Haaga-Helia
University of Applied Sciences

Improving the User interface and User experience of in-room tablets

Case GLO Hotel Kluuvi

Marta Tolonen Torralbo

Bachelor's Thesis
Degree Programme in International Sales and Marketing
2020

Haaga-Helia
University of Applied Sciences

Abstract

Date: 20 May 2020

Author(s)
Marta Tolonen Torralbo

Degree programme
International Sales and Marketing

Report/thesis title
Improving the User interface and User experience of in-room tablets. Case: GLO Hotel Kluuvi

Number of pages and appendix pages
24 + 2

This bachelor's thesis is a product type thesis. The aim of the study is to improve the User Experience (UX) and the User Interface (UI) of Poshie in-room tablet and provide guidelines for the best practices.

Poshie interactive is a company based in Helsinki that provides a service tablet for hotels with the purpose of providing a better hotel experience. The study focuses on the introduction of the Poshie tablet in GLO Hotel Kluuvi.

The thesis consists of theoretical and empirical research, using a user-centred approach covering the topics of User Experience, User Interface and user behaviour. These terms are presented and supported through qualitative and quantitative research methods. The structure of the design process is based on the Double Diamond Design Process.

This study presents the importance of creating a user-centred design, with placed importance on the users' needs and expectations.

The study's focal point is to improve the interface and user experience of the Poshie tablet particularly although the results are not limited can be applied to other service tablets.

Keywords
User Interface, User Experience, User-Centred Design, User behaviour, Double Diamond, Iteration.

Table of contents

1 Introduction

When was the last time you spent an entire day without looking at a screen? We live in a world that has adopted technology as a daily necessity, we look at our phones, computers, tablets and even street advertising screens as a normal information and entertainment channel.
With the need for constant development of technologies, combined with the thirst of information the society currently has, it makes sense that companies and industries have started to take advantage of these changes. That is why, companies like GLO Hotel Kluuvi have taken the initiative to introduce new technologies, like the Poshie tablet to their business to improve customer satisfaction and become one of the first hotels in Finland to provide a service tablet in the rooms.

1.1 Commissioners

GLO Hotel Kluuvi is a lifestyle hotel located in the centre of Helsinki, Finland. The GLO Hotels are a part of Kämp Collection Hotels, a hotel group formed by 10 hotels with an impeccable reputation in Finland and the world.
GLO Hotels has a strong brand made up of vibrant colours, their mission is to provide experiences to their guests in order to create memories.

Poshie interactive is a company that was founded in 2017 with the purpose of providing hotels and restaurants a service that would improve customer experience.
Poshie is an in-room tablet that can be used to order room service, request services and amenities, browse content and also serves as a channel for in-house marketing.

GLO Hotels, following their mission to create memorable experiences, decided to incorporate the Poshie tablet to their Luxe and Suite rooms to provide their guests a personalised butler that assists in meeting the guests needs. The tablet is a source to improve brand equity as it shows the hotel's placed importance in their guest's care. They provide services as well as tips on how to make the most out of the guest's stay and visit to Helsinki, providing valuable and relevant content.

1.2 Objective

The objective of this thesis is to give suggestions to optimize Poshie's user interface (UI) and therefore the overall user experience (UX) through theoretical understanding, gaining insight, and providing solutions and improvement ideas. The research is designed to identify the tablet's strengths and weaknesses and give insights about customer's expectations when using a service tablet.

The importance of this study lays in the idea that in order for Poshie to provide the best service to the hotel guests, the delivery of the content and the interface must be optimal.

1.3 Conceptual framework

Customer experience, as defined by Colin Shaw is “The sum of all interactions between a customer and your organization. It´s the blend of your organization’s physical performance and the emotions that you create all measured against customer expectations across all your points of interaction”. (Shaw in Kelleher 2014) According to this definition, in order for customer experience to be optimal in your organization, every entity in it must work together and improve communication within the company and with the customers. It is crucial that the product or service the company provides has optimal physical performance and that customer´s expectations are being taken into consideration throughout every touchpoint. (Kelleher & Barnes 2014)

Providing a great customer experience in an environment with many competitors is what brings the company a competitive advantage over the rest. In the case of GLO Hotel Kluuvi, a fraction of their customers’ experiences will be determined by the services provided in the Poshie tablet. For this reason, it should not only communicate the brand’s core values and ideas but, as mentioned above, the tablet should have optimal physical performance.

1.4 Limitations

There are some limitations to this study and the research. The research methods used were both a survey and a focus group. The original idea relied on conducting 3 focus groups, however, due to the COVID-19 pandemic, I was not able to carry out 2 of the focus groups. For this reason I created the survey as a research method. The survey results have limitations as the respondents did not physically interact with the Poshie tablet.

The study follows a double diamond design process although it does not include prototyping and therefore omits the iterative process of testing the results and improvement recommendations.

2 User-Centred Design

User-Centred Design (UCD) is a process that places importance in the users and their needs, which are taken into consideration throughout every step of the design process. When conducting a user-centred approach, the context in which the system will be used should be studied, user needs and requirements are to be identified as well as evaluating the results to address the outcome; if the user needs have been met. It is an iterative process, which should be repeated until the results are satisfactory.
The aim of following a User-Centred Design is to get an overview of the whole user experience. For this process to be successful, user evaluation must be involved, and the experience must be monitored. (Interaction Design Foundation 2020.)

Shaffer and Lahiri, in the book Institutionalization of UX (2013), present the idea that a user-centred design process is the only way to reliably create a useful, practical, usable and satisfying product. A user-centred design process focuses on the user experience before the technology is put in place.

2.1 User experience

User experience (UX) is the perception that a user has of a product or service after interacting with it. The UX is made up of a combination of elements in the interface like: layout, design, brand and interaction. (UEPA 2012)

A user, as defined by Business Dictionary (2020) is, an entity that uses or operates a system, facility, application, equipment or process to solve a problem or get a benefit.
An online user is not only a reader or a viewer, they interact with their surroundings leaving a data trail, individual to each user. These data trails allow limitless amount of information available to understand user behaviour, opening a door to strategically design the User experience. (Gibbs 2015, 267)

UX designers use the information from the data trail to find patterns of movement and identify user behaviour in order to improve their services, taking into consideration all the touchpoints throughout the user journey and their interaction with them. (Gibbs 2015, 267)

User experience design's goal is to make the user unaware of functionality and only focus on the task they are carrying out. If the functionality is effective, it will most likely be an unnoticed characteristic, this is a positive thing as functionality is a trait that is expected by the user, however if there is mistakes or glitches in the service, it will generate a negative response from the user. By foreseeing potential problems in the usability the designers

can address them before they occur, therefore creating a positive user experience. (King 2008, 44-47)

2.1.1 UX Design principles

Many factors influence the user experience, users have different needs when interacting with a computer system, these needs vary from person to person and age groups, however there are some common traits and features that users look for consciously or unconciously that have to be met. These are some factors that, according to Pablo Parea (2017) in his book UX Design for mobile, help design solutions that fit the user's natural behaviour.

Needs from our human condition

Humans experience the world through their senses; processing information through the vision, hearing, touch, smell and taste, being the three first the most relevant when interacting with an electronic device or application.
Our vision focuses on a fixated point at a time, but human nature also allows for peripheral vision, through which we are able to identify slightly blurred objects, shapes and colours, as well as motion. If there is movement anywhere inside the peripheral vision, it is going to get noticed.
This natural human behaviour pattern was analysed by designers when they created pop-up notifications, a form of communication done through a small line of text or an icon that appears when an application or a system is calling for an action.
By creating notifications that pop up instead of fading in it will generate a reaction from the user that will make them look at it. The shapes of these notices also lay importance on the design as the user will perceive the shapes in different ways. If the corners of the notification are sharp, they will be perceived as more serious whereas a sharper edge will be perceived as more playful. (Parea 2017)

Needs from general expectations

Users, when starting to make use of a product, have expectations of how that product is supposed to behave or respond. These expectations come from several different sources, one of them is the user's previous experience with similar services. Consequently, when a product doesn't behave as expected. It would be violating the principle of least astonishment, one of the main principles in Human-computer interaction (HCI), which states that the component of a system must behave in a way that users expect matching their experiences, expectations and mental models. (Yampolsky 2018)

When a user interacts with a product, he/she is making a mental effort, otherwise known as the cognitive load. When you reduce the cognitive load the amount of effort a user makes will decrease. The design of the product should be easy to use and obvious to manipulate. Hence, to achieve this, the design must include affordances; properties that indicate the possible actions an object is designed to fulfil. Affordances can be seen in the form of a button, shape, movement or colour that will aid the user to intuitively understand the purpose of its use. (Parea 2017)

In order to ensure a **positive user experience** according to the needs that come from general expectations the system should: Require minimum intervention, inform users in relevant terms, not waste user's time and avoid situations in which the user could make mistakes. (Parea 2017)

Minimal intervention can be achieved by avoiding adding unnecessary complications and steps, this can be done through allowing flexible input, incorporating smart defaults and supporting direct manipulation features, such as zoom. (Parea 2017)

Informing users in relevant terms is an important step as users find meaningful to receive confirmation of their actions when using a system; by showing a message or an icon in the screen when the user performs a task ex. Sending a message will make them feel in control. Communication with the user must be done with simple and understandable terms and not technical vocabulary. (Parea 2017)

User's time is important when they handle a device or a product, placing features that improve performance, reduce interruptions and locating tools at hand, where it "makes sense" will optimize the user's invested time. Another way to improve performance is by focusing on the called perceived performance, measured as the speed that the user thinks your site has instead of the real-time speed. The perceived performance is more important than the real-time one, and it can be improved by adding placeholders or loading indicators to give the impression of a shorter wait. (Parea 2017)

Finally avoiding mistakes can be done by predicting situations in which the user might have difficulties and designing the system to not allow the possibility of making that mistake. This can be done by adding for example logical restrictions such as not allowing to make reservations of dates that have already passed a well as avoiding dead ends. If a mistake is unavoidable, the communication of it should be done in a non-threatening way, without placing blame on the user. (Parea 2017.)

2.2 User interface

The interface of a system or a service is a combination of all the components in which people come to contact with the system physically, perceptually and conceptually. Physical interaction involves touch, perceptual interaction is done through the sight and noise (e.g. Notification), and conceptual interaction is done through the user discoverability, in other words, the path that a user follows guided through messages in the page. (Benyon 2019, 48.)

For users, what makes up the user experience is the product, and for that product to be a success the user interface should be well designed. UI in its essence is the conversation between the product and the user to achieve the goals of the user. (McKay 2013, 3)

2.2.1 Effective UI communication

Effective UI communication is made up from the combination of useful, relevant and necessary and purposeful content, the language should be clear, natural and easy to understand and the overall design and content has personality and tone. (McKay 2013, 17.)
However, one of the most important UI design principles is intuitiveness, if the interaction between the user and the product is intuitive, it will allow the user to achieve the goal they want to reach when performing a task in a simple and effective manner.
To achieve this, the user interface should include a combination of some of these features:

Discoverability: is the user's capacity to find and identify key data, services or complete a task. The design of the discoverability can be improved through consistent style and design, site flow and design elements such as fonts, shapes and colours. (Techopedia 2012)

Understandability: is the ability of users to understand clearly the content of the site and make decisions without the need of assistance. (McKay 2013, 31)

Affordances: are features that an object presents that guide the use or actions that can be done upon it. An example of affordance is a door handle, it signals that the door can be opened. Affordances improve interaction, there are several types of affordances in UI like photos, to visually support information, branding signs, illustrations, interface icons and buttons. (Tubik 2018)

Predictability: making sure the UI design is in line and delivers a clear and expected result when performing the task. To ensure that the predictability is good, the calls to action must be clear and the icons must be standard. This will ultimately reduce the user's cognitive load. (Klein 2010)

Efficiency: allowing actions to be performed easily by the user without major effort from the system. (McKay 2013, 31)

Responsive feedback: any action carried out by the user calls for a response from the system, for example providing a clear notice when an action is completed (such as notification that the message was sent/ not sent) (Sanson 2018)

Forgiveness: making sure the design supports the action of undoing a task in the case that the user makes a mistake. If the user, when browsing through the interface does something wrong or presses on an action he did not mean to, the system should provide a solution or an undo option. (McKay 2013, 31)

Explorability: making it easy for user to explore the content without getting lost or confused with the direction of the page. (McKay 2013, 31)

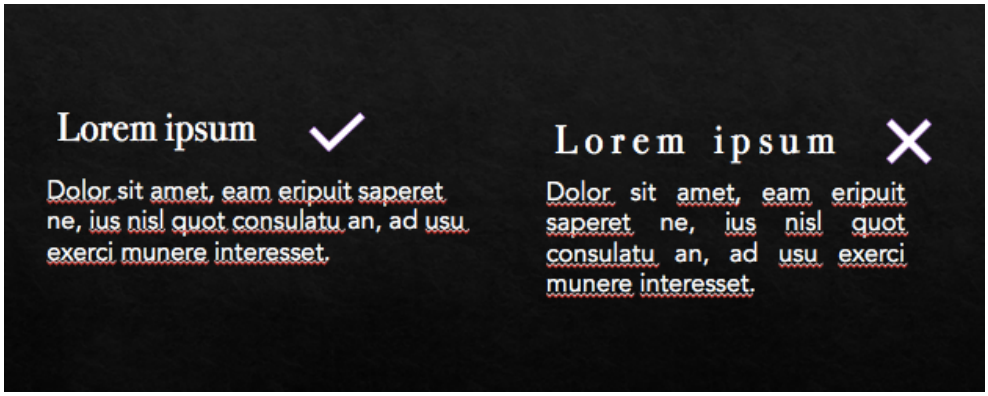
Users, as mentioned above, have expectations when they begin using a product or service. Those expectations are normally built by past experiences with other similar products, that is why, having an inconsistent interface design will have a negative effect on the overall customer experience (McKay 2013, 27.)

2.2.2 Typography

An important factor to take into consideration when designing the interface of a system is typography. Typography is the arrangement of letters and text in a clear, legible and visually appealing way. Typography is made up of the relation between the font's style, structure and appearance. Good typography captures the audience's interest and aids the reader in gathering information in a simple, quick and accurate way. (Jaye 2020)
There are some basic design principles that typography should pay attention to: legibility, spacing and alignment, consistency and uniformity, contrast and hierarchy. (Wollsten 2020)

The font choice and size must be coherent with the target audience, distribution channel and message that is to be transmitted. Depending on the target audience the font must reflect the tone of voice of the audience (e.g. Modern, formal, playful etc.) the font size is also important to consider alongside the target audience, where younger audiences are able to read text of 8 or 9 points whereas, if the text is presented to older audiences, it should have a minimum size of 10 points. Texts of more than 14 points break the continuity of the text. (Wollsten 2020)
Spacing and alignment play a big role on how the reader perceives the message, the spacing between the letters and text has to be balanced to maintain the reader focused and avoid being overwhelmed. Text alignment is moreover important to guide and aid the

eye movement while reading and, therefore, reduce the cognitive effort. There are 4 types of text alignment: left aligned, right aligned, centred text and justified text.
Left alignment is the default web alignment and it is the most legible of the four, it is characterised by being aligned at the left and ragged at the right corner. Right alignment is ragged on the left side and straight on the right. This alignment is harder to read as it forces the eye to focus on a different starting point each time. It is commonly used for marginal notes or sidebars. Centred text gives the impression of a formal look; however the legibility becomes harder in long body text as both left and right corners are ragged. Finally, justified text has the most symmetrical and formal appearance both left and right sides are aligned giving an even look. However because of this even alignment it creates odd spacing (see picture 1) in between the text, which creates a distraction during the reading. (Shen 2012)



Picture 1. Example of typography alignment. Left aligned and justified.

Hierarchy and contrast are used to establish the structure of the visual text. Typographic hierarchy is used to organize the content into heading, subheading and body text. This allows for the designer to guide the reader's attention and highlight important information. (Lam 2020) Hierarchy, with a combination of different font types and sizes creates contrast. In order to maintain uniformity and continuity the same colours and a maximum of 2 to 3 fonts must be used in the document to maintain concordance. (Wollsten 2020)

3 User behaviour

Alex Cowan presented the Hook framework as a service design theory based on the idea that a digital service or a product can become a habit for a user. He based his framework, presented in figure 1, on 4 components: trigger for an action, action, variable reward and investment. (Lewrick, Link & Leifer 2017, 30)

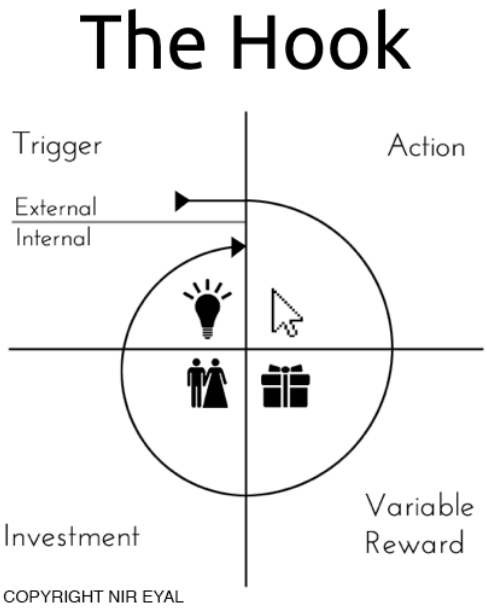


Figure 1. The 4 components in the Hook Framework. (Eyal 2011)

In the trigger for an action he presented two types: internal and external. An external trigger comes from an external environment, something you are able to see and triggers an action such as a notification in an app. On the other hand, an internal trigger for an action comes from a feeling or a thought, an example of an internal trigger would be opening a social media app because you are feeling bored. (Cowan 2013)

An action is the minimum interaction the potential user has to have with your service to get a reward. The action should be designed to be as effortless and simple as possible. (Cowan 2013)

The reward is the key emotional element for the user. Depending on the configuration of the action, the consumer can be given more satisfaction than the initial need. There are three types of reward: reward of the tribe, reward of the hunt and reward of the self.
The reward of the tribe is based on social acceptance, like one generated through getting a like on Instagram. The reward of the hunt comes from the excitement of finding what you wanted or were looking for, an example of this reward could be as simple as making a

google search. Finally, the reward of the self is based on personal gratification and mastering that comes from the need to control or complete tasks. (Eyal 2011.)

The investment is what creates value for the customer that will cause them to invest in a specific task that will trigger a future internal or external action. An example of an investment is signing up to a newsletter. (Cowan 2013.)

The Hook Framework serves as a guideline to follow to ensure that the tablet is functional and valuable to the customer. Every step of this framework is designed to first, draw attention to the tablet, then generate an action in it, give the customer a reward or a satisfaction and generate a positive attitude towards it to generate an investment. All the steps must be taken into consideration in the design process of the tablet as, even if the tablet has an impeccable interface, if it doesn't satisfy the reward principles, users will not invest in the product and therefore not use it again.

4 Design process

The Double Diamond model was developed by the Design Council in 2004. This model presents the design process in 4 steps: Discover, Define, Develop and Deliver.

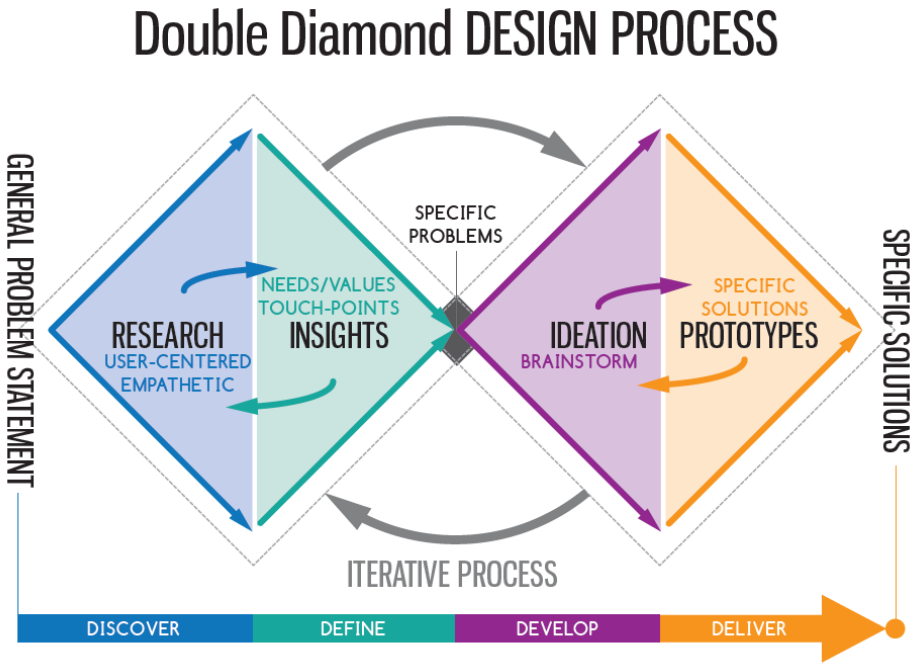


Figure 2. The Double Diamond model. (Stanwick 2019.)

The two diamonds allow two different processes of exploration; divergent thinking, a wider free-flowing search for solutions and convergent thinking, a more focused search to find one fixed solution (Design Council 2004)

Enclosed in the first diamond, we find the research phase, which focuses on gathering qualitative and quantitative information to identify the research problem.
The first step is discovery, in which the topic is researched and understood in order to have a clear picture of the problem. There are several ways in which we can identify the design problem, research methods such as observation, user diaries, brainstorming, surveys or simply making use of the product or service through the user's eyes are some of the many roads to discovery.

After gathering insights during the previous research, the challenge will be defined. In this part of the process the insights gathered before are reviewed and selected to set the main challenge. Some methods used for this are focus groups and creating customer journey mapping. (Design Council 2004)

In the second diamond, we move on to the ideation phase which is meant to open a gate to find solutions.
The first step to ideation is developing, in which the designer comes up with various answers to the research problem. In this stage we identify who we are designing for and which are the most important touchpoints. Creating personas is an easy way to focus the design on the potential user rather than just designing to taste. Creating scenarios and role-playing is a very effective way to analyse the context of interaction and the path users might follow depending on their circumstances. Putting yourself in the user's situation and isolating key interaction situations will aid in the ideation process. This is the step where the first prototype could be crated, or in cases of iteration, an improved version. (Design Council 2004)

Finally, the last step is the delivery of the product and it consists on finalising, producing and launching the product as well as collecting feedback on it. The final steps also include the testing of the product or service, this will be done starting from a small amount of people (3-5) before testing it on a bigger amount of people (50-100). This process will help identify any problems the product might showcase. Evaluation will aid in the identification of the product's success or changes in satisfaction. Finally, introducing feedback loops will help identify the success points or, in case of dissatisfaction, the points for further improvement. (Design Council 2004.)

This design model is iterative, therefore the process should be repeated if there is a need to further develop ideas and improvements.

4.1 Discover

I aimed to get insights and understanding on the topic by conducting a survey. This was a method that saves both time and money as I collected data from 88 people in between the ages of 18-65 in one week (3.4. -10.4.2020). The survey and the focus group were conducted to potential user's in order to define the expectations, experiences and to develop the interface of Poshie and finally deliver guidelines for the commissioner.

4.1.1 Survey

I conducted a survey in order to study potential user's knowledge and previous experiences and expectations when it comes to service tablets. The survey was conducted to 88 people from various age groups; from tech savvy young people to experienced travellers of a more mature age. The respondent distribution is as follows (Figure 1): 35 % of the respondents were between the ages of 18 and 34, 24 % of respondents were between the

age of 35 and 54 and 41 % of the respondents were from the ages of 55 and above. Each age group had different priorities when it comes to what they find valuable in a service tablet although there are many similarities between the groups.

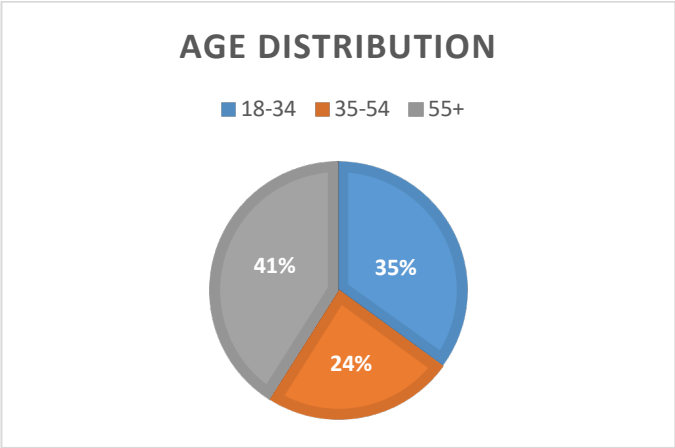


Figure 3. Distribution by age of the survey respondents

In order to find out which were the features that make an app/service appealing to the user, I provided several qualities from which the subjects were asked to pick three, the results showed that the most valued features in an app in order of importance, as showed in Figure 2

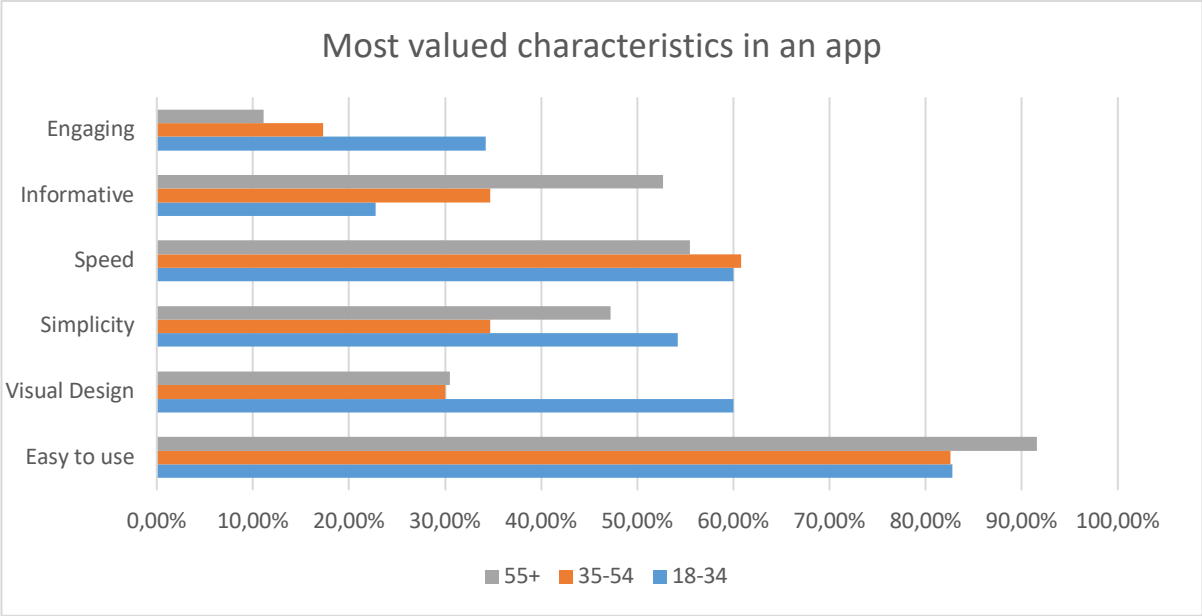


Figure 4. Most valued characteristics in an app

The figure shows that the most valued characteristics in an app are: for ages 18-34: easy to use, visually attractive, speed and simplicity, for the respondents aged 35-54: easy to

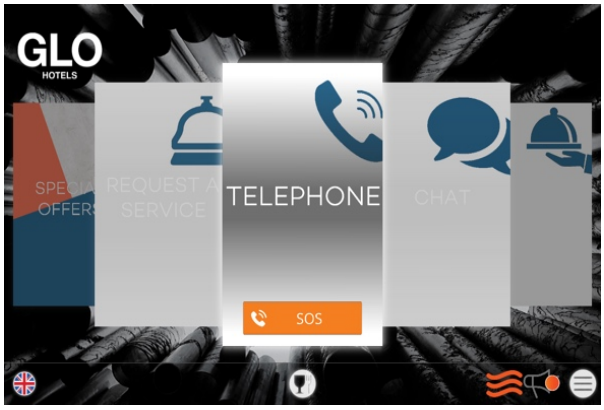
use, speed, informative and visually attractive, and for the respondents of 55+ years: easy to use, speed, informative and simplicity.

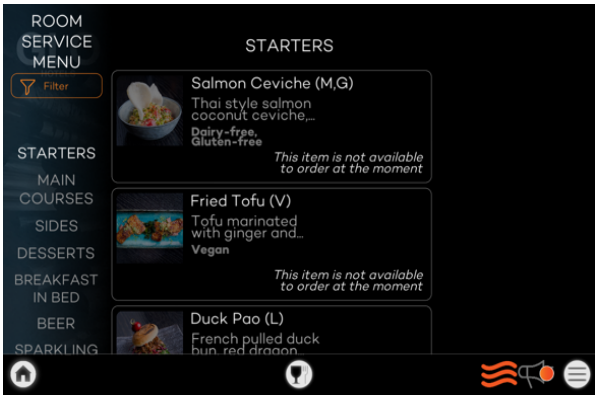
According to the theory, users generally have expectations for a product that derives from their previous experience with similar products, hence, the next question was designed to evaluate the respondents' previous experience with similar products and their experiences with it. This question was designed to be open ended, so the analysis of the answers is projected in a qualitative manner.

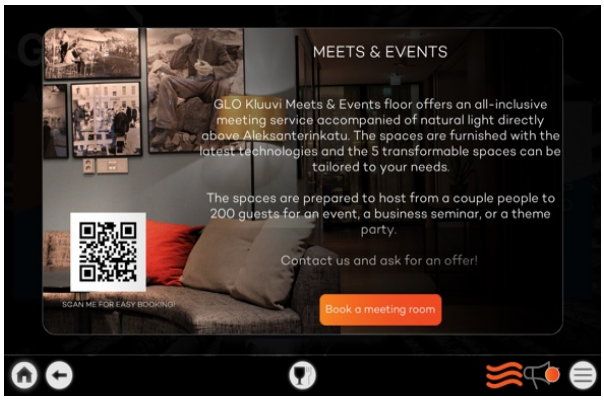
63,6 % of the respondents had used a service tablet before, when asked their experience with them, every group had both positive and negative experiences: most respondents agreed that the use of a service tablet was convenient, helped them save time, it was user friendly, provided a full service, was intuitive and one respondent said that its services provided a better hotel experience. However, some of the respondents said that their experience with a service tablet was impersonal, it was difficult to use, that it was messy or clumsy and it was slow.
This question was open ended, the answers are very broad and each respondent has had a different experience when interacting with a service tablet, nevertheless these past experiences play a big role when it comes to the next interaction with a service tablet which can cause the user to not pick up the tablet or give up on it the instant it begins to slack.

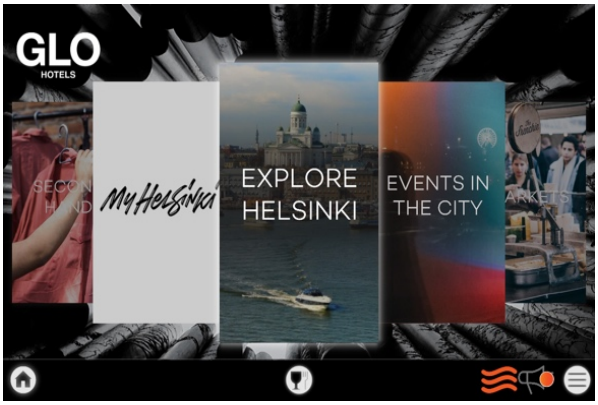
Potential customer's expectations for the content in in-room tablets were assessed, analysing the respondent's aged 55+, they expect to encounter hotel information, relevant contacts and services, transportation options, local attractions and dining options, weather forecast and maps. The remaining two age groups answers were exact but also payed importance on the tablet offering deals and offers as well as entertainment and TV connection.

Moving out of the general terms, I presented in the survey a video with screenshots from the tablet presented as pictures 1-4 amongst other screenshots and asked them with an open-ended question to give their opinion on the tablet and what caught their eye the most:









Pictures 2-5. Screenshot preview of Poshie's main menu, rooms service menu, meeting and event floor icon and explore Helsinki menu.

The subjects had positive reactions to the pictures presented, the respondents of ages 55+ placed emphasis on the amount of information available, said the layout looks easy and attractive and liked the pictures, however some respondents pointed out that the lay-out was too dark and hard to see, with too much clutter and had an odd navigation. The respondents between the ages of 18-34 and 35-55, had almost identical reactions agree-ing in the beautiful and easy layout, the amount of information available and how intuitive it looks placing a lot of attention in the pictures and the menu. Various respondents in be-tween the ages of 18-34 pointed out that the QR code was a nice addition.

Finally, to conclude the survey I asked if there was something that they were missing from the tablet or would appreciate to encounter in Poshie. The most named additions were games and content streaming services as well as the possibility to add a voice control/ vir-tual assistant to aid in the search of information. Many respondents from all 3 groups pointed out that the background is too dark, and the colours should be clearer.

4.2 Define

The focus group consisted of 4 members ages 22-30 that are familiar with technology and are aware the current trends in the field. In the focus group, the subjects made use of the tablets following a series of scenarios and tasks designed to gather insights and evaluate the user interface and the overall user experience. The subjects were given 5 minutes to familiarize themselves with the tablet before moving on to asking specific questions regarding the research problem. The analysis is focused on the customer's perspective about the visual design, content understanding, usability and performance of the tablet and the interaction design.

4.2.1 Focus group

To begin the focus group and start the conversation, the participants were asked if they had used a service tablet before. Three of the subjects had used a service tablet before, two of them in an airplane and one of them in another hotel. Subject 1 had used a tablet in a hotel before but the content in it was limited to mainly hotel information. Subject 2 had never used a service tablet before. Subject 3 and 4 had used the tablet in an airplane and agreed that it provided most of the things that you would need such as movies, music, games and a moving map. Subject 4 pointed out that she disliked the service button [of the airplane tablet] as it was too big, and on-sight and it could be pressed accidentally.

I asked the subjects what they expect from a service tablet in a hotel; Subject 1 had a negative experience and said that she expects to encounter minimal services, she doesn't expect a tablet in a hotel to have anything else than the necessary such as room service, phone and a small amount of information about the hotel, as she said before, she had used a tablet in a hotel before and it didn't have a lot of content. Subject 2 didn't have any expectations. Subject 3 said she expects simplicity and direct content that eases the job of employees, Subject 4 agreed, simple and straight forward content.

The subjects were given some time to browse through the tablet presented with a scenario; *"It is 3pm, you arrive to your hotel room and see the Poshie tablet, what do you do first?"*

Subject 1 decides to browse the content of the tablet to see what the offerings are, she points out that is pleasantly surprised by the look of it and is especially interested in the eat & drink section. Subject 2 notices that the tablet seems to provide a full service with a good amount of information and likes the chat feature. She moves on to visit the room service menu as she was curious of the food offerings and is pleased with the layout of the

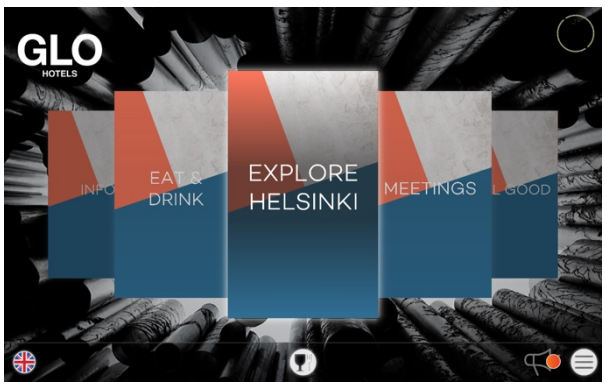
menu and the filter feature. She says that she really appreciates the filter system as she would make use of it. However she points, and I quote:

> *"I really like the filter option in the room service menu, but the alignment of the text is uneven, look (the subject shows me the tablet), the words are cut off in the middle" Subject 2 on Room Service menu.*

Picture 6. Recreation of alignment disruption in the filter option, Room Service menu.

Subject 3 goes to the Explore Helsinki icon to see what activities she could partake on in the afternoon. Subject 4 is drawn to the room service menu, she points out that the text saying, "the item is not available at the moment" and the darkness of the pictures gives the impression that everything in the menu is sold out.

The conversation continued with all the subjects joining and agreeing that it might be a better idea to write down the opening time of the restaurant instead of only stating that the item is not available at the moment (refer to picture 6). Subject 4 pointed out that the button in the lower part of the screen, the cart, resembled a menu icon (arrow in the picture below) and was confusing in the main menu view.



Pictures 7 & 8: Screenshots of Poshie room service menu and main menu

The next question, in order to assess the subjects' perception about the tablet I asked them to attribute Poshie with adjectives as if it was a person, they agreed that Poshie had characteristics that resembled a woman, friendly, visually attractive, informative and extrovert but also thought that "she" was a little heavy with too much information.

The subjects noticed that the browsability of the interface is smooth and different to anything they had seen before, however Subject 4 noticed that when opening the Flow (orange icon with three lines) the page that she had previously been browsing was lost when she closed simultaneously with the flows, causing her to have to find her way back to the same page she was on previously, which she found hard. She hoped for a search bar to find the information she wanted faster.

Finally, I asked the subjects what they thought of the tablet and if they have any suggestions to improve their user experience.

> *"I think that the text is too small, and the background too dark which makes it a bit hard to read for me because I wear glasses" Subject 3 on body text.*

Subject 3 also suggested the option of a vertical view of the content to aid in reading the information. Subject 1 proposed a virtual assistant feature that guides you through the content and gives a more personal service. Subject 4 pointed out that the tablet is slow reactive, and links take too long to load when opened. Subject 2 said that she missed having a date and time analogic feature in the screen.

4.3 Develop

After analysing both the survey results and the focus group answers we can point out similarities in previous experiences, expectations and ideas.

The survey gave many insights into understanding expectations and experiences with service tablets in general terms. As the respondents were not able to physically use the tablet, the insights are general and more focused on what makes up a good user experience rather than an in-depth look at Poshie's individual user experience and interface. However it sets some guidelines into what customers expect or would appreciate to encounter in a hotel tablet.

The previous experience the users have had with service tablets determines the attitude they will have towards the next service tablet they encounter; this means that if the user

had a bad experience, he will be bias the next time he uses another one and vice versa. This has to be taken into consideration and fulfil the user's general expectations.

The service tablet is expected to be easy to use, intuitive, user friendly and it should better the hotel experience.
Poshie is a full-service tablet that already includes most of the features that the survey respondents mentioned that they expect to encounter, however there are some features like contacts, weather forecast, maps and entertainment that could be added. It was mentioned that the view was too dark although it didn't seem to bother other respondents.

The focus group, as they physically used the tablet, gave many insights to the interface of Poshie. The subjects were very pleased with the design, but they noticed some inconsistencies in the interface. In their opinion there was a good amount of information available however they thought that is was badly organised and noticed that the icons weren't consistent with the order of the content. Every time they would enter an icon, for example the feel-good icon, the sub-icons appeared in a different order every time. This was confusing as attempting to find information that they had previously searched for was harder. Their main focus laid on the room service menu, which was very clear, but they thought the pictures were too dark, the information received as to why they couldn't order room service wasn't specific to the reason and the filtering terms were not in line with cut out words.

4.4 Deliver

Combining both researches and insights I have come up with solutions to the problems that came up. As a guideline for the improvement of the tablet I have assessed the results in three categories: customer expectations, user interface improvement and user experience optimization.

Regarding customer expectations, the content must provide all the basic information about the hotel, its surroundings and available services as well as, according to the research, an addition of a map option to get around and explore the city as well as weather forecast. Another expectation that customers had was related to providing entertainment through streaming services or games. An addition that came up during the focus group is to present an analogical clock with the date and time.

Moving on to the interface of the tablet, the most frequently mentioned characteristic was the darkness of the design. In the focus group, as mentioned in one of the quotes, one of the subjects struggled to read the text properly due to its size and contrast. To fix this concern, I suggest having the option to switch the view from dark to light mode and vice versa

according to the user's preference. Regarding another comment from the focus group, in order to aid readability, the view could also allow to be switched vertically. These are some of the factors that, alongside a proper following of typography design principles could aid to reducing the cognitive load and effort of the reader. As mentioned in the theory, although not brought up in the research, the body text when delivering information should be left aligned, and in the room service menu, the filter's alignment (as presented in picture 6) must be even. Finally. The tablet was seen by the focus group as slow reactive, to improve this, theory suggests adding placeholders or loading indicators, this way the perceived performance will be shorter.

Finally, to improve not only the user experience of the tablet but also of the hotel, it is necessary that the interface is functional and attractive. According to the theory, to satisfy the needs from our human condition, notifications in the tablet should involve movement and sound in order to gain the attention of the user and generate a response.

Both the survey and the focus group participants agreed that there is a lot of information in the tablet, this information should be presented in a simple way and following the hotel's tone of voice. To reduce the invested time of the user in the tablet, adding a search bar would aid a more specific search of content. Speaking of features, one of the discussed changes was that the cart icon, presented as a knife and fork, which gave the impression of a menu rather than a cart, this could be evaluated and changed. Finally, to take the customer experience up a notch, the tablet could offer a virtual assistant with voice control. This feature, integrated with the hotel data system has the potential to create a personalised experience for the customer.

Relating the Hook Framework to Poshie, the trigger for an action can happen in two different ways, either the customer sees the tablet and decides to pick it up or the tablet presents a notification that causes to customer to draw its attention to it and pick it up.
Once the tablet is in the customer's hand, we are looking for him to make an action, for this to happen the interface must be optimal, intuitive and clear as well as having affordances. After the action, the customer will get a reward, satisfying the reward of the tribe could be related to a sense of importance, for example if the tablet greets you and welcomes you to the hotel. The reward of the hunt could be satisfied after finding the information that he was looking for and finally, the reward of the self will be fulfilled by a sense of control and understanding after browsing through an intuitive interface.
Lastly, we are looking for the customer to invest in the tablet again, this is accomplished through the value that the tablet provides; if the customer finds the tablet helpful and interesting, he will use the tablet again the next time there is a trigger for an action.

By integrating the tablet with the hotel system and adding a virtual assistant to the tablet, it is a way to satisfy the reward of the tribe. It generates a sense of importance and personalised approach that will create value to the customers.

5 Discussion

The results are based on the combination of theoretical understanding and research, presented in the delivery section of the design process. These results support the aim of this study; to provide suggestions and guidelines to optimize the Poshie tablet. The consideration and application of these results will provide GLO Hotel Kluuvi's guests a positive impact regarding the customer experience, and can be applied to other hotels.

This thesis presents user-centred guidelines to improve the tablet, these guidelines serve as a first picture of improvement, however, to accurately reach the most optimal result, testing and feedback must be implemented and monitored.

The research methods and results were very insightful and gave room for analysis and the delivery of valid results. Regarding the reliability of the research, the survey questions were very general and it may not have reflected accurately a full scope on the respondent's opinion of the tablet due to the lack of interaction with it, however it was a good source for identifying user expectations and needs. The focus group was very insightful although it only portrays the view of 4 users.

The research followed ethical guidelines, respecting the privacy and anonymity of the respondent, the analysis was objective and follows the bases of honesty and integrity in the delivery of the results.

For further development of the study, I would focus my attention in creating more conversation between the sources and place more importance on getting responses both in the survey and the focus group from a specific target group. The survey analysis was categorised by age so the reader can focus its attention in general or specific viewpoints according to their needs and preferences.

During the research and study I have enlarged my knowledge on the key focus points to design the user experience and user interface as well as learned the importance of a user centred approach to improve the experience of the customers. I have learned the importance of having an objective approach to the analysis. Writing this thesis has broadened my knowledge which will be very useful in my further career opportunities.

References

Cowan, A. 2013. Making your product a habit: the hook framework URL: https://www.alexandercowan.com/the-hook-framework/ Accessed: 7 December 2019

Eyal, N. 2011. Variable rewards: want to hook users? Drive them cray. URL: https://www.nirandfar.com/want-to-hook-your-users-drive-them-crazy/ Accessed: 7 December 2019

Faudree, M. 2016. The 7 eras of Marketing. URL: https://www.getsimple.com/blog/seven-marketing-eras/ Accessed: 6 December 2019

Interaction Design Foundation. 2020. User centered design. URL: https://www.interaction-design.org/literature/topics/user-centered-design Accessed: 16 May 2020

Jaye, H. What is Typography and why is it important? A Beginners Guide. 2020 URL: https://careerfoundry.com/en/blog/ui-design/beginners-guide-to-typography/ Accessed: 12 May 2020

Kelleher, B. & Barnes, R. 2014. Customer Experience for Dummies. For Dummies.

King, D. L. 2008. Designing the Digital Experience: How to use experience design tools and techniches to build websites customers love. Cyber Age Books.

Klein, L. 2010. The Importance of Predictability in Design. URL: https://www.usersknow.com/blog/2010/11/importance-of-predictability-in-design.html Accessed: 6 May 2020

Lam, J. 2020. 7 typography tips for interface design URL: https://uxdesign.cc/7-typography-tips-for-interface-design-b7185e9397c4 Accessed: 16 May 2020

Lewrick, M. Link & P. Leifer, L. 2017. The design thinking playbook. John Wiley & Sons Inc.

McKay, E. 2013. UI is communication. Morgan Kaufmann.

Sanson, J. 2018. Feedback - action needs reaction. URL: https://uxdesign.cc/feedback-action-need-reaction-99a970fc1cbb Accessed: 6 May 2020

Scaffer, E., Lahiri, A. 2013. Institutionalization of UX. 2nd edition. Addison-Wesley cop.

Shen, Y. 2012. Alignment URL: https://smad.jmu.edu/shen/webtype/alignment.html Accessed 16 May 2020

Surbhu, S. 2017. Difference Between Primary and Secondary Data. URL: https://keydifferences.com/difference-between-primary-and-secondary-data.html Accessed: 6 December 2019

Techopedia. 2012. Discoverability. URL:https://www.techopedia.com/definition/28140/discoverability-design Accessed: 6 May 2020

Tubik Studio. 2018. UX Design Glossary: How to Use Affordances in User Interfaces. URL:

https://uxplanet.org/ux-design-glossary-how-to-use-affordances-in-user-interfaces-393c8e9686e4 Accessed: 6 May 2020
Usability Experience Professionals Association. Glossary. 2012. URL: http://www.usabilitybok.org/glossary Accessed: 11 May 2020
Wollsten, J. 2020. Typography presentation. Haaga-Helia Advertising course.

Appendix 1. Survey questions

POSHIE in-room tablet survey

I am conducting a research for my Thesis in collaboration with GLO Hotel Kluuvi and Poshie interactive, a company founded in 2017 with the purpose of providing hotels and restaurants a service that improves customer experience.

Poshie is an in-room tablet that can be used to order room service, request services and amenities, browse content and also serves as a channel for in-house marketing.

Thank you for your collaboration!

Survey questions:

How old are you?

How many apps do you use daily?

- 1-4
- 5-10
- 11-14
- 15+

What are the requirements/ features that make an app appealing? Choose 3.

- Easy to use
- Visually attractive
- Engaging
- Informative
- Simple
- Fast
- Other

Have you ever used a service tablet before? ex. airplane, restaurant, hotel etc.

- Yes
- No

If yes, what did you like about it?

- Open ended

What do you expect to find in a service tablet in a hotel?

- Open ended

Mark from 1 to 8 from most important to less important to have in a hotel service tablet

- Hotel information
- Room service
- Request of services
- Phone & chat
- Transportation
- Tourist destinations
- Fitness and care
- Offers

Here is a preview video of Poshie, please watch and answer the following questions: https://youtu.be/x8lQ77EhuOo

What caught your eye the most?

- Open ended

If Poshie was a person, how would you describe it? 3 adjectives

- Open ended

Do you have any content / feature suggestions for the tablet?

- Open ended