, generating, filtering, explaining and realising. Mager (ibid) and Moritz (ibid) both introduce methods that help working through these different phases. The service design process is therefore starting to find its form; yet there are and will continue to be variation.

One can identify important factors to consider when developing and applying service design processes:

– Understanding the service design challenge: the users, business environment and applicable technologies
– Observing, profiling, creating empathy for the users, participating with the users and being visual during the whole process
– Creating ideas, prototyping, evaluating and improving including the clients and the users in the process
– Implementing, maintaining and developing the services
– Operating with business realities.

IN THE FIELD

This publication represents service design case studies from various business areas and different cultural contexts. These cases show what kinds of applications and concepts are produced when service design is used in the field. Van der Lugt for example describes an intense user-oriented service design project done with ProRail. Miaosen Gong writes about a service design project that promotes Chinese social innovation. Carla Cipolla analyses the results of two sustainable design projects and comes up with the concepts of relational services and conviviality. And finally, Marc Stickdorn writes about service design and tourism as a very service-intensive trade.

Overall, the book intends to open the discussion on designer's methods and approach to developing services in order to better meet people's needs.

Keyword	Definition	Reference and further reading
SERVICE DESIGN	Service design addresses services from the perspective of clients. It aims to ensure that service interfaces are useful, usable and desirable from the client's point of view and effective, efficient and distinctive from the supplier's point of view. Service designers visualise, formulate, and choreograph solutions to problems that do not necessarily exist today; they observe and interpret requirements and behavioural patterns and transform them into possible future services. This process applies explorative, generative, and evaluative design approaches. The restructuring of existing services is as much a challenge in service design as the development of innovative new services. Service design stands in the tradition of product and interface design, enabling the transfer of proven analytical and creative design methods to the world of service provision. In particular, there are close ties to the dimensions of interaction and experience that originated in interface design. (Mager 2008)	Mager, B. (2008): Service Design definition in the Design Dictionary. Design Dictionary (Board of International Research in Design) Michael Erlhoff (Editor), Timothy Marshall (Editor) Publisher: Birkhäuser Basel http://www.service-design-network.org/system/files/Mager_Service%20Design_0.pdf (1.5.2009)
SERVICE ECOLOGY	System in which the service is integrated: i.e. a holistic visualisation of the service system. All the factors are gathered, analysed and visualised: politics, the economy, employees, law, societal trends, and technological development. The service ecology is thereby rendered, along with its attendant agents, processes, and relations. (Mager 2009) By analysing service ecologies, it is possible to reveal opportunities for new actors to join the ecology and new relationships among the actors. Ultimately, sustainable service ecologies depend on a balance where the actors involved exchange value in ways that is mutually beneficial over time. (Live|work 2008)	Mager, B. (2009): Introduction to Service Design. Digital communications tool. Culminatum Innovation 2009. http://www.share2solve.org/introtosd/start/Main.html (1.5.2009) Live|work (2008): http://www.servicedesign.org/ (1.5.2009)
CUSTOMER JOURNEY	Consuming a service means a consuming an experience, a process that extends over time. The customer journey thus illustrates how the customer perceives and experiences the service interface along the time axis. It also considers the phases before and after actual interaction with the service. The first step in creating a customer journey is to decide its starting and stopping points. The customer journey serves as the umbrella under which the service is explored and, with various methods, systematised and visualised. (Mager 2009)	Mager, B. (2009): Introduction to Service Design. Digital communications tool. Culminatum Innovation 2009. http://www.share2solve.org/introtosd/start/Main.html (1.5.2009)

Keyword	Definition	Reference and further reading
SERVICE TOUCHPOINTS	Service touchpoints are the tangibles, for example, spaces, objects, people or interactions (Moritz 2005), that make up the total experience of using a service. Touchpoints can take many forms, from advertising to personal cards; web-, mobile phone- and PC interfaces; bills; retail shops; call centres and customer representatives. In service design, all touchpoints need to be considered in totality and crafted in order to create a clear, consistent and unified customer experience. (Live|work 2008)	Live|work (2008): http://www.servicedesign.org/ (1.4.2009) Moritz, S. (2005): Service Design: Practical Access to an Evolving Field. Köln International School of Design. University of Applied Sciences Cologne. http://stefan-moritz.com/Stefan%20Moritz/Service%20Design_files/Practical%20Access%20to%20Service%20Design.pdf (20.4.2009) Further reading: Saffer, D. (2005): Designing for interaction: creating smart applications and clever devices. Berkeley. CA: New Riders
FRONT OFFICE/ FRONTSTAGE	The time and place in which customers come in contact with the service, for example, the website, the person serving you at the restaurant, etc. (Morelli 2002)	Morelli, N. (2002): "Designing product/service systems. A methodological exploration." Design Issues 18(3): 3-17. http://servicedesign.wikispaces.com/ (1.5.2009) Further reading: Pine, B. J. II & Gilmore, J. H. (1999): The Experience Economy. Boston: Harvard Business School Press
LINE OF INTERACTION, LINE OF IT INTERACTION, LINE OF VISIBILITY	When the customer is experiencing the service she/he is facing the line of interaction (examples: receptionist greeting at the hotel reception and guiding to your room, conference registration staff greeting the delegate and giving information). The customer faces the line of IT interaction when she/he is using the IT services (examples: hotel television, information in the parking area through the IT system, hotel and conference website and booking system). The line of IT interaction is still part of the frontstage activity. There is a line of visibility for the service actions that the customer is not able to see. There services happen in the backstage (examples: staff working with the reservation internally in the hotel booking system, registration of the hotel customer in the conference system, acceptance of the credit card in the customer management system).	Mager, B. (2009): Introduction to Service Design. Digital communications tool. Culminatum Innovation 2009. http://www.share2solve.org/introtosd/start/Main.html (1.5.2009)

Keyword	Definition	Reference and further reading
BACK OFFICE/ BACKSTAGE	How services are facilitated inside the organisation: for example, the food production chain inside the restaurant not visible to the customer. The design of the service may involve a re-organisation of these back office activities performed by the service provider. (Morelli 2002)	Morelli, N. (2002): "Designing product/service systems. A methodological exploration." Design Issues 18(3): 3-17. http://servicedesign.wikispaces.com/ (1.5.2009) Further reading: Pine, B. J. II & Gilmore, J. H. (1999): The Experience Economy. Boston: Harvard Business School Press
SERVICE BLUEPRINT	Mapping out of a service journey identifying the processes that constitute the service, isolating possible fail points and establishing the time frame for the journey. (The British Standard for Service Design) Service blueprinting is a process analysis methodology proposed by Shostack (Shostack 1982, 1984). Shostack's methodical procedure draws upon time and motion method engineering, project programming and computer system and software design. The proposed blueprint allows for a quantitative description of critical service elements, such as time, logical sequences of actions and processes, also specifying both actions and events that happen in the time and place of the interaction (front office) and actions and events that are out of the line of visibility for the users, but are fundamental for the service. Service blueprinting involves the description of all the activities for designing and managing services, including schedule, project plans, detailed representations (such as use cases) and design plans, or service platforms. (Morelli 2002)	The British Standard for Service Design (BS 7000 -3, BS 7000 -10, BS EN ISO 9000). Morelli, N. (2002): "Designing product/service systems. A methodological exploration." Design Issues 18(3): 3-17. http://servicedesign.wikispaces.com/ Shostack, L. G. (1982): How to Design a Service. European Journal of Marketing, 16(1), 49-63. Shostack, L. G. (1984): Design Services that Deliver. Harvard Business Review (84115), 133-139. Further reading: Saffer, D. (2005): Designing for interaction: creating smart applications and clever devices. Berkeley. CA: New Riders

Method	Description	Reference and further information
BODYSTORMING **Prototyping method, creating, generating and modelling new service features** **Empathic design method**	The idea in bodystorming is to act as though the service would exist, ideally in the context where it would be used. This method gives the opportunity to test the proposed service and its interactions either inside the service design team or including the participants. Different service situations can be acted out, for example, the customer service situation at the hotel reception. Service designers create the service situation, cast the roles, practise with the professional or on their own and play the situation. The purpose is to prototype and come up with new solutions, test new interactions and make ad hoc innovations. (Oulasvirta el al 2003, Iacucci et al 2000) **See Mager (2009): Service Design as an Emerging Field. In this publication.**	Oulasvirta, A., Kurvinen, E. and Kankainen, T. (2003): Understanding contexts by being there: case studies in bodystorming. Pers Ubiquit Comput (2003) 7: 125–134 DOI 10.1007/s00779-003-0238-7. London: Springer-Verlag. http://www.cs.helsinki.fi/u/oulasvir/scipubs/bodystorming_AO_EK_TK.pdf (2.5.2009) Iacucci, G., Kuutti, K. and Ranta, M. (2000): On the Move with a Magic Thing: Role Playing in Concept Design of Mobile Services and Devices. DIS '00, Brooklyn, New York. http://users.tkk.fi/~giulio/P1_jacucci.pdf (2.5.2009)
CONTEXT MAPPING **Identifying, discovering and understanding the service context and the users** **Participatory design method, co-design**	This method reveals users' conscious and latent needs, experiences, hopes and expectations. Users participate in a workshop facilitated by a tutor. They use make-tools: pictures, drawing, creating with different materials and storytelling to generate ideas. There can be a preparatory phase before the workshop when the users are working with creative thematic assignments on their own. Make-tools aim at gathering data from people about issues that are not easy to verbalise. The tools support the users to express themselves and reveal subconscious and still relevant thoughts with metaphors and associations. (Sleeswijl el al 2005, Stappers and Sanders 2003) **See Miettinen (2009): Service Designers' Methods. In this publication.**	Sleeswijk Visser, F., Stappers, P.J., van der Lugt, R. and Sanders, E. B.-N. (2005): Context Mapping: experiences from practice. ID-Studiolab, Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands; MakeTools, Columbus, Ohio http://www.maketools.com/pdfs/Contextmapping_SleeswijkVisseretal_05.pdf (20.4.2009) Stappers, P.J. and Sanders, E. B.-N. (2003): Generative tools for context mapping: tuning the tools. ID-Studiolab, Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands; MakeTools, Columbus, Ohio and SonicRim http://www.maketools.com/pdfs/GenerativeTools_Stappers_Sanders_03.pdf (2.5.2009)

Method	Description	Reference and further information
EXPERIENCE PROTOTYPING **Prototyping method, creating, generating and modelling new service features**	An experience prototype is a representation of a design, made before the final solution exists. We need prototyping for electronics, we need to think about a more total experience like designing a service or designing what happens with the chips and the people, then you need something which is more to do with storytelling, using video of how to tell a story or theatre for enactment or computer simulations. All of those become a necessary part of our prototyping vocabulary. The rapidness of a prototype cycle between trying something out and testing it with people, trying it out with people, is what makes the relationship between design and business successful. We can make a small prototype very inexpensively, we can try it out, test it and if it's successful perhaps we'll move forward to the next stage. (Moggridge 2006) The aim of experience prototyping is to test the feasibility of the service, the logistics, customer experience and financial impact of the service product in a cheap and quick way. An experience prototype is any kind of representation, in any kind of medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system we are designing. (Buchenau & Fulton Suri 2000) **See Miettinen (2009): Service Designers' Methods. In this publication.**	Moggridge, B. (2006): Competitiveness Summit. Design Council. UK. http://www.designcouncil.org.uk/AutoPdfs/DesignCouncil_2303.pdf (3.5.2009) Buchenau, M. and Fulton Suri, J. (2000): Experience Prototyping. San Francisco: IDEO. http://www.ideo.com/images/uploads/thinking/publications/pdfs/FultonSuriBuchenau-Experience_PrototypingACM_8-00.pdf (20.4.2009)

Method	Description	Reference and further information
FIELDWORK: OBSERVATION AND DOCUMENTATION **Identifying, discovering and understanding the service context and the users** **Industrial ethnography**	Ethnography appeals to designers because it provides a window onto the ways consumers interact with products in their everyday lives. (Wasson 2000) When using ethnographic methods it is good also to focus on documentation of the process, communication within the design team as well as on expected results. Ethnographic fieldwork methods: observation and documentation are very much present in identifying, discovering and understanding the service context and the users. These methods need to be applied in the working context and timeframe of the project. (Sperschneider and Bagger 2003) Shadowing is an ethnographic technique used to understand a person's real-time interactions. Shadowing often focuses on particular events or tasks that participants are willing to share. **See Hämäläinen and Lammi (2009): Service Design as a Tool for Innovation Leadership. In this publication.**	Wasson, C. (2000): Ethnography in the field of design. Human Organization. http://findarticles.com/p/articles/mi_qa3800/is_200001/ai_n8895749/ (3.5.2009) Sperschneider, W. and Bagger, K. (2003): Ethnographic Fieldwork Under Industrial Constraints: Toward Design-in-Context. http://www.mci.sdu.dk/m/Research/Publications/UCD/KB.PDF (20.4.2009)
FIVE WHYS **Identifying, discovering and understanding the service context and the users**	The method known as "5-Whys" is an analysis method used to dig below the outward symptoms of a problem in order to find its real root cause. Five Whys is also known as the why-why chart (Ammerman 1998). It allows the individual or group to drill down through the causal pathway. It is a simple and effective tool that works well in groups and also when undertaken by an individual. Example of the method: A patient had the wrong leg amputated 1. Why: Patient gave consent for amputation the night before the proposed surgery to Registrar (who was not going to undertake procedure). 2. Why: Amputation site marked with a biro (wrong leg). 3. Why: Registrar unaware of hospital policy on amputation sites being marked with a skin pencil and with bodily part being fully visible to Doctor. 4. Why: The department had no induction procedures for new medical staff working in the department. 5. Why: Because "we've never been asked to". (Root Cause Analysis Tool Kit. NHS) **See Samalionis (2009): Can designers help deliver better services? In this publication.**	Ammerman, M. (1998): The Root Cause Analysis Handbook: A Simplified Approach to Identifying, Correcting and Reporting Workplace Errors. New York: Quality Resources. Root Cause Analysis Tool Kit. NHS. National Patient Safety Agency. http://www.clean-safe-care.nhs.uk/ArticleFiles/Files/Root-Cause-Analysis/Doc-13-Five-whys.pdf (3.5.2009)

Method	Description	Reference and further information
PERSONAS **Identifying, discovering and understanding the service context and the users**	Personas, fictional user profiles based on research data (interviews, participatory observation, data analysis), have gained popularity in the design field over recent years. These profiles include names, personalities, behaviours, and goals that are representative of a unique group of individuals. Personas are a tool for understanding others. (Williams 2006, Amdahl and Chaikiat 2007, Ndiwalana et al 2005) **See Stickdorn (2009): Service Design in Tourism. In this publication.**	Williams. K. L. (2006): Personas in the design process: A tool for understanding others. Georgia Institute of Technology. August, 2006 http://etd.gatech.edu/theses/available/etd-07102006-101208/unrestricted/Williams_Karen_L_200608_Mas.pdf (3.5.2009) Amdahl, P. and Chaikiat, P. (2007): Personas as drivers. An alternative approach for creating scenarios for ADAS evaluation. Department of Computer and Information Science, Linköping University, Sweden. Ndiwalana, A., Chong Lee, J., Smith, J. L., Wahid, S., Hobby, L., Chewar, C. M. and McCrickard, S. D. (2005): From Personas to Design: Creating a Collaborative Multi-disciplinary Design Environment. Center for Human-Computer Interaction and Department of Computer Science Virginia Polytechnic Institute and State University, USA. http://people.cs.vt.edu/~mccricks/papers/ndiwalana-hcii05.pdf (3.5.2009)
PROBES **Identifying, discovering and understanding the service context and the users** **Participatory design method, co-design**	Design probes are a user-centred approach to understanding human phenomena and exploring design opportunities. They are based on user participation by means of self-documentation. Probes can also be built on mobile or on online platforms. Probes look at the user's personal context and perception, and they have an exploratory character. Self-documenting diaries or self-photography are typical examples of this method. (Mattelmäki 2006) The core of the probes approach is to give people (possible future users) tools to document, reflect on and express their thoughts on environments and actions. One of the aims of the approach is to create a communication link between the users and the designers, and to inform and inspire the design team. (Hulkko et al. 2005) **See Miettinen (2009): Service Designers' Methods. In this publication.**	Mattelmäki, T. (2006): Design Probes. University of Art and Design Helsinki A 69. Hulkko, S., Mattelmäki, T., Virtanen, K: and Keinonen, T. (2005): Mobile Probes. University of Art and Design Helsinki. http://akseli.tekes.fi/opencms/opencms/OhjelmaPortaali/ohjelmat/MUOTO_2005/fi/Dokumenttiarkisto/Viestinta_ja_aktivointi/Julkaisut/MobileProbes_Nordichi_finx1x.pdf (3.5.2009)

Method	Description	Reference and further information
SCENARIO-BASED DESIGN **Prototyping method, creating, generating and modelling new service features**	A scenario is a synonym to the screenplay, manuscript, copy or a script. The elements of a scenario are virtually the same both in the original notion and in the scenario definition applied as a method in the user-centred product development process. These basic elements include: the actors (users), the scene (context) and the scheme (the story including the background, tasks, goals and action). The goal of the scenario work is to visualise the main service concept for the client. Scenarios help express the requirements of the different stakeholders in a format that can be easily understood by the other stakeholders. Scenarios are stories about people and their activities in particular situations and environments (contexts). They can be textual, illustrated (e.g. picture books or comic strips), acted (e.g. dramatised usage situation) or even filmed (e.g. videos) descriptions of usage situations. They describe current or envisioned work practises or tasks of the users and thus help different stakeholders (including the users themselves) understand the tasks in their contexts, evaluate the practises and suggest changes to these practises in parallel to designing new tools. Scenario generating aims to predict how people could act in particular situations. That is why it is well suited for designing new product concepts, when the context of use and the intended users are not strictly defined. Scenario building is a flexible and cost-effective way to generate design ideas for new products and to identify the potential user groups and contexts of use for the service. It is desirable to develop and compare several concepts. (Heinilä et al 2005) **See Miettinen (2009): Service Designers' Methods. In this publication.**	Heinilä, J. (Ed.), Strömberg, H., Leikas, J., Ikonen, V., Iivari, N., Jokela, T., Aikio, K. P., Jounila, I., Hoonhout, J. and Leurs, N. (2005): User Centred Design Guidelines for Methods and Tools. VTT Information Technology; University of Oulu, Dept. of Information processing science; Philips Research, Philips Applied Technologies. The Nomadic Media consortium, November 2005. http://www.vtt.fi/inf/julkaisut/muut/2005/UCD_Guidelines.pdf (3.5.2009)

Method	Description	Reference and further information
STORYBOARDING **Prototyping method, creating, generating and modelling new service features**	The storyboarding method has several uses. It can facilitate product and service design processes. Storyboards can illustrate a visual storyline of a service or product use situation in its context(s) for users and clients or they can help in illustrating interface interactions for the design team or users. The process of creating a storyboard helps designers put themselves in the shoes and setting of the people for whom they are designing. It often prompts invention and ingenuity, as problems end-users encounter are recognised and opportunities to solve them are devised. The story can serve as a "user experience testbed" as prototypes are developed and critiqued. Take a proposed design for the system, and run through the story imagining the protagonist using it. Does the system solve the problems the protagonist encounters? Does it "fit in" with the story and the protagonist's environment? Does the solution provide the intended value to the people in the story? What changes to the system should be made so it does? (Gruen 2000) Storyboards are sequences of images, which demonstrate the relationship between individual displays and actions within a system. A typical storyboard contains a number of images depicting features such as menus, dialogue boxes and windows. A sequence of these screen representations conveys further information on the structure, functionality and navigation options available within an intended system. The storyboard can be shown to colleagues in a design team and to potential users. This allows users and design team members to offer critical feedback about the composition and scope of the intended interface. Storyboarding can be used early in the design cycle, in which case it supports the exploration of design possibilities and the early verification of user requirements. (Heinilä et al 2005, Landay J.A. and Myers J.A 1996) **See Oosterom (2009): Who do we think we are? In this publication.**	Gruen, D. (2000): Storyboarding for Design: An Overview of the Process. Lotus Research. IBM Research. http://domino.watson.ibm.com/cambridge/research.nsf/0/ebcd159a81a43e3685256920006 7d59e/$FILE/Techreport%202000.03.PDF (3.5.2009) Heinilä, J. (Ed.), Strömberg, H., Leikas, J., Ikonen, V., Iivari, N., Jokela, T., Aikio, K. P., Jounila, I., Hoonhout, J. and Leurs, N. (2005): User Centred Design Guidelines for Methods and Tools. VTT Information Technology; University of Oulu, Dept. of Information processing science; Philips Research, Philips Applied Technologies. The Nomadic Media consortium, November 2005. http://www.vtt.fi/inf/julkaisut/muut/2005/UCD_Guidelines.pdf (3.5.2009) Landay, J. A. and Myers, J. A. (1996): Sketching Storyboards to Illustrate Interface Behaviors. HCI Institute, School of Computer Science. Carnegie Mellon University. http://www.cs.cmu.edu/afs/cs.cmu.edu/user/landay/pub/www/research/publications/CHI96/short_storyboard.ps (3.5.2009)

Method	Description	Reference and further information
STORYTELLING **Prototyping method, creating, generating and modelling new service features**	Stories are effective tools for design, useful both in facilitating collaboration around the service and in exploring and conveying the value the service will bring to the people who use it. It is often helpful to explain an idea, a product, service or an opportunity through a story. Stories enhance the design process in many ways. Stories capture in detail the real-world context in which a new technology will be used; they help determine which functions will be useful, how they should be presented, and what integration with other tools, people and information will be important. Stories can be an effective way of communicating to others problems with current work processes and the value of new interaction being proposed. Stories are useful with multidisciplinary or cross-organisational teams because they tend to serve as a "common language" that spans differences in background and organisational status and focuses attention on the people who will use the system (a constituency often absent from many design discussions). Stories are particularly valuable for conveying the benefits of collaborative systems, whose full value is not in any individual user task, set of screens or specific functionality, but in the real world consequences of the collaboration they enable among multiple people. (Gruen 2000) **See Hämäläinen and Lammi (2009): Service Design as a Tool for Innovation Leadership. In this publication.**	Gruen, D. (2000): Beyond Scenarios: The Role of Storytelling in CSCW Design. Lotus Research. IBM Research. http://domino.watson.ibm.com/cambridge/research.nsf/0/35aea10dcca079068525692000 66e970/$FILE/Techreport%202000.02.PDF (3.5.2009)
VOX POPS **Identifying, discovering and understanding the service context and the users** **Participatory design method, co-design**	Vox pop: the man in the street, unrehearsed persons, not selected in any way. As such, broadcast journalists almost always refer to them as the abbreviated, vox pop. The interviewees are shown in public places and supposed to be giving spontaneous opinions in a chance encounter. Each person is asked the same question; the aim is to get a variety of answers and opinions on any given subject. Journalists are usually instructed to approach a wide range of people to get varied answers from different points of view. The interviewees should be of various ages, genders and communities so that the diverse views and reactions of the general public will be known. **See Thurston (2009): Designing Public Services. In this publication.**	Hardman, L. (2005): Research FactSheet. Centrum voor Wiskunde en Informatica. http://homepages.cwi.nl/~media/demo/VoxPopuli/FactSheet.pdf (4.5.2009)

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An Emerging Field

PART ONE

SERVICE DESIGN AS AN EMERGING FIELD

BIRGIT MAGER

The economic basis of all industrial nations has changed dramatically in the last four decades from manufacturing to the provision of information and services. Services now represent between sixty and seventy percent of the gross domestic product of developed nations – in Hong Kong this even amounts to more than 90%. Almost all new companies being founded and jobs created are in this so-called tertiary sector.

Until the early 1970s the focus of societies and the economy had been industrial production. It was there where investments in research, development, design and marketing were unquestioned. It is quite interesting to look at an etymological dictionary – the Latin word "producere" originally meant "move forward" – so the idea of progress is already implemented in products and production. The word "service" on the other hand finds its origin in the meaning of subalternity or dependency, being the "runner" – and it is not surprising that until the early years of the 20th century in many contexts the economic dimension of services had been totally ignored or – as Adam Smith put it in 1793 in the "The Wealth of Nations": "The labor of some of the most respectable orders ... churchmen, lawyers, physicians ... is unproductive of any value."

FACTS AND FIGURES

A study from the UK Design Council in 2005 pointed out that 41% of all producing companies regard design as an integral component of their company, and they found that companies that use design are 200% more successful on the stock market. (Design Council 2007)

However: only 6% of all service companies see any role at all for design. I do not want to bore the readers with figures, no reason to worry, just one more fact: different sources give different figures on this, but they still indicate the same trend. In the year 2002 in Germany producing companies invested, per employee on average, 3270 EUR for research and development whereas service companies invested only 67 EUR per employee on average. A newer study says that the production sector in the year 2007 invested 13 000 EUR in "innovation" per employee on average while the service sector invested 4 000 EUR in innovation activities. (Zentrum für europäische Wirtschaftsforschung 2008)

These studies point in the same direction and obviously the investments into research, development, innovation and design are less by far in the service sector compared to the production sector.

SLOW CHANGE – SPEEDING UP

Keeping in mind how important the service sector has grown in our economy and how large the contribution of systematic research, development and design has been in the production sector, these figures are quite amazing. Fortunately under pressure of a rapidly changing market, there have now been noteworthy developments. While service engineering is still trying to establish itself as a discipline in universities and in practise, service management is no longer unusual as a path of study in business administration courses. Service marketing has established itself internationally and has brought, and is bringing, inspiring and fundamental findings into the world of service industries. In order to create an umbrella for the multidisciplinary research activities in the field of services IBM has now for several years supported the interdisciplinary and international field of service science research, bringing together experts from all over the world from all different disciplines in order to share, connect and collaborate.

All over the world successful and innovative companies are starting to realise the need for service-specific approaches, methods, roles and structures in order to make use of the potentials of the service business, and they are beginning to systematically invest in research development and design, to create new departments and roles within their companies in order to continuously

innovate their service offerings. But still we find that many companies have not yet moved on and seem to rely on service quality and service innovation as something that will evolve unattended by itself. Moreover, it seems that many companies have an amazing misconception regarding customer satisfaction: while 80% of all companies believe that their service is good, only 8% of the customers think so (Bain & Company 2005).

SOME MORE FACTS

A recent worldwide study from Accenture points out that overall customer satisfaction that had constantly improved since 2005 has gone down slightly in the last year. They also found that expectations of customers are continuously rising, especially in emerging markets. In addition customer loyalty is decreasing: customers are willing to change providers even if they are basically satisfied. Satisfaction will not win loyalty if customers do not find that their experience is meaningful and relevant to their expectations. An overall estimation of the business impact this lack of loyalty has is on average $4000 worth of business per customer. This is not particularly surprising since customers have access to data and can easily compare offerings, switching providers has become easy, and emotional and rational commitment to a provider is rare. (Accenture 2008)

"… [T]he results point out a prevailing lack of customer centricity – service designed around what truly matters most to customers – the economic impact of which is considerable." (Accenture 2008)

In these changing markets improvement and innovation of skills are of crucial importance to service providers in order to keep customers and in order to win new ones. Accenture claims that

companies need to develop more sensitive antennas for tuning into what today's consumers expect and value, as well as learning what it takes to reach and retain them. Obviously the traditional path of customer insight that freezes needs and experiences in Excel sheets is obsolete, and new ways of approaching and of gaining meaningful insight are needed. "Using the customer experience as a springboard to high performance, however, is far from simple." Therefore new concepts and methods are needed in order to succeed.

FOCUS ON SERVICE DESIGN

Service design is a new concept, introducing new processes and methods to service providers. Service design was rather irritating when first introduced as an academic field in design research and education at the University of Applied Sciences in Cologne at the beginning of the 1990s. At that time there was a common misunderstanding of design by the wider public and in many media and industry. Design was linked to the idea of styling and product cosmetics. Design was thought to be about making things more beautiful and more expensive, perhaps putting them into museums. Service design thus seemed rather odd, and at the time I understood that a lot of basic communication about the value of design was necessary in order to connect service design to the relevant business needs of service providers.

At that time not only common design understanding but also design education needed to be thereby repositioned and redefined. Whereas in the past designers were highly specialised professionals that contributed great value to different aspects of economic and social challenges, the demand for new approaches and competencies increased as the complexity of the economic and social problems

grew. A holistic design education that placed emphasis on analytical, conceptual and social competencies and that integrated the urgent issues of a service economy, ecological responsibility or even gender-related issues into education instead of teaching technical skills alone was at the time the answer to the changes in the world.

Service design was thus established as a part of a holistic and innovative design education, and even if it was irritating at the beginning it now has credibility in teaching, research, and practise all over the world. Throughout these almost fifteen years of research, experimentation and collaboration with industries a quite amazing body of knowledge has been developed and service design expertise has proven its value in numerous projects in the industrial, public and private sectors.

SUCCESS STORIES

Virgin Atlantic, for one, has its own department for service design. The Volkswagen research department is integrating a service design approach into their research. McDonald's has set up a customer experience innovation centre using the service design approach as a major facilitator for innovation. Numerous service companies, including telecommunication providers, insurance companies, banks, hospitals, transportation and hospitality industries are integrating service design on an organisational or on a project basis.

Universities are changing. At the end of the last millennium, as mentioned, it was the Köln International School of Design that had initiated an academic service design programme in 1992, and the Polytecnico di Milano, Carnegie Mellon University and Linköping University established service design as topics within an academic field. Now we find universities all over the world focusing on Service

Design education. Especially in the Nordic world there is an enormous amount of innovation in design education going on.

Agencies for service design have set up starting from the end of the last decade with a major hub in London and by now spreading internationally, especially in Scandinavia. Great and established design companies like IDEO or Continuum have set up Service Design as relevant practises that have successfully been developed throughout the last couple of years. International service design conferences have attracted and inspired practitioners and researchers not only in Europe and the United States but also in several regions in Asia. The Service Design Network (www.service-design-network.org) offers an impressive overview of the multiple players and activities in the Service Design field. The Network connects and informs those that are interested to learn about the growing discipline, and it connects those professionals that have enriched the service design community with their expertise.

SERVICE DESIGN. SOME FOUNDATIONS.

What exactly is service design? Service design addresses the functionality and form of services from the perspective of the user. *It aims to ensure that service interfaces are useful, usable, and desirable from the client's point of view and effective, efficient, and distinctive from the supplier's point of view.* Service design stands in the tradition of product and interface design, enabling the transfer of proven analytical and creative design methods to the world of service provision. In particular, there are close ties to the dimensions of interaction and experience design that originated in interface design. Even if these fields of study are still primarily oriented around designing human-machine

interfaces, parallels have emerged in theoretical and methodological development, in the search for factors to be noted and influenced when designing an experience, even though experience cannot really be designed, only the conditions that lead to experience.

Service design also connects to expertise that has been developed throughout the last decades in marketing. And it goes beyond these design- and marketing-related foundations by focusing on service-specific challenges. It has created design-rooted processes and methods that meet these challenges. *Service designers take a deep dive into the ecologies of services, into the world of needs and experiences of users and providers. They visualise, formulate, and choreograph solutions to problems that do not necessarily exist today*; they observe and interpret requirements and behavioural patterns, and they transform them into possible future services. In doing so they bridge business, technology and design perspectives.

SERVICE DESIGN. BASICS.

Some compact basic statements about service design shall create a simple and understandable first framework to this innovative design field; these basics have been around for a while and I still find them useful as first access to this field (Mager 2006):

1. LOOK AT YOUR SERVICE AS A PRODUCT. Good design is connected to a good strategy. This is true for services just as much as for products. If service design is to be used in a substantial and not in a decorative manner it has to be connected to the business strategies. It is about fundamental questions of positioning and portfolio management.

2. FOCUS ON THE CUSTOMER BENEFIT. Rethinking the organisation might be part of service design processes in order to create structures and processes that are focused on the delivery of benefit to a customer. It is a radical change of perspective: moving from frontstage to backstage is revolutionary for many service providers even though it seems so natural.

3. DIVE INTO THE CUSTOMERS' WORLD. Often the knowledge about the customer is very much rooted in the past and frozen in Excel sheets and diagrams. Service design explores in depth the vivid world of emotions and experiences, it reads in observations and probes, and helps people to envision and describe more about their own desires.

4. SEE THE BIG PICTURE. The service experience might start long before the customer gets in contact with the provider, and the experience does not end with the "Goodbye". Services are embedded in larger systems of relationships and interactions. And they need to take into consideration the changes users go through throughout the duration of the relationship.

5. DESIGN AN EXPERIENCE. The choreography of experience or at least of conditions that enable certain experiences is a major challenge in the service design process. Use techniques that have their roots in performing arts; learn from experience and interaction design in order to "design time".

6. CREATE PERCEIVABLE EVIDENCE. Making the invisible visible and the not yet existing perceivable is a contribution of service design. The invisible service needs to be transformed into perceivable evidence along the touchpoints of the service experience.

7. GO FOR A STANDING OVATION. In many service encounters success depends on people. The service performance needs to be supported by a designed setting that serves the needs of the "actors". This might require a fundamental reflection upon the recruiting, development, empowerment and appraisal of people.

8. DEFINE FLEXIBLE STANDARDS. A 100% standardisation as we often find it in production sites is not applicable to services; the right balance of standardisation and flexibility needs to be defined, considering the type of service that is being designed.

9. A LIVING PRODUCT. Services need to be designed for learning and development; an open membrane towards customers, employees and environment needs to be part of the service system.

10. BE ENTHUSIASTIC. The corporate culture has a major impact on the quality of the delivered service. An attentive observation of existing culture and a support of cultural change is thus part of the design process.

SERVICE DESIGN. SOME PRINCIPLES.

A service design approach is holistic. It looks at systems and subsystems of relationships and interactions. It takes the context into consideration, being aware that services are living systems. Mapping the service ecology and creating stakeholder maps are fundamental first steps in understanding the system that shall be designed. The work of service design is often interdisciplinary by necessity. Depending on the objective and the phase of a project it will be specialists from the client side that are involved: marketing, business strategies, the

organisational department, human resources development or the IT department, just to name a few. It might be external experts that bring their expertise and professional view into the design project.

Service design is anchored in a human-centred design approach and often has to understand or influence the behaviour of people. It is often therefore psychological or anthropological expertise that enriches projects – but it might also be branch-specific knowledge or insight about technologies or trends that is invited.

Co-creation is part of service design work in two ways. For one thing the client and customer will be thoroughly integrated into the exploration and creation process. This embraces external expertise in the design of services. And it brings expertise into the client's organisation and prepares clients for independent continuation on service design thinking and acting. *On the other hand co-creation also concerns the service offering: by definition most services are co-produced, so design integrates customers as active parts into the service delivery process, seeing them not as passive consumers but active partners and "co-creators" of value.*

Service designers think and work visually. Throughout all phases of the design process the transformation of ideas into visible or even tangible dimensions is practised. Ideas win a new dimension of life as soon as they are visual. This is not only stimulating; it also helps to move into constructive processes of modelling and adapting. *Mock-ups, prototypes, storyboards, and enactments are tools and methods that are applied.*

The service designer should be radical. They should challenge the existing, should reframe the given and go beyond the imaginable. They should play the disrespectful "court jester" in certain phases of projects. Service design should make sure that in the end

the result is not about minor decorative improvements in service systems that "hurt" nobody but that the opportunity is taken to think and to invent, to rethink and reinvent.

The work with the service design approach can and should be truly inspiring. *The above-mentioned principles, a holistic view, interdisciplinarity, co-creative work, visual thinking and a radical approach, create a special spirit that sets energy free and gives motivation for change.* And this is absolutely necessary because often a lot of change is needed: not change of machines, production processes or materials but change of structures, processes, culture and people. And in order to make this kind of change successful it needs a lot of inspiration, energy and motivation.

SERVICE DESIGN. SOME PERSPECTIVES.

The service design community has successfully grown throughout the last fifteen years, it is successfully implemented in practise, and a strong network has come into existence. International and interdisciplinary research is being conducted, and the body of knowledge and expertise is building up constantly. The successful application of service design has been practised in basically all fields of service industries: banking, insurance, hospitality, transport, telecommunications, retail, health and education, just to name a few. It is successfully applied in the field of public and social services. These successful cases now make it much easier to communicate about the service design approach, its relevance and impact. And even though we look back on a fifteen-year-old success story there are still many hurdles to take until service design is anchored in the world of services as a known and unquestioned contribution, until it is

implemented in organisational structures and roles, and until external expertise is integrated into service development and innovation projects on a broad scale. There is need for a broader acceptance of investments in research, development and design in service industries and a need for a broader understanding of the contributions service design bring to this emerging field. And last but not least there is a need for more systematic education for service design in academic and professional contexts.

Communication through publications like this one, through "Touchpoint", the first international service design magazine, through websites like the Service Design Network site, and through conferences will help to create a broader and better understanding and will open doors for new successful projects. A shared understanding of definitions, language, processes and methods, as it is now developing in the service design community, will help to communicate. And of course this shared understanding needs to leave enough freedom for the necessary national and personal differences in profile. Shared research on some fundamental aspects of service design will strengthen the discipline and the community. I would like to touch upon some of the research topics that will be of priority for the coming years.

The development of a formal language for services is one of the exciting new fields in development and practise, because a formal language of services may become the basis for systematically creating conditions that would support the design of service experiences. A design language for services empowers service designers to create interactions, spaces, and processes on the basis of a solid knowledge of systems relationships. This connects to the design language research that has been built with a focus on product design and which helps to understand the semiotic power of colour, shape or

material. What, then, are the corresponding dimensions of a service design language? And how could categories like style or genre influence this?

The performing arts are one field being explored by current service design research projects to tap into their potential for concept transfer and provide inspiration for innovative forms of organisation, notation, and communication. Perceptions and procedures derived from the performing arts have proved useful when embarking on the service design process. The issues of choreography and orchestration invite to be explored for their inspirational potential. The metaphor of front- and backstage is already a very helpful model for service performances, because it reveals the necessity for a comprehensive view of the whole system and the necessity to cast processes, locations, props, and actors from one mould. Storyboarding provides a comprehensive system for thinking about and visualising the procedural narrative structure from the perspective of clients. There are certainly many more such impulses concealed within the theatrical process, from the first ideas to the final performance, that will be valuable and fruitful for the design of services.

Service design is in many cases dealing with human behaviour: behaviour of employees, behaviour of customers and co-customers. Due to co-production customer behaviour is of greatest relevance for the success or failure of the service. So research on the way design can influence behaviour is of major interest within the service design field. The social and public service sector will especially need to focus more on the opportunities of behavioural change by the use of design and service design interventions.

A question that has been posed often throughout recent years deals with the potential of service design in B2B relationships. Thus far there has been no systematic research on this question,

even though some hypotheses and practical experience leads to the assumption that service design is and can be successfully applied. There is need for a deeper reflection on the restrictions and opportunities in this field.

A research agenda will be shaped in more detail within the Service Design Network and within those communities and networks that have now started to grow on a more regional level. The successful development of service design on an international level will be thus strengthened with these activities – and publications like this volume will support this process.

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SERVICE DESIGN IN THE AGE OF NETWORKS AND SUSTAINABILITY

EZIO MANZINI

Although services have existed since the beginning of history only in the last two decades has the issue of how to design them been explicitly raised. In these twenty years things have moved rapidly, and now service design is a fairly consolidated discipline, with its own set of conceptual and practical tools. On the other hand, even though this process of knowledge building has been fast, the context around it has moved even faster and so, to cope with such a rapidly changing situation, this young discipline must already re-define itself and its social, cultural and economic role.

Services are complex artefacts. We can find them in countless application fields involving a variety of actors with different motivations and roles, and different system architectures and material/immaterial relationships. Nevertheless, in spite of these diversities, they have a common core: all of them are interactions that generate value. More precisely, they are interactions between people who cooperate to produce a commonly recognised value.

In my view this is a useful definition because it includes every kind of service: from traditional ones (standard services) to the ones we can find in the new networks of contemporary society (collaborative services), where standard services are based on asymmetrical interactions between active providers and passive users, while in collaborative services interactions tend to be symmetrical and the distinction between providers and users blurs.

THE NEXT ECONOMY AND SERVICE DESIGN

In Chinese, as in several other languages, the ideogram "crisis" is composed of two parts, the meanings of which are "danger" and "chance". Without any doubt, we can say that today we are facing a deep, worldwide crisis. Many people are talking about its dangers, but now it is necessary and timely to talk about its chances too. This is particularly true if we want to discuss the present and future role of service design.

There are several possible exit strategies from the crisis. The best of them is oriented towards more sustainable ways of living and producing. This is the big chance that the crisis offers us. Moving in this direction there is a lot to be done, starting from the ecological re-orientation of the entire production and consumption system (to dramatically increase its eco-efficiency; see Stern 2006), moving

to the social production of services (to face new demands and to increase social cohesion; Mulgan 2007) and ultimately reaching specific regional eco-development programmes (to promote the sustainable use of local physical and social resources; Landry 2006, Thackara 2007).

Considered as a whole these activities indicate the rise of a new economy: an economy that is neither a utopia, nor a far-off future possibility, but one of which the first examples can be registered today and that, most probably, will boom in the near future. This is a next economy that is near to us and, at the same time, quite different from what has been the mainstream economy until now.

SERVICE-ORIENTED SOLUTIONS

The crisis shows that continuous consumption growth is environmentally and economically unsustainable. Therefore, the next economy re-orientates its activities in new directions. Its "products" are complex artefacts such as: distributed power generation systems (to optimise the use of diffuse and renewable energies); new food networks (to create direct links between farmers and consumers); intelligent mobility systems (to promote public transportation and innovative solutions); programmes of urban and regional development (to enhance local economies and new forms of community); and collaborative services for prevention and health care (to involve directly interested users in the solution).

All these examples require appropriate, local-specific solutions: sets of products, services and knowledge systemised to achieve a result (Manzini, Collina & Evans 2004). Considered as a whole these solutions are to be considered a new kind of service: complex localised systems where different actors interact in order to produce

a commonly recognised value. *The result is that, being based on context-related, service-oriented solutions, the next economy calls for a deep change in traditional ideas on production and consumption, and consequently on design.*

In the past century, mainstream thinking (as far as production, consumption and design were concerned) was deeply product-oriented: industrial products, largely independent of the places they had to be produced and consumed, were at the centre of the scene, while services, when they were considered, were seen as product extensions and/or additional features. In recent decades the focus has progressively moved towards services, while products have been increasingly seen as "service evidences", i.e. physical elements that make services possible. The emerging next economy asks us to move further in the same direction, extending our standard idea of service to solutions and, in particular, extending it to the advanced solutions that appear when we consider them in the framework of the network society (Castells 1996) and of the new forms of organisations that the Internet has made thinkable and possible (von Hippel 2004, Tapscott & Williams 2007, Leadbeater 2007). Looking in this direction, the keywords for a discussion about services and service design evolution are: distributed system, collaborative networks and creative communities.

DISTRIBUTED SYSTEMS

Over the last few decades the adjective "distributed" has been increasingly used in relation to several different socio-economic systems: information technologies, and distributed computing; energy systems and distributed power generation; production processes and distributed manufacturing; innovation and distributed

creativity, distributed knowledge. Some of these concepts became mainstream two decades ago (the "classic" distributed computing). Some of them have a strong position in the international arena (e.g. the concepts of distributed power generation and distributed manufacturing). Others have emerged very recently, or are currently emerging, to a wide and growing audience (distributed knowledge and distributed creativity).

In all these cases, what the term distributed adds to the substantive to which it is related is the idea that it has to be considered as a web of interconnected, autonomous elements, i.e. elements that are capable of operating autonomously, whilst remaining highly connected with the other elements of the system. In other words, what the adjective "distributed" indicates is the existence of a horizontal system architecture where complex activities are accomplished in parallel by a high number of connected elements (technological artefacts and/or human beings). Given our initial definition of service, all these (inter)connections can be considered (and designed) as a new kind of service: service relationships that are spread all over the distributed systems.

COLLABORATIVE NETWORKS

Something very interesting is happening in the field of organisations and in the way people participate in collaborative projects (Stalder & Hirsh 2002, Weber 2004, Mulgan & Steinberg 2005). For instance: in building new common knowledge, as in the case of Wikipedia; in enabling large numbers of people to do something together, as in the cases of Meet-Up and SmartMobs; in promoting mutual help, adopting a peer-to-peer approach in health care, as in the case of Open Welfare, a project led by the British Design Council

(Cottam & Leadbeater 2004a; Bruns, Cottam, Vanstone & Winhall 2006).

These cases, and many similar ones, can be defined as collaborative networks: networks of people who collaborate to obtain specific results by building a common vision and adopting a peer-to-peer modality. Thanks to this organisation, collaborative networks are able to develop very complex projects at both a global scale (as Wikipedia) and a local one (as Meet-Up, SmartMobs). Quoting the British Design Council, they are new forms of services where "the boundary is blurred between the users and producers of a service", and where "it is effectively often impossible to differentiate between those who are creating the service and those who are the consumers or users of the output" (Cottam & Leadbeater 2004b).

CREATIVE COMMUNITIES

Looking attentively at the complexity and contradictions of present society we can see another very interesting typology of cases: an emerging number of creative people who invent and enhance new and more sustainable ways of living and producing (Meroni, 2007). For instance: groups of people who re-organise the way they live in their home (as in the co-housing movement) and their neighbourhood (bringing it to life, creating the conditions for children to go to school on foot and fostering mobility on foot or by bike); organisations that promote a more effective mobility developing car-pooling and car-sharing systems; communities that set up new participatory social services for the elderly and for parents (such as the young and the elderly living together or micro-nurseries set up and managed by enterprising mothers) and that set up new food networks fostering producers of organic items, and the quality and typical

characteristics of their products (as in the experience of the Slow Food movement or solidarity purchasing groups, fair trade organisations and community-based agriculture).

The list of examples could continue, showing their variety but also their common denominators. In fact, considered as a whole, these promising cases tell us that there are people who are able to cooperate with others and to achieve concrete, positive results. We will refer to them with the expression creative communities (EMUDE 2006, Meroni 2007).

Observing the characteristics and implications of creative communities, we can recognise several interesting aspects. The most interesting one for us here is that they are the clearest example of a new typology of services: *collaborative services. That is, they are services that, to be performed, ask for the direct and active involvement of all the interested actors, final users included.*

A POSSIBLE CONVERGENCE

Until now, distributed systems, collaborative networks and creative communities have been three different and rather separate phenomena. Except for some minor overlapping, they have been generated by different people with different motivations. Nevertheless, in the next economy they may converge and become a single complex dynamic of social change. Doing so, they will strongly reinforce each other: creative communities will bring the lively richness of people involved in real, daily problems, and collaborative networks and distributed systems will bring the new opportunities that have been opened by their brand new forms of organisation (Manzini, 2007).

NETWORK SOCIETY AND SERVICE DESIGN

The next economy proposes a very wide range of service typologies, from standard services to collaborative ones. However, if we look at it in a dynamic way, considering the "Internet revolution" as one of the ongoing stronger drivers of change, we can observe that the focus of interest is progressively moving towards the latter, that is, towards collaborative services (Mulgan & Steinberg 2005, Bauwens 2007, Leadbeater 2007). In view of this movement, in order to discuss the present and future potentialities of service design, it is useful to focus on some of the characteristics of standard and collaborative service.

STANDARD SERVICES

In past decades, the social and economic shift from products to services was largely based on the movement from informal internal activities (internal to households and enterprises), to formal services delivered by external experts (that is, the outsourcing of non-core activities, in the business domain, and full service delivery, in households). All these cases, from laundries to food delivery, from nurseries to care of the elderly, have traditionally been based on the same modality: providers do their best to reduce user effort and the time needed to achieve a given result. In other words, as already noted, all of them were traditionally built on the standard, highly asymmetrical, interaction model.

From an environmental point of view, the movement towards outsourcing and full service may present some advantages: when selling final results rather than material products it is in the service deliverer's economic interest to increase the eco-efficiency of the system by extending the life of products, components and materials,

and optimising their utilisation (Stahel 1997; Manzini & Vezzoli 2002; Mont 2002; Tukker, Charter, Vezzoli, Sto & Munch Anderson 2008). On the other hand, as far as the social implications are concerned, the discussion on these service potentialities needs far more detail. In fact, as regards services for everyday life, the diffusion of standard services may become socially dangerous: by aiming to reduce users' efforts and involvement, they also reduce their sense of responsibility and their capability of taking care of their own environment and, more generally, of the basic functions of their everyday life. In other words they risk being very effective disabling solutions: solutions the side effect of which is to reduce users' capabilities and willingness to take action to solve problems and/or to open new opportunities (Manzini & Jegou 2003). This is exactly what should not happen in the transition towards sustainability: the social and technological change that it requires calls for all the available resources, i.e. for everyone's sensitivity, creativity and entrepreneurship.

COLLABORATIVE SERVICES

We have already introduced the concept of collaborative services and, dealing with creative communities, we have mentioned some examples: from co-housing to micro-nurseries and from car-pooling to the possibility for children to go to school on foot. Cases like these can be defined as collaborative services because, as we said, they call for the direct and active involvement of all the interested actors. Now, looking at them carefully, an important implication of this necessary active involvement emerges: all these cases very clearly show that, to exist, they must be based on a high degree of mutual trust and relational qualities, i.e. on good personal relationships

(Cipolla 2005, 2007). In fact, while all human organisations may present some degree of relational qualities, for collaborative ones simply a high degree of them is not an option: it is the pre-condition of their very existence. Collaborative services call for trust, and trust calls for relational qualities: no relational quality means no trust and no collaboration, and consequently no practical results.

This character has important implications for service design. The first consideration to be made is that personal relationships and trust, by definition, cannot be imposed. The second one is that collaborative services are very delicate social organisations, and every intervention from outside puts their equilibrium at risk. Given that, it clearly appears that they cannot be planned (at least in the way in which this term is normally used). Nevertheless, as we will see, something can be done. Looking attentively at existing collaborative services, we can discover that collaborative attitudes can be made more probable and that better contexts for trust and relational qualities can be built. And that, therefore, larger numbers of people can be enabled to implement new service ideas or to replicate some existing ones (Castells, Mireia, Linchuan & Sey 2006; SEP 2008).

ENABLING SOLUTIONS

Generating a new service idea or creatively adapting an existing one calls for a huge commitment in terms of time and personal dedication. Although this almost heroic aspect is one of the most fascinating characteristics of these initiatives, it is also an objective limit to their long-term existence and to the possibility of being replicated and adopted by many. This appears to be the major limit to the diffusion of collaborative services: the limited number of people capable and willing to cross the threshold of commitment required

to become one of their promoters, or even just one of their active participants.

To overcome these problems collaborative services call for enabling solutions: systems of products, services and knowledge conceived and developed to make collaborative service ideas more accessible (reducing the threshold we mentioned earlier), more effective (increasing the ratio between results and required individual and social efforts) and more attractive (increasing people's motivation to be active) (Jegou & Manzini 2008). *In more general terms we can say that enabling solutions have to bring into play a specific intelligence: the intelligence that is needed to stimulate, develop and regenerate the ability and competence of those who use them.* Obviously, the more expert and motivated the user, the simpler the necessary supporting tools may be. On the other hand, the less expert the user, the more the system must be able to make up for his/her lack of skill by supplying what he/she does not know or cannot do. In addition, the less the user is motivated, the more the system must be not only friendly, but also attractive: i.e. taking an active part in a collaborative service must be stimulating.

EMPOWERING PEOPLE'S CAPABILITIES

The concept of enabling solutions proposes a new way of considering individuals and communities: to look at them for the opportunities they offer, rather than their problems, and their capabilities rather than their needs. To consider human beings neither as consumers nor as passive users, but as active subjects, endowed with resources and, if the conditions are right, ready to put them into play.

This approach, per se, is not new: more than 2500 years ago Lao Tzu's wrote: "Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime" (Tao Te Ching). It means that, to give people long-lasting well-being, we must make it possible for them to deal with their own problems themselves. And, to do so, they may need access to appropriate knowledge and tools.

Moving to the present, we can find Amartya Sen (who, in 1998, was awarded the Nobel Prize for Economics) who says that what determines well-being is neither goods nor their characteristics, it is "the possibility of doing things with those goods and characteristics..." (Nussbaum & Sen 1993, Clark 2005). In fact, it is this possibility that enables people to approach their own ideas of well-being and feel able to "be" what they wish to be and "do" what they wish to do. In other words, Sen proposes to look at people, focusing on their capabilities and the way to increase them: a capability approach that is very close to what was previously suggested when introducing the concept of enabling solution.

In conclusion, Sen's capability approach could (and, in my opinion, should) offer a solid basis for an updated service design theory. Adopting it, the basic question of what to design and how could have a very simple but challenging answer: design to expand the capabilities of people to lead the kind of lives they value. And to do it in a sustainable way.

DIFFUSE RESOURCES AND SERVICE DESIGN

The world is rich in potential resources. They are diffuse natural and social resources such as, for instance, solar energy and wind on one side, and people's creativity and entrepreneurship, on the other.

Traditionally these resources were not considered, because the idea of economy of scale was blinding us, and we were unable to recognise their potentialities. Today, we have learnt that, in the network society, things can be seen in quite a different way: diffuse resources can be valorised by distributed systems. The Internet has made thinkable and practically feasible peer-to-peer organisational models that allow us to valorise diffuse knowledge and people's capabilities. The result is that now we can see a solution in the richness of these diffuse resources, most probably the only viable solution, to the current major problems of our Planet. That is, the only viable way to move towards sustainability.

Design has a lot to do with this vision. The perspective of valorising diffuse resources (by promoting distributed systems, collaborative networks and creative communities) is very concrete. More than that: it indicates one of the next economy's main fields of action. To work in these promising fields of action it is necessary to bridge social and technological potentialities at the local scale, to connect them with larger networks and to do all this in a meaningful way. These three actions (bridging society and technology, connecting local and global, and giving meaning to new artefacts) are also the core of every design activity. If this is true, it follows that, by adopting an appropriate approach, design could become one of the main agents in what will necessarily become a huge participatory social learning process towards sustainability.

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SERVICE DESIGNERS' METHODS

SATU MIETTINEN

Designers' tools and the service design process place emphasis on strong social skills, empathy for the users, creativity and visual thinking. Design thinking has the ability to create concepts, solutions and future service experiences for users. This article discusses designers' co-creation methods and processes when developing the service product. Designers work as coordinators in the service development projects between all the stakeholders during the process. This article illustrates the process phases.

Service design connects the areas of cultural, social and human interaction. Use of design methods: research, thinking and visualisation methods in the service design process is also a link between the different views and to service design. Design thinking is an important mindset for a service designer. *Tim Brown (2008) has outlined the design thinker's personality. They have the ability to feel empathy for the others, notice things that others don't and utilise this to inspire innovation. Design thinkers create novel solutions that dramatically improve existing ones. They have the optimism to challenge, expose questions and explore constraints. And they collaborate alongside other disciplines.*

Blackman (2008) discusses the designer moving from the design of artefacts to the design of interfaces and processes. Both design thinking and operations thinking provide both users and designers with the languages that describe what is going on in these interfaces and processes. Designers are trained to see systems from the perspective of individuals.

Service thinking has been introduced as a new concept by live|work. It has similar elements to than design thinking. Reason & al. (2009) from live|work discuss the concept of service thinking in their e-article. People must be re-engaged in the services they use. Networks enable services. Technologies enable these connections. Service thinking is an ongoing consideration of how our collective needs are met without overstretching human and natural resources. Value is constructed in new ways. Moritz (2005) has also discussed service design thinking as a way of giving strategic direction. It includes all strategic consideration, the identification of direction and the scope of the service design project. It gives service design direction and guidelines.

Jane Fulton Suri (2008) writes about design research methods as an integral part of the innovation process. *Design research exposes the patterns underlying peoples' behaviours and experiences, explores reactions to probes and prototypes and sheds light through iterative hypothesis and experiment.* Design research both inspires imagination and informs intuition.

Design research methods also play an important role in the service design process. Moritz (2005) has defined one of the service design process phases as a service design understanding. This is about finding out and learning about the customer's latent and conscious needs. In this part of the service design process design research methods become very helpful. Service design is a new emerging field of design investigation where the vocabulary and paradigm are developing. Yet it is useful to look at the exciting discussion and work done in the field of design research and see what we can learn there. In my previous research with tourism and service design I was able to utilise Mattelmäki's (2006) research on design probes. Design probes are a user-centred for understanding human phenomena and exploring design opportunities. They are based on user participation by means of self-documentation. Probes look at the user's personal context and perception and they have an exploratory character. Self-documenting diaries are a typical example of this. I'll review design research methods briefly.

Fulton Suri (2008) has discussed three types of questions that design research addresses with respect to innovation.

GENERATIVE RESEARCH METHODS: gaining human-centred insights, new ideas and opportunities, emergent patterns and challenges, possible new offerings (context mapping, role playing, design probes).

EVALUATIVE OR FORMATIVE RESEARCH METHODS: co-discovery, co-design, engaging the participants in creativity and in critical thinking, sketches, models, videos, prototypes, continual learning through a process to determine the what, how, and to whom the offering is directed (storyboards, animations, tangible prototypes).

PREDICTIVE RESEARCH METHODS: future opportunities and ideas, speculative scenarios, estimating the scale and potential of an opportunity even when most variables are unknown (scenario-based design).

During the past two years I have been able to participate in two service design projects, developing a research plan, testing service design methods and processes, and also involving groups of innovative design students in these two processes. The first project was a regional development project concerning a new leisure product for a local ski resort. The second was a research project called "Experiencing Well-being - New Service Platforms and Mobile User Interfaces for Leisure": developing service products that support well-being. This research project was funded by the Finnish Funding Agency for Technology and Innovation.

These hands-on experiences with design research methods, users, co-creation, prototyping and service product development have given me insight into the overlap between service design and design research methods. *The service design process uses generative, formative and predictive methods. It implicitly contains the idea of innovation, and it can use several methods to concretise a new offering or innovation even in the same development process.*

SERVICE DESIGN AND INTERACTION

Co-creation is a new concept in the service world. The value of services is increasingly being co-created in a process together with the firm and the customer. This is the case especially in open source products. Battarbee (2006) has introduced the concept of co-experience, which is a user experience constructed through social interaction. Products may be involved in these interactions as the subject, object or the means of interaction. Co-experience opens up new possibilities in design for user experience by focusing on the role of technology in human action. Co-experience can be designed into the interactions of products and services (Battarbee & Koskinen 2006).

Evanson (2008) also discusses services and interaction. She defines services as activities or events that form a product through an interaction with designed elements of the service organisation, the customer and any mediating technology. These interactions are delivered through machine to machine (m2m), person to machine (p2m), and person to person (p2p) modalities. Service design is a systems challenge driven by understanding of human experience.

When users' needs and expectations are the starting point of the design process the usability of the product or service is ensured. Human-centred design processes for interactive systems are based on the ISO 13407 (1999) standard. This standard has been developed to include the user needs in the design process. The process has four stages: understanding and defining the context of use, making up a definition of the user, producing the design solutions and evaluating the solutions. Hanington (2003) has suggested an interesting division of research methods for human-centred design, as follows.

TRADITIONAL METHODS serve their purpose well. The data is easily compiled, analysed and visualised. These methods include:

Market research, Focus groups, Surveys, Questionnaires, Interviews, Unobtrusive methods, Experiments.

ADAPTED METHODS are borrowed from disciplines engaged in human research. These methods are adapted to better suit the needs of designers and include the following.

Observational research: Participant observation, Still and Video documentation.

Ethnographic methods: Video ethnography, Beeper studies, Experimental sampling, Cultural Inventory, Artefact analysis.

HCI (human computer interaction): Thinkaloud protocol, Heuristic evaluation, Cognitive walkthrough.

INNOVATIVE METHODS are credible ways of collecting user information through creative means. They have a visual as well as participatory nature. They are creative. Innovative methods comprise the following.

Creative and Participatory methods: Design workshops, Collage, Card sorting, Cognitive mapping, Velcro modelling, Visual diaries, Camera studies, Document annotations.

In design processes traditional research methods serve to support the process. Often data collection and understanding the user needs begin with interviews.

Adapted methods, especially from ethnography, are very common in user-centred design processes. Industrial ethnography is commonly used. Field research in design does not assume a level of involvement comparable to ethnographic fieldwork in a social setting for studying social interaction. In a participatory design setting the designer seeks to understand the user's tacit knowledge in using and interacting with technology: fieldwork is thus often performed by an ethnographically untrained HCI-specialist in a much shorter time.

Even though industrial time constraints seem antithetical

to ethnographic fieldwork much can be accomplished in a few hours (Sperschneider & Bagger 2003). It is clear therefore that any new design project requires rethinking the fieldwork/research strategy. Methods must be adapted to the circumstances.

Innovative methods are an interesting area that is developing though increased experience in participatory design. New innovative research methods that support the service design process are continually being developed.

DESIGNING SERVICES FOR LEISURE: CASE TAHKO

I will now describe the two service design case studies with which I was deeply involved. The first of these describes a service development process for a local ski resort. During the case study the service design process was applied, and participatory design methods played an important role.

The city of Nilsiä and the company Tahkovuori Oy, located in south-eastern Finland, coordinated a regional tourism development project called "Experience Tour in Tahko". The Savonia University of Applied Sciences, Kuopio Academy of Design, provided service design services for the development project. Tahkovuori Oy has the largest reserve of rental cottages in the Tahko ski resort area. In Nilsiä over 60% of the working force is employed in the service sector, and tourism has a major role.

The "Experience Tour in Tahko" project aimed at designing a new leisure product for an old open quarry area a few kilometres from the Tahko ski resort. The ski resort area includes ski slopes, a spa, cross-country skiing areas and various winter activities. A new service product was designed to serve guests during the late autumn

and winter seasons. The service design brief was thus to design and prototype a customer-oriented service product for the quarry area.

The project was carried out in a team including the project coordinator, tutoring teachers, design students and a researcher. The client representatives from Tahkovuori Oy and from the city of Nilsiä made comments and choices after each development phase.

SERVICE DEVELOPMENT PROCESS:

1. PRE-WORK AND FIELDWORK

The student team visited the International 2008 Travel Fair at the Helsinki Fair Centre to see the leisure products being offered on the national and international market. The selection was then analysed. The starting point for the project was thus background research on the area of tourism and leisure as well as the Tahko leisure cluster to benchmark the service selection in the market and development needs of the local tourism cluster.

Fieldwork at the open quarry area and at the ski resort area with the team was an important part of the project. A representative from Tahkovuori Oy joined the fieldwork and gave a second project briefing at the location. Some of the initial ideas were tested, and the quarry itself was documented: the quarry area had some physical touchpoints that had to be considered in the design process.

2. CONTEXT MAPPING WITH TOURISTS

The results of the background research provided information for preparing the context mapping (Sleeswijk Visser, Stappers, van der Lugt and Sanders 2005) workshop with tourists. The idea of the context-mapping workshop was to reveal conscious and sub-conscious

Case Tahko: the SEES service launched at Tahko. *Photo courtesy Kari Ikonen.*

Case Tahko: Prototyping the service at Tahko.
Photo courtesy Katja Sorvali.

information on tourists' experiences, hopes and expectations for their travel experience at the quarry. One of the most important project goals was to have the tourists (the users) participate in the service design process. We organised a context-mapping workshop where the tourists had the possibility to share their travel narratives, experiences and dreams. This was conducted through a series of tasks that the tourists carried out in the workshop: choosing images and telling their holiday narratives related to the pictures, responding to words with synonyms, and working out a picture collage on their dream holiday. The information they produced, both visual and verbal, was then analysed using content analysis methods.

3. SCENARIO-BASED DESIGN

Scenario-based design was based on the analysis of the background research, context mapping and the fieldwork at the open quarry. The goal of the scenario work was to visualise the main service concept for the client. Scenarios are useful tools in narrating and visualising a user-oriented story for a client. They can concretely fix an interpretation and a solution but are still easily revised. They can have multiple levels and perspectives for many purposes, and they anchor design discussion in work, supporting participation among stakeholders and appropriate design outcomes (Carroll 1999). Students were working in three different teams so three service scenarios were produced. Each team chose a different concept that arose from the data. Service scenarios were visualised using various methods: multimedia, storyboards, vocal narratives and images. The client chose the elements for the prototyping stage from the presented scenarios.

4. EXPERIENCE PROTOTYPING

The aim of the experience prototyping was to test the feasibility of the chosen service scenario: to test the logistics, customer experience and financial impact of the service product in a cheap and quick way. An experience prototype is any kind of representation, in any kind of medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system we are designing (Buchenau & Fulton Suri 2000). Experience prototyping of the service product also provides plenty of information on the context related to the service experience as well as the architecture of the travel experience: pre-, ongoing and post-experience (Miettinen 2007). Experience prototyping was carried out with users who tested central touchpoints and the customer journey created in the service scenarios. Tahkovuori Oy prepared the prototype service at the open quarry. After the experience prototyping users had the opportunity to discuss the experience with the service development team and the service provider. This feedback went back into the final application of the service product.

5. NEW LEISURE PRODUCT LAUNCH: SEES AT TAHKO

The new leisure product was launched for the ski holiday season in February and March 2009. It is now possible to include the customer feedback in the development and maintenance plan.

6. LESSONS LEARNT

In this case study a new leisure product was developed and launched. A participatory design approach was important as we wanted to develop a product that would answer to the users' needs and expecta-

tions. Difficulties were in coordinating different parts of the process and communicating the main findings to all the stakeholders. Choosing the key service drivers for the scenarios from the data was also challenging, as there were time constraints on the process of analysing the data and visualising the customer journey. *The key drivers were the main feelings, emotions and expectations that the tourists had for their holiday experience. The team had to transfer these expectations into a customer journey formed by the touchpoints at the open quarry. These key drivers opened up opportunities to design compelling value propositions for the users.* Jacoby and Rodriguez (2007) state that the designer needs to uncover human needs in order to define compelling user value propositions to, in turn, design products or services that people want to buy. Prototyping the value proposition, the customer journey at the open quarry, was a satisfactory way to test the product before the product launch.

EXPERIENCING WELL-BEING

The Kunnonpaikka rehabilitation centre has been working with marginalised children for some years. We have worked with the rehabilitation centre on a service product development project for activating marginalised children. This initiative was part of the aforementioned Experiencing Well-being project funded by the Finnish Funding Agency for Technology and Innovation. The service design process in this case progressed in a very similar way to the previous case. Also in both cases the new service and customer journey were embedded into the existing service landscape: rehabilitation services, leisure service etc. The team in this case study was similar to the previous case: a researcher, design students and teachers.

SERVICE DEVELOPMENT PROCESS AT THE REHABILITATION CENTRE:

1. BACKGROUND RESEARCH WITH TRADITIONAL AND INNOVATIVE METHODS.

This initial phase entailed determining the central elements for the user experience at the rehabilitation centre, identifying existing touchpoints and the customer journey; increasing understanding of the context of rehabilitation; and benchmarking children's amusement parks with child participants. This involved much fieldwork and many interviews at the rehabilitation centre and including the staff in the service development process. Frontline staff and management thus participated in a context-mapping session where they produced a vision of future rehabilitation services. According to Jones and Samalionis (2008) many executives rarely know what frontline staff think and how they would leverage their services. It is beneficial to develop insights about customers, the business, and the technology in parallel. Context mapping revealed that the future scenario for the rehabilitation centre differed significantly, depending on the point of view in the organisation.

2. INVOLVING THE USERS IN A PARTICIPATORY DESIGN PROCESS.

This phase intended to discover conscious and subconscious information regarding children's experiences, hopes and expectations for the playground of their dreams. Children participated in a context-mapping workshop where they were working with a physical scale model of a large indoor and outdoor space in two teams. They had visual materials (images and stickers), drawing and painting materials, building materials and small objects that they could use to

BELOW LEFT: **Experiencing Well-being: One of the proposed new service touchpoints visualised.** *Photo courtesy Niina Talaslahti.*

BELOW RIGHT: **Experiencing Well-being: Prototyping the service with children.** *Photo courtesy Niina Talaslahti.*

BOTTOM: **Experiencing Well-being: Children constructing the playground of their dreams in the context mapping workshop.** *Photo courtesy Kuopio Academy of Design.*

construct their space. After working with the scale model the team members explained the concepts with which they were working. This type of active workshop method worked well especially with children aged eight to twelve. There were eight children working with two scale models. An expert from the rehabilitation centre also participated in the context-mapping workshop.

3. SCENARIO-BASED DESIGN

The scenarios were based on data analysed from the background research and from the results of the generative research methods. An expert from the rehabilitation centre participated in analysing the results. Students produced several scenarios based on these results. The rehabilitation centre chose one scenario for experience prototyping. The choice was based on feasibility, functionality and profitability, as well as the new value proposition that the service product offered.

4. EXPERIENCE PROTOTYPING

The aim of this phase was to test the service product quickly and inexpensively in order to discover any problems. The rehabilitation centre carried out service prototyping with a customer group. The prototyping challenged existing operational realities; this revealed several problems that needed solving before proceeding to product launch. Here experience prototyping as a method served well. We were able to analyse the situation from both the user and service provider's points of view and revise the product before the launch.

6. LESSONS LEARNT

Jones and Samalionis (2008) discuss the pathway to radical innovation and how difficult it is to introduce new services. Focusing too much on current reality makes it problematic to envision a world that is different. This case taught us how challenging it is to find tools to find common ground inside the organisation. Even if there is need for new business opportunities it is difficult to see a common future. Communicating the future with scenario tools helps the various stakeholders to discuss the service opportunities, but for implementing the new service process, new tools, such as training, consulting, or new service channels, may be needed. This is especially true if there is need to change the service channels and interaction processes, for example, to alter the person-to-person communication, or the ways the staff is communicating to the customers.

CONCLUSION

The service designer has various methods available that are based on design research and design thinking. Innovative design methods especially lend plenty of scope for developing the service design process. New service concepts and products are thus evolved through systematic development work. Good methodological knowledge and practical fieldwork skills in applying and innovating these methods are essential for a service designer.

The human-centred design process focuses not only on developing usable, functional and desirable services but also creating unique value propositions for the customers. New ways that users can participate both in the service development processes and in creating new kinds of value propositions are the future challenges in the area of service design.

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FROM INTERACTION TO SERVICE

STEFAN HOLMLID

When service design got its boost in 2003-2005, as design firms plunged into what seemed to be unchartered area, the possibilities and provisions for the design discipline were under-explored. In this article we will trace one of the strands of development that have supported service design since then, and also point towards areas where service design might benefit from building on earlier developments.

Digital interaction designers were starting to graduate in the 1990s, from our and other universities. Since then quite a few students have gone into different business sectors and established for themselves specific roles. Meeting them and starting to talk to these professional designers about service design and what service design is, a typical comment we heard was, "sure, that's basically what we've been doing all along". Strange as their laid-back reaction seemed, I tried to figure out what was behind this. The obvious was of course that they were designing online services, mobile services, etc. And even though these might be regarded as service channels, in some cases they were the only service channel. Another reason seemed to be that, because some of the basic qualities of the design object are so similar between services in general and digital interaction design, the design techniques and methods, and the focus on user-centred design, this has given them a vantage point on the design object that allows them to think in terms of services. Yet another reason was that Scandinavian design traditions, such as cooperative design, made it possible for them to work with inclusive processes with several stakeholders with varying objectives.

Finally, with the interaction design students we had worked with in Linköping since 1997, we had systematically and consistently worked in the courses with design perspectives and use qualities. That is, in the design process it was made a point to be able to design, reflect on, argue for, and make judgments on design objects from perspectives such as a tool-perspective, a media-perspective, etc. It was also made a point to be able to design, reflect on, argue for, and make judgments on design objects based on defined qualities of social use, aesthetic use, practical use, construction usage, and ethical use. These two actually laid ground for a reflective design practitioner who develops a certain sensitivity towards continuous learning.

This indicates that there is a possible heritage from digital interaction design that can go into service design, as well as experiences from service design that should go into digital interaction design (Holmlid & Evenson 2008). That is where this article tries to make a contribution.

FROM INTERACTION DESIGN

To begin with I would like to offer a short interpretation of how interaction design transformed into service design. This will be done from a Scandinavian viewpoint, even though a similar description possibly could be made from any standpoint.

During the 1970s and the 80s the foundations were laid for a discipline that was called interaction design (Winograd 1994, 1996; Löwgren & Stolterman 2005; Ehn & Löwgren 1997). During this period, there was established an engineering perspective, as well as participative, contextual and design perspectives, on the development of interactive systems. The two earliest perspectives were a cognitive psychology perspective (Norman & Draper 1986; Norman 1988) and the participative perspective, with its roots in Scandinavia (Ehn 1988). The participative, or, as it is sometimes called, the cooperative perspective, took as its starting point a high degree of user involvement in design and change processes. The engineering perspective had its typical proponents such as Jakob Nielsen (Nielsen 1994), with usability engineering, or the lifecycle perspective (Mayhew 1997) that is institutionalised through a set of ISO standards (see e.g. ISO/IEC 9126, ISO 9241, ISO 13407, ISO 18529, ISO/IEC 25010). The contextual perspective emerged from the engineering perspective as well as some of the shortcomings of that perspective (Whiteside, Bennett & Holtzblatt 1988; Wixon, Holtzblatt & Knox

1990; Beyer & Holtzblatt 1998). The design perspective set off slowly during the 70s from several different sources but grew to become an important perspective during the 90s.

During the 90s, interaction design was established alongside experience design as central design disciplines in the development processes of digital artefacts. During this period and the early 2000s the use of the World Wide Web for business purposes was initiated and grew rapidly. We saw the advent of online banking, community-based shopping, auction sites, travel arrangements, bookstores, and many other businesses. The designers working on the design of these were typically interaction designers or experience designers.

In hindsight it is evident that these designers were participating in designing services, focusing on the online presence and the user-interface component of a self-service channel. This is one reason why interaction design, as conceived during the 90s, should be referred to as digital interaction design. Given that, it is easier to understand authors such as Löwgren and Stolterman, because they focus on the technology-based interaction and assume that there is an interactive artefact at centre stage.

Digital interaction design highlights technology as an enabler, an instrumental tool-perspective, and as self-service. It highlights media perspectives, technology-mediated communication, and the fact that designers only can design possibilities for usage. On the other hand, digital interaction design suppresses the social meeting, the contacts where people are touched and become touched, and the co-creation/co-production of value in the service process.

Another reason for referring to this design tradition as digital interaction design is when we look at design theorist Buchanan's

(2001) design orders. He describes differences between design disciplines in terms of differences between their primary design objects, such as signs or things. For the design order he calls interaction design, all kinds of interactions are included. In effect, the design discipline digital interaction design should be regarded as a part of this order. Moreover, if one views services as being performed through interactions, service design would also be part of this order. To be able to distinguish between the design order interaction design and the design discipline, we need to talk about digital interaction design (Holmlid 2007).

OUT OF DIGITAL INTERACTION DESIGN

The character of the design object of digital interaction design is distinct from an ordinary product, in the sense that it is a digital, and therefore intangible, object, and that it is the activities with the digital object that are designed (Arvola & Artman 2007; Holmlid 2002; Löwgren & Stolterman 2005; Hallnäs & Redström 2002). In an analysis of the character of digital interaction design (Edeholt & Löwgren 2003), a framework of characteristics was developed. The framework consists of three areas, Process, Material and Deliverable. Each area is constructed of a set of dimensions with characteristics (see the framework from Edeholt & Löwgren 2003).

This framework was developed and used to compare characteristics of digital interaction design and product design, in the context of ubiquitous computing. Apart from highlighting the specificity of the material of digital interaction design, it will later be tied together with the material of service design.

Within digital interaction design, user involvement and participation has been one of the fundamental issues. One capstone

THE FRAMEWORK FROM EDEHOLT & LÖWGREN (2003)

AREA	DIMENSION	CHARACTERISTICS
PROCESS	Design process	Explorative Analytical
	Design representation	Depictive Symbolic
	Production process	Physical Virtual
MATERIAL	Material	Tangible Virtual
	Dimensionality	Spatial Temporal
	Aesthetic	Visual Experiential
DELIVERABLE	Scope of deliverable	Product Use
	Flexibility of deliverable	Final Customisable
	Customer for deliverable	Mass market Organisational support

THE CHARACTERISTICS ADDED TO THE FRAMEWORK IN THE ANALYSIS OF SERVICE DESIGN (HOLMLID 2007)

AREA	DIMENSION	CHARACTERISTICS
PROCESS	**Design process**	
	Design representation	Enactive
	Production process	Ongoing
MATERIAL	**Material**	
	Dimensionality	Social
	Aesthetic	Active
DELIVERABLE	**Scope of deliverable**	Performance
	Flexibility of deliverable	Dynamic
	Customer for deliverable	Customer's customer

supporting this development has been the utilisation and adaptation of ethnographic methods for user research and for working with users. Another development this has led to is an abundance of explorations in experimental design methods and techniques, complementing more traditional design techniques such as prototyping (see e.g. Floyd 1984; Ehn 1988; Pliskin & Shoval 1987; Boehm, Gray & Seewaldt 1984).

Buchenau and Fulton Suri (2000) describe one such technique, experience prototyping. This technique allows clients, users and designers to experience an imagined future situation. This should be interpreted as contrary to watching a demonstration of the experience of the future situation. Experience prototyping also allows for understanding not only one or the other artefact, but an integrated experience. Other similar approaches have been tried and developed through recent years. For Danholt (2005), allowing future users of technology to work with prototypes has a twofold purpose. One purpose is for users to figure out the purpose and operation of the prototype of the imagined future activity. The other purpose is for designers and developers to understand and develop the requirements and experiences of the user. For Iacucci, Kuutti and Ranta (2000), using a provisional or prototypical object in an activity is a way of understanding the activity, stakeholder values and other aspects surrounding the actual technology used.

Other techniques, often with catch-phrase names, are continuously developed and updated: extreme characters (Djajadingingrat 2000), focus troupes (Sato & Salvador 1999), place storming (Andersson & McGonigal 2004), bodystorming (Oulasvirta et. al. 2003). These are often supported by other research efforts, such as on endowed props (Howard, Murphy Carroll, Peck, 2002), role-playing (Svanaes & Seland 2004), design games (Brandt & Messetter

2004, Brandt 2006), theatre (Newell, Morgan, Gregor & Carmichael 2000), storytelling (Erickson 1996), video (Bardram, Bossen, Lykke-Olsen & Halskov Madsen 2002), boundary objects (Star & Griesemer 1989), the role and function of prototyping (Schneider 1996, Houde & Hill 1997) among others. Yet other techniques, such as personas, scenarios, and storyboards, have been widely adopted and developed for design purposes.

Another fundamental issue in digital interaction design has been the concept of the user and user-centred design. This encompasses a wide array of important practise and research, from early cooperative and participatory design (Ehn 1988, Kyng & Matthiassen 1982, Bannon & Bödker, 1991, Adler & Winograd 1992), over contextual design (Beyer & Holtzbaltt 1998) and value-based design (Friedman 1997), to user-centred design (Carroll 2000, Forlizzi & Ford 2000, Winograd 2006) and critical design (Dunne 1999). Different ways of involving users have been implemented and formalised, as well as means of involving broader arrays of stakeholders. The future workshop methodology is one of those that has a long historical track record (Jungk & Müllert 1989).

Some of the typical ways of involving users in early stages of development processes have been for example cultural probes (Gaver, Dunne & Pacenti 1999), where users are asked to perform a set of tasks to document specific aspects of their day-to-day practises. Diaries, as a more open-ended technique, also serve the same purpose (Lindström, Ståhl, Höök, Sundström, Laaksolahti, Combetto, Taylor & Bresin 2006). Raijmaker, Gaver and Bishay (2006) used video documentaries to allow users to document their service experience, which then may be used together with other video-based methods later in the design process (Mackay, Ratzer & Janecek 2000). Löwgren (2004) suggests using animated sketches

as a design representation to allow for involving certain aspects of technology usage.

A recent area of interest in interaction design has been how organisations can include design and designers in the acquisition processes when they procure new IT systems and software. This strand of research opens up the design space of interaction design to directly relate to business goals and processes, design management and organisational theory, and to include more actors in involvement processes than are usual in the institutionalised interaction design area (see e.g. Artman 2009; Holmlid 2004, 2005, 2009b, 2009c; Markensten 2005).

INTO SERVICE DESIGN

As with digital interaction design it is common to describe services and service design in contrast to goods. For services, there are two general ways of doing this. The first is to use the four constructs of intangibility, heterogeneity, perishability and inseparability (Zeithaml, Parasuraman & Berry 1990; Sasser, Olson & Wyckoff 1978; Edvardsson, Gustafsson, Johnson & Sandén 2000). The second is the service-dominant logic as a figure of thought (Vargo & Lusch 2004, 2006, 2008). Two of the Ten Foundational Premises Vargo and Lusch propose are that

– value is co-created with the customer through interaction and
– firms only can offer value propositions.

Both highlight the fact that services, just as interactions, are ongoing processes and activities where the user/customer is part of creating value. Assuming this, it becomes of interest to analyse service design in comparison to digital interaction design. This has been done using the same framework as the one used

to characterise digital interaction design (Holmlid 2007). While introducing service design in Edeholt and Löwgren's comparative framework, the framework needed to be amended with seven characteristics.

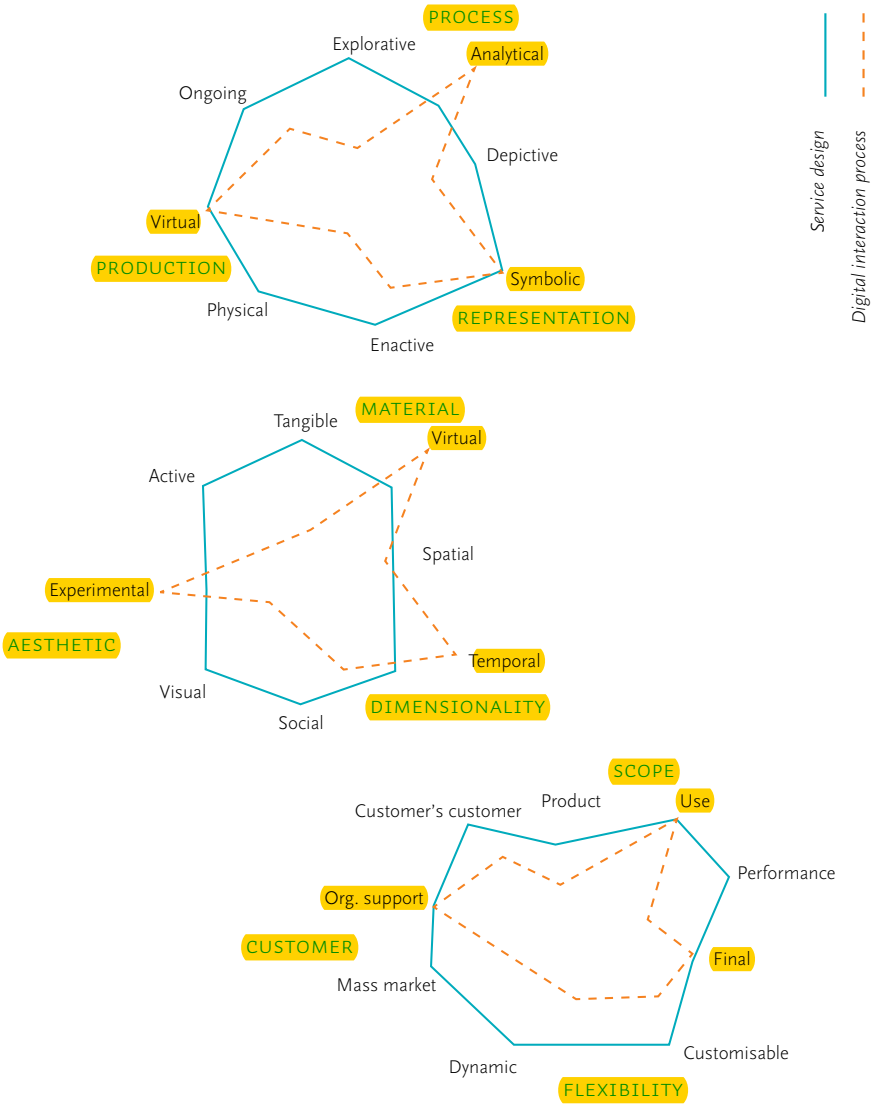
The comparison of the different characteristics can be seen in FIGURE 1, where each characteristic has been judged as being "not significantly characteristic", "somewhat characteristic", or "highly characteristic".

In the following we will look at some of these areas where service design and interaction design benefit from each other.

Digital interaction design has utilised and adapted ethnographic methods, contributing to fields such as design ethnography and applied ethnography. In the discourse of service design practise user research plays an important role (Segelström, Raijmakers & Holmlid 2009). *Service design should look at the lessons learned from digital interaction design and build on those experiences. On the other hand, digital interaction design can look to service design to question the ways that ethnographic user research material is put to use in digital interaction design processes (Segelström & Holmlid 2009).*

Where digital interaction design has focused on user-centred design, service design has focused on human-centred design (Mager 2004, Holmlid & Evenson 2007). This shift in perspective is similar to the difference between institutionalised user-centred design in human-computer interaction and the approaches that use a rich set of stakeholders, such as cooperative design (Ehn 1988; Bannon & Bödker 1991). What this basically means is that instead of focusing on users, in order for a service to be performed, a range of stakeholders come together with their unique set of capabilities and contributions to co-create value. In service design the design

FIGURE 1: **THE COMPARISON BETWEEN CHARACTERISTICS OF DIGITAL INTERACTION DESIGN AND SERVICE DESIGN (ADAPTED FROM HOLMLID 2007)**



processes that deeply involve sets of stakeholders as well as provide a structure and process of change could find valuable support in the literature from cooperative design and participatory design. Some of the theoretical frameworks used in digital interaction design, such as Activity Theory, can support the kinds of complexity that characterise services. It is also my firm belief that some of the recent projects within service design, sometimes classified as transformation design projects, or the projects on public services in Britain, are fine examples of cooperative design (see e.g. Cottam & Leadbeater 2004). From these projects, digital interaction design should find inspiration, tools and methods to continue to develop.

Looking back at the critical design school, or the design techniques using endowed props, from a service design perspective there are two main reflections that are important. The first is that some of these techniques where the designer's attention is directed to understanding context and activities actually are techniques for defining the meaningful contexts and actions that work as motivations for a specific service channel. The second is that there is need to develop methods and theories to support service design in developing a similar concept: that is, it is known from digital interaction design how an object can be used as a vehicle for producing that kind of wider knowledge, but little is known regarding how we might use a process as a critical object in design, in what could be called a critical interaction process.

From **FIGURE 1** we can see that the digital interaction design process is characterised by a higher degree of being analytic and that the aesthetic of digital interaction design is characterised by a higher degree of being experiential. On the other hand, service design is scored higher on a long range of characteristics, such as Explorative Process, Depictive and Enactive Representation, Physical and Ongoing production. In essence this means that in many aspects, the two design disciplines share many characteristics.

Two of the common tools in service design and development are the customer journey and the blueprint (Shostack 1984). Both highlight the interactions between the customer and the service organisation, and that interactions, touchpoints and evidence are distributed over time. In digital interaction design, techniques such as scenarios, narratives, and storyboarding have been explored, which might shed some light over the usage of these techniques. An important development area for service design is to understand situations and behaviour in these. Suchman (1987, 2007) developed one important theoretical framework for doing this based in situated cognition; she describes plans and actions. Another theoretical framework that might be applied is Latour's Actor Network Theory. Another aspect of the time-based nature combined with the multiple stakeholders and parallel service channels is the fact that the service performance is a distributed activity (Hutchins 1996; Hollan, Hutchins & Kirch 2000).

There is a host of other areas where digital interaction design and service design should find common and critical development processes, such as embodied interaction, ecological psychology, etc.

LOOKING FORWARD TO INTERACTION DESIGN

While writing this article the financial backlash struck hard and fast across many countries. Service researchers have been using the argument that 60-80% of an OECD economy is service driven and stating that 80% of some of the car manufacturers' earnings have come from after-sales services. As credit markets were drained, the blow was doubled. And the latter argument turned hollow. The conclusion perhaps should be that there needs to be a sensible balance in a product-service-system. And to that end service designers might help.

While digital interaction design has received a lot of attention during the last 50 years, service design has now gained the spotlight. Where digital interaction design has had better prerequisites to develop a practise as well as a body of well-grounded knowledge, service design has started out mainly as practise-driven.

On the shoulders of service design and digital interaction design, we may reach the exciting area of interaction design. It might seem a long road to walk, but by experimenting, applying and adapting knowledge developed and experiences gained in digital interaction design, service design research and practise will continue to develop. When service design finds its path, digital interaction design will be challenged, and new perspectives will be dealt with.

I look forward to being part of the evolution of the wider area of interaction design during the coming decades, and to contribute as much as I can to service design as well as digital interaction design.

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DEVELOPING SERVICE DESIGN EDUCATION

KATRI OJASALO / JUKKA OJASALO

In our advanced information society, organisations have moved from business models where value came from physical goods to models where value comes from intangible things such as services, knowledge and relationships. As a consequence, whether in a pure service firm, in a manufacturing company, or in a non-profit organisation, adding value through services has become an essential way to maintain and increase the success rate. This service-dominant logic places services rather than tangible goods at the centre of exchange, and tangible goods can be seen as appliances, which derive their value from their ability to provide service (see e.g. Vargo & Lusch 2004).

Today customers are looking for service value, comprehensive solutions and compelling experiences. In a rapidly changing environment an inevitable challenge is offering continuously improved or totally new services, always remaining one step ahead of the competition and at the same time complying exactly with customers' needs and expectations (see e.g. Edvardsson et al. 2006). It is essential to identify where, when and how a service can be made more valuable to both providers and buyers/users of the service. Consequently, most service organisations are striving to develop and design their operations, offerings, concepts and brands. Some are seeking growth; others cost savings.

"Today, there's no safe ground in business. The old barriers to competition—ownership of factories, access to capital, technology patents, regulatory protection, distribution choke holds, customer ignorance—are rapidly collapsing. In our Darwinian era of perpetual innovation, we're either commoditizing or revolutionizing." (Marty Neumeier, 2008)

A major challenge for service organisations is designing services that deliver a sustainable competitive advantage. Their focus can no longer be on today's processes but on tomorrow's strategies: organisations must no longer react to change but optimally initiate it. Several national and international research projects and government and industry reports have recently underlined the increasing need for service innovation and the consequent need for service business and design competences (e.g. Succeeding through Service Innovation 2008; Supporting Innovation in Services 2008; European Commission 2007a and 2007b; ERECO 2006; FinnSight 2015; Metcalfe & Miles 2006; Sitra 2006).

The purpose of this article is to discuss what kinds of competencies service designers and developers need and to show how edu-

cation can respond to the increasing need for these competencies. It describes a new Master of Business Administration programme in Service Innovation and Design developed in a multidisciplinary university of applied sciences in Finland. The contents of the programme are based on extensive research and active work on practises and theories in service innovation and design. The degree programme emphasises the true interdisciplinary nature of services by combining service design with service business, strategy and management.

The structure of this article is as follows. After briefly introducing the need for service innovation and design competences, it looks at the expertise areas needed by a service designer or manager in a service-dominant society. It then traces the roots of service theories and shows how service research has developed to the current point. Subsequently, it briefly goes through the development process of the new Master's degree programme in Service Innovation and Design and describes the contents of the programme. Lastly, final conclusions are drawn.

EXPERTISE IN THE FIELD OF SERVICE INNOVATION AND DESIGN

Service management is a professional practise supported by an extensive body of knowledge, experience and skills (ITIL 2007). A rapidly changing business environment and growing competition means that service expertise never stands still. The rising demand for service innovation has huge implications for competences and the knowledge base that underpins them. People are needed who can understand service value and have the sensitivity to anticipate changes in customers' behaviour, needs and expectations. Those

who have the ability to rapidly create a repeatable, scalable and unique market success, i.e. who can create genuine new ways of delivering services and creating customer experiences, are especially needed. Thus, design skills are a critical component of service innovation (e.g. Seizing the White Space 2007).

Service innovation is not merely a matter of new ideas. Most importantly, it is a process that requires a disciplined approach to rigorously identify and implement the most promising ideas. However, launching truly new services onto the market is rare and radical innovation; new services that dramatically change the marketplace are even rarer. Thus, the implementation of service innovation is important: the alignment of the right idea, the right team, the right development process, the right leadership, the right target market, the right time to market and so on. Consequently, it is important that a holistic approach to all aspects of service innovation and design is adopted. Expertise in the field of service innovation and design can be roughly divided into four main categories, which will be described in the following sections (cf. Seizing the White Space 2007; ITIL 2007).

1. GAINING DEEP INSIGHTS ABOUT THE BUSINESS, CUSTOMERS, BUSINESS ENVIRONMENT AND FUTURE TRENDS

Successful service organisations exhibit a clear vision about their goals and strategies. A vision for the future has to be based on an understanding of where the business is now, who the customers are, what is offered to customers and how the organisation has come to this point. It is also important to know how profitable the business is, how the company does compared to the competitors and what the core capabilities and strengths of the organisation are. The market

landscape for services is evolving constantly. Thus, deep insights about any legislative, technological, market or cultural trends that will impact on the business are of course essential. *Service innovation is fundamentally based on evolving customer behaviours and their expectations.*

In addition to deeply knowing the customers and their real needs and expectations, companies should be able to identify which customers provide the most income and why they do business with the company.

In other words, thoroughly understanding customers is critical for any service business, because customers and their decisions are the source of all revenue. In service design customers/users are, however, no longer seen only from an observational perspective; distinguished service organisations innovate and design services directly with their customers (e.g. Moritz 2005). *Because of the importance of co-creation in services, service design encourages companies to take a genuinely people-centred, empathetic approach.* Customers/users are an essential source of information, innovation and creativity.

2. CREATING INNOVATIVE VALUE PROPOSITIONS

It is important to link service strategy and service design (Goldstein et al. 2002; Moritz 2005). A service strategy defines strategic objectives for the service organisation, provides direction for growth and success, and prioritises investments. Strategy influences organisational attitudes and culture towards the creation of value for customers through services. For converting strategic objectives into portfolios of services, design principles and methods are useful. Service design includes both new services and the changes necessary

to maintain and increase value to customers over the services' lifecycle (ITIL 2007).

The term 'value proposition' can be used to describe competing service offerings in a competitive marketplace. Regardless of how the service organisation defines the service, a delivered service should function seamlessly in order for customers to perceive it correctly. To ensure that the value proposition fits the needs and expectations of the customer and the service organisation itself, service companies must focus on the design and delivery of their service concept (Goldstein 2002). Creating innovative value propositions includes the competences to translate intangible value propositions into desirable, often more tangible offerings. *Service design helps value propositions to be prototyped early to allow emerging propositions to be expressed, explored and modified with customers, experts and other stakeholders in a more tangible and emotive way.*

3. MANAGING THE SERVICE BUSINESS

To design and deliver a service a large number and wide variety of decisions are required at several levels of the organisation. It is important to ensure that decisions at each of the levels are made consistently, focused on delivering the correct service to targeted customers (Goldstein et al. 2002). The service management systems and tools should be reviewed to ensure they are capable of supporting the new or changed service (ITIL 2007). Most services rely on other services, and it is thus important to look holistically at the whole service system. This involves ensuring that the new or changed service is consistent with all other services, and that all other services that interface, support or depend on the new or

changed services are consistent with the new service.

All organisations need evidence and tools to ascertain and monitor the payback of investments in new or improved services. Many managers still see service improvements as costs rather than as contributors to profits, partly because of the difficulty involved in tracing the link between service and financial returns or cost reductions. Results of service design are often cumulative, and therefore, evidence of the link between the changes in service and revenue growth and cost reduction may not come immediately or quickly after investments. While the financial impact of cost-cutting efforts is often more easily evaluated, the financial impact of revenue expansion efforts requires more devotion. Still, this is an essential task for any company that seeks to build its service profitability. One way to evaluate the financial impact of service improvements is to measure a return on investment (ROI) by relating the increase in customer equity to the investment required to produce that increase (Rust et al. 2004). Nevertheless, if calculating the economic value of a service is hard to quantify, it may still be possible to qualify the value. Value is defined not only strictly in terms of customer's business outcomes: it is also highly dependent on customer perceptions (ITIL 2007).

The balanced scorecard is a classic performance measurement approach developed by Robert Kaplan and David Norton (1992; see also Kaplan & Norton 2004) for measuring a company's activities in terms of its vision and strategies. It gives a comprehensive view of the performance of a business by capturing four perspectives: the financial, customer, operational, and learning. The balanced scorecard can be implemented not only in business but also in government and non-profit organisations as well. The balanced scorecard brings together, in a single management report, many elements of

an organisation's competitive agenda and forces the management to consider all the important measures together (Zeithaml et al. 2006).

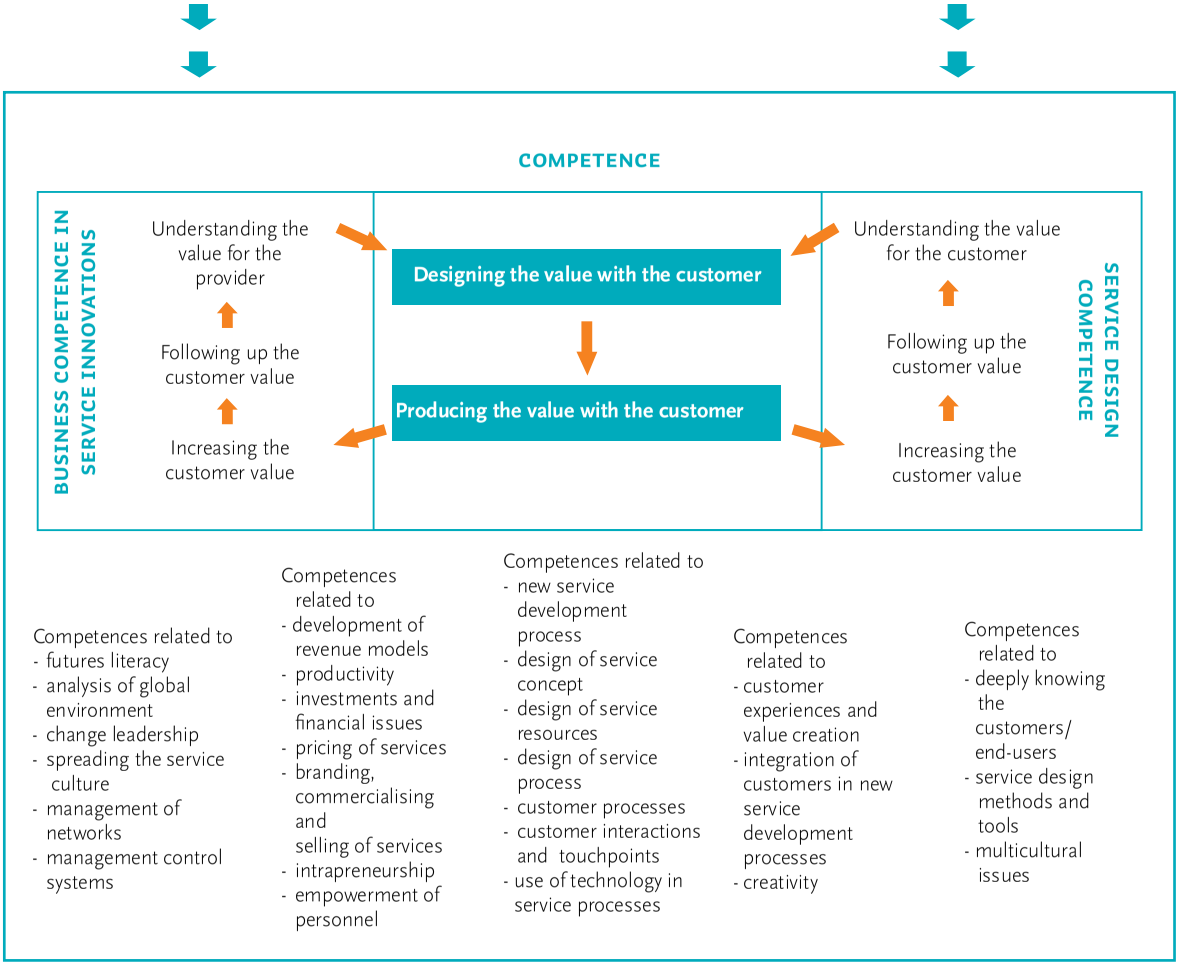
4. FOSTERING THE SERVICE CULTURE AND SERVICE LEADERSHIP

A major challenge for service organisations is ensuring that the processes, roles, responsibilities and skills have the capability to operate the new or changed service (ITIL 2007). In order to build long-term relationships with both internal and external stakeholders, companies need to be able to communicate efficiently. Successful companies have a participatory culture in place, where staff can share ideas and discuss how the company is progressing. The frontline staff should also be able to engage in dialogue with customers and pass on any potential concerns to the management. This helps to keep staff motivated and ensures that everyone is clear about the company's goals and objectives.

Ultimately, frontline staff is the face of a service company. In order to provide enjoyable experiences, frontline personnel should be properly trained to understand the needs of different customers and have the necessary autonomy to deliver a personalised service. In order to respond to the specific needs of a customer, employees might require some level of autonomy and flexibility at the point of delivery.

The next figure illustrates the competencies needed by service designers and developers when innovating and designing services. The figure combines business and management competences in service innovations and service design competences. At the heart of these two competence areas are the competences related to co-designing and co-producing the services with customers.

FIGURE 1. **Areas of Expertise in Service Innovation and Design**


COMPETENCE
BUSINESS COMPETENCE IN SERVICE INNOVATIONS
Understanding the value for the provider
Following up the customer value
Increasing the customer value
Designing the value with the customer
Producing the value with the customer
Understanding the value for the customer
Following up the customer value
Increasing the customer value
SERVICE DESIGN COMPETENCE
Competences related to
- futures literacy
- analysis of global environment
- change leadership
- spreading the service culture
- management of networks
- management control systems
Competences related to
- development of revenue models
- productivity
- investments and financial issues
- pricing of services
- branding, commercialising and selling of services
- intrapreneurship
- empowerment of personnel
Competences related to
- new service development process
- design of service concept
- design of service resources
- design of service process
- customer processes
- customer interactions and touchpoints
- use of technology in service processes
Competences related to
- customer experiences and value creation
- integration of customers in new service development processes
- creativity
Competences related to
- deeply knowing the customers/ end-users
- service design methods and tools
- multicultural issues

SERVICE INNOVATION AND DESIGN AS A MULTIDISCIPLINARY FIELD

Service innovation and design is a distinctly multidisciplinary field. To illustrate the multidisciplinary nature of knowledge in the field of services, the evolution of service research, especially service development and design research, is next briefly described.

Since the end of the 1970s, there has been much research and discussion on new service development and service improvement especially from the marketing perspective, and the origins of the new service development theories stem from researchers representing the Nordic School of Services (e.g. Grönroos & Gummesson 1985; Grönroos 1987; Norling et al. 1992), Service Management and Marketing (e.g. Shostack 1981; Lovelock 1984; Langeard et al. 1986) as well as Service Operations Management schools of thought (e.g. Chase 1978; Voss et al. 1992; Clark et al. 2000). The evolution of multidisciplinary service research can been characterised in six periods (based on Fisk et al. 1993 and Succeeding through Service Innovation 2008) as follows.

During the first period between 1950–1980, called the Crawling out period, service marketing and service operations became distinct from goods marketing and operations. In addition, conventional service economics reports started to categorise more of the economy as value derived from service activities. At the beginning of the 1980s a core group of service academics and business practitioners was developed. This second period, between 1980–1985, is called the Scurrying about period, with more published services research moving beyond goods and products, even while the literature was still mostly conceptual.

The third period between 1986–1992 is called the Walking erect period with an increasing number of scholars of service, and explo-

sive growth in the literature including service research journals, dissertations and textbooks (e.g. Bowers 1986; Scheuing & Johnson 1989). Plenty of academic events (e.g. QUIS) and centres in Europe as well as the US emerged. In a widely-known textbook, Zeithaml, Parasuraman and Berry (1990, p. 157) suggested that:

"One of the key service-quality challenges for the 1990s is service design. Service design... involves processes rather than bricks and mortar. The idea is to design high quality into the service system from the outset, to consider and respond to customers' expectations in designing each element of the service."

The fourth period between 1993–2000 is called the Making tools period with more quantitative research: measurement, statistics and decision-support modelling. Research in the field of services was broadened, deepened and sharpened. There were more multidisciplinary research and expanded topic areas including service productivity (Ojasalo 1999), service experiences, service quality and customer satisfaction, connecting operational factors that link quality to customer loyalty and service orientation, service supply chains, service recovery, technology infusion and service computing, and so on. Moreover, Service Design began to be taught as a subject from 1994 at the Köln International School of Design in Germany.

The fifth period from 2000 until now is called the Creating language period. In the new millennium fresh models of service are emerging, and the concept of a service system is beginning to take hold to unite the many perspectives. The field is spreading rapidly with an expansion of literature worldwide and increasing numbers of conferences, centres and networks bridging practitioners and academics (e.g. the International Service Design Network). Several publications that focus on service design from the designers' point of view have emerged (e.g. Nettelbladt & Renström 2003; Mager

2004; Moritz 2005; Koivisto 2007; Miettinen 2007). The Service Science, Management and Engineering (SSME) initiative is seeking to strengthen industry-academic-government interactions (see Hefley & Murphy, eds. 2008). Service science aims at applying scientific understanding to advance the ability to design, improve, and scale service systems for business and societal purposes (Maglio & Spohrer 2008). The service-dominant logic view (e.g. Vargo & Lusch 2008; Gummesson 2008) is gradually replacing the traditional view of goods-versus-services, with a view of service as value co-creation that involves both tangible things and intangible activities. Consequently, while the origins of service management have been in traditional service businesses such as airlines, hotels and banks, its practise has grown with the adaptation by industrial companies of a service-oriented approach to managing comprehensive customer solutions (see Ojasalo and Ojasalo 2008).

Sixth, in the near future the Building communities period means an inclusive multidisciplinary approach to service innovation, with science, management, design and engineering being supporting academic disciplines, and with T-Shaped professionals, which implies deep know-how within one discipline and more superficial knowledge about how it interacts with others, as adaptive innovators to link and unite these disciplines. As a consequence, there is an opportunity to create a measurable growth in service innovation for business and society (Succeeding through Service Innovation 2008).

MASTER'S DEGREE PROGRAMME IN SERVICE INNOVATION AND DESIGN

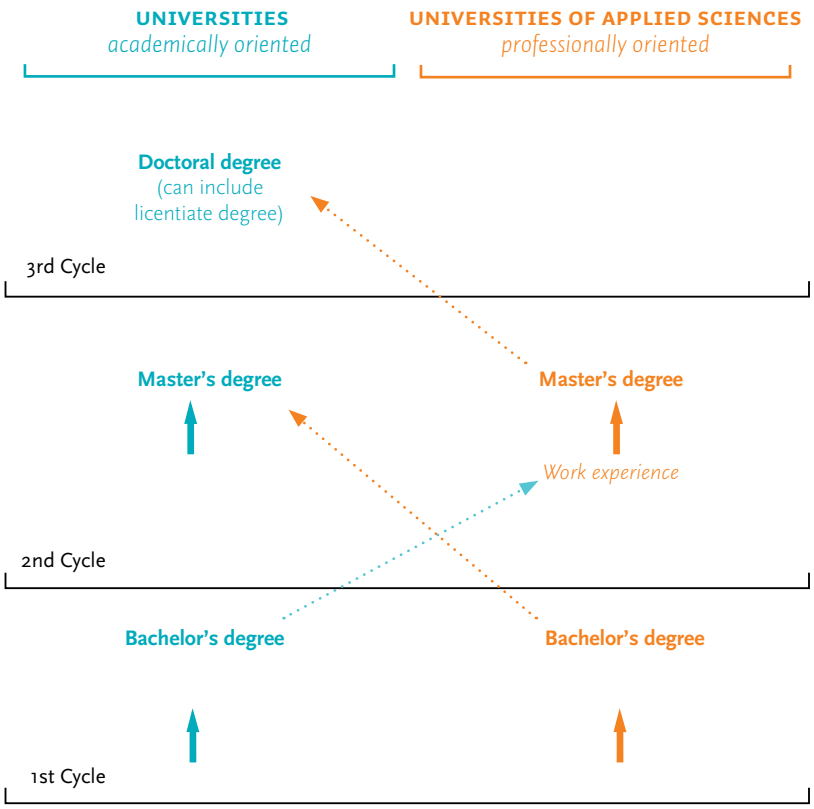
In Finland, the Ministry of Education reviews plans for new master's degree programmes in universities of applied sciences and makes

the decision whether or not the universities are given the permission and financing to provide such education. The Ministry of Education has also set the national minimum requirements for students applying to a master's degree programme provided by a university of applied sciences. The applicants must have completed a Bachelor's or a Master's degree and have at least three years of relevant work experience after their graduation (see Figure 2). Thus, the students of the master's degree programmes are already professionals themselves in their field. The studies, which can be completed alongside a full-time job, are meant to strengthen their professional competencies as well as to boost their own organisations.

At the beginning of the development process the main objective was to create a plan for education that is truly based on genuine competence development needs of companies and other organisations, particularly in the Helsinki capital region where the case university is located. It was stressed that every aspect of the plan for the new degree programme is carefully and reliably studied and motivated. Motivating the real need for this kind of education was based on the institution's own research, on various national and international government and industry reports dealing with competence needs now and in the future, as well as on discussions and interviews with service design professionals and academics in several organisations. The plan of the Master's degree programme in Service Innovation and Design was sent to the Ministry of Education for review, and it was accepted in spring 2008. Public financing for the education was confirmed so that twenty students can enrol in the programme annually, beginning in autumn 2009.

To make the curriculum complete, more research, discussions with professionals and academics, and also a workshop with participants from international universities were executed. The

FIGURE 2. **STRUCTURE OF FINNISH HIGHER EDUCATION DEGREES**



AT LEAST 3 YEARS TO DIPLOMA AT *upper secondary level*

case university of applied sciences is a member of the International Service Design Network, and eight team members from this university participated in the first three-day European-based Service Design Conference in Amsterdam at the end of 2008. Two international Service Innovation and Design seminars were also organised by the programme during the development phase, in late 2007 to early 2009.

The Master's degree programme in Service Innovation and Design is planned for students with diverse backgrounds (designers, service managers with business background, engineers etc.). A central aim of the degree programme is to provide students with multidisciplinary knowledge in service innovation and design through advanced studies of various service theories and their implications for service innovation and design practise. Supervised development training and work on independent projects improve students' competencies in combining academic rigour with managerial relevance. Compulsory study modules are as follows (see also FIGURE 3):

- *Business and Management Competences in Service Innovations*
- *Value Creating Competences*
- *User-centric Service Design Competences*
- *Master's thesis: a service development project*

The elective study units enable students to pursue their specific interests, as well as overcome deficiencies in their design preparation. With faculty advice, these study units may also be selected from the other Master's programmes at this university of applied sciences or provided by international partner universities. With the university

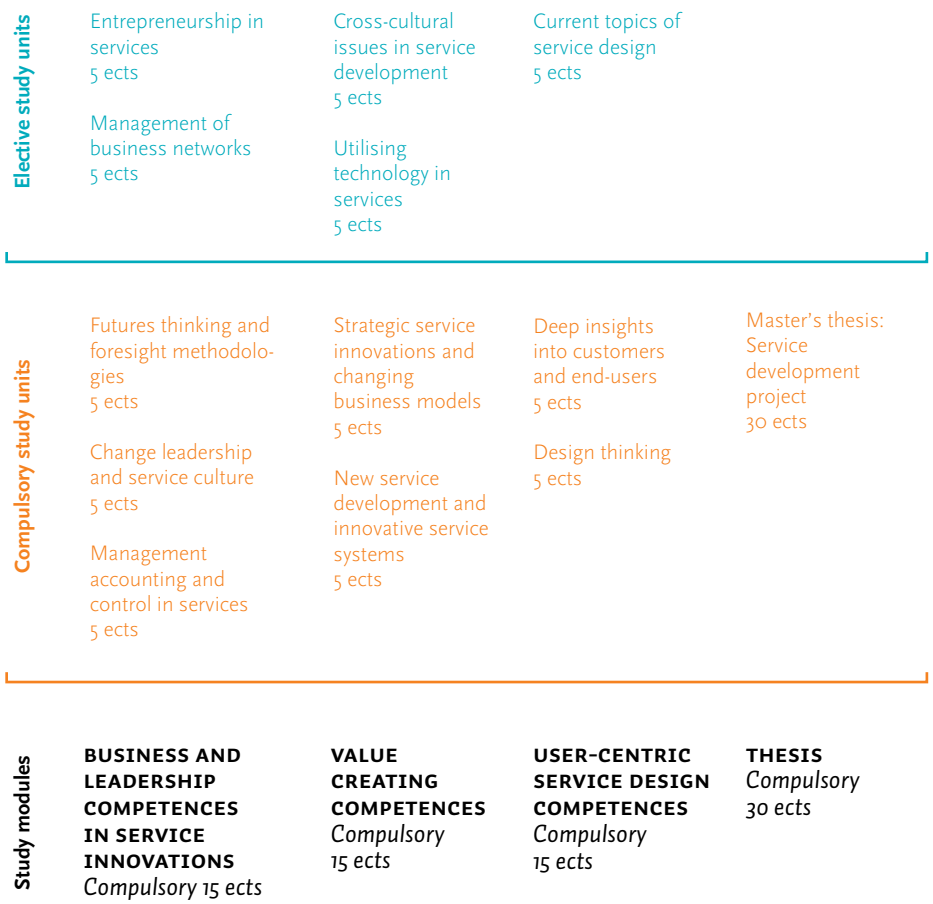
partners various kinds of shared intensive courses, research and development projects and conferences will also be arranged.

A central theme of the studies is that services (both commercial B-to-C and B-to-B as well as non-profit) require a distinctive approach to strategy, innovation and design. At the beginning of the studies students acquire insights into the service business and the *dynamic business environment as well as future trends. In parallel, students develop their competences related to deeply understanding the customers/users, their unarticulated needs, and their behaviours in their natural environment. Various service design tools and methods are learned, and design thinking is introduced.* Later, branding, commercialising and selling competences as well as service management and leadership skills are developed. The programme of study culminates in a thesis project, which is an extensive service design project.

CONCLUSIONS

The purpose of this article was to discuss what kinds of competencies service designers and developers need and to show how education can respond to the increasing need for these competencies. It described a new Master of Business Administration programme in Service Innovation and Design developed in a multidisciplinary university of applied sciences in Finland to respond to the increasing educational needs in this field. This article began by introducing the need for service innovation and design competences. It then looked at the expertise areas needed by a service designer or manager in a service-dominant society. Four critical areas of expertise in this field were discussed. These were gaining deep insights

FIGURE 3. **MASTER'S DEGREE PROGRAMME IN SERVICE INNOVATION AND DESIGN: THE STRUCTURE OF THE STUDIES**



into the business, customers, business environment and future trends; creating innovative value propositions; managing the service business; and fostering the service culture and service leadership. The roots of service theories were then traced, showing how service research has developed to the current point. Next, the article showed the development process of the new Master's degree programme in Service Innovation and Design, and described the contents of the programme. The central areas of education focus around business and management competences in service innovations; value creating competences; user-centric service design competences; as well as the master's thesis, which is typically an authentic service development project.

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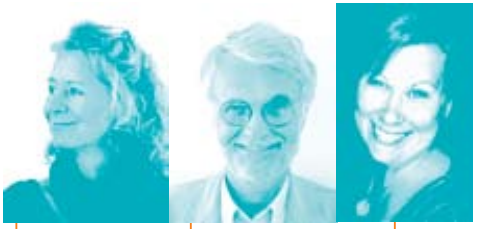

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Practise

PART TWO

CAN DESIGNERS HELP DELIVER BETTER SERVICES?

FRAN SAMALIONIS

When it comes to improving services, is it worth spending money on service designers? Of course, improving services can be attempted without recourse to seeking expert help, but the result is more than likely to be a false economy. Changes in service design will be long-lasting and profitable only if they are driven by insights gained by close observation of the people who use those services. It is this human-centred approach that lies at the heart of everything our design teams do at IDEO.

Design challenges are inherently complex – and every client has their own particular knots to untie – but over the years, our experience has shown that better service design depends on overcoming four crucial problems that are common to all our clients: how to get closer to consumers; how to collaborate across every part of the organisation; how to create a strong narrative that inspires key people and finally, how to conquer the fear of failure. Hand in hand with identifying the problems our clients all share has gone the development of techniques to tackle them. This article takes a look at these in detail and shows how they can be used in collaboration with organisations of every size and in every business.

Having an array of techniques, however, is only half the story. To be effective, they have to be used with great sensitivity. Time and effort are well spent when they go beyond recording what people initially reveal into the more intriguing territory of what they actually feel. To uncover these often contradictory and always intricate aspects of human behaviour requires one thing above all – empathy. Let's begin by seeing how an approach that strives to identify with people's feelings and difficulties can drive innovation in service design.

GETTING CLOSER TO THE CONSUMER

To get closer you need to dig deeper. We engage with people in their real-life contexts, to unearth those latent rational and emotional needs that many cannot articulate, and may not even be aware of, because of the bewildering ability of human beings to intuitively develop coping strategies. *By close observation of how people truly behave, we can come to understand what they think and feel as much as what they say and do.*

Our focus is also wide as well as deep. We spend time with a full range of stakeholders, not just the end consumers. So, for instance, for a credit card project, our research would encompass not only the card users and their families, but also the cards' sales and call centre staff, and the staff in the shops where the cards are used. The kinds of consumers we choose to get close to also goes beyond the conventional. We select a relatively small number of 'extreme' users, such as low income unemployed and affluent CEOs; control freaks and hedonists; early adopters and laggards. The 'contrast' level of these extremes gives us more insight than the 'white noise' generated by large numbers of moderate users. Our experience is that these extreme users are inherently predictive of mainstream needs.

We use a variety of techniques to investigate people's latent as well as explicit needs, and to encourage storytelling, which we find reveals much more than basic facts. We call one such technique Personal Archaeology, which is used to catalogue evidence of a person's lifestyle, revealing their behaviours, habits, values and emotional triggers. By asking someone to disinter the contents of their handbag or wallet, and talk us through the 'artefacts' found, people share with us their unique stories, built around not only 'hard' evidence such as receipts and bills, but also those objects they choose to spend their daily lives with (and sometimes forget!)

We might also ask someone to talk us through the last five purchases made with a credit card and compare these to the last five purchases made with cash or a debit card. These highly personalised narratives paint a more unguarded and accurate picture of priorities and behaviour than those derived from traditional market research.

A conversation about money is often much more than merely rational: it can be loaded with emotion and post-rationalisation.

To bring this complexity into focus, we use a technique called The Five Why's (asking "why?" in response to five consecutive answers). Someone might say:

– "I open my credit card statements after I've looked at all my other mail"

– "Why?"

– "Because they always look so intimidating"

– "Why?"

– "Because I feel as though they're making me feel bad about the fun things I did last month" etc.

This technique requires delicate handling, but when applied empathically, it prompts people to examine and express the underlying reasons for their behaviours.

An example of how these techniques can help a client get closer to their customers, and point towards a relatively small change in their operation which brings big benefits, is Bank of America. To better understand the market the bank wanted to focus on - boomer-age women with kids – IDEO conducted observations across the US with the bank's innovation team. Together, we discovered that many of the women we talked to would often round up their financial transactions to the nearest dollar. When asked why they did this, most said it was for speed and convenience. In addition, the team found that many moms had difficulty saving, giving their reasons as either lack of resources or willpower.

These observations were shared in a series of brainstorming sessions, which generated a solution that uses the habits existing on the one hand to resolve the problems persisting on the other. Called Keep the Change, the service automatically rounds up purchases made with the bank's debit card to the nearest dollar and transfers the difference from the customers' checking accounts into their

savings accounts. This elegant and easy to understand method of helping customers save was launched in October 2005. By May 2008, the eight million customers who had signed up to Keep the Change had accumulated approximately $10 billion in savings.

COLLABORATING ACROSS SILOS

No matter the size of an organisation, services tend to be delivered through multiple departments that are designed to support their own operational efficiencies rather than deliver a holistic service experience for the consumer.

Anyone ordering a item from a retailer and then having to deal separately with a delivery service that operates independently, will recognise the fracture lines that often appear in what ideally should be a seamless operation.

Without resorting to massive restructuring, IDEO's collaborative approach to service design can have a beneficial ripple-effect across organisations hampered by a silo mentality, bringing wholeness to inherent fragmentation. As we have seen, getting close to consumers allows designers, working with our client's team, to map the fault-lines between a consumer's needs and their actual experiences. These are then shared in an 'open mind' environment which allows and encourages unrestricted thinking. With few rules to constrain them, ideas flow freely and new possibilities are imagined, questioned and tested.

This collaborative mindset generates a mutually-shared sense of dedication to discovering solutions, and an optimism about making them work. This is exhilarating to experience, of course, but more importantly, it creates tangible results. For instance, working with healthcare provider Kaiser Premanente, we shared our service

design techniques with nurses, doctors and administrators so that with us, they could find ways to improve the experiences of both practitioners and patients.

One project focused on re-designing nurse-staff shift changes, which present one of the biggest challenges to the continuity of patient care. As nurses go on and off a shift, a crucial exchange of information and duties must take place in order to ensure safety, quality of care and efficiency. A core project team, working in four hospitals, brought together IDEO designers and people from across the organisational silos, including a strategist, a technology expert, a process designer and a union representative. In observing shift changes around the clock, they discovered that every nurse had developed their own particular ways to prioritise and communicate information.

The team explored potential solutions through rapid collaborative prototyping, such as the videoed performance of new ideas about how to achieve a consistent and efficient shift change. In only one week, they had built a working prototype that included new procedures and some simple software with which nurses could call up previous shift-change notes and add new ones. The design that emerged, shaped by hospital and patients, was implemented on every ward in 40 hospitals and has led to higher quality of knowledge transfer and a 50% reduction in preparation time.

CREATING A STRONG NARRATIVE

For improvements in service design to take root and flourish, they must first survive certain unfavourable conditions which often exist within an organisation. Changes in service design may have a strong champion in place at the time they are introduced, but as

rapid staff movement becomes increasingly the norm, implementation of these changes can take longer than this person is in the post. Without an advocate to defend and see through the changes, competing agendas and competition for resources may divert the energy needed to keep the momentum going.

For the ripple effect of change to flow across the silos of an organisation, there needs to be commitment to that change from all influential stakeholders (from marketing and service development to finance and human resources). Having everyone on board is essential, as challenging existing paradigms requires endurance and imagination. The solution is a strong narrative that describes the changes in service design in a consistent and compelling way, which will win over key people and give them a story they understand and can easily share.

Good designers are good storytellers, and a good story makes ideas accessible to client stakeholders so they can collaborate effectively. Each silo in an organisation tends to speak its own language; for instance in telecoms, the technical people speak about bytes, whilst the business arm is likely to be talking about ARPU's (that's Average Revenue Per User for the uninitiated). But both 'tribes' can understand the language of consumers, as they can all relate to the universal experience of being one. The job of the designer is to translate their diverse languages into the common language of the consumer and tell the consumer's story in a way that will fire their imagination.

A fine example of this is the 3D structure IDEO constructed for a major telecommunications company, which made tangible the story of the consumers' experience. It was built as a response to the telecom's confusion of marketing materials, beginning with the most common touchpoint, the monthly bill, which typically appears as a blur of

numbers. This was visualised as a blizzard of irrelevant information. A swirling storm of digits told the story of how most consumers experience their bill and brought into sharp focus the lost opportunity there is in not making the data meaningful and interesting.

The problems inherent in another silo of the business were tackled in the part of the journey which visualised the obstacle course that consumers must negotiate to leave a contract. This part of the structure was plastered with marketing materials from those competitor operators offering more flexibility in quitting, making concrete the ironic point that an operator that made leaving it easier was more likely to pick up new customers. By bringing together the challenges faced by different parts of the organisation, speaking about them in the commonly understood language of the consumer and giving them material presence in a 3D structure, this project created a strong narrative that everyone could grasp, and prompted solutions that sparked across the void between the company's silos.

CONQUERING THE FEAR OF FAILURE

Change is expensive and risky, so it is not surprising that organisations often take the line of least resistance, favouring changes in services that appear familiar and feasible over those that are new and untested, no matter how desirable they may know them to be.

The IDEO approach is to use prototypes: quick, low-cost mock-ups which allow emerging ideas to be expressed, explored, modified and shared with teams, clients and stakeholders in a way that is tangible yet economical. Further into the development process, more detailed prototypes are introduced to help manage risk, through testing multiple iterations and refinements with users before the client commits to the cost of substantial implementation and roll out.

ABOVE: **Early, low resolution mock-ups encourage constructive feedback.**

TOP: **Keep the Change – people rounding up their financial transaction to the nearest dollar.**

RIGHT: **Tangible story of the customers' experience to bring to life opportunities for service design.**

We have found that prototypes facilitate more emotive client communication and encourage more informed decision-making. By giving physical form to an idea, prototypes enable a project to continually move forward by helping to generate, evaluate, evolve and communicate the value of a proposed solution.

As we have seen, organisations are often fragmented, with multiple and disparate factions (such as brand, marketing, technology, customer care, delivery channels), all of which impact on the service offering. *Prototypes that look and behave like an end service enable a diverse range of stakeholders to engage with, and evaluate, a concept from their specific perspective or area of responsibility. A prototype can cheaply and quickly communicate a service proposition and prompt questions around technical feasibility, consumer desirability and business viability.*

Typically, we would begin by describing a customer's journey through a service, plotting, among other things, how they become aware, join, use and pay for a service. For example, for a mobile phone service, the signposts of the journey would include Awareness (the consumer's first encounter with the service, through ads in a magazine, for instance), Join (in store, online etc), Use (of the service itself) and Pay (via a paper or online statement).

We then identify all the interactions between the service and the consumer, which we call 'service touchpoints'. It is these that provide the richest prototyping opportunities, by allowing the implications of each touchpoint to be explored in relation to the target market (and related Unique Selling Point). They also allow us to explore the scale of the business idea and its implications for brand, marketing, technology, customer care, delivery channels and so on.

Each prototype is designed to address a specific issue. For

example, prototyping Awareness touchpoints, such as digital and print advertising, helps us explore the target audience for this service. We can pinpoint what media is associated with those segments of the market we want to reach, identified by lifestyle, worldview and the benefits described in an advert. This ensures the Awareness touchpoint talks directly to the needs and aspirations of the target audience. Awareness prototypes provide answers to an array of questions, including: What is the service's USP? How many customers is this service for? Who will it appeal to? How will customers perceive and understand the service? How will they gauge its value? And does the brand have permission to deliver this kind of service?

An example of how prototyping can offer highly-focussed but inexpensive ways to measure the possible risk in change can be seen in our work with the hotel brand Marriott. TownePlace Suites are long-stay hotels, which aim to meet the needs of those on extended business trips. IDEO delivered an 'experience blueprint', which was designed to act as a roadmap for understanding extended stay guest behaviour. It identified key touchpoints in the guest journey, and developed relevant spaces and services around them. Included in these was the revamping of the lobby to convey the extended stay experience as more home-like than hotel, with a wall map of visitor-recommended local destinations that served as a DIY concierge, and a pantry area stocked with locally-sourced food. In the guest rooms, a versatile work/live layout was designed to strike a balance between business and relaxation.

IDEO worked with Marriott to employ rapid prototyping with guests and general managers, creating early feedback loops and decreasing implementation costs. Full-size, white MDF mock-ups of the spaces, with key features highlighted in colour, provided enough to imagine the real experience without the expense of building the

real thing. These prototypes were less about testing to kill ideas and more about resolving the problems ideas may produce, so that guests and general managers were able to experience them and form an opinion on how to improve them. Prototypes give the design team and the client permission to get things wrong. Quickly made and introduced early in the design process, they mean we can move on together at speed, having identified mistakes and still with the confidence to try new things. Clearly it is better to learn from a cheap MDF mock-up in the first weeks of a project than discover problems in an expensive, fully furnished room years into development.

We began by asserting that designers can deliver better services. But only those that root their innovations in insights gained from close observation of human behaviour. It is then that their solutions resonate with the people they are designed for, and deliver lasting and profitable results. By using, with empathy and skill, techniques that allow our clients to get closer to the consumer, that encourage collaboration across every part of an organisation, that create a strong narrative for key people to relate to, and that free the client from their fear of failure, we believe that our human-centred approach allows us to say with confidence, "yes, designers can indeed deliver better services."

FRAMEWORKS FOR STRUCTURING SERVICES AND CUSTOMER EXPERIENCES

MIKKO KOIVISTO

The design of services is challenging, since services are intangible and they happen over time. The purpose of this article is to describe different frameworks that are used in service design to structure services and service experiences. Frameworks are needed when creating, specifying and structuring service offerings, since they make the process more concrete and controllable. Some of the specification models presented in this article originate from services marketing and some are new models that have been developed in the area of service design. All presented models open up features and elements that one has to consider when developing and managing services.

Let us begin with presenting a framework that clarifies the core characteristics of service products. When considering service as an offering, one notices that it can be divided into two main components: the Service Delivery Process and the Outcome of the Service (see FIGURE 1). Services are time-based processes that consist of sequences of operations targeted to deliver a solution to the customer's problems and needs. The solution found to solve the need of the customer can be seen as an outcome of the service. This outcome should bring value to the customers so that they are willing to consume them. (Grönroos 2000)

THE BASIC SERVICE PACKAGE DESCRIBES THE OUTCOME OF THE SERVICE

The outcome of the service offered to the client is described in the Basic Service Package. This package defines the bundle of services needed to fulfil the needs of customers and is divided into two dimensions: the Core Service and Supplementary Services (see FIGURE 2) (Grönroos 2000). The core service answers the primary need of the customers and determines what the consumer receives from the service provider (Lämsä and Uusitalo 2002). The core service for an airline, for example, is air transportation, which offers a solution to the customers who need to get from one point to another as fast as possible. It is difficult for service companies to differentiate their offering on the market only with the core service, since competitors often offer exactly the same core service. For example, the passenger gets from one place to another regardless what airline he or she uses on a particular route.

The core service is therefore not a complete service offering: it also has to include supplementary services. Supplementary services

FIGURE 1: **SERVICES CAN BE DIVIDED INTO TWO MAIN COMPONENTS: THE SERVICE DELIVERY PROCESS AND THE OUTCOME OF THE SERVICE.**

FIGURE 2: **THE BASIC SERVICE PACKAGE (ADAPTED FROM GRÖNROOS 2000)**

THE BASIC SERVICE PACKAGE Determines the bundle of services needed to fulfil the needs of customers		
THE CORE SERVICE Determines what the consumer receives from the service provider	**SUPPLEMENTARY SERVICES** Accomplish the core service	
	FACILITATING SERVICES Facilitating services are mandatory; without them it is impossible to use the core service	**SUPPORTING SERVICES** Supporting services make the consuming of the service more convenient

FIGURE 3: **THE SERVICE SYSTEM MODEL (ADAPTED FROM GRÖNROOS 2000)**
The Service System Model divides services into stage and coulisse.

Support Part	LINE OF VISIBILITY	*Interactive Part*	CUSTOMERS
Technology and Systems Know-How Systems Support		Systems and Operational Resources	
Managers and Supervisors Management Support		Contact Persons	
Support Functions and Support Persons Physical Support		Physical Resources and Equipment	

can be split into Facilitating Services and Supporting Services. Facilitating services are mandatory; without them it is impossible to use the core service. For instance, the facilitating services for a flight are the check-in and the security check. Supporting services are not necessary when consuming the core service, since they respond to customers' auxiliary needs. Supporting services make the consuming of the service more convenient; they add value to it and help to differentiate the service. (Grönroos 2000; Kinnunen 2003) Meals and drinks served on flights, in-flight entertainment, and blankets and pillows available are examples of supporting services. Supporting services can have a major influence on customer experience and the success of the service provider.

THE AUGMENTED SERVICE OFFERING MODEL DEALS WITH THE SERVICE DELIVERY PROCESS

Since services are produced and consumed in an interactive process between a provider and a customer, service offerings cannot be defined only in terms of the basic service package describing the outcome of the service. The definition has to be extended to the Augmented Service Offering Model, which also takes into account the impact of how customers perceive the process itself. This process consists of three components: Accessibility of the Service, Interaction with the Service Organisation and Customer Participation. Accessibility of the service consists of elements that affect the client's experience of how easy or difficult it is to buy or use a service. These are, for example, the number and skills of the personnel, opening hours, and location and looks of service outlets. The customer's interaction with the service organisation also affects the client's perception of the service. Some examples of this is the

interactive communication between staff and consumer, the interactions with various physical and technical resources of the organisation, interactions with systems and appliances such as automatic machines, and interactions with other customers simultaneously involved in the process. Finally, customer participation means that the customer himself has an affect on the service he perceives. For example, if the patient cannot give the doctor the right information about the problems he or she has, the doctor cannot make the right diagnosis and might prescribe the wrong treatment. (Grönroos 2000)

THE SERVICE SYSTEM MODEL DIVIDES SERVICES INTO STAGE AND COULISSE

The Service System Model (see FIGURE 3) describes resources and support functions needed in delivering services. The central concept to the service system is the Line of Visibility that separates those parts of the service that are visible to the customer from those which are not. The visible part of the service system is called the Interactive Part (a.k.a. front office) and the invisible part is called the Support Part (a.k.a. back office). (Grönroos 2000) Customers experience the service through the interactive part (Baron and Harris 1995), which can be broken down into a set of resources. These are listed below (Grönroos 2000; Baron and Harris 1995).

CUSTOMERS: Since customers are actively participating in the process of service delivery, they are seen as forming part of production resources. A customer can be a buying customer or other customers that have an effect on the service experience.

CONTACT PERSONS: The frontline personnel of the service organisation who are in direct contact with customers, such as flight

attendants and ground crew, are called contact persons. Contact persons interact with customers face to face, by phone, by letter, or by email and perform tasks assigned to deliver the service.

SYSTEMS AND OPERATIONAL RESOURCES: The service provider's operational and managerial systems and routines that the customer must go through when using services, such as airlines' procedures to serve meals on flights, have a major impact on how contact persons operate or how customers experience the service.

PHYSICAL RESOURCES AND EQUIPMENT: Physical resources in the service production process affect the customer experience and communicate the quality of the service to the customer (even before the purchase). Physical resources and equipment are, for example, the location and layout of the service provider's premises, and spatial conditions like temperature, scents, sounds, décor, furnishings, products, equipment and signs. These elements create a so-called Servicescape. When the servicescape is well designed it is easy for a passenger to find the right departure gate at the airport, for example.

The major parts of the service delivery process are performed behind the line of visibility in the service system's support part. Even though customers are not in direct contact with operations done in the back office, these operations still have a great influence on how customers perceive the offered service. (Grönroos 2000; Baron and Harris 1995) Based on Grönroos (2000) the support part includes:

MANAGEMENT SUPPORT: Managers and supervisors are responsible for supporting and encouraging the contact personnel to perform well. Management creates the service organisation's values, working methods and prevalent service culture.

PHYSICAL SUPPORT: Contact persons are often dependent on support persons' work-input when serving customers. For example, without the support people's contribution airplanes would not be

cleaned, passengers on the flight would not be served any meals, and the flight crew would not be trained for their work tasks.

SYSTEMS SUPPORT: Systems support is composed of investments that the service organisation has made in infrastructure, technology and systems know-how. ICT systems, buildings, offices, vehicles, machines, tools and template documents are examples of system support.

The service system model can be compared to a theatrical performance (a play) as a metaphor. According to this metaphor customer servants are the 'actors' and clients are the 'audience'. The visible part of the service production happens on the 'stage', and the invisible part of the service delivery process happens 'backstage'. The 'set' and the 'props' can be compared to the servicescape and tools used in service production. The service delivery process as a whole can be seen as the 'script'. (Baron and Harris 1995)

SERVICE SEEN FROM THE USER'S PERSPECTIVE

Service design focuses mostly on the interactive or visible part of the service as the main area of intervention (Maffei et al. 2005). This means that the understanding of how customers experience and use services in different contexts is emphasised (Parker and Heapy 2006). Service design is based on a user-centred approach that puts the users of the service at the centre of the design process. When service is seen from the users' perspective new ways of structuring services are needed. These concepts are known as Service Moments, Customer Journey and Service Touchpoints.

SERVICE MOMENTS: Every service is made of episodes or encounters where the production of the service and the interactions between a customer and service provider happen. These episodes,

which together constitute the service entity, are called service moments. An example of a service moment is when the customer checks in at the airport (see FIGURE 4).

CUSTOMER JOURNEY: Services are processes that happen over time, and this process includes several service moments. When all service moments are connected the customer journey is formed. The customer journey is formed both by the service provider's explicit actions as well as by the customer's choices. The likely customer journey for a passenger before a flight is shown in FIGURE 5.

The concept of the 'Service Chain' is commonly used in services marketing and can easily be confused with the concept of a service journey. However, there is a major ideological difference between these concepts. The service chain presents a more organisational perspective on services development: customers are seen as a mass of people that are forced to proceed from one service moment to another, mainly following the interests of the organisation. Allegorically loops in a chain are interlocked with one another in a specific order. The customer journey, instead, takes into account that customers are not only following the process that the service provider suggests: they also make their own choices based on their needs and behaviour. In a way each customer constructs his own unique service journey since people behave and act differently and because the service provider usually offers customers optional ways and channels to consume a certain service. For example, flight tickets can be booked via the Internet or a travel agency, and the customer can choose to travel to the airport in his own car or by taxi (see FIGURE 6). Service design tries to recognise different primary behavioural models to consume a service, so that the customer experience can be designed to answer customers' varied needs.

In service design the customer journey and the service

FIGURE 4: **AN EXAMPLE OF A SERVICE MOMENT IS WHEN THE CUSTOMER CHECKS IN AT THE AIRPORT.**

FIGURE 5: **THE CUSTOMER JOURNEY FOR A PASSENGER BEFORE A FLIGHT: BOOKING A FLIGHT – CHECK-IN – SECURITY CHECK – BOARDING – ON BOARD ETC.**

moments can be mapped out from an already existing service (as-is) or used as tools in the concept design phase of new service offerings. By doing this the service structure becomes more concrete and understandable and can therefore be better shaped and critically examined. With the help of observation and other methods used in service design it is possible to find new customer needs and new models of earning money. Sometimes the customer journey can be prolonged at the beginning or the end and sometimes even new service moments are added in between the already existing moments. Service moments that the customer does not like, or that do not produce any value or turnover for the service provider, should be deleted from the customer journey. An individual service provider is often unable to provide all the services that a customer might need in a customer journey. It is therefore important to discover services that are missing in the customer journey and to find the right service providers to produce these supporting services. With the help of the customer journey it is also possible to observe if the other service providers are in the right spot in the customer journey or if they should change places to create a more complete customer experience. (See FIGURE 7.)

SERVICE TOUCHPOINTS: Each service moment is made of a number of touchpoints (see FIGURE 8), through which the service and its brand is experienced and perceived with all the senses. Touchpoints are divided into channels, objects, processes and people.

– Channels are environments, spaces and places where the visible part of the service production happens. Channels can be physical (e.g. the airline lounge or the airplane), digital (e.g. Internet), or intangible (e.g. a phone service). Often services are multichannel customer experiences, which means that they are produced through many different media. In a single channel the customer encounters

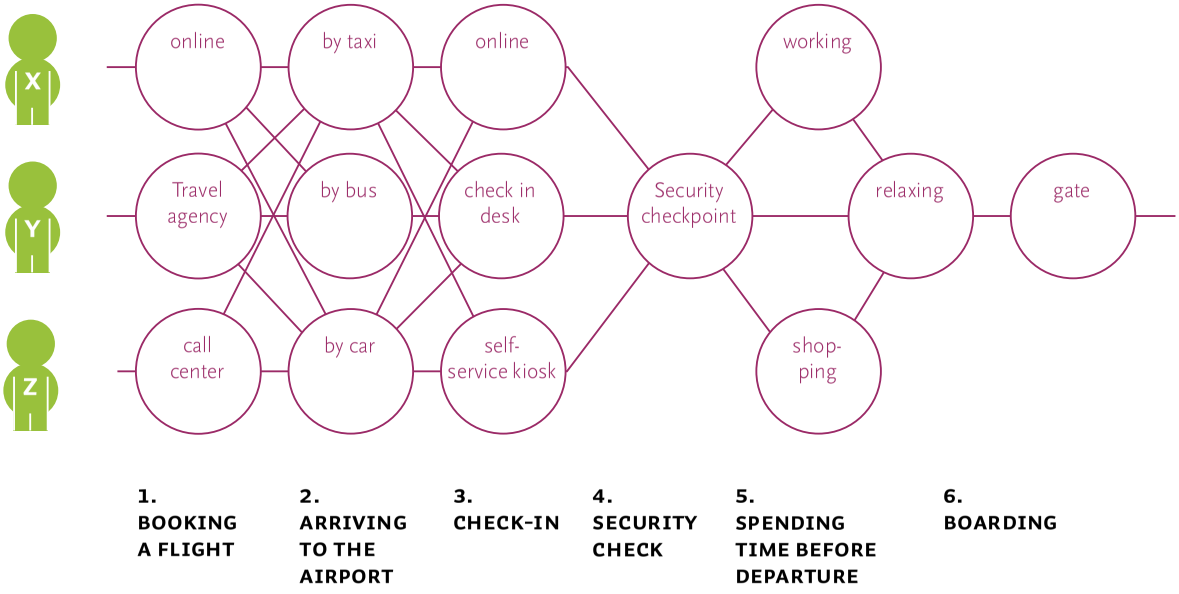


FIGURE 6: **Each customer constructs his/her own unique service journey since people behave and act differently and because the service provider usually offers customers optional ways and channels to consume a certain service. For example, flight tickets can be booked via the Internet or a travel agency, and the customer can choose to travel to the airport in his own car or by taxi.**

many different touchpoints. In physical environments touchpoints such as décor, lighting, scents, people flow and sounds have significant influence on the customers' overall experience.

– Objects as touchpoints are things or machines that the customer himself uses, needs or gets when using a service (e.g. a flight ticket). The objects can also be things that the personnel use but are still visible to the customer and contribute to the customer's service experience (e.g. the drink trolley in an airplane). Touchpoints on the flight can be newspapers, a loyal-customer card, a safety instruction sheet, meals and drinks. Since the service cannot be tested before using it the customer often draws conclusions based on what he or she sees. Objects often thus have a communicative role in services.

– Processes and procedures determine how the service is produced and experienced. Examples of processes and practises as touchpoints include the way a check-in kiosk's user interface functions, the order in which food is served on the plane, and the way passengers are greeted by the crew. In service all the processes and routines can be determined by the smallest details. These small details are called service gestures. Service gestures are for example when the check-in ground crew circle the departure gate on the ticket or when the toilet paper has been folded in the hotel room. These gestures may be very small but can have a great impact on the customer experience.

– People often have a central role in service delivery. With service design it is possible to direct those who consume services (the buying customer and other customers) and those who provide them (contact persons). It is important to design suitable roles for both contact persons as well as customers. It is also important to consider to what amount the customer servant is responsible for the service production and how much the customer is responsible for it

him/herself (a.k.a. self-service). Customer servants should be in the most useful and appropriate role, and the division of responsibilities should be clear. For example, the social skills, the way of dressing and the manner of speaking of customer servants have a great impact on the customer's service experience.

FIGURE 7: **Considering appropriate service moments in a customer journey.**

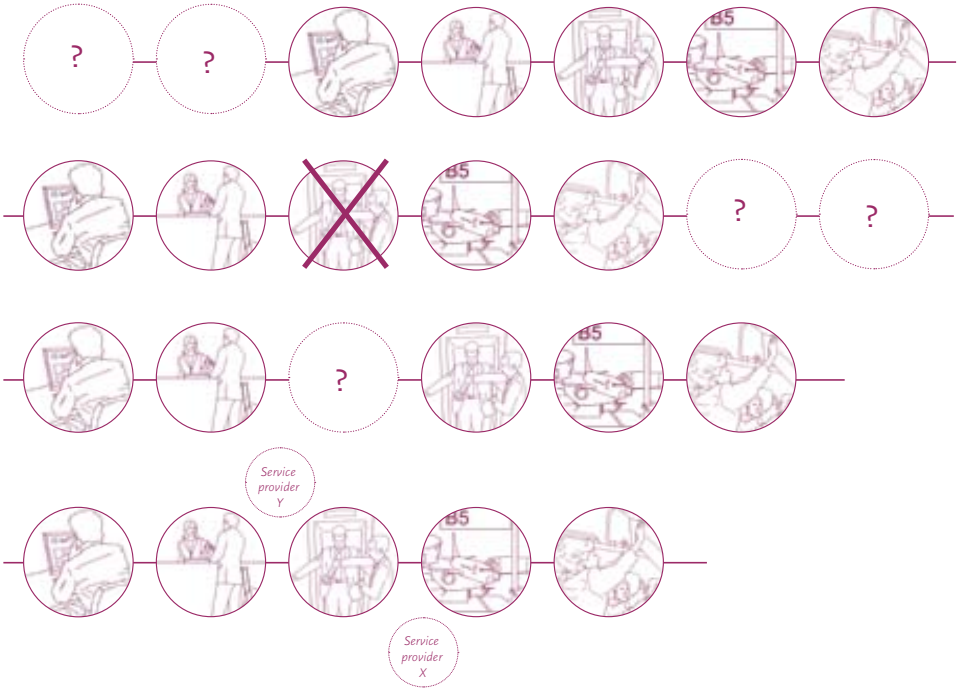
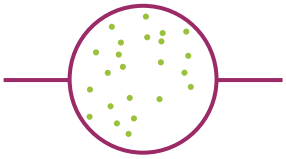


FIGURE 8: **Each service moment is made of a number of touchpoints.**



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DESIGNING PUBLIC SERVICES

PAUL THURSTON

The public sector in the UK has seen unprecedented levels of spending over the past decade. However, public services still face significant social problems: long term conditions affect over 15 million people and diabetes alone is estimated to cost the NHS £1m every hour (Douglas Smallwood, Diabetes UK Chief Executive). Public services need innovative solutions to address these big social challenges, whether these are in health, local government, education or other areas of the public sector. This article aims to discuss the key areas of opportunity for service design in public services; these include building capability from within organisations, creating more meaningful user involvement and personalising public services.

No one would argue against public services that help improve people's lives, whether it involves making sick people feel better, improving a child's education or helping someone find a job. But what about how these services are delivered? Should we be concerned about people's experiences or is it simply about providing the service? The 2008 Department of Health Document 'High Quality Care for All' (Darzi Review) started to address these issues, setting out 'why' we should be improving experiences for patients in three ways:

1. the moral imperative to protect people when they are at their most vulnerable;

2. the clinical case, which shows that patients who feel informed, relaxed and cared for heal faster; and

3. the business case, as patient choice begins to permeate through the NHS.

It is difficult to argue against improving experiences. However these systematic changes will not happen overnight and need work at all levels to create change. Service user involvement can often create frustration for both the service and the user because the capacity to create meaningful change is limited. *By using service design techniques that enable all levels of the service to engage with their users and understand their experiences it is possible to turn this involvement into real service improvements.*

Design and social innovation agency thinkpublic worked with the NHS Institute for Innovation and Improvement at Luton and Dunstable Hospital's Head and Neck Cancer Service to develop a new model for service design in the NHS. Over the course of twelve months, thinkpublic initiated the UK's first-ever co-produced "experience-based design" project in the NHS. Combining radical thinking in commercial and social innovation with seasoned techniques from

the world of design, we put together a methodology that would get the best results from patients and staff. Then we stepped back and let people do the improving for themselves.

Using the co-design process with patients and staff resulted in 43 improvements to the service, including an improved waiting room layout and redesigned outpatient clinic times. When the project began in 2005 this was the first time design had been used in this way within the NHS. The approach thinkpublic used was tested with five other NHS Trusts, in departments including stroke services and day case surgery. Following these tests thinkpublic co-developed a training product called Experience Based Design (EBD). This product will enable NHS organisations to use service design methods such as observation, experience capture and emotional mapping in all NHS improvement work. By designing tools and techniques to enable staff and patients to design and make improvements themselves, thinkpublic has enabled the EBD approach to spread across the whole of the NHS.

BUILDING SERVICE DESIGN CAPABILITY IN PUBLIC SERVICES

Working with service design methods it is possible to support organisations to build design capability into their work process. By using these methods with rather than for organisations and involving staff and users in the design of services, staff become champions of these methods and pass them on to others, one of the key factors in creating a meaningful impact in public services.

Designers bring energy, we are hungry for change, and want to make things work better. A fresh pair of eyes can give services important insights but in order for the change to happen staff must

see this for themselves. *Service design in the public sector often involves innovating within existing services rather than designing new services from scratch.* Previous work by thinkpublic in the NHS and local authorities has shown that there is a real hunger to take on service design methods, but staff need to be supported to do so. Products such as toolkits and activities are useful in doing this and give people something to start with, but often more personal support and training is required. *Service Design must start looking at how methods and processes can spread within organisations to show true value in the public sector.*

What tools can we develop that start to achieve this?

Service design needs to develop tools that

- enable public sector organisations to take on service design methods,
- help organisations build capability in frontline staff,
- develop an entrepreneurial mindset within organisations.

Existing Service Design tools like emotional mapping and storyboarding help to visualise experiences and have worked very well in public services. Already there are large numbers of these tools available and they have been used widely; however these service design methods tend to be used as part of the organisational work process, and thought needs to be invested in how the methods are delivered and then disseminated within the service.

CREATING MEANINGFUL INVOLVEMENT

At thinkpublic we began to see that our experiences with service design in health could be transferred to other areas of the public sector, areas that faced similar challenges around innovation, engagement and design. We were invited in September 2008 by


SOLDIERS GREEN
WARD

Co-design in full swing, project newspaper.

Identifying crime hotspots with young people.

Barnet Council to find out what their customers thought about a particularly prominent issue, fear of crime. Previous consultation told them that one ward in the North London borough had a disproportionately high fear of crime compared to actual crime rates. In another, there was a low fear of crime compared to actual rates. To uncover the reasons behind the anomalies, thinkpublic worked with the Council to carry out ethnographic research and discovery workshops in the heart of these two communities.

Using filmed interviews and vox pops, we found out how people and communities really felt about crime and where their fears came from. We ran an interactive text message and photo-mapping workshop with children and young people at youth clubs in the local community. They helped us understand their fears about the area and capture ideas for how they could be involved in helping reducing the fear of crime within their community. By engaging with staff and users we were able to co-design a number of activities that would facilitate meaningful engagement in public service design, employing the experience of their users in a way that is relevant to them. On the back of this work thinkpublic designed an experience mapping tool called 'Birds Eye View' for the whereilive.org website. This tool was designed to capture customer insight through user-generated content on YouTube and Flickr that is mapped across the borough.

The engagement activities and findings have been replicated across Barnet Council departments to help the Council observe, listen to and design with their service users when carrying out any service design work. This has been achieved by providing staff tools to share their experiences of working in this way with colleagues, training for staff in service design techniques and inviting staff to shadow members of the thinkpublic team when carrying out this work.

CREATING PERSONALISED PUBLIC SERVICES

Public services are often part of large, complicated organisations, which makes innovation difficult. Using a collaborative process such as co-design means that users and providers can understand their roles and responsibilities in the design, delivery and improvement of any service. In our projects we have found that providers are often surprised how much users can help. As I mentioned before, the public sector cannot sustain current level of investment, and services will increasingly rely on their users to take greater responsibility for elements of service delivery.

Many areas of the private sector have already embraced this change: experiences with services outside the public sector are raising users' expectations, particularly when looking at online companies. *This shift in expectation from service users is making public services re-assess how they meet their users' needs. The idea that users can play a role not only in the design but also in the delivery is new, but we are already seeing changes that will affect the role of service design.* In the UK we have seen examples of personalised care services with 'individual budgets', an initiative that aims to "bring about independence and choice for people receiving care or support" (Department of Health www.dh.gov.uk).

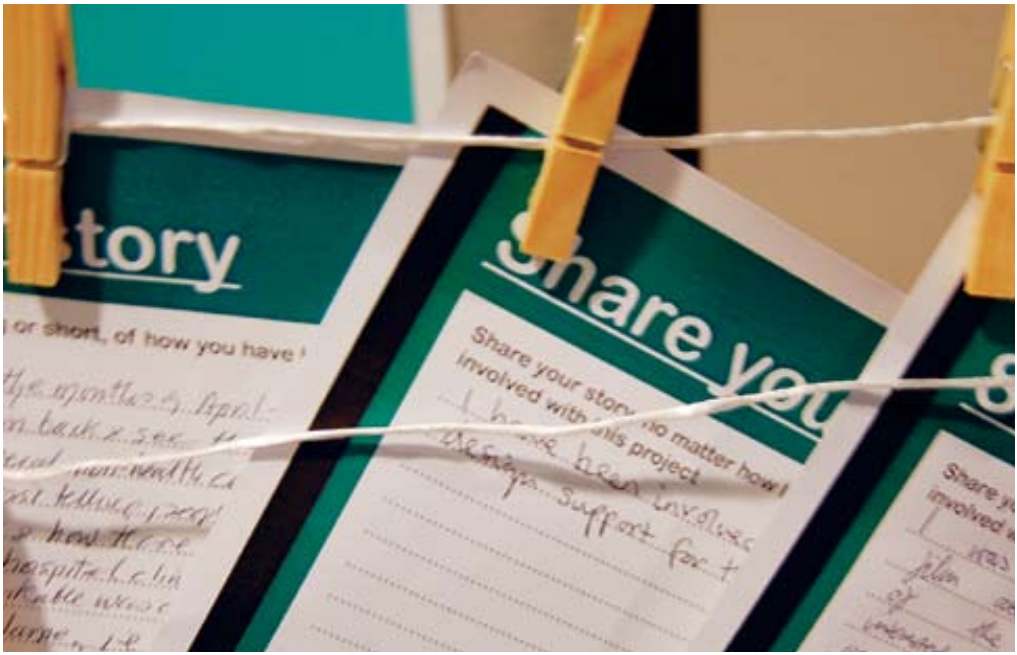
This new approach to public service delivery is also encouraged by the Royal College of Psychiatrists at a clinical level, with research showing that "employing users in case management or outreach services is beneficial; the individuals they work with appear to have fewer hospital admissions and an improved quality of life than comparable groups" (Rutter et al. 2004). This highlights the benefit to service users of meaningful involvement in mental health.

The range of services now available has made communication

Each mission is texted through to teams of young people then photos are texted back.

Getting people involved at Luton and Dunstable.

Sharing service stories.



and collaboration between departments more important – as has meeting demands for personalised services" (Varney 2006). In the future people will still want to go to their GP, local school or visit a library; however as these examples show it is the relationship we have with these services that will start to change. With more decisions and involvement from users, services will be better at explaining what they offer and how they work.

Service design brings a useful set of tools, techniques and methods that enable public services to fully understand the way their service is experienced and make changes based on this understanding. Often in the public sector, services have grown organically over long periods of time: they have not necessarily been 'designed' as such. These types of public services have a tendency to continue in this way until someone questions why or attempts to innovate.

We want to see service design methods supporting public services, to turn the ideas of staff and users into solutions that make a positive difference to people's lives. The examples at Luton and Dunstable hospital and Barnet Council show that using service design methods can drive change and deliver better outcomes. *By using service design methods we have shown how it is possible to build capability, increase meaningful involvement and create personalised services.* There is a real hunger in the public sector to find better ways of achieving these goals, and service design can provide a set of methods that can make them happen. For this to take place, service design must dedicate time to educating others in these methods and design ways for them to spread throughout public services.

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WHO DO WE THINK WE ARE?

ARNE VAN OOSTEROM

I am writing this article to describe what the strategic design consultancy DesignThinkers does. Not what I would like to do, should do or think I'll be doing in the future. There would be no value in that. And I'll just be wasting your time. So hat I would like to do is show you how our minds work, how we perceive this changing world, what motivates us and why we are so obsessed and excited about service design. I will bore you a bit with some theory, but I will try to keep it limited.

Let me just start by saying that I am no scholar or scientist. I have not done any research about how the world, businesses, countries, societies, cultures, customers, end-users, citizens, civilians, people, or you and I are changing. All I have is my experience and a curious, creative, chaotic and always restless mind. But although I am a practitioner I constantly look for discussion to challenge and sharpen my own views. It is the discussion I am interested in, not the definition it might produce. While discussing and playing around with ideas we keep learning and growing, a final definition makes us stand still. It's not the goal that matters, but the journey. So let us not agree! And besides, theory simply doesn't pay my bills.

Coincidently, I'm writing this article exactly two years to the day from when my friend and business partner Marjo Staring and I started DesignThinkers. A good moment to reflect on two years' (re)searching, developing methods, talking too much, having lots of fun and generally working too hard and spending all too little time with my family. And while looking back I wonder why we started DesignThinkers with so much faith in ourselves. What made us believe we had an answer? Was there a question?

I guess the answer is that at the time, working as a Creative Director for a communication and design agency, I felt that I did not provide my customers with the best possible solutions. Most of our clients were service organisations but we had no specific vision or tools designed to help them deliver a better service than their competitors. We could only make better posters or websites. And, from a more personal perspective, I was working in a world where individual prestige and awards were more important than making people happy. This started to bug me. Besides wanting the best for my clients, I wanted to make a difference. Add some real and meaningful value to people's lives for a change (call me naïve). For

this the tools I used felt outdated and inadequate, my reasoning and concepts superficial. I realised something: when I went to school my teachers did not have a clue about the future. They could not prepare me for it, but they pretended they did know. We keep teaching our children the same way. I felt I had to throw everything away and start from scratch. And when I started to read about design thinking and service design the penny dropped. And somehow the service design world, as far it existed at that moment, appealed to me. I liked the look-and-feel of it.

Then I had a problem: the agency I worked for did not have the capacity or flexibility to change its course. And maybe they just thought I was a complete idiot. Maybe they were right. Anyway, I left and started DesignThinkers together with Marjo Staring. From day one we started raising awareness, educating people in our network, and slowly started developing a market, since there wasn't any. At DesignThinkers we are pro-active. We don't just wait for a client to call. Often we come up with concepts and projects first and then find a client for it. And we constantly organise design thinking and service design workshops and training sessions. Being pro-active, involved, out there all the time, is one of the key factors in our success.

WHAT ARE WE TALKING ABOUT?

While talking to clients and potential clients about service design I learned something else. You see, there is a particular jargon that accompanies service design, and it can take some time to get used to. It can make everything sound a bit mushy and alien. If I start orating about co-production, end-users, service-delivery blueprints, customer journeys, service ecology and so on, my clients generally start to get nervous. "What the hell is he talking about? I thought

we were working on a website?" So I quickly changed my language. I started using words from the more familiar fields of expertise like branding, experience marketing and, my personal favourite, life in general. This sounds easy, but customised words are sometimes pretty handy if you want to get to the point fairly quickly. But until everyone knows what exactly a 'service ecology' means, better shut up about it. It makes conversations a lot easier.

Most of our clients talk about marketing, branding, quick wins and deliverables. They don't like the sound of a 'holistic' approach. They have a fixed budget meant to build a website, run a campaign or design a book. And we noticed that in general clients find it very hard to pay for advice, a problem we still find very difficult to solve.

Naturally everyone wants the best possible outcome. But to get there a project often needs research, good strategy, creativity and a holistic approach. This sounds like: expensive, expensive, expensive, and more expensive. And even though we are able to show our clients that in the long term, investing in research and prototyping will save a lot of money in the end (and everyone agreed we came up with the best approach), projects hardly ever get done the way we initially proposed. Because this would involve a change in focus, attitude, internal organisation, deadlines, etc. Only a manager, CEO or director at the highest level can make such a decision. And people at the top are hardly ever the people we talk to when we start a project. They are shielded or busy doing important things.

But a service design approach can only be successful if supported at the highest level of an organisation. That is why we like to work for start-ups and small companies or pilot projects. When working for bigger organisations we usually talk to a project, marketing or communications manager. And my

experience is that often they want to be reassured, make a success and not take risks (although not always. We have the joy to work for some very courageous and visionary people). *They usually want to know exactly what the deliverable is going to be, before they agree on hiring us. And a service design approach can feel like taking a risk to them. We don't have any answers and we can't possibly know what exactly the outcome of a project will be when we start.*

We live in a world where we are encouraged to pretend we know all the answers. We have to sell ourselves as being competent and very confident. Organisations work hard to become big impenetrable fortresses, shining with self-confidence. "Trust us," they shout, "we are experts, we know exactly what we are doing." It's called branding and marketing. It is perfectly normal behaviour. We reward it, expect it and teach it in school. *But this attitude is very dangerous and especially destructive for any creative process. We need to be able to make mistakes, sketch, experiment, and design prototypes that fail miserably. This is how we learn and grow. It's what being creative; or rather being human, is all about. It's experimenting and sketching that helps shape the masterpiece.*

"If you're not prepared to be wrong, you'll never come up with anything original." (Sir Ken Robinson)

Companies and organisations are just a collection of people working together. Anyone who has worked for any large or medium-sized organisation knows that it is far from perfect. Things go wrong. But this can't be discussed in the open. To the outside world everything has to be perfect. But no one knows what's going to happen next week, let alone next year. And the Internet makes it more and more possible for the outside world to see behind the façade.

The empowerment of the customer is making strong brands vulnerable. However, this is an opportunity, as much as it is a threat to the status quo. Accepting you don't know everything and you don't have to, can be eye-opening and very liberating. It makes you stop talking and start listening. That's the first start of a relationship.

Knowing when to shut up is a very important lesson a service designer needs to learn as well. Service design can have a profound impact on an organisation. Knowing your place is the key. Generalists need specialists. It's very important to define the moments within a project you will have to bring in the specialist who knows what he is talking about and knows everything about, for example, reorganisations, transport, databases, architecture, landscaping, interaction design, airplanes, or phone companies. Something I learned: many things in life can be solved by using a bit of common sense. But as Voltaire once said: Common sense is not so common.

WHAT WE ARE DOING?

"People don't want services or products. They want outcomes, or solutions."

"There are no pure goods or pure services." (Peer Insight)

"People don't want a quarter-inch drill. They hire a quarter-inch drill because they want a quarter-inch hole."(Theodore Levitt, Harvard Business School)

Selling a product or service that enables people to achieve an outcome they desire is how businesses earn their money. For example: listening to music is an outcome. A device to play previously recorded music makes it possible. Talking to someone you want to talk to is an outcome. A phone makes it possible. And the whole experience is the added value. *Design can add value to*

5 STEPS TO SERVICE INNOVATION

1 DISCOVERING, 2 CONCEPTING, 3 DESIGNING,4 BUILDING, 5 IMPLEMENTING

1A DISCOVERING / BUSINESS

We do not think that the end-user is the starting point of any realistic service design project. We always start with the client. Understanding your client is essential to the success of the service design project. Step one is research into the organisation's characteristics and goals: their vision, mission and culture. We look at the history of the project and existing services (blueprints/systems). We talk about their Key Performance Indicators (KPIs) and develop emotional KPIs. We make a context map with all the stakeholders and look at examples from the market (benchmarking).

1B DISCOVERING / EXPERIENCE

During this step we discover the desired outcomes, map customer journeys, and all the touchpoints. We start conversations with end-users and front office personnel about their experiences. And we get out there for ethnographic fieldwork. This is when we gain our most important insights. At this point we make our first analyses and recommendations. Usually this is a moment when a client has to give another go-ahead.

2 CONCEPTING

Now it's time to start developing ideas together with end-users, front office personnel, experts from different fields of expertise and the client. We do interviews, brainstorms, workshops, and we experiment using prototypes. In the end we will have a tested concept. At the same time we start visualising our ideas. This will result in a visual concept or moodboard.

3 DESIGNING

This is the moment when we put everything together and start designing the whole system, resulting in a detailed service blueprint. At this time we will work closely together with experts from different fields of expertise. And we will finalise the look-and-feel.

4 BUILDING

Now we start building all touchpoints. This can be anything from physical locations, different media, up to training employees and call-centre staff. We start putting processes in place and building the organisation needed to deliver the outcome. During this part of the project we develop the marketing/ communication strategy. In the end we have an organisation tested and ready for implementation.

5 IMPLEMENTING

This is the moment where we open the shop and invite everyone in.
Making customers happy with a highly competitive service organisation.

the journey getting to the outcome and getting people as close as possible to an outcome they need or desire. This is why at DesignThinkers uncovering the desired 'outcome' is central to developing the best possible concept and solution. And to be honest; we don't care what the method is called. We put the ideas into practise that we discovered in practise.

DesignThinkers assists public and private organisations and companies in delivering the best possible service. We help them to be more innovative and competitive. To do so we created a 5 Steps Service Innovation Method. This Method is used as a guide while working on complex service design projects. To put it into perspective: usually the reality of a project is very chaotic. This method is used as a starting point and a checklist for us, and our clients.

CASE: GO WEST

To give you an idea of the complexity and breadth of our work I want to tell you about one of our projects. This is an ongoing project we do for the city of Amsterdam, specifically the port of Amsterdam. Unfortunately because of the sensitive nature of the project a lot of information cannot be shared. But because the challenges the Port of Amsterdam faces are the same as what almost all large international seaports, and other large industrialised areas, are confronted with, I thought it would be an interesting case to talk about.

DESCRIPTION

Amsterdam, capital of the Netherlands, has the second largest seaport in the country (the biggest being the Port of Rotterdam). It is a vast industrialised area employing more than 25 000 on the

western edge of the city. There are many seaport-related companies and activities, but there are even more companies who have no seaport-related activities at all. This means the port offers a wide variety of jobs on every level, and there are many job opportunities. Amsterdam wants the port to grow and stay competitive. To do this they will need more workers. So the city is looking for people who want to work in the port area.

The part of the city closest to the port is called Amsterdam New West. In this part of the city there is a relative large group of people with little education, looking for a job, compared to the other neighbourhoods in the city. But only a small group of people from Amsterdam New West actually works within the seaport area, again compared to the other parts of Amsterdam.

Naturally our client wants to put two and two together. But while looking for a solution they have focused mainly on mobility. And rightly so. This area can do with some improvement. A mobility specialist (Bureau H2O) was asked to come up with a concept. (They already had a transport service in place called W-Bus, a unique collaboration between the public and private sector and a good service, but too small in size to meet the expected demand). And soon we were brought in because they realised that focusing only on mobility, and only looking at it from the port's point of view, would not be enough. But still, setting up a service around mobility was central to our initial brief.

Fieldwork in Amsterdam. Impressions of coal at a coal transhipment company at the Port of Amsterdam.

DISCOVERING

We began with research into the context and we mapped all the stakeholders. We talked to everyone who wanted to talk with us. The people from the Port of Amsterdam, the representatives of Amsterdam New West, as many representatives of the companies we could meet. And we arranged several workshops with the people the city pinpointed as the primary target groups.

THE PRIMARY TARGET GROUPS ARE:

– Women (mainly) with low education, an ethnic background, who have received language training and are considering a job for the first time.
– Young people who left school early and are in government-funded programmes to get them ready for a job.
– Other jobseekers.

WHAT WE DISCOVERED:

From the Port of Amsterdam perspective
– Amsterdam uses two names to describe the area: Haven van Amsterdam (Port of Amsterdam) and Westpoort (Western Gateway). The port decided to stick with the name Port of Amsterdam.
– The port area is partly on the territory of the city and partly on the territory of the province North Holland.
– A large potential workforce will increase the competitiveness of the Port of Amsterdam. Meaning: the port authority wants to keep the companies already in the port happy and attract new companies to choose the Port of Amsterdam by, amongst other things, having a large selection of employees on offer.

FROM THE AMSTERDAM NEW WEST PERSPECTIVE:

– New West wants to find a solution to unemployment and is very active.
– New West feels that public transport needs to be improved.
– New West likes people to find a job in their neighbourhood.
– Traffic jams are suffocating the city during rush hour.

FROM THE COMPANIES PERSPECTIVE:

– The companies with no seaport-related activities do not use Haven van Amsterdam or Westpoort to describe where they are located. (They do not like to be associated with the seaport.)
– The companies with seaport-related activities do use Haven van Amsterdam to describe where they are located. The image the port has suits them.
– They use mainly informal channels and employment agencies to find new employees.
– They are not interested in where their employees come from. But they see some benefits for their company in having workers living close by.
– They employ people from all over the country.
– The employment agencies do not care where the workers come from.
– Some companies had strong connections and roots with certain neighbourhoods, before they moved to the Port. They still have many workers coming from those neighbourhoods.
– In general they only have problems finding people with a technical background.
– They think they will need more people in the future (in ten years) because of the age of their workers.

LEFT: **Mind mapping while working for the Port of Amsterdam.** *Photo courtesy Lauren Currie.*

RIGHT: **Fieldwork in Amsterdam. A look at the different kinds of public transportation.** *Photo courtesy Lauren Currie.*

LEFT: **Fieldwork in Amsterdam. A look at where people live.** *Picture Lauren Currie.*

RIGHT: **Fieldwork in Amsterdam: Working with the users of public transportation.** *Photo courtesy Lauren Currie.*

FROM THE TARGET GROUPS PERSPECTIVE

– The women often do not know where the port is, let alone how long it would take them to get there.
– All target groups have no idea of the kinds of jobs the port has on offer.
– They all associate the Port of Amsterdam with dirty, hard physical labour.
– They have never thought about working in that area. And do not know how to find a job there.
– The port is very close to where the target groups live… on the map, but due to little or no public transportation travelling to work can sometimes take 45 minutes or longer.
– They do not own a car.
– The target groups are schooled and guided by organisations and projects funded by the government. The people leading these organisations do not know the route to the port and have no more knowledge about the port than the people they are training and guiding.
– The various organisations working with the unemployed are not interconnected. No one has a bird's-eye view.

The general outcome or solution for the target groups: having a higher income and a nice and interesting job, close to home where they can meet people and learn new things.

SOME RESULTS OF OUR FIELDWORK:

– The port area is daunting. People do not feel safe.
– There are hardly any people outside in the port area, only in vehicles. And the office buildings are situated away from the roads. So there is hardly any human activity visible.
– People do not use their bicycles to travel to work (in the Netherlands the bicycle is a very popular means of transport).

– The port area has no heart, and there is nowhere to go if you want to go outside for some fresh air.
– Some people wander over to a petrol station to get some coffee.
– Streetlights and pavements (sidewalks) are missing in some areas.
– Travelling from Amsterdam New West to the port and back can be a lengthy undertaking. There is only a transportation service that goes to specific companies and only at specific times. When travelling with this service going home a bit early or even five minutes later is not an option.
– The only place people can reach using public transport is the train station Sloterdijk. This station is on the outermost eastern edge of the port area.

GO WEST RECOMMENDATIONS:

Although the Port of Amsterdam is our initial client and starting point we felt that it is Amsterdam New West that should be the pro-active party. There are many opportunities in restoring and building the relationship between an industrialised area and a nearby neighbourhood.

Amsterdam New West should build a relationship with the companies in the port. They must set up a Go West service system, channelling information and people. On the one hand Go West provides the companies with their own intermediary, job broker, from New West. The job broker must be a pro-active problem solver, taking problems out of the hands of the companies. And she or he provides them with an opportunity to find quality employees that live only a few streets away.

It is key that the contact between the companies and intermediary is not businesslike and impersonal: the job broker must become a person the companies grow to appreciate and trust.

Go West connects all the different organisations and projects that work with the unemployed in the neighbourhood. The intermediary will get to know all of them and be in constant contact with them, providing information about the port and specific job opportunities and providing a bird's-eye view, connecting all parties and information together.

And last but not least Go West will help the jobseekers from New West to find suitable jobs in companies in the port area, making sure they are well prepared and supported for job interviews.

In combination with the job broker, there must be a Go West mobility service that is flexible enough to meet any demand. This will be achieved by using and extending the already existing service of the W-Bus.

In the centre of the port area there should be a hub. There must be a bus service going directly to this hub from Amsterdam New West, significantly shortening travelling time and distances in the port area as well as increasing the feeling of safety. Moreover, the hub gives the port area a central place, a heart. Thus it can function as a meeting place for people working in the port area. Go West must have a physical presence here and also open an office in the centre of Amsterdam New West.

If the Go West service is in place and functioning it can easily be extended towards other areas like Schiphol Airport. This is another bordering area with many job opportunities.

CONCLUSION

Naturally this project is far from over and I cannot go into too much detail. But what I hope to have shown by describing some aspects of this project is how complex a service design project can be, even

though the end result seems very simple and straightforward. During this project we dealt with unemployment (a very politically sensitive area), place branding, landscaping, mobility, different interests within a local government, a multitude of companies and projects. And to top it all off we actually had to switch from one client (the Port of Amsterdam) to another (Amsterdam New West). What I can say is that one of the results has been that Amsterdam New West will take the initiative, and this sparked a new collaboration between New West and the Port of Amsterdam. It is dealing with complex issues that make service design projects like this very exciting. And at the end of the day we will actually help people find a job. It can't get any more rewarding than that.

SERVICE DESIGN AS A TOOL FOR INNOVATION LEADERSHIP

KAI HÄMÄLÄINEN / MIIA LAMMI

Services have proven a competitive tool for businesses in Finland, even for society as a whole. The aging population presupposes new service concepts, innovation, and creativity. Technology is needed to make services more effective and available, but technology cannot drive service development. The National Knowledge Society Strategy, for example, lists insufficient focus on user and customer perspectives as a deficiency for Finland in product and service development. The customer or user cannot be overlooked; on the contrary, success is based on a profound understanding of the customer's world. Customers have an essential role, particularly in service development, because services are based on encounters between customers and the service provider. These encounters take place via various interfaces, such as the Internet, face-to-face meetings, and the physical environments in which the customer experiences the service.

With a focus on customer and user experiences, the DESIRE project examined market-oriented service design as a means of improving service innovation in businesses. The project studied user-oriented service design processes in four Finnish enterprises: Itella, SOL Services, VLP, and Ålandsbanken. Itella specialises in logistics, continuing the traditions of the national postal service. SOL Services is a national provider of cleaning, property management, and laundry services. Part of the Anvia Group, VLP is a telecommunications company, and Ålandsbanken is a bank originating from the Åland Islands. For all of these companies, service design was a new method of service innovation. In addition to these, the project included two individual processes focusing on social challenges.

The key tools in the project were ethnographic user research and service design methods. Ethnography seeks to acquire a profound understanding of human life from social and spatial viewpoints: How do people behave? What types of rules and norms guide their actions? What interpretations do people construct from the world around them? What aspects do they communicate?

User scenarios were the most important service design method used in the project. These scenarios describe the service process as interactions among the user, context, and service. The process of service design also covered the analysis of existing services and related problems and challenges. The project outlined and created new service ideas, modelled service journeys, and visualised and devised various touchpoints. Below, we describe in more detail the user-oriented service design process used for the four enterprises.

FOUR CASES, ONE PROCESS

Each user-oriented service design process was launched with a workshop attended by project staff and company representatives to define company-specific starting points and goals. These workshops were based on a model created by Stefan Moritz: in this model, service design begins with a background survey and the devising of strategic guidelines, based on the challenges and opportunities the company is facing. This focus on the current situation and future prospects guarantees that the service design process is based on the company's real needs and the actual market situation. The perspective was broadened with an analysis of international megatrends and their effect on the company and its future.

Because all of the companies were new to service design, they were also introduced to the basic concepts and the tools service design provides for service development. These workshops resulted in four commissioned briefs with detailed themes and goals for service design. These briefs were further refined during the design process in meetings between the designers and company representatives.

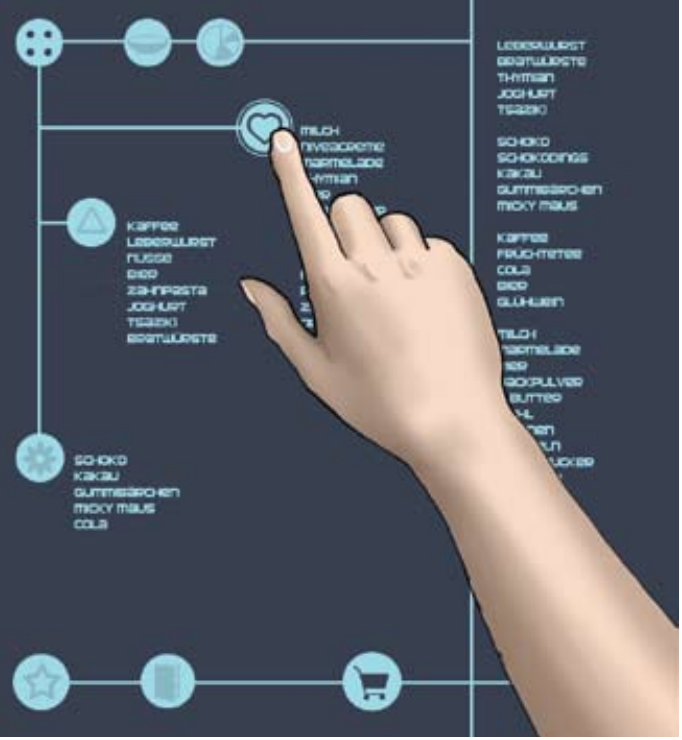
Each user-oriented service design process was carried out over a period of three months by a design researcher and a team of design students. In the first phase, the members of the design team acquainted themselves with the company and its goals and the methods of user-oriented service design. In the user research, the team focused on ethnographic methods, particularly on user observation and interviews, which provide information on both the user and the context. The service was modelled as a service journey, a series of actions in time and place, which included a generalised model of the usage process and service moments from the viewpoint of the user, as well as a model of the different contact points or touchpoints.

Service journeys are often used as a source for creating new service concepts and as a means of understanding the user's world.

Creating new service ideas did not constitute a clear, single phase in the process. New ideas were generated from the beginning of the service design process, based on the designers' earlier experiences and their experiences from familiarising themselves with the company and its services. Discussions with company representatives also served as a good source of inspiration. User research was particularly productive in terms of new ideas. When the designers acquainted themselves with user experiences, hopes, and concerns, they discovered new ways of solving problems and responding to needs. From the very beginning, the process included visualising and outlining service ideas, and these draft concepts became more specific with time. The best service ideas were further refined and developed into service concepts.

When creating new service concepts, the teams employed storytelling methods, scenario techniques, and user-oriented thinking. They also took into account the company's resources and goals. Typically, these service concepts were descriptions of revised service journeys or parts of such paths, depending on the commissioned assignment. Some concepts described service moments and related usage situations and interfaces. However, the most common type of presentation was a cartoon-like usage scenario that mapped out the user's actions. *Special attention was paid to the needs that the service meets—in other words, the user's motives—and the benefits the service provides.*

In the course of the process, the usage scenarios became more specific, describing in greater detail the services and their qualities, such as the interfaces and uses of digital services or the composition of service moments. Ideas were also merged, and the best parts of



LEFT: **The service takes into consideration users' diets including allergies.**

TOP RIGHT: **The first touchpoint on a customer journey based on social challenges. "Saturday shopping." "No thanks." "What about shopping in your own kitchen?"**

BOTTOM RIGHT: **One service moment describes screen installation, service customation and guidance.**

Drawings Laura Volkmar.

different concepts were combined into new processes.

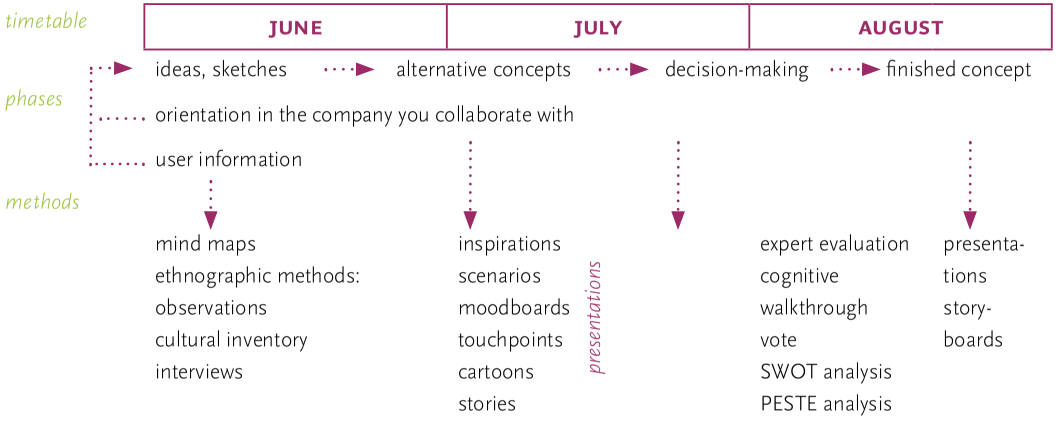
Joint meetings and collaboration with the companies were planned precisely, because the schedule for the user-oriented service design processes was tight, and the intention was to offer the companies meetings that were as productive and rewarding as possible. The designers and company representatives met three times during the process. The first meeting focused on getting acquainted with the company, the process, and the goals. In the next two meetings, the teams reviewed the service concepts, evaluating them in terms of innovativeness, functionality, and suitability for the company.

The service concepts were reviewed using group evaluation based on the waterfall method, in which the weakest ideas are gradually eliminated and the best are selected for further development. The entire process results in one complete concept. The companies chose the direction because of their firsthand knowledge of the goals, and the designers were responsible for the logic and transparency of the process, helping the companies further refine their goals. The process of creating new concepts also generated new visions and insights in the companies and laid the foundation for new goals. The following sections describe the results of the project as well as its relation to other studies and publications.

UNDERSTANDING THE CUSTOMER BY MEANS OF ETHNOGRAPHY

Acquiring a profound awareness of customer and user needs is essential in the early stages of the service design process, as is acquiring a comprehensive understanding of customer encounters in service situations. An understanding of customer needs helps companies identify the aspects of the existing service that need further development and thus create a more attractive and meaningful

FIGURE 1. **THE PHASES AND METHODS OF THE SERVICE DESIGN PROCESS IN THE DESIRE PROJECT.**



service entity. This awareness also helps companies identify new opportunities for innovative services.

Ethnographic methods increase awareness of customer needs. Ethnography is a research method in which information is acquired by observing people in everyday life; in other words, the designer observes the customer in real-life situations to identify problems and needs related to the service. This also produces new service ideas, provided that the designer is able to recognise the most significant and relevant events and situations in everyday settings. Analysing these events and situations from the viewpoint of the company and its needs helps identify new ideas.

A sociological approach and sensitivity to social phenomena take the designer from the planning desk to where the services actually take place. This will provide the designer with firsthand information on the values and attitudes that are relevant in creating new services. Furthermore, the designer can incorporate meanings that customers find valuable into these services. For this reason, the designer needs to have the ability to recognise and interpret the signs and meanings present in our everyday life. Ethnography in design is not only a one-way method of acquiring user information; reality challenges the designer to examine the meanings he or she has constructed. The success and validity of his or her interpretations ultimately depend on whether they appeal to the target group of the service. This ethnographic approach helps companies design attractive and meaningful services that also enhance their competitive strength.

Ethnographic methods challenge not only the designer, but also the company. Acquiring user information and modelling the existing service journey require a new

approach to encounters between the company and the customer: the company must be able to see and understand what happens in these encounters from the customer's perspective. Ethnographic observations and interpretations are meaningless if the company does not recognise or acknowledge the problems revealed in the service journey. The company needs to centre its operations on the customer experience if it wishes to create meaningful service journeys.

SERVICE DESIGN AS A MEANS OF SERVICE DEVELOPMENT

Service design offers a functional means for developing user-oriented services. Companies may have difficulty in seeing the entire service journey because of decentralised operations and responsibilities. This calls for discussion on abstract services and systematic evaluation.

Describing a service journey illustrates the service and its meaning from the user's viewpoint, directing attention to the whole instead of to the details. The main focus is on the customer's experience and service process in the usage situation. Modelling an existing service path, even without new ideas, helps the company understand the service from the customer's perspective and gain a clearer and more concrete sense of the encounter. This in turn helps the company locate critical points with room for improvement. A service journey can be lengthened by adding new service moments, or problematic service moments can be improved to better meet customer needs.

Service design facilitates the improvement of problematic details. An analysis of touchpoints and service moments helps the company understand the quality and significance of customer

encounters in a new way. The company can examine how the customer reads and interprets the service moments and touchpoints and what type of experience the customer seeks. When the company sets this desired experience as a goal, the design will focus on relevant aspects, both the big picture and the small details. Focusing on the service experience also generates ideas for marketing: What benefits should the company emphasise when communicating the new service to customers? How does the service make the customer's life easier? How does it provide a new meaning for the customer? A consistent brand can also serve as a goal in service design: a semantically coherent and uniform brand is presented systematically at different touchpoints.

Companies can benefit from service journeys and other presentations of customer encounters in a number of ways. Modelling a service journey serves as a platform for discussions between designers and company representatives. Presentations of service journeys are also useful in discussions with customers, business partners, and investors. Moreover, they allow for objective evaluations of service development: What direction should service development take in the company? How will the company's line of business change in a few years? How far should the company go in developing new services? How do customers experience new services or service areas?

Visual presentations make it possible to discuss and evaluate an abstract idea of a chronologically proceeding service, the interaction between the service and the customer at each stage. Without a visual model, companies tend to pay attention to entities that are too large or too abstract, or to details that are too small in terms of service development. Modelling is a good starting point for building a larger system of services with distinct parts and phases.

SERVICE DESIGN CHALLENGES THE DESIGNER

The field of design is expanding more and more from designing objects to designing experiences. These new applications require broad-based and diverse competences as well as specialist skills. Collaboration with experts in other fields is a necessity. This is particularly true of service design, a field in which designers must forget the stereotypical role of the independent artist and adapt to different situations, circumstances, and tasks.

The results of the DESIRE project indicate that ethnography challenges the designer in the development of service concepts: it was not always easy for the participants to differentiate between their own experiences or meanings and user information acquired by ethnographic methods. However, they found ethnographic methods to be a useful and rewarding way of collecting user information; according to the participants, reflecting on their own experiences was particularly useful and generated ideas for new services. They felt that ethnography was a more relevant way of working than, for example, market research, which the participants thought may actually be counterproductive in terms of new ideas. These views tell of a burning desire to be able to design in the spirit of action research, in which the designer is an active participant and has an effect on the events. In other words, analytical and practical work go hand in hand.

The different backgrounds of the design students gave cause to examine the suitability of various educational backgrounds for service design. For industrial designers, the suitability is obvious; after all, Stefan Moritz's model of the service design process resembles the conceptualisation phase in product design. Designing user experiences with the help of technology is nothing new for interaction designers, either. Experiences from this project indicate, however,

that for graphic design students, service design is a new world. The work of the design teams also reflected the challenges that service design presents; after all, it is easier to design tangible objects than service entities aiming at an abstract customer experience. Based on the results of the study, it is necessary to examine in the future how a design tradition based on artistic expression could be utilised to better serve the needs of multidisciplinary teamwork. How could the design process be further developed in a more abstract and experience-based direction?

NEW TOOLS FOR INNOVATION LEADERSHIP

Generally, companies create new and innovative services to enhance their competitive strength or to respond to changing customer needs. Technological advances and legislative changes also offer new opportunities for innovation. The concept of innovation is expanding, and more and more often new ideas are sought outside the realm of traditional, technology-oriented product innovation. Areas with more potential for innovation include modes of operation, distribution, or pricing that utilise new competence or existing competence in a new way. The result may be a product, a mode of operation, or a new kind of user experience.

A service concept becomes an innovation when it takes into account all aspects affecting the service, ranging from subcontractors and collaborators to marketing and sales. A good service innovation has a distinct effect on user behaviour; other defining characteristics include novelty, uniqueness, and financial profit.

Until now, technology and efficiency have routinely surpassed customer needs in importance. However, increased competition and changes in the market, such as the rise of ecological consciousness,

require a new approach to customers. If a company wishes to be customer-oriented, it needs to change its rigid structures and modes of operation; a comprehensive service offering requires not only flexibility, but also cooperation with other service companies. *Service design offers a new means of centring development on customer needs–but not without growing pains. The further development of customer encounters challenges the company's decision-making culture. Moreover, it puts the company's courage and ability to reform itself to the test: is the company genuinely customer-oriented?*

Technological development and demands for environmental responsibility leave no company unaffected. Customers expect companies to provide them tools for a more ecological way of life. However, in addition to such characteristics as responsibility and ethicality, our fundamental nature includes such traits as hedonism and selfishness; for this reason, ecological choices often involve more talk than action. People need to be motivated to change their routines and practises; otherwise, their good intentions never materialise in the hustle and bustle of everyday life. One recipe for success is for companies to offer customers tools for making responsible choices and doing good deeds–and for enjoying life.

Purposeful innovation leadership requires diverse interaction. The communication lines must be open for the service provider and customers as well as the different departments of the company. New ideas must be subjected to analyses, evaluations, and tests, which presupposes a more open innovation culture. Service ideas can be tested within the company by conducting quantitative and qualitative preliminary studies, which can then be complemented with market or customer studies. Companies should pay special attention to how usable and appealing their services are and how they link to the

customer's everyday life. Staff participation in service development is essential in determining the right tools for producing the service. In addition, launching the service successfully requires training so that the staff will be able to introduce the service and inform customers properly.

FIVE USER-ORIENTED SERVICE DESIGN TOOLS FOR INNOVATION LEADERSHIP

The DESIRE project included four company-specific, user-oriented service design projects and two independent projects based on a current market phenomenon. Each process proceeded in a similar manner, but the company's needs determined the specific goals. Each company was different in terms of size, mode of operation, and line of business. The competencies of the participating designers also added diversity: their strengths ranged from visualisation to technical expertise and from planning expertise to competence in user research. This diversity resulted in five different methods of using service design as a tool for innovation leadership. These methods are:

1. Understanding
2. Mending
3. Branding
4. Innovating
5. Reforming.

Understanding is the first method; without mastering this method, it is difficult to use the others. The company needs to understand the value of its customers and service users and find out what their needs, hopes, and desires are. This understanding covers customer behaviour as well as the motives, routines, and practises guiding

this behaviour. Ethnography is a proven means to understand the customer profoundly and comprehensively, which in turn lays a good foundation for innovation leadership.

Mending is the fastest and easiest way to introduce user-oriented service design into a company. Analysing and modelling the existing service journey from the viewpoint of the customer help identify defects and weaknesses, which can be mended with service design. Identifying the start and end points of the service journey also offers an excellent opportunity for extending the service. When services are based on the customer's real needs, the mended service journey provides a more meaningful experience to the customer.

Branding is a means of differentiating a company's service offering from the competition. A brand is the image customers have of a company; the company seeks to control this image by means of visual appearance, marketing communications, and product qualities, for example. Service has become more and more important in brand management. User-oriented service design is a tool for creating or managing a service brand–a service that customers know and trust.

Innovating is a necessity for which user-oriented service design offers a number of tools. Collaboration with outside designers offers opportunities for creating new and fresh service ideas. Outside designers often find it easier to focus on the user experience, because they are not responsible for the organisational changes the new services may require. A controlled, transparent and cooperative service design process ensures the result the company desires.

Reforming is the most challenging of these five methods. Reforming holds immense power: a total focus on the user experience requires organisational changes and a new business culture in which design, marketing, technical product development, human

resources, and customer service collaborate closely. This collaboration presupposes a more open and communicative approach from experts and organisations.

IN CONCLUSION

The companies that participated in the DESIRE project were pleasantly surprised by the service design and its outcomes. The process required a surprisingly small investment–a clearly defined commissioned brief and checkpoints at different stages produced an effective process and appropriate results. The designers were also able to link the service concepts to the technological and ecological challenges the companies reported in the joint workshops. The technological possibilities included in the concepts gave the companies food for thought; however, investments in new technology require profound analysis and careful consideration. The service concepts were more future-oriented than companies had expected, thus providing ideas for both near- and long-term development. However, further research into service design is needed to produce more information on new methods, their applicability, and their effects on business operations.

The DESIRE project was carried out with the support of Tekes, the Finnish Funding Agency for Technology and Innovation. The research partners were the Hanken School of Economics and Western Finland Design Centre Muova, a joint research and product development centre of the University of Art and Design Helsinki and the University of Vaasa. Muova specialises in market-oriented design. The two-year project was carried out between 2007 and 2009.

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Cases

PART THREE

SERVICE DESIGN PRESSURE COOKERS

REMKO VAN DER LUGT

This article deals with ‘pressure-cooker’-like design explorations that involve both user research and concept generation. These explorations tend to take place at a pivotal moment in the design process, at which the focus switches from an analytical to a generative mindset. Throughout the article, I will use one typical case example: a three-day service design workshop on the Pleasant Railway Platform. It provides a concrete example of the issues that one has to deal with when doing and utilising user research in a service design project that is as intense as a pressure cooker.

It is 4 o'clock on a cold January afternoon. A group of fifteen designers are huddled up in a small back office room at Leiden railway station in the Netherlands. They are participants in a short service design project on the pleasant railway platform. The designers have just spent hours at the freezing station to gain insights into how people experience waiting at the railway platform. Some designers focused on the travel pathways, some on the topic of waiting, and some paid special attention to whatever was happening on the platforms. After three hours in the cold, the groups share their first experiences while taking joy in the warm room, the hot cup of coffee in their hands. Some of the things the designers noticed beg to be put on the table. On their way from Utrecht to Leiden, Nicole filled out a customer journey map while interviewing an elderly couple. To mark the beginning and ending of this journey, Nicole asked where they came from and where they were going. The two had no idea about their destination. The groups would disintegrate instantly, then regroup some minutes later, like a flock of birds. Even though tired after a hard day's work, the group engages in a lively debate regarding directions for new service concepts. They have quickly forgotten the cold, eager to start designing.

The above user research activity as part of a short design project brought a number of issues to mind that are important to deal with while taking a service design approach. Diving into the user's world filled the design team with warm, fuzzy feelings for the travellers on the platform, especially after having shared some of the travellers' hardships. The designers truly got the sense of having met and having gotten to know the people for whom they were going to design. The user research, which was limited to just a few hours, provided the designers with empathy towards the users, and plenty of motivation to engage in the project. The observations made were used as springboards towards new ideas. And yet, as the user research entailed just a few hours of work, the depth of

understanding gained was limited. The user research consisted of a quick dip, rather than a deep dive.

After such a quick dip into the user's world, designers tend to easily lose the sensitivity towards the user world, setting out to generate ideas without truly reflecting upon the user's perspective. In the end they end up designing on the basis of their own experiences, rather than the experiences of the variety of people that volunteered to participate in the research. This is fine if the function of doing the user research and idea generation is merely inspirational. It becomes more problematic if the objective is to create new products or services that are to truly fit the user world. When using a more systematic approach to designing, we intend to not only generate new ideas inspired by the insights from the user world, but also to support and provide rationale for design choices. Then, the quick dip and rushed nature of a short and intense design workshop provides some serious challenges.

In the past years I have been involved in a variety of pressure-cooker-like workshops, for governmental agencies, institutions and large corporations. From these experiences, I have become convinced that a participatory attitude in the interpretation of data and using the knowledge gained in idea generation dramatically enhances the designers' understanding of and commitment towards the user group (Sleeswijk Visser and Van der Lugt 2007). However, there are possible pitfalls. In this article I will introduce some reasons for why designers may find it difficult to stay in touch with the knowledge elicited from users during such pressure-cooker-type design projects. I will also provide some directions regarding how to deal with these issues.

UNDERLYING PRINCIPLE: SCAFFOLDING BY MEANS OF TENTATIVE DESIGN STEPS

Both the power and the challenge of a pressure-cooker-type design session lies in the time pressure. By having limited time, the team is forced to make rapid steps could rationally be made only after substantial contemplation. While one could argue that this limited time makes for poor results, oftentimes the opposite is true.

A service design problem is a 'wicked' problem (Rittel and Webber 1973): there is not one single optimal solution, and the problem changes with the solution. Each solution merely shifts the problem. The way designers deal with such wicked problems is to move forward: making tentative design steps as explorations of the solution space, the range of possible solutions to the problem. Mintzberg and Westley (2001) refer to this approach as seeing first, as 'groping precedes zeroing in': tentative gropes towards solutions give an understanding regarding in which direction to proceed. Design pressure cooker sessions have one or more such deliberate groping steps, in which different pathways to solutions are explored in parallel to develop an understanding of the range of possible solutions.

This relates to the constructivist notion of 'scaffolding' (Vygotsky 1986): knowledge is created in a group by the dialogue in which people make connections between intuitive, isolated insights. The resulting scaffolds are mere temporal knowledge structures and need fortification in a later stage. In design pressure cookers, the team moves forward quickly by means of creating scaffolds, be it in the research stage, where user insights are connected to theory, or in the generative stage, where the theory is translated towards new service concepts. This leads to advanced but frail levels of knowledge. In order to make the new knowledge transferable beyond

the pressure cooker session, more stable knowledge structures are needed. Questions arise like: "why is this or that a good idea?" Or, "why is this something people need or would use?" Thus, some of the scaffolds need to be solidified into explicit knowledge. *The service designer's main materials for fortification are the user data and insights. This means that it is imperative to keep these data available throughout the process, and to keep referring back to the original remarks made by the users.* Even though it is crucial in a design pressure cooker to keep moving forward, it is just as crucial to take time to re-integrate the new ideas and concepts developed with the knowledge gained from the users. It is a process of taking two steps forward and one step back.

CASE: THE PLEASANT PLATFORM PROJECT

The pleasant platform project was a three-day service design pressure cooker organised by the Utrecht University of Applied Sciences in cooperation with 31Volts, a service design agency. The client was ProRail, the Dutch Railways Authority. The participants were a group of about twenty volunteering designers (product, interaction, graphic, and architecture), professionals, academic staff and students. The participants joined out of intrinsic motivation: they wanted to learn and experience service design methods. The aim was to develop new service concepts to make the waiting experience more pleasant. At the moment waiting at the platform is not seen as a pleasant activity. In fact, subjective waiting time – how long people experience that they are waiting – is on average three times the real, objective waiting time. Even just a slight delay makes many travellers complain about the railway system. The goal of this project was to develop new service concepts for making the platform experience

more pleasurable and thus reducing the subjective waiting time.

The project consisted of three stages, largely following common Creative Problem Solving methodology (Isaksen et al. 2000): finding insights, exploring concepts, and developing concepts. Each of these stages involved several activities (see FIGURE 1).

1. FINDING INSIGHTS

Participants came to the session equipped with a set of digital photos reflecting their own experiences and observations around the three key themes: waiting, the railway platform, and train journeys. We used this as a starting point to identify key interest areas upon which to focus the user research. The three groups then travelled to Leiden Station, where they did various kinds of user research: one group used customer journey maps to guide interviews with fellow travellers on the train. The second group interviewed people on the topic of what they were doing while they were waiting. The third group observed what happened at the platform, how people related to objects and each other, how they moved about, and so on. Each group interpreted the data that they generated and presented their key findings to the team the next day.

2. EXPLORING SERVICE CONCEPTS

The research findings were used as stepping stones for generating insights. We organised these to develop an understanding about the solution space. This led to a two-dimensional model with the orientation towards other people as one dimension (cocooning < > social) and the attitude towards waiting as the other (comfort < > active). We then filled the quadrants with 'ideal concepts'. We referred to these

FIGURE 1: **THE THREE STAGES OF THE SERVICE DESIGN PRESSURE COOKER.**

1 FINDING USER INSIGHTS
- Pre-work: picture journal of own waiting experiences
- Focusing the search
- User research
- Interpretation and sharing findings

2 EXPLORING SERVICE CONCEPTS
- Generating insights
- Organising insights
- Exploring solution space with extreme concepts
- Reflecting on concepts with client

3 DEVELOPING SERVICE SOLUTIONS
- Re-defining directions based on client feedback
- Developing integrated concepts
- Experience prototyping
- Presenting to client

FIGURE 2. **SNIPPETS FROM THE 'EXPERIENCE PROTOTYPES' THAT WERE DEVELOPED IN THE PLEASANT PLATFORM PROJECT.**

SPACES: Different areas on the platform are designated for different waiting styles.
PROFILES: Each traveller has a personally optimised platform experience, based on earlier preferences.
MOB GAMES: Platforms get to challenge each other by means of low-threshold games: for instance by spreading out over the platform evenly while keeping moving.

concepts as 'concept cars'. They are not meant to provide feasible solutions, but they are intended to help learn about the relationship between user needs and possible directions for new services. A variety of methods were used to communicate these concepts, such as photo boarding and playacting (Boess et al. 2007). These 'concept cars' were discussed with the client, in order to develop an understanding about feasible, novel and appropriate directions for innovation.

3. DEVELOPING SOLUTIONS

Based on the client feedback, the group identified three directions for development that utilise the best aspects of the concept cars generated in the previous stage. These concepts were intended to be complementary, so in the development stage, the three sub-groups stayed in close contact to tune the service concepts. See FIGURE 2 for a short overview of the resulting concepts.

The initial intention to test prototypes at the station turned out to be too ambitious. The prototyping remained at the level of demos and scenarios. The client appreciated the project, especially the insights that came from the user research. Even though the final concepts were not necessarily ready for implementation, the client liked how they provided vistas regarding how to make the leap from the user insights to new product- and service concepts. In a follow-up session the group revisited the insights in order to develop a framework of the waiting experience, which the client will use to provide structure to their service innovation efforts.

A SLIPPERY BALANCE BETWEEN EMPATHY AND CREATIVITY

By participating in user research activities, designers truly gain the sense of having met and having gotten to know the real people for whom they are designing. Yet, when switching from an exploratory-research frame of mind to a generative-designerly frame of mind, the sensitivity towards the user can easily dissipate. In previous experiences, we have encountered this regularly (Van der Lugt and Sleeswijk Visser 2007). The opposite can happen as well: when staying too attached to the user's point of view, early crystallisation might happen. In other words, too many constraints make for a premature solidifying of a solution direction. Designers find it difficult to generate ideas and at the same time stay sensitive to the user's perspective.

For instance, when I entered the station on our research outing, I explored how travellers used a prototype of a heating pillar on the platform (see FIGURE 3). I joined a few people who were warming their hands at the heating pillar. I enjoyed how the product made for more social interaction, because of the limitations of the heating capacity: you had to hold your hands very close to the pillar to feel the heat. We therefore ended up warming our hands facing each other at very close range. This made it almost impossible to not start a conversation. Indeed, I had a very nice chat with a middle-aged mother, her daughter, and a couple of teenage kids about their travel plans, and how they ended up at this exact location on the platform. For me this was a very nice experience. But reflecting on the project, I see now that I could not help keeping this single (my own!) experience in mind during the whole design project, thus blocking out other insights and possibilities.

EXPLOSION OF DATA

When diving into the user world, using available media like video and digital cameras gives us the opportunity to acquire rich data. But it also makes for an explosion of materials that a team has to deal with in the interpretation and design process (FIGURES 4 and 5). Only one decade ago as researchers we had to be very careful about which data to collect. This was primarily caused by storage limitations. We were taught to be deliberate in what materials to collect and which to keep. Nowadays, technology provides us with sheer unlimited storage capacity. And we easily adapt to this mindset. For instance, when using a traditional analogue still camera, we used to be very careful about when to push the shutter button, as there were only 36 pictures on a roll of compact film. Nowadays, we shoot a bunch of photos and thus make sure that at least one of them is worth keeping. This is not 'bad' per se, if the collection of photos can be organised in a simple way. For example, the iPhoto collection on my Mac stores all my pictures, about 5000, in chronological order. This works fine for me personally; I can easily browse and retrieve pictures.

However, in a creative service design project, pictures have a specific function. They are not just 'data'; they are placeholders that refer back to the designers' experiences and insights gained from dipping into the user world. This means that large quantities of images do not necessarily provide a better recollection of these insights. On the contrary, especially in a team effort, large collections of pictures by themselves have no meaning to the team. For instance, if I take a picture of somebody eating chips on the platform, different designers might give different meanings to this picture. While this person told me that he "felt like giving himself a treat after a hard day's work", other designers might provide their

own interpretations (don't like the smell of fast food on the platform, unhealthy, etc.). The challenge is to keep in touch with the real user's experiences. Large quantities of materials make this challenge much more difficult.

Problems of a whole different order arise when using video. As camcorders become smaller, cheaper and gain a larger capacity, the video camera has become a common and attractive design tool (Ylirisku and Buur 2007). Especially in service design, where the user experience rather than the product is the object of design, designers eagerly use the camcorder. Besides the wonderful opportunities that video footage brings to collecting and sharing user insights, some specific challenges occur. For one: watching videos takes time. The insights are hidden in the temporal structure of the footage. This makes it difficult to point at a video fragment to support discussion without showing the video clip. Besides, video elicits a passive mindset in the person watching. It is difficult to generate options, ideas and insights while watching a video at the same time. In the Pleasant Platform project, the three groups used video cameras to make observations and do interviews. This resulted in dozens of video fragments covering hours of footage. As in the project only three hours were available for data interpretation, it was simply impossible to utilise the videos for interpretation purposes. However, we used fragments to develop a post-hoc description of the project to present to the client. The video footage could not therefore be used to construct the scaffolding, but it did function as clay for solidifying the scaffolding.

A very practical aspect when working with video is the time needed to transfer, convert and organise materials from the cameras onto the computer. While with photographs this process takes minutes, when using video it can take hours before the data is readily

available. For a successful pressure cooker experience this requires either a night-shift for support staff preparing the materials for the next day's interpretation session or a break in the session. The latter is usually unwanted as it takes away from the momentum of the session.

INTERPRETATION: LIVING WITH CHAOS

So, now we have gathered all this wonderful data. How do we digest this data into insights that can truly guide the conceptualisation process? The materials gathered, photographs, video observations, interviews, customer journey maps, and the like, provide rich soil for interpretation, but the sheer quantity of interesting bits might put designers off. The easiest way out is to just start generating ideas, with the assumption that merely getting in contact with the user world has sensitised the designers. Or, the designers may latch on to their first observations, like the ones shared when debriefing the day's research activities at the station. Oftentimes there are more and richer insights to be found when taking the data seriously. We have found that borrowing an attitude from Grounded Theory (e.g. Strauss and Corbin 1990) can be very useful. The basic concept of grounded theory is that by looking at data with an open mind, theories will emerge in an iterative process. The grounded theorist sets out to interpret data by means of looking for emerging patterns or mini-theories, which can then be tested and/or refined by looking for supporting data. In essence, the objective of Grounded Theory is to develop hypotheses that may be validated in a different kind of study. These resulting hypotheses can be a potent fuel for designers' creativity. Below are some of the basic elements of Grounded Theory that we have applied when interpreting data in a design pressure cooker.

FIGURE 3: **People huddled around a heating pillar at the platform.**

FIGURE 4: **How can we keep an overview on loads of data rapidly accumulating in a service design project?**

FIGURE 5: **An overview of some of the data elicited during the pleasant platform project.**

EMERGENCE: Useful relationships and themes will emerge when analysing data without setting a framework for interpretation ahead of time. Often there is a push from the client (out of a need for security of results) to pre-conceptualise a structure for analysing. The danger is that when applying such a pre-set structure, one loses the opportunity for illumination and surprise, leading to search directions that could also have been identified without the user research. The liability of depending on this emergence is that it takes time. One cannot force the a-ha moment to take place. Usually we 'force' designers to take a deep breath and merely absorb the data, without jumping to conclusions.

EVERYTHING IS DATA: According to grounded theorists, there is no difference in value between a researcher's own thoughts and notes, video footage, or remarks made by a user. They are all useful and can be used in the interpretation process. Of course, the way they should be treated varies. One needs to be open about regarding himself as an actor in the process, not an objective outsider, and therefore be sensitive as to when one is reflecting on one's own experiences and when on other people's experiences.

OPEN CODING AND AXIAL CODING: In Grounded Theory there are two ways of coding. During the first of these, open coding, we look for categories and perhaps cluster these categories into super-categories. This is usually where, during brainstorming sessions, the clustering ends. However, in Grounded Theory a second layer of coding is applied that has the potential to lead to much deeper insight. During the second coding process, axial coding, we look for patterns and relationships within and between categories. Then we organise them into a structure that visually supports the scheme of relationships.

THEORETICAL SAMPLING: Upon reaching a tentative theory, we revisit the data, to look for new and additional support of the theory. By doing so, it quickly becomes clear which theories hold ground and which need to be discarded. If, through theoretical sampling, no additional support can be found, there is typically little reason to take the theory further. An issue with pressure cookers is the limited time available: it is not always possible to do a second user research activity to sample data in the 'real world'. As compensation for this we can use the large amounts of data available. A second run through the available data usually provides ample materials that somewhat compensate the impossibility of a second real-life sampling activity.

In the Pleasant Platform project, we applied these principles to the generated insights. Upon writing down insights, we organised them into emerging categories, together with supporting data elements (pictures, etc.) on the wall (open coding, see FIGURE 6). Some of the categories were: Control, Cocooning, Action, Social, Inspiration, and Comfort. Subsequently, we organised and related the categories to each other (axial coding). This resulted in a very basic two-dimensional scheme (cocooning vs. social and action vs. comfort), under which the other categories could be related. (See FIGURE 6). The next step would be the equivalent to the theoretical sampling mentioned above, namely to dig through the data to find raw materials, photographs, quotations, etc. that could support this structure. Unfortunately in the rush of the moment, we failed to do so. This made it much more difficult to provide the rationale for convincing stakeholders.

CONCLUSION

In this article I tried to provide some reflections on the challenges that we face when attempting to apply a user-centred design approach in short design projects with significant time pressure. Of course many process decisions had to be taken on the spot and in hindsight not all decisions turned out to be the right ones (if there is such a thing as 'the' right process decision: just like a design problem, process design has many qualities of a 'wicked' problem). The biggest learning for me – as an experienced and well-trained creative problem solving facilitator – was the complexity of dealing with the variety of data holders: interview sheets, photographs, notes and video. In future I will put much more thought into utilising the strengths of these media by developing strategies regarding how to deal with them ahead of time. At Utrecht University of Applied Sciences, we are currently focusing on new media tools with which we can organise digital materials, photographs and video, fluently and present in the design studio rather than having them deep in someone's laptop computer.

The success of a service design pressure cooker is largely determined by the stories that can be told about the process and the results. Storytelling has only recently made its way into the world of designers but has been part of the filmmaking industry from the start. Designers and facilitators can learn from the approaches that filmmakers take to make an appealing documentary or cover story in a very limited time (e.g. see Raijmakers et al. 2006). It involves keeping the final storyline in mind with every design action, filling it in as you move along.

Although there are difficulties with taking the user seriously in these short service design pressure cooker projects, and even though

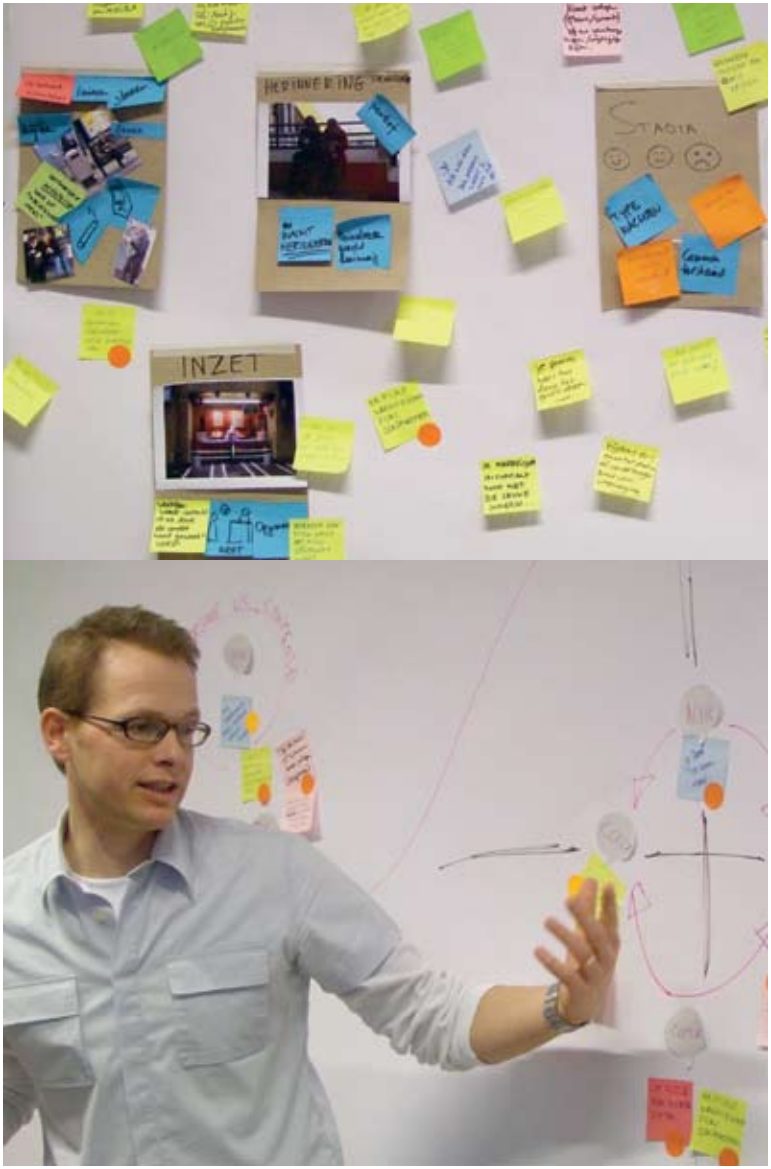

FIGURE 6:
Open coding.

Axial Coding.

purists might not appreciate the loose use of methods, I am still convinced that service design pressure cookers can provide a turning point for companies who are making the transition towards a user-centred attitude. Not only does it provide them with ideas, it provides them insights about the user, and makes them interested in an open and creative service design process.

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SERVICE DESIGN FOR SOCIAL INNOVATION

MIAOSEN GONG

How can design play a role in promoting social innovation? Research has been conducted in this area from various perspectives: Social Design, Strategic Design, Design for Local Development, Transformation Design (Bruns 2006) and Civilian Design. The experiences from these activities show that service design can be an effective approach considering the nature of social innovation.

Social innovations are innovative activities and services motivated by the goal of meeting a social need that are predominantly developed and diffused through organisations whose primary purposes are social (Mulgan 2006). They could be considered to form an emerging wave of human evolution, something that has been widely discussed in civil society since our environmental and social problems are increasing in a way that is larger and faster than what innovations in technologies and businesses can follow and solve. Given that, social innovation could be a strong driver towards sustainable society (Manzini 2007a, Jegou 2008).

This article reports upon the results of a collaborative project called CHITA08 between the School of Design, Jiangnan University (JU), and the INDACO department, Politecnico di Milano (Polimi) in 2008 on the subject of Collaborative Service and Mobile Communication. CHITA08 is both a service design exercise as a didactical activity and a research project to investigate how the service design approach can promote Chinese grassroots social innovations in a network society.

CHINESE SOCIAL INNOVATIONS AND PROMISING CASES

It is widely agreed that we need radical changes towards sustainability. In this process, China has more possibilities to re-orient the direction of development, more than it did in recent times, and to leapfrog. The idea of a "sustainable lifestyle" is one of the keys to opening the window to a sustainable and Harmonious Society. As one of the largest emerging economies, China is becoming an experimental base of social innovation not only because of the fast change of its economy and society, but also the increase in the number of social and environmental problems to be solved.

A cluster of promising cases in grassroots social innovations has been collected and studied as creative communities (Meroni 2007), such as communities supporting agriculture, carpooling, purchasing groups, co-housing, mutual elderly services, mutual neighbourhoods, time banks, and a rediscovery of bicycle transport. These types of cases are emerging and diffused in the urban everyday life of many different regions, including China.

Taking PINCHE (Chinese Carpooling) as an example, this is a service system to generate a convergence between people with cars and those without in the similar routine of going to work. It generates a common value between the service participants: to increase the quality of mobility and to decrease economic expenditure; as a result, the system decreases the ecological footprints of transportation and increases social participation.

It was found that when comparing the promising cases found in China (CCSL 2007) and in Europe (EMUDE 2006) many of them have the same service ideas but have different contents. However, they could also be seen as anticipating a Chinese sustainable lifestyle (Gong 2008). Therefore promoting the promising cases and their initiatives could be a true step forward towards a Chinese sustainable society.

DESIGN IMPLICATIONS AND COLLABORATIVE SERVICES

Grassroots social innovations, in particular creative communities, create and perform a new typology of services that have been called "collaborative services" or "community-based services". These are generated by a group of people who collaborate in the co-creation of commonly recognised values (Manzini 2007b). Most of these promising cases entail a common characteristic: clients and agents

of the service system are interwoven or completely overlap since the solutions are based on a cooperative approach (Cipolla 2005).

It could be found that collaborative services are based on a peer-to-peer (P2P), collaborative relationship between actors, which needs a high degree of mutual trust and a relational quality (Cipolla 2009). In addition they call for direct action by the involved people and are based on their willingness and capacity to act. Given that the contexts of collaborative services are highly complex socio-technical systems, this calls for new design experience and knowledge if they are to be facilitated.

Chinese collaborative services have different characteristics from European experiences in terms of content, motivation, structure, scale, context and so on, which demand different policies and technical support (Gong 2008). *Case studies also show that mobile communication has been widely used in the forms of creative services or applications for generic social benefits, impacts, changes and innovations, which implies that mobile communication and networks are becoming a significant driver of social innovations.*

COLLABORATIVE SERVICES AND MOBILE COMMUNICATION

The CHITA08 project is a teaching and research collaboration between two design universities in Italy and China, focusing on how to promote the social innovation and the initiatives of sustainable lifestyles by service design approaches and how they can be empowered by mobile communication. It is a pilot experiment on the subject of design for social innovations in the context of China, as compared to European experiences. A workshop was organised as the main part of the project in Jiangnan University, with 27 students

and nine multicultural and multidisciplinary instructors.
The workshop had four stages:

1. Case studies and field research
2. Problem setting and idea generation
3. Concept definition and scenario building
4. Project communication.

Each group of students was asked to do field research at the beginning and define the project questions in the local context; to then generate service ideas based on the field research findings; and finally to develop concepts and solutions using service design tools: storyboards, system maps and video simulations.

These service design exercises focused on concept design: offerings and interaction more than systems and solutions. The results of the workshop thus presented more the front stage scenarios of services than the back stage scenarios of Chinese sustainable lifestyles.

DESIGN SCENARIOS OF CHINESE SUSTAINABLE LIFESTYLES

Six service design proposals about food networks, mobility, healthcare, stories connecting places, migrant workers and outdoor sports based on the local context in Wuxi were developed:

1. TAXI POOLING

Service idea: between some particular places in the city, Taxi pooling can be organised by mobile phone to decrease overall taxi transportation and increase the economic benefit to users. The taxi pooling concept is a particular case example of a car-pooling system in the

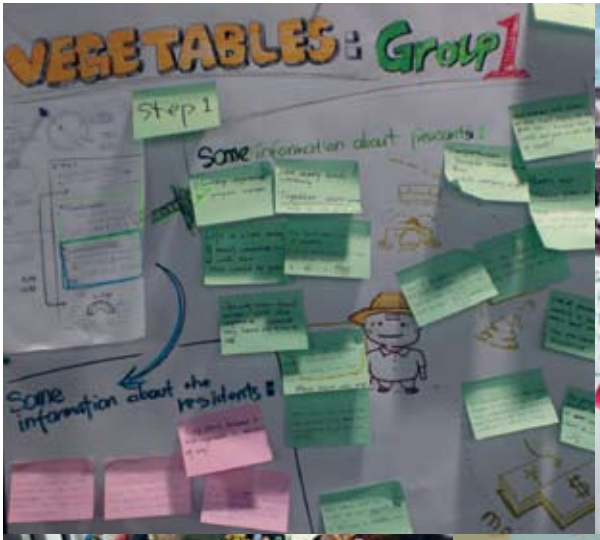
local context, where people flows between some areas in the city are particularly heavy and where bus transportation is not enough nor feasible to meet the needs. This service can facilitate people who would like to take a taxi together by organising taxi pooling themselves easily by mobile phone and MCTs (mobile communication technologies).

2. FOOTPRINTS

Service idea: Footprints is a locally-based service for independent travellers who can access relevant information and share their experiences with others in real time during their travels. It is a service system that works through peer participation between travellers, especially those who like travelling for adventure. It works based on GPS, SMS and mobile internet technologies. Footprints can supply routes and related information to users. It also records routes automatically and helps the users to upload photos, messages, video and so on. It is convenient for users to share their happiness and experiences during their travels with each other as well as with family and friends.

3. PRIDE HOUSE

Service idea: through a mobile digital platform, migrant workers share and exchange experiences and skills and face problems together. Pride House is a service concept for migrant workers who form a large group in specific social contexts. As a new phenomenon, there are still many problems regarding their physical conditions, social and cultural environment including problems related to social exclusion. This concept aims to use mobile phones to



TOP: **Working with the idea generation of design scenarios.**
ABOVE LEFT: **Workshop participants warming up for the working session.**
ABOVE RIGHT: **Presentation of one of the service concepts during the workshop.**

enable social communities to form and the use of social resources in a P2P mode.

4. MOM'S TALK

Service idea: Mom's Talk is an MCT-based service to facilitate the connection between pregnant women, new mothers and doctors in order to deal with problems and share experiences together. Pregnancy is a particularly intense period for women who will experience certain specific physical and psychological pressure. Physically, they stand out slightly from 'normal' life and community and may lack a social life, while psychologically, they have stronger needs to express their experiences and feelings. With mobile devices, this service system provides them with access to communities and participative activities, which brings them more strength, confidence and happiness to be pregnant women.

5. FINDING THE FRESH (F&F)

Service idea: a Community Supporting Agriculture service, F&F is a network matching the needs of urban residents for organic food and small-scale and/or family food producers in the suburbs. Urban people today increasingly recognise that food quality is important to their health and food produced in a traditional way has better quality. On the other hand, there are still a number of people in the countryside who cultivate local vegetables and fruits as traditional family producers, and in general, the harvest is more than they need. This network intends to connect these distributed and unstable resources and diffused needs with local organic food and countryside experiences.

6. YESTERDAY ONCE MORE

Service idea: People who have experiences from a certain place can keep the memory of that place and share its stories with a mobile-specific local service.

This concept has evolved from the local context where large-scale city rebuilding and expanding and population influx results in the collapse of social infrastructure and fabric. The idea of "yesterday once more" aims to protect social capital and common resources in a bottom-up way, to ultimately enrich people's everyday life and reinforce social cohesion.

These six service design proposals describe several possibilities of Chinese sustainable lifestyles in different aspects of everyday life such as re-managing mobility services (Taxi Pooling), sharing personal travelling experiences (Footprints), facilitating social cohesion of migrants (Pride House), enabling selected communities (Mom's Talk), building food networks (Finding the Fresh) and recovering social infrastructure (Yesterday Once More). As a whole, they are collaborative and participative services that can be further developed and promoted as social innovations.

In most of these proposals, the service ideas are strongly adapted to the local context. "Yesterday once more", for example, is based on the large-scale urbanisation pattern in contemporary China, which destroys the social infrastructure of urban communities. Given the complexity of the context and issues, defining and clarifying the problem sets up a challenge to designers. During the workshop, it was recognised that the problem hypothesis defined at the beginning can be far away from the ones identified after the field research. Given that, the field research is acknowledged to be a fundamental step in the design process to understand the context and set problems. *Moreover, in the field research and design*

processes, dialogue with target users, interlocutors and stakeholders are helpful to steer the direction of concept development, which often entails co-creativity or co-design between designers and other actors in the service system.

In the workshop design process it was strongly discussed who the users of the service are, and the results show that the target group of the scenarios is often very specific. The sense of "specific" here is something other than demographic groups or marketing segments, as these solutions cannot be put into the general sense of general people. For example, it is difficult to involve in "Mom's talk" those pregnant women who would like to protect themselves from strangers. If some urban residents do not wish to connect to farmers, they will not find it interesting to participate in "Finding the Fresh", and neither then would the farmers. Most likely the service is not intended for a large public but a given group who have the personalities of being collaborative and active as subjective conditions. Therefore the designer has to properly identify the interested given group, which is a selection to be discovered rather than a choice to make.

It can be found that these service ideas are oriented by social benefit since the problems or initiations of projects are usually ignored by traditional business sectors. Therefore, the systems of these services are mainly non-business-oriented as social enterprises. They involve governments, public service sectors and NGOs/CSOs besides industrial partners. From an economic viewpoint, they often cannot make a profit in the short term but aim to meet the pressing social needs. For example, the "Pride House" can increase the social cohesion among migrant workers and local communities and build their confidence in urban life. Its stakeholders include

local government, the association of migrant workers, the local community, the technology developer and the mobile telecom whose motivations have to be defined in a non-business-oriented way as opposed to a normal business plan.

In the last two stages of the project, the students were asked to simulate the interaction in the service themselves and record a video of the simulation. The results and feedback from the students indicate that using video as a tool in the design process was a big success. On the one hand, field simulation generates a practically "real" environment where designers can put themselves into the service, which is an effective way to improve and embody the interaction in the service. On the other hand, a movie scenario can be a popular Design-oriented scenario (DOS) tool that visualises service ideas and concepts which usually are intangible. As a result, it is a strong communication medium to promote the new ideas of sustainable lifestyles, as was proved in the CIIDE exhibition which displayed the results of the CHITA08 project.

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RELATIONAL SERVICES AND CONVIVIALITY

CARLA CIPOLLA

The main question raised in this contribution concerns the possibility of designing services that are deeply rooted in relational qualities. This question originally emerged out of two international projects: EMUDE, Emerging User Demands for Sustainable Solutions, funded by the European Commission and extended later to Brazil, China, and India through CCSL, the Creative Communities for Sustainable Lifestyles project, backed by UNEP (United Nations Environment Programme). These projects discussed the potentialities of the collaborative creativity in everyday life, as manifest in creative communities (Manzini 2005), to generate and diffuse new and more sustainable ways of living in urban environments.

An analysis of the social innovations (Mulgan 2007) organised by these communities revealed that they are prevalently organising services, which range from child-care to care of the elderly, from looking after green spaces to alternative forms of mobility, from the building of new solidarity networks to the realisation of unprecedented housing typologies, and indicate an emerging service model deeply and profoundly based on the quality of interpersonal relations between and among participants. This model was thereby called relational service (Cipolla 2009).

The term relational indicates that these services are based on face-to-face and non-anonymous interpersonal encounters. It means that, in these services, it is necessary to consider the participants mainly for their "presence" rather than to focus only on the "roles" they perform in the service.

Relational services are:

– services because people are interacting to produce a commonly recognised benefit;

– relational because the interpersonal relations are an essential component of these solutions. These relations are not an involuntary consequence of the solutions: the interpersonal relations are intrinsically part of the service solution operation itself.

The Walking Bus (**1**), for example, is a relational service based on collaboration between teachers, grandparents and parents: i.e. it is based on their interpersonal relationships. No participant can easily be replaced, because together they produce more than a "transport" service; they "produce" community, a common story, memories and identity. All the neighbourhood participates, because the group of people walking through the streets are also "relating" to their locality. These relational dynamics are an essential part of the

service operation and are part of its output (the benefits produced by the service).

In comparison, the normal school service does not operate in a relational way because the driver is an employee. He is part of the service solution but participates on an anonymous basis. It means that he can be substituted by another driver, and the service will still work. Some relational output can be generated, like friendship or intimacy, but this is not seen as an essential and required part of the service operation; i.e., it is an unexpected result.

THE CHARACTERISTICS OF RELATIONAL SERVICES

The relational service model presents some characteristics that particularly distinguish it from other approaches in services. The first one is that in this model, "clients" and "providers" are interwoven. *This means that it is difficult to think about service scripts or guided (standardised) service performances.*

"Les Jardins de Cérès" (2) is an example of a service where the roles of provider (agents) and consumer (clients) are blurred. In this case the consumer purchases, by paying in advance, all the food that will be produced and supplied by the farmer, becoming his "partner" and co-producer. This is an example where there is more than a co-produced service: there is an in-depth partnership between the people involved. They are doing things "by themselves" and "for themselves".

The case called "Living Room Restaurant" (3) is another example: the service lies in the possibility of booking a table for dinner in a family house rather than in a restaurant. The "client" even helps lay the table. The service is characterised by a "hospitality" perspective, in which it is possible to think in terms of "hosts" and "guests"

instead of "providers" and "clients". The "provider", i.e. the family running the "restaurant", cannot be considered clearly as a conventional "service provider". They are not representing an organisation or an "external" interest. Participants are personally involved in the service event.

The same is valid for the case "Lodge a Student at Home" (4) where elderly people offer accommodation to university students, using the rooms previously occupied by their children. Here, it seems easier to distinguish the client and the agent (service provider) in the student and the elderly person respectively. But the service being performed in the elderly person's home involves him/her personally and essentially. The student's presence changes his/her everyday life.

Secondly, relational services require mutual responsibility, intimacy and trust to work. Participants are personally involved; they do not represent someone else or other organisations. It follows that these forms of organisation are distinctly different from the usual concept of industrialised service (Levitt 1972). Services here are forms of human interaction based on mutuality because the interactions between the people involved cannot be based on "anonymity". This is the opposite of the paradigmatic service example: the "service encounter" taking place over a counter. When we stand in front of a counter we do not necessarily need to know or have a personal relationship with the person serving us. *Instead, the relational service model is based on interpersonal relations between participants.*

Living Room Restaurant (3) and Lodge a Student at Home (4) are examples showing what the relational service model requires and are based on the intimacy between participants. These two solutions work in a space that is traditionally considered to be private, even

1.
ITALY /
WALKING BUS
How can children go to school on their own in a safe and pleasurable way?
How can lonely elderly people have an everyday family life?

The "Walking Bus" (literally: "walking to school alone") is a project that encourages children to walk to and from school in the safety of a group under the supervision of one or more adults (the so-called "grandfather/mother-friends"). This kind of activity is supported by creating safe routes and can be a safe, fun and pleasant part of the children's daily routine. In this way the children have the opportunity to meet their friends and share their experiences outside school. This project also raises the children's awareness of vital road safety skills, improves pedestrian safety, makes for healthy and walkable community environments, and offers the possibility for friendlier neighbourhoods as people get out and interact with one another. Finally, it reduces traffic pollution and road accidents involving child pedestrians. In Milan every day, a significant part of the traffic problem is due to parents bringing their children to and from school by car. However, other options are threatened by negative factors such as the insecurity of routes to school and dangerous sidewalks often blocked by parked cars. The walking bus tries to remedy this situation by organising an appropriate service that protects and organises the groups of children.

2.
FRANCE /
LES JARDINS DE CÉRÈS
How can citizens interested in a healthy lifestyle and environmental safeguards get organic food from local farmers?
How can small farmers be supported in their production?

"Les Jardins de Cérès" is an association, a group of people gathered together as consumers, who make an agreement with a local farmer to produce goods under the circumstances (organic farming) they wish. Therefore all the produce is bought in advance in order to "motivate" the farmer and guarantee his economic benefits. In this system the customers adjust their demand according to what the farmer is able to offer during certain times of the year. The members of the association help the farmer during several steps of the vegetable growing process: they clean and form storage places in the 400-year-old cellar of the farm, they help plant the potatoes, they help take care of them and finally help in the harvesting process. During the activities at the farm, the members of the association and the farmer develop a close relationship. Through creating this direct producer/consumer link the farmers can sell their products at a good price and continue their business under better conditions; the customers in turn can buy locally-produced, high quality products for a good price. By improving the economic situation of the farmer these organisations are providing a possible solution to slowing down greenfield industrialisation.

3.
THE NETHERLANDS / LIVING ROOM RESTAURANT

How can people in love with cooking turn their ability to a larger audience than, let's say, only their wife or husband?

The "Living Room Restaurant' is an occasion for people to have an inexpensive meal and to meet other people, located in the residence of the solution providers. After reservation via email or a phone call, people can literally come and sit at the dining table with the resident hosts. After a short chat and getting acquainted with all the guests, dinner is served. The dinner consists of two appetizers, a main course, dessert and unlimited drinks. Guests can choose the music they want to play in the background and only have to help with clearing the table between each dish. The providers sit at the ends of the table and between the dishes they switch places so they can talk to everyone who is present. How long the evening lasts depends on the mood and cheer, and afterwards the guests pay. This is a very interesting innovation since it brings people back together again in their own home environment. The people who started the solution want to make friends, be socially active and create a backup in case one of them loses their job. They love to cook and want to offer a cheap alternative for people that go out for dinner, so that it is affordable for everyone.

4.
ITALY / LODGE A STUDENT AT HOME

How can students coming to town find accommodation in a family-style environment without paying too much money?
How can lonely independent pensioners find a little help and companionship in everyday life and a contribution to housing expenses?

"Lodge a Student at Home" provides a service to improve the quality of life of elderly people in search of company and security, and students looking for low-cost accommodation. Large Europeans cities like Milan are characterised by a huge demand for student accommodation and an increasing number of elderly people living alone in town and needing a little help in everyday activities. In addition, the price of rooms in Milan is one of the most expensive in Italy, forcing students to live in nearby cities and to commute every day. MeglioMilano is an association that realised that independent elderly people could provide young students with accommodation in exchange for a little help. With the help of a psychologist they carry out the selection process and interviews, visit the houses and match the human profiles in order to couple a pensioner with a student. MeglioMilano provides the users with free legal assistance and free psychologist support; they also ask for feedback from the users and organise regular meetings with all users.

"intimate" – one's own home – which in these solutions is opened up and made available to others. The case Les Jardins de Cérès (**2**) also involves an intimacy that goes beyond the commercialisation of products: the "consumers" visit the "farmer's" house and farm; they even work with him. Opening up your own space also means opening up your own intimacy. Therefore, in these examples, what "produces" intimacy is the place where the solutions are operating: a person's home. Making one's intimate space available means making oneself "vulnerable" to another person: the other person may hurt or betray me, but first and foremost he can reach me (Cipolla 2005).

Trust is the other essential relational quality produced by these solutions. Turning to the first case, the Living Room Restaurant: it is a service open to everyone, i.e. total strangers are received in the family living room. If we consider that this solution runs in an urban context, it can be considered as a particular form of trust and "openness". The "host" family invests their "trust" in others, but there is also a certain level of trust required from "guests": they are entering someone else's place, and who knows if this unusual service could be a trap. Certainly there are mechanisms to relieve this tension: indications about the service trustworthiness can be passed on by word of mouth, for example. The case Living Room Restaurant is a paradigmatic example where we can observe the highest level of (almost "blind") trust-making.

Lodge a Student at Home also requires trust, but in this case, there is an "organisation" that facilitates the meeting between the elderly people and students. The association Meglio Milano carries out a careful cross-analysis – of their psychological profiles – in order to match people who will be able to live their everyday lives together in the best possible way, and afterwards also provides support to avoid and solve tensions and misunderstandings. The Les Jardins de

Cérès case also requires trust in the process of inverting the usual commercialisation process and to find people prepared to pay in advance for something that has yet to be produced.

Thirdly, relational services propose the achievement of well-being based on interpersonal encounters: an approach that focuses more on "actions" or "relations" than on "things" (Leonardis 1998), which leads to sustainable practises. *Services that promote ways of living based on sharing and collaboration reinforce the transition towards sustainability: they regenerate the local social fabric and promote the creation of new common goods.*

Living Room Restaurant and Lodge a Student at Home are apt examples. These services improve the utilisation of existing resources; in these cases, people's own houses are used. They enable people to share, in order to "consume fewer environmental resources", particularly considering that sharing is an intensive relational activity. The example of Les Jardins de Cérès illustrates how the co-production and consumption pattern is bringing regenerative effects: (a) for the farmer, economic and convivial (Illich 1973) benefits based on the sense of partnership; (b) for the urban "consumer" better food quality, but more than that, a connection with the food production processes and with the rural community. For both, the service is contributing to regenerate their contexts of life.

CONVIVIALITY AS A SERVICE DESIGN APPROACH

When considering services and their interpersonal relational qualities we cannot forget Ivan Illich's thoughts. His aim was to analyse the structures of industrialised society and to provide both rigorous criticism and a set of alternative concepts.

Particularly useful to our study is his book called "Tools for Conviviality" (1973) in which he dedicated particular attention to the theme of services. Here, he analyses how the major social agencies have been reorganised according to scientific criteria during the last 180 years. *Education, postal services, social work, transportation, and civil engineering have all followed this evolution. In brief: services were organised as industrial institutions (Levitt 1972).*

In "Tools for Conviviality", Illich (1973) analyses the rise of modern medicine, particularly how the management of this activity was taken away from shamans and herb doctors and placed in the hands of medical school graduates. He also describes how "the exclusion of mothers, aunts, and other non professionals from the care of their pregnant, abnormal, hurt, sick or dying relatives and friends resulted in new demands for medical services at a much faster rate than the medical establishment could deliver". *Here, Illich indicates how the industrialisation of medicine led to the break-up of the network of interpersonal relations in which people had always found relief and support in their everyday lives.*

This analysis of medical services is only one example of the unlimited expansion of tools that invaded all areas of human agency generating unprecedented demands and needs and transforming people more and more into passive consumers. The key question is the "abundance" of industrial tools and experts – including service provision – that suffocates people's freedom, creates dependence on producers and providers, and stimulates the development of an individualism that can go beyond personal realisation and reasonable self-interest, to become closure and indifference.

Against the enslavement of man to his tools Illich (1973)

proposes the concept of "conviviality": "I choose the term 'conviviality' to designate the opposite of industrial productivity. I intend it to mean autonomous and creative intercourse among persons, and the intercourse of persons with their environment; and this in contrast with the conditioned response of persons to the demands made upon them by others, and by a man-made environment. I consider conviviality to be individual freedom realized in personal interdependence and, as such, an intrinsic ethical value. *I believe that, in any society, as conviviality is reduced below a certain level, no amount of industrial productivity can effectively satisfy the needs it creates among society's members.*"

A convivial approach is guided by a vision of a society where interpersonal dependence is affirmed. Austerity is a term remembered by Illich (1973) who defines it as a virtue that does not exclude all enjoyment, but only that which distracts from or destroys personal relatedness. This is based on Thomas Aquinas in the Summa Theologica (II, II in the 186th question, see article 5). Illich's apprehension concerns things or tools that can destroy rather than enhance "eutrapelia", a lively wit.

The relational dimension and conviviality is an essential part of relational services. In the Living Room Restaurant, for example, the solution generates economic benefit, but without forgetting the pleasure of being together, cooking and receiving friends in the living room. The same is valid for the case Les Jardins de Cérès. People could go to the supermarket and buy food products quickly and easily. Instead, in this solution people choose to have "more work", to specifically invest their time in another consumption pattern. They have chosen other criteria to evaluate the "efficiency" of their purchasing practises and the quality of their products: personal involvement and mutual interdependence.

Looking at these relational services we seem to skip the process of radical service industrialisation and concentration of knowledge power. The so-called "craft" service model, related to traditional communities which have become obsolete, is being updated and reinvented, proposing other ways to satisfy our needs. Instead of focusing only on "industrial productivity", these models are proposing convivial effectiveness as a value, but without forgetting the efficacy of the final results.

DESIGNING FOR RELATIONAL SERVICES

All services rely on user participation. However, relational services require participation and engagement more than other kinds. It is necessary not only to be operationally active but also personally involved, because no one can be indifferent to the level of interpersonal relations and participation required by these services. "Users", in this perspective, bring not only knowledge and will, but bring also relational capabilities. Therefore, what principles and sensibilities can guide designers to set up a relational service? Basically, the interpersonal dimension of services (all kinds of service) - an essential human dimension - cannot be fully controlled by designers. Thus, the very nature of relational services poses a radical limitation to direct design intervention. The consequence is that, in our view, relational services can only be "meta-designed", in the sense that the design intervention needs to work "behind the scenes". It means developing a solution that enables participants to co-produce their own relational service by themselves, supporting them in doing what they want and intrinsically operating on the basis of the interpersonal relations they already have (or want to have).

One example of these meta-designed solutions was developed

by the INDACO Department/Politecnico di Milano, in particular the Research Unit DIS, Design and Innovation for Sustainability, together with the agency for social innovation INNOSENSE PARTNERSHIP. They have developed together a particular method and tools to offer support to people interested in setting up their own co-housing solution in Italy. Co-housing is a residential community with shared services and facilities, first appearing in Denmark during the sixties and found today especially in Sweden, Holland, England, the United States, Canada and Japan. This is essentially a combination of private dwellings, each with its own intimacy and autonomy, with the advantage of shared facilities such as micro-nurseries, DIY workshops, laundries, guest accommodation, vegetable gardens, gardens and so on, which offer environmental and economic benefits to the community based on a relational and convivial way of living.

Our conclusion is that designers are being invited to look for inspiration among existing relational services, i.e. cases like the ones we have analysed here, to develop solutions able to "reproduce" their value and benefits in different contexts. Some of the cases analysed here already have a more or less developed solution enabling them to work, as in the case Lodge a Student at Home, and additional new solutions could be developed based on the relational approach. In synthesis, relational services are inviting us to consider the immense possibilities opened up by focusing on the interpersonal relational capabilities and conviviality in service design theory and practises.

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SERVICE DESIGN IN TOURISM

MARC STICKDORN

Tourism is a service-intensive industry depending on the customers' service experiences and their consequent assessments of its quality. Most products in tourism are booked and paid for in advance, and thus customers need to rely on the accuracy of accessible information. Constantly evolving information and communication technology, changing behaviour patterns among tourists, and the continuing development of holistic tourism products and packages enhance the information availability of tourism products. Therefore, tourists are increasingly better informed and react faster to shifts in the tourism market, and to changes in product prices and qualities. Hence, the importance of effective service quality management is crucial for the tourism industry.

Various approaches have been introduced within the service sector, and therewith the tourism business, to improve service performance. Nevertheless, the competitiveness of any service provider ultimately depends on customer satisfaction, which is determined by the consumer's assessment of expectations and experiences with service processes. As a consequence, the adoption of a so-called service orientation by service providers has become of increasing interest in recent years; it is a decisive factor in the improvement of profit, growth, and both customer and employee satisfaction and loyalty (Zehrer 2009, Lytle and Timmerman 2006, Fitzsimmons and Fitzsimmons 2001, Lynn et al. 2000, Heskett et al. 1997, Johnson 1996, Rust et al. 1996, Schneider and Bowen 1995, Henkoff 1994).

In most parts of the world, the tourism business is dominated by small- and medium-sized enterprises (SMEs) and has developed into a fragmented industry (Pechlaner et al. 2004, Getz and Carlsen 2000, Morrison et al. 1999, Thomas et al. 1999, Buhalis and Cooper 1998, Smallbone et al. 1999). The vast majority, 99%, of all European tourism companies employ fewer than 250 employees and 94% employ even fewer than six employees (EC 2003). The attractiveness of the tourism sector for SMEs is based upon relatively low market entry barriers. Various types of tourism firms require only low capital investments, few staff and small operating costs. Often, the motivation for setting up business in tourism is as well predicated on a desire for profit or security as it refers to lifestyle, location, and leisure preferences (Getz and Carlsen 2005, Ateljevic and Doorne 2000, Getz and Carlsen 2000). Furthermore, the crucial authentic experience of the tourism product can be intensified through genuine contact with local residents. Thus, many tourists prefer hostels, bed & breakfasts,

and likewise smaller establishments (Zehrer 2009, Wanhill 2000).

The fragmented SME tourism sector involves not only below-average company sizes and relatively low market entry barriers, but also low growth rates, weak internationalisation, and relatively poor qualification levels (Pechlaner et al. 2004). For that reason, tourism SMEs are confronted with competitive disadvantages, including poor economies of scale and scope, minimum potential for diversification and innovation, and limited access to capital markets. However, SME service providers can face these identified weaknesses through a persistent service-orientated structure and consistent design of tourism services (Zehrer 2009).

THE TOURISM PRODUCT

Tourism products are service products that often combine various services, and, therefore, are often referred to as service packages or bundles. Thereby these packages characteristically consist of a main (or core) service, enclosed by auxiliary (or peripheral) services as add-ons (Kandampully 2002, Grönroos 2001, Normann 2000). Altogether in the service industry, a product's core service constitutes the content of a service. However, it is not only substantial what is delivered, but also how it is delivered (Sureshchandar et al. 2002).

Applying this concept to the tourism sector leads to an even more sophisticated insight into tourism products, since these mostly represent not only a bundle of different services but are also provided by several SME service providers. Therefore, the quality of a tourism product relies not only on one single firm but on a complex structure of regional service providers. A holistic view on regional tourism products as tourism destinations thus gains in importance (Buhalis 2000, Weaver and Oppermann 2000, Buhalis and Cooper 1998,

Palmer and Bejou 1995). Each perceived product quality affects the holistic image of a tourism destination and as a result the tourist's expectations towards a destination. Consequently, the customer's expectations towards a certain tourism product within a destination essentially affect the assessment of the perceived service quality.

The comparison of expectations and experiences of a service product involves confirmation or disconfirmation, leading to satisfaction or dissatisfaction. This confirmation and disconfirmation paradigm as a process-oriented model of customer satisfaction is widely accepted as an applicable approach to measuring customer satisfaction (Oliver 1980 and 1997, Matzler 1997). Most authors indicate three types of independent variables, each one contributing to a certain extent to overall customer satisfaction (Dutka 1993, Gale 1994, Johnston 1995, Deschamps and Nayak 1996, Vavra 1997). These variables, namely, basic, performance and excitement factors, differ in their levels of expectations and their ultimate influence on the overall satisfaction (that is, the perceived holistic service quality). While a high level of expectation but low impact on the overall satisfaction characterise basic factors, excitement factors are defined as the contrary: a low expectation level but high impact on overall satisfaction. The impact of performance factors on overall satisfaction is proportional to their expectations and thus can be classified as unimportant and important. Hence, basic factors are required by customers and their absence or bad performance leads to dissatisfaction, while only in exceptional cases does a superior achievement of a basic factor contribute significantly to overall satisfaction. The presence of excitement factors immediately results in a higher overall customer satisfaction, although they cannot compensate for unfulfilled basic factors.

The importance of service quality in tourism, the

high proportion of SMEs in the tourism sector, the fragmented constituent parts of tourism product bundles, the significance of expectations and overall customer satisfaction make tourism attractive, while nonetheless challenging.

CHANGES AND CHALLENGES WITHIN THE TOURISM SECTOR

As a result of the phenomenon widely known as Web 2.0 the tourism business is undoubtedly undergoing a radical change (Egger 2005, Holloway 2004, Buhalis 2003). Tourism services are intangible and utmost experiential products and hence heavily reliant upon information for both service providers and travellers. While the former utilise various media and channels to communicate with the market and distribution systems for booking and purchase, the latter turn to information sources, not only prior to departure to become aware of their options and to assist in evaluating travel alternatives, but also post-arrival to publicly assess their experiences (Schweda 2004). In 2006, the European Travel Commission stated that (ETC 2006, p. 6-7):

The growth of cheaper worldwide communications, coupled with the availability of in-expensive transport, will increase travel and tourism volumes rapidly. [...] The internet may develop as a tool for individuals to connect with other communities in a viral context; [...] Consumers are seeking advice from other consumers through the internet (e.g. blogs) and 'skilled consumers' are increasingly likely to know more about niche products than many [...] professionals.

People with common interests interact through the internet using web blogs, chats, accommodation review websites and open

communities focusing on common interests, such as special interest tourism or certain destinations (Kirby 2006, Schertler 2006, Stickdorn 2007). Only until very recently have a vast number of SMEs in the tourism sector been dependent on the local tourist board for promotion and marketing purposes, because of their limited resources. However, nowadays the tourism business is facing a dramatic change, as Holloway noted (2004, p. 197-198):

Information and communication technology, as it is now known, has come to play a key role in all elements of the marketing mix, and the new term recognizes the importance of communication in the interface between a business and its customers. Electronic, or 'online' communications have become affordable and practicable for even the smallest SMEs, and no sector of the travel industry is unaffected by this revolution.

This new dimension of customer empowerment is reflected in the description of both the information producing and consuming travellers of today, the so-called prosumers (Freyer 2009, Geser and Markus 2008). In view of the fact that it is increasingly common for prosumers to use the internet not only to inform themselves and book tourism products, but also to evaluate them subsequently, it is a logical consequence that service quality becomes the focus of attention.

Since customer satisfaction is highly dependent on prior expectations, the future challenge is to match these expectations through service providers' marketing actions and third-party evaluations of experienced services. The consequent prosumers' online evaluation influences not only the purchasing decision of each respective product but also the expectations of potential customers. Within this context, the catchword 'proofed content' is of utmost importance, as the following example of a mismatch between service expectations and experience of a hotel stay shows:

A tourist books a hotel because he trusts a specific large brand. TV

and print advertisements, the website and the brochures evoke an image of clean and quiet rooms. However, once on-site the traveller notices that the room is not clean at all. Hairs in the bed, a limed-up washing basin and the construction site in front of the window does not allow a convenient stay at all.

A consumer in the classical sense would be dissatisfied, in rare cases complain about the situation, but very likely simply not return. In terms of brand marketing, this single bad experience with one tourism product might even damage the consumer's brand image, such that the customer may no longer trust the brand and will not rebook any other of the brands' products. *Prosumers, on the other hand, could post a bad evaluation or put a video on YouTube and therefore announce this mismatch to the public, with a negative effect on the brand image or even preventing other prosumers from booking respective products (Egger 2007, Geser and Markus 2008).* Applying this to the example above would modify it somehow thus:

A tourist wants to book a certain brand's hotel because he trusts it. However, it received bad customer reviews on a hotel rating website. Consequently, the tourist prefers a clean and quiet hotel, meeting most of his requirements.

Hence, what seems to be a challenge or even threat for the bigger player proves to be an opportunity for SMEs. If product quality is the decisive attribute and less so the marketing budget, the consistent design of tourism products according to the customer's needs is not only a marketing tool, since it uses the customer's expertise published through the internet as a strategic communication pattern and consequently is a profit driver. Hence, a holistic customer-focused service orientation is a prospective opportunity for SMEs to compete with large tourism players.

SERVICE ORIENTATION

Service orientation describes an organisational predisposition that encourages a distinctive approach to all aspects of the consumer market. Although the approach of a service-oriented company is not new, the concept postulates a consistent organisational commitment focusing on the customer and thus can be referred to as a presupposition for a constitutive service design process. In 1990, Grönroos suggested six principles of service management, which briefly portray the service orientation of today.

Based on the concept of service orientation, the design of services has become an increasingly important issue. Therefore, service design needs to respond to a new service-dominant logic, focusing largely on operant resources, with which companies persistently intend to make more attractive value propositions than their competitors (Vargo and Lusch 2004). *In general, for tourism service providers, superior value propositions rely on the consumers' experiences.*

Although particularly in the tourism sector, the construction of services with a view to creating memorable and satisfying customer experiences is not new, the intentional design of service experiences as a distinctive management discipline with its own principles, tools, and techniques can be said to be a new approach (Zehrer 2009). This is true particularly with regard to the holistic and interdisciplinary approach of service design, involving management and marketing skills as well as social and product design backgrounds (Kimbell 2008, White 2008).

Service Design strives to create, aligned with a company's service strategy and orientation, material evidence of a sensually perceivable service product. This comprises all sensual aspects, including optical, haptical, acoustical, olfactory and gustatory factors,

GRÖNROOS' SIX PRINCIPLES OF SERVICE MANAGEMENT

1	**The profit equation and business logic**	Customer perceived service quality drives profit.
2	**Decision-making authority**	Decision-making has to be decentralised as close as possible to the interface between the organisation and customer.
3	**Organisational focus**	The organisation has to be structured with the main goal to mobilise resources and support frontline operations.
4	**Supervisory control**	Managers and supervisors have to encourage and support employees.
5	**Reward system**	The perceived quality by customers is the basis for the reward system.
6	**Measurement focus**	Customer satisfaction with service quality has to be the focus of measurement.

with which customers come in contact (Mager 2004). Conclusively, White states that (2008, p. 31):

Successful service design has three outcomes: the creation of a service that can be brought to the market, that people fall in love with, and which makes good business sense for the provider.

A service design process is separated into various stages. While these stages vary depending on the particular project, a certain framework is indeed observable. Apart from possible differences in wording, in general there are about four stages in every service design process: discovering, concept design, prototyping and implementation.

DISCOVERING THE SERVICE DELIVERY PROCESS

The focal point of service design is the customer and, therefore, it is crucial to gather adequate knowledge about who the customers are, what the key success factors of each respective service product are, and whether certain behaviour patterns are of specific interest to the service providers.

Hence, new approaches to market segmentation, focusing on behavioural similarities rather than socio-demographic aspects, are crucial to a customer-based service orientation. Within this context, Sinus Milieus and affinity-group management are prospective concepts, to name but a few (Zehrer and Frischhut 2008, Schertler 2006, Stickdorn 2007, Sommer 2008). A promising initial point for a service design process is the visualisation of these customer segments through personas (Strnad 2008). Personas exemplify previously identified customer clusters through stereotypes and thus picture these in a more conceivable manner. Furthermore, qualitative data, such as interviews with customers and front office

discovering concept design prototyping implementation

staff and ethnographic fieldwork, deliver a deeper insight into the service process and complement the personas (Merholz et al. 2008, Miettinen 2007, Best 2006, Mager 2004). Since service design is dominated by creative approaches, imaginable customer descriptions such as personas are a feasible starting point for a constitutive application of service design tools and methods.

In no other application area than tourism could the fundamental idea of the customer journey as a service design tool be more obvious. As the journey of a traveller follows a track with certain milestones, a customer experiences a service process with certain touchpoints (Lane 2007). Furthermore, and yet again like a traveller, these touchpoints between a customer and a service provider are structured with regard to the process of the service into a pre-service, service and post-service period (Miettinen 2007). As outlined earlier, unlike other businesses in tourism these touchpoints are highly dependent on external sources. Within the pre-service period customers use external sources, such as word of mouth or accommodation review websites, to gather information about the product, while the very same sources are utilised in the post-service period to

disseminate information and opinions about the product in question, and thus again influence other customers in their pre-service period as described earlier. Another characteristic of the tourism business is that also during the service period, not all touchpoints are under direct supervision of the service provider, since products in tourism are often bundles and do not only consist of individual services but of different service providers. In the example of a hotel, this could be everything from the hotel's shuttle service to the masseur, or from a broader point of view every service provider within a tourism destination the customer gets in touch with during his stay and therefore contributes to the overall customer satisfaction. This simple example alludes to the question of how touchpoints are defined. Again a general definition is impractical, since service processes are seldom transferable. Moreover, touchpoints need to be defined from the view of the customer, since especially in tourism there are quite a few indirect ones of which the service provider needs to be or at least become aware. Service design tools such as shadowing, mapping, interviews, user journals, or observation techniques help put the designer in the customer's shoes (Mager 2004, Best 2006, Miettinen 2007, Merholz et al. 2008, Strnad 2008, Partício et. al. 2008). Therefore, the customer journey can be seen as a bottom-up approach to illustrating a service process, rather than a top-down service process conceptualisation.

Beyond the touchpoint sequence from the customer point of view, the very same sequence from the staff point of view and the consequent backstage processes are equally important (Teboul 2006). Only when the underlying processes are uncovered and illustrated can the complexity of service processes become apparent and hence permit an effective improvement, redesign or innovation.

The customer journey provides another benefit for the complex

service structures of tourism products, since it can reveal desired product compositions of respective customer or target groups. Once the status quo of a product is identified, and service processes and touchpoints are discovered, the next stage of service design is rather more creative than descriptive.

CONCEPT DESIGN

There are a variety of generally applicable service design tools and methods for the stage of concept design. Brainstorming techniques, blueprinting, stage or desktop walkthroughs, service specifications, sketching, mind mapping, co-creation and storytelling are but a few examples (Merholz et al. 2008, Partício et. al. 2008, Mager 2004). However, alongside creative techniques quantitative methods of market research are also relevant approaches, such as consumer behaviour studies, importance grid evaluations, or conjoint analyses. Furthermore, there is a need to accentuate the usefulness of an assessed touchpoint analysis, which often constitutes the transition between the first analysing stage of a service design process and the stage of concept design. An assessed touchpoint analysis is based on the customer journey and the critical incident technique, as illustrated in the following chart.

PROTOTYPING AND IMPLEMENTATION

The ensuing stages, prototyping and implementation, might differ in tourism from other service design projects insofar as the heightened product complexity, such as the involvement of different service providers and diverse customer groups, mostly do not allow the testing of prototypes under real-life conditions. Hence,

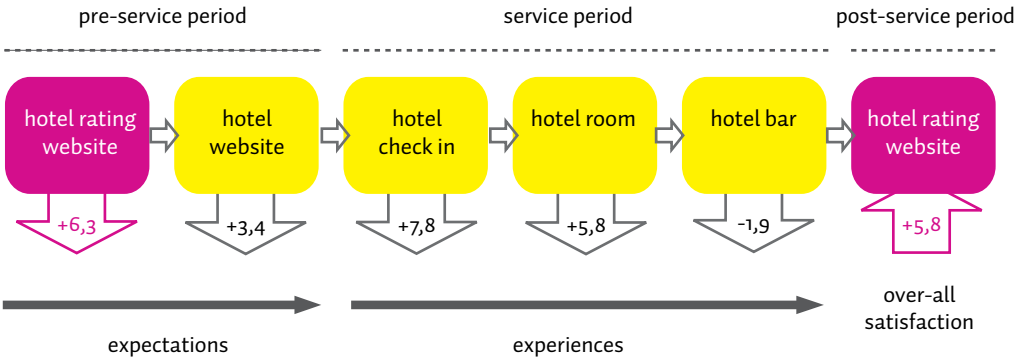
prototyping has to be done under laboratory conditions taking into consideration the implicated customer groups and approximating the complex product composition. However, prototyping for tourism products always involves the danger that laboratory conditions fail to reproduce reality. Thus, the prototyping and implementation of new services have to be surveyed and the success needs to be evaluated to facilitate immediate action in order to ensure quickly iterating solutions (Rodriguez and Jacoby 2007, Best 2006). To measure the success of a modified service product, yet again the assessed touchpoint analysis is a valuable tool. Consequently, this analysis needs to be conducted not only before a service design process to define the status quo and to identify critical incidents, but also during implementation as a monitoring tool.

The complexity of tourism products presupposes a holistic view of these products and their enclosed service bundles. The ideal case of a service design process for an SME in tourism is to include all existing and potential service providers within a destination. Therefore both horizontal and vertical cooperation among these regional service providers is crucial for the successful application of service design in tourism (Zehrer 2009).

CONCLUSIONS AND OUTLOOK

Service design can contribute to a better understanding of the customer, to design more suitable service products, improve the service quality and as a result increase the company's profit on a sustainable basis. In the SME-dominated tourism business constant and effective improvement of service quality provides an opportunity for SMEs to compete with larger competitors and even tourism chains, since evolving tourism rating websites, regarding transportation,

THE ASSESSED TOUCHPOINT ANALYSIS



This chart demonstrates a touchpoint analysis, based on the examination of several customer journeys with similar service processes. Although this example is extremely simplified, it visualises the concept sufficiently. The outer boxes represent an indirect touchpoint, which in this case is a hotel rating website, but alternatively could be anything the service provider cannot influence directly, from word of mouth advertising to newspaper articles or television reports. The inner boxes correspond to any touchpoints upon which the service provider has an impact. However, considering the complexity of tourism products, it must be remembered that rarely are all touchpoints within the service period under direct control of the service provider, as indicated earlier. Nevertheless, with a view to keeping the example simple, these touchpoints have to be seen as exemplary in nature rather than true to detail. The numbers in the vertical arrows underneath each box stand for the mean values of each respective touchpoint as rated by the customers on a scale from minus 10 to plus 10. Therefore, negative values represent bad experiences with the particular touchpoint, while positive ones indicate satisfying ones. Moreover, the horizontal arrows illustrate the aforementioned confirmation and disconfirmation paradigm of customer satisfaction. The touchpoints of the pre-service period build up the customer expectations towards the service product, which are later confirmed or disconfirmed by the perceived experiences of the very same product and result in over-all satisfaction or dissatisfaction with

the whole product. Considering the indirect touchpoints, the over-all rating influences other customers through media or word of mouth by information-producing consumers, the already mentioned prosumers. The respective touchpoint ratings thereby provide a review of each touchpoint's satisfaction within the service process and allow identification of critical incidents. Critical incidents are touchpoints with the lowest, even if not negative, rating. Hence, these incidents should be the starting point for a constitutive service design process; in this simplified example, this would be the hotel bar with a mean assessment of -1.9. However, the touchpoints with the highest rating also deem a closer examination, since they are most conducive to overall satisfaction and therefore can be seen as profit drivers causing follow-up visits and online evaluation highlights, such as the hotel check-in in the example. The distinction between basic, performance and excitement factors is crucial for the correct interpretation of these evaluations. The subsequent service design process is based on the tools and methods listed earlier. Since the selection of tools and methods within this process varies according to the product(s) and service provider(s), but does not significantly differ from the concept design of other service products, this article stresses more the unique characteristics of service design in tourism.

accommodation, or leisure and recreational activities, provide customers with open access to third-party evaluations in parallel with a real-time price comparison.

For most leisure tourists, their holidays are of superior value, not only because it is a time period which is temporally very limited, but also as it consumes financial resources long before the actual service is consumed. Hence, tourism products are always a matter of trust, and the purchase of them highly depends on expectations regarding the desired experiences. The matching or even exceeding of perceived experiences with expectations is crucial to customer satisfaction. On the one hand a satisfied guest is more likely to return and potentially even turn into a loyal customer, while on the other hand the satisfaction of customers reflected in their evaluation, either face-to-face or online, influences the expectations of other potential customers. Service design reveals this tension between expectations and experiences and ensures an efficient and sustainable quality improvement.

Service design is an emerging field in tourism. The persistent service and customer orientation of the tourism business along with an increasing body of academic experience in tourism research provides a mutually beneficial conjunction of service design and tourism. However, as service design is still a developing discipline, further research is needed in particular in the development, application and evaluation of service design tools and methods.

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