Haaga-Helia
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Designing customer journeys for a future hotel room

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Bachelor's Thesis
Degree Programme in Hotel, Restaurant and Tourism Management
2016

Haaga-Helia
University of Applied Sciences

Abstract

23.11.2016

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Degree programme
Degree Programme in Hotel, Restaurant and Tourism Management

Report/thesis title
Designing customer journeys for a future hotel room

Number of pages and appendix pages
38+6

The modern world is moving towards experience economy enabled by emerging technologies. Our lives start more and more resembling complex structures with many interconnections and links. All the industries are affected by this change. Hospitality industry is challenged to create new concepts to keep up with the everchanging world. In the future, a hotel room will not be anymore defined by analog features, but rather by technology that supports creating experiences.

Realising this context, the present thesis takes an explorative and creative path to picture how a hotel room will look in the future. The author of the thesis got inspired to complete this work by the Box project that has launched at Haaga-Helia UAS in year 2016.

The thesis follows Service Design process principles, a new Service Design process model is created by the author to fulfil the objectives of the thesis project. The stages of the process that the project followed are: Understanding, Defining, Developing and Explaining. The outcome of the design process are two customer journeys, introducing experiences that are created in a future hotel room by implementing Augmented Reality and Virtual Reality technologies.

The first chapter introduces the reader to the subject of the thesis, presents aim and objectives and provides the outline of the report. The second chapter covers the theoretical framework, built around Service Design studies. The third chapter of the thesis report gives a description of all the stages of the Service Design process completed by the author. The final chapter covers the comparison of the theoretical framework and the practical outcomes of the project.

With this work the author hopes to contribute to the development of the future hotel room concept that will be prototyped at the Best Western Hotel Haaga in year 2017.

Keywords
Service design, customer journey, future hotel, immersive technology.

Table of contents

1 Introduction 1
1.1 Aims and objectives 2
1.2 Outline of the thesis 2
2 Theoretical framework 4
2.1 What is Service Design 4
2.2 How did service design emerge? 6
2.3 Overview of the Service Design process models 7
2.3.1 Moritz model 7
2.3.2 Design Council model 9
2.4 Service design framework for a future hotel room 10
3 Designing customer journeys for a future hotel room 13
3.1 Understanding for future hotel room journeys 13
3.1.1 Customer 13
3.1.2 Context 17
3.1.3 Immersive technology 19
3.1.4 Multiverse 21
3.2 Defining for the future hotel room journeys 23
3.2.1 What did I learn during the Understanding phase? 24
3.2.2 Design challenge, frameworks and tools 24
3.3 Developing the future hotel room journeys 25
3.4 Explaining the future hotel room journeys 27
3.4.1 Meet the guests of the future hotel room 27
3.4.2 See what they see 28
3.4.3 How to read the future customer journey map? 32
4 Discussion 33
4.1 Service design process in relation to the thesis process 33
4.2 Ideas for future studies 34
4.3 Personal learning and development throughout the process 35
References 36
Appendices 39

1 Introduction

Nowadays agenda of numerous hospitality conferences and seminars include topics related to innovation and trends, shaping the future. Times are changing, pace of innovation is increasing; keeping up with the accelerating pace becomes crucial for success of a business. The way to go about it is to constantly be on a look out for signals that alert what might become the next breakthrough. Taking a step further hospitality businesses are updating their existing offering to match the changing demands of customers by creating new concepts, that require a high degree of innovation.

The author attended the Gastro fair, that took place in March 2016 in Helsinki. As a part of of programe there was a Gastro Pro leadership seminar organized, that brought together industry decision makers, educators and experts. The seminar provided a unique opportunity to learn about the trends, updating service products and creating wow moments for customers in the hospitality industry.

During the fair the author also helped collecting data for a research that was conducted among the visitors of the Box project stand. While collecting data, the author got a chance to try Virtual Reality headset for the first time. It was a unique experience, that left the author wishing for more. The author could also observe the other exhibition visitors testing the technology and it became evident that virtual reality experiences do engage people emotionally.

Getting inspired by the future oriented and innovative climate around her, the author wanted to learn more. She scored an interview meeting with innovation experts Ron Swidler and Matt Phillips, who spoke at the Gastro Pro seminar. In fact, the two experts were major contributors in the Finnish Hotel of Tomorrow project implemented by Haaga-Helia UAS in 2007-2008. The author of the thesis wanted to hear their insight of the Finnish Hotel of Tomorrow (FHOT) project as well as how do they approach creation of innovative concepts. The conversation took a turn to discussing visions on how a hotel room would look in the future, and the expert voiced his opinion that the room itself will not be much different, but “the thing that changes are the devices that people carry with them into the space and how those devices interact with the environment” (Swidler 16 March 2016).

Having seen and learned so much the author got carried away with thoughts about what a hotel will be like in the future and what kind of experiences it would offer the future guests. This set a direction for the thesis work that the author completed in autumn 2016.

1.1 Aims and objectives

The present thesis is a product type thesis that aims at creating customer journeys for a future hotel room. In order to achieve the goal, the author have set the following objectives: to study various frameworks that are used when developing services; to acquire an understanding of the emerging technologies that have a potential of getting wide-spread in the future; to picture how technologies will shape experiences of hotel guests in the future.

By completing this project the author wanted to get a practical experience of designing a service, that she could apply in professional life, gain a better understanding of the immersive technology landscape and arouse an interest among peer students towards implementation of emerging technologies in hospitality field. The outcome of the project is two customer journey maps that showcase an implementation of Virtual Reality and Augmented Reality technologies in a future hotel room. The author hopes that the customer journey maps can be used when creating a future hotel room concept that will be prototyped as a part of the Box project.

Because of the future oriented nature of the project the outcomes are generic. The customer journeys are limited to implementation of the Augmented Reality and Virtual Reality technologies. As well customer journeys were designed for an abstract hotel that would exist in the future in Helsinki. That was defined by the fact that a future hotel room concept would be potentially prototyped in the Best Western hotel Haaga located in Helsinki. The customers' profiles that are used in the customer journeys are limited to two customer segments that will appear in the future.

1.2 Outline of the thesis

Following the traditional thesis report structure, the present report is divided into three parts: theoretical part, empirical part and discussion. The theoretical part is presented in the chapter 2 by introducing service design field, its origins and existing process models. The theoretical part is concluded with a description of a service design process framework developed by the author to carry out the project. Chapter 3 represents the empirical part of the thesis. It provides a detailed description of all the stages of the service design process completed by the author. The customer journeys, created as an outcome of the process are presented in the end of the chapter. The chapter 4 contains a discussion on the outcomes of the process performed by the author, followed by the recommendations on what studies can be done in the future to further develop and enrich the subject covered in

the present thesis. In the end of the thesis report the author assesses her learning outcomes and reflects on the knowledge gained as a result of completing the thesis.

2 Theoretical framework

2.1 What is Service Design

There is a variety of definitions of service design in both academic and professional sources. One of the reasons behind is an evolving nature of the study. While an early research on related topics dates back to the beginning of the 1990's, the subject has gained popularity among academics' alike practitioners 10 years later. Currently it maintains popularity due to its wide application in business world. (Stickdorn & Schneider 2011, 308.)

For this thesis two definitions of the Service design are relevant. According to Stickdorn and Schneider (2011, 29), "Service design is an interdisciplinary approach that combines different methods and tools from various disciplines. It is a new way of thinking as opposed to a new stand-alone academic discipline". And, according to Moritz (2005, 8), "Service Design is a new holistic, multi-disciplinary, integrative field. It helps to either innovate or improve services to make them more useful, usable and desirable for clients, as well as efficient and effective for organisations".

Both definitions emphasise the multidisciplinary nature of Service design. Furthermore, it explains that the Service Design can be applied when creating new services as well as finetuning the existing ones. Going beyond the definitions it worth paying attentions to the characteristics of the service design described by both authors. This will enable better understanding of philosophy behind the phenomena.

Stickdorn and Sneider (2011, 34) state five principles of service design thinking as following:

- user-centred
- co-creative
- sequencing
- evidencing
- holistic

User-centred means that an ability to indicate and understand various mindsets and needs of customers is a key to a success in a service design process. Co-creative principle describes a need for various stakeholders, including customers and front-line employees to be involved in a process. This has a positive impact on customers and employees of a company alike through loyalty, higher perceived value and employee satisfaction. Sequencing principle explains an importance of paying attention to all stages of a service (pre-service, service and past-service), across the various touchpoints. The goal is to achieve a pleasant flow, that is adequate for the service provided. Evidencing is about

creating a tangle evidences of a service. In an ideal situation, evidences will trigger memories of a customer about a positive service experience. Yet, to achieve such an outcome, those physical artifacts have to be designed in line with the whole process. Holistic principal in the interpretation of this study means always aiming at having a bigger picture of the context where the service takes place. (Stickdorn & Schneider 2011, 34-45.)

Moritz (2005, 42) suggests that following characteristics differentiate service design:

- Service Design truly represents clients perspective.
- Service Design addresses the unique features of services
- Service Design integrates expertise from different disciplines.
- Service Design is interactive.
- Service Design is ongoing

When talking about client's perspective Moritz points out that most of the services are created from company's perspective, while service design allows to indicate needs and desires that might have not yet been obvious even to a client. Designing services from a customer viewpoint ensures the end offering to be relevant for the needs of both a client and an organisation. Moreover, he points out that there are two types of clients in a Service Design process: user-clients (service providers) and customer-clients (service consumers).

In other words, Service Design aims at improving both customers' and employees' experiences associated with a service. The unique features of the services imply characteristics that differ a service from a product. It does not mean that a service and a product are two distinct entities, rather the first is designed around the latter. Therefore, the Service touchpoints should be carefully planned to go in hand with the Service concept. Service Design invites to benefit from the knowledge and tools generated by the other disciplines. On one hand, the process itself includes tasks and tools previously employed only by a specific field (such as product design, IT, business strategy).

On the other hand, including all the different stakeholders in a process brings their respective field of expertise to the table. An interactive nature of Service Design means that with a use of prototyping, developing services can be tested and improved to reach the best solution. As services unfold over a period of time Service Design is also an ongoing process. It means services should be monitored beyond the implementation phase for a constant need of improvement. (Moritz 2005, 43-46.)

When comparing the described approaches to service design some similarities become evident. Moritz (2005) as well as Stickdorn and Schneider (2011) talk about placing a cus-

tomer in the heart of service design, involving as many shareholders as possible in the design process, paying attention to the touchpoints and creating a holistic service for a customer.

Similar defining characteristics are also brought up by Polaine, Løvlie and Reason (2013, 41), who point out that service design is about designing with people not just for them. Earlier is already targeted in user centered design and marketing, versus the latter is an essential characteristic of service design. Authors note that people in the above-mentioned statement mean not only customers but also service providers – employees. This point is followed by a discussion on how the services unfold over time and the service design should be continuous. Holistic component of service design can be followed in how authors talk about "researching people's activities and interactions across all the touchpoint channels as well as the segments of their journey through the service" (Polaine, Løvlie & Reason 2013, 46).

2.2 How did service design emerge?

Service design has emerged with a transformation from product to service economy. The challenges associated with unique characteristics of services such as intangibility, perishability, interactive and complex nature raised a call for a new approach (Moritz 2005, 23-31). Alike (product) design aims to make products more useful and desirable for customers, service design creates the overall experience of a service as well as a process and strategy of delivering it to a customer (Moritz 2005, 39).

The combination of opportunites and challenges posed by development and a wide use of thechnology in the service field have played a great role in an establishement of a distinct field of service design. It enebles a better interaction between technology supported service offer and a consumer, creating a more user-friendly solutions. (Polaine & al. 2013, 24.)

Taking its roots in various forms of design, such as product design, interaction design, graphic design, as well as marketing and management, nowadays Service Design is a young field that keeps evolving (Stickdorn & Schneider 2011, 55-54, 310).

While the early research on service design was focusing on defining the subject itself and differentiating it from the other fields, the current research moved towards exploring tools and methods as well as looking into integrating practices from the other fields. (Stickdorn & Schneider 2011, 308-314.)

2.3 Overview of the Service Design process models

Given a diverse nature of the Service Design field, there is a variety of Service Design process frameworks proposed. A great attempt to summarise and compare those models is done by Else-Marie Lehto. The author visually presented existing service design models (Figure 1). The creators of the models are indicated on the left, followed by a liner interpretation of the process. Each stage of the process is presented in a separate block. The stages are colour coded to indicate the similar activities across the models. The full figure also contains the author's own process model developed for the thesis. It is excluded from the present picture as it is irrelevant for the current discussion.

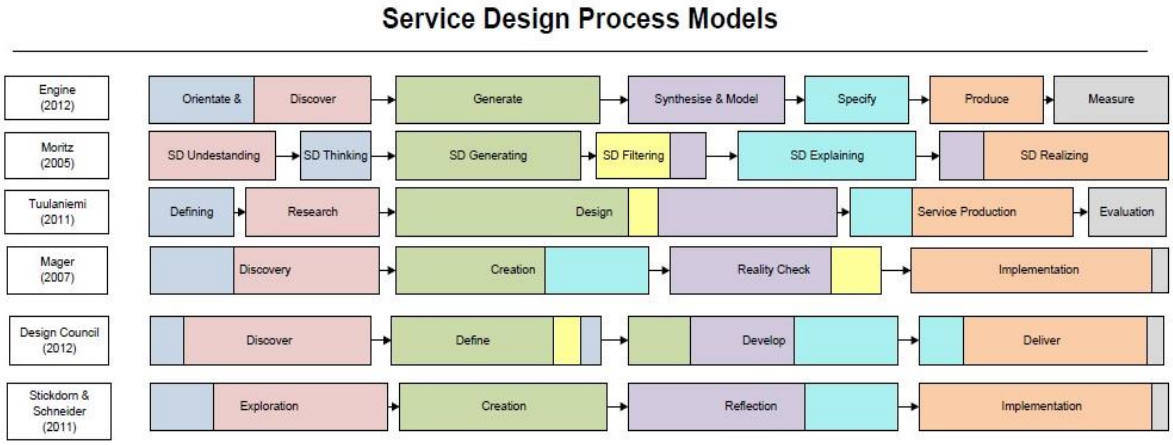

Figure 1. Service Design Process Models (Lehto 2012)

This figure helps to gain an understanding of the variety of models in the field as well as to see how they differ. Overall the reviewed service design processes are built from a minimum of four to up to seven stages. Nonetheless the logic and the process flow is similar across the models. This overview served as a starting point in researching Service Design process models, as other structured list of models was not discovered. In the present thesis two models will be analysed in detail: Moritz (2005) and Design Council (2005).

2.3.1 Moritz model

In his book, Service Design: Practical access to an evolving field, Stefan Moritz starts off by giving a general overview of tasks that should be completed within a Service Design project. Figure 2 illustrates Service Design categories. This concept is essential in understanding the interconnections between the tasks as well as ongoing nature of the process. As Service Design is not aiming at just launching a service (as product design does for a product) but rather provides a framework for continues process of improvements and developments. The fact that categories overlap emphasises that the tasks of the service design do not necessary take place in a sequential manner but can also take place simultaneously or in a mixed order. An arrow in the middle of the figure means that the various

tasks of Service Design can be used multiple times over the course of a project. The short explanations given above the circles point out the goal of each category. (Moritz 2005, 149.)

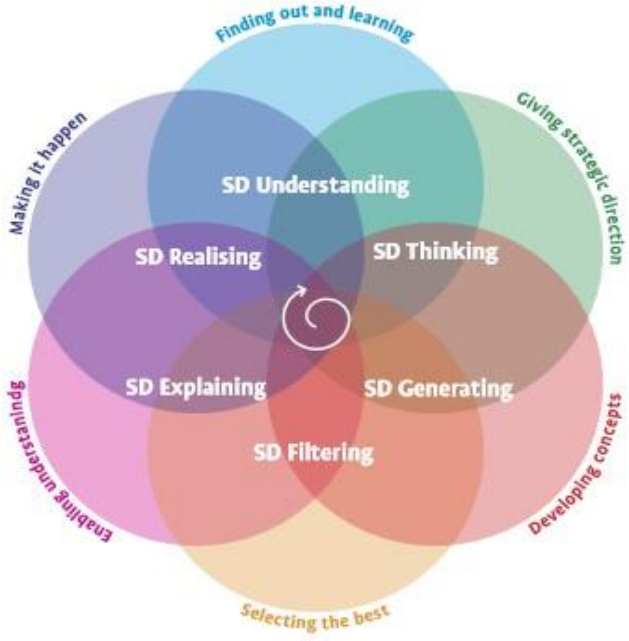

Figure 2. Service design categories (Moritz 2005, 149.)

When it comes to more detailed explanation of the process itself, the author suggests a liner version of the model, which is more suitable to see how the transactions are made between stages, as well as how, each layer builds upon the previous one (Figure 3).

A project starts with establishing a team, discussing such important details as objectives, timeframe and scope. Then begins the first phase – SD Understanding. At this point the context of the project should be clarified as well as customer's needs, current market situation and links between stakeholders involved in a service. The collected knowledge and insights create a foundation for the next stage – SD Thinking. The aim is to analyse the information available, combine it with the criteria and objectives, which will give a strategic direction for a project. Next comes SD Generating, when all the stakeholders involved in a project and often outside contributors are invited to create a large amount of ideas, concepts and solutions. Then the ideas are filtered based on factors such as legal constrains, and strategic directions to extract the most suitable few. After comes SD Explaining – making the suggested service concept clear to all stakeholders by means of blueprints, scenarios, prototypes. If it becomes evident that there are areas that need improvement or a concept does not resolve the stated problem, the process can be repeated from the stage 2. Otherwise when a solution proves to be right, the final stage of the process takes

place – SD realisation. That is when the idea comes to life, supported by detailed implementation plan and guidelines.

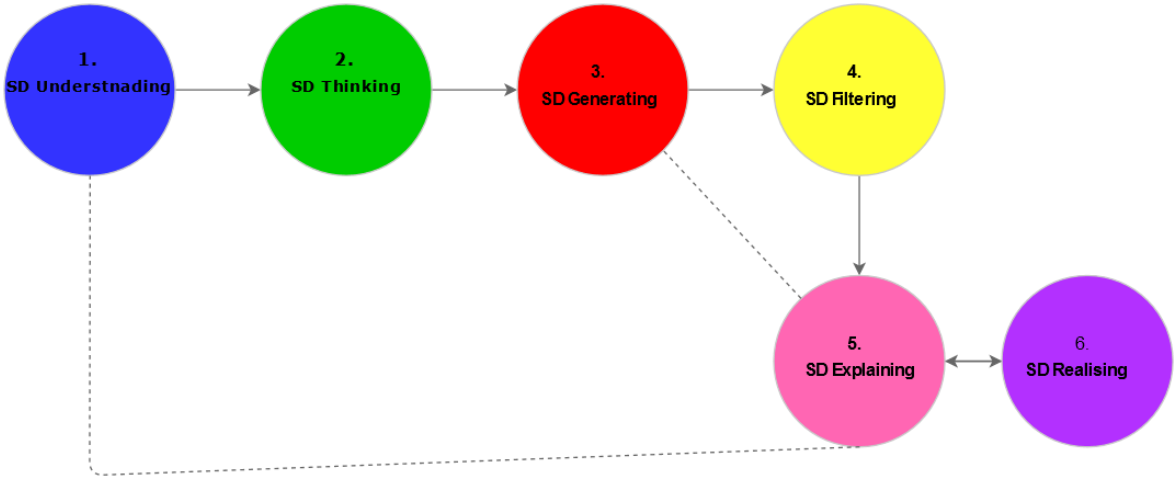

Figure 3. Service Design Process (Moritz 2005,159.)

Still it is vital to understand that the liner representation of the process is created for clarification sake, while the above mentioned circular model showcases the essence of the Service Design process. (Moritz 2005, 123, 154-157.)

2.3.2 Design Council model

Design council is an enterprising charity organisation that works towards improving people's lives through design (Design Council 2016).

The Double diamond model created by the Design Council is a more static, liner approach. It divides the whole process into four distinct phases: Discover, Define, Develop and Deliver (Figure 4). The shape of the model visually represents how the process passes through the phases where the amount of information and ideas is large to the points where it should be narrowed down in order to bring focus to the objectives.

The first quarter of the diamond represents the Discover phase, when inspirations and insights are gathered along with identification of customer's needs and initial ideas for a service. At this point a large knowledge resource is gathered. Next comes Define stage, when designers will indicate the most valuable information, make sense of all the possibilities uncovered during the previous stage. At this point a large volume of ideas is narrowed down to one problem that the process will solve. The third quarter of the framework represents the Develop stage, when ideas and solutions for a stated problem are generated, prototyped and tested. A special attention is paid to aligning different elements of a ser-

vice to a holistic experience. Finally, when a solution is proven to be ready for implementation, the design process arrives to the fourth quarter – Deliver. That is when a service is taken for launching, equipped with customer feedback channels, so that the solution addresses the needs identified in a Discover phase. Another important point is to communicate the outcomes of the development process to the organisation. (Design Council 2005, 7-9.)

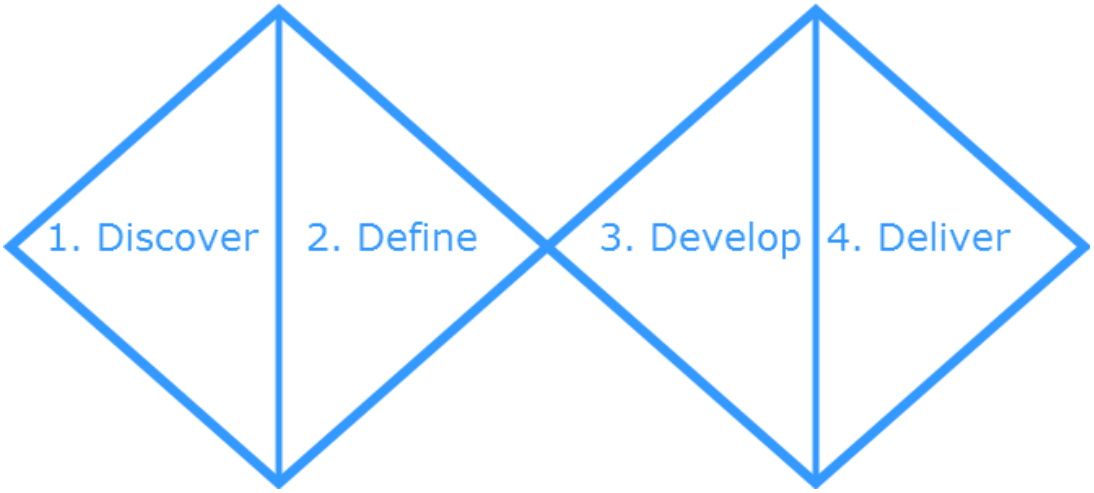

Figure 4. Double Diamond model (Design Council 2005, 6)

2.4 Service design framework for a future hotel room

In the present thesis project Service Design process, will be used as a tool for achieving the goal of the project. The decision is justified by the innovative nature of a service that will be developed, hotels having services at its core, therefore a need to design a holistic service that is built around a customer and the fact that the service in question is enabled by a technology.

Having analysed and compared the two above mentioned process models and keeping in mind the specific characteristics of the present project a need to develop an alternative Service Design process was indicated. A new model (Figure 5) will combine the two models, adapting it to the realities of this project.

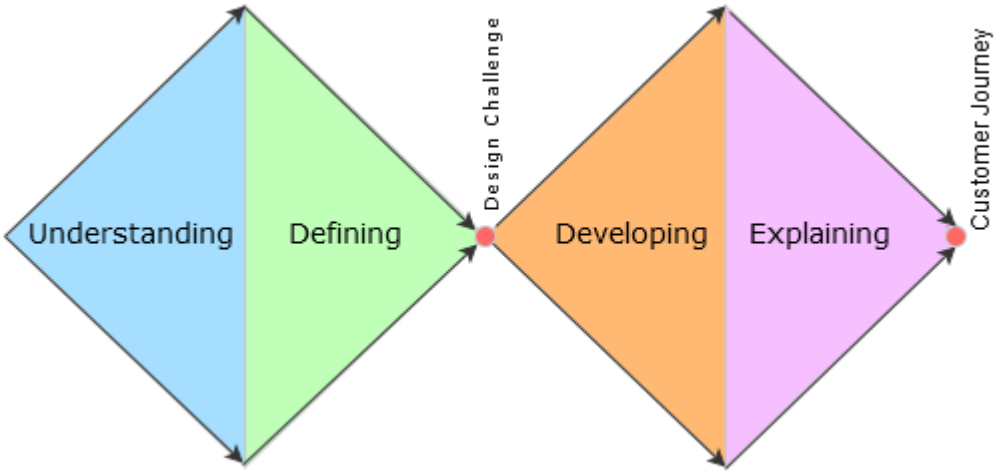

Figure 5. Service Design process model (Developed by the author)

The process starts off with Understanding phase, where the author will get familiar with subjects within the scope of the project by reading books and articles, following news, attending a fair. This actions will enable throughout comprehension of the field of the project. The goal at this stage is to gain insight into customer, the context of the project and possible solutions that exist.

The stage of narrowing down the large scope of information, such as trends, potential customer segments and numerous solutions to a single direction that the project will take is titled Defining stage. After that a precise design challenge is formulated.

The following stage is called Developing stage. During this phase a multitude of ideas is generated together with external contributors, who share the values of the target customer group. Due to the fact that not all ideas are suitable for the concept in mind, number of ideas proposed during the brainstorming sessions will be eliminated. Analysing and improving the remaining few solutions will conclude the Developing stage.

Explaining stage will clarify and describe the created concept. A customer journey map is selected for this purpose. The Service Design process will end with presenting the developed solution. If a created concept will attract interest it can be later tested and prototyped within the larger project.

The linear representation of the process, that follows the Double Diamond framework is used for visual explanation of the developed process model as well as structuring the information presented in the following part of the thesis. It is especially good at communicating how large scope and amount of information is narrowed down twice across the pro-

cess. Nonetheless the innovative and explorative nature of the project determined the adaptation of the Moritz's philosophy of being flexible with a consequence and structure of the stages. For instance, activities of the Understanding and Defining phases will occur simultaneously. As well as Developing stage in the present model is a combination of the Generating and Filtering stages of the Moritz's framework. The proposed model ends at the Defining stage as the actual implementation of the developed concept is not planned. Nonetheless if the proposed concept will be found viable in the scope of the larger project then other tasks of the service design can be performed in order to test, further develop or prototype the service. Similarly, in Moritz model after explaining stage the project can be taken back to SD Generating or even SD Thinking stages.

The following tree Service design tools will be used during the service design process. Personas are based on research insights on groups with common values that are then developed into specific characters. Even though characters are fictional the motivations and reactions they have towards a service follow the real traits of customer groups. Stickdorn and Schneider (2011, 178) explain that "Personas are fictional profiles, often developed as a way of representing a particular group based on their shared interests". Having a specific character allows to shift the focus from abstract demographics to actual needs of real people. A successful persona should be engaging and provide a complete profile of a character, visual representations are often used. (Stickdorn & Schneider 2011, 178.)

Customer Journey map is a tool, which provides a structured yet vivid visual representaion of a service user's expereince. A customer journey map is constructed form a user's perspective and provides an overview of factors that influence an expereince. Touchpoints on the journey map indicate the points where user has an interaction with a service. (Stickdorn & Schneider 2011, 158.)

Brainstorming is one of the ideation techniques friquently used in service design. It is meant to generate a large volume of ideas around a specific topic. Involving a range of different people, conducting several sessions and having multiple groups generating ideas on the same topic increses a reachnes of ideas that are created. The rules that ensure the success of a brinstorming session include: "defer judgement; build on the ideas of others; focus on the topic; one conversation at a time; encourage wild ideas". (Design Council 2015, 17.)

3 Designing customer journeys for a future hotel room

3.1 Understanding for future hotel room journeys

A service design process starts with getting familiar with an unknown subject, uncovering a wide range of ideas, inspirations and solutions. The following chapters present an overview of the information and theories examined by the author in order to reach an understanding of the context and the field where the customer journey for the future hotel room is created.

3.1.1 Customer

Identifying the right customer is a key to a successful business. The challenge in this project is that the concept that is being created looks in the future, therefore the potential customers will differ from the ones that exist today.

Dividing customers into groups based on their specific characteristics have been well established theory for decades. Segments can be created around such characteristics as age, gender, financial status, nationality. However, customers are constantly changing, their behaviour is evolving, which makes a call for a new approach to segmentation. Even though a wide spread trend of personalisation, might challenge the very nature of segmentation – dividing customers into groups, there is still a sufficient similarity in the needs and motivations of people to travel that enables to form them into groups. (Amadeus 2015a, 26.)

For instance, the four tribes presented in the Future Travellers Tribes 2020, published by Amadeus in 2007 were largely defined by demographics, nationality and behaviour characteristics. The tribes were following: active seniors, global clans, cosmopolitan commuters, global executives. Trends, such as aging population, increased mobility and popularity of visiting friends and relatives are clearly reflected in the categories. Pursuing a goal of finding a more accurate way of describing travellers' groups that will appear in the future the company made a second attempt, creating the Future Traveller Tribes 2030 report, that was published in 2015. The new six tribes are built around the initial four, but this time focusing on behavioural traits, motivations and values, rather than demographics (Figure 6).

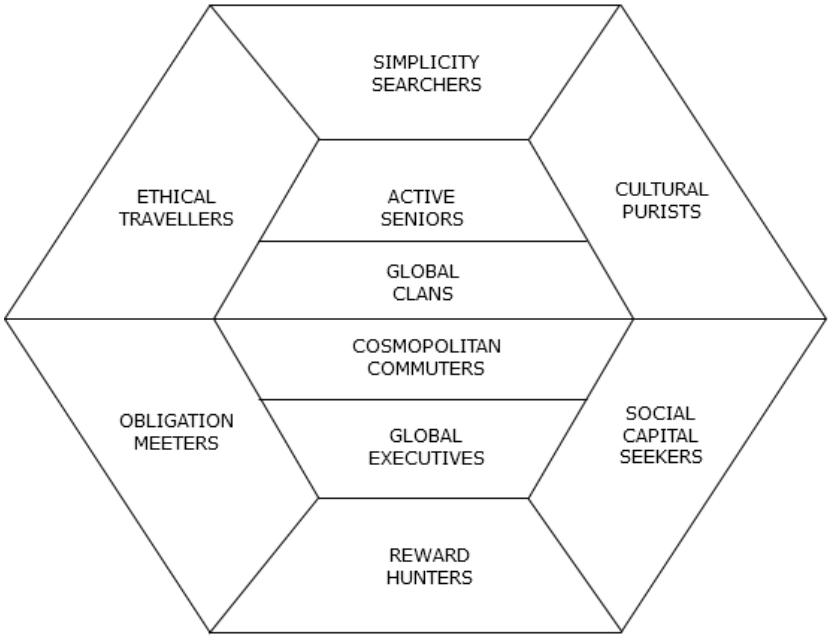

Figure 6. Travellers tribes 2030 (Amadeus 2015a, 29)

Simplicity searchers seek easy solutions for their holidays. They are likely to hand in the decision making to the third parties in exchange for being provided a safe and well working travelling option. They also value transparency, being able to understand how those options are build and priced. Cultural purists are aiming at experiencing new cultures and ways of living when away from home. Social capital seekers are motivated to travel by an urge to create a social media footprint, they are willing to share their experiences with a wider audience to be perceived as well-travelled individuals. Reward hunters see holiday making as a reward for a hard work that are doing on a day to day basis. They are after self-indulging, luxury experiences. Obligation meeters shape their travelling choices around a need to be at a certain place in a specific time. Ethical travellers are guided by consciousness, their travelling decisions are affected by environmental, political or economic causes (Amadeus 2015a, 30).

It is important to understand that future travellers cannot be statically divided into the above-mentioned tribes. A traveller may represent a different tribe on each individual trip, as well as switching between the tribes even within stages of one trip. It happens since attitudes and behaviour vary based on priorities and obligations (Amadeus 2015a, 27).

Another approach to understanding the future customer is provided by the concept of Digital natives. The term was first introduced by Prensky (2001). Further investigated and explained by John Palfrey and Urs Gasser in their book: Born Digital. Understanding the first generation of Digital Natives. Palfrey and Gasser (2008) describe them as people born into the world, where technology and Internet have already existed. Thus, for them, being

connected, staying in touch through social media and using technology in any possible aspect of life is a way of living. They have the tools and know how to use it. In contrast to the Digital Immigrants who had to learn and adjust their lives with an arrival of the digital era. In fact, digital natives do not make a difference between their digital identity and real-life identity but rather having one identity with representations in multiple spaces. And the technology represented by computers, smartphones and other devices, is just a mediator of interacting with one another. This new mindset will certainly bring a huge change, transforming industries, as the Digital Natives enter the workforce. (Palfrey & Gasser 2008, 1-7.)

Because service design is a customer centred approach just identifying a target group is not enough. Gaining a deep understanding of how a customer behaves, what motivates him in the choices and how the behaviour evolves while experiencing a service. To address this task a variety of tools exists in the field of the service design. For instance, customer personas, customer journey mapping, touchpoints. Typically, insight is gathered by observing customer while experiencing service – shadowing, contextual interviews, ethnical research and other. However, as mentioned earlier a customer, addressed in this project will live a few years from now. Hence the author analysed yet another report in the series: Future Traveller Tribes 2030: Building a more rewarding journey, published by Amadeus few month after the initial report. This study provides insights into purchasing behaviour of the developed tribes. It also draws a picture of how a customer journey will look in the future.

According to Amadeus (2015b, 10) “traveller journey will not change fundamentally but the purchase behaviour will”. Technology will certainly have an impact on the journey, but rather expanding the scope of the journey, making a customer accessible for a service provider for a longer period of time. Which in turn extends the number of potential touch points dramatically. (Amadeus 2015b, 10-12.)

Taking the next step in understanding a customer is getting familiar with the behaviour traits possessed by a tribe. This project will focus on two tribes out of the existing six. The tribes are: Simplicity Seekers and Social Capital Searchers. The selection is based on the values and motivations the tribes represent. The Figure 7 presents the summary of the purchasing behaviour of the two above-mentioned tribes. Note that the purchasing behaviour is adjusted with a hotel stay scenario.

Category	Simplicity Searcher	Social Capital Seeker
Opportunity to influence	From inspiration to booking	Across all the journey
Degree of personalisation	High	High
Purchasing experience	Package type	Both package and individual
Level of contact	Very low	Very High
Touchpoint devices	Inspiration centric	Any
Type of experience	Convenient	Exciting, sharable

Figure 7. Mapping Future Traveller Tribes purchasing behaviour (adapted from Amadeus 2015b,17)

A company is the most likely to influence a purchase decision of a Simplicity Searcher, while he is planning his future stay or during the booking process. This can be achieved by providing a try before buy component, that will create a feeling of certainty and simplify the decision-making. Any attempts to offer additional services after the stay is booked will irritate a guest. He desires to receive a customised package-type solution that covers the whole trip and defines all the experiences in advance. This type of guest will be willing to share personal data to adjust the experience to the personal needs, hence this also should be addressed during the booking stage. He is hardly looking for any interaction with a service provider between the booking and the actual stay. This is defined by not willing to surface extra time after the decision was made and the stay was booked. Simplicity Searcher will complete the whole research and booking process form one interface, that should provide a comfortable way to navigate through the options and displays information in a clear as well as engaging way. This kind of the purchase behaviour is shaped by the desire to make a travelling experience as convenient and care free as possible. (Amadeus 2015b, 18-19.)

When reviewing a purchase behaviour typical for a Social Capital Seeker a different portrait emerges. A representative of this tribe can decide on purchasing of a service at any point of the journey. She will be happy to receive customised adds-on if they will expand her social capital. She is equally likely to book a package trip or purchase components of a trip independently if this way she will get something outstanding and not available within the ready-made offer. She will be happy to be in contact with a service provider throughout the journey and get excited about all the extras and complements offered by a hotel. This will make her feel special, standing out of the crowd and she will love to share her experiences with her social network. Being driven by followers on social networks and making decisions based on the amount of Social Capital each travelling choice provides is a defining characteristic of this tribe. It is evident that high involvement in social media interactions makes Social Capital Seekers early adapters of all the new technologies, which

means that the purchase process might take place through any device or even multiple devices at a time. (Amadeus 2015b, 22-23.)

This information provides a valuable insight on how a company should interact with their customers, at what point of the customer journey, through which channels; what types of experiences customers seek. This will be kept in mind when designing customer journeys for a future hotel room.

3.1.2 Context

The Finnish Hotel Room of Tomorrow project took place in 2007 – 2008. It was a collaboration project between Haaga-Helia UAS, industry partners and Best Western Hotel Haaga. It developed and implemented two hotel rooms of the future in the above-mentioned hotel. According to Björkqvist (2009, 13) “The project aimed to build an authentic room laboratory, where service and technology innovations as well as changes in them could be tested with real guests”. Mega trends and change factors were analyzed and a variety of concept possibilities was created. The selection was narrowed down to two themes: sustainability related and technology oriented, which were implemented in Connection to Nature (Picture 1) and Individual Guest Technology (Picture 2) rooms respectively.

Picture 1. Connection to Nature room (Björkqvist 2009, 18)

Picture 2. Individual guest technology room (Björkqvist 2009, 20)

Connection to Nature room was aiming to shift a guest towards more sustainable choices, influenced by being surrounded by nature inspired shapes and spaces. Having a guest reflecting on the own connection with nature was an important component of the concept. Individual Guest Technology room on the other hand was showcasing the implementation of the advanced technology in a pursuit of creating an interactive, adjustable and connected hotel room. This room would be attractive for tech savvy travelers, who are willing to experience the cutting-edge technology first hand (Björkqvist 2009, 11,17-20).

As part of the project feedback was collected from rooms visitors as well as guests staying overnight. The overall tone of the feedback was positive, guests were happy with the rooms. Improvement suggestions can be summarized as following: brining even more nature-like feeling to the Connection to Nature room as well as improving the sense of space; making Technology room more user-friendly and inviting. Technology imbedded in the room needed better instructions on how to use it (Björkqvist 2009,31-32).

In order to keep up the pace with the fast-changing world there is a clear need to review the established concepts and create new ones that respond to the emerging challenges. For this reason, another project was launched at Haaga-Helia UAS in year 2016. The Box is a research project that unites international researchers, professionals from sensory simulation, content creation, and audio-visual field, as well as technology providers. The aim of the project is to “help investors and industry operators tackle complex issues with a better understanding of the potential opportunities and challenges that lie ahead in the future experiences” (The Box 2016).

The focus is kept on the implementation of technologies that enable creating chromatic atmospheres using large images and videos projected on walls of a room (can be potentially

any space: restaurant, showroom, hotel room) and combining it with other sensory stimulators to achieve a more immersive experience. Within the scope of the project number of ways of implementing the technology will be prototyped and tested such as a multisensory dining experience staged during the Gastro fair in Helsinki in March 2016 (Picture 3), virtual zoo experience in Ähtäri in August 2016, sensation dinner during the Sauce food fair in Tallinn in September 2016 to name a few. One of the outcomes of the project should be creating a concept that will be prototyped in the existing laboratory hotel rooms in Best Western Hotel Haaga in spring 2017 (Tuominen 2016, 4 November 2016).

Picture 3. Multisensory dinner at Gasrto fair (The Box 2016)

3.1.3 Immersive technology

For the past couple of years there have been an increased interested towards both Virtual Reality (VR) and Augmented Reality (AR) technologies in business world, and hospitality industry in particular.

> According to Azuna (2007, 2) augmented Reality (AR) is a variation of Virtual Environments (VE), or Virtual Reality as it is more commonly called. VE technologies completely immerse a user inside a synthetic environment. While immersed, the user cannot see the real world around him. In contrast, AR allows the user to see the real world, with virtual objects superimposed upon or composited with the real world. Therefore, AR supplements reality, rather than completely replacing it.

In other words, VR creates experiences outside of the real world that can be accessed through Head-Mounted Displays (HMD), such as Oculus Rift or Samsung Gear VR for example. The technology is immersive, which means that a user is fully consumed by the experience and no interaction with the real world is possible. Augmented reality in its turn provides an extra layer of information on top of the real world, that enriches the real-world

experience. Historically AR would require special devices such as GSP navigating devices, but with appearance of smartphones, the technology is readily available for a smartphone user; projects such as Google Glass and Microsoft HoloLens are dedicated to developing interface device solutions that will be able to take AR to a new level. An example of how wide spread the technology can get is a Pokémon Go game that was released in summer 2016 and took over the world, reaching over 20 million of daily active users (Dogtiev 2016).

Both AR and VR belong to the Immersive technology, varying by a degree of immersion of the analog view with technology. For this reason, the two technologies are often brought up together or in worst cases interchanged. (Nguyen 2016, 20 September 2016.)

Trend reports unanimously propose AR&VR as one of the drivers of change in the future. For instance, Top 10 strategic technologies for 2017 by Gartner, the world's leading information technology research and advisory company, places Augmented and Virtual Reality among the 10 emerging technologies enterprises should pay attention to. It states that "the landscape of immersive consumer and business content and applications will evolve dramatically through 2021". Sales of the Head-Mounted Displays, that enable immersive technology are forecasted to drastically increase from 1,4 (VR) and 0,1 (AR) millions of units in 2016 to 25,8 (VR) and 13,0 (AR) millions of units in 2020. A possibility of connection between AR&VR interfaces as well as mobile devices, Internet of Things and sensor rich environments will extend the Immersive technology beyond an isolated, single-user experiences. Immersive technology in hand with the other emerging technologies will make rooms and spaces highly interactive. (Gartner 2016). Economic projections are also positive estimating AR&VR software and hardware market at 80 billion US dollars in revenues by 2025. (Goldman Sachs 2016).

An alternative view is presented on Tech talk, IEEE Spectrum's general technology blog, stating that even though year 2016 was a break-though year for Virtual reality, the technology is yet far away from being wide-spread. High cost of the devices that enables the experience as well as limited content available might slow down the process of the mass adaptation. In the discussion, an attention is paid to the issue of content creation. Firstly, the initially low quality of some content currently available might turn off potential customers with the first try. Secondly, in order for the technology to become wide-spread there should be enough content to experience, which is not the case at this point in time. Furthermore, it is mentioned that companies, giving it a try could not demonstrate a strong return on investment, the technology was yet good only for creating marketing buzz. That

suggests enterprise level application of VR rather than on the customer end. (Nordrum 2016.)

According to Skift, hospitality industry is excited to utilize Virtual Reality technologies. International brands such as Mariott, Shangri La, Hilton, Holiday Inn Express and lately Best Western Hotels & Resorts have turned their sights towards the technology. Each company though takes a different approach. Some, like Starwood is making a serious strategic move, currently testing if VR would gain a response from guests in their concept lab. Mariott tested providing VR experience for its guests by offering to borrow a Samsung Gear headset for 24 hours. The other companies prefer actions over strategy. Those companies just want to take advantage from the popularity of the technology to attract attention. There have been several marketing videos available in VR. Overall the two areas of implementing Virtual Reality in Hospitality so far are limited to informing and selling and entertaining and marketing. Informing and selling means providing information about a room or a hotel in more engaging way, which should have a positive effect on the number of reservations as customers will prefer your service over the competitors. Entertaining and marketing means using VR as a tool in a marketing strategy (comedic video by Holiday Inn Express or Teleport experience by Mariott) to gain a better brand recognition. (Skift 2016.)

3.1.4 Multiverse

The Experience economy challenges companies to come up with the new ways of creating value for customers. This challenge can be addressed by innovation, supported by digital technology. Due to its nature, innovative digital solutions enable creating realistic and memorable experiences. Digital technology helps colliding real and virtual worlds. (Pine & Korn 2011, 4-6.) It provides endless possibilities of enriching companies offering, which might be difficult to navigate through.

For that reason, Pine and Korn (2011) came up with a Multiverse model that suggest a framework for developing digitally enhanced experiences. It is comprised by 8 realms that exist across real – virtual continuum. The reality can be described as three dimensions of time, space and matter. Time – sequence of events that happens at a given moment, space is the real places, people inhabit and matter consists of atoms. Understanding the virtual world as an opposite of the real, suggests that it exists within dimensions of no time, no space and no matter. Where no time is a created sense of time or timelessness that does not exist in real world; no space are all the virtual worlds that can be explored; no matter are computer bits. All those dimensions and how they are interconnected are illustrated in Figure 7.

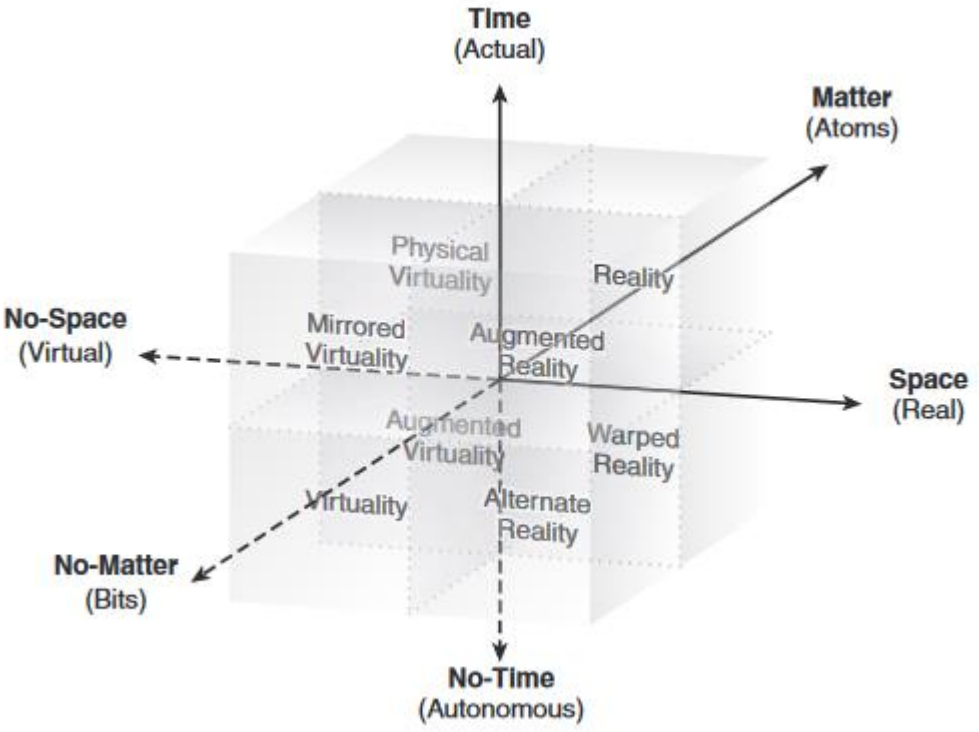

Figure 7. Mulriverse model (Pine & Korn 2011, 17)

The graphic above also explains how the 8 realms emerge. Reality (time, space, matter) are all the experiences people encounter in the real world. Such as a walk in a forest, watching a sunset or spending time with friends and family. The experience takes place in the exact moment in time, in a specific place in the real world.

Virtuality (no time, no space, no matter) on the other end are the experiences created in the virtual worlds, be it playing video games, surfing an Internet, using social media or even watching television.

Augmented reality (time, space, no-matter) emerges when an event in a real time and space is augmented by the bits of no-matter. In the other words Augmented Reality creates an extra layer on top of the real life that enhances an experience.

Augmented Virtuality (no-time, no-space, matter), is augmenting virtual experiences with matter. It means that an experience that takes place in the virtual world brought into the real world by a physical medium. An example of this realm is a guitar hero game or a Wii gaming console.

Alternate Reality (no-time, space, no-matter) takes its name from alternate reality games (ARGs). This realm is about taking games of other activities traditionally played out in a

virtual world and transferring them into the real world, allowing to see the whole world as a big play ground.

Physical Virtuality (time, no-space, matter) allows to bring objects created in a virtual space to a real life. A wide-spread example of this realm would be customized products, that can be ordered online, but an emerged technology of 3D printing has an opportunity to take this realm to a new level.

Warped Reality (no-time, space, matter) covers the experiences that allow people to play with time. Any type of activity that happens in a specific place but creates a different sense of time or even timelessness. Picturing historic reconstruction fair would help understanding this phenomenon.

Mirrored Virtuality (time, no-space, no-matter) can be described as “a mirrored perspective of what is going on out there, in the world”, a reflection of a real situation in a virtual world enabled by any type of technology. (Pine & Korn 2011, 18-22.)

Figure 8 below presents a structured list of all the realms discussed above.

VARIABLES			REALM
1. Time	Space	Matter	Reality
2. Time	Space	No-Matter	Augmented Reality
3. Time	No-Space	Matter	Physical Virtuality
4. Time	No-Space	No-Matter	Mirrored Virtuality
5. No-Time	Space	Matter	Warped Reality
6. No-Time	Space	No-Matter	Alternate Reality
7. No-Time	No-Space	Matter	Augmented Virtuality
8. No-Time	No-Space	No-Matter	Virtuality

Figure 8. Realms of the Multiverse (Pine & Korn 2011, 17)

The proposed framework is a tool for gaining understanding of the complex world of digital technology as well as designing new experiences that create competitive advantage for companies. Navigating through the 8 realms creates endless possibilities for companies to innovate.

3.2 Defining for the future hotel room journeys

The previous chapter presented the overview of all the possibilities laid out before the author. This chapter covers the Defining stage of the service design process. At this point in

the project the goal is to make sense of all the possibilities discovered during the Understanding phase, to narrow it down to a few that the project will focus on. Frameworks are developed and exact elements that will be used in the Developing stage are pointed out.

3.2.1 What did I learn during the Understanding phase?

It becomes evident that various technologies will have a great influence on the future not only by enabling our lives but also by changing the ways we think and act. Being able to implement technology in line with a company's strategy, so that it benefits operations, instead of creating boundaries is a key to success for future businesses. Another aspect is understanding an everchanging customer. In the current service economy, services should be designed for people or even together with them. Therefore, recognising the way customer behaviour and motivations change over time is very important in order to be able to create value for them.

Immersive technologies represented by AR&VR are likely to gain popularity in the years to come. The novel experiences created and the greater amount of information that becomes easily accessible is what defines its future success. Hospitality industry should start identifying ways of applying this technology in its service offering as well as operation that are unique for the sector. Only this way it will bring economic value for the companies beyond being just another expensive marketing channel. This precise goal is approached by the Box project, that aims at developing a specific application for emerging technology in hospitality sector. One of the outcomes will be prototyping a future hotel room.

3.2.2 Design challenge, frameworks and tools

This thesis project aims at creating a concept of how AR&VR can be applied in a future hotel room. In order to portray the future traveller a framework of the Traveller Tribes 2030 will be used. Simplicity Searchers and Social Capital Seekers are the two tribes that will be addressed in this concept. This specific tribes are selected in line with the author's belief that representatives of this two tribes would the most benefit for the abovementioned technology. Social Capital Seekers are the early adopters of new technologies and eager to use various devices and interfaces. Besides that, unique experiences created in both Augmented and Virtual reality will attract them and help creating Social Capital. Technology often simplifies long and boring processes, that is why Simplicity Searchers will be driven to a technologically enhanced room.

Getting familiar with the Multiverse model helped to understand the differences between all the experiences that can be designed using innovative technologies. Author found it a great visual tool to explain a complex structure. It provoked an imaginative process, when the author started picturing all the possible ways of using realms of experiences in a Future hotel room. Nonetheless, to keep a focus, in this project the two realms are used: Virtuality and Augmented reality, as they represent Virtual Reality and Augmented reality technologies respectively. The author took advantage of in-depth recommendations on applying different realm provided in the book. The definitions of the realms and examples will be used for establishing a common language with the others involved in the design process.

In order to enrich the design process with insights and ideas, a decision was made to include peer students into the designing process. The majority of the students at Haaga campus of Haaga-Helia UAS belong to the Technology natives' generation, therefore their opinions and ideas are similar to the mindset of the Future Traveller. Moreover, all the students belong to the Hospitality field of studies, which means that they have a deep knowledge in the industry as well as practical experience.

The design challenge for this thesis project is formulated as following: to design customer journeys enhanced with Augmented and Virtual Reality technologies that address two future traveller tribes.

A customer journey map is selected as tool of explaining the outcomes of the service design project. It allows to communicate a holistic picture of the service, explain how a customer interacts with the service and which technology is used in each touchpoint.

3.3 Developing the future hotel room journeys

During the developing stage of the service design process ideas will be generated to create a solution for the service design challenge. The large amount of ideas is then narrowed down and adjusted to serve specific needs of customers.

For this project a brainstorming tool was selected. The author got familiar with brainstorming techniques and rules suggested in service design studies to be able to facilitate successful workshops. Then a schedule and the agenda for the brainstorming sessions was created. In the scope of the project it was possible to organize two sessions with peer students. The first group consisted of the Haaga Future Leaders Club members, a student run organisation, that the author belongs to. The second workshop included students participating in Creating transformative experiences course at Haaga. The first session took

place on 31.10.2016, nine members of HFLC were present. The second session was held on 2.11.2016 and ten students took part in the brainstorming activity. Both workshops followed the same pattern, so that the conditions and therefore the outcomes would be consistent. That would allow later to compare and combine the ideas that were generated.

In the beginning of each workshop the thesis project was introduced as well as the background information about the Finnish Hotel Room of Tomorrow and the Box projects. Then the Multiverse model was presented by viewing a YouTube video. Members were informed that the session will focus on generating ideas about Virtuality and Augmented Reality realms. During the first workshop the VR technology was demonstrated by providing participants with both Samsung VR Gear and Google Cardboard. During the second workshop, the larger number of participants was initially expected, therefore the VR technology testing was not included in the agenda due to a tight schedule. After that members were invited to the actual brainstorming session. It consisted of two rounds, fifteen minutes each. Participants were seated around a table, that was covered with a large piece of paper – improvised brainstorming board. The theme of each round was featured in the center of the board. First, participants were given 5 minutes to generate as many ideas as possible and collect them on post-on notes. Then an active exchange of ideas started. Further into discussion some ideas were grouped and new ones then evolved. Each round ended with a brief overview of the outcomes.

Overall students were interested in the AR&VR technologies and possibilities they uncover in a hotel. The discussions were vivid and often illustrated with real life experiences of the participants or their reflections on a proposed service. It allowed the author to gain a valuable insight in how Digital natives perceive the technology.

The paper brainstorming boards were transferred in a digital format, so it would be possible to access and utilize later (Appendix 1 and 2). Shortly after the sessions the author have analysed the generated ideas, indicated the similar ideas emerged in the both sessions. For instance, concepts, such as treasure hunt, interactive map of a facility, virtual reality skype and virtual reality preview of a room were brought up by the both groups of students.

Combining the ideas generated together with the students and the selected traveller tribes the author decided to design two customer journeys. The first will illustrate experience of a Social Capital Seeker. The second journey will represent the experience of a Simplicity Seeker in a Future hotel room. As designing a journey for *a representative of a tribe X”

felt too generic and impersonal the author developed two personas based on the insights gained from the theory.

In base of a customer journey map is a service process outline. The author has used a travel cycle introduced in the Traveller Tribes 2030 report and adjusted it for a hotel stay scenario. The pre-service stage consists of inspiration, booking, before stay and upon arrival. The actual service stage that takes place within a hotel is defined by check-in, on the way to the room, in the room, during the stay and check-out. The process ends with the after-service stage that is titled “after the stay”.

Having the process outlined the author started placing ideas of implementing AR&VR technologies across the stages. The author aimed at finding the right match between a solution and a need that a customer is trying to fulfill at that point in the process. This way touchpoints were created. Then the channels through which the experiences are delivered in the touchpoints were reviewed and finetuned in the way that a customer does not need to switch between too many channels during one journey. The author then described emotions a customer feels as a result of interaction with a service.

3.4 Explaining the future hotel room journeys

3.4.1 Meet the guests of the future hotel room

Jack Lee is a 34 years old user interface designer from Hong Kong. He lives a high paced lifestyle, so he wants to have a carefree time when he goes on holidays. Because of his profession, he is exposed to the cutting-edge technology and knows how to use it very well. He appreciates how technological solutions can make our lives easier and enhance it. The next week Jack is travelling from Hong Kong to Prague for a conference. Having no direct flights, he opts for an option suggested by the corporate travel agency; travel a bit earlier and spend the weekend relaxing in Helsinki.

Niina Koskinen is a 22 years old girl from Finland. She lives in Kuopio and shares a flat with 2 best friends. Alike her friends she spends a lot of time on the social media, she also loves to share her experiences on the go. She follows a few popular travel blogs, thus her interest towards Hospitality. She took a few years break between the studies, but now she feels ready to continue. Niina is applying for the Hospitality Degree programme at Haaga-Helia UAS, so needs to travel to Helsinki to take part in the entrance examinations. The exam has two rounds, so if she will get through she must spend a night in Helsinki there is no way she could travel back and forth to Kuopio. She does not feel too confident, as she has not studied for a while, so she did not bother to book a hotel room.

3.4.2 See what they see

Jack's Journey

Figure 10. Jack's experience at the Future hotel (Developed by the author)

Touchpoint 1:
Jack receives a short immersive preview video of the hotel provided by the corporate travel agent, that is organizing the trip for him. After watching it on the VR headset he has, he feels confident that the hotel will be able to support a flawless stay.

Touchpoint 2:
Jack makes the booking though his VR headset. The space around him resembles reception of the hotel. Stay options are presented in packages, which can be sampled in a short experience preview. He realizes than he can pause and adjust the details (rooms type, number of beds, meals, excursions, airport pick up) on the go. All the process takes place in one interface.

Touchpoint 3:
The hotel is updated on Jack's arrival based on the GPS mark enabled with the AR platform on his mobile device. As soon as Jack enters the airport terminal he gets a personalized greeting message; it informs that the ride will be waiting for him outside. The virtual room key is automatically uploaded at this point, so he can go straight to the hotel room.

Touchpoint 4:
From the hotel entrance Jack is guided to his room by the arrows that are augmented on

the floor. As he walks through the hotel he also notices that signs such as Restaurant and Spa are displayed in the language of his interface.

Touchpoint 5:
Jack enters and looks around. He sees a stylish and cozy room; The room is set according to Jack's request. He just adjusts the light a bit by pointing at an augmented icon with his own mobile device. The technology is present yet invisible. Jack falls asleep after exhausting 10 hours flight.

Touchpoint 6:
A mouthwatering picture featured on the room service menu card can be augmented into interactive order form. Jack's favorite breakfast set is delivered to the room by an attentive F&B staff.

Touchpoint 7:
Jack meets Joulupukki (Finnish Santa Claus) without ever leaving his hotel room. This experience is exclusively available on the hotel's VR platform.

Touchpoint 8:
As a part of his travel package, Jack receives an immersive massage session at the hotel's SPA. The massage room tranquil atmosphere is enhanced with the sight of the white sandy beach that he sees through the VR headset.

Touchpoint 9:
On Sunday evening Jack goes back to the virtual reception in his VR headset and checks out. He does need to pay make any payment, as all the experiences, including the ride back to the airport were part of the pre-planned package. He seamlessly leaves the hotel early in the morning and arrives at the conferences rested and ready to work.

Touchpoint 10:
The data and preferences are collected for the next stay and shared across the hotel group; Right upon his return to Hong Kong, Jack receives a VR postcard from Lapland that invites him to spend his next holiday at an immersive hotel in Rovaniemi. He can preview his customized hotel package and get a taste of his next carefree escape.

Niina's Journey

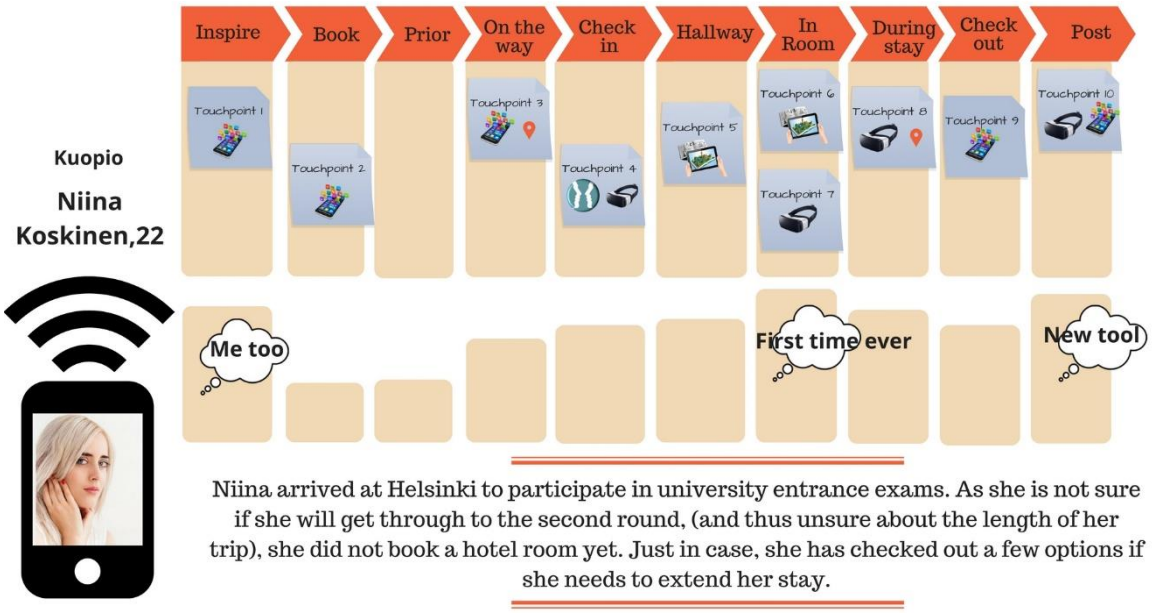

Figure 10. Niina's Journey at the Future Hotel (Developed by the author)

Touchpoint 1:
During the train journey Niina is checking out hotel options in case she gets selected to the second round of exam, which is scheduled on the following day. She realizes that there is a hotel right next to the campus that her favorite travel vlogger stayed at. She remembers that the vlogger endorsed the hotel for providing VR experiences. She is excited by an opportunity to experience such a new technology.

Touchpoint 2:
At the lunch break during the entrance exam, Niina gets to learn she has gotten through to the next round. From her mobile Niina is able to score a last-minute deal; she gets a De Lux room for a discounted price! She shares her preferences for the room customization, via interactive 360 video of the room.

Touchpoint 3:
Niina gets an offer to attend a movie premier that will be life streamed on the hotel's VR platform later this evening. She already feels how relaxing it will be to stay in bed and watch a movie after such a stressful day. She happily accepts.

Touchpoint 4:
Niina is greeted by an attentive front desk employee, who shows her how to use her mobile device with the headset. She is informed that she can always get a virtual support or

come and ask for help.

Touchpoint 5:
Niina notices graffiti on the wall that is visible only with the AR feature of her phone. She learns that there are many more secret memorabilia items left behind by guests; the messages can be traced back to the author and she connects with the ones that inspire her.

Touchpoint 6:
Niina is so amazed by all the personalized interactive features in the room that she keeps posting screenshots of her AR interface on her network.

Touchpoint 7:
After watching the movie, Niina spends a lot of time discovering all the possibilities that VR headset uncovers. She loves novel experiences and quickly learns how to use the hotel's VR platform.

Touchpoint 8:
After finishing the second round of the exam, Niina feels she have deserved a reward. She attends a multisensory wine-testing in the afternoon. She would have totally missed if she would not be notified about the event, when she was passing by the restaurant; She got the hint because she left a review about a wine fair she attended last month.

Touchpoint 9:
Niina is in a hurry for the last train back home. She pays all the extra services at the reception by scanning her mobile device. She learned that she got a discount because posts about the stay on Nina's social network brought 50 new followers for the hotel's account.

Touchpoint 10:
To thank her for the video review Niina made about her stay, the hotel sends her a voucher to get a discount of her first VR headset purchased from the hotel's head set supplier. Now the 360 videos that she has captured in the hotel will become even more immersive.

3.4.3 How to read the future customer journey map?

A well-designed customer journey map should be easy to understand and intuitive in navigation, yet it was the author's first attempt at creating a customer journey map. Thus, her vision of the lay out will be given to avoid misinterpretation.

The journey follows the customer along the whole hotel stay lifecycle. Names of the stages of the cycle are indicated on the top of the map. Vertical columns represent the customer experiences. Touchpoints – moments of the customer's interaction with the service are indicated by the post in notes. Touchpoints are numbered chronologically, which meant that the Touchpoint 1 is the very first moment the customer encounters the service and the Touchpoint 10 is the last point of the customer's journey. Typically, those are most vital points of the customer journey, as the first impression is created in the beginning and in the end of the service the company should be able to engage the customer, so he would return to the service in the future. The lower vertical blocks reflect the emotional level of the customer throughout the service cycle. The pick moments are indicated with callouts symbols. The essence of the emotion and how it is relevant for this specific guest is captured in short key words. The icons under the touchpoints showcase what technology is implemented in the creation of each distinct experience: Augmented reality, Virtual reality, Mobile platform, GPS. Moreover, it should not be confused with the channels as ultimately Augmented and Virtual Reality technologies can be delivered through various devices.

4 Discussion

As a result of creating customer journeys for a future hotel room, where customers can experience various implementation of AR&VR technologies the author came to uncovering factors that should be considered when designing a service enabled by these technologies.

First, a future hotel should develop a platform that supports and links together all various fragments of the experience. Such a platform will enable a holistic service experience and smooth transactions between the touchpoints. Second, a problem of introducing customers to the new technology should be addressed. It might be difficult and confusing to use the Virtual Reality headsets for the first time, therefore a way of providing guidance and support should be established. The challenge comes with understanding that a task of educating customers will potentially involve higher labour expenses. Third, accessing AR&VR experiences require Internet connection, which might limit customers from abroad in using the service due to a high costs of mobile internet connection outside of the own network coverage zone. Therefore, such customer will only be accessible for a service provider for a fraction of the suggested service cycle. Forth, having a previous experience with AR&VR technologies might affect the customer's willingness to use it as a part of a hotel stay. A negative experience might prevent a customer from using it; or else being often exposed to AR&VR technology might decrease a sense of excitement and therefore require a hotel to profile a more advanced AR&VR experiences.

It is also important to understand that the developed customer journeys communicate a vision of the author on how the AR&VR technologies can enhance a customer experience in a hotel. The times when such comprehensive experiences can be created in real life are still distant and the actual implementation will be greatly affected by how the technologies, software and hardware alike will progress in the development.

4.1 Service design process in relation to the thesis process

The present thesis project followed a Service design process, therefore in the end of the process it worth comparing the theoretical framework with the practical outcome of the project. This reflection process will deepen the authors understanding of the Service Design phenomenon.

Service Design and particularly Moritz's approach, is concentrated on a specific company. An important component of a Service Design project is to grasp the company's culture

and processes that underlie a service. In this thesis, there was no case company indicated. The project took a more generic approach, identifying a variety of applications of AR&VR in hotels, that later can be tailored to the needs of a company. Furthermore, having a company's perspective in a project, would make it possible to add an extra dimension to the customer journeys, from the point of the processes and from the employee point of view.

Design Council's Double Diamond framework on the other hand is more a design specific process translated into the business world. It gives a more general guideline on how the task should be tackled. Nonetheless, the author found it helpful in clarifying one important component in a Service Design process: the flow of information volumes. The shape that illustrates the framework made it very easy to understand and apply in the project process.

Service design is built around people. The study advocates creating services for people, together with them. In this matter the author believes her work was successful. She truly understood and embraced the personal motivations and needs of the future customers. In this regards personas was a very helpful tool. In enabled the author to empathy a customer and connect to him on a better level, which certainly improved the quality of the customer journeys developed.

Brainstorming, which was used as a tool for generating ideas was evaluated by the author as challenging. Even though the author had a previous experience of participating as well as organizing creative brainstorming sessions, she still finds it complicated and exposed to several factors affecting the outcomes. A successful brainstorming session requires planning, preparation and an experienced facilitator, only in that case the generated ideas will truly be daring and extraordinary. The author felt that the knowledge acquired by her during the understanding phase enabled a more advanced comprehension of the subject compared to the students participating in the workshop. Initially she was not satisfied with the amount and quality of the ideas collected. But then combining the ideas with the needs of each persona made her understand that the right application makes the ideas stand out.

4.2 Ideas for future studies

The technologies that were the center in the present project have just started being available for the larger audience beyond the early adapters. That is why the author feels that there are broad possibilities for the future research and development projects. First, the

author recommends prototyping and testing AR&VR experiences with potential customers. This would allow to determinate whether such experience bring value to a hotel stay, as well as reveal possible difficulties associated with using various devices to access the AR&VR experiences. Another direction that studies can take is designing application for these technologies for a specific hotel, taking into consideration real company's strategic goals and precise customer segments. Furthermore, a financial aspect of bringing AR&VR technologies should be researched. The most technological solutions are expensive for businesses to acquire and maintain, therefore investments required to provide AR&VR experiences should be studied thoroughly and then compared with potential revenues; this will allow to determine whether it is a viable investment to make.

4.3 Personal learning and development throughout the process

Looking back at the work that have been done, the author also wants to reflect on her experiences along the process. Before all, it worth mentioning that the author is content with the subject of the thesis. Even though it proved very challenging at times, since it pushed the author to read and research a lot. Neither the concepts of Service Design nor Multiverse was covered as part of the curricular. Which meant, the author had to build her knowledge from the scratch. Then again, learning something not encountered in the past makes the process more exciting and yields greater personal growth.

The author has discovered the true value of the visual tools when learning or explaining complex processes. And when it comes to the frameworks the author has discovered that the existing models should not be just blindly followed but always can be adjusted if a need arise.

Emerging digital technologies including AR&VR, were a huge revelation for the author. Before starting the work on the thesis, she just has used computers or mobile devices for studies or socializing. During the thesis project, she has discovered the whole new "digital frontier". It had a dramatic effect on the author's perception of technologies in our lives. The author formed an understanding of digital technologies as innovation enabler, a driving force of the change in the future, that should be implemented in the right way. Often Hospitality industry is perceived as a people business that is distant from technologies; completing this project, which showed how technologies can be brought in a hotel service with a use of Service design has changed the authors perception of the industry and own career path options.

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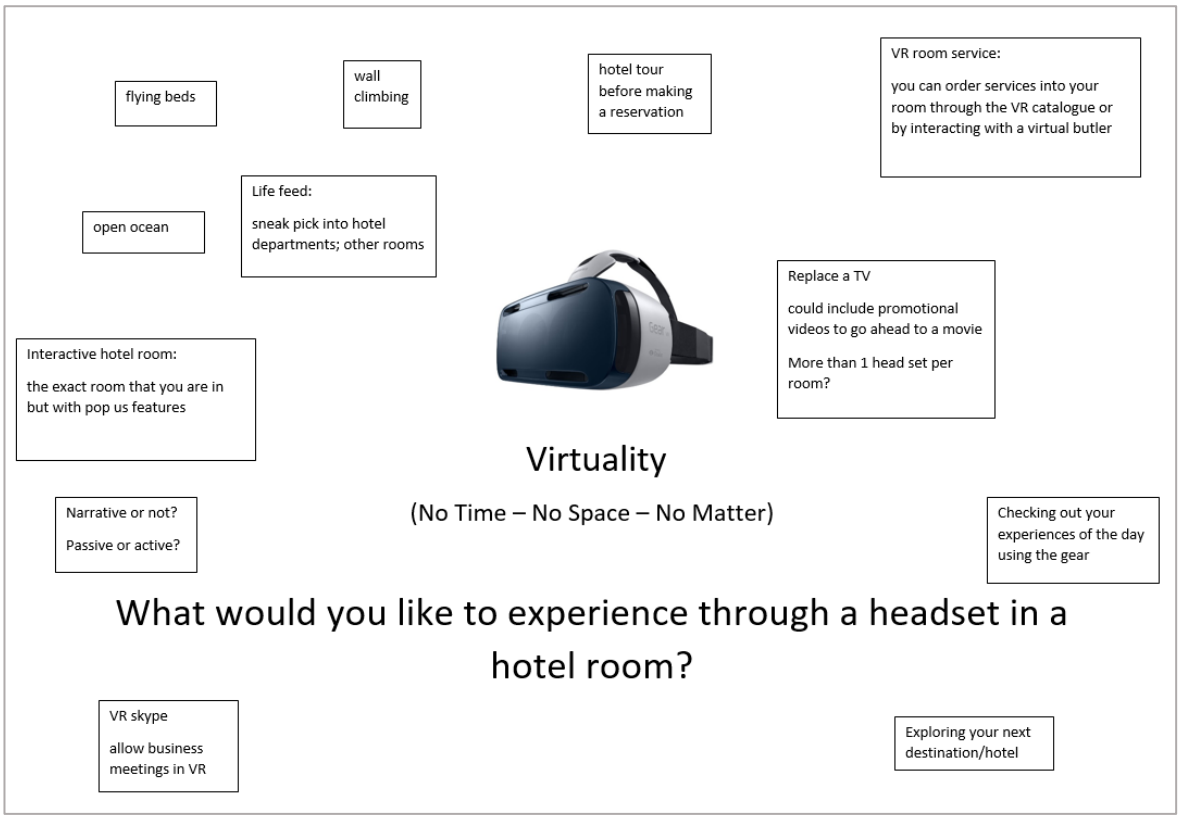
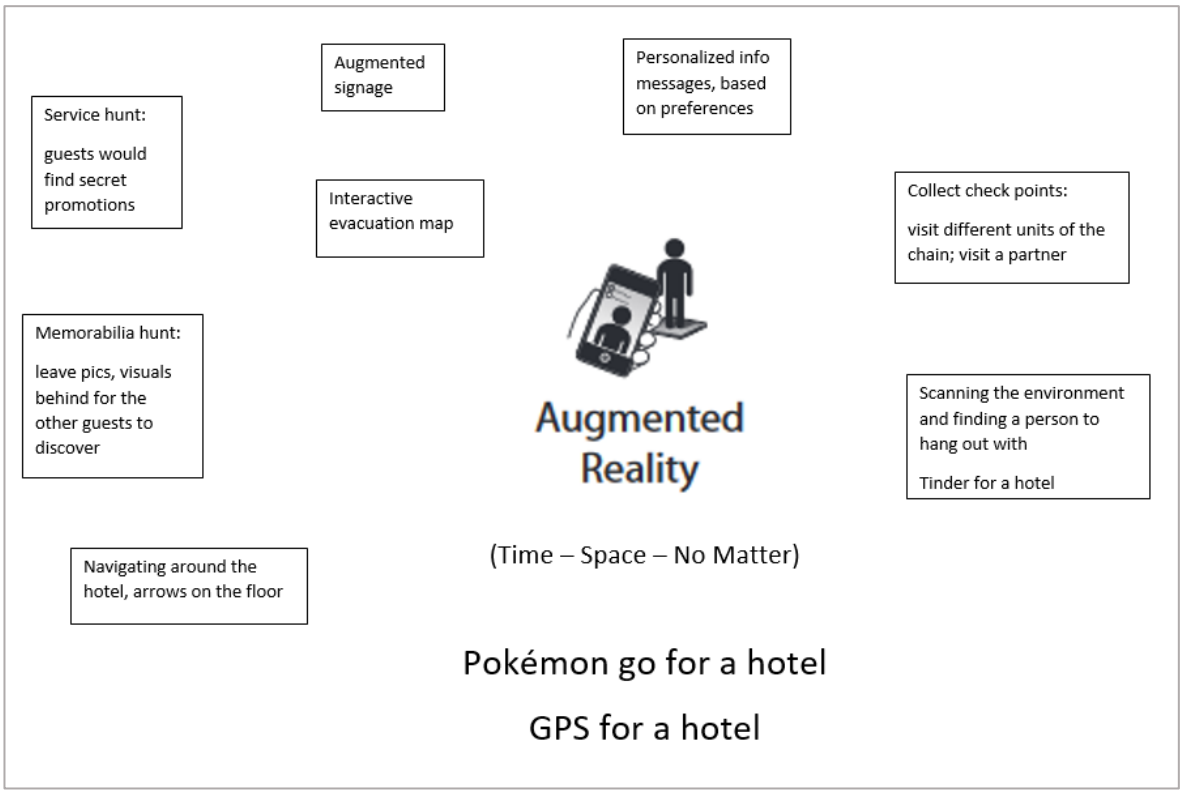
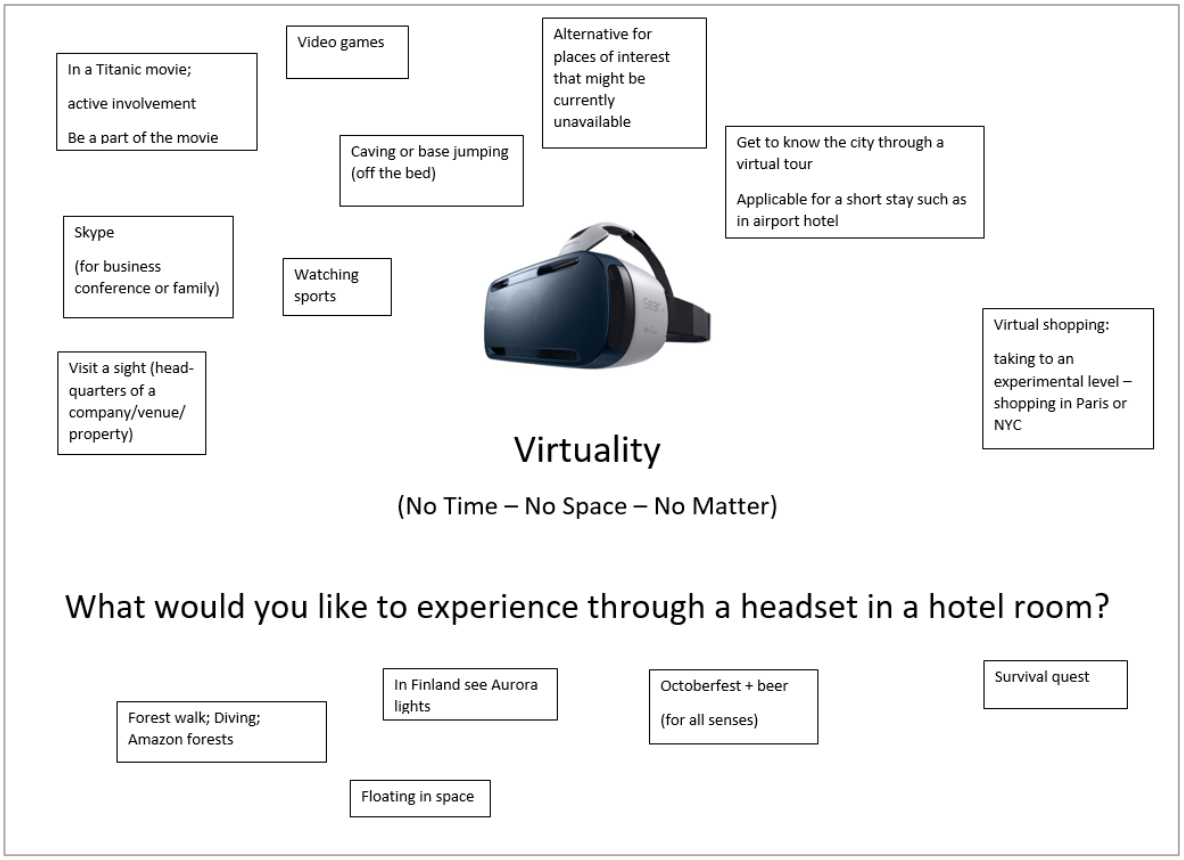
Appendices

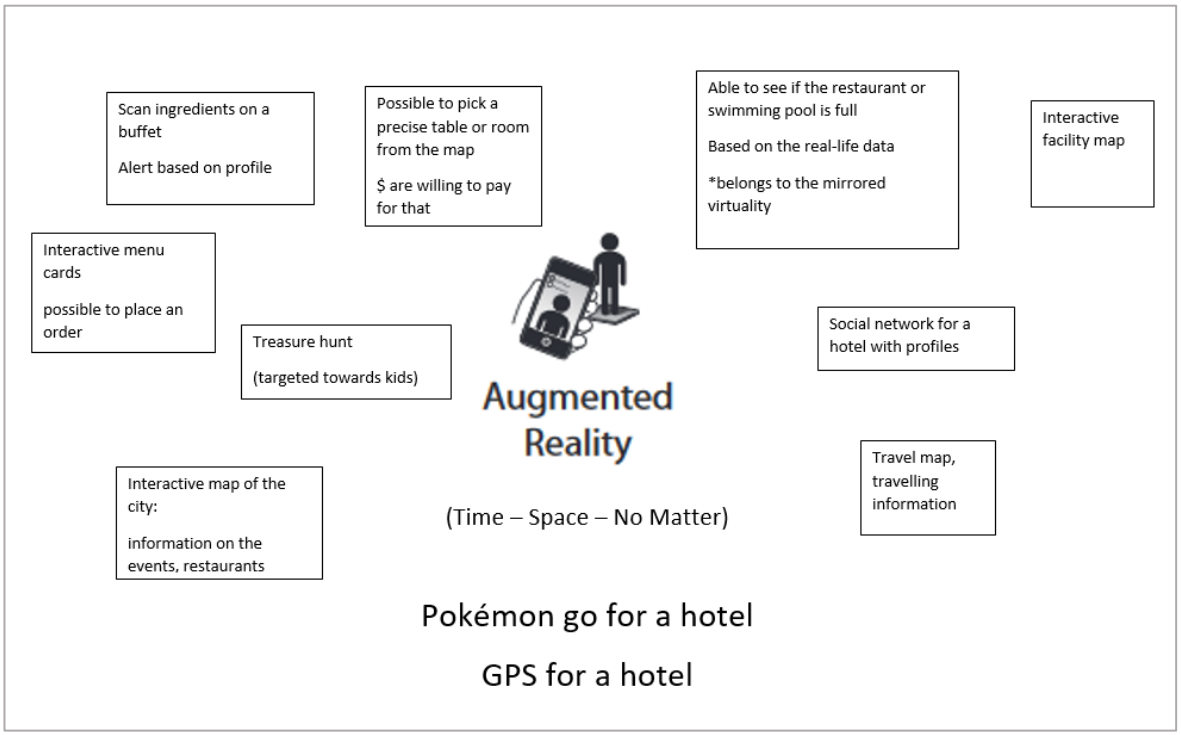
Appendix 1. Ideas generated during the first workshop





Appendix 2. Ideas generated during the second workshop





Appendix 3. Jack's experience at the Future hotel

Jack is traveling from Hong Kong to Prague for a conference. Having no direct flights, he opts for an option suggested by the corporate travel agency; travel a bit earlier and spend the weekend relaxing in Helsinki.

T1:
Jack receives a short immersive preview video of the hotel provided by the corporate travel agent. He feels confident that the hotel will be able to support a flawless stay.

T2:
Jack makes the booking though his VR headset. The space around him resembles reception of the hotel. Stay options are presented in packages, which can be sampled in a short experience preview. He realizes than he can pause and adjust the details (rooms type, number of beds, meals, excursions, airport pick up) on the go. All the process takes place in one interface.

T3:
The hotel is updated on Jack's arrival based on the GPS mark enabled with the AR platform on his mobile device. As soon as Jack enters the airport terminal he gets a personalized greeting message: it informs that the ride will be waiting for him outside. A virtual room key is automatically uploaded at this point, so he can go straight to the hotel room.

T4:
From the hotel entrance Jack is guided to his room by the arrows that are augmented on the floor. As he walks through the hotel he also notices that signs such as Restaurant and Spa are displayed in the language of his interface.

T5:
Jack enters and looks around. He sees a stylish and cozy room. The room is set according to Jack's request. He just adjusts the light a bit by pointing at an augmented icon with his own mobile device. The technology is present yet invisible. Jack falls asleep after exhausting 10 hours flight.

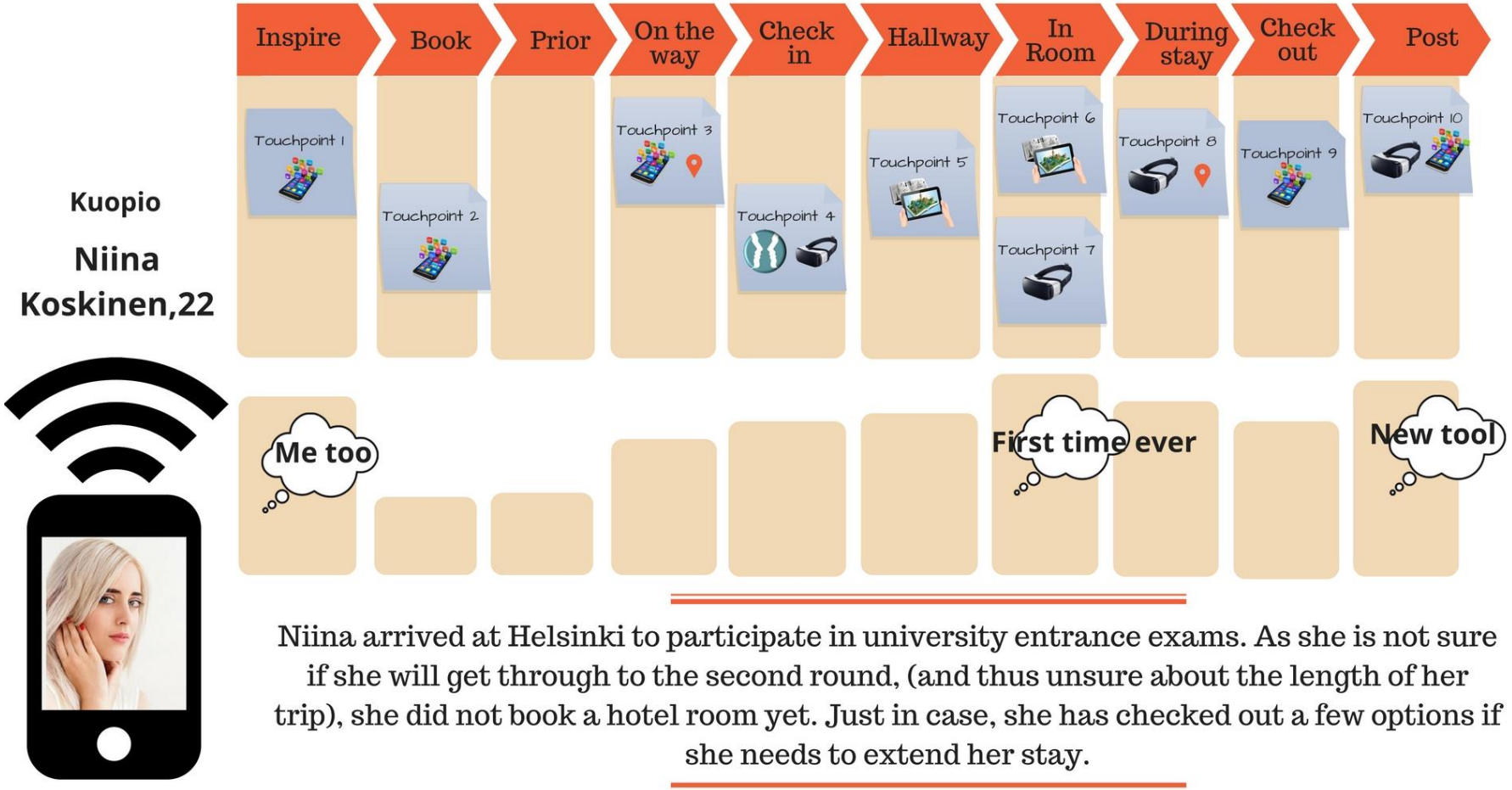
T6:
A mouthwatering picture featured on the room service menu card can be augmented into interactive order form. Jack's favorite breakfast set is delivered to the room by an attentive F&B staff.

T7:
Jack meets Joulupukki (Finnish Santa Claus) without ever leaving his hotel room. This experience is exclusively available on the hotel's VR platform.

T8:
As a part of his travel package, Jack receives an immersive massage session at the hotel's SPA. The massage room tranquil atmosphere is enhanced with the sight of the white sandy beach that he sees through the VR headset.

T9:
On Sunday evening Jack goes back to the virtual reception in his VR headset and checks out. He does need to make any payment, as all the experiences, including the ride back to the airport were part of the pre-planned package. He seamlessly leaves the hotel early in the morning and arrives at his conference rested and ready to work.

T10:
The data and preferences are collected for the next stay and shared across the hotel group. Right upon his return to Hong Kong, Jack receives an immersive postcard from Lapland that invites him to spend his next holiday in an immersive hotel in Rovaniemi. He can preview his customized hotel package and get a taste of his next carefree escape.



Niina arrived at Helsinki to participate in university entrance exams. As she is not sure if she will get through to the second round, (and thus unsure about the length of her trip), she did not book a hotel room yet. Just in case, she has checked out a few options if she needs to extend her stay.

T1:
During the train journey Niina is checking out hotel options in case she gets selected to the second round of exam, which is scheduled on the following day. She realizes that there is a hotel right next to the campus that her favorite travel vlogger stayed at. She remembers that the vlogger endorsed the hotel for providing VR experiences. She is excited by an opportunity to experience such a new technology.

T2:
At the lunch break during the entrance exam, Niina gets to learn she has gotten through to the next round. From her mobile Niina is able to score a last-minute deal; she gets a De Lux room for a discounted price! She shares her preferences for the room customization, via interactive 360 video of the room.

T3:
Niina gets an offer to attend a movie premier that will be life streamed on the hotel's VR platform later this evening. She already feels how relaxing it will be to stay in bed and watch a movie after such a stressful day. She happily accepts.

T4:
Niina is greeted by an attentive front desk employee, who shows her how to use her mobile device with the headset. She is informed that she can always get a virtual support or come and ask for help.
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T5:
Niina notices graffiti on the wall that is visible only with the AR feature of her phone. She learns that there are many more secret memorabilia items left behind by guests; the messages can be traced back to the author and she connects with the ones that inspire her.

T6:
Niina is so amazed by all the personalized interactive features in the room that she keeps posting screenshots of her AR interface on her network.

T7:
After watching the movie, Niina spends a lot of time discovering all the possibilities that VR headset uncovers. She loves novel experiences and quickly learns how to use the hotel's VR platform.

T8:
After finishing the second round of the exam, Niina feels she have deserved a reward. She attends a multisensory wine-testing in the afternoon. She would have totally missed if she would not be notified about the event, when she was passing by the restaurant; She got the hint because she left a review about a wine fair she attended last month.

T9:
Niina is in a hurry for the last train back home. She pays all the extra services at the reception by scanning her mobile device. She learned that she got a discount because posts about the stay on Nina's social network brought 50 new followers for the hotel's account.

T10:
To thank her for the video review Niina made about her stay, the hotel sends her a voucher to get a discount of her first VR headset purchased from the hotel's head set supplier. Now the 360 videos that she has captured in the hotel will become even more immersive.