Service Design in the Public Sector: Role, Challenge and Good Practice

Lapin yliopisto
Taiteiden tiedekunta
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Summary:

This master's thesis examines the connection between service design and public sector: my interest is to observe and study the role of service design in the public service development globally and nationally and also to identify some specific key factors, challenges and good practices based on literature and interviews which are the basis of this thesis.

In this thesis my main aim is to analyze seven service design professional interviews by highlighting and opening the key factors that have positive or challenging effects to service development in the public sector and reflect the accuracy of outcomes to literature and conversations concerning these themes. As a result I am able to identify seven different phenomenon that have key roles in service development process: (1) big part of the tools support customer understanding and concept design, (2) based on interviews service design tools do not support the rooting and launching of new services, (3) personal initiative and commitment are required that process is able to proceed inside the organization, (4) organizing, decision-making and maintaining are the main challenges when taking concepts towards implementation, (5) when launching new services there are lots of challenges where to find solutions.

As an outcome I present recommendations for public sector service designers where I reflect identified good practices and challenges based on this thesis.

Keywords:
Service design for public sector, design thinking, service design process, service design tools, content analysis

Lapin yliopisto, taiteiden tiedekunta

Työn nimi: Palvelumuotoilu julkisella sektorilla: rooli, haasteet ja hyvät käytännöt
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Tiivistelmä:

Tämä pro gradu tarkastelee yhteyttä palvelumuotoilun ja julkisen sektorin välillä: tutkimusintressini on tarkkailla ja tutkia palvelumuotoilun roolia julkisen palvelujen kehittämisessä maailmanlaajuisesti ja kansallisesti ja myös tunnistaa keskeisiä tekijöitä, haasteita ja hyviä käytäntöjä jotka perustuvat tässä pro gradussa käytettyyn kirjallisuuteen ja haastatteluihin.

Tässä työssä tärkein tavoitteeni on analysoida seitsemän palvelumuotoilun ammattilaisten haastatteluja ja nostaa esille sekä avata avaintekijöitä joilla on positiivisia tai haastavia vaikutuksia palvelujen kehittämiseen julkisella sektorilla. Löydöksien paikkaansa pitävyyttä reflektoin kirjallisuuden ja palvelumuotoilussa käytävien keskustelujen kautta. Tämän seurauksena pystyn tunnistamaan seitsemän eri ilmiö, joilla on keskeinen rooli palvelun kehitysprosessissa: (1) iso osa työkaluista on asiakasymmärryksen ja konseptisuunnittelun tukena, (2) haastattelujen perusteella palvelumuotoilun työkalut eivät tue uuden palvelun lanseeraamista ja juurruttamista, (3) oma-aloitteisuutta ja sitoutumista tarvitaan, että prosessia pystytään viemään organisaatiossa eteenpäin, (4) organisointi, päätökset ja ylläpitäminen erityisesti ovat haasteina konseptin viemisessä toteutukseen, (5) uuden palvelun lanseeraamisessa on paljon haasteita, joihin haetaan vastauksia.

Lopputuloksena esitän suosituksia julkisen sektorin palvelumuotoilijan työssä toimiville, jotka pohjautuvat tässä pro gradussa tunnistettuihin hyviin käytäntöihin ja haasteisiin.

Avainsanat:
Julkisen sektorin palvelumuotoilu, muotoiluajattelu, palvelumuotoilun prosessi, palvelumuotoilun työkalut, sisällön analyysi

Muita tietoja:
Suostun tutkielman luovuttamiseen kirjastossa käytettäväksi: X
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(vain Lappia koskevat)

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1 INTRODUCTION

1.1 Research topic and background

According to Confederation of Finnish Industries (2012) two-thirds of Finland's GDP value consists of public services that are growing one-quarter each year. The changes of economy, age structure (Statistics Finland 2012) and service structure poses new challenges for the public sector decision-makers. As services are developing in general also better public services are demanded by users and government (Ministry of Employment and the Economy 2010). Recently user-driven innovation policies have replaced the typical development of new public services and operating models. User-driven innovations emphasize now the needs of the customer and encourages towards co-development of the services. Public services are inevitably shifting towards public participation when the rights of citizens in decision making are becoming stronger. Innovative design methods used in service design not only bring concretization and visualization to service development but also support user participation (Thomas 2008).

1.2 Research problem

These above-mentioned changes bring new development challenges to the field of service design as there is a growing demand for reorganized or totally new public sector service solutions. When designing user-driven public services policies and reports recognize the role of service design but shifting from familiar operating models that are relied and trusted for something new and lesser-known creates resistance. Instead of changing superficial operating patterns with short-term impacts there is need for wider change of total behavior which e.g. design has capacity to provide (Polaine *et al., 2013*). Through this Master's Thesis I aim to gather up good practices that service design can provide to the public sector challenges and what kind of challenges service design might face.

1.3 Research questions

The research question in this Master's thesis focuses on the role of service design in public sector. Research questions are:

1. What solutions service design can offer to public sector service development?
2. What kind of challenges can be identified?

1.4 Objective of the study

The goal of this study is to survey and outline role, challenges and opportunities that service design can offer when developing public services and to take part to discussion concerning the role of service design in the public sector. In this study my aim is to find answer to my research question through content analysis and definitions of the main concepts in my master’s thesis theoretical part.

1.5 Data and methods

Research data used in this master’s thesis is qualitative and based on studies, reports, literature and interviews that are related to my research theme. The most important data becomes from seven interviews, gathered from international design professionals that represent high knowledge of public sector service design.

Data gathered from the interviews has been analyzed by using qualitative analysis method, content analysis during the August - September 2013. More details about data analyzing process is presented in chapter contents analysis and coding.

2 THE KEY CONCEPTS OF THE STUDY

2.1 What is service design

It seems that when writing and talking about service design there are as many definitions as there are definers. The following quote is a good opening for this chapter which introduces the challenge of defining service design approach from few perspectives. Marc Stickdorn has once said *"If you would ask ten people what service design is, you would end up with eleven different answers – at least".* Stickdorn presents service design as a new way of thinking which combines tools and methods from various fields and forms an interdisciplinary approach (Stickdorn and Schneider 2010).

Mager (2009b) presents service design as approach that understands human activities, feelings, needs and motives and sees that service design is about creating services from the users' perspective. Technically Mager sees service design as a systematic, creative and empathic approach to uncover unmet explicit and hidden customer needs and desires that are usable, useful, efficient, effective and desirable from the users' point of view and feasible, viable and valuable from the producer's point of view.

Moritz (2005) has very similar view with Mager as he presents service design as holistic, multi-disciplinary approach that develops new human centered service solutions or improves existing ones. Moritz also writes that service design can be understood as utilizing design methods in commercial development of existing or new services. Service design provides visual tools to create overall picture of the situation, generates mutual understanding, enhances operations and directs resources.

2.2 Changing role of service designer

The role of designer has been in a change globally and nationally. Over the decades profession has been shifted from 1950s artist to 1960s industrial designer and from 1980s design manager and 1990s strategic designer to 2000s innovator (Valtonen 2005). Moritz (2005) presents the role of service designer as analyzer and usability reporter that reflects the experience of the customer or service user.

Tan (2009) presents multiple roles of service designer from facilitator to communicator, capability builder, strategist, researcher, entrepreneur and to co-creator. Designer as facilitator is active translator whose responsibility is to reflect practice in workshops and to contribute collaboration among participants. Designer as communicator is illustrator who visualizes conversations and contributes common understanding. Designer as capability builder is process-focused and business-oriented when strategic designer acts as a link between design, planning and policy. Designer as researcher is using various methods to produce data together with stakeholders. Designer as entrepreneur is searching ways to commercialize and find profit opportunities from service ideas as designer as co-creator works closely for and with the croups to co-create new service solutions.

Roles	Characteristics	Examples of activities
Designer as **Facilitator**	» Joining up different thinking, philosophy and approach from different parts of the stakeholder groups. » Enabling better collaboration, synergy and participation of people. » Mobilising and energising thinking of others (Inns, 2007: 25)	» Facilitating reflective practice among the stakeholders through formal (for example in workshops) and informal means (for example in conversations). » Translating conversations into visuals (for example graphic facilitation).
Designer as **Communicator**	» Using visuals to initiate conversations around issues, gain feedback for iterations and ideas. » Using communication devices to bring together disparate stakeholder groups. » Closely linked to the facilitation role.	» Examples of tools used include storytelling, diagrams and prototypes. » Illustrating relationships, emotions, networks, abstract, systems, prototypes and strategy through visual means.
Designer as **Capability builder**	» Transferring design processes and methods to businesses to enhance their own processes. » Acting as a 'conduit' in the knowledge transfer process.	» An adoption of design processes and methods into business processes.
Designer as **Strategist**	» Involved in designing and planning action and policy to achieve a major or overall aim.	» Acting as the project champion and lobbying support for the project. » Helping create and visualise strategy.
Designer as **Researcher**	» Doing research with stakeholders and potential stakeholders of the product or service. » Project outcome are usually recommendations,	» Using a range of methods such as questionnaires, surveys, vox pops, observations, interviews, personas, context mapping, journey mapping, cultural
	improvements, ideas and opportunities translated from design-led research, rather than a design artefacts. » Drawing research methods from architecture, development studies, anthropology, social sciences, marketing, business etc.	probes, stakeholder mapping and workshops.
Designer as and **Entrepreneur**	» Designer involved in end-to-end process of developing and rolling out an idea that can function profitably or sustainably.	» Looking toward commercialising the idea. » Looking for ways to develop ideas into a sustainable enterprise model.
Designer as **Co-creator**	» Relationship with users is to both 'design with' and 'design for.' » Co-design's approach is about: o The participation of people; o A development process; o The creation of ownership; and o Being outcomes-based (Bradwell and Marr, 2008).	» Involving user groups throughout the project to co-create solutions. » Using a range of participatory tools such as cultural probes.

Figure 1: Seven roles of service designer (Tan 2009)

2.3 Towards user participation and co-design

Co-creation, co-development or co-design are terms that are often mentioned when talking about service design. Co-design can be understood as a way to design solutions for a community with the community. Moritz (2005) defines co-design as user-shared design process where the service is designed collaboratively with service users, local residents, service providers and professionals.

According to Jäppinen (2011) co-design has increased its popularity – especially in public sector services. As a result of this development the traditional way of participating in decision making on services through representative or direct democracy is accompanied by and a new, more innovative way where residents participate in the planning and development of service provision through user-driven innovation activities. Sanders and Stappers (2008) present that there has been a significant change in the roles of users, designers and researchers comparing to classical design process. When using co-design methods, user data can be exported quickly to the service development as well as used to provide feedback from the user. When the users' needs and expectations are the starting point of the design process, usability of the product or the service is easier to ensure (Moritz 2005).

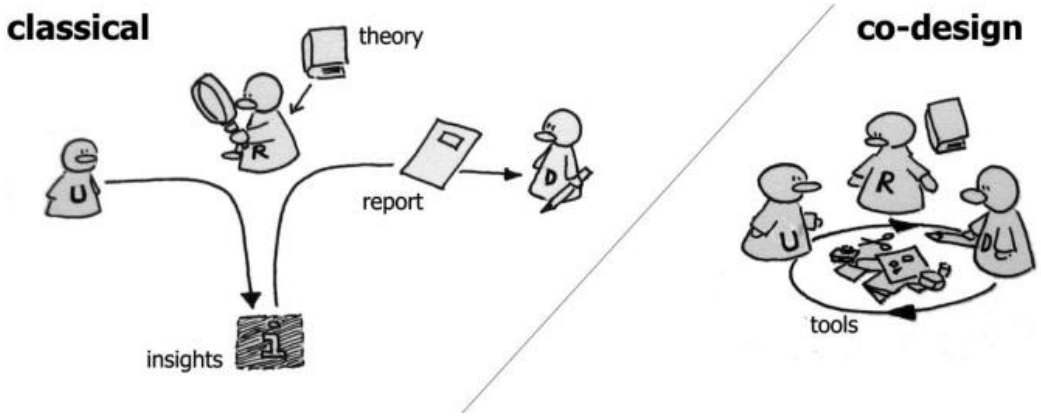

Figure 2: Roles of users, designers and researchers in design process: from classical role towards co-design role (Sanders & Stappers 2008, 11).

2.4 Service design process

In service design approach processes are often starting point of development work. Service design process has its roots in classical design process where there has been a change from designing concrete products towards immaterial services with and for the users (Miettinen et al., 2011). In this master's process plays a key role which reflects strongly to data structuring and outcomes. Process is based on the following process views.

Design Council (2015) presents design methods through process that is based on double diamond model: discover, define, develop and deliver. Meroni and Sangiorgi (2011) present service design process through four common activities: analyzing, generating, developing and prototyping.

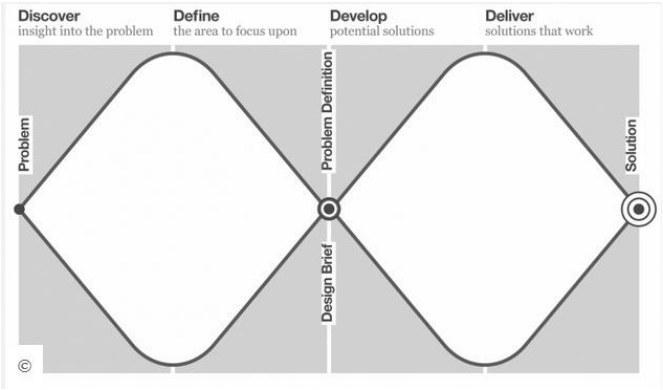

Figure 3: Design Council's double diamond model (2015)

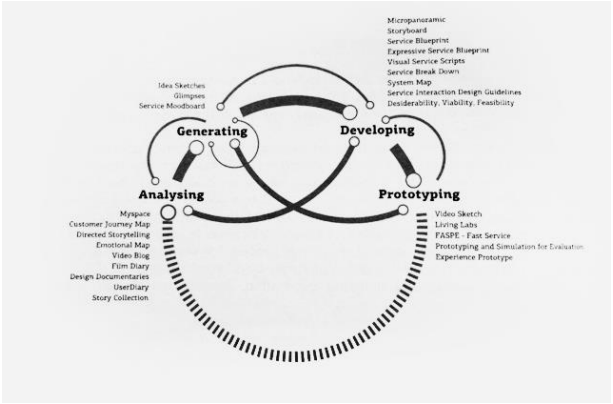

Figure 4: Meroni's and Sangiorgi's iterative design process (2011, 240)

Mager (2009b) presents service design process in four phases: discovery, creation, reality check and implementation. Oosterom (2009) divides process into 5 phases: discovering, concepting, designing, building and implementing when Moritz (2005) divides service design process into six tasks: finding and learning, giving strategic direction, developing concepts, selecting the best, enabling understanding and making it happen. In service design categories where phases are overlapping with each other Moritz presents service design understanding, service design thinking, service design generating, service design filtering, service design explaining and service design realizing.

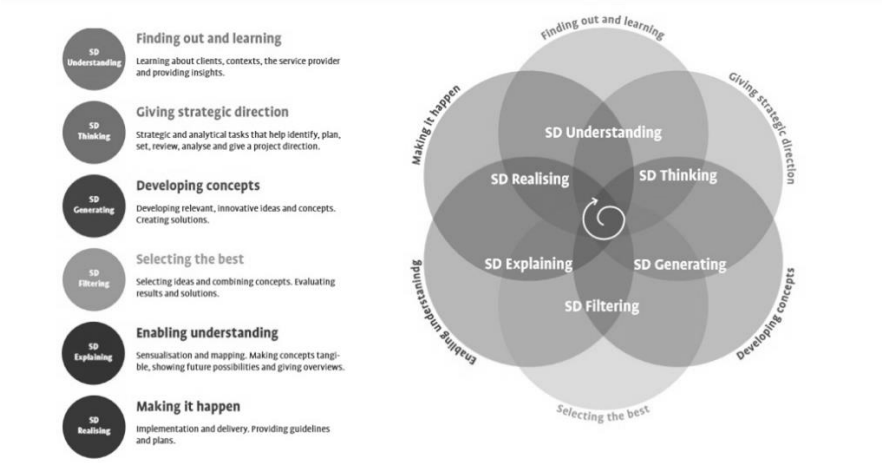

Figure 5: Moritz's six service design tasks and service design categories (2005, 123-149)

2.5 Service design tools

Service design tools have very important role when developing new services. Usually tools are attached to the development process and categorized under different phases. Tools such as lego serious play, role playing, rough prototyping, design games and storytelling support creating empathy and understanding of service experience. When ideating new solutions personas, mock ups, storyboards, customer journey maps and experience prototyping are tools that push design teams towards concretization.

As service ideas are ready to implemented service prototypes, blueprints and use cases make service concepts realistic and present them on visual way creates common understanding (Meroni and Sangiorgi 2011, Stickdorn and Schneider 2010, Service design tools 2009). These examples were just few mentioned tools used in service design, variation of tools is wide and still growing.

Figure 6: Some main tools used in service design (Service design tools 2009)

3 SERVICE DESIGN IN THE PUBLIC SECTOR

3.1 The differences of public sector service design and social design

When developing service solutions for public sector's social challenges, there is still going discussions concerning the differences of service design, social design and human-centered design. Kimbell and Julier (2012) present definition to social design as practical learning journey which includes people and which aim is to create services and products that are effective, usable and meaningful with societal impacts. As also in service design, in social design tools such as storytelling, storyboards and blueprints are important but the concentration is more in social and policy issues. Kimbell and Julier also present seven typical habits of social design.

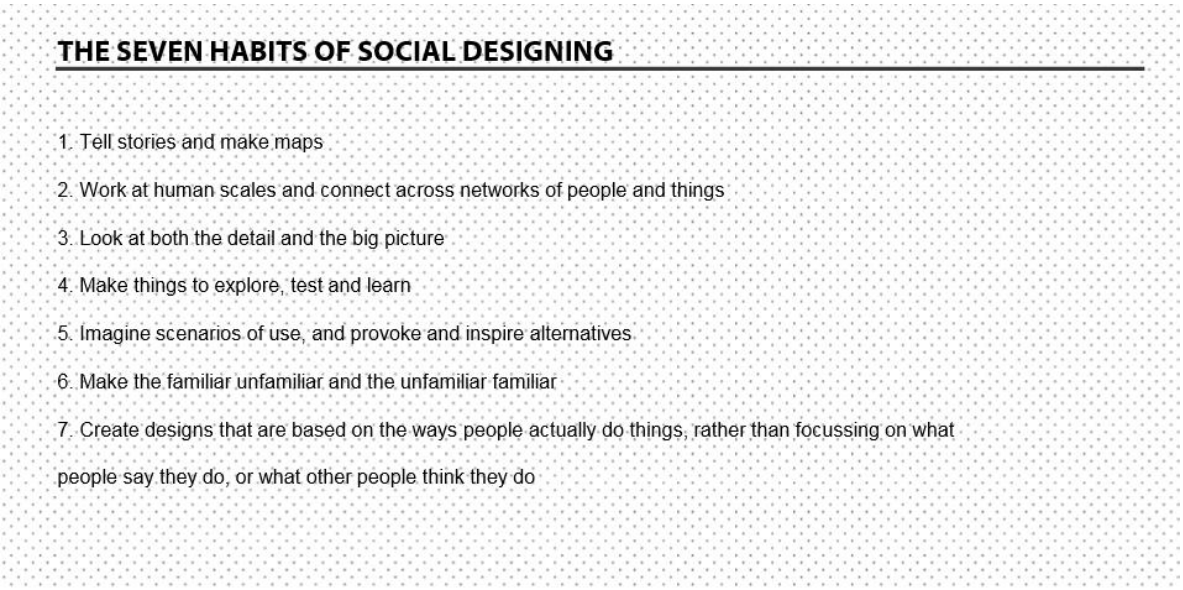

Figure 7: Seven habits of social design (Kimbell and Julier 2012, 6)

Armstrong et al. (2014) present social design instead of discipline as discursive moment that has taken confluences from public sector service design, austerity, activism, outsourcing, digitalization, big data, design thinking, open government, localism, social innovations, customer experience, generation "millennials" and social entrepreneurship.

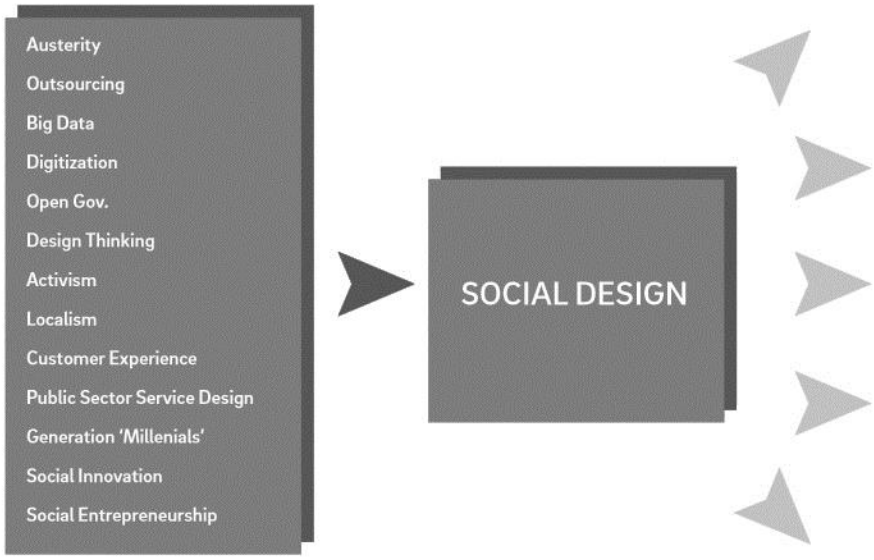

Figure 8: Factors of social design (Armstrong et al., 2014, 26)

3.2 The role of service design in changing society

Service design has a growing role in public sector when the changes of economy, aging population (Statistics Finland 2012) and service structure are creating new challenges for public services and the public sector. Due to these facts there is still huge potential for innovation of new service solutions as innovative design methods used in service design enable user participation in service development (Thomas 2008). At the same time, service design responds to those upcoming challenges when the profession of design is changing and design moves towards experience based co-design. This is one of the reasons why service design has started to have growing role in the private and public sector globally.

In Finland Association of Finnish Local and Regional Authorities has published guides for Finnish Municipalities and decision makers to promote local residents as part of the public service production. The aim of association is to support Finnish welfare society e.g. through user inclusion and co-development are in the center as are also tools that promote user participation. This can be seen as of the signs towards user-oriented thinking in Finnish public sector.

Figure 9: Guides for Local resident developing services and Residents at the center (Jäppinen and Sallinen 2012, Jäppinen and Nieminen 2014)

One of the good process examples from reaction to changes of society in Europe can be found in United Kingdom where co-production has been implemented together with public sector and service users already for decades and user orientation has been used to renew British public services (Miettinen *et al., 2010*).

Governance International (2013) has presented co-production star for practical co-production of public services. Process is divided into four phases: co-commission that happens in early phases of designing in interaction with the user, co-design that provides decision making e.g. concerning budgets together with service users, co-deliver that supports service delivering together with service users and co-asses that concentrates on final evaluation of service together with service users.

Figure 10: Co-production star (Governance International 2013)

3.3 The role of service design in political control and financing

In recent years, the field of design has become more global, rapidly changing and transformable area. In Europe especially European Commission has drawn attention to design-driven innovations. In Implementing an Action Plan for Design-Driven Innovation (2013) Commission defines six strategic areas where one is design for innovative public sector. Commission also mentions that in the future one of its aims is to support the capacity of government officials to use more design methods and to improve design-driven, innovation-related research and development work. Also peer learning and cooperation among the public sector decision makers who are seeking design-oriented solutions are recommended by the Commission.

Need for design methods and tools can be also seen in big European financial instruments calls. Development targets of the biggest EU research and Innovation

programme Horizon 2020 are focusing on health, security and societies. Demographic changes and wellbeing, inclusive, reflective and innovative societies and protecting freedom of European citizens are topics where especially service design tools and methods can provide solutions. One of the good examples of this is in Finland where PARTY (Participatory Development with the Youth)- project started in February 2015 and which is funded for four years by Horizon 2020, Marie Skłodowska-Curie Research and Innovation Staff Exchange Scheme (RISE) with 1, 017, 000 EUR. PARTY is international and inter-sectorial project coordinated by University of Lapland and it focuses on using service design tools for supporting employment and empowerment of San youth in Namibia and South Africa (University of Lapland 2015).

Design-led innovations has become global as South Korea, Australia and New Zealand are trying to find solutions for societal and public sector challenges. In Europe Finland, United Kingdom, Denmark and Germany are seen as pioneers of user-driven innovation policy. For example in Denmark, service design methods are already used in a systematic development of public services (SEE 2013). In UK design thinking has been merged into public sector through companies such as We Are Snook (2014) whose business is based on cooperation between the Ministry and the local council. Snook's aim is to bring public administration, policy makers and citizens together to co-produce municipal services.

Public sector service design is still recent phenomenon in Finland but in many Finnish cities such as Helsinki, Tampere, Kuopio, Mikkeli and Espoo customer and user orientation are written inside the municipal strategy (City of Helsinki 2014, City of Tampere 2005, City of Kuopio 2014, City of Mikkeli 2014, City of Espoo 2012). In Finland discussion about the new role of design started when Muoto 2005! first national design program supported design research to become more established scientific field. Program was funded by Tekes and Academy of Finland for five years (2006). At the time design research was seen more as a strong industrial development tool but when Muotoile Suomi, national design program was published in 2013 (Ministry of Employment and the Economy) there was also demand for design in the public sector. In 2009 Ministry of Employment and the Economy published user-driven innovation policy which aim was to support and strengthen the awareness of user-driven

innovation, knowledge and research and to involve users to the innovation processes. These above-mentioned actions show how through design the role of residents, public service users have begun to seen more and more as an important resource in cities and municipalities.

According to Vaajakallio and Mattelmäki (2013) users should have rights to co-design public sector service development directly or indirectly. They approach challenges related to public sector and co-design from three aspects: defining design challenge, concept design as understanding- and decision making tool and finally bringing concept design inside discussions.

Defining design challenge, finding right research problem or question in a way is always the first thing to do in design process and definition should always done in collaboration with key people who are truly developing public services to make sure long-term effects. Concept design was presented powerful tool for decision making, when showing workshop ideas to public sector actors. Visualized concepts can help in understanding or even create empathy from the needs, expectations and dreams of service user/citizen.

Vaajakallio and Mattelmäki raise that uncertainty is one of the challenges identified in process because results are often hard to see beforehand. Also operating and decision making models that have often strict and basic principles slow down processes which require more cultural and behavioral changes. However, service design tools can support effective innovation processes through visualizations and prototypes and above all create engagement to development work. Co-design sessions and workshops support to raise important issues or give first-hand information about the tools and methods for participants.

3.4 Service design as a tool for change management and learning

Design can operate as a tool for change management and learning by offering new content, tools and skills to management and decision-making. Design can play a significant role in public sector's changing service culture by concretizing development and supporting commitment of new practices. Design thinking has become new rising trend and international phenomenon in the public sector's innovation activities.

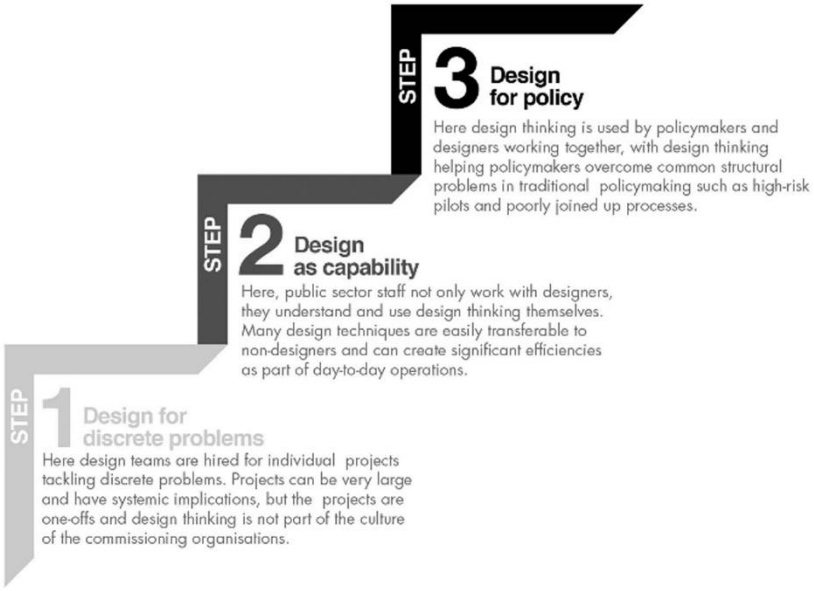

Figure 11: SEE platform, public sector design ladder (2013)

Design thinking has become a key element of the new derivation, it is a problem-solving activity, which utilizes a multi-expertise by using visual and concrete methods. Design thinking supports municipalities or cities content creation, anticipation and development work. Design methods support remodeling of services when public sector is shifting from production-oriented manufacturing towards customer insight and user-oriented thinking.

Development work can be implemented in (a) from the top down, administratively so that service delivery is enhanced, or (b) bottom-up, with the customer whereby the quality of services increases and even new services may emerge in which case radical reforms can be achieved (Miettinen 2014).

3.5 Service design solving wicked social problems

Growing amount of aging population, keeping young people in attached to the education and the public sector structural changes have caused major challenges for the public service business (Ministry of Employment and the Economy, 2010. This phenomena is defined as wicked problem which means massive social or cultural problem that might be difficult or even impossible to solve (Kolko 2012).

Public service business has tried to solve wicked problems for over the past decades by transferring part of the production of municipal services towards commercial enterprise service production and also by developing new models for processes such as service ordering and service production.

Service design methods could support this development by creating opportunities for utilizing and applying new operating models for co-production of services and financing and by increasing communication and cooperation between public and private sector. User-driven development methods can be used to increase local residents' satisfaction by identifying their latent needs and providing smooth running service paths. Service design tools raise service user's needs and wishes already in the early stages service development process which is a critical phase when ensuring service functionality (Jäppinen 2011).

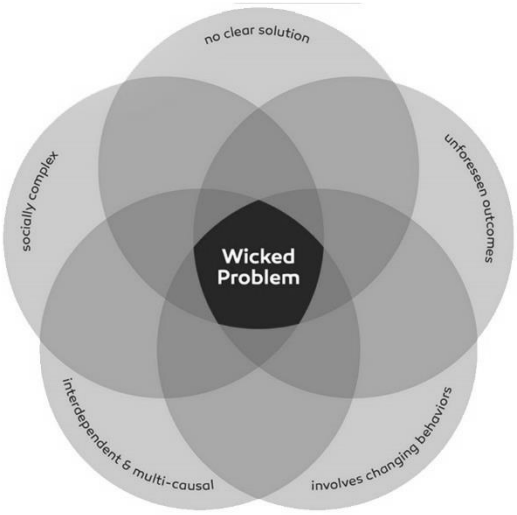

Figure 12: The wicked problem (Stamps 2015)

3.6 Service design as a tool for anticipation

Methods and tools used in design such as scenarios and storyboards can help to anticipate future changes. Nelimarkka and Kauppinen (2006) present anticipation as a systematic, participatory process where information is collected, evaluated, analyzed and established as long-term and medium-term visions and it can be used when developing future-oriented thinking.

One of the challenges is that future is often seen as a direct continuum of the past, and that can lead to the direction where future visions and goals may be at variance with the future.

Economic decisions are often based on looking to the past but visual design methods such as scenarios, storytelling, body storming and prototyping will help decision-makers to see changes in future operating environments e.g. when developing public healthcare and social services (Miettinen 2011).

Anticipation can be used generally to the preparation of the strategies, to identify future customer relationships and public health risks as well as help to allocate resources in the right direction (Nelimarkka and Kauppinen 2006).

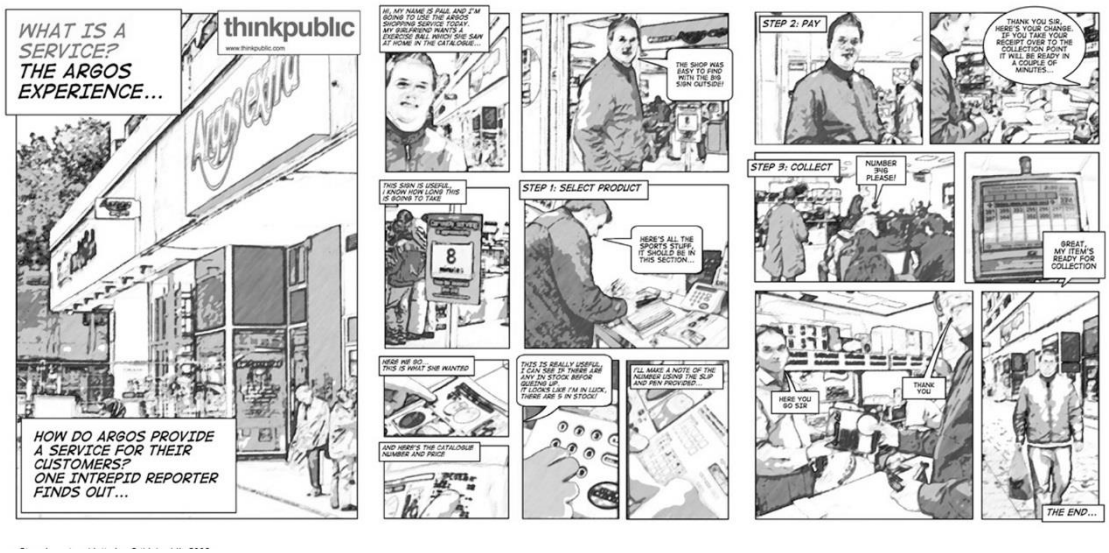

Figure 13: Storyboard (Thinkpublic 2009)

4 RESEARCH APPROACH AND METHODS

4.1 Data collection

Data in this thesis is gathered and analyzed by using qualitative research methods. Qualitative research is phenomenological, hermeneutic research that is based on phenomena and interpretations. Lehtinen (2003) presents that the aim of qualitative research is to understand human actions and to find the meanings of phenomena on its own terms and take into account details.

Qualitative research data can be collected by using observations, interviews and documents such as diaries, audiotapes and videos. Data in this thesis was collected by using interviews that were analyzed by content analysis.

4.2 Interviews

The purpose of the interview is to gather information from experts about their specialized knowledge according to phenomena under examination. There are still some challenges in gathering data by using interviews and it requires personal involvement of the researcher. Cooperation with the interviewee is necessary to avoid linguistic communication problems and misunderstandings (Anttila 2005).

Lantz (1993) divides interview formats in four sectors, the natures of interviews are open, open and directed, semi-structured, and structured. Research data collected and analyzed in this master's thesis consist of open, elite interviews which were implemented face-to-face. Interviewees, professionals were selected based on the view of the phenomenon.

The nature of the interview	Open	Open and directed	Semi-structured	Structured
Starting points	Preliminary understanding of the researcher	Concept model	Model of the concepts and the relationships between them	Theory of the concepts and the relationships between them
Question layout	The individual perception of the characteristics of the phenomenon and the importance of the phenomenon. The interviewer is looking for a single binding information on the quality of the phenomenon.	Individual's perception of the characteristics of the phenomenon. The interviewer is looking for a single binding information from defined quality characteristics in the study.	Individual's perception of the quantities and characteristics of the phenomenon. The interviewer is looking for information on the amounts and the possible relations between the concepts of the phenomenon.	The interviewer is looking for information about relations between concepts (requires a quantitative clarification).
Context is determined	With empathy/ to settle in position of the person under investigation.	With empathy from the perspectives set by the interviewer.	Formally planned in advance.	Formally defined in advance.
Implementing the interview	One broad question. Interviewer will accompany and set further questions to deepen the subject. Open answers. Interviewer concentrates on those issues that the respondent seems to be appropriate.	One question topic that is illuminated widely. Interviewer will accompany flexibly. The interviewee concentrates on those issues that the interviewer considers appropriate.	Question topics and questions in the prescribed order. Combination of open and solid answers. Interviewee perceives own view of things interviewer is setting. Interviewer gets an understanding of the defendant's view in what comes to the appropriateness of the questions.	Question topics, questions and answers to fixed in a certain order. Interviewee gives understanding of what the interviewer considers appropriate.
Analyzes	Various interviews usually turn out to be different: the advantage of qualitative analysis. This enables qualitative analysis of the phenomenon.	If interviews turn out to be even partially different, it is considered an advantage for understanding the nature of the phenomenon. Qualitative analysis is limited to the characteristics of the phenomenon.	If the interviews of the same topic are considered to be comparable, it gives requirements to the quantitative analysis. Any open questions provide a limited opportunity to the qualitative analysis of the nature of the phenomenon.	Interviews are comparable and quantitative analyzes are possible

Figure 14: Inter-comparison of different interview formats, open interview (Lantz, 1993, translated by Vuontisjärvi 2015)

4.3 Contents analysis and coding

Content analysis is a theoretical method which aim is to analyze written documents such as books, articles, interviews, letters, conversations, reports etc. systematically and objectively and to create a narrative and a clear description of the phenomenon under investigation (Tuomi and Sarajärvi 2004). As a unit of analysis, words and word combinations has been used and coded, grouped and classified during the research process.

Data collecting started from the selection of interviewees. It was considered that because of the new and limited subject research data should represent global view and interviews would be collected from global experts. Experts were selected together with Professor Satu Miettinen and interviews were implemented globally during the spring 2013.

Selected experts were (1) Arne Van Oosterom, Startup Mentor, Personal and Team Development Coach, Founder of Design Thinkers Group and Design Thinkers Academy, Netherlands, (2) Mikko Koivisto, Lead Service Designer at Diagonal Mental Structure Oy, Finland, (3) Satu Miettinen, Professor at University of Lapland, Finland, (4) Tuula Jäppinen, Senior Adviser at Association of Finnish Local and Regional Authorities, Finland, (5) Elizabeth Pastor, Partner and Cofounder at Humantific, USA, (6) Marianna Recchia, Business Designer at Volkswagen Group Research, Germany, (7) Hanna-Riina Vuontisjärvi, Service Designer at University of Lapland, Finland.

Interviews were implemented, documented and transcribed during the spring 2013 by Professor Satu Miettinen and Industrial Design Program students Mira Alhonsuo and Hanna-Riina Vuontisjärvi, University of Lapland, Faculty of Art and Design.

Transcribed interviews were analyzed by using content analysis and there were two analysis rounds implemented by Satu Miettinen and Hanna-Riina Vuontisjärvi. First round brought up themes and keywords that were associated with service design and the designer's role in development of public services, findings were summarized in the meeting 2.9.2013.

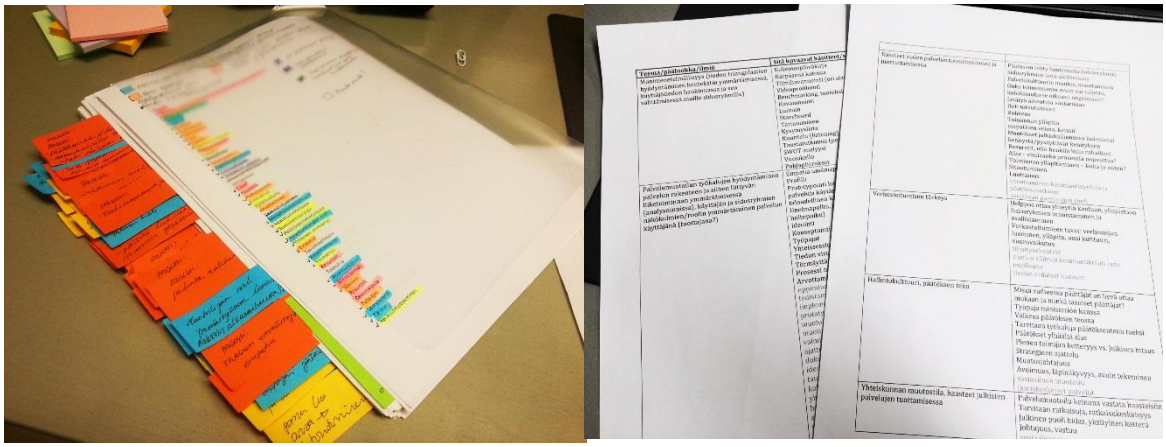

Figure 15: Content analysis and coding (Vuontisjärvi 2013)

Second round crystallized main categories to themes and key words and after that themes that were earlier raised from data were brought to classical service design process by using visual map which made it possible to perceive where themes were located.

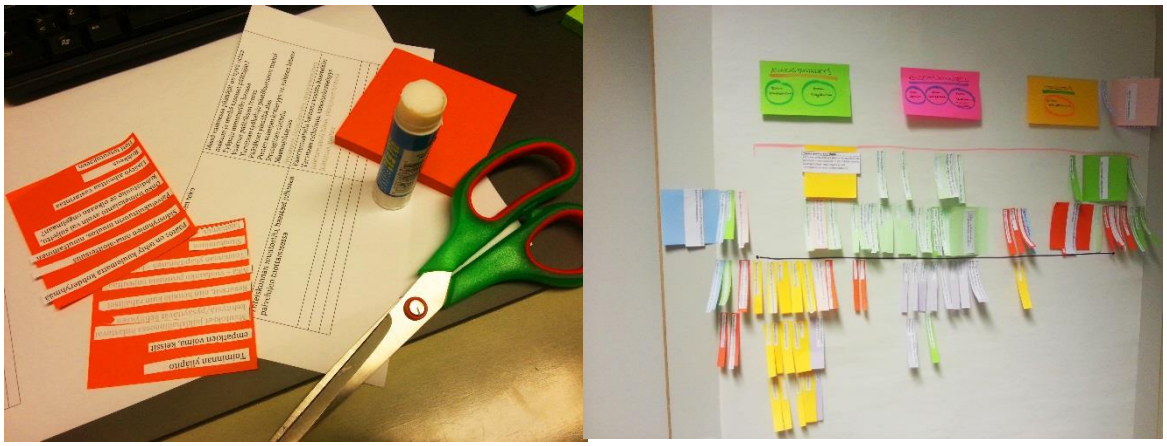

Figure 16: Building visual map (Vuontisjärvi 2013)

Visual map was created in spring 2014 by Hanna-Riina Vuontisjärvi, which gave instantly wider understanding about the results of the interviews. Before visual map data was structured only in text form but visualization made information more understandable. When findings presented on visual map were compared to challenges and good practices mentioned in chapter of key concepts similarities were observed and it gave author certainty that the direction of the thesis was heading to the right direction.

5 DATA OPENING

5.1 Service design process as a tool for organizing research data

Process that has been formed and introduced in this chapter has its basis in writer's general perception about service design process introduced in chapter service design process. Service design process phases were structured as following three main phases with six detailed phases:

- research: service design understanding, service design thinking
- concept design: service design generating, service design exploring, service design filtering
- design/ operations: service design realizing

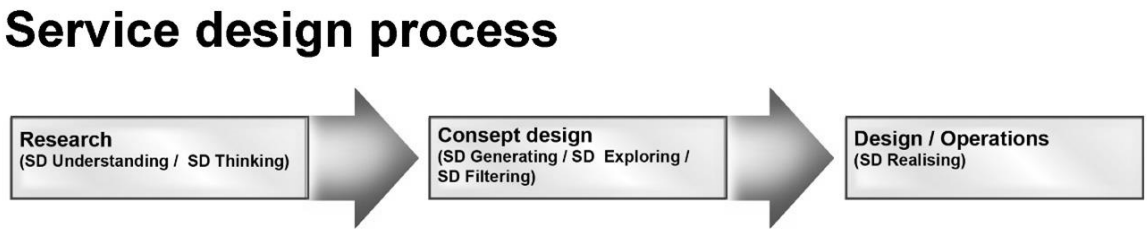

Figure 17: Service design process used in this Master's thesis (Vuontisjärvi 2014)

Service design phases were visualized on top of the visual map where words and word combinations were placed under the process phases as follows:

- strategic level: policy/ long term decisions, time duration quarters or years
- tactical level: procedure/medium term decisions, time duration months or days

- operational level: execution/day to day operations, time duration days and minutes
- methods and tools

Strategic, tactical and operational levels are based on levels of management (Kaplan Financial Knowledge Bank 2012). The reason why writer decided to use these three levels came from public sector where decision making and whole structure is based on these levels. Methods and tools were selected as main levels because of how data was structured towards more concrete and specific level. Terms are also commonly used in the design professional vocabulary.

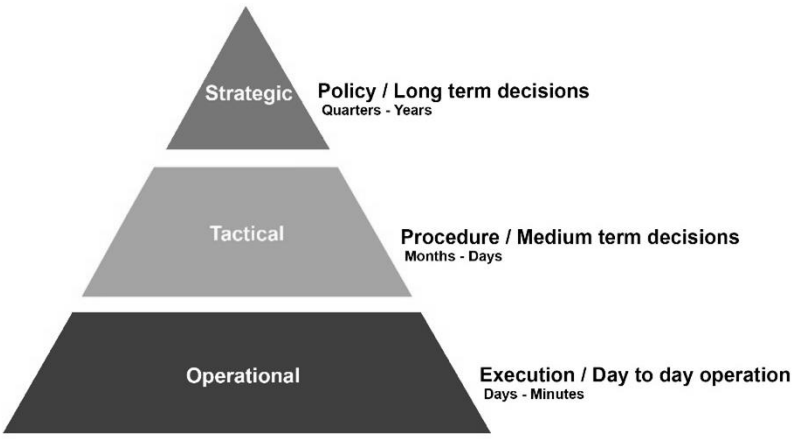

Figure 18: Management levels (Vuontisjärvi 2014)

In visual map words and word combinations are coded in colors of blue, green, grey, red, orange and purple. Color tones that are shifting to red are identified as challenges in public sector service design process and blue/ green tones are identified as good practices.

In figure visual map most of the challenges seem to settle in to strategic and tactical levels and design/ operations level but there are lots of good practices in the early phases of design process. Key findings based on this map are opened more widely and presented in chapter key finding and theoretical discussion.

Figure 19: Visual map (Vuontisjärvi 2014)

6 KEY FINDINGS

6.1 Data becomes as named themes

Named themes consisting words and word combinations are introduced here wider. Themes were named together with Satu Miettinen and Hanna-Riina Vuontisjärvi based on the words and word combinations categorized during the content analysis process. Themes were clearly categorized in service design tools and methods, service design process, societal challenges and strategic level service design.

Themes were named as:

- using multiple methods
- using service design tools as an analytical tool
- workshop as a strategic tool for co-design
- from concept to practice with huge challenges
- importance of networking
- policy, management and decision making
- societal change, challenges in public service production.

6.2 Using multiple methods

In collected and coded data it can be seen that interviewees mentioned very specific tools and methods they had used in the service development. All mentioned tools are classical in the field of service design (Curedale 2013, Stickdorn and Schneider 2010). Almost every tool was used in the research and concept phases in service design process except year clock and prototyping which were used in the design/operation phase. It can be seen that methods can be exploit for understanding the context, user data acquisition and the transmission of other stakeholders.

Based on interviews it seems that there are multiple methods that support customer understanding and concept design but not the rooting and launching of new services.

Based on interviews following words and word combinations were:

- background investigation (traditional methods)
- benchmarking/ product search
- fly on the wall
- observation
- team observation (various experts in the field)
- listening
- question list
- experience diary
- probe
- video profiles
- storyboard
- storytelling
- SWOT analysis
- year clock
- ground plans

Based on interviews defining context and right design challenge is important and background work is vital when starting design process. Tools such as benchmarking, product research and background investigations are required. Using tools for understanding users, stakeholders and environment can be implemented e.g. with fly on the wall, team observations together with various experts, probes or experience diaries.

Also questioning by using question lists and simply listening peoples experiences, expectations and dreams can bring towards innovative service solutions or even new services. Analyzing collected data can be carried out e.g. with SWOT analysis or transforming data to video profiles or storyboards. Ground plans or year clocks are

classic tools when seeking individual engagement to carry on new service ideas to implementations and when following implementation process.

6.3 Using service design tools as an analytical tool

Interviews brought up the importance of using service design tools as an analytical tools. Visual tools support to create a common understanding, to build bigger picture about complex service structures, help to define the intangible, promote learning and develop strategic thinking. Especially Vaajakallio and Mattelmäki (2013) emphasize the benefits of service design tools to support common understanding, create empathy and contribute decision making. Visual methods and tools are in key role to produce also concepts that can work as bridge of direct or indirect co-development of public services between policy, service providers and citizens.

In this theme also the role of service designer was raised where similarities can be seen when comparing results to service designer definitions presented by Moritz (2005) and Tan (2009). Based on interviews the role of designer was seen as facilitator, sparring partner and rationalizer who is able to bring strategic thinking among participants and organization. Aim of designer is to collide different stakeholders, open their thinking and support them to produce ideas through brainstorming.

When talking about workshops it is important that sessions are shared and every participant represent their own expertise. Process and workshops should be implemented in a way that they are effective and rather quick. For this reason good background work is required.

Documentation is also important during the process to raise good practices and observe afterwards what were the benefits and challenges in the process, documentation also helps in new learning processes. During the service development process is important to identify the key tools such as empathy dream path, empathy paths, service paths and profiles that can share common understanding about user experience.

When shifting towards concepts in the development process, data visualizations and data sharing becomes as important tools for sharing understanding between participants, service providers and decision makers. Valuing, evidencing and prototyping brings ideas towards implementation.

Based on interviews following words and word combinations were:

- designer a sparring partner (placed on the process)
- designer as rationalizer
- strategic thinking
- facilitation
- colliding
- brainstorming
- opening thinking
- seeing the overall picture
- background work
- documentation
- identification
- empathy dream path
- dream path
- service path
- profile
- perceiving differences / needs between communities
- prototyping in practice (trying out services in practice and ensuring economic viability)
- conceptualization
- workshops, shared sessions
- process perspective/ process speed
- duration of the preparatory work
- data visualization and sharing
- learning through prototyping

- valuing
- evidencing
- prototyping as implementation tool
- implementation

6.4 Workshop as a strategic tool for co-design

One of interesting findings was the importance and strategic role of workshop in different stages of service design process. Based on interviews there were various forms of workshops: objectives of decision-making workshop, brainstorming workshop, conceptualization workshop, commitment workshop, identification workshop, communication workshop, experiment workshop and panel workshop.

Interviewees emphasized e.g. the importance of planning, choosing participants, involving stakeholders and keeping interaction and positive atmosphere. Kyffin and Gardien (2009) present also the importance of planning in creative process and chosen tools. Synergy between participants is vital and tools assist sharing and producing ideas and contributing collaboration.

Based on interviews workshop has a key role as strategic tool. Careful planning of workshop structure is important as it is also its form which defines participants. Designer should make good ground work when planning tools, group structure, dynamics and participants as they should also represent multidisciplinary expertise. One of the challenges might be in common language when people are coming from different fields that can set obstacles in common understanding and group dynamics.

Designer should make sure that the space and atmosphere are supporting positive community spirit and even support chances in mindsets. Tools that push towards implementation of ideas, shift thoughts and discussions from problem-oriented to solution-oriented and future-oriented thinking brings long-term effects in organizational and individual levels.

Based on interviews following words and word combinations were:

- workshop planning
- various forms of workshops: objectives of decision-making workshop, brainstorming workshop, conceptualization workshop, commitment workshop, identification workshop, communication workshop, experiment workshop, panel workshop
- modularization
- the importance of choosing participants/ recruitment
- multi-discipline
- involving stakeholders in the workshop
- understanding group dynamics / group structure
- identification of challenges in the group
- teaching problem-solving skills
- learning models
- community empowerment
- workshop discussion platform
- social media/ conversation platform
- teaching methods
- the importance of interaction in the workshop: understanding, a common language, discussion, group dynamics, motivation
- common vision
- creating a common way of thinking
- changes in mindsets
- bringing people together
- consultation of the individual
- creating sense of community and building empathy
- goal orientation
- space/ environment
- atmosphere
- fun

- positive experience in the workshop
- debate is opening process
- need for polyphony and the convening
- from problem-oriented to solution-oriented
- change tools assisting changes in practices (learning)
- experimenting
- future thinking
- data rationalization

6.5 From concept to practice with huge challenges

When aiming towards practice it is important to engage stakeholders and service users to decision making (Mager 2009b, Moritz 2005, Miettinen *et al*., 2010). There is need for courage, commitment and interaction when the culture of service production in public sector is changing and the role of citizen is becoming from passive to active. Teamwork and new active ways of communication are required. Based on interviews from bringing services to practice some challenges were identified.

Data shows that when developing new services or improving existing ones there are quite often human, time and money resource challenges in the public sector. When trying to bring new ideas as concrete level one of the challenges is that public sector processes are also often very slow so there is a need for whole service culture change. From the process point-of-view data shows that also service design tools offer less support in rooting and launching of new services.

Based on interviews following words and word combinations were:

- decision was made without consulting the target group
- customer's passive role
- initiativeness of stakeholder

- service culture change
- new culture
- courage
- commitment
- interaction
- inclusion
- confidence
- teamwork
- way of communication between the teams
- open or closed mandate
- additional work to cause resistance
- immediate implementation
- operational maintenance
- resources (person and money resources)
- changes in public administration will slow down development / stop development
- time/ speeding up process, to maintain operations - who and how
- engaging in the development and decision-making
- cases

6.6 Importance of networking

The importance of teamwork and networking was clearly one of the main themes in interviews. One of the roles of service designer is to create sustainable networks that support the implementation and maintenance of service. Identifying and involving key stakeholders is very important already in the early phases of the development process.

Nykänen (2015) emphasizes the importance of identifying and defining the differences of network. Network is synonym for collaboration as network cooperation is synonym

for networking. Networking can be planned on systematic way which brings long-term benefits for public sector e.g. in continuous evaluation of service development process.

Based on interviews it is important that collaboration with public sector organizations and stakeholders starts easily and that in workshops participants create networks. Service designer should make sure that created networks are maintained by using networking methods.

Based on interviews following words and word combinations were:

- easy to contact the school
- identifying and involving stakeholders
- networking methods/ creating networks
- maintenance

6.7 Policy, management and decision making

One of the themes was clearly concentrating on discussions about strategic level decision making. Parker et al. (2009) present that public sector decision making should be decentralized in very radical ways to enhance the ability to react. Jyrämä and Mattelmäki (2015) see that design should be part of the strategic level decision making instead of using it just in small-level cases and projects. Design can be seen as discipline that crosses hierarchies and borders.

One clear theme raised from data was concerning strategic level and decision making. Including decision makers to the development process and identifying the phase when to do it was one of the raised challenges in data. Based on interviews it seems that organizing, decision-making and maintaining are the main challenges when taking concepts towards implementation. Openness and transparency were required when developing human-centered public services.

Based on interviews following words and word combinations were:

- at what point is good to include decision-makers and what level of decision-makers
- workshop with the Ministry
- difficulties in decision making
- we need tools to support decision-making
- decisions from the top-down
- agility of small actor versus slowness of public sector
- strategic thinking
- change leadership
- openness
- transparency
- open making
- social design
- human- centered services

6.8 Societal change, challenges in public service production

There is growing need for solving huge challenges in the public sector such as aging population, financial resources and global insecurities. Parker et al. (2009) present the challenges public sector has to tackle are concerning about channels of service delivery, state of economy, accepting new innovative ideas and organizations working cultures.

Based on interviews there is societal change towards social innovations. Transferring from problem-oriented thinking towards solution-orientation was seen as one of the solutions service design could bring to public sector challenges. Leadership and responsibility from public sector side were required when transferring service concepts

towards implementation. Based on data many interviewees experienced that public sector processes are too slow comparing to agile private sector. It is vital to find the processes that accelerate quicker practices in public sector.

Based on interviews following words and word combinations were:

- service design as a way to respond to the challenges
- solution-orientation
- slow public sector and agile private sector
- leadership
- responsibility
- social innovations.

7 CONCLUSION

7.1 Crystallized challenges and good practices

Content analysis process was estimated in joint analysis session together with Satu Miettinen and Hanna-Riina Vuontisjärvi held in 05.09.2013. As a result of this process new classification was formed, where findings could be placed in the different phases of service design process: research, concept design and design/operations together with strategic level, tactical level, operational level, methods and tools.

Process raised five crystallized findings presented here:

- Big part of the tools support customer understanding and concept design.
- Based on interviews service design tools do not support the rooting and launching of new services.
- Personal initiative and commitment are required that process is able to proceed inside the organization.
- Organizing, decision-making and maintaining are the main challenges when taking concepts towards implementation.
- When launching new services there are lots of challenges where to find solutions.

As a conclusion based on analyzed data and findings recommendations for service designer when developing public services were created. Recommendations are raised, summarized and listed in order of presented themes.

7.2 Recommendations for service designer when developing public services

- When planning whole development process or just a single workshop take account the use of methods and tools. Plan whole process carefully, especially what tools to use to promote the rooting and launching of new public service if it is on agenda.

- Aim to use tools in a way that participants reach common understanding and are able to perceive bigger picture about the service. Use tools that help them to define the intangible, promote learning and develop strategic thinking.

- Recognize the content and nature of workshop: objectives of decision-making workshop, brainstorming workshop, conceptualization workshop, commitment workshop, identification workshop, communication workshop, experiment workshop and panel workshop. Plan workshops and participants carefully, make sure you are able to keep interaction, personal commitment and positive atmosphere.

- Even when trying to solve big challenges or "wicked problems" together with participants (decision makers, citizens and 3rd sector actors) try to visualize resources in a way that they don't appear insurmountable or even try to re-organize resources in a new way together with participants.

- Try to get people to know each other and create networks. Create an overall picture of the participants. Who could work together? Identify and involve key stakeholders already in the early stages of the development process.

- Include decision makers to the development process and identify the phase when it is efficient to take them to the process. Plan carefully organizing, decision-making and maintaining of the new service. Openness and transparency are required.

- Guide from problem-oriented thinking towards solution-oriented thinking by using visual service design tools during the discussions. When challenge is recognized facilitate teams towards instant solutions and encourage them to test ideas immediately. Facilitate decision makers to take leadership and responsibility when bringing ideas towards implementation.

8 DISCUSSION

In this chapter I open the notifications and questions raised during the study. Main thoughts and reflections are concentrating on process, research field of service design, role of service designer and service design thinking that I observe from personal point-of-view.

8.1 Process and learning by doing

Overall the process during this thesis was extremely interesting. I feel that concentrating on this thesis and doing such a big ground work definitely developed my understanding from service design as approach and profession. As a very practical person I have always said that I am not very sure about my capability to be researcher but I think after this journey I am keen to continue some of the themes raised from this thesis.

For me, challenges are more interesting than good practices because challenges always raise thoughts how to solve them. Challenges during this process were faced especially after coding – how to structure coded words and word combinations in a smart way. After I realized that I can also start to use visual tools for organizing my data, I started to literally cut and organize words in the paper and the final form started to crystalize. First under the service design process, second under four management levels. For me, understanding the complexity of service design process was important when really spending time searching for different process views.

Several meetings and conversations with Professor Satu Miettinen and other service designers at University of Lapland brought me lot of confidence to implement this thesis. I also felt that working on several public service design projects while writing this thesis gave me aspect and personal experiences on how service design is integrating to the public sectors strategic, tactical and operational levels and I have freely used this knowledge as a benefit in text.

8.2 Research in service design

As I started this study, I was aware of difficulties concerning definitions about service design approach and service design process. As a "black or white" person I started my work with the aim of finding one answer but (luckily) during the process I realized the wide area of different views concerning service design approach. As the field is multidisciplinary and taking influence from such many disciplines I understood the gentility of design – in a way it should be little bit undefined, that is the character of design. Design start to happen and exist when it is conscious.

As people come to ask from me the definitions of service design I still find it easier to tell them "Let's do something first and I'll ask you after that". I still start from concrete actions and tools and let people form the definition of service design by their own because for me it is also start towards service design thinking and hopefully in some cases also direction towards bigger changes inside the organization's service culture. As Marc Stickdorn said, there are such as many definitions as there are people.

During the time I also faced couple of times conversations about the questioning existing process structure which is so strongly based on business-oriented product design process. In this study I concentrated on existing process theories but in the future it would be interesting to study, what are the possible changes in the process when shifting towards immaterial services that are public and "soft-valued" without so big aims of creating profit in big markets.

8.3 The role of designer

One of the raised questions that this study brought was, what is really the role of designer? In a way chapter recommendations for service designer when developing public services is reflecting the existing role of public sector service designers.

Designer's role has shifted towards facilitator that aims towards solution-oriented thinking and maintains innovative atmosphere.

Understanding the needs and timings of service design tools is vital, because usually it is impossible to structure and design whole process or workshop entirely – as product designer's materials are tangible such as wood, plastic or steel, service designer's materials are human feelings that are changing all the time.

8.4 Towards service design thinking

For me this study has raised also the question about the service design toolkits – for whom we should develop them? At the moment several service design toolkits have born for both public and private sector from the themes of creating new business models to the inclusion of citizens.

At least based on my experience I haven't quite seen public sector engaging for using toolkits for some reason. Maybe instead of concrete toolkits (as important they still are) we, service designers should concentrate more on developing and bringing design thinking inside public sector organizations and raise awareness of design thinking among the decision makers. To my mind changes in thinking would bring more sustainability to new service solutions in public sector, maybe true engagement would happen.

Also making service development more open and transparent and taking people that are using public services (citizens, 3rd sector actors etc.) in cooperation would bring human-centered, long-term solutions even to very challenging social "wicked problems". But when trying to reach towards these kind of changes it also requires long-term cooperation and work from service designers.

8.5 Future aspects

As the outcomes of this thesis are recommendations for service designer when working in public sector my future aim is to utilize these challenges and good practices to my profession as project manager and service designer. At the moment I have started working with PARTY- project which concentrates on tackling social problems such as employment and marginalization of the youth in Namibia and South Africa by using service design methods and tools. Development work and data gathering happens in several workshops where I will definitely bring findings from this thesis. And maybe I can start collecting wider research data around these topics in the future.

REFERENCES

Anttila, P. (2005). *Ilmaisu, teos, tekeminen ja tutkiva toiminta*. Hamina: Akatiimi.

Armstrong, L., Bailey, J., Julier, G. and Kimbell, L. (2014). *Social Design Futures: HEI Research and the AHRC*. University of Brighton.

Curedale, R. (2013). *Service Design: 250 essential methods.* Topanga, CA: Design Community College, Inc.

Jäppinen, T and Nieminen, V. (2014). *Kuntalaiset keskiöön.* Suomen Kuntaliitto.

Jäppinen, T. (2011). *Municipalities and User-driven Innovation. Interaction between a Municipality and a Resident in Decision-making on Services and Service Structuring.* Acta Publications No. 230. The Association of Finnish Local and Regional Authorities. Helsinki.

Jäppinen, T. and Sallinen, S. (2012). *Kuntalainen palvelujen kehittäjänä*. Suomen Kuntaliitto.

Jyrämä, A. and Mattelmäki, T. (Ed.). (2015). *Palvelumuotoilu saapuu verkostojen kaupunkiin; Verkosto- ja muotoilunäkökulmia kaupungin palvelujen kehittämiseen*. Aalto ARTS Boojs, Unigrafia Oy, Helsinki.

Kolko, J. (2012). *Wicked Problems: Problems worth Solving: A Handbook & A Call to Action.* Austin Center for Design. Austin Texas.

Kyffin, S. and Gardien, P. (2009). *Navigating the Innovation Matrix: An Approach to Design-led Innovation*. International Journal of Design. 3(1). (pp. 57-69).

Lantz, A. (1993). *Intervjumetodik.* Lund: Studentlitteratur.

Lehtinen, T. (2003). *Kohti tutkivaa työtapaa.* Audio-opetuksen luentorunko. Helsingin yliopiston avoimen yliopiston luentomateriaali.

Mager, B. (2009b). *Service Design as an Emerging Field*. In Miettinen, S. and Koivisto, M. Eds. (2009), *Designing Services with Innovative Methods.* Publication series. University of Art and Design Helsinki B 93. Kuopio Academy of Design. Taitemia Publication Series 33. Otava.

Meroni, A. and Sangiorgi, D. (2011). *Design for services*. Burlington, VT: Gower.

Miettinen, S. (Ed.). (2014). *Muotoiluajattelu*. Teknologiateollisuus.

Miettinen, S. and Koivisto, M. Eds. (2009). *Designing Services with Innovative Methods.* Publication series. University of Art and Design Helsinki B 93. Kuopio Academy of Design. Taitemia Publication Series 33. Otava.

Miettinen, Satu (Ed.) (2011): *Palvelumuotoilu – uusia menetelmiä käyttäjätiedon hankintaan ja hyödyntämiseen*. Teknologiateollisuus.

Miettinen, S.;Myllymaa, O. and Jäppinen, T. (2010*). Britanniassa käyttäjät kehittävät palveluitaan itse.* Kuntalehti 13/2010. (pp. 50-51).

Ministry of Employment and the Economy. (2010*). Demand and User-driven Innovation Policy.* Publications of the Ministry of Employment and the Economy Innovation 48/2010. Finland.

Morelli, N. (2008). *Designing Product/ Service Systems: A Methodological Exploration.* Design Issues. Vol. 18, No. 3. MIT Press. Cambridge.

Nelimarkka K and Kauppinen T. (2006). *Onko kunnissa tulevaisuutta? - tulevaisuusorientaatio käyttöön sosiaali- ja terveysalalle*. Kunnallistieteellinen aikakauskirja 1/2006.

Nykänen, K. (2015). *Kohti systemaattista verkostoitumista: verkoston rakenteen ja prosessin arviointi*. in Jyrämä, A. and Mattelmäki, T. (Ed.). (2015). *Palvelumuotoilu saapuu verkostojen kaupunkiin; Verkosto- ja muotoilunäkökulmia kaupungin palvelujen kehittämiseen.* Aalto ARTS Boojs, Unigrafia Oy, Helsinki.

Oosterom, A. (2009). *Who do we think we are?* In: S. Miettinen and M. Koivisto, ed. *Designing Services with Innovative Methods.* Kuopio Academy of Design, University of Art and Design, Helsinki B 93. (pp. 162 – 179).

Parker, S. (Ed.). (2009). *More than Good Ideas: The Power of Innovation in Local Government.* IDeA/ Nesta London: National Endowment for Science. Technology and the Arts.

Polaine, A.; Løvlie, L. and Reason, B. (2013). *Service design: from insight to implementation.* Brooklyn, NY: Rosenfeld Media.

Sanders E. and Stappers P. (2008). *Co-creation and the new landscapes of design*. CoDesign: International Journal of CoCreation in Design and the Arts. Vol. 4, Iss. 1. (5–18).

Stickdorn, M. & Schneider J. (2010). *This is Service Design Thinking. Basic – Tools – Cases.* Amsterdam: BIS Publishers.

Tan, L. (2009). *Design methodology in the public and social sector: Severn roles of designers*. Dott 07 public design commission projects and their relevance to sustainable development contexts. PhD Abstract. London.

Thomas, E. (Ed.). (2008). *Innovation by design in public.* Solas Foundation Imprint.

Tuomi, J. & Sarajärvi, A. (2004). *Laadullinen tutkimus ja sisällönanalyysi*. Jyväskylä: Gummerus Kirjapaino Oy.

Vaajakallio, K. and Mattelmäki, T. (2013). *Co-design with the public sector*. In Vaajakallio, K. and Honkonen, J. (Eds.). (2013). *Designing for wellbeing*.Helsinki; Aalto ARTS Books. (pp. 103-115).

Valtonen, A. (2005). *Six decades - and six different roles for the industrial designer.* Conference proceedings of Nordic Design Research Conference.

ELECTRONIC REFERENCES

Association of Finnish Local and Regional Authorities. (2015). http://www.localfinland.fi/en/association/Pages/default.aspx

City of Espoo (2012). *Espoo tarina.* http://www.espoo.fi/fi-FI/Espoon_kaupunki/Paatoksenteko/Espootarina

City of Helsinki. (2014). *Strategiaohjelma.* http://www.hel.fi/www/Helsinki/fi/kaupunki-ja-hallinto/strategia-ja-talous/strategiaohjelma/

City of Kuopio. (2014). *Kuopion strategia 2020.* https://www.kuopio.fi/web/kaupunkitietoa/kuopion-strategia-2020

City of Mikkeli. (2014). *Kestävän kasvun ja hyvinvoinnin Mikkeli: Mikkelin kaupunkistrategia 2014–2017.* http://www.mikkeli.fi/files/atoms/files/strategia-asiakirja_2013.pdf

City of Tampere. (2005). *Yhteinen Tampere - Näköalojen kaupunki: Tampereen kaupunkistrategia 2005.* http://www.tampere.fi/material/attachments/k/6IoZ2as0k/DK_TRE_strategia_suomi_kevyt.pdf

Confederation of Finnish Industries. (2012). *Tuotanto ja investoinnit.* http://ek.fi/mita-teemme/talous/perustietoja-suomen-taloudesta/3998-2/

Design Council. (2015). *Design Methods Step 1: Discover.* http://www.designcouncil.org.uk/news-opinion/design-methods-step-1-discover.

European Commission. (2015). *Implementing an Action Plan for Design-Driven Innovation.* http://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges.

European Commission. (2015). *Societal Challenges.* http://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges.

Governance International. (2013).*The Co-Production Star: how to do co-production of public services* http://www.govint.org/our-services/co-production/achieving-change-how-to-do-co-production-of-public-services/

Kaplan Financial Knowledge Bank. (2012). *Information for management* http://kfknowledgebank.kaplan.co.uk/KFKB/Wiki%20Pages/Information%20for%20management.aspx

Kimbell, L and Julier, J. (2012). *Social Design Methods Menu.* Fieldstudio Ltd. London.
http://www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf

Ministry of Employment and the Economy. (2012*). Ministeri Vapaavuori: Tuotannon aineeton lisäarvo pyrittävä pitämään Suomessa.*
http://www.tem.fi/ajankohtaista/tiedotteet/tiedotearkisto/vuosi_2014?117197_m=114885#.U0-_KtLvdmc.facebook

Ministry of Employment and the Economy. (2013*). Muotoile Suomi: muotoilusta uutta kasvua.*
https://www.tem.fi/files/36278/Muotoile_Suomi_spreads.pdf

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/_files/Practical%20Access%20to%20Service%20Design.pdf

SEE: Sharing Experience Europe. (2013). *Design for Public Good*.
http://www.design-council.org.uk/our-work/insight/policy/design-for-public-good/report-design-for-public-good/

Service Design Tools. (2009). *Communication Methods Supporting Design Processes.*
http://www.servicedesigntools.org/

Stamps. School of Art and Design. (2015).
http://stamps.umich.edu/mdes

Statistics Finland. (2012). *Statistics.*
http://www.stat.fi/til/index_en.html

TEKES. (2006). *MUOTO 2005: teollisen muotoilun teknologiaohjelma.*
http://www.tekes.fi/globalassets/julkaisut/muoto_2005.pdf

Thinkpublic. (2009).
https://designforservice.wordpress.com/2009/01/20/thinkpublic-comic/

University of Lapland. (2015). *PARTY (participatory development with the youth).*
http://www.ulapland.fi/InEnglish/Units/Faculty-of-Art-and-Design/Research--Development/Ongoing-Projects/PARTY

We Are SNOOK. (2014).
http://wearesnook.com/?page_id=23.