Service design in an interaction design project

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ABSTRACT

This article takes a look at what the service design field has to offer in an interaction design project. Some of the most common tools and methods in the two fields will be presented and compared. Service design contributes with an overview of a company’s service that is lacking in a normal interaction design project. To design an interaction that fits in with the existing service offering, knowing what the existing service is, how it is used, and if the project can contribute with a more sufficient service, could make or break the success of the project.

KEYWORDS: Interaction design, service design, design tools and methods, design process

1. INTRODUCTION

Both service and interaction design are relatively new fields, first mentioned in the 1980s. Some of the first to mention interaction design was Bill Moggridge and Bill Verplank. It grew popular and evolved into an established design discipline during the 90s. Service design was first mentioned in articles like “How to design a service” (Shostack, 1981) and “the introduction of service design as a design discipline” (Erhloff, 1991), but it is first in the past eight years that service design really has blossomed. Even though both fields are new, interaction design has had time to set roots before service design was rediscovered and developed.

Considering that the two fields are related, there are few articles that investigate the relationship between the two fields. The lines between the two fields, as in all the design fields, are vague. It can be difficult to define where one design discipline ends and the other begin.

The design process will always vary a bit depending on what kind of problem that has to be solved. Interaction design normally looks at one particular problem at a time, and one interaction that needs improvement. For example, even though a company outsources both its web page and its app to be redesigned, they have no guaranty that the solution found will fit in to the company’s future if the strategic goals have not been set in advance. The result of such a project may solve the interaction problem beautifully, but does it fit in with the rest of the solutions that the company offers? This article investigates if, ensuring that the solution found is in the best interest of the whole service, can be the role of service design in an interaction design project.

“The service sector now accounts for over 70% of total employment and value added in most OECD countries” (Maffei, Mager and Sangiorgi, 2005). Most companies acknowledge that good services
are important to attract and keep customers (Wilson, Zeithaml, Bitner and Gremler, 2008). This is why service design is such an important field. The question is, can it be a part of a smaller project? Can it contribute to making an interaction design project better?

In chapter 2 the definitions of the two relevant design disciplines, interaction design and service design, will be presented. In chapter 3 and 4 some of the tools and methods from the two disciplines are described. This article has been written simultaneously as an interaction design project has been conducted to test the hypothesis presented in this article. The experiences from this project will be presented in chapter 5, as an example of how service design can be used in an interaction design project. In the last chapters, 6 and 7, the relevance of service design in an interaction design project will be discussed before the conclusion of the paper will be presented.

2. DEFINITIONS

2.1 Interaction design

The different design disciplines share many design tools and methods. By knowing one design field, learning another is easier. Design thinking has become a well-known way of conducting a multidisciplinary project. Design thinking shows the importance of a good design process (Brown, 2009).

Interaction design can be hard to define because there are many different types of interactions that can be designed. Three different definitions will here be described to illustrate the diversity in definitions. “Interaction design can be understood as shaping digital things for people’s use. “ (Lowgren, 2008), that just covers the interactions with digital surfaces. “Interaction designers design for the possibility of interaction. The interaction itself takes place between people, machines and systems in a variety of combinations” (Saffer, 2010) defines interaction design as human machine interaction.

“Interaction design is the practice of designing interactive digital products, environments, systems, and services” (Cooper, Reimann and Cronin 2007) includes all interactions between humans and products, both physical and virtual.

In the 1990s, Bill Moggridge from IDEO, an international design company, named the new kind of design he was doing interaction design. By the mid 90s interaction design was getting popular and, with the increasing use of technology, became a natural part of improving human-machine interactions. Most design schools today offers interaction design as an independent education. It has become a well-known profession, and a respected design field.

2.1 Service design

The interest and development of service design started even later than interaction design, and is therefore even harder to define. Different designers have different opinions of what service design is, and what it should be. Two definitions are as follows: “Service design helps to innovate (create new) or improve (existing) services to make them more useful, usable, desirable for clients and efficient as well as effective for organizations. What is a new holistic, multidisciplinary, integrative field” (Moritz, 2005 cited in Stickdorn and Schneider 2010, p.31). “Service design is a holistic way for a business to gain a comprehensive, empathic understanding of customer needs” (Frontier Service Design, 2010 cited in Stickdorn and Schneider 2010, p.32). A more visual definition is “When you have two coffee shops right next to each other, and each sells the exact same coffee at the exact same price, service design is what makes you walk into one and not the other” (31 Volts Service Design, 2008 cited in Stickdorn and Schneider 2010, p.32). These quotes are taken from the book “This is service design thinking”, which strives to make an overview of the new field, with methods, tools and definitions.
Marketing was one of the first fields to see and understand that services needed to be planned and designed as a whole. As a result, marketing has had a big influence on the development of service design (Stickdorn and Schneider, 2010). A good service gives a competitive advantage because it offers the client a coherent and predictable service. Because service design is such a new field, there are still few service design educations.

3. INTERACTION DESIGN TOOLS AND METHODS

The tools presented in this chapter are the tools that are most commonly used and referred to in the literature investigated for this article. There are of course many more that can be used. Every project is different, and should therefore contain the tools and methods that are most relevant for the specific project. Those included here are not exclusively used in interaction design, and can also be found in many other design fields. They are never the less presented here because they appear in the literature as important parts of an interaction design process.

The first part of any design project is normally information gathering. It can be helpful to plan what kind of tools and methods that are going to be part of the process in advance. In this way the information gathering has a clear purpose, and the tools can be applied more efficiently.

An assortment of information gathering tools:

- **Research**: reading books, articles and searching the web for useful information.
- **Interviews**: asking users questions. It gives a first hand understanding of the users habits, needs and wishes.
- **Shadowing**: Following users without interruption. It is not always the users are aware of their own behavior, and it can therefore be useful to observe them through the interactions to find problematic areas.

- **Benchmarking**: it is important to see what works and what don’t within the existing solution. With this knowledge the same mistakes can be avoided in the new design.

3.1 Personas

To keep the end user and the different user groups in mind during the design process, Personas can be an important tool. “A persona is a fictional person who represents a major user group” (usability.gov). Personas should be based on real people, with different needs and wishes. During the design process the questions like “would the persons like this?” can be an important part in finding new solutions.

3.2 Scenarios

Scenarios are illustrations of specific situations during the interaction. Scenarios are an effective way to tell a user story. The scenarios illustrate different problems that need to be solved. Different personas can react differently throughout the different scenarios, and this can be a big help in ensuring that the project is covering all user groups (Saffer, 2010).

3.3 Task flow

“Task flow analysis will document the details of specific tasks. It can include details of interactions between the user and the current system, or other individuals, and any problems related to them” (usabilitynet.org). Creating a task flow overview shows what tasks that need to be implemented. The task flow shows the logical hierarchy and is the foundation for the wireframes (Saffer, 2010).
3.4 Wireframes

“The wireframe itself is a detailed view of a particular part of a product” (Saffer, 2010). When you are designing an app, every screen has a wireframe. The wireframes explain why buttons are where they are, what function they have and so on.

3.5 Prototyping

When designing an interaction, testing is a necessity. All the aspects of the interaction can be brilliantly designed, but the interaction itself may still not work perfectly. Testing is therefore a very important tool. Depending on what kind of interaction is being designed different types of prototyping tools can be used. For a physical interaction cardboard and glue can be the right tool, while for a screen based interaction different types of fast mock-up programs, like proto.io for iPhone and ipad, are available for fast prototyping.

4. SERVICE DESIGN TOOLS AND METHODS

Even though service design is in development, there are many tools and methods that are a part of defining it. Many of the tools and methods are as in interaction design borrowed from other design disciplines. An overview of the most common service design tools and methods described in the literature will be given here.

Information gathering for a service design project is much the same as for an interaction design project. The difference is how the information is being used. Because service design is about seeing the whole picture, the information gathered needs to cover a bigger area than for an interaction design project. For example can depth Interviews of all the stakeholders be very useful. Other methods like personas and scenarios are often used in service design as well as in interaction design.

4.1 Customer Journey map

Touch points are the contact areas where the customer interacts with the company that provides the service. All the touch points makes out the total service experience (Bechmann, 2010). Each touch point is often used in sequence to tell the user story of how different customers use the service, a customer journey map. “A customer journey map provides a vivid but structured visualization of a service user’s experience” (Stickdorn and Schneider, 2010). The customer journey maps give an overview over how the customer travels through the service and how the customer experience each touch point.

4.2 Service blueprints

Service blueprint is a schematic presentation of all the aspects of the service. This gives an overview over the user action, the front stage and the back stage interactions (Stickdorn and Schneider, 2010). This way every point of interaction can be reveled, evaluated and designed.

4.3 Co-creation

“Co-creation is a core aspect of the service design philosophy” (Stickdorn and Schneider, 2010). The customer plays an important role in a service, and it is therefor relevant to involve the customer in the design process (Bechmann, 2010). The customer can be involved in different parts of the project, depending on what the designer finds relevant. Co-creation can happen from the early business and vision part of a project to the ide generating and the evaluation of concepts.

4.5 Role play

A scenario can be played out to get a better understanding of the situations and the tasks involved in the process. The players can be actors, users or the designers them selves. “A
possible evolution of this tool consists in the performance of the same scene several times, changing the character profiles on each scene in order to understand how different users would act in the same situation” (servicedesigntools.org)

4.5 Prototyping

Designing a service experience can be a very abstract process. It can therefore be useful to build prototypes to remember that the service is something that are going to be used and not just end up in a written report on a desk somewhere. There are no right answers in design, hence the solutions need to be tested. The easiest way to do this is with simple mock-ups that illustrate how the touch point can work. Here interaction design and service design connects. When working with one touch point, one interaction, is it then interaction design or service design?

5. EXPERIENCE

As mentioned earlier a project has been conducted simultaneously as this article has been written, to investigate the potential benefits of combining service- and interaction design. The project was done for Flytoget (airport express train) in Oslo. Flytoget has a clear brand profile, and satisfied customers. According to Bls, Norwegian business school, yearly customer barometer Flytoget has the happiest customers in 2012. They also won in 2008 and 2010 (kundebarometer.com). They are known for good service, punctuality and as a modern innovative company.

The design brief for the project was “1. Identify the touch points between Flytogets service and the customers. Present the touch points in a customer journey map in an easy, visual way. 2. Find which touch points an app can improve. 3 Design a new app based on the findings.”

In this project the service was relatively easy to get an overview over, and the customer journey did not revile any big problems. This was expected since the service is well functioning and has a customer satisfaction of 96%.

It is important that the end users feels that the app is a part of the company, and that it can contribute to making the journey easier. To make sure that the app actually contributes and does not make the journey more difficult, the project was started as a service design project. The touch points were found, and together with customer interviews lay the foundation for personas and the customer journey. Through the customer journey it became clear that the app today does not contribute to the journey. The big question was then which touch points the app can improve? The easy ticket system is something that Flytoget is known for, but it is just easy for those who are buying adult tickets. This together with being able to plan your journey became the main aspects of the app.

An important question along the way was if the project could contribute to improving the touch points. Through the whole project the view was constantly changed from an overview perspective to a detailed perspective. This made it possible to see the project from different sides, and made it easier not to get lost or go in the wrong direction.

Without the service design angle at the beginning of the project “the feeling” of Flytoget might have been lost. With “the feeling” means the streamlined design, the efficiency and punctuality of the train together with the warmth from the personnel assisting you every step of the way. The need for an alternative to buying tickets from the ticket machine may also have been overlooked, and the wish from the customers to only include the most necessary information. An important aspect of the Flytoget project was to lay a foundation for the redesign of the other virtual solutions to ensure that the different solutions are cohesively designed.
6. DISCUSSION

Development of technology and new commands from the public drives new design disciplines as interaction design and service design forward. They were both “discovered” in the 80s, but interaction design developed in to a known design field 10 years before service design. It can be difficult to say why, but perhaps the huge technologic advances made the interaction design a necessity. Much like the fact that around 70% of our economy today is service related has contributed to the development of service design as an important design field.

The tools and methods that define service design and interaction design are different, but many of the tools for gathering information and insight are the same. It is the way the tools and methods are applied that makes the big difference. Service design looks at the whole picture; both stakeholders and customers are a part of the process. In interaction design on the other hand there are often one specific problem that needs solving, and the tools and methods needs to be applied in a way that give a deeper understanding of the specific problem. The idea generating tools are the same in most design processes, and will therefore not be discussed in this article.

![Diagram of company, service, and products]

**Figure 1**

Figure 1 shows the relationship between the company, the service they offer and the individual products that the service consists of (both physical and virtual). The products are just one aspect, and by looking at this part alone the risk is that the solution found does not function with the rest of the service, or there could be missed opportunities for the project. By starting at the top, with the company, then look at the service as a whole and then form and design each touch point, the project has a bigger potential for succeeding.

An important aspect of any company is profitability. By losing opportunities to maximize the profit of a project, the company risks having to do extra projects or ends up with a service that does not work. The Norwegian buss company AtB has done this. They have tried to be as flexible as possible by letting the customer pay cash, pay with a buss card or pay through an app. This is in itself a good idea, but when the bus card and the app needs two different accounts it all becomes difficult for the customer. Each touch point has been developed on its own without thought of how all the touch points together looks from a customer’s point of view. If all the touch points had been planned together, before the development of each solution, the result may have been a coherent service that gives the customers opportunities to use the service as they please.

In both interaction and service design, user involvement is a big aspect of the design process. But also here the user involvement is fundamentally different. In service design all the stakeholders should be a part of the design process at one point or another. In interaction design, the end user is the main focus. In the Flytoget project the main focus was on the user, and the service design part of the project also kept this focus. Maybe the result had been different if the service design part of the project focused on all the stakeholders. But to me it is clear that the service design part of the project contributed with a lot of insight that had been hard to obtain otherwise. It is still clear that this needs to be investigated further in other projects. How big the role of service design needs to be to ensure the quality of the project is uncertain.
7. CONCLUSIONS

Service design should be a part of every interaction design process. Many of the methods used in the two disciplines are the same. It is the application of the methods that vary. Service designers look at the whole picture. They try to see the whole company and its services, while interaction designers look at one aspect of the company, one problem that needs attention. Looking at the big picture first can give a better insight and therefore also a better result. This insight makes sure that the results fit the rest of the company, can give awareness of changes that should be done other places and provides a chance to do so cohesively.

By using the most fitting tools and methods for the specific project, regardless of the design field they belong to, the designer can tailor a design process for the given task.

The importance of thinking of the company first, then the service they offer and then the interaction in each touch point may be an important method to ensuring that the company delivers a coherent service that the customers are satisfied with. This does not necessarily mean that that an interaction design project has to include every touch point. It can mean that the company needs to look at the big picture before starting to redesign the individual touch points. By implementing the insights in each project they can ensure that the end results mirror the company’s vision.

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