THE BEST OF BOTH WORLDS

DESIGNING A SEAMLESS INTEGRATION OF THE IN-STORE AND DIGITAL RETAIL EXPERIENCE

By Martina Frantzén
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ABSTRACT

The increased use of online channels has opened up new possibilities for traditional stores to develop their businesses towards a global market place. Although the use of online retail channels has expanded rapidly among customers, the physical store still remains a crucial component in the multichannel customer experience. In this thesis, the goal was to explore how a seamless customer journey can be achieved by bridging offline and online retailing channels through the utilisation of user experience design.

Previous research in retailing trends, customer motivations and existing solutions provided a basis for understanding the holistic customer journey and those factors affecting the customer’s online and offline shopping experience. Interviews conducted with customers, store associates and retailing experts provided diverse perspectives on the customer journey. In addition, field studies were conducted to obtain deeper insights about the customer’s experience in a real store environment.

With the identified challenges and possibilities acquired from the research, a future concept proposal was developed through an iterative design process.

The concept consists of a platform-based mobile service that combines the versatility of online channels with the qualities of the store environment. Prototypes were built in order to evaluate the experience when using the service. The outcome of the concept evaluation supports the set goal of integrating the offline and online channels in order to create an integrated customer journey. Additionally, the outcome from the evaluations showed a positive result when measuring both the pragmatic and hedonic qualities of the experience. The outcome can be seen to support the importance of a seamlessly integrated customer experience throughout the in-store and online retail channels.
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1. INTRODUCTION

Considerable changes have occurred in the retail business as a result of technological innovations. The traditional form of retailing, where the retailers primarily trusted in their shops and a friendly staff, is becoming part of a much larger system. The use of online tools has made it possible to find a wider range of products outside of one’s hometown. Additionally, it enables the user to obtain easier access to better prices, detailed product reviews and a diverse set of information. This development has opened up a whole new world for consumers, who can purchase products regardless of geographical locations or opening hours.

Retailers increasingly utilise online channels by introducing online shops and mobile applications. The popularity of online purchasing is on the increase among consumers, but on the other hand, combining the use of both online and offline channels during a purchase journey is also becoming more and more common (Accenture, 2014). In a recent study regarding simultaneous use of online and offline channels, more than 80% of the international respondents claimed to use online sources of information before buying products such as electronics, books, and entertainment in store (PwC, 2012). Additionally, the seamless integration of online mobile devices into the physical space is predicted by analysts to take place in 2014 (Ericsson, 2013).

1.1 BACKGROUND

Although the use of multiple channels among consumers continues to expand, the usage of these channels as a single holistic experience is often overlooked by retailers. The incoherence that a consumer experiences when using an online store and later visiting the same brand’s physical store can result in two very different experiences (Dodd, 2012). The various channels offered by retailers today include mobile applications, websites and physical stores, all of which can appear rather detached from each other from a customer journey point of view. This suggests that the various channels have not been explored enough by today’s retail businesses as an entity of building blocks in a
customer journey. Thus, the incorporation of these digital channels into the physical store could create a unified and integrated user experience is worth further investigation. In my view, the connection between the physical and digital worlds will transform the way customers shop and view conventional stores and digital experiences in the future.

1.2 OBJECTIVES
The goal of this thesis is to explore how a seamless customer journey could be reached by combining offline and online retailing channels into an integrated entity that ensures a more coherent multichannel customer journey by bringing the overall customer experience closer to the traditional store. The primary approach so far has been to apply the principle of ‘just-in-time’ interaction when developing a new concept proposal.

The thesis results in a proposal of a concept that is supported by topic-related literature and in-depth insights obtained from different stakeholders and experts. By using various research methods, new insights were obtained regarding the behaviour and actions of consumers while shopping. The results contribute for their part to the understanding of a user-friendly customer journey.

**FIGURE 1.** Bringing retail channels together can encourage a coherent customer journey.
2. LITERATURE REVIEW

2.1 INTRODUCTION
The literature review aims at covering the essential aspects of the customer experience, the development of upcoming retail models and ‘just-in-time’ interactions described in the thesis. As such, it provides an insight into the customer journey, summarises the basis of the retail customer experience, and establishes an overall understanding of the various retailing channels used today. It also indicates how these channels can be combined in a more seamless manner by applying various design approaches and assists in answering the key question of this research: How can online and offline retailing channels be integrated to achieve a seamless and richer customer journey?

2.2 DEFINING EXPERIENCES
A central element of creating a seamless customer journey occurs through a greater understanding of how customer experience is formed and how customer behaviour is affected by it. These customer experiences can be further divided into direct or indirect interactions with a company and its products. According to Meyer and Schwager (2007), these direct interactions are generally initiated by the customer and include the purchase and use of a product or service while indirect interactions occur when the customer encounters the company’s products, brands and services in unplanned situations such as advertising, word-of-mouth (recommendations or criticism), and news reports. This differentiation is key especially when considering how it may apply to business-to-consumer (B2C) and business-to-business (B2B). Pförtsch et al (2007) argue that a B2C company serves their customer’s personal needs while a B2B company aims at making a meaningful contribution in their client’s value chain. However, in both cases, it is clear that the ultimate goal would still be to create a meaningful and positive experience for their end-users.

According to user experience consultant Jon Innes (2013), a user of an online channel is likely to become a customer if he or she has had a positive experience when interacting with the company.
Furthermore, he (2013) suggests that a successful customer experience can only be achieved through an effective initial online user experience, since this can lead to a purchase. Thus, a positive interaction can transform the potential user into a customer. Since this thesis relates to the target group of retail service as potential customers, I will refer to them as both users and customers throughout the thesis.

2.2.1 USER AND CUSTOMER EXPERIENCE

Defining user experience and methods of implementation is critical in order to understand its purpose and potential. The definition and evaluation of user experience (UX) varies somewhat between disciplines and fields. In a study by Väänänen-Vainio-Mattila, Roto and Hassenzahl (2008), perceptions of UX were researched by comparing the views of researchers and product developers. According to the study, there are differences between these two groups’ perception of UX. While researchers place more emphasis on the hedonic, emotional and dynamic aspects of the experience, the product developers’ focus was on functionality, usability and the product life cycle. According to Väänänen-Vainio-Mattila, Roto and Hassenzahl, (2008) product development is also shifting towards appealing products that fulfil the essential preferences and values of people, rather than focusing solely on their functionalities.

2.2.2 TRANSFORMATIVE EXPERIENCES

The value of experiences has not only been recognised by designers, but corporations in general increasingly consider it a useful business tool. Instead of only acknowledging the direct value of a product, corporations have also begun paying greater attention to experiences as a result of consumer demands: “Today we can identify and describe this fourth economic offering because consumers unquestionably desire experiences, and more and more businesses are responding by explicitly designing and promoting them” (Pine and Gillmore, 1998, p.97). As this statement suggests, a change is taking place,
and the consumer is playing a key role in shaping the future of brand experiences. Since the publication of this earlier article, Pine has progressed to talk about “The Transformation Economy” as a next step of development. In an online video interview with Jyske Bank (2010), he explains that the next step from the experience economy is a transformational stage, where experiences can have a more personal impact on users and affect their behaviour in the long run. He offers an example of this in the way fitness and healthcare services encourage people to live healthier through the experiences they offer (Jyske Bank 2010). Joseph Pine’s view on experiences transforming into new behaviour and their personal impact on users has been a source of inspiration for this thesis. Moreover, it can offer a potential way for retail businesses to change the concept of shopping and the way in which users interact with products and services in the physical store.

2.2.3 EXPERIENCE MAPPING
The transformational effect of experiences is strengthened by the research group, Conifer Research (2002). The five phases, ‘entice’, ‘enter’, ‘engage’, ‘exit’ and ‘extend’, depict various stages of transformative experiences. The first step explains the expectations of the customer for the upcoming use of the product or service. The following stage acts as a guideline to orient the customer into the experience e.g. finding a specific location. The third stage depicts the important contact between the company and the customer. The customer’s exits the experience after using the service or product. Extending the experience after the main contact is over is suggested as a last stage in the process (Conifer Research 2002, p.2).

This model has been created in order to provide companies with a better overview of their services and the touch-points between them and their customers. In this thesis, this model is helpful in order to understand the components that form a customer experience and the journey that they go through.
A seamless integration of offline and online channels requires the designer to understand the situations in which these are used. With mobile technologies enabling dynamic and fast interaction, it is crucial to consider the context and the demands of the various user situations.

2.3 JUST-IN-TIME INTERACTION

This thesis focuses primarily on ‘just-in-time interaction’ which is a relatively new approach. The expression ‘just-in-time’ is commonly used to describe the method where an item is produced or assembled close to its delivery time in order to reduce transportation and storage costs (Kootanacee et al., 2013). However, JIT can also be put into the realm of interaction design as introduced by the designer Scott Jenson in a blog article on designmind.com (Jenson, 2011).

The relatively new approach of JIT interaction allows the user to effortlessly access information about a specific object or place using a mobile device for example. The information needed by the user can be temporary and does not require the user to prepare or download applications to locate it. Scott Jenson (2011) refers to this sort of action as a ‘one shot interaction’ that provides temporary, but valuable information in the moment.

Today, the integrated usage of digital and physical store channels still requires the use of conventional mobile applications. However, the common setup with a mobile application and online and physical stores can be made more fluid by applying the principle of aforementioned JIT interaction.

The JIT interaction approach will be a crucial part of this thesis and the method of interaction applied in it. Due to the novelty of this approach, published literature on the subject is sparse. An interview was conducted with Scott Jenson for this thesis in order to obtain more background on the topic. This interview and the insights will be presented in the ‘Immersive insights into the customer journey’ section of the study.
2.4 ROLE OF THE CHANNELS

2.4.1 ONLINE AND MOBILE

The breakthrough of online devices amongst consumers has allowed new communication channels that offer a useful tool when creating user-friendly store experiences. The amount of internet users is rapidly increasing, with more than 2.5 billion web users in the beginning of 2014 (SG, 2014). With approximately 6.5 billion mobile subscriptions in the world, these devices continue to represent a significant tool for many retailers and consumers (Ibid). Moreover, the benefits of using online channels for purchases have offered further opportunities for consumers and small businesses to reach out to a global marketplace. Compared with physical stores, online retail channels attract consumers with wider item selections, better prices and research possibilities. For retailers, starting up an online store is very inexpensive compared with the costs of a physical store (Sands, 2008). As the use of online channels increase, the role of the physical store is yet to be clarified.

2.4.2 THE PHYSICAL STORE

In the previous section of the thesis, the online channel and its usage was explained in order to clarify its role and the way it is currently used by customers. With the utilisation of online channels, examining its effect on the use of offline stores was completed as a logical next step. In order to investigate the importance of physical stores, a survey was conducted by a group of American researchers around the 2010 Christmas holidays (Cho and Trincia, 2012). According to the study, 48% of the purchases were made in-store and 45% online. Even though a large part of the items were purchased online, the majority of consumers stated that they had visited a physical store to view the product prior to buying it; many customers did this regardless of which channel they used to make the final purchase (Cho and Trincia, 2012).

My interpretation of these findings is that consumers should have the possibility to use both digital and physical channels during a customer journey. Both the
physical and digital tools offered today in the shape of web stores, online reviews, blogs, and the traditional in-store, create a good starting point for further development of the customer experience. As a next step, I considered it important to reach an understanding of the motives and decision-making processes that the users traverse when using these channels.

2.5. MULTICHANNEL USERS

The choices that consumers make before and during a purchase scenario can be linked to personal needs and goals, and these motives can be mapped with customer profiling. To this point, Keisidou et al (2011) provide an interesting approach to customer profiling wherein identified behaviours are categorised according to cultural factors, social factors, personal factors, and psychological factors.

The same study also points out the factors that affect the acceptance of online shopping among users including consumer characteristics, personal perceived values, website design, and product (Ibid).

Due to the complexity of the online users who are affected by both individual motives and external factors, it was important to obtain a basis for profiling customers, which would possibly assist in the development of the overall concept. In addition, it was important to attain deeper insights into the factors that affect the users’ choice between offline and online channels.

2.5.1 CUSTOMER PROFILES

The characteristics of multichannel shoppers have been researched in order to understand their reasons for choosing online shopping. One such study conducted by Rohm and Swaminathan (2004) in a grocery shopping context resulted in user profiles that the authors argue can be applied to various retail settings: convenience shoppers, variety seekers, balanced buyers, and in-store-oriented shoppers.

The first category of users, the convenience shoppers (11%), is described as; 1) valuing convenience the most, which ultimately makes online shopping a very attractive alternative for them; 2) the least
drawn to the physical store with little need for instant possession of the product; and 3) not valuing social interaction during a purchase situation as highly as the other user types (Ibid.).

The second group, the variety seekers (41%), represent the largest group of shoppers in the study, and they value variation in shopping alternatives and tend to combine online and offline channels during a single customer journey planning their shopping journeys more than the other types of shoppers (Ibid.).

The balanced buyers (33%) is a group of shoppers that express an equal level of interest in both convenience and variety, are fairly interested in the values of in-store shopping, and spend less time in planning the purchase ahead (Ibid.).

The in-store oriented shoppers (15%) are those who prefer purchasing an item directly and place therefore more value on the in-store experience; moreover, they enjoy the social interaction that occurs in-store and are therefore not avid users of online shopping (Ibid.).

As shown below, these profiles allow a clear categorisation of the most common online users and their motives. Since consumers can represent a great variety of ages and needs, adapting these profiles during the concept generation phase provided a useful guideline when designing for everyday consumers. As such, factors such as the cultural or psychological characteristics of the customers will not be investigated in greater detail. Based on these profiles, I was also able to adapt and develop my own personas during the ideation phase.

2.6 THE ROLE OF THE BRAND

Early in the process, it became apparent that the user experience in the digital channels is often very detached from that of a physical store. Hence, this thesis explored how to connect these channels for potentially enhancing the brand values inside the store. As such, the relationship between brand and customer was further
investigated in order to understand what kind of value the in-store brand experience can bring to the user. As stated by Pine et al (1998), the in-store experience is quite significant when conveying the store brand. This has also been underlined by other authors. The overall experiences when shopping have been stated to have a significant impact on customers’ brand loyalty, according to Brun and Castelli (2008) who propose that customers are increasingly driven by the brand experience and less by the specific details and characteristics of the products.

As mentioned earlier, the physical store still plays a large part in the customer journey despite the popularity of online shopping. According to the consulting agency Deloitte (2011), the current role of physical stores will expand further in the future, transforming into a ‘showroom’ that reflects the entire brand. Moreover, the Deloitte study claims that the store space can be regarded as an ‘embodiment of the brand’ where the brand’s values can be conveyed in various ways to the customers (Deloitte, 2011, p.6). In this thesis, one aspect of consideration was how brand values can be conveyed through the integration of online and offline channels.

2.7 INSIGHTS FROM THE LITERATURE

The literature review has helped to formulate a deeper understanding of the factors that create a successful customer experience. By categorising consumers’ needs and motives as presented in the user profiles of Rohm and Swaminathan (2004), it was possible to obtain an overview of the most common values of multichannel users. The three most significant factors reflecting these values are: online product research prior to purchase, social interaction provided by the physical store, and the need to experience the look and feel of the product. Thus, the key role of the traditional store could be identified through these profiles.

Despite the emerging online trends within retail, the physical store space is still crucial for further development of the
customer journey. The versatile nature of the physical store makes it an essential location for conveying the brand experience and to provide further value to the user.

From the literature, it was also possible to identify the emerging use of multiple channels amongst users. Other aspects obtained from the literature include the increasing value customers place on the experience when shopping, and the transformational impact new experiences can have on a customer. As well, the potential of applying JIT interaction enables a means to make the in-store experience more personal and create new ways of interacting in-store. JIT interaction can further affect multichannel retailing in the future by enabling dynamic and context-aware information in the moment.
3. CASE STUDIES OF EXISTING SOLUTIONS

After exploring the literature related to online-offline retail and the motives and behaviours of consumers, the next step was to further explore the existing solutions applied within this area. On this point, new innovations within retail have emerged for some years now, especially as a result of new technological opportunities.

In the following section, existing solutions that aim at integrating the digital and physical channels are examined. Thus, the goal was to gain further information regarding the dynamics of interaction in a multichannel retail context and the various ways in which companies have approached this issue.

The solutions chosen for presentation combine both digital and physical features. After presenting these solutions, I will discuss them based on my design approach.

3.1. BEACONS

A solution that directly aims at connecting the in-store experience with mobile devices is Apple’s iBeacon (2013). The iBeacons use low-energy bluetooth (BLE) enabled sensors (‘beacons’) that are placed inside a physical store. iBeacon technology has been adapted by the Polish company Estimote (2013). Estimote provides customised beacons that transfer information to the user through the Estimote app that the user has installed on their phone (Figure 2). This service allows the stores to convey information to the customers about the products’ location as the customer moves inside the store. For example, if a customer is browsing jeans in a clothing store, a beacon located in this department can send information about current offers to the user’s phone (Ibid).

![Figure 2. Estimote Beacons for in-door location based information. Image source: http://estimote.com/estimote-press-kit.html](image-url)
By applying beacons in this way, each store can have their own set of sensors that communicate specific information through the Estimote application. This example demonstrates the merging of physical and digital channels based on a customer’s movements inside a physical space.

3.2 USING THE STOREFRONT
A trial concept by Adidas called ‘Adidas NEO Window Shopping’ allowed users to shop items directly from the storefront (Adidas, 2012). By interacting with a touch screen, a customer could browse items and experiment with different virtual outfits regardless of the store’s opening hours. After adding the selected items into a virtual shopping bag, the customer could sync this content to his or her smartphone and continue with the check-out process.

In my view, the advantages of the storefront have not yet been utilised to their full potential. In the case of Adidas NEO, this brings focus to an unexplored area such as the storefront and creates an engaging experience that evokes the curiosity of people passing by. By displaying information in a dynamic manner that enables users to browse and interact with the storefront, a sense of playfulness is added to the shopping experience. Bringing the digital feature into a rather passive part of the store like the storefront is an effective example of how digital solutions can provide more vitality and customer interaction to the traditional store.

3.3 QR CODES
Solutions to reduce the perceived effort involved in grocery shopping have been explored by the grocery chain Tesco Homeplus in South Korea (Rigby, 2011). The service introduced the possibility for busy South Korean commuters to order groceries right to their home by scanning groceries with individual QR Codes in publicly displayed posters (see Figure 3). The QR (Quick Response) Code is a matrix code which stores information scanned by electronic readers in a similar way as barcodes (DENSO, 2011). After scanning the QR Codes of the selected
groceries, the customer pays for the items with his or her smartphone. The groceries are subsequently delivered directly to the customer’s doorstep without the inconvenience of carrying heavy bags of food. According to Tesco, the service was well received with some 10,000 consumers having used it during the first three months after its launch (Rigby, 2011).

Tesco’s solution is an excellent example of how to combine a public space with a mobile application to create convenience for everyday purchases such as groceries. The screens are placed in busy metro stations, which demonstrate considerable understanding of the users’ routines. Introducing the store into the public space in this manner creates a useful extension of the store.

3.4 SOCIAL MEDIA
The use of social media has also played a significant factor in creating a valuable dialogue between retailers and their customers. By taking advantage of services such as Facebook, Twitter, and Youtube, many companies have been able to spread their message very efficiently and attract larger numbers of potential customers from around the world.

A prime example of how communication through social media has been applied is evidenced by the concept, BakerTweet, a device aimed for bakeries to communicate with their customers (Baker Tweet, 2009). This device is used to send real time tweets to the bakery’s Twitter followers whenever they have newly baked goods available.

Other means of engaging customers through connecting social media with the
physical space is the example by South African fashion retailer Urban Hilton Weiner (Atagana, 2013). Their campaign was built upon the trend of ‘selfies’ where people snap pictures of themselves and post it to various social media sites. The store initiated a campaign called ‘Pay towards your purchase with a selfie’ which allowed customers to use their ‘selfies’ as a means of payment. While trying out outfits in the store, the customer can snap a picture of themselves and post it to Twitter and the retailer’s Facebook page. By doing this the customers were able to win prizes and receive discounts on specific outfits (Ibid). When seen through the scope of this thesis, this example can be seen as demonstrating the power of connecting the physical retail store with the realm of online social media. Various solutions are constantly emerging and these examples represent just some of the innovative new ways of enhancing the shopping experience by using social media. In the scope of the thesis, the aspect of advertisement will not be examined in detail.

3.5 SUMMARY OF EXISTING SOLUTIONS
All of the aforementioned solutions aim at connecting digital and physical channels to a more integrated entity. Although they create a better shopping experience for customers, they are often restricted to app-based mobile platforms. In these solutions, the user needs to prepare an account in order to save the items and pay for them, which creates an extra step in the customer journey. Therefore, the user cannot access information ‘in the moment’. Considering the short duration of an interaction with the application, downloading and installing software in this manner seems redundant. Furthermore, the app remains installed in the customers’ phones even though it is used only during a specific moment. The data offered by many of the services today is rather broad and provides a monotone layer of content, such as price, discounts, recommendations, and general product specifications.
Consequently, this type of interaction and information sharing has a lot of development potential when creating new valuable experiences for the customer.

The various solutions existing today, such as the use of iBeacons, QR Codes, and interactive storefronts introduce novel ways for the user to interact with a physical store. However, the possibilities of removing extra steps when using digital tools, e.g. downloading apps, should be further explored. The conclusion after reviewing these services is that there remains a need for a more dynamic and effortless solution based on the opportunities of new approaches.
4. IMMERSIVE INSIGHTS INTO THE CUSTOMER JOURNEY

The following step was to grasp the actual context of retail, where more detailed insights and perceptions from stakeholders and experts were obtained. In this section, I will explain the methods that were chosen and how they were applied to the research phase. Additionally, a summary of obtained insights will be presented and how these were advanced in the concept phase.

The methods were chosen in order to obtain a deeper understanding of the users’ conscious and sub-conscious decision-making in a purchase situation. When approaching the stories of people and what personal motivations and goals lead to certain decisions, a qualitative research approach provides valuable information. Qualitative research is often collected in the form of the subject’s textual replies and the researcher’s written observations obtained from field studies or interviews (Crouch and Pearce, 2012). Therefore, the aim is to be able to grasp and understand the users’ perceptions as close to the real experience as possible (Ibid). The information gathered from store employees and professors helped form an understanding of the business perspective of retailing and how UX is perceived from their viewpoint. Furthermore, by interviewing Scott Jenson, the founder of the JIT interaction design approach, further insights were obtained into the possibilities and potential of applying JIT interaction in a retail context.

4.1. GETTING TO KNOW THE CUSTOMERS
Learning from the personal stories of individuals and understanding the perceptions that occur was a key objective of this thesis. Since the interviews were carried out at an early stage of the thesis, allowing a wider approach on the topic was desirable. By using semi-structured interviews, participants were able to freely explain and reflect on the questions based on the topic without additional direction actively provided by the interviewer (Gillham 2000; Crouch and Pearce 2012). By allowing a wider set of input from the participant, this method can often provide the designer with new and unexpected in-
sights that might not have been previously considered (Ibid). Additionally, interviews with users were documented in the form of customer journey maps. Using these maps enabled the acquiring of an overview of touch-points and learning from personal insights (Stickdorn and Schneider, 2013).

Interviews with users were conducted in order to understand their experiences during purchases and how they viewed their typical customer journeys. Five participants were interviewed between the ages of 25 and 60, in order to obtain a diversity of insights.

In order to start the reflection process, each participant was given a scenario that would act as a starting point. The scenarios that were used consisted of examples, such as “You live outside of Helsinki city centre, and you wish to buy a new computer”. From here, the user was able to reflect on each step throughout the journey, starting from possible preparations all the way to the moment of purchase. Based on these notes, it was possible for me to ask follow-up questions about their statements. These statements helped to add more depth to the answers and opened up a lot of interesting insights into the complexity of the purchase decisions. This sort of customer journey mapping together with users enabled detailed insights of the factors that affect their choices during a purchase scenario.

By placing the notes in a chronological order, it enabled the customer journey map to act as a basis for the interview that took place.
place simultaneously. The outcome of the participants’ notes was sketched into rough roadmaps that summarised the findings from the interviews.

The roadmaps that were created during the interviews provided a collection of valuable insights. The final roadmaps that the interviews resulted in show a very complex journey of several steps that the customer must travel. The participants were asked to elaborate on each step in the process by answering questions such as ‘what do you do after this?’ and ‘why did you choose that alternative?’. By separating each step systematically and asking detailed questions for each step, the dialogue was opened up substantially. The most valuable findings identified in this process were linked to prices, selection, and intuitive preferences that affect the decision making. One of the key findings regarding the interviewees’ research before deciding on a product purchase indicates that almost every participant looked for various forms of information before a purchase.

4.1.1 ONLINE USAGE

Some users expressed how urgency can affect the choices that they make. For example, one of the users stated: “I usually avoid online shopping because I don’t have the patience to wait for a product to arrive.” In contrast, another user expressed that she preferred to purchase products online, because of the wide selection that is offered. This user also mentioned that the majority of purchase decisions, regardless of the price level of the item, happen after a research process. The online research methods that were mentioned varied between viewing YouTube reviews to reading community forums and blogs. The use of online sources for researching certain products was carried out to a certain degree by four of the five participants. Two of the participants stated that they read and watch reviews to learn as much about the product as possible prior to purchase. The price factors of the specific product did not affect the behaviour of searching for item information, but it was conducted more or less out of habit. When asked as to the reason for
doing so, one of the participants answered: “Because I don’t want the store clerk to affect me in my decision”. In other words, the customer had in this case already made a decision on what to purchase long before visiting the store, reducing the store clerk’s input to a minimum. This sort of behaviour among customers can perhaps point towards a lack of ‘neutral’ information being offered inside the store.

The triggers that awaken a desire for acquiring a product were also discussed. Those products purchased by friends and influencers within other social networks were factors that four of the participants mentioned as a trigger for discovering and wanting a product.

4.1.2 PRICE AS A MAIN DRIVER
One of the users explained that she usually starts by viewing the product in-store. After doing this, she purchases the product online at a better price. Product sales were one aspect that was mentioned as a crucial factor by two of the users during the interviews. If these users had found a product they preferred in a physical store, they would sign up for a newsletter subscription to that specific store. In this way, they were updated on the price changes of the particular product of interest. If the newsletters do not provide enough information or were not available, one of the users mentioned that they tend to visit the store on a regular basis to keep track of the product price changes.

4.2 INTERVIEWS WITH STORE EMPLOYEES
The staff and experts included in the interviews represent the stakeholders situated at the ‘backstage’ of the user experience. Since the store employees have an important role in providing a positive experience for the customer, understanding their viewpoint on the customer journey was a substantial addition to the thesis research. With these interviews, it was important to gather some insights into how the store clerks’ experience their role and how they view the overall customer experience that their store offers. Furthermore, I was also curious to know if the store associates
were aware of how their customers use their store’s online services.

The interviews were carried out with five employees in five different stores in the city centre of Helsinki. The shops that were visited were a women’s clothing store, high-end jewellery store, hardware store, and bookstore. All of the stores mentioned were part of larger international chains, apart from the jewellery store and the bookstore that were domestic. A variety of products was chosen to identify if there were any significant differences in the experiences due to the product groups.

When asked about the most common problems with customer service, the clothing store employee mentioned the challenge of recognising the customers’ wish to get assistance and knowing when they prefer to browse the store independently. Knowing whether to offer assistance or not was also evident in the case of the jewellery store. In the hardware store, the customer is often looking for something specific, and ‘browsing’ behaviour in customers is less common according to the interviewed employee. In the hardware store, the customer either waits for help from the staff upon entering the store or just proceeds to look for the product by themselves. The book store employee explained that customers often know what they are looking for, and therefore they tend to inquire about the book from one of the store associates directly rather than looking for it themselves.

Based on the interviews with staff, I was able to discern a collection of useful findings. One of the most commonly mentioned factors in the interviews concerned the item availability in store as well as the customers’ extensive use of multiple channels of information sources when preparing their visit to the store.

4.2.1 PRE-PURCHASE PREPARATIONS

Regarding the use of online tools, all of the store employees had noticed that customers often refer to information obtained from digital sources when asking for certain products. According to the clothing
store employee, it happens that customers show the store staff a screenshot or a photo on their phones that is taken from their online store. The bookstore associate stated that customers often use book reviews from magazines and bring these with them to the store. These findings indicate that customers are using various sources in order to gather information when planning a purchase.

The employee at the jewellery store described the customers’ expectations as often being built up prior to the visit. When customers have planned to purchase a specific item prior to visiting the store, this can often build up expectations in advance. Occasionally, if several customers are inside the store at once, the staff may be unable to assist everyone. This was perceived as a problem. As the customer may feel neglected when not receiving immediate help, there could possibly result in them leaving the store.

4.2.2 OUT-OF-STOCK PRODUCTS
Some common problems that were expressed by the employees were linked to the in-store item availability. As this was something that the employees were not able to affect in that particular moment, it was perceived as problematic for both customers and employees. The employee at the clothing store mentioned that certain items can of course be ordered to meet the demand of the customers to some extent. However, the issue of products being out of stock was less common in the case of the hardware store, due to the large warehouse spaces they have.

Stores that are centrally located in the city often have limited space available for storage, which can in turn lead to unavailability. When these kinds of situations occur, the store clerks are unable to assist the customers in that moment, due to storage capacity being out of their control.
From a customer viewpoint, this event disrupts the flow, and eventually it affects the rest of the customer’s journey. Customers can of course visit similar stores with the same brand name products to find an available item. However, this can be time consuming and demands additional
effort from the customer in order to obtain
the product they want. Some of the store
employees said that there is a possibility for
their customers to purchase the product
from their online store, in case a certain
item is not available to buy directly. More-
over, the hardware store had an option for
customers to order the product directly to
their home address or to pick it up from
the store. These findings suggest then
that store item availability and assistance
capacity can be considered to be significant
challenges in the customer journey.

4.3 VIEWS FROM THE
EXPERT DOMAIN
The two pertinent factors that I wished to
include in my research were how com-
panies view the aspect of a multichannel
customer experience and how they adapt
UX design when developing future retail
services. As mentioned in the literature
review, companies have and continue to
acknowledge the benefits of integrating
stronger UX aspects in their strategies
(Pine and Gilmore, 1998).

4.3.1 INTERVIEWS WITH
RETAIL EXPERTS
In order to gain further insights from this
area and perhaps more understanding of
the overall relationship between stores and
their customers, a meeting was arranged
with marketing professor, Jaakko Aspara,
from Aalto University School of Business
in Helsinki. An e-mail correspondence
with professor Tore Strandvik from the
Hanken School of Economics in Helsinki
was also carried out in order to collect
more thoughts on the subject. The main
aspects of these interviews concerned how
companies take the customer experience
in account when setting up their retailing
strategies and how UX is perceived today
in general within companies.

THE VIEW ON
CUSTOMER JOURNEYS
The interviews highlighted the awareness
that companies have about the experience
of customers regarding the use of vari-
ous retail channels. At the moment, UX
aspects are not being actively analysed
and are often included with the whole
customer journey in mind, according to
both Aspara and Strandvik. Hence, the systematic inclusion of UX thinking during the development of new retail services remains rather uncommon today in many Finnish companies, as Aspara pointed out. According to Strandvik, companies have only recently started using customer journeys as a method to view their services. He describes how the customer’s journey has mostly been viewed as ‘episodes’ that start from the point when the customer enters the store and ends when the customer leaves. The focus has largely been on the individual moments of contact between the company and customer rather than a process that takes place over a longer period of time over multiple retail channels.

USE OF DIGITAL CHANNELS
When asked about how companies include digital tools in their strategies, Aspara mentioned the use of apps as a popular tool for retailers. When retailers create apps, it is usually understood as a marketing channel in the same way as YouTube or other advertising media, Aspara continues. He also points out that companies can sometimes invest in apps as a reaction to competitors doing so, and they do not always explore how these can be further developed to fit their unique product groups and customers’ needs.

The findings acquired from these interviews point out the possibility of providing new visions for companies on the diverse potential of digital tools and how this can benefit brands and customers alike. When it comes to how retailers use digital channels such as apps, this demonstrates that the potential and capabilities of digital platforms should be explored and utilised for more than just advertising purposes. Based on the findings from these interviews, there is a noticeable need for clarifying the potential that digital tools can offer to brands. Clearly, merging them with in-store capabilities can result in a very powerful resource for both retailers and customers.

4.3.4 INTERVIEW WITH SCOTT JENSON
One of the inspirations for my thesis topic
originated from an approach by Scott Jenson, a Google product strategist who has an extensive background in UX design and has worked with companies such as Apple and Frog Design. Applying a JIT interaction approach in the context of a retail store would strongly support the goal of making the interaction inside the store more fluid as mentioned in the literature review. In order to obtain his insights on JIT interaction, I contacted him for a discussion over Google Hangout. The aim was to discuss what led him to introduce this approach to the design community and what future adaptations of JIT interaction may appear in the future.

JIT INTERACTION FOR REACHING A DYNAMIC EXPERIENCE

When talking about the way in which current mobile apps provide context-aware solutions, Jenson suggests looking at apps in the opposite way. He suggests that the way we obtain information from apps today has to be planned and actively pursued by the user, “Applications today are permanent, you must install them”. He is exploring the concept of developing transient apps in the future. Depending on the usage frequency, this would mean that these apps would either disappear or remain installed. This approach runs contrary to the way in which they are used today. As Jenson explains, the user has to actively delete apps in order to ‘garden their phones’ when they are no longer needed. Furthermore, he suggests that some of the challenges for this approach are often more due to people holding firm to the existing concept of an app which makes this pattern of thinking very challenging to break. This relationship with apps today does not only apply to everyday users, but also to people in the digital industry themselves who tend to live “in an app myopia”, as Jenson describes it.

When asked about the largest threat to achieving seamless JIT interaction-based systems, Jenson suggests it lies in offering ‘services that are good enough’. With this statement, he implied that users should not settle until a just-in-time interaction approach has become the standard for
how we interact with our mobile devices. This interview helped me to form a better picture of the potential and the core idea of JIT interaction, and acted as an inspiration for my continued work. At this stage, a collection of various personal experiences from users was obtained; as well, insights were received from interviews with retailing associates and experts. In order to ‘zoom out’ from these insights towards a larger context, I decided to investigate what actually happens inside a store space.
5. FIELD RESEARCH

5.1 IN-STORE SHADOWING

Eight users of various ages were shadowed in this phase in order to obtain a variety of viewpoints. The use of ‘shadowing’ observations as a means of gathering qualitative information about user behaviour is often applied in ethnographic research (Crouch and Pearce, 2012). This method is used in order to obtain insights about the real behaviour of the observed target groups (Stickdorn and Schneider, 2013). In particular, I was interested in learning how the behaviour differs when the user has decided on a certain product as compared to simply browsing in-store. Additionally, this shadowing was employed to recognise potential patterns during the interaction between customers and staff in a store environment. From the interviews that were conducted earlier, I had learned that customers often conduct various forms of research from online sources or magazines before visiting the store.

The stores where the shadowing was carried out were the same as the ones used for the staff interviews earlier in the thesis (women’s clothing store, bookstore, jewelry store, and hardware store). With the permission of the store managers, these observations were carried out. After the shadowing, customers were chosen and asked the following questions regarding their visit.

Did you know what you were looking for already when entering the store?
Did you find what you were looking for?
How did you find out about this product?

Observing the movements and interactions that occur inside a store provided a valuable portrayal of the events that actually take place inside the store space. By first observing the customers and later asking the customers complementary questions, it was possible to identify patterns in their actions. The findings will not be specified based on the stores and their product groups, as the focus was on acquiring an overview of the actions and behaviour of the customers in the store space.
5.1.1 ITEM DECIDED
In almost all of the stores, browsing behaviour occurred among the customers. Five of the eight customers that were shadowed and interviewed had an item in mind upon entering the store. The customers who had decided on what to purchase beforehand seemed to know where the product could be found in the store. With a specific product in mind, the customers spent considerably less time in the store overall.

Two of the observed customers who failed to find the specific product they were looking for spent approximately 5 minutes searching the store by themselves before asking for help.

When later queried as to where they had learned about the product they were looking for, online and printed media were mentioned by three customers. One of the customers decided to visit the store after seeing an interesting product displayed in the storefront. Four of the five customers who had decided on a product beforehand, found exactly the item they were looking for. The only customer who did not find the exact item they had in mind, decided to purchase a similar product from another brand instead.

5.1.2 BROWSING
Three of the eight customers disclosed that they browsed the store as a way to pass time. When entering the store, they tended to start viewing the products in a more systematic way, starting with products that were closer to the entrance.
These customers moved slowly through the store and took more time in viewing the individual products. The browsing of products was perceived as more relaxed, and these customers took more time, viewed more items and examined them closer.

5.1.3 QUEUING FOR ASSISTANCE
In addition to shadowing and conducting short interviews, observations in the store in general provided further insights. These observations revealed how the large amounts of customers inside the store simultaneously affected the interaction between the customer and store clerk. Since the shadowing was carried out in the afternoon, there was an increased amount of customers in the stores. If customers wished to receive information about items in store, this required them to queue and wait for the store clerk to assist them. In one of the stores, there were only 3 store clerks to roughly 15 – 20 customers. Additionally, the sales clerks who were not at the cash register, were located in various parts of the store, e.g. organising items. If a customer desired some assistance, they were required to stand and wait until the clerk had finished helping the previous customer. While waiting for assistance, the customer could not continue browsing. In order to maintain their ‘place in the queue’, he or she was forced to stand next to the store clerk until they were done. In three out of four stores, the customers who wished to receive help had to share the same queue as the paying customers. Only one of the stores had a separate information desk with almost no queue.
6. INSIGHTS GAINED

The insights that were obtained from the literature, interviews, road mapping, and field studies formed a basis for the development of new user scenarios in the store environment. The following section is a summary of all the findings that were made. When it comes to interpreting qualitative data, Crouch and Pearce (2012, p.73) explain how the methods of analysing the findings can be very unrestricted: “...it is typically an exploratory, creative and an iterative process”. Collecting insights from literature and experiences from the customers enabled an overview that strengthened various findings that were identified earlier. The main takeaways that were identified after viewing all the collected insights were summarised into five main categories.

6.1 THE USE OF MULTIPLE INFORMATION SOURCES

During the interviews, participants frequently expressed the need for acquiring valuable product information. The behaviour that many of the customers expressed prior to visiting the store, indicated that product research in various shapes and forms is conducted before a planned purchase. This finding was also supported by the customers’ identified use of multiple information sources for obtaining the information. As mentioned earlier by the store clerks, material such as screenshots from online stores, magazine cut-outs, and other sources of product information were just some of the materials used by customers in-store. This behaviour supports an overlapping of the digital and physical information sources and was therefore addressed in the concept development.

6.2 SEPARATED RETAIL CHANNELS

With a strong focus on the customer’s experience when visiting the store, there was a clear opportunity to explore combining the various digital channels such as app and website. As acknowledged earlier, the use of digital channels among retailers today remains largely unexplored, as discussed with Professor Jaakko Aspara.

Although apps are often advertised by the stores, the user interviews indicated
that these apps often pass unnoticed or are ignored by the customers. When discussing the channels used by the customers during the interview, brand mobile apps were never mentioned as a source of information by any of the participants. As concluded earlier based on the literature review, the movement away from the concept of ‘one store, one app’ was an aspect I wanted to address in my concept exploration.

Based on the findings, it seems as though many retailers design multiple digital channels separately and do not always include the aspect of a holistic customer journey in this process.

The aim was to make the experience inside the store exciting and inspiring for the customer. One means of achieving this is by utilising the store’s visual brand characteristics and conveying the brand value as a way to bridge the online and offline experience. This insight originated from the dialogue with the marketing professors during the research phase.

6.3 WAITING FOR STORE ASSISTANCE

Obtaining information in-store was addressed as a problem today, especially when there are a large number of customers inside a store simultaneously. This created lines and made it difficult to interact with the store associates when inquiring about products. As identified in the shadowing, the customers who sought out help were on several occasions required to share the same queue as the customers wanting to pay. This finding points towards the interference of the customer’s desire to receive information while in-store. As such, the time with which customers spent queueing was an interesting finding worth addressing in the concept.

6.4 JIT INTERACTION TO SUPPORT FLUENCY

Today, there exists a barrier between the user and easy access to mobile digital information. A simple demonstration of this issue can be considered through a simple scenario. In the scenario, a person
is walking in the city and sees an interesting product on a poster. If the person wishes to learn more about this product at that moment, he or she has several choices: launch a web browser on their phone to initiate a regular search about the product, download an application to scan the poster’s QR Code, or to download the brand application onto their phone. All of these scenarios require time and effort from the customers in order to receive the content they want.

Removing the aspect of ‘preparation’ or downloading sources such as apps was additionally supported by my initial approach of JIT interaction as identified in the literature review. With this approach, the user can effortlessly receive dynamic information about a specific object or place; hence, the users’ ‘preparation’ process is eliminated (Jenson, 2011).

With this approach of JIT interaction, the stores can provide new appealing opportunities for interacting within the store space.

6.5 OUT-OF STOCK PRODUCTS

Another strong finding was linked to the scenario of products being out of stock or unavailable. When this occurs, it disrupts the customer journey, and the customer is required to find an alternative method of finding the product. For instance, the customer might have to visit another store in the city or order it online for home delivery.

As I see it, this situation creates an obstacle for both retailer and customer. The retailer can eventually risk losing a potential customer, and the customer in turn needs to take an active role when searching for the item elsewhere. From a holistic customer journey point of view, the unavailability of items in store provides an abrupt ending to the coherence of the customer journey. Bridging this gap would extend the customer journey and eventually benefit both the customer and retailer.

The storage capacity in this case cannot be affected and will not be taken into account in the concept development during
this thesis. However, being aware of this occurrence and attempting to find ways to address it in a future concept will be explored.

6.6 EXPERIENCE JOURNEY FRAMEWORK
As an initial starting point, the focus areas were set according to the phases of the customer journey model provided by Conifer Research (2002). This customer experience map was used to define the scope of this thesis and which area of the customer journey to focus on. Since the thesis concerns the use of JIT interaction for bridging the in-store with digital channels, the main focus will be placed on the ‘engage’ phase of the map (Figure 5). This part of the customer journey represents where the touch point between customer and company occur and where the service is used. However, it should be noted that this thesis will not go into detail on aspects regarding specific product groups.

FIGURE 5. Illustration of the focus area based on the Experience Journey by Conifer Research (2002).
7. DESIGN CONCEPT EXPLORATION

With support from the main findings addressed earlier, the ideation phase was subsequently initiated. In this section, the methods for concept generation and the outcome of the final concept are presented. The concepts should support the aspects of merging the digital channels and bringing them into the store space.

7.1 USING PERSONAS

In order to create a framework of the user characteristics that were identified earlier in the research, personas were created. A persona can be explained as a fictional character that summarises and represents the identified needs of a larger group of people (Guojónsdóttir, 2010). Clarifying the needs and lifestyles of the target groups can assist the designer to develop solutions that fit the identified criteria (Ibid). During the literature review, a collection of profiles presented by Rohm and Swaminathan (2004) were examined to clarify the types of users that were identified as users of offline and online channels. These profiles combined with insights from the interviews and shadowing of users resulted in three personas.
PERSONA 1: JONAS ANDERSON, 27
Jonas works as a graphic designer for a small lifestyle magazine publisher in central Helsinki. He lives alone in a small flat in the south of Helsinki. He is a very active member on social media and follows more than 200 people on Twitter. He visits his three favourite blogs at least once per day. The blogs are mostly lifestyle oriented (fashion, food, and music). Whenever he finds a nice product online, he tends to buy it without reflecting too much on it.

PERSONA 2: LISA BERGMAN, 40
Lisa is a school teacher at an elementary school in Espoo. She lives together with her husband and their two dogs about 100 km from Helsinki. During her spare time, she is often out running with her jogging team of 8 people. She is not an active member on any social media site, even though she has an account on almost all the large communities. Lisa never buys anything online, because she wants to see and feel the product before buying. She uses websites to gather information about products, but she tends to buy them from a store in the city.

PERSONA 3: SIMON SAARI, 16
Simon lives with his parents and older sister in Turku. Simon is an active member on Facebook, Pinterest, and Tumblr. He enjoys spending time with his friends, and in his free time he plays guitar in a band. Simon considers himself to be a tech-geek and aims at purchasing all the new gadgets before any of his friends have them. Due to the limited offering of the local music stores, he often buys music related items online. Whenever he visits a store, he usually already has an idea of what he wishes to buy. Prior to visiting a store, he often uses his phone to quickly read through reviews about the items. Sometimes he does this while in the store in order to compare prices.
7.2 CREATING CONCEPT SCENARIOS

As identified earlier, researching and acquiring information about products before buying them was addressed by many of the interviewed users. Exploring the possibilities for how objective and unbiased product information could be offered to the user was therefore carried out. These concepts focus on the experience in the store space and the store front.

7.2.1 CONCEPT 1: IN STORE SCREEN

The first scenario offered the customer the chance to interact with the physical store and to use this as a means of acquiring information in the moment. Lisa, who represents the ‘in-store oriented shopper’ was used as a basis for this concept. This persona valued seeing and feeling the product in a real scenario before deciding on a purchase.

Since this person is not an avid user of mobile devices, the interaction that occurs is based solely on the interaction that takes place inside the store. The layers of multichannel information, as acknowledged in my research, was incorporated in this concept through an interactive screen. In the scenario, the customer picks up an item and places it on the screen for additional product information. Upon placing the item on the screen, it identifies the item using a NFC sensor. After recognising the item, the screen can show information such as “This item has been bought by 20 people today” or “There are 5 items of this type left”. By combining sets of information such as showing registered purchases made during that day and using the store’s in-stock data, the layers of information can become more interesting for the customer. This concept additionally addresses the issue of finding store clerks, which was identified during the shadowing observations. The screen in this concept acts as an extension of the services that the store clerks offer and presents the information in a dynamic manner.
FIGURE 6. Sketches of the three concepts.
7.2.2 CONCEPT 2: STORE SYNC

The findings obtained earlier explore the opportunity of using a mobile phone when interacting with products inside the store space. In this scenario, the user has a platform-based service on their mobile device that communicates with the WiFi signal in the store space. When the customer enters the store, the customer is recognised by the store based on his or her phone ID. The store’s visual brand language is temporarily synced with the customer’s phone in order to enhance the merging of channels. Moreover, this feature can be used to convey and enhance the brand’s distinct visual expression to the customer more personally. When browsing the store, the user can scan an item’s NFC tag with a mobile phone to know more about. Depending on the product, the feature can show information such as item availability based on the user’s profile, product reviews, and general product specifications.

This concept allows the customer to acquire versatile information directly in the store. If the product is not available in this particular store, but available online, the user has the option to purchase the product directly with their mobile phone and receive the product via home delivery. Using the customers’ mobile phone in this manner enables the possibility to design and establish a more personalised experience between the customer and the store.

7.2.3 CONCEPT 3: BOOKMARKED ITEMS

The third concept proposes a feature that supports the users’ product research before visiting the store. This behaviour was identified through the user interviews conducted earlier as well as by the store employees. In this particular concept, the user can save items that he or she finds when browsing blogs or other online media. These items can be added as ‘bookmarks’ in the user’s personal cloud account. This service assists the user in finding the items they want by recognising the person’s location in the city using GPS locations. When the person is close to a store
that carries one of the items saved on his or her account, a notification is sent to the user’s phone. The notification may show a message such as ‘This store carries the sneakers you liked. There are 3 pairs left in your size.’ After receiving this, the user can either choose to ignore it or decide to visit the store. Since the user has saved the specific items that he or she likes, the amount of notifications is decided by the user.

All of these concepts were later evaluated in order to see how they are perceived by the users. The aim with the evaluations was to formulate a better understanding of what the users value in each service and clarify the direction the concept should take.
7.3 DESIGN CONCEPT EVALUATION

Due to its versatile nature, a user experience can be quite challenging to evaluate. Author Minna Isomursu (2008) stresses the importance of creating a realistic setting for the evaluation in order to reach as truthful of a response as possible from the users. In this thesis, the concepts were all linked in various ways to the physical store space; hence, it was important to test these concepts in this particular environment for obtaining the qualitative results. These evaluations offered a clear opportunity to identify the touch points that are perceived as offering the most fluency and value for the users.

7.4 EXPERIENCE PROTOTYPING

Simple prototypes were built in order to simulate a real user scenario where these services could react according to the user’s actions. Jodie Moule (2012), co-founder of Symplicit, explains the importance of prototyping as a means of identifying the user’s requirements and to understand the potential limitations of the design. She (2012) suggests the strengths of using prototypes as a way of providing a better understanding of what the users feel when using the product and to envision new possible directions of the design.

Each concept was validated by acting out a short scenario and later interviewing the users on the experience with the usage. Due to the technical limitations of these prototypes, a certain degree of guidance was provided to the participants during the evaluation.

The evaluations were carried out in three stores in the Helsinki city centre together with three users. The stores used for these evaluations were a men’s clothing chain, a domestic bookstore chain, and an international electronics retail company.

7.5 USER FEEDBACK AND DISCUSSION

The concepts that were tested consisted of an in-store screen, a mobile service that allows online bookmarking of interesting items, and a mobile platform that allows syncing with the store for obtaining information.
FIGURE 7. Evaluations of all three concepts were carried out in real store environments around the city of Helsinki.
The following part will explain the feedback that each of the concepts received from the users.

When using the ‘in-store screen’ some users expressed concern about how the experience can be affected by a large amount of customers in the store at once. This could eventually result in queues forming from people wanting to use the screen, something I wanted initially to avoid. When one of the users simulated the use of this screen, additional practical issues emerged. One of the users mentioned the potential for people to bring items to the screen and potentially leaving them there after using the screen. This could lead to additional re-shelving work for the staff. Even though this can be seen as a practical issue, I consider this as a factor that can eventually affect the customer experience in the long run. Overall the in-store screen did not seem to add sufficient value in the sense of creating an engaging experience for the users.

The second concept, which allowed for collecting items found online into a cloud based profile, was generally perceived as a useful feature by the users. Having an effortless way of collecting items into a unified ‘profile’ was an appreciated feature by all of the users. However, one user expressed some concern regarding the amount of alerts that could bombard the user regarding the availability of saved products. He imagined its use as being potentially bothersome if several notifications showed up on a mobile screen when walking around the city.

When this scenario was simulated, the user was asked to imagine being at home reading a blog before entering the store. By doing this, it became evident how the larger amount of the interaction took place prior to entering the store, instead of in the moment. The findings obtained from the literature review concerning the use of JIT interaction are not clearly represented in this scenario.
The approach of allowing an instant interaction in a set time and space is compromised due to the majority of the interaction taking place in another location other than the store e.g. when saving interesting items to his or her profile. The key approach of merging the digital and physical worlds is based around using the physical store space; hence, this concept did not meet that particular criteria.

Syncing the store’s brand with the user’s mobile phone was an aspect which all of the users found to be a positive feature when entering the store. One of the users stated: ‘It feels like the store is welcoming me’. This statement provided strong support for my aim of merging the digital and physical experience with the possibility of incorporating the ‘feeling of the brand’ when entering the store. Since this concept was developed based on the findings on separated customer experiences that modern brands offer to their customers, the feedback supported the possibility of using this to bridge the brand’s store channels into one experience.

The findings from the evaluated concepts provided a valuable overview of how the users experienced these services. By comparing the findings with my main design drivers mentioned in the summary of insights, the third concept ‘store sync’ was taken further for additional development. The findings obtained from the user evaluation proved the potential of enabling an engaging interaction between the customer and the store.
WHITE-OYESTER AUCKLAND RACERS / Converse

SIZE AVAILABILITY

213 times

58 times

0

1 40
2 41
5 44
3 45
1 46

INFORMATION

Auckland Racers Ox. White-oyster color.
8. FINAL CONCEPT

The final design proposal consists of a mobile platform-based solution that enables an enhanced in-store experience with support from the digital channels. The concept supports the findings obtained both from customers as well as the domain of experts. The setup of current retail channels indicates a sense of separation in the overall customer experience. The use of digital means has the possibility of transforming the role of the traditional store experience. By acknowledging the current use of various digital sources amongst customers, these insights have contributed to the development of a coherent and engaging customer experience.

As identified earlier from the customer journey maps and through the interviews with store employees, the issue of unavailable items in-store was addressed. This occurrence leads to the flow of the customer journey being disrupted, and the customer is forced to find new means to acquire a product. The use of a mobile platform for creating this kind of service offers the benefits of a versatile and dynamic way of obtaining the information. This is due to the possibilities of offering existing sources of information such as hashtags and RSS feeds to the user to obtain useful reviews and other valuable dynamic information.

8.1 BRINGING THE CUSTOMER AND STORE TOGETHER

By syncing the physical store’s visual expression to the mobile device, the feeling of stepping into the store both digitally and physically is enhanced. This was supported by the literature reviewed on the store becoming the ‘embodiment of the brand’ as claimed by Deloitte (2011). For instance, the link between the user and the store is enhanced through recognition of the customer when entering the store.

8.2 CREATING A PERSONALISED EXPERIENCE

The final concept allows the customer to interact with the store and its products in a seamless manner. The personalised customer experience begins when the
customer enters the store. Upon entering the store, the customer is recognised by the store’s WiFi system based on the customer’s unique MAC ID on their mobile phone.

Through this customer identification, the store can readily differentiate between a new and old customer. Moreover, each new customer is automatically assigned a profile and is not required to sign up for the services. Removing this preparatory step for the user is a strong part of obtaining a JIT interaction approach that was chosen as a guideline.

With this profile, the store can collect customer related information such as purchase history. Based on this information, the system can extract data, such as size, product colour, and price. This information is interpreted by the service and can be used to make an increasingly more personalised experience for the customer. For example, if a customer has purchased 3 pairs of size 45 shoes in a certain store, the system can draw the conclusion that the customer most likely has this shoe size.

As the customer enters the store space, his or her mobile phone displays a small launcher icon to indicate a connection with the store. This launcher can either be ignored or activated by tapping the icon on the screen.

The visual expression of the store’s brand and interior is conveyed into the shopping launcher on the screen. This is used to enhance the merging of the digital device and the physical store space. The activation of the launcher enables the user to receive digital content from products inside the store. Similarly used as a barcode, the NFC tag on the product can be read by the customer’s mobile phone and receive product related content. This set of information can consist of items, such as in store item availability (stock) and general product information including price and material. Other possible sources of content are social media, blogs, and online forums. When the customer pays for their product at the cashier, they have the option to save additional information about the product, such as product care, expiration dates, and warranty.
This adds a practical aspect of the shopping experience since the information is stored digitally, rather than as physical printouts. In the case of an item being out of stock, the customer has the option to effortlessly purchase the item online by using their mobile phone. The product is then delivered to the customer’s home.

This removes the identified issue of unavailable products that resulted in a disrupted customer journey. Additionally, this offers an effortless way for the customer to obtain products that are otherwise unavailable in-store.

Figure 8. The service gets activated when the customer enters the store. For this example a clothing store called The Men was used.

The launcher shows a branded start screen. In this case the customer can sync the mobile phone to a product or browse the customers purchase history.
Figure 9. Explanation of item sync.
Right page: More detailed description.

1) The user can access extended information about a product by syncing the mobile phone with the product.

When the user positions the mobile phone within the range of field, the phone indicates with a circular element on the screen that the product and phone are ready to sync.
2) When the phone and the product is synced the information will start to load.

3) After the product information is done loading the screen will fade.

4) The item content screen is revealed.
**SCENARIO**

1) Tom needs a pair of new shoes, he walks towards The Men clothing store.

2) As he enters the store his mobile phone connects with the WiFi of the store and a notification icon appears on his lock screen. If he decides to ignore it, the icon disappears. If he wishes to use the service he can simply tap on the icon.
3) He activates the launcher and sees how his mobile phone is temporarily paired with the store's visual brand style.

4) The mobile phone is synced and ready. Tom can now use his phone to sync with products that he finds interesting. He finds a pair of shoes and syncs them with his phone. The phone shows him that there are two pairs of shoes left in his size, 42.
5) The shoes are very comfortable and Tom decides to buy them.

6) Just as Tom has confirmed the payment he gets a notification on his phone asking him if he wants to save the purchase details to his cloud account.
Figure 10. Examples of how the visual brand expression can be conveyed on the information screen.


http://jetsettimes.files.wordpress.com/2012/08/bmw-652x290.jpg

**FREITAG** Image source: http://www.freitag.ch/Fundamentals/Business-Bags/BEN/pa/F77_01138

Photo Credit: Sebastian Mayer

http://www.freitag.ch/media/stores/freitagtokyoshibuya
9. EVALUATION OF FINAL DESIGN

In order to test the validity of the proposed concept, evaluations were conducted with the aim of obtaining the users’ perceptions while using the concept. A simulated store environment was set up in order to evaluate the prototype.

9.1 ATTRAKTDIFF SURVEY

In order to evaluate the experience of using this service, a method called AttraktDIFF was applied. This method allows the measurement of the attractiveness of interactive products based on its hedonic and pragmatic qualities (AttraktDIFF, 2013).

The method is carried out using a questionnaire displaying 23 word pairs with opposite meanings, such as ‘Simple - Complicated’ or ‘Human - Technical’. By using a ‘seven-step’ scale between each word the user can mark the value that represents the experience of using a service or product. After each user had evaluated the digital prototype, they were asked to fill in an AttraktDIFF questionnaire. The results obtained from the users provided an overview of the positioning of the concept when comparing hedonic and pragmatic values. The answers were later entered on the AttraktDIFF website that provided with a summary (Figure 11).

![Figure 11. The findings resulted in a report that was provided on AttraktDIFF’s website. www.attrakdiff.de](image)

The outcome presented a ‘Desired’ positioning on the grid provided by AttraktDIFF.de. The results express the concept as fulfilling both usability and the emotional qualities by the users.

The feature of the concept that received the most positive feedback was the possibility of seeing the in-stock items.
In particular, the temporary item information displayed when scanning a product was well received by all of the users.

Regarding the effect that the concept would have on the interaction with the store associates, one user stated: “It’s good that you can check the availability of the products yourself. I usually don’t want to ask the clerk.” This seems to suggest that the service was perceived as practical in the sense that it allows the customer to browse and check for products independently. In contrast, another user stated that he feels that the service could isolate the customer from the store clerk, since the interaction is replaced by the service to some extent.

With regards to the product information screen, two of the users expressed a wish to save the information for comparison later. One user replied, “What if I want to share the item information with a friend?” This user explained that he usually asks for a second opinion from his partner before purchasing. Similarly, another user explained how she often takes a picture of the product in order to have time to consider it properly before buying.

Concerning the development potential of the service, one user suggested that the system could ask the customer about what they want upon entering the store. Further opportunities were discussed regarding how the service could expand in the future, with one noting: “I can see this as a big opportunity for companies.” In addition, one of the participants in the evaluation, who was also currently working as a sales clerk at an international clothing store in Helsinki, imagined that this sort of service would be well received by that particular store as well as others. Overall, the response from the users was very positive with the majority stating that they would use the service in reality.

9.3 DISCUSSION

Although the concept positioned well based on the AttraktDIFF questionnaire and supported both the hedonic and pragmatic aspects, the results should be interpreted with a certain degree of
caution. What these evaluations did not cover was the long term experience of using the service. The concern about this method was raised by Marc Hassenzahl (2007) who noted that both the hedonic and pragmatic values can vary depending on repetition over time. Moreover, what was missed when using a simulated space was the aspects surrounding e.g. how the service usage is affected by large amounts of customers being in the store at once.

However, the benefits of using a simulated store environment included the possibility of evaluating the concept individually with a larger number of users to receive a wider set of insights. Despite this, it seemed quite easy for the study participants to envision how the service would be employed in an authentic store context.

One additional key aspect to consider for potential further evaluations is the improvement of the prototype.

Since JIT interaction was the main approach when designing the concept, it was critical to remove all ‘obstacles’ that disrupted the flow of the customer journey that were identified during the research. Just-in-time interaction implies that information should be received in the moment, which means that accessing content must be connected to a specific context or situation (Jenson 2011). In this concept, the product content was mainly received when the customer was inside the store. However, expanding this coverage could be a potential aspect to develop further.

In this sense, JIT interaction is defined as conveying information in the moment and not enhancing access to information later. This concept supported the aims established earlier and demonstrates the possibilities that an integration of retail channels can offer when creating unified customer experiences for the future.
CONCLUSION

The world of retail is experiencing substantial transformations that have opened up new opportunities when creating valuable and improved experiences for customers. New technological innovations and increasing awareness of purchasing experiences are becoming acknowledged by more and more fields and disciplines. In this thesis, the aim has been to explore the possibilities of creating a seamless integration of online and offline retailing channels. This approach enabled the envisioning of new customer journeys seen from the viewpoint of the individual. A strong focus was placed on creating a coherent journey through retail channels by understanding the users’ motivations and needs. The use of JIT interaction as a guideline enabled the development of new means of interacting between the user and the traditional brick-and-mortar store.

Obtaining qualitative insights from users at an early stage of the thesis ensured a good base from which to continue this work.

Moreover, applying methods from the field of UX design supported the acquisition of insights regarding the hedonic and pragmatic aspects when utilised by various retail channels. The main findings from the interviews and field studies shed considerable light on the preparation process as well as the use of several information sources before the purchase. The findings collected from users as well as retailer experts supported an overlapping of the digital and physical information sources in order to create a seamless cross-channel journey.

Through an iterative design process, a final concept was generated — a platform-based mobile service that offers a simple and easy way for customers to interact inside the store space. This service aspires to bring the customer closer to the in-store environment and its products through seamlessly enhancing the experience through digital means. Throughout this thesis, I sought to present a vision of how a future customer journey can
be achieved seamlessly and dynamically by merging the offline and online channels into one experience. In addition, this thesis addresses the opportunities that a unified multichannel experience can offer to brands and how these can provide new ideas and possibilities for the future.

**AUTHOR’S REFLECTION**

As a designer, I find the world of retail to be a fascinating area to be involved in and to design for. It is an area which has the potential to change people’s perceptions and behaviours in innovative ways with forthcoming advances in technology, systems, and services. This thesis has been a valuable learning process that has shed light on the complexity of designing services for an area such as retail. The experiences acquired during this thesis has added greatly to my overall learnings during my Master’s studies.
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REFERENCES


HASSENZAHN, M. 2007. The hedonic/pragmatic model of user experience. Landau, Germany. p.4


PWC. 2012. Understanding how US online shoppers are reshaping the retail experience. p.4.


STICKDORN, M. & SCHNEIDER, J. 2013. This is Service Design Thinking, John Wiley Sons. pp. 156-165, 178
