

Service blueprints

Persistent qualities and future potential

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ABSTRACT

The service blueprint is a way to map and visually explain the system supporting a service. Through a literature review and two interviews conducted with experienced service designers, this article addresses the core of service blueprinting. It was found that the purpose of service blueprinting satisfies the same needs today as three decades ago, when the method was developed. However, there has been a change in the content of the blueprint, now including more information on the customer experiences. A potential for improvement of the service blueprint is found to be its communicative properties, now being too complex and with missing information hierarchy.

KEYWORDS: Service blueprint, blueprint, customer journey, layers, method, tool

1. INTRODUCTION

Service design is a discipline that has specialized in planning how to organize a service to satisfy customers. Even though the variety of services is huge, generic tools have been developed that can be applied to the variations. One of these tools is the 'service blueprint', which is the area of focus in this article.

The service blueprint is a way to map and visually explain a service, or as Kingman-Brundage describes it; 'In the simplest terms, a service system blueprints is a picture of a service system' (Kingman-Brundage, 1988, p. 30). The blueprint representation of a service shows the sequence of events experienced by the customer (the customer journey) on the x- axis, and different aspects of the service related to the customer journey on the y-axis. The rows on the y-axis, often referred to as layers, differ from service to service, and with whom are making the blueprint. Still there are typical aspects, or layers,

presented on the y-axis that often occurs. These similarities will be explored later in the article.

Kingman-Brundage expressed that 'The design of a service blueprint should meet two criteria: economy and symmetry' (Kingman-Brundage, 1988, p. 33). Bitner et al. (2007) explained that the goal of the service blueprint is to capture the entire customer service experience from the customer's point of view. These statements express very different intentions for developing a service blueprint, and illustrate some questions to be discussed in this article: What is the purpose of making a service blueprint? How is the service blueprint used today compared to when the tool was developed? Is there a potential for further development of the service blueprint? By searching for answers to these questions the article aims at explore the persistent qualities and future potential of the service blueprint.

1.1 Method

The article will first address the origin of the method of service blueprinting, examine how it has developed in recent years and how it is described to be conducted nowadays. This will be done through a literature review, based on selected articles and literature explaining how the method of service blueprinting should be carried out. The literature is found by searching in various databases, where Google scholar gave the most valuable findings, using different combinations of the keywords “service blueprint”, “service design”, “tools”, “methods” “development” and “experience”. References in interesting articles and sources suggested on the website [Service Design Tools \(http://servicedesigntools.org/tools/35\)](http://servicedesigntools.org/tools/35) were traced, and articles not available on internet were ordered through the University Library at NTNU. The selection of articles was done by their relevance and potential contributions to the topic of this paper.

The material used in this article spans from articles published in 1977 until today, and will be presented chronologically with respect to the year of publication. The literature review gave a generally positive, but not very nuanced representation of the method of service blueprinting. Therefore two semi-structured interviews (Denscombe, 1998) with experienced service designers were conducted, to see if there is correlation between theory and practice and if the service designers have other experiences with the tool than what literature covers. The interviews gave valuable insights and were necessary to be able to speak more in depth about the future potential of service blueprinting.

2. THE ORIGIN OF SERVICE BLUEPRINTS

2.1 The demand for a new tool

Already in 1977 Shostack requested ‘... a framework which accommodates intangibility

instead of denying it’ (Shostack, 1977, p. 74). She argued that ‘Since this service exists only during the time in which it is rendered, the entity’s true ‘reality’ must be defined experientially, not in engineering terms’ (Shostack, 1977, p. 76).

Shostack had realized that products in themselves were not alone creating value to the customers, but also the service related to the products. To be able to control and develop the service, there was a demand for understanding the structure and to be able to communicate it clearly to others. Shostack (1982) compared the product-service combinations to atoms, connected in unique molecular configurations, and compared how the overall entity of a service would change if the elements rearranged or altered, as if changing the bonds or atoms in a molecule creates a new substance. To be able to offer good service, or a combination of a product and service, it is important to both be able to see the service from an overview level and form each element in the delivery to fit into the entirety. This consciousness formed the demand for what Shostack called a service blueprint: ‘What is required is a system which allow the structure of a service to be mapped in an objective and explicit manner while also capturing all the essential functions to which marketing applies; in other words, a service blueprint’ (Shostack, 1982, p. 55). Even though Shostack (1977) requested to define the service experientially and not in engineering terms, the name of the method, service blueprinting, is ironically very much transmitted from engineering terms.

The need to get an overview of the context and control it (Shostack, 1977) was the background for finding a systematic way to map the situation. It is challenging to discuss and change something that is not commonly perceived, and a point of reference was needed to communicate how the service should be structured and related to its elements. Kingman-Brundage stated that ‘Service system blueprints simplify the complexity associated with a service by systematizing it or by revealing systems which are otherwise invisible’ (Kingman-Brundage, 1988, p. 33). The need

behind the blueprint was to understand how elements of a service affected the overall, so they could be changed to increase profitability.

2.2 The early history of development

The first contributions to the service blueprint were introduced in the 1980's (Shostack, 1982; Shostack, 1984; Kingman-Brundage, 1988), from a management and marketing perspective. With inspiration from other methods that were designed to deal with processes, acts and flows, a simple blueprint for a Corner Shoeshine was developed (Shostack, 1982). The focus in this service blueprint was the relation between the activities and the standard execution times. Facilitating services and products that were not directly seen by the customer, but necessary to perform the service, were also mentioned.

In an article published two years later, Shostack (1984) summarizes the process of designing a blueprint in four steps:

- Identifying the process
- Isolating the fail points
- Establishing the time frame
- Analyzing profitability

These four steps clearly communicates the goal of creating an efficient service, in terms of time spending and economic profitability, something which emphasizes the management perspective the blueprint was derived from.

Kingman-Brundage (1988) developed the service blueprint further, and suggested a more detailed framework for plotting process against structure: 'Process is depicted from left to right on the horizontal axis as a series of actions (rectangles) plotted chronologically... Service structure is depicted on the vertical axis as organizational strata, or structural layers' (Kingman-Brundage, 1988, p. 31). In her example (Figure 1), Kingman-Brundage placed the customer's actions on top of the blueprint, followed by the service provider's actions. These two are separated with the 'line of interaction', visualizing the points of contact between the customer and the service provider. The service provider's actions are separated in 'onstage' and 'backstage' actions, divided by the 'line of visibility', illustrating that the onstage actions performed by the service provider are seen by the customer and that the backstage actions are invisible to the customer. The next layer is 'support functions', which is divided from the service provider's actions with the 'line of internal interaction'. Below support functions the 'line of implementation' illustrates the boundary between 'Management functions', what is the management's responsibility, and the support functions.

The framework suggested by Shostack (1982, 1984) and further developed by Kingman-Brundage (1988) made the foundation for the service blueprint that later has both been widely used but also discussed.

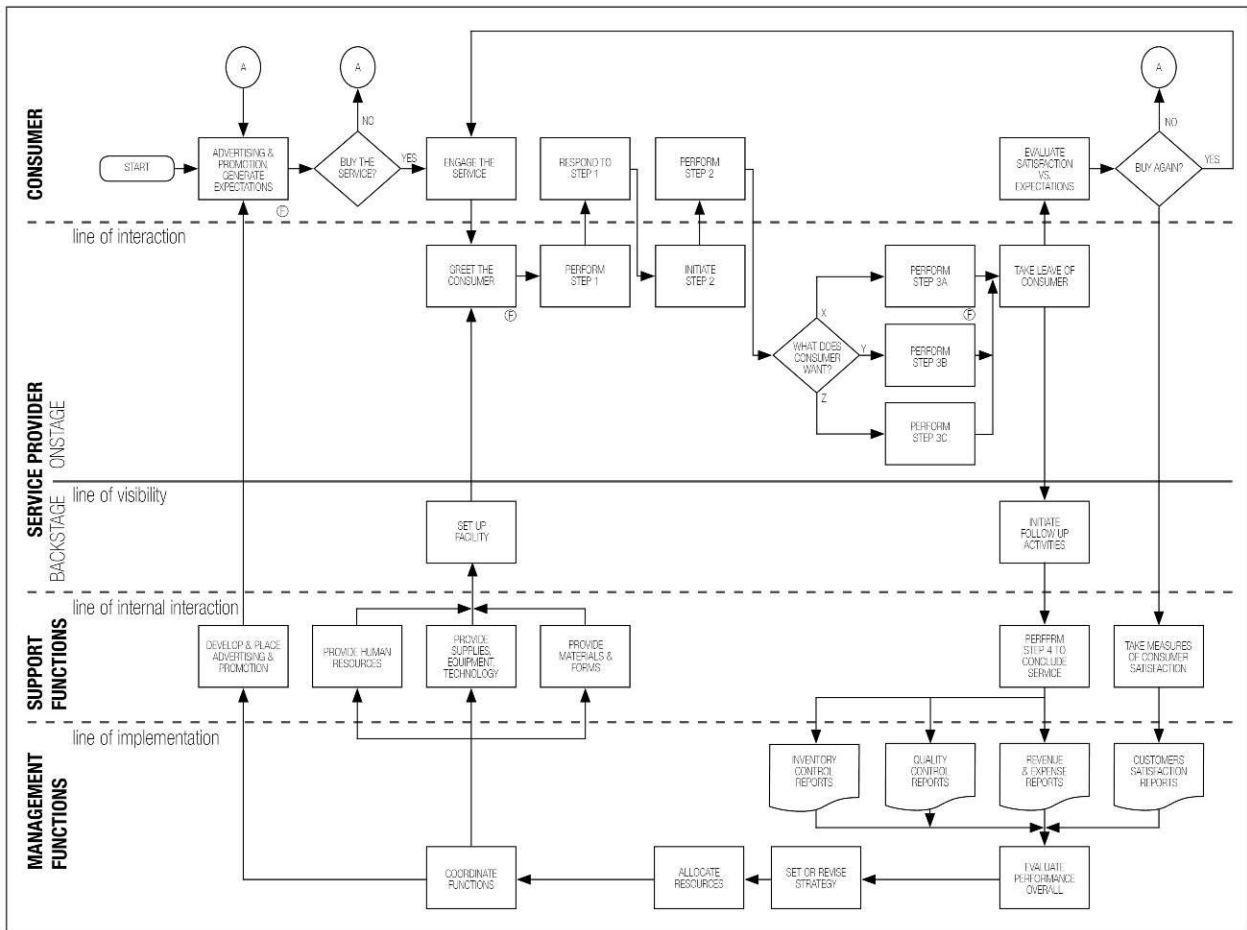


Figure 1. The structure of a service blueprint suggested by Kingman-Brundage (1988).

3. RECENT DEVELOPMENT

3.1 Debate on the content of the service blueprint

Based on the foundation developed by Shostack and Kingman-Brundage, there has been a number of contributions to the debate on how the framework of a service blueprint should be developed. The discussion is essentially about which layers the blueprint should contain, depending on what the writer sees as the most important insight when creating a service. The development of the service blueprint is summarized in Figure 3, at the end of the chapter (p. 8).

Morelli (2002) claimed, among other, that it would be relevant to give information in a service

blueprint about the (physical and virtual) spaces in which the service is located.

Berry et al. (2002) stress the importance of the total customer experience; how anything that is perceived or sensed that is related to a company carries a message and impacts how the customer sees the company. Another concern that Berry et al. promote, is the understanding of the customer journey, how a company must gain insight all the way from expectations before the experience occurs, until the assessments the customers are likely to make when the journey is over. Similar to Berry et al. (2002), Patricio et al. (2008) focus on the customer experience, and require a tool better customized to design multi interface service experiences.

Spraragen and Chan (2008) tried to visualize the information in the blueprint in a more graphic sense than what was done before, and found that pictorial representations best captured the meanings they wanted to express. They used icons and charts, and differentiated between emotional states by facial expressions on the icons, how close (physically) the icons were placed and the sizes of elements.

Shimomura et al. (2009) criticized the original blueprint for the lack of design relevant information. They argued that the blueprint (with its flowchart style diagram framework) did not give enough information about the customer, and customers with different points of view. Also, they criticized the insufficient normative notation. They felt that the meanings of symbols were often ambiguous and inconsistent.

These views reflect the use and development of the service blueprint. None of the authors doubt the value of creating a service blueprint, but they have different views on what information should be included. In broad terms, there is a greater focus on the customer experience from the turn of the millennium, with the need to include more background information about the customers. This is requested to be information about the environment (Morelli, 2002), emotions, expectations and assessments that the customers have (Berry et al., 2002), customers with different points of view (Shimomura et al., 2009) and the opportunity to use different channels to communicate with the customer (Patricio et al., 2008). Designers are also exploring how the information should be presented in the service blueprint, using more pictorial representations (Spraragen and Chan, 2008). Shimomura et al. (2009) argued that the danger with graphic visualization is that symbols often are too ambiguous and inconsistent. (See Figure 3 for overview on a timeline).

3.2 The present framework

Another important aspect in literature when analyzing the use of service blueprints is

literature explaining how to conduct different design methods. The service blueprint framework is not presented consistently in the same way in this literature (Bitner et al., 2007, Stickdorn and Schneider, 2011, Polaine et al. 2013), but with great similarities. The views mentioned in the last chapter are reflected also in the present framework, and it seems like they have influenced the development.

In 2007 Bitner et al. published the article 'Service Blueprinting: A Practical Technique for Service Innovation', a workshop guide to how a service blueprint can be developed in collaboration between different stakeholders. They have a strong focus on the customer's emotions and experiences. The article also emphasizes the importance of keeping the customer in focus, as the customer is the foundation for all other elements in the blueprint.

When mapping the customer journey, which is the first step in creating a service blueprint, Stickdorn and Schneider (2011) point out the importance of really understanding the users: 'It's important to not only visualize the path of the customer journey - encapsulated via a series of touchpoints - but also to collect stories that explain why the journey happened as it did. What were the circumstances, motivations and experiences that resulted in this process?' (Stickdorn and Schneider, 2011, p. 161). This is closely related to what was requested by Morelli (2002), Berry et al. (2002) and Shimomura et al. (2009). The framework that Stickdorn and Schneider suggest for the blueprint is more or less identical to the one proposed by Bitner et al., except from small variations in terminology. They have both only small variations from the framework suggested by Kingman-Brundage (1988).

In their book 'Service Design: From Insight to Implementation', Polaine et al. (2013) argue for why a service blueprint should be developed: 'Blueprints help to capture the big picture and interconnections, and are a way to plan out projects and relate service design decisions back

to the original research insights' (Polaine et al, 2013, p. 93). They also propose to use the blueprint to investigate where the service breaks down or where great opportunities exist.

The framework for the service blueprint suggested by Polaine et al. (Figure 2) differs from earlier versions by being more detailed. The horizontal axis is divided in phases of the customer journey: Aware, Join, Use, Develop and Leave. This facilitates the consciousness of how the customer journey spans all the way from when the customer becomes aware of the service until the customer decides not to use the service any more, either for a single session or

forever. The vertical axis is divided in three main fields; User, Channels (touchpoints) and Backstage Processes, but with finer distinctions inside the categories (see Figure 2). By displaying all the different touchpoints the users are exposed to in the Channels field, Polaine et al. responds to the demand for a tool better customized to design multi interface service experiences, expressed by Patricio et al. (2008).

Even though the framework suggested by Polaine et al. is more detailed, it contains to a great extent the same information as the service blueprint template suggested earlier.

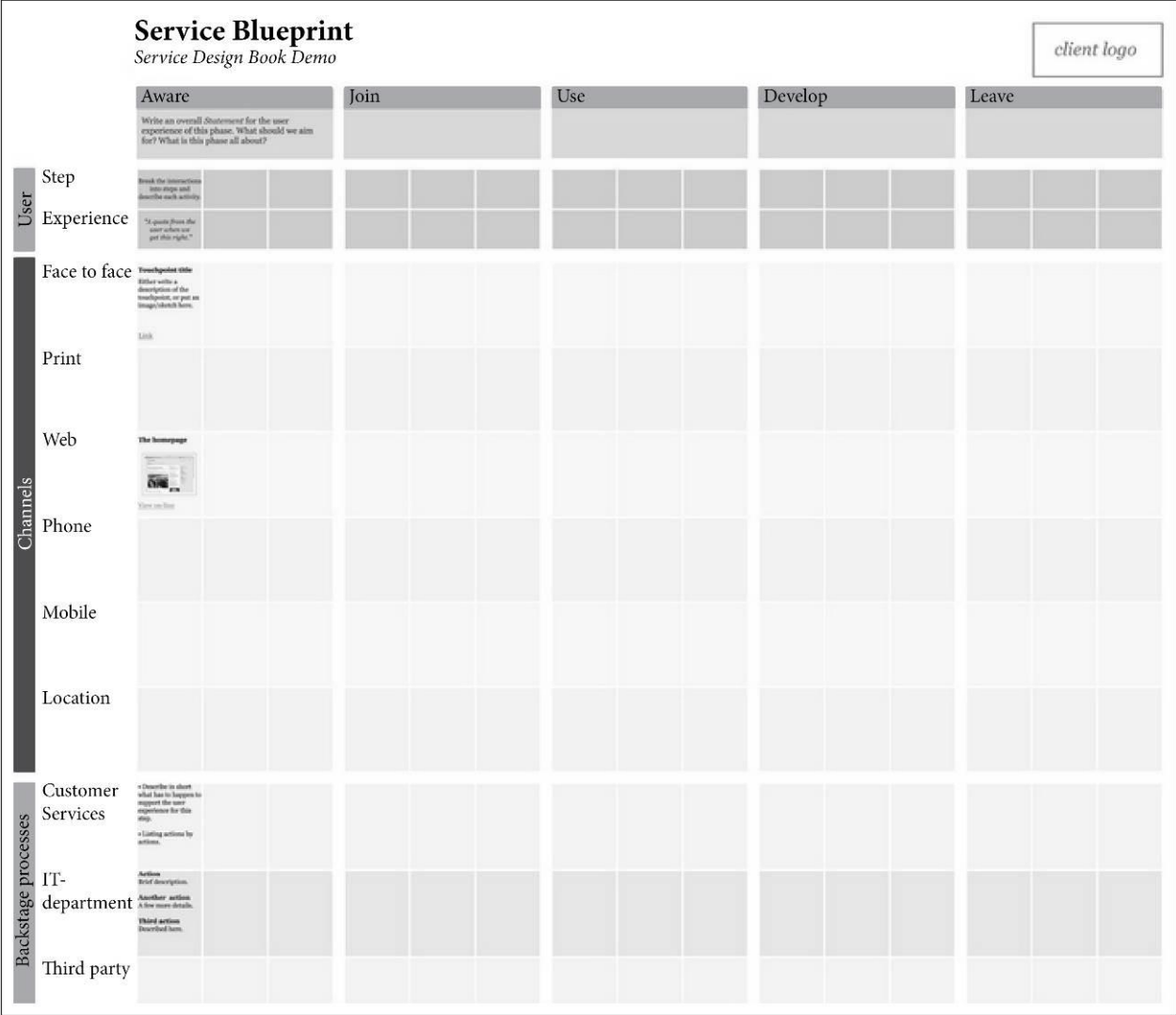


Figure 2. The service blueprint framework suggested by Polaine et al. (2013).

Polaine et al. realize that different projects need to customize the service blueprint to the setting: 'Even within a single company, blueprints change in terms of design and content, sometimes requiring additional channels or more or fewer phases depending on the project and its purposes' (Polaine et al., 2013, p. 94). They also comment that the flexibility of the service blueprint is one of its strengths.

Status quo in literature is that the service blueprint framework suggested has great similarities to the one developed by Kingman-Brundage (1988). The differences are variations in layers on the vertical axis to include more information about customers and various touchpoints. The present framework suggested by literature is to a greater extent based on the customer's experience, while the original service blueprint is a flowchart, displaying the elements the service consists of and the relation between them. There have been discussions on how the information should be presented (Spraragen and Chan, 2008, Shimomura et al., 2009), but in the present framework the layouts are schematic, organized in a grid where text or post-its can be filled in.

3.3 Similarities with Lean Consumption map

An interesting observation is that Lean Consumption, a popular theory within marketing and management today, uses maps called 'Lean Consumption Map' to see opportunities for improvement (Womack and Jones, 2005). The goal is to minimize time spending and costs, but at the same time not reduce the value they create for the customers. The Lean Consumption theory states that this can be done by delivering

exactly what the customer want, when and where he or she wants it. To get insight on how this can be done, the theory suggests to draw a Lean Consumption Map, which looks remarkably similar to the traditional service blueprint developed in the 80's (Shostack, 1982): on the horizontal axis the process of the service is depicted, and on the vertical axis there is a customer track and a service providers track explaining their activities and the relation between them. When analyzing this map, the goal is to minimize the customer's time consumption by reducing the 'wasted' time, the time which is not value-creating.

It seems to be that service designers and management and marketing disciplines have the same need to get an overview of service processes, and uses very similar maps to achieve this insight. The Lean Consumption Map does not differ much from the early versions of the service blueprint developed in the 80's. The service blueprint used by designers also has significant similarities with the traditional service blueprint, but has expanded the amount of information to include about customers.

Even though there have been discussions on what information should be presented in a service blueprint, and to a certain degree how it should be presented, the views stated in literature about the value of blueprinting are generally positive and no radical changes have been made. To understand if the service blueprint method is actually used in practice, how it is used and if service blueprinting is a tool with potential for further development, up-to-date information was needed.

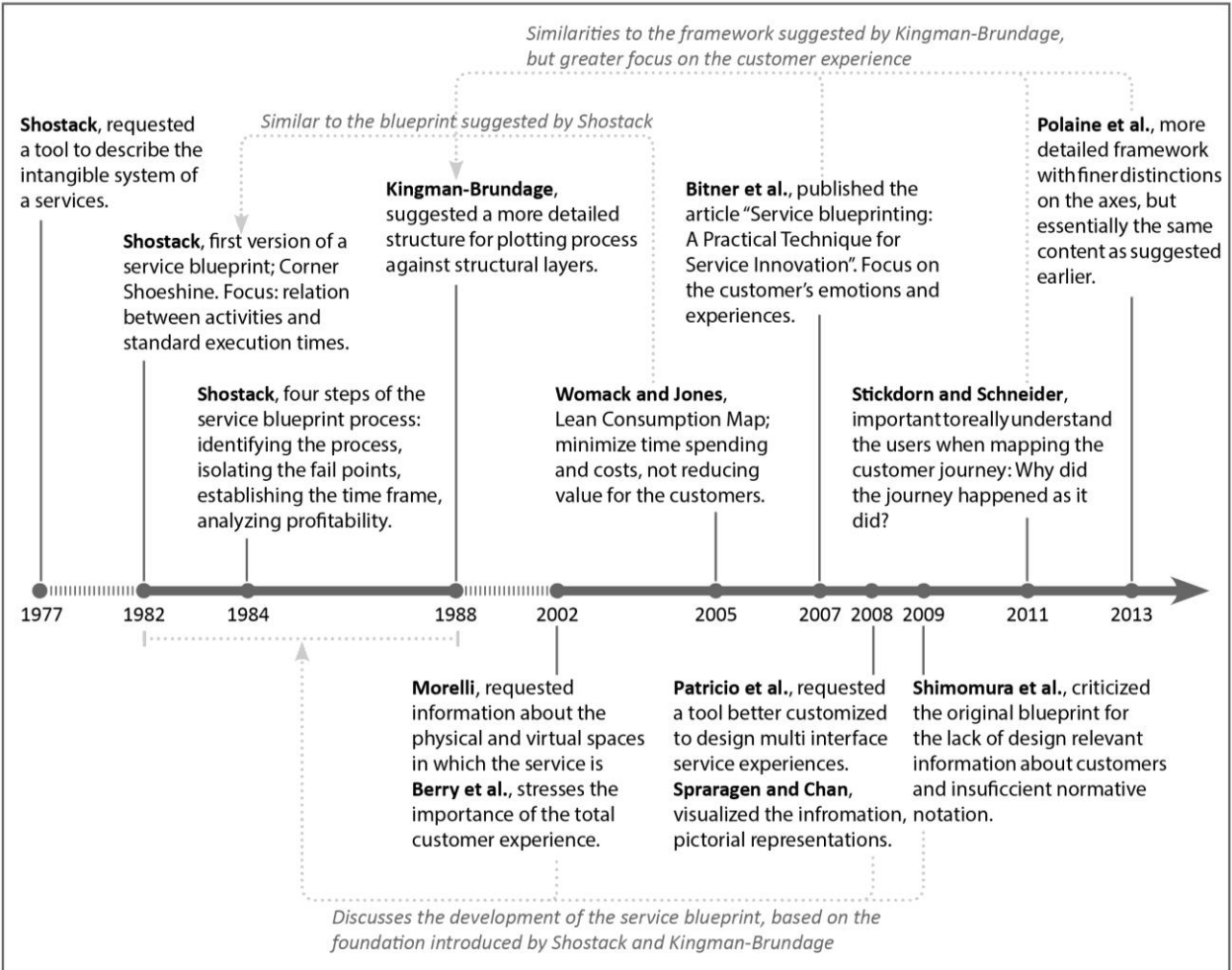


Figure 3. Model of how the service blueprint has developed, based on the literature reviewed.

4. THE USE OF SERVICE BLUEPRINTS IN PRACTICE

To get more insight on how the method of service blueprinting is used by service designers today and the experiences they have with blueprinting, two semi-structured interviews (Denscombe, 1998) were conducted. Questions regarding their perceptions of a service blueprint and how they use the tool were prepared and talked through. The questions for the interviews can be found in the appendix. The interviewees work for the design consultancies EGS and BEKK as service designers. The goal for the interviews was to find out if there is correlation between theory and practice, and if the interviewees have more experiences with the tool than what literature covers. More people should have been

interviewed to answer these questions, but the two representatives gave valuable information and input.

The interviewee from EGS considered a service blueprint to be similar to a blueprint in other engineer disciplines: a technical drawing that would work as a description for how the service is to be delivered. All necessary information to conduct a service should be included, and the blueprint is therefore to be made by the end of a project, when this information is obtained and specified. At the same time the interviewee pointed out that different visualizations, like 'scenarios', 'mega map', 'customer journey' etc. are widely used in their company, in all stages of the design process. The customer journeys she made often contained more information than

only the flow of the customer's actions, but she did not have a clear definition on the differences between a customer journey and a service blueprint. These visualizations might often be similar to what others refer to as service blueprints, but the interviewee explained that she liked to narrow down the use of the word 'blueprint' to be more of a detailed, layered, technical drawing of the service concept. The interviewee explained that the threshold for calling something a service blueprint is high, as this implies that something is finished. The interviewee also explained that in most cases the client is unfamiliar with the word 'blueprint', and therefore she would rather prefer to give the illustrations more indicative names, like 'customer journey' or 'service map'.

The interviewee from EGGs had the same reasons for developing a service blueprint as the literature explains: Get overview of the total service, make insight explicit and facilitate communication between the different stakeholders involved in providing the service. She found it to be a very useful tool, but did not make a complete service blueprint to all her service design projects because of the extensive workload. The interviewee also commented other cons with the service blueprint. One of them was that the level of complexity often becomes too high, which results in poor communication of what is really the essence. Also, the way the information in the traditional service blueprints is visualized, with text, boxes and arrows, often in a grid, does not instantly communicate the service. By following a strict grid, all the information is viewed at the same level, not highlighting important areas. Other feedback the interviewee gave was a troublesome affair when trying to present the blueprint to a client. When all the information is displayed at the same time, the audiences are not able to both focus on what is said and the visual, complex system. If there would be a quick way to hide some of the information, this would have made it easier to explain the content of a service blueprint to others.

The service designer in BEKK told that they frequently arrange the information and insight derived from the design process in different maps. What information the maps contained varied, and they did not have a specific layout they always followed. The interviewee did not spend a lot of time visualizing the information, as this is time consuming. She still was a fan of graphic representation of information, as this gives an immediate impression of the content. She did not care what to call the different maps and where to draw the boundary between "customer journey" and "service blueprint", but commented their qualities. The interviewee explained the pros of mapping the information to be that you see problems that are not identified otherwise, they foster discussion and set focus on the proper areas. The maps display and give customer insight, both for the service designer and for the client. By mapping all the touchpoints in the customer journey, both the ones that are intended and not intended to be part of the service, it becomes clear where the service is delivered successfully and where improvements are needed. The interviewee from BEKK commented the same problem as the interviewee from EGGs: it is difficult to present a map with a lot of information, because all the information displayed at the same time confuses the client. Another interesting comment about the service blueprint the interviewee from BEKK made was that to really be a representation of reality, a lot of insight were needed from qualified and experienced people. Information and insights are often insufficient, and the map is therefore not a true picture of reality.

The two interviews showed correlation between theory and practice concerning the reasons for why they organize information as service blueprints or similar maps. By mapping the information you get an overview of the process, all the elements it consists of and the relation between them. When seeing this overview it becomes clearer where improvements are needed and opportunities exist. By displaying the information, the insight becomes explicit and

works as a common ground for discussions between the stakeholders involved.

Through the interviews, weaknesses with the method of service blueprinting were identified. One of them is related to the point of Spraragen and Chan (2008), that the content of the blueprint should be visualized in a more graphic sense to easier communicate what the service is really about. In this visualization the information should be differentiated, not giving all facts the same attention, but highlighting certain points of interest. Another problem is that the complexity of the service blueprint often becomes too high, which makes it difficult to explain the system to others. Complexity also affects the comprehension by making it hard to understand what the essence of the system really is and where resources should be focused to make improvements. Both of the interviewees commented the problem with complexity when presenting the service blueprint to their clients. If they presented all the information at the same time, the audience would not follow their mindset. This could be solved by using programs with particular features to make a presentation, but required too much effort and resulted in a document that the client could not change himself.

The learnings from the interviews were that the service blueprint (or similar maps) is a valuable and frequently used tool, but has weaknesses especially in the field of communicating the information it contain to others, something which is due to complexity and little differentiation in importance of the information. The interviewees both pointed out the value of visualizing the information, as this give an immediate impression of the service.

5. DISCUSSION

5.1 The name 'Service blueprint'

The origin of the method of service blueprinting started with the notion of how it was not only

products themselves that created value to the customers, but also the service related to the products (Shostack, 1977). Products are tangible and can be drawn and easily described. Services are intangible and less defined, and therefore harder to control. This created the demand for a tool to describe the system of a service, so it could be understood, controlled and changed to increase profitability. What Shostack requested was to be able to describe the service experientially, and not with engineering terms. However, she consulted engineering methods to find inspiration and gave the service tool a name that was already established in engineering disciplines; a blueprint. It may seem like what Shostack developed, or at least the name she gave it, not directly responded to what she requested. Still, the framework she initiated has been widely used and has many qualities.

In literature, methods within service design are named and explained. 'Service blueprint' and 'Customer journey' are in literature (Stickdorn and Schneider, 2011) described as two different methods, even though a service blueprint is always based on a customer journey. What is not surprising, but became clear from the two interviews, is that in practice, the methods are mixed and matched, so that the distinction between them is not as specific as in literature. The two interviewees did not have a clear definition of where to draw the boundary between a customer journey and a service blueprint. The interviewee from BEKK had no interest in defining the differences, but focused on the positive features of the methods, and combined them as appropriate. The interviewee from EGGs drew parallels to blueprints in other engineering disciplines, and therefore considered the service blueprint to be the service designer's version of a 'production/manufacturing drawing'. Literature describes the blueprint to be a tool that can be used both in the beginning of a design process to gain insight and at the end of the process as a map to explain how a service should be delivered (Bitner et al., 2007, Stickdorn and Schneider, 2011, Polaine et al., 2013). The name service 'blueprint' can therefore be

misleading, as 'blueprint' only refers to finished drawings that are ready to be used as production drawings. From the name of the method, it is therefore not intuitive to understand that 'service blueprinting' is something that can be done also in the beginning of a design process.

Another argument to why 'blueprint' is not an appropriate name for the method, can be derived from the comment made by the interviewee from BEKK, that information and insights are often insufficient, and the map is therefore not a true picture of reality. A blueprint in other engineering disciplines is more of a set formula, while the service blueprint is also an analytical tool, rarely being a complete picture of reality. When a blueprint is used as a communication tool between the service designer and client, the interviewee from EGGG pointed out that it is more sufficient to give the map an easier comprehensible name. 'Blueprint' does either not give the client information about the content at all, if he or she is not familiar with the term, or it may give improper conceptions about the level of completion. However, it seemed like the two interviewees used more or less the same procedure in their design process, mapping different 'customer journeys', 'service maps' and 'gigamaps' in the beginning and if appropriate, organized the information more or less into a layered blueprint, like it is described in literature.

Insights from the two interviews confirm that the name service blueprinting can be misleading, both for communicating when in the design process the tool can be used, when trying to explain to a client what a 'blueprint' is and because it is not necessary a true picture of reality in the same sense as technical drawings in other engineering disciplines.

5.2 Shift in focus

Both from the literature review and from the interviews conducted it was found that there has been a development from efficiency and economic profit to a greater focus on customer experience in the service blueprint. The two citations mentioned in the introduction highlights this shift in focus: 'The design of a service blueprint should meet two criteria: economy and symmetry' (Kingman-Brundage, 1988, p. 33) and 'The goal is to capture the entire customer service experience from the customer's point of view in the blueprint' (Bitner et al., 2007, p. 7).

The notion of how the focus in the service blueprint has changed is mentioned in a former article (Bitner et al., 2007), but the reasoning for why this change has occurred is novel insight, not found in the literature reviewed. The change in focus is in this article found to have two explanations. The first is that the tool initially was developed from a management and marketing perspective, which have an economic point of view, and is in recent years adopted by designers, who in general have a customer oriented focus.

The second explanation is the development of overall business strategizing. Figure 4 (Forrester Research, Inc.) shows a development from the 'Age of Manufacturing' to the 'Age of the Customer'. The insight that the products not alone created value to the customers can be seen as typical for the 'Age of Distribution', when the method of service blueprinting evolved, questioning not only what products to produce, but also how the products should be delivered. According to Forrester we are now in 'The age of the customer', and argue that 'Power comes from engaging with empowered customers'. This corresponds to the recent development of the service blueprint.

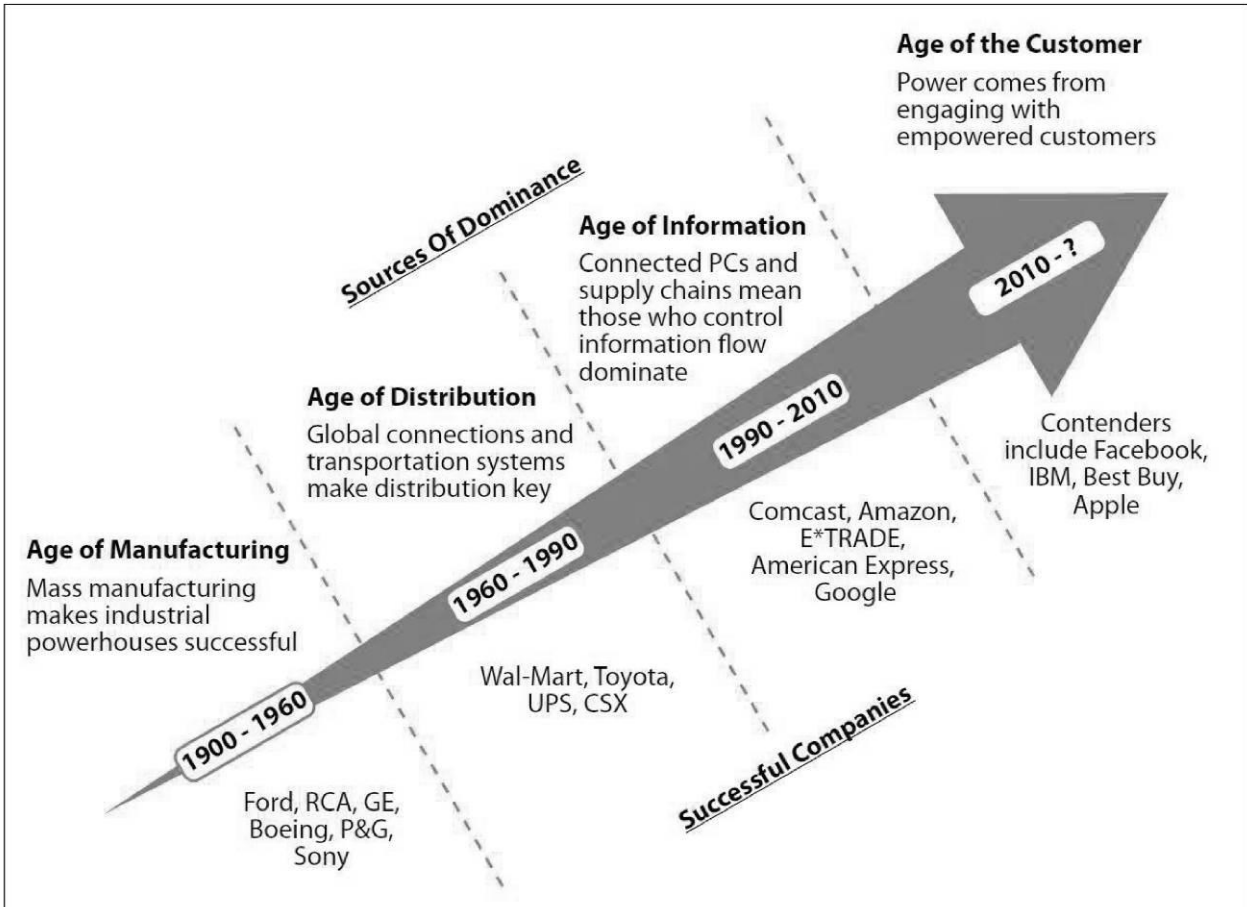


Figure 4. Development of business strategizing from Age of Manufacturing to the Age of the Customer (Forrester Research, Inc.).

5.3 Presentation of information

From the articles discussing and giving critique to the service blueprint framework, and to an even greater extent from the interviews conducted with the two service designers, weaknesses with the method were detected.

Both of the interviewees commented how it is difficult to present a complex service blueprint to a client, because of too much information displayed at the same time and little differentiation between how important the information is. Spraragen and Chan (2008) found that pictorial representations were useful to visualize the information in the service blueprint, but the view of Shimomura et al. (2009) is that meanings of symbols often are too ambiguous

and inconsistent, and that there is insufficient normative notation.

It seems to be a dilemma how the information in the service blueprint should be displayed. There are obvious drawbacks with using a strict grid and text-boxes, but it is time consuming and requires graphical skills to visualize the information, and as Shimomura et al. point out, the symbols are often ambiguous and there is a risk that information gets lost.

Through the literature review and the interviews conducted, the need for a tool better customized to present the complex information of a service system is discovered. For service designers presenting the blueprint with insights to their clients, it is important that the information is

easily understood. The interviewee from EGGS commented that it would have been a help if some of the information could be hidden.

Morelli and Tollestrup (2007) predicted a shift in industrial production, where 'the design of solutions including both material (products) and immaterial elements (services) will be the main task for industrial companies and for designers' (Morelli and Tollestrup, 2007, p. 1). In the same article they point out the critical role of representation technique in this new paradigm. Because more co-operations between different stakeholders and co-production are needed to develop new services, new presentation tools are needed to communicate with the involved actors. Morelli (2006) request these tools to be of three categories:

- 1) Analysis and interpretation of the context
- 2) Development of the system
- 3) Representation and communication of the solution.

She found that the third category often has been overlooked and that representation and communication techniques for product service systems are insufficient.

Based on research around the method of service blueprinting, the findings in this article leads to the same conclusion as Morelli (2006) and Morelli and Tollestrup (2007) drew, that the communicative properties of service design tools, in this case the service blueprint, are poor and has potential for improvements.

6. CONCLUSION

The purposes of mapping information into a service blueprint are found to be several, but the most important proceeds were:

- Make intangible conditions explicit
- Describe systems and get overview of processes, and at the same time become aware of all the elements the service consists of, so they can be changed to benefit the entirety

- Communication between the different stakeholders involved, common point of reference
- Achieve customer insight, so the service can be changed to better satisfy their needs

In both literature and interviews these qualities are found to be the reason for why people map information like service blueprints, and the needs for this tool are the same today as it was three decades ago, when the service blueprint method was developed. This is likely to be why the method has been popular for so long. Economic development show that being able to offer customers value through other channels than physical products is profitable, and will be in the future (Morelli and Tollestrup, 2007). Tools for facilitating the development of services are therefore highly needed.

The service blueprint method, developed from a management and marketing perspective, has in recent years been adopted by designers, which together with the trends saying we are in 'The Age of the Customer' (Forester Research, Inc.), has affected what information is mapped in the blueprint. The information included has changed from practical to also include more background information about the customers, like thoughts and feelings, and the environment in which the service is conducted.

Mostly through the interviews conducted, but also from the literature review, cons with the method of service blueprinting were detected. It was found that the communicative skills of the traditional service blueprint are poor, due to high complexity and little differentiation between how important the information is. For the service designers making a blueprint it is time consuming to visualize and organize the information so it is more comprehensible for their client, not displaying all information at the same time. To increase the quality and usability of the service blueprint tool, and other service design tools (Morelli and Tollestrup, 2007), further development in the field of displaying the

information to be better communicated is necessary.

The challenge to develop the communicative properties of service design tools is responded to in a project derived from this article. The project is conducted in collaboration with a fellow student who has specialized in how information should be visualized. A concept for how the system supporting a service and how in depth information about customers can be communicated through a digital surface is developed. The focus in the project is how the information should be displayed to provide both overview of the entire process, but at the same time give detailed information about elements.

REFERENCES

- Berry, L. L., Carbone, L. P. and Haeckel, S. H. (2002), 'Managing the Total Customer Experience', MIT Sloan Management Review, Vol. 43, No. 3.
- Bitner, M. J., Ostrom, A. L. and Morgan, F. N. (2007), 'Service Blueprinting: A Practical Technique for Service Innovation', California Management Review, Vol. 50, No.3, p. 66-94.
- Denscombe, M. (1998), 'The good research guide', Open University Press, Buckingham UK, p.113.
- Forester, Research, Inc.
- Kingman-Brundage, J. (1988), 'The ABC's of Service System Blueprinting', from 'Designing a winning service strategy', Papers from 7th annual service marketing conference, held in Arlington 1988. Chicago: American Marketing Association, 1989.
- Morelli, N. (2002), 'Designing Product/Service Systems: A Methodological Exploration', Design Issues: Vol. 18, No. 3.
- Morelli, N. (2006), 'Globalised markets and localised needs – relocating design competence in a new industrial context', Engineering & Product Design Education Conference, Salzburg.
- Morelli, N. and Tollestrup, C. (2007), 'New representation techniques for design in a systemic perspective', Design Inquiries, Stockholm.
- Patrício, L., Fisk, R. P. and João Falcão e Cunha (2008), 'Designing Multi-Interface Service Experiences: The Service Experience Blueprint', Journal of Service Research, Vol. 10, No. 4, p. 318-334.
- Polaine, A., Løvlie, L. and Reason, B. (2013), 'Service Design: From Insight to Implementation', Rosenfeld Media, LLC
- Service Design Tools (<http://servicedesigntools.org/tools/35>). This website is the result of the research activity done by Roberta Tassi during her graduation thesis, further developed within the framework of the cooperation between DensityDesign research group at INDACO Department - Politecnico di Milano and DARC - the Research & Consulting Center of Domus Academy. Service Design Tools is conceived as an open platform of knowledge, to be shared with the design research community.
- Shimomura, Y., Hara, T. and Arai, T. (2009), 'A unified representation scheme for effective PSS development', CIRP Annals - Manufacturing Technology 58, p. 379-382.
- Spraragen, S. L. and Chan C. (2008), 'Service Blueprinting: When Customer Satisfaction Numbers are not enough', International DMI Education Conference, Design Thinking: New Challenges for Designers, Managers and Organizations, 14-15 April 2008, ESSEC Business School, Cergy-Pointoise, France.
- Shostack, G. Lynn (1977), 'Breaking Free from Product Marketing', Journal of Marketing, Vol. 41, No. 2, p. 73-80, American Marketing Association.
- Shostack, G. Lynn (1982), 'How to design a service', European Journal of Marketing, Vol. 16, No. 1, p. 49-63.
- Shostack, G. Lynn (1984), 'Designing Services That Deliver', Harvard Business Review, January-February 1984, p. 132-139.
- Stickdron, M. and Schneider, J. (2011), 'This is service design thinking', John Wiley and Sons, Inc., Hoboken, New Jersey.
- Womack, J. P. and Jones, D. T. (2005), 'Lean Consumption', Harvard Business Review, March 2005
- Interview with service designer in EGG, Trondheim, 16.10.2013, kl. 15.00-16.00. The 28.11.2013 the interviewee got to read through a draft of the article and approved how the information from the interview is used.
- Interview with service designer in BEKK, Oslo, 1.11.2013, kl. 12.00-13.30. The 28.11.2013 the interviewee got to read through a draft of the article and approved how the information from the interview is used.

APPENDIX

QUESTIONS FOR THE INTERVIEWS

The interviews were held in Norwegian, but below the questions are also translated to English.

1. How do you describe a service blueprint?
(Hvordan vil du beskrive hva en service blueprint er?)
2. What is the difference between a customer journey and a service blueprint?
(Hvor går grensen mellom customer journey og service blueprint?)
3. In what projects do you make a service blueprint?
(Til hvilke type prosjekter lager du/dere service blueprints? Lager dere alltid service blueprint til tjenestedesignprosjekter? Hvorfor/hvorfor ikke?)
4. Why do you make service blueprints? What do you gain from it?
(Hvorfor lager dere service blueprints? Hva får dere ut av det? Hva bruker dere blueprinten til? Få oversikt selv, kommunikasjon med oppdragsgiver, evt. kommunikasjon med kunden...?)
5. When in the design process do you make a service blueprint?
(Når i designprosessen lager dere service blueprint? Research-fasen, midt på eller mot slutten av prosjektet som en leveranse til oppdragsgiver? Evt. bygger på litt og litt underveis?)
6. What layers do you normally include on the vertical axis? Do you follow a standard layout or do the layers differ depending on type of service?
(Hvilke lag/rader pleier du/dere å ta med på den vertikale akse? Følger dere et standard oppsett, eller er lagene/radene avhengige av type tjeneste?)
7. How detailed do you believe the information in a service blueprint should be?
(Hvor detaljert mener du informasjon i en service blueprint bør være? Går dere f. eks i detalj på hvordan en arbeidsoppgave skal utføres eller holder dere dere til en overordnet oversikt over forløpet?)
8. How do you present the information in the blueprint? Text and boxes, icons, other graphics?
(Hvordan pleier du/dere å fremstille informasjonen? Tekst og bokser, bilder, ikoner og/eller annen grafikk..? Hvorfor fremstiller du/dere informasjonen på denne måten?)
9. What do you believe are the greatest pros and cons with service blueprinting?
(Hva synes du er største fordeler og ulemper med service blueprinting?)