Service blueprints and user journeys
How do service designers apply these techniques?

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ABSTRACT

One of the main skills that characterize a service designer is the ability to visualize. Nevertheless, there is a lack of research on how visualization tools are applied by service designers today. The aim of this article is to show how service designers use the two well-known visualization techniques user journey and service blueprint. This is done by interviewing four practicing service designers from four different companies about their use of the two visualization techniques. The results from the interviews are related to existing literature. Findings show that the applied science of the two visualization techniques differs from the pure science of the same techniques.

KEYWORDS: Service design, Visualization, Service Blueprint, User Journey, Customer Journey

1 INTRODUCTION

The interest in service design has increased significantly the last few years [1, 2], and service designers ability to visualize interests several authors [1-5]. Some of the visualization techniques designers make use of are user journeys; service blueprints; stakeholder maps; expectation maps; personas; design scenarios; story boards; desktop walkthrough and service prototypes [6].

Osterwalder and Pigneur (2010) finds the main reasons to use visualization techniques to be: understand the essence; enhance dialogue; explore ideas and improve communication [7]. Segelström (2010) conducted 14 interviews with service designers between October 2008 and January 2009 [5]. The main reasons to use visualisations were found to be: "To formulate insights from the user material collected, to communicate these insights to their clients and as a way of keeping the data 'alive'" [5] p. 45.

Interviewees were also asked about what kind of visualization techniques they make use of [5, 8]. The respondents listed a range of techniques. The following techniques were each mentioned one time by one respondent: illustrations; experience journey; stakeholder journey; journey mapping; layered journey mapping; user scenario and sketches. Four respondents further mentioned scenarios, and customer journeys was mentioned by six respondents [5, 8]. Segelström then clustered these visualization techniques as *journeys.* Blueprint was mentioned only by one of the interviewees [5, 8].

Two years after the interviews were conducted, Segelström (2010) published a research where he described and analysed how designers apply visualizations techniques [5]. Stickdorn and Schneider (2011) [6], Martin and Hanington (2012) [9], Polaine, Løvlie and Reason (2013) [10] followed with descriptions of visualization techniques. It is tempting to believe that the use

of visualization techniques has developed with the increased interest in service design and visualization techniques. Never the less, there is not found research describing how service designers apply visualization techniques since Segelström (2010) [5]. Following from this, updated research on how visualization techniques are applied by service designers today seems necessary.

This article examines two visualization techniques: user journey and service blueprint, and describe how they are used by service designers. To do so, four service designers have been interviewed. A literature review related to a selection of existing literature on visualization techniques, especially user journey and service blueprint, have also been conducted.

The first section of this article explains key terms such as user journey and service blueprint. The research questions are framed and the methodology is described in section 2. In section 3 the results from the interviews are described. In section 4 the results from the interviews are discussed in comparison to existing literature on user journeys and service blueprints. The article concludes in section 5, and it is found that the applied science of the two visualization techniques differs from the pure science of the same techniques.

1.2 User journey

Several terms have the same meaning as user journey. Most authors use the term *customer journey* [5, 10-15]. Others make use of terms like *service journey, user journey map,* e*xperience journey, user journey*, *customer journey map* and *user journey map* [5, 9, 10, 14, 16]. This article uses the term *user journey* to include non-paying users of a service and employees, in addition to the customers.

User journey has been a frequently applied technique among service designers for several years [5, 16]. It was described in early nineties [17], but, according to Segelström (2010) [5], did it not receive much attention by authors before the publication of Parker and Heapy (2006) [16]. Zomerdijk and Voss (2007) followed the year after.

Halvorsrud et al. (2014) defines a customer journey to be "a sequence of touchpoints and actions involved for a customer to achieve a specific goal" [1] (p. 293), this definition is adapted in this article, but "customer" is replaced with "user". Touchpoints are defined as potential points of, or instances of, communication or interaction between a customer and a service provider [1]. An action is seen as "an event or activity conducted by a customer or service provider as part of a customer journey" [1] (p. 293).

1.3 Service blueprint

Service blueprint is one of few visualization techniques that have been described repeatedly for several decades in academic literature. It was introduced by Shoestack (1982), [18], and has later been studied and developed by several authors [6, 10, 14, 19-33].

Polaine et al. (2013) explain that "there are no standard or typical blueprints" [10] (p. 98). However, they describe a service blueprint to be: A map of the user journey, the touchpoints and the backstage processes [10]. Two examples of blueprints are presented in Appendix A & B.

2   METHODS

2.1 Research questions and design

The purpose of this article is to examine how practicing Service Designers apply user journeys and service blueprints. This is done by asking the following research questions:
1. How do they describe the two techniques?
2. How are the two techniques displayed?
3. When do they use the techniques?

4. What are the motivations of using the techniques regarding design phases and projects?
5. What do they consider to be the challenges with the two techniques?
6. How do they think the techniques will develop in the future?

To examine the research questions, four interviews with service designers from four different Norwegian companies were conducted. Conducting few interviews might usually be considered a limitation. However, in the present study it seemed appropriate as the main criterion was to gain an in-depth understanding on the research questions, following Morse (1995)[34].

The conducted interviews are the main focus of this article as there was found comparatively few articles on the research questions. The existing articles are used in relation to the results of the interviews.

2.3 Sample and recruitment

The following companies have been recruited: "SINTEF", "Halogen", "Eggs Design" and "Nice Industridesign". These companies were chosen because they represent different areas in the service design community in Norway. Halgoen, Eggs Design and Nice Industridesign are consult companies, while SINTEF is a research organization where the interviewed designer often collaborates with other companies.

SINTEF is a big, interdisciplinary firm with 2100 employees, where only a few of the employees are service designers. The interviewee from "SINTEF" [P4] has worked with service design for one year and three months.

Halogen and Eggs Design are both design firms with around 50 and 40 employees respectively working on different fields of design. The interviewee from Halogen [P2] has been interested in service design for six years, and works in the company's office in Oslo where several other service designers are working. The interviewee from Eggs Design [P1] has worked as a product and service designer the last four years and is the only service designer in the firm's office in Trondheim.

Nice Industridesign is a small, new design firm. The interviewed service designer from Nice Industridesign [P3] established the firm together with two others industrial designers two years ago.

2.3 Data collection

The four interviews were conducted between 13. October, 2014 and 10. November, 2014. First, the author conducted a face-to-face, semi-structured interview with a representative from Eggs Design. The interview lasted for one hour and was conducted in Eggs Design's locations in Trondheim. An interview guide (Appendix C) concerning service blueprints was used. Semi-structured interview allows the interviewer to follow topical trajectories in the conversation when it is considered appropriate [35, 36]. During the interview, the interviewee touched upon relevant aspects of user journey, and because of this the interviewee was encouraged to talk about both techniques.

The interview guide was adjusted to cover both user journeys and service blueprints on the three next interviews (Appendix D), which all lasted 30 minutes each. These interviews were what Tjora (2010) calls "Fokuserte interjvu" in Norwegian [35] (p. 126). "Fokuserte intervju" are similar to semi-structured interviews, but differ as the interviews are shorter and straight to the point. The interviews with representatives from SINTEF and Nice Industridesign were both done face-to-face, while the interview with Halogen was conducted over Skype. The interviewees are partly anonymized as the purpose of the interviews is to gain an overview on how a sample of service designers uses the techniques rather than to show how specific persons are using the techniques.

2.4 Analysis

The data from the interviews have been analysed by using qualitative content analysis, following Elo and Kyngäs (2007) [37]. The raw data contains of the recorded interviews and own notes from the interviews. The notes include information on visualizations shown during the interview, observations and notes from the conversation. First, the recorded interviews were transcribed and a summary of the transcription was written. Second, the summary and the notes were used to create categories. The categories from the different interviews were collected and sorted according to the research questions.

3. RESULTS

All the interviewees use visualizations in their design process, and they all know how to use several visualization tools, such as scenarios, user journeys and customer journeys [P1-P4].

Often the visualizations are custom made to fit the particular project. The interviewees from Eggs Design and Nice industridesign mentioned that the more they get used to visualize, the less effort they use on categorize the different visualization methods. Instead, they use their focus on creating the best possible visualization to fit the particular project [P1, P3].

3.1 Description user journey and service blueprint

The interviewees have a common understanding of user journey, but do not have a clear and common description of a service blueprint. However, in some settings it might be difficult to distinguish the two. As the interviewee from Halogen puts it; "this is where it gets complicated (…) because blueprint is something else than a user journey, but a user journey can be similar to a blueprint when working with complex services" (30. October, 2014, translated from Norwegian by the author) [P2].

3.1.1 Description of user journey

All of the interviewees describe user journey as a visual course of events [P1, P2, P4] or showed examples of service blueprints that fits this description [P3]. They explained that the user journey has a time aspect [P1-P4]. The time aspect can be from before the user is in contact with the service until the user no longer has contact with the service provider [P4], and steps such as "Before", "During", "After" are used by the interviewees [P1, P2, P4]. One of the interviews often includes the step "next time" [P2]. The interviewees use the technique to tell a story centred on a user [P1, P2, P4]. Human roles and touchpoints are highlighted as important in the user journey [P1].

3.1.2 Description of service blueprint

The interviewees do not have a common description of service blueprint. Two of the interviewees describe it as a visualization that shows how the course of events is supposed to be, and what is needed to implement the service [P2, P4]. They both explain a service blueprint as a "blueprint of the service", and compared it to blueprints of chairs and other physical products. The interview from Nice Industridesign told that a blueprint typically contains of "who, where and channels" [P3]. Some created blueprints inspired by the ones presented in the books "This is service design thinking" [6] [P4] and "Service design from insight to implementation" [10] [P3] (see Appendix A & B).

The designer from Eggs Design did not appreciate the traditional blueprint. Nevertheless, the designer uses what were called "blueprint light" in several projects [P1]. This is an extended user journey, where information on the back-stage processes on every step of the user journey can be found on other pages in the document. It presents the same information as a service blueprint, but uses a different format. Blueprint light is not an acknowledged technique, but a term that was used during the interview for the visualizations explained above.

3.1.3 Similarities and differences

The author has found some general similarities and differences between the two visualization techniques, based on the interviewees' response.

The main similarities of user journeys and service blueprints are found to be:
1. Both user journeys and service blueprints show the course of events when a user and service provider interact.
2. Both visualization methods have a time aspect, and are most often chronologically told.
3. Both visualizations are general and give a holistic overview over the service.

The main differences of user journeys and service blueprints are found to be:
1. Everything described in a user journey can be seen or experienced by the user. A service blueprint provides both how the user interact with the company, and an overview over what the service provider must do to make the service happen.
2. A user journey includes events that are not directly linked to the service provider, such as transport and queues. A service blueprint contains only happenings directly linked to the service.

3.2 The display of the user journeys and service blueprints

The interviewees often custom make both user journeys [P1 - P4], and service blueprints [P2, P3]. Thus, the display of the visualizations varies. Still, they had some characteristics on both user journey and service blueprint that are worth mentioning. The main difference on the appearance of the two techniques is that user journey is freer in its form than a service blueprint [P2].

Many of the visualizations in the research phase are created by using post-its, whereas they later are visualized on computers for further use.

3.2.1 The display of the user journeys

According to the interviewees there are many approaches to design a user journey. In the simplest way it can be created by icons or textboxes linked by arrows [P4]. It can also be shown as a storyboard [P2] or by more complicated hand- or computer-visualizations [P1, P3]. The user journeys do often contain one or more of the following; written text, icons, hand-drawings, post-its, computer-drawings and pictures. It can be visualized together with an emotional journey [P2] and quotes from users [P1]. In this setting, an emotional journey shows the mood of the user in different steps of the user journey. The designer from Eggs Design explained that the user journey can contain elements typically associated with service blueprint, such as the line of visibility and/or backstage factory [P1].

The physical format of the user journeys shown by the interviewees vary; it can be presented as sketches on a sheet of paper [P4], or it can be more complicated computer drawings presented on big posters [P1, P3]. It can also be presented as a video [P1] or by using desktop walkthrough [P2]. Desktop walkthrough is a technique where 3D-figures, such as Lego, are used in a small remake of the service environment, to create or tell a story.

3.2.2 The display of the service blueprints

The interviewees pointed out that blueprints often have a more defined appearance than user journeys. The blueprints are often presented as combinations of boxes with text and simple icons [P3]. Some of the interviewed described it as a Microsoft Excel-version of a user journey [P1, P2]. The size and detail level of the service blueprints vary. It was pointed out that some of the service blueprints could be up to several meters long, while others could be only 20 cm [P2]. Two of the blueprints shown were adapted from the blueprints shown in Appendix A and B, and were displayed in a similar way [P3, P4].

The display of service blueprint light (chapter 3.1.2) is similar to user journey. The only difference, as far as the author can see, is that a blueprint light always contains of more pages or documents where the backstage processes are explained.

3.3 When are the techniques used?

User journey is frequently used by all interviewees while the use of service blueprint varies in the sample.

3.3.1 When is the user journey used?

All the interviewed make use of user journeys in most, or all, service design projects [P1-P4]. The user journey is used in all phases of the design process, from gathering information to implementation. The designer from Halogen uses user journeys when exploring in the double diamond process [P2].

3.3.2 When is service blueprint used?

The use of service blueprint varies in the sample. The designer in Halogen uses it, to a certain degree, in all projects [P2], while the designer in SINTEF uses the technique mostly in the bigger projects due to the time demanded to make a blueprint [P4]. The service designer from Eggs Design apply "blueprint light" (explained in chapter 3.2.2) in most projects [P3].

Service blueprint can be used in all phases of the design process [P3]. One of the interviewees uses it in the starting point of a project to gain insight [P3]. The designer from SINTEF has used Service Blueprint once to map the existing service, and is planning to use it again to map a suggested service [P4]. The interviewees from Nice Industridesign and Eggs Design suggest that service blueprints can be used when implementing a new service, but have not yet tried it themselves [P1, P3]. However, the designer from Eggs Design pointed out that it is too complex to be used as a presentation tool [P1]. The designer from Halogen uses Service

blueprints to concretize in the double diamond process [P2].

3.4 Motivations to use the techniques

The interviewees make use of both user journey and service blueprint to build understanding, to improve communication and to gain a holistic overview of the service.

The designer from SINTEF told that the aimed understanding vary between the two methods. When creating a user journey, the goal is to explore feelings, while the service blueprint describes what happens [P4].

The interviewees told that talking about a theme that is visualized helps stakeholders understand each other [P3, P4], and both methods are used to improve communication [P2].

It was also told that the methods communicate a holistic view and show connections that might be difficult to describe with words [P4].

3.4.1 Motivations to create user journeys

The user journey can help concretize the purpose of a project and help the stakeholders understanding the aim of the project [P2]. The interviewee from Nice Industridesign explained that the user journey is a strong tool to highlight the essence of loads of information, and by that gain understanding of the situation. She showed a poster containing several user journeys, which summarized information from 70-80 pages of transcribed interviewees and explained that the user journey had been useful both to structure the information internally in the design firm and when communicating with stakeholders. After creating the user journeys, the people she had interviewed were asked to review the user journey. By doing so, several misunderstandings were cleared up. The interviewee from Nice Industridesign meant that it is both easier and more fun for people to comment on a user journey than on a long text-document [P3].

Some of the interviews reported that a user journey can be used to improve communication with stakeholders [P2, P4]. It is easily understood [P1], which is positive when communicating with people with little knowledge of the project. It was said that creating user journeys during an interview with stakeholders is the fastest way to learn how things work [P2], and that it is an effective way to help stakeholders communicate with each other in workshop settings [P4]. The interviewee from Halogen held that presenting user journeys in untraditional ways, such as desktop walkthrough, could encourage the involved to communicate new ways, which he meant is favourable in several projects [P2].

One aim of making a user journey is to get a holistic overview on what the service receiver experiences when interacting with the service provider [P1, P2, P3, P4], and the technique is used to tell a story about the users experience of the service [P1].

3.4.2 Motivations to create service blueprint

Service blueprints are used as a tool to understand the connections between the user journey and what happens internally [P4]. One interviewee described it as a useful tool to create system in chaos [P2], and another interviewee told the visualization helps people think of a service as connections [P4]. The interviewee from Nice Industridesign showed an example where a blueprint inspired by by Polaine et al. (2013) [10] (Appendix B) had been used as a starting point in a project. The goal of filling out the blueprint was to gain insight rather than creating a complete blueprint. The designer gained enough insight before the blueprint were done, and did therefore leave the blueprint half finish. The designer then created a custom made visualization for the specific project [P3]

The interviewee from SINTEF explained that service blueprints work well to gain a common understanding and encourage communication within a group who already know the service and the issues in the project, but not as well with third party stakeholders. This because service blueprints often are complex and most people needs time to understand it [P4].

The service blueprints are used to show the holistic view on the service [P1, P4].

3.5 Challenges with the two techniques

All of the interviewees find user journey to be a useful tool and uses it to a large extend (chapter 3.3.1), and most of the interviewees make use of service blueprint (chapter 3.3.2). Nevertheless, there are found some challenges connected with the two techniques.

Some of the interviewees wish for a common language, both verbal and visual, of these two visualizations types [P1, P2]. When interviewing the designers the author found that it is often difficult to distinguish between scenarios and user journeys, and user journey and service blueprint. It was said that clients working with several design firms might get confused as different firms could possible use different terms and visualizations for the same things, or the designers might mean different things with the same terms and visualizations [P1, P2].

A challenge with both visualizations types, according to the interviewee from Nice Industridesign, is that they are simplifications and therefor lack some information. Still, the interviewee meant that it was absolutely necessary to create simplifications to be able to work with complex services [P3]. One of the interviewees thought it might be difficult for stakeholders not used to the techniques to understand that these visualization methods are useful [P4].

It was also said that it is a challenge to create good visualizations that show both the holistic overview and details at the same time. Two of the interviewees reported that they had tried the computer program "Prezi", but it didn't satisfy their needs [P1, P2]. One of the designers argued that the presentations are quickly outdated, it is

difficult for clients to reuse the presentations and the computer-program is helpful only when presenting, not during the design process [P1]. Another challenge reported by the interviewee from Eggs Design is that visualizations are often soon to be outdated [P1].

The interviewee from Eggs Design told that it can be difficult to decide the physical format of the visualizations. The different physical formats have different strengths and limitations. If a lot of information is presented on one page, the visualization might have to be quite big. A big format could be difficult to handle because of the size. The interviewee said that a big poster with loads of information might be good to create an overview in a small group, but it can be too complex to be used in presentation settings. A simple user journey, on the other hand, might be good to present the overview, but it can easily be too simplified and important information can get lost [P1].

3.5.1 Challenges with user journeys

When asked about challenges with user journeys, the designer from Halogen told a story where a client asked him to remove some parts of the user journey. This because the user journey highlighted some problems the company was not yet ready to handle [P2].

3.5.2 Challenges with service blueprint

It was reported that it is time consuming to create and finish a service blueprint [P3, P4]. Because of this the one of the interviewees found it to be important to know when it is suitable to take the time needed to create a blueprint, and when it is not [P4]. It was said that service blueprint does not fit all projects [P1, P4].

It was also mentioned that it is important to be aware that a service blueprint is not the delivery of a new service, but it shows how it can be done. If the company does not understand how to use the service blueprint, and how to

implement the new service, there is a risk that the service blueprint can be left unused [P2].

The designer from Eggs Design sees several challenges with service blueprints. She finds the term *simplexity* to be important, with this she means to simplify and show the main features in the service, but still embrace the complexity. The service blueprint does not, according to the designer, fulfil this goal as it is too detailed and shows too many stories at the same time. She did also point out that in many cases clients (form external companies) finds it difficult to deal with a very detailed overview of the service. The designer mentioned that service blueprint is just one of many tools a designer has knowledge about and argued there are other, and better, ways to communicate an overview of the service. One of the techniques she use in-stead of service blueprint is by creating "blueprint light" (chapter 3.2.1) [P1].

3.6 The future

The designers reported three wishes for the future development of the two techniques.
1. A common visual and verbal language [P1, P2].
2. Useful computer programs that allow them to create and share visualizations with their clients [P1,P2].
3. More and better research on the visualization methods [P4].

To keep updated on how the methods develop the interviewees
- Read books [P3, P4].
- Read on internet, [P3, P4].
- Study real case projects, this can be done on conferences or events [P1, P4] interviewing other designers [P4] or examine students work at the university [P1].
- Learn by talking with colleges [P4].

The interviewee from Nice Industridesign expressed that visualization techniques develop in high speed [P3].

4. DISCUSSION

4.1. Applied science and pure science

User journey did not receive much attention by authors before 2006 (chapter 1.2), and, according to Følstad et al. (2014), has "no coherent framework … been proposed to structure these practices" [15]. Nevertheless, the interviewees seems to agree on what user journey is and uses it to a large extend. On the other hand, service blueprint has been described frequently in publications since 1982 (chapter 1.3), but the respondents apply it in to a smaller extend than user journey, and they do not have a common description of the technique. It seems to be a diversity between the pure science (to know) [38] found in literature and the applied science (to do) [38] among the interviewees. There might be several reasons for this.

First, user journey is easier to understand and to apply than service blueprint (chapter 3.3). The service blueprint does often present more information, and is therefore more difficult to understand and apply. The author has found the same tendency in literature. While the definition of user journey presented in chapter 1.2 is clear and understandable, the definition of service blueprint (chapter 1.3) is vaguer. The two blueprints presented by Stickdorn and Schneider (2011) [6] (see Appendix A) and by Polaine et al. (2013) [10] (see Appendix B) shows the diversity among the blueprints. The first blueprint seems to be strongly inspired by Bitner et al. (2008) [33], and has a focus on overlying processes. The focus of the second blueprint seems to be on mapping all possible touchpoints of a service.

Second, the designers keep updated on new techniques and the development of techniques in other channels than academic literature (chapter 3.6). One exception of this is academic literature published in service design books or on web pages easily accessible for the designers.

Third, the interviewees do not focus on categorizing visualization techniques, but custom

make visualizations appropriate for specific projects (chapter 3). The author believes that by doing so, the existing techniques are going to develop and new techniques might appear. Feibleman (1961) puts it "applied science has as a result the stimulation of discovery in pure science" (page 306) [38]. At the same time, the author finds it to be important with formal approaches to the visualizations. This is needed both when multiple actors apply a service design approach in collaboration [1] and when students are learning the techniques.

4.2 Common language

The interviewees want a common language on visualization techniques (chapter 3.6). Authors have paid attention to the language of service design. Halvorsrud et al. (2014) argues that there is a need for a visual language for service design, and they present a suggestion on a visual language concerning customer journey [1].

However, there are several terms on user journey (chapter 1.2), and there are multiple ways to present a service blueprint [10]. The interviewees explain that sometimes it might be difficult to distinguish between user journey and service blueprint (chapter 3.1), and elements typically for service blueprints are used in user journeys by the interviewees (chapter 3.2.1). Desktop walkthrough and storyboards, which normally is presented as separate techniques [6, 9], are used to present user journeys (chapter 3.2.1). The interviewees present emotional journey as a part of user journeys (chapter 3.2.1), some places is presented as another word for user journey [5].

There are several terms which mean the same as user journey (chapter 1.2). The author believes that there is a need for clarifying what the differences between the terms are. A user is a person using a service, and a user journey should therefor describe the journey of a user. A customer is a person buying a product or service, and a customer journey should describe the journey of a customer.

4.2 The display of visualizations

The interviewees reported that sometimes it is a challenge to decide the physical format of the visualizations (chapter 3.5). It is found few publications on this theme. Sevaldson (2011) argues that GIGA-mapping can be used when dealing with very complex situations [39], but the interviewees did describe challenges with working on big formats. They also reported that there is a lack of computer programs that fulfil their needs when designing the visualizations.

4.3 When to use the methods

In the study conducted by Segelström (2010) [5] it was found that several service designers used a cluster of different journeys as visualization techniques, while service blueprint were mentioned by only one of the interviewees (chapter 1). In the study presented in this article, all the interviewees creates user journey frequently. Service blueprint seem to be a more used technique than when the first interviewees were conducted, but is used less than user journeys.

4.4 Motivations

The service designers in this sample reported the three main reasons to apply user journey and service blueprint to be: to build understanding; gain a holistic overview and to improve communication. This fits the motivations of using visualization techniques described by authors (chapter 1).

4. CONCLUTIONS

The conclusion of this article is that the applied science of the two visualization techniques differs from the pure science of the same techniques, i. e. concepts suggested in the literature. It is found that the respondents focus on creating visualizations that are needed in each project rather than following guides from the pure

science. The main motivations of using the two techniques are to gain understanding of the situation, a holistic overview and to improve communication. The main challenges with the techniques seem to be that a common visual and verbal language on the two techniques is still lacking and to decide the format of the visualization is difficult, also because there are is a lack of computer programs, which meets the needs when designing user journeys and service blueprints.

INTERVIEWEES

[P1]   Service designer from Eggs Design,
        interviewed by Synneva Storaas
        in a personal interview conducted in
        Trondheim, 1 hour, 13.10.2014

[P2]   Service designer from Halogen,
        interviewed by Synneva Storaas
        over Skype, 30 minutes, 30.10.2014

[P3]   Service designer from Nice Industridesign,
        interviewed by Synneva Storaas
        in a personal interview conducted in
        Trondheim, 30 minutes, 30.10.2014

[P4]   Service designer from SINTEF,
        interviewed by Synneva Storaas
        in a personal interview conducted in
   Trondheim, 30 minutes, 10.11.2014

REFERENCES

[1]   R. Halvorsrud, E. Lee, I. M. Haugstveit,
        and A. Følstad, "Components of a Visual
        Language for Service Design," *Proc. ServDes
        2014,* pp. 291-300, 2014.

[2]   J. Nieminen and T. Mattelmäki,
        "Navigating in the World of Services-
        Visualizing a system of systems," *Nordes,*
        2011.

[3]   J. Gloppen, "The strategic use of service
        design for leaders in service organizations,"
        2011.

[4]   L. Kimbell, "Insights from Service Design
        Practice," in *8th European Academy of Design
        Conference*, 2009, pp. 249-253.

[5]   F. Segelström, "Visualisations in service
        design," 2010.

[6]   J. Schneider, M. Stickdorn, F. Bisset, K.
        Andrews, and A. Lawrence, *This is service
        design thinking: basics, tools, cases*. Hoboken,
        N.J.: Wiley, 2011.

[7]   A. Osterwalder and Y. Pigneur, *Business
        model generation: a handbook for visionaries, game
        changers, and challengers*. Hoboken, N.J.:
        Wiley, 2010.

[8]   F. Segelström and S. Holmlid,
        "Visualizations as tools for research:
        Service Designers on visualizations,"
        Nordes, 2009.

[9]   B. Martin and B. Hanington, *Universal
        methods of design: 100 ways to research complex
        problems, develop innovative ideas, and design

[10]   A. Polaine, L. Løvlie, and B. Reason, *Service
        design: from insight to implementation*. Brooklyn,
        New York: Rosenfeld Media, 2013.

[11]   S. Miettinen and M. Koivisto, *Designing
        services with innovative methods*: University of
        Art and Design, 2009.

[12]   S. S. Tax, D. McCutcheon, and I. F.
        Wilkinson, "The Service Delivery Network
        (SDN) A Customer-Centric Perspective of
        the Customer Journey," *Journal of Service
        Research,* vol. 16, pp. 454-470, 2013.

[13]   L. G. Zomerdijk and C. A. Voss, "Service
        design for experience-centric services,"
        Journal of Service Research, vol. 13, pp. 67-82,
        2010.

[14]   J. Gloppen, *Service design leadership: shaping
        service innovations at the intersection of design and
        strategic management* vol. 57. [Oslo]:
        Arkitektur- og designhøgskolen i Oslo,
        2012.

[15]   A. Følstad, K. Kvale, and R. Halvorsrud,
        "Customer journeys: Involving customers
        and internal resources in the design and
        management of services."

[16]   S. Parker and J. Heapy, *The journey to the
        interface: how public service design can connect users
        to reform*. [London]: Demos, 2006.

[17]   S. Whittle and M. Foster, "Customer
        profiling: getting into your customer's
        shoes," *Management Decision,* vol. 27, 1989.

[18]   G. L. Shostack, "How to design a service,"
        European Journal of Marketing, vol. 16, pp.
        49-63, 1982.

[19]   B. J. Berkley, "Analyzing service blueprints
        using phase distributions," *European Journal
        of Operational Research,* vol. 88, pp. 152-164,
        1/6/ 1996.

[20]   C. Paquet, D. St-Arnaud-McKenzie, G.
        Ferland, and L. Dubé, "A blueprint-based
        case study analysis of nutrition services
        provided in a midterm care facility for the
        elderly," *Journal of the American Dietetic
        Association,* vol. 103, pp. 363-368, 3// 2003.

[21]   S. Fließ and M. Kleinaltenkamp,
        "Blueprinting the service company:
        Managing service processes efficiently,"
        Journal of Business Research, vol. 57, pp. 392-
        404, 4// 2004.

[22]   P. T. Chuang, "Combining service
        blueprint and FMEA for service design,"

effective solutions. Beverly, Mass.: Rockport
Publishers, 2012.

Service Industries Journal, vol. 27, pp. 91-104, 2007.

[23] T. Wreiner, I. Mårtensson, O. Arnell, N. Gonzalez, S. Holmlid, and F. Segelström, "Exploring Service Blueprints for Multiple Actors: A Case Study of Car Parking Services," in *First Nordic Conference on Service Design and Service Innovation*, 2009, pp. 213-223.

[24] Y. Geum and Y. Park, "Designing the sustainable product-service integration: A product-service blueprint approach," *Journal of Cleaner Production,* vol. 19, pp. 1601-1614, 2011.

[25] C. Coenen, D. von Felten, and M. Schmid, "Managing effectiveness and efficiency through FM blueprinting," *Facilities,* vol. 29, pp. 422-436, 2011.

[26] A. Meroni and D. Sangiorgi, *Design for services*. Burlington, VT: Gower, 2011.

[27] G. Kostopoulos, S. Gounaris, and A. Boukis, "Service blueprinting effectiveness: Drivers of success," *Managing Service Quality,* vol. 22, pp. 580-591, 2012.

[28] T. Kleinert, S. Balzert, P. Fettke, and P. Loos, "Systematic identification of service-blueprints for service-processes - A method and exemplary application (Research Paper)," in *Lecture Notes in Business Information Processing* vol. 132 LNBIP, ed, 2013, pp. 598-610.

[29] T. P. Liang, Y. W. Wang, and P. J. Wu, "A system for service blueprint design," in *Proceedings - 2013 5th International Conference on Service Science and Innovation, ICSSI 2013*, 2013, pp. 252-253.

[30] P. U. Zine, M. S. Kulkarni, A. K. Ray, and R. Chawla, "Designing flexible service

systems: application to machine tools," *Journal of Intelligent Manufacturing,* 2014.

[31] G. L. Shostack, "Designing services that deliver," *Harvard business review,* pp. 133-139, 1984.

[32] J. Kingman-Brundage, "The ABCs of service system blueprinting," *Designing a winning service strategy,* pp. 30-33, 1989.

[33] M. J. Bitner, A. L. Ostrom, and F. N. Morgan, "Service blueprinting: A practical technique for service innovation," *California Management Review,* vol. 50, pp. 66-94, 2008.

[34] J. M. Morse, "The significance of saturation," *Qualitative health research,* vol. 5, pp. 147-149, 1995.

[35] A. H. Tjora, *Fra nysgjerrighet til innsikt: kvalitative forskningsmetoder i praksis.* Trondheim: Sosiologisk forl., 2010.

[36] D. Cohen and B. Crabtree, "Qualitative research guidelines project," *Robert Wood Jonhson Foundation,* 2006.

[37] S. Elo and H. Kyngäs, "The qualitative content analysis process," *Journal of advanced nursing,* vol. 62, pp. 107-115, 2008.

[38] J. K. Feibleman, "Pure science, applied science, technology, engineering: an attempt at definitions," *Technology and Culture,* vol. 2, pp. 305-317, 1961.

[39] B. Sevaldson, "GIGA-Mapping: Visualisation for complexity and systems thinking in design," *Nordes,* 2011.

Appendix A
Service blueprint adapted from Stickdorn and Schneider (2011) [6] (pp. 206 - 207).
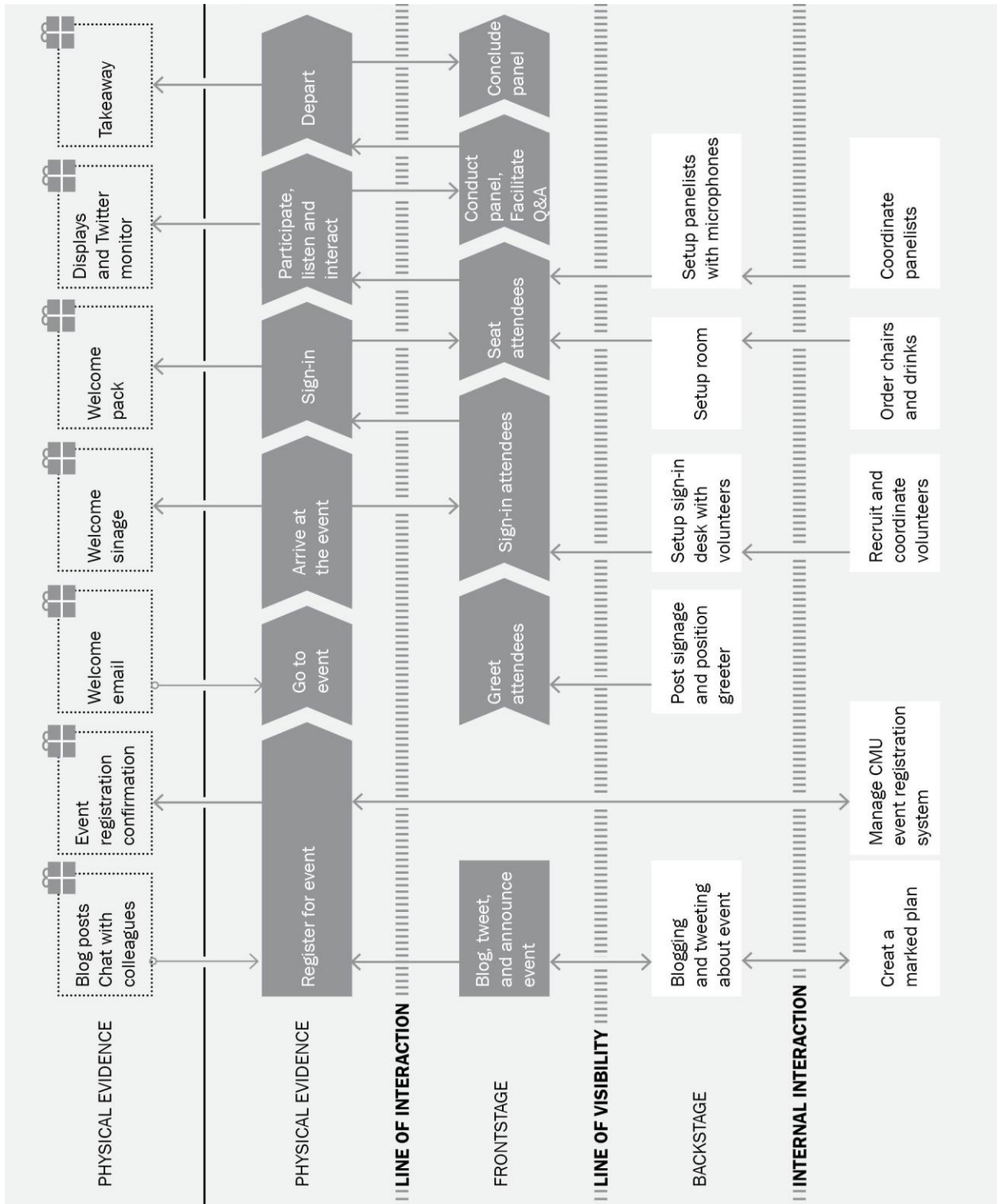
Appendix B
Service Blueprint adapted from Polaine et al. (2013) 94 [10] (p. 94).

		Aware		Join		Use	Develop	Leave
		Write an overall *Statement* for the user experience of this phase. What should we aim for? What is this phase all about?						
User	Step	Break the interactions into steps and describe each activity.						
	Experience	*"A quote from the User when we Get this right."*						
Channels	Face to face	**Touchpoint title** Either write a description of the touchpoint, or put on image/sketch here.						
	Print							
	Web	**The homepage** (Screenshot of the homepage)						
	Phone							
	Mobile							
	Location							
Backstage processes	Customer services	- Describe in short what has to happen to support the user experience for this step - Listing actions by actions						
	IT-department	**Action** Brief description. **Another action** A few more details **Third action** Described here.						
	Third party							

Appendix C
Interview guide, Eggs Design

The interviews were held in Norwegian, below the questions are presented in both Norwegian and English.

How do you describe service blueprint?
(Hvordan beskriver du service blueprint?)

Do you make use of service blueprint in the service design process?
(Benytter du deg av service blueprint i servicedesignprosessen?)
- To what extend?
  (I hvor stor grad?)
- In which settings?
  (I hvilke settinger?)

What is your purpose of applying service blueprint?
(Hva er formålet ditt med å bruke service blueprint?)
- In the different steps of the process?
  (I de ulike stegene i prosessen?)

How do you create a service blueprint?
(Hvordan går du fram for å lage en service blueprint?)
- How is the clients company involved?
  (Hvordan involveres bedriften?)
- In which parts of the process is it made?
  (Når i prosessen lages den?)

What works well with a service blueprint?
(Hva fungerer godt med service blueprint?)
- Why?
  (Hvorfor?)

When does it not work well?
(Når synes du det ikke fungerer?)
- Why?
  (Hvorfor?)

How do you think you are going to apply service blueprints in the future?
(Hvordan vil du bruke service blueprint i framtiden?)

How do you think it is going to be used generally by others in the future?
(Hvordan tror du det vil brukes generelt i framtiden?)

Appendix D
Interview guide, Halogen, Nice Industridesign, SINTEF

The interviews were held in Norwegian, below the questions are presented in both Norwegian and English. In the section "User journey/service blueprint", the interviewees were first asked to answer all the questions listed on user journey, and later on service blueprint.

- How much of your work concern service design, and how long have you with this?
  (Hvor mye av ditt arbeid handler om tjenestedesign, og hvor lenge har du jobbet med dette?)

User journey/ service blueprint
(Brukerreisen/Service blueprint)
- How do you understand the term user journey/service blueprint when you use it in your service design process?
  (Hva legger du i begrepet brukerreise/service blueprint når du bruker det i tjenestedesignprosessen?)
- When do you use the techniques?
  (Hva bruker du det til?)
- Could I please see some examples?
  (Kan få lov til å se noen eksempler?)
- Do you see any benefits with the technique?
  (Ser du noen fordeler med teknikken?)
- Do you see any challenges with the techniques?
  (Ser du noen ulemper med teknikken?)
- In what part of the process do you use the method?
  (I hvilken del av prosessen benytter du deg av metoden?)
- How do you think user journey/service blueprint is going to develop in the future?
  (Hvordan tror du at bruken av brukerreise/service blueprint kommer til å utvikle seg framover?)

User journey and service blueprint compared to each other:
(Brukerreisa og service blueprint i forhold til hverandre)
- Do you see any similarities between user journey and service blueprint?
  (Ser du noen likheter mellom brukerreisa og service blueprint?)
- Do you find some differences between the two techniques?
  (Ser du ulikeheter mellom brukerreise og service blueprint?)
- Do you prefer any of the methods while working?
  (Foretrekker du en av metodene når du jobber?)
- How do you think the techniques are going to develop?
  (Hvordan tror du at SB og BR kommer til å utvikle seg i framtiden?)
- How are you keeping updated on new methods?
  (Hvordan holder du deg oppdatert på nye metoder?)