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Service design implementation for innovation in the public sector

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Abstract

In a changing world, the public sector faces challenges to meet the needs of the citizens. To face these challenges they need to be innovative and create and implement new services. Service design is a powerful innovation tool. One of the main challenges in service design is the implementation. Implementation of services is complex because it combines physical, technological and human components. Implementation of these services demands change, both from the organisation and from the people in it. Service designers that wants to contribute to innovation in the public sector need to have the skills and tools to implement the services, not only to create them. The aim of this article is to understand what factors that are important for a successful service implementation in the public sector. This was done through reviewing existing literature and service design toolboxes. Furthermore, it aimed at examine the possible role for designers in public services innovation. The main finding is that the designers need to consider implementation and plan for it from the beginning of the design project. It is also important that the organisation and people delivering the service understand what to change, how to do it, and are motivated to change. Designers are not a magical source of innovation *for* the public sector, but can innovate together *with* the public sector.

Keywords: Service design, implementation, public sector, innovation, design tools

1 Introduction

The field of service design is growing and the diversity in where service designers apply their skills is increasing. In the private, public and voluntary sector service designers work to improve services, with projects ranging from banking and technology to health and education.

In the public sector, the interest in service design and use of designers to develop innovative services is increasing. In Norway, the government has a goal to renew, simplify and improve the

public sector (Chaffey, 2014). Public services are under constant pressure to improve efficiency and performance. In addition, they are now facing a deeper challenge, to take into account individual needs and treat the users with respect and dignity, in which service innovation is the key (Albury, 2005).

By applying their skills of user insights, visualisation, idea generation, rapid prototyping and asking the right questions designers create public services that put the citizens and their need at the centre (Stickdorn & Schneider, 2011). However, the success of innovation is not only depending on designing a good service, it also needs to be implemented. One of the most common critiques of designers in the field of public and social innovation is lack of skills in implementation, resulting in too many ideas that never leave the drawing board (Mulgan, 2014). According to Bechmann (2010) "it is nothing new, that the implementation phase often is one of the greatest obstacles" (Bechmann, 2010, p. 183). Therefore, to contribute to service innovation in the public sector designers should improve their skills in implementation.

Research on service design has focused more on what services is and how they are designed (Kimbell, 2011), rather than how to implement the design. More techniques have been developed for the early stages of the design process, such as research, visualisation and idea generation, than for the later stages, such as prototyping and implementation (Blomkvist & Holmlid, 2011). There seems to be a general focus within the service design field on the early stages in the design process. The designer's role in the implementation of innovative services is not clear.

Service design in the public sector is still young and promising. If it is to remain relevant in the following years designers need to learn how to improve their weaknesses, if not then service design risks being a short lived phenomenon in the public sector. The goal of this article is to understand what is important for a successful service implementation in the public sector. Furthermore, it is to examine the possible role for designers in public services innovation. To do this we must first understand what service design is, what service designers can do and understand how the public sector understands innovation.

1.1 Methods and terminology

The research field of service design is growing, but in academic design literature, little has been written about implementation of service design. However, the books written on service design, having a holistic approach to the design process include tools and methods for implementation. Therefore, they are a valuable source of how designers think about and approach the implementation process. In addition, I will look into different service design toolboxes, to identify important tools for service implementation.

The research fields of service design and public sector management use different terminology. While the design literature uses service design, the public sector management literature uses service innovation. Minder (2014) discuss the relationship between design and service innovation. She concludes that although the design literature does not always use the term "service innovation", the projects are usually service innovation projects. When there is talk of a fundamental change in an organisation, resulting in radical innovation, the design literature uses the term transformative design/services/change (Burns, Cottam, & Winhall, 2006; Sangiorgi, 2011).

2 Service design

2.1 The service design process

There are many frameworks describing the design process in general and the service design process in particular, both from literature and practice. They typically have three to seven steps, the names of the steps vary, but they all share the same mind-set (Stickdorn & Schneider, 2011). In short, you have to find the right problem, create a solution, test it, implement it, evaluate and measure it (Stickdorn & Schneider, 2011; Bechmann, 2010).

The approach is iterative and nonlinear, and at every stage, it might be necessary to take one or more steps back. Because each project is different, the process needs to be adapted to the individual project. "In fact, the very first step of a service design process is to design the process itself, since the process ultimately depends on the context of the service being designed and thus varies from project to project" (Stickdorn & Schneider, 2011, p. 126). The first part of a design project is often referred to as the fuzzy front end, because of its ambiguity and chaotic nature (Sanders & Stappers, 2008). The fuzziness can make it challenging to plan and design the process. Services need to adapt to a changing environment after implementation, and there is always room for improvement. Design of services in principle never stops (Bechmann, 2010). Many models of the service design process is a circular and iterative one. However, the process in a service design project will have a defined beginning and end.

3 The public service sector

The public sector is facing the challenging task of providing quality services in a fast changing world. "'One size fits all' services – if they ever existed – are not suited to an ever-more diverse and heterogeneous society with rising expectations of 24-hour/seven-days'-a-week access, tailored provision and service quality." (Albury, 2005, p. 51)

3.1 Innovation in the public sector

Innovation comes in many forms, it can happen "top-down" and "bottom-up", it can be radical or incremental innovation. A key to innovation is the relation between the innovator and end user and between elements in the supply-chain, as well as a senior-level champion that supports throughout the hard phases nearly all innovation faces during the development. Some of the barriers to innovation in the public sector are short-term budgets and planning, few incentives to innovate or implement innovations, risk aversion and poor skills in risk and change management (Albury, 2005).

3.2 Framework for innovation in public services

Albury (2005) presents a framework for thinking and action to foster innovation in the public sector. The framework consists of four parts:

The generation of possibilities*:* Given the opportunity, employees on all levels of the organisation can be a source of ideas for improvements, especially new ones. Tools of creative thinking, a license to break the rules and a leadership who provides clear goals without detailed control can be necessary to tap into this source of possibilities.

The trailing and prototyping of promising ideas: It can be difficult to select which ideas to develop, there is never a guarantee for success and all innovation carries risk. Pilots is an effective tool is to create a safe space to develop ideas.

Replication and scaling up: Publishing best practice can be a way of disseminating of innovative ideas, however it is not always efficient to universalise "best" practice because the success often depends on the context. Mechanisms for incentives used for system-wide innovation can increasing learning from others, without copying.
Analysis and learning: Learning is not the last step in innovation but an element of a cyclical process. It is important to find out what works in what context and why, but it can be equally valuable to learn from unsuccessful innovation.

3.3 New, useful and utilised

The vision of The Norwegian Association of Local and Regional Authorities (KS) is "An independent and innovative local government sector" (KS, 2014). They have developed an innovation tool which name may be translated to "New, useful and utilised" and is designed to help municipalities be more innovative, and create and apply new and useful solutions. The fundaments in this tool is needs, solutions, driving force, team and anchoring. All five fundaments is necessary, like factors in a multiplication. If one of them is zero, so is the product (KS, 2014).

4 Implementation of service design

4.1 The service concept and the role of the designer

The goal of implementation is to put ideas into action through the organisation delivering the service, and ultimately for the organisation to execute the design independently. Service design projects often begin in the periphery of the organisation, but the project may reach deep into the organisation. The change required to implement the service concept depends on the level of depth the project reaches into the organisation (Junginger & Sangiorgi, 2009).

The involvement of designers in the implementation process varies, often depending on the financial resources available. In one end of the spectrum, the designer is an active participant, taking part in the design of physical and digital touchpoint, training of staff and evaluating the progress. In the other end of the spectrum, the designer hands the project over to the organisation (Bechmann, 2010).

4.2 The implementation process

The implementation process is often challenging, because it demands a process of change. According to Stickdorn and Schneider (2011) the key to implement the changes is a few basic principles of change management. The implementation process involves planning change, implementing change and measuring change (Stickdorn & Schneider, 2011; Bechmann, 2010; Polaine, Løvlie, & Reason, 2013). At this stage in the design process, the whole organisation, frontline employees, managers and decision-makers are important actors.

It is important that the frontline employees understand the service concept and are motivated to implement it. To ensure this it is important that the employees clearly understand their task and do not feel forced to change (Cadwallader, Jarvis, Bitner, & Ostrom, 2010). Especially when the employees are relatively highly educated and used to autonomy in their work (e.g. in healthcare and education), it can be crucial that they understand the goals and see the possibility to reach the goal before asking them to change how they work (Lin, Hughes, Katica, Dining-Zuber, & Plsek, 2011). One way to do this is by involving the employees from the beginning of the service design

process and use co-design workshops to give frontline employees a saying and a collective ownership across all stakeholders (Donetto, Pierri, Tsianakas, & Robert, 2014).

There will always be some problems and friction when implementing change, therefore it is important that management is on-board and know how to deal with problems quickly and creatively (Stickdorn & Schneider, 2011). In transformation design, they "seek to leave behind not only the shape of a new solution, but the tools, skills and organisational capacity for ongoing change." (Burns, Cottam, & Winhall, 2006, p. 21), which will empower the management to continuously improve the service after implementation.

If the project is not anchored in the right places in the organisation, the chances for a successful implementation decreases, therefore decision-makers on all levels of the organisation also need to be involved (Bechmann, 2010). Designers can support decisions by measuring the results. To measure the results a baseline and a goal is needed. At the beginning of the design project, it is important to set key goals and decide how change will be measured, whether the goals are economic, social or environmental. A good rule of thumb for what to measure is to ask what kind of feedback that will increase the probability of the frontline employees and the management to improve the service, and create a culture of improvement (Polaine, Løvlie, & Reason, 2013).

4.3 Implementation tools

To map which implementation tools that are available to service designers, I analysed six service design toolboxes. Two toolboxes from published books on service design (Bechmann, 2010, p. 134-135, 173-187; Stickdorn & Schneider, 2011, p. 148-213), two online service design toolboxes (Tassi; Namahn & Design Flanders), and two toolboxes from service design firms (Livework; Engine). The different toolboxes allocate the tools into either three or four design process phases. The tools in the last phase are regarded as tools for implementation. Table 1 gives an overview of the different tools designers use in the implementation process.

The tools overlap to some degree, but most tools (12) are mentioned in only one of the toolboxes. There is one tool which is mentioned in all six toolboxes, "service blueprint", which is used to get a visual overview of both front and back stage processes in the service, see e.g. Tassi or Livework. Almost all the toolboxes mention service prototype, however in some toolboxes testing and prototyping is not an implementation tool, but rather a tool to develop the service concept.

One of the toolboxes (Stickdorn & Schneider, 2011) divides the tools into three phases: Explore, Create & Reflect, Implement. How the tools are divided into the three phases are shown in Table 2. A tool can be placed in one, two or all three phases. Around half of the tools belong to more than one phase, mostly the implementation tools. None of the tools in the implement phase is in this group only, and all but one is in all three groups.

Table 1. Overview of service design implementation tools from six toolboxes.

Tools: Toolbox:	This is service design thinking	Servicedesign, Bechmann	Servicedesigntools.org	Servicedesigntool-kit.org	Live work	Engine
Storytelling	x					
Service blueprint	x	x	x	x	x	x
Service role play	x					
Costumer lifecycle	x				x	
Business model canvas	x					
Co-creation	x				x	
Agile development	x					
Service staging	x					
Storyboard/use cases/scenario	x	x	x		x	
Personas	x					
Costumer journey maps	x					
Stakeholder maps	x					
Service prototype		x	x	x	x	
Role script/behaviour guideline		x	x			x
Heuristic evaluation		x				
Task analysis grid			x			
Specification/high level design			x		x	x
Roadmap				x		
Organisational impact analysis					x	
Guide for implementation						x

Table 2.Tools sorted on phase in the design process. The main phase is indicated with a bold x.

	Stakeholder map	Service Safaris	Shadowing	Customer Journey maps	Contextual Interviews	The five whys	Cultural Probes	Mobile Ethnography	A day in the life	Expectation maps	Personas	Idea generation	What if …	Design Scenarios	Storyboards	Desktop walkthrough	Service prototypes	Service staging	Agile development	Co-creation	Storytelling	Service blueprints	Service roleplay	Customer lifecycle maps	Business model canvas	
Explore	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**							x	x	x	x		x	x	x	18
Create & Reflect	x			x						x	x	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	x	x	x	x	x	18
Implement				x							x				x			x	x	x	**x**	**x**	**x**	**x**	**x**	11

4.4 Service implementation in the public sector

Warwick, Young and Lievesley (2014) suggests four features of an organisation that influence transformational change in a service design project: The first one is the understanding of the service design approach, what designers can do. The second is an attitude towards change. What can or should change and what cannot or should not change. The third is the value of process as well as outcome, willingness to engage in the process and not only wait for the solution. The fourth is the compatibility between the organisational culture and the design approach. These four features can help indicate to what degree a radical innovation is possible, or if the organisation just want to optimise their current practice (Warwick, Young, & Lievesley, 2014).

As mentioned earlier there is a culture of risk aversion in the public sector. Pilot projects is therefore a powerful tool to implement the service in a real, but limited scale, document the results and evaluate if it preforms better than current practise, before scaling up (Albury, 2005). One of the reasons that service design projects end up not being implemented in the public sector is that projects is subsidised and started without the necessary financial resources to implement the (whole) solution (Bechmann, 2010).

5 Discussion

5.1 Service design as an innovation tool

Three of the four parts of Albury's framework for innovation in the public sector (Albury, 2005) describes approaches service designers would be very good at: *the generation of possibilities*, *the trailing and prototyping of promising ideas*, and *analysis and learning.* The same goes for the need and solution part of KS's innovation tool (KS, 2014). Identifying what it is that works or not, what the needs are, generating ideas to solve it, selecting ideas, developing and testing concepts is a part of the design process. The public sector could probably benefit a lot from allowing design professionals work with this, directly or by facilitating and giving the employees in the organisation tools to do it. However if the goal is that the public sector can do this themselves, it would require more than just some workshops and tools. The service designer would not have any obvious tools or skills for r*eplication and scaling up*, as this requires more than a tool, this is not implementing a service concept in the context it was designed. It requires a whole system and changes in the organisation, maybe of the whole public sector.

Regarding the three last parts of the innovation tool from KS, *driving force*, *team* and *anchoring* (KS, 2014), designers should contribute, but they cannot do it alone. The *driving force* is the person that ensures progress in the work. To ensure the progress after the implementation the *driving force* should be a person inside the organisation, and in most cases, the designers are not. The designer may naturally contribute to the progress; one way to do that is by being part of the *team*. Service designers can contribute a lot to innovation by being part of, or collaborate closely with, the *team*. Regarding *anchoring*, co-design could be a powerful tool. However, the responsibility and the driving force of the implementation should preferably be a central player within the organization.

5.2 Implementation throughout the service design process

Sections 2.2 and 4.2 describe the service design process in general and the implementation process in particular. Seeing these processes in light of each other, the success of the implementation does not only rely on the last part of the design process. The resources invested

in earlier stages influence the likelihood of a successful implementation. An important aspect of the implementation is to measure the performance. A measurement of the baseline or status before the beginning of the project, or at latest before any implementation have been done is therefore needed. Such documentation may also be a valuable tool to make the initial problem definition more precise.

Designers need to take into account the constraints that will influence the implementation from the beginning of the project. It can be formal constrains in the form of rules or cultural norms in the organisation. Frontline employees, managers and decision-makers are important actors in the implementation. Considering their needs, as well as the needs of the end user from the beginning of the process should make the implementation easier. Co-creation is used in all stages of the design process. Co-creating with the organisation, not only the end user can, to some degree, leave behind the mind-set and tools of the designer and create ownership and anchoring across the organisation. Being aware of this when co-creating in the early stages of the process can maximise the effects and make the implementation easier.

5.3 Service design tools for implementation

Section 4.3 and Table 1 show that the different service design toolboxes have different implementation tools. There are some tools that are agreed upon by most toolboxes: Service blueprint, scenario and prototype. However, this is the minority of the tools. There is no clear consensus across the toolboxes of tools for implementation. The observation that all the toolboxes include prototyping, but not always in the implementation phase, indicates that the definitions are unclear. Polaine, Løvlie and Reason (2013) describes four levels of prototyping, ranging from discussion to pilots, indicating that the tool can probably be used both before and in the implementation phase. As shown in Table 2, service design tools may be used in different phases, and particularly implementation tools. If designers use these tools throughout the design process, then maybe they plan for the implementation in the beginning. Alternatively, it could be a sign that designers have no specific tools for implementation, and they mostly use tools they know from earlier phases.

5.4 Recommendations for the public sector

The success of service design as a tool for innovation in the public sector relies both on the designers' success in providing design services and on the public sector to be an active and committed partner. One of the reasons for the lack of implementation in the public sector is the lack of resources and commitment. The public sector needs to prioritise innovation.

Project funding is a good place to start but a terrible place to stop for funding innovation, because projects per definition will have an end, and so will the funding for it. Therefore, founding for continuing the process must be included in the "normal" budgets, before the project ends. Some would argue that the resources for innovations should come from ordinary budgets from the start to ensure sustainable resources.

If the public sector want to use service design for radical innovation then they need to be receptive for change and the design approach and value the process as much as the result. This is often easier said than done, especially if the current organisational structure, culture and mind-set differs substantially from the one of service design.

6 Conclusion

Implementation in service design is challenging and complex. It not only involves products and technology, but also people and organisation. To implement a service, people and organisations need to change, that is not always easy to facilitate but not impossible either. A service blueprint gives a clear overview of the service, and can help visualise what need to change. Service prototypes in various forms throughout the process optimises the solution, and a good alternative motivate to change to the new solution. Implementation is not the end of the design process because the design process on principle never ends. Planning for implementation in the beginning of the design process and ensuring anchoring in all levels of the organisation is very important for the success of the implementation.

Analysing the innovation frameworks from Albury and KS it is clear that there are many possible ways that service design may contribute to innovation in the public sector. Service design can be a powerful tool for innovation, but it is not without limitations. According to Polaine, Løvlie, and Reason *"it is important to emphasize that we are not saying that service designers are going to take over and solve everything as some kind of design superheroes. The issues that service design uncovers and the solutions that it offers involve significant change management on organisational as well as political and cultural levels, and it is important that we work with professionals in those areas, as well as policy makers and advisors, to make sure the change actually happens. These kinds of partnerships only work when there is a climate of professional humility on all sides."* (Polaine, Løvlie, & Reason, 2013, p. 179) Designers cannot be innovative *for* the public sector but can innovate *with* the public sector. The public sector and designers need to learn from each other and understand each other's strengths and weaknesses in order to establish a fruitful innovative partnership. Designers offer the public sector competences to help tackle their challenges through innovative solutions, and the public sector offers designers an opportunity to work on projects that directly contribute to the society.

Future work should include looking at all service design tools, not only the one for implementing and find tools that are important for the implementation in the earlier stages. This may be used to produce a holistic framework for implementation throughout the design process.

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