



SERVICE SYSTEMS DESIGN (2018)

PROJECT TITLE: USER EXPERIENCE- A PROJECT IN COLLABORATION WITH ARP-
HANSEN HOTEL GROUP; A CASE STUDY WITHIN THE HOTEL/RESTAURATION
BRANCH

(10TH SEMESTER- 2018)

MASTER THESIS BY MIHAELA LOREDANA LIXANDRU

SUPERVISOR: NICOLA MORELLI

CONTACT PERSON: ALI OZDEMIR

AALBORG UNIVERSITY



Aalborg
University

ABSTRACT

The hereby presented paper proposes to tackle a process of exploring consumer needs within the service/restaurant branch of the hotel industry. The project itself revolves around identifying and resolving the issues that arise in the context of consumers making use of the buffet facilities one particular hotel, namely, The Square Copenhagen, provides its customers with. This thesis has been conducted between the months of March and June of 2018 and represents the final point in the MSc in Service Systems Design offered at Aalborg University.

Qualitative methods were made use of in order to gather knowledge about staff pain points and understand their daily experience within their work environment, but quantitative methods were also employed, especially for insight about customer pain points and experience since the limited access for interaction prevented from doing otherwise. In this manner, success was achieved in exploring the existing offered service and understanding of both perspectives - customers and staff.

The hotel guest needs and pain points were recognized and properly filtered through in order to improve their experience within the restaurant service, where the identified pain points and needs of the staff member were also used for easing employee workflow and at the same time provide them with a service that reduces stress and thus catalyzes best possible performance.

Different stakeholders were involved in the design process, especially in the event they would be direct participants, so they provided with all manner of needed information for the interviews and during the workshop process.

The workshop had huge impact for the final decisions of the concept. In the long run, it was the needs and pain points of consumers which provided with proper foundation for the new ideas, dictated by a dedication for both optimization and innovation alike.

The new service was delivered to the ARP-Hansen restaurant manager from The Square Copenhagen, and he will further present the project to all ARP-Hansen managers at their next conference meeting, which is intended to take place in 2019.

Keywords: Service design, hotel chain, restaurant, breakfast, customer experience, staff pain points.

ACKNOWLEDGEMENTS

Making use of the opportunity, I thank all the consumers whose make up a part of the research material. I also wish to express gratitude towards all the members of the hotel staff and the staff of ARP-Hansen Hotel Group for providing relevant input when needed.

Huge thanks to supervisor Nicola Morelli, who offered consistent and invaluable advice and guidance throughout the entire process, especially for being a source of reason in moments of panic.

Finally, warm-hearted thank you's to each and every one of the people in my life that provided support and put up with the demands of the process in every possible manner, every step of the way.

LEARNING OBJECTIVES

On a formal level, according to regulations of Technical Faculty of IT and Design - The Study Board of Media Technology, the students who are assessed to have completed the thesis module are to obtain qualifications as follows:

Knowledge

- Must have knowledge about the possibilities to apply appropriate methodological approaches to specific study areas.
- Must have knowledge about design theories and methods that focus on the design of advanced and complex product-service systems.

Skills

- Must be able to work independently, to identify major problem areas (analysis) and adequately address problems and opportunities (synthesis).
- Must demonstrate the capability of analysing, designing and representing innovative solutions.
- Must demonstrate the ability to evaluate and address (synthesis) major organisational and business issues emerging in the design of a product-service system.



Competences

- Must be able to master design and development work in situations that are complex, unpredictable and require new solutions (synthesis).
- Must be able to independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility (synthesis).
- Must have the capability to independently take responsibility for own professional development and specialisation (synthesis).

These are naturally accompanied by goals fitting a more personal dimension on the researcher's behalf, since they represent an integrated part of the drive for the thesis and the personal involvement. In no particular order:

- Learning how to make applied use of service design methods and tools in real life, in real time.
- Understanding the role of a service designer in both the public and the social sectors
- Exploring various design research methods, with the purpose of becoming more flexible and adaptable in both choice and manipulation of the research method(s) deemed appropriate for the situation
- Delivering an impactful solution, with ramifications which stand true to the nature of reality
- Accomplishing the completion of a whole design process both independently and individually

Table of content

Introduction	08
Discover	18
Define	42
Develop	52
Deliver	59
Conclusion	84
References	87



I INTRODUCTION

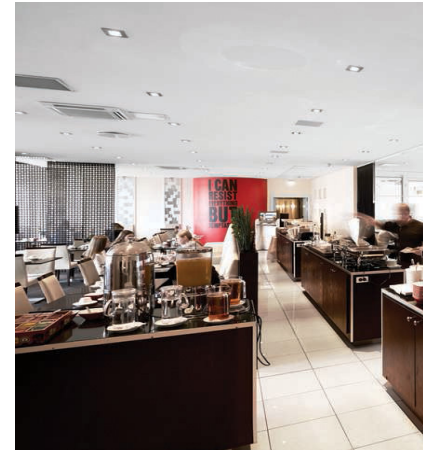
Scene

Service design is a discipline in its establishment stage and is meant to become an approach to either innovate or improve services - "to make them more useful, usable, desirable for clients, as well as more efficient and effective for organizations" (Moritz, 2005; page 5) and is also expanding into becoming a field of research. It is an iterative process that solves problems using design principles, which in turn helps identify opportunities or improve services. It revolves around a deep interest in comprehension of the

people to whom one is designing for. Depending on context and situations the consumers may have different experiences and needs within a service of the same kind. It is therefore crucial to explore customer experiences holistically in order to understand the existing service and uncover needs and pain points as well as expand into discovering opportunities for improvement, which this thesis will further explore upon (Design Council, 2017).

In that sense, the case presents itself as a cooperation between different actors - namely, the ideology behind the thesis module

of the programme undertaken at Aalborg University, the entity presiding over the targeted hotel industry sector - ARP-Hansen Hotel Group, with its subsequent hotel The Square Copenhagen identifying as the direct provider of services and the researcher themselves.



The service provider

The researcher has chosen to collaborate with the ARP-Hansen Hotel Group as the service component of the thesis. Focused, the thesis centers itself around the food catering services provided at hotel The Square Copenhagen.




The group represents Copenhagen's largest chain of hotels, founded more than 50 years ago and consists of privately-owned hotel with a (predominantly) central location. All the hotels combined amount to the coverage of 22% of Copenhagen's room capacity and provides with an additional quantum of 100 meeting rooms and one congress hall (Arp-hansen.dk, 2018).

As described in the company's own vision, the uniqueness of the locations, as well as the standards to which each and every aspect of the hotel experience is bound to, entails the delivery of high quality service at every level, aiming to meet the expectations of both customers and staff members alike "at the best addresses".

Zooming in, The Square Copenhagen's name refers to its prime location, just across from Copenhagen City Hall. The hotel facilities are as follows:

- Free WiFi
- Express check-out
- Healthy, delicious breakfast buffet and 'to-go'
- Flat-screen TV and wireless (Bluetooth) music center in all rooms
- Family- and child-friendly
- Allergies- and disabled-friendly
- Cats and dogs welcome
- 100% smoke-free
- Parking facilities starting at 270,-/day
- Guides/tips for experiencing Copenhagen
- Safebox at the Executive, Junior and Junior deluxe suites



“How could Service Design methods and tools support the improvement of an already-existing service, so that it provides ease in the work of the staff as well as helps guide the customers throughout their interaction with the service?”

Service Systems Design

The MSc in Service Systems Design offered at Aalborg University Copenhagen gives way to teaching, as follows: "...how to plan and organise people, infrastructure, communication, media and components of a service in order to improve its quality, the interaction between service provider, customers and the customers' experience" (Aalborg University Copenhagen, n.d.).

Focus area

Instead of looking at the entire panel of services the hotel fans out for the consumers' own disposition, the thesis finds its focus within the restaurant and zooms in on the experience of the breakfast buffet service the hotel offers and the way the consumers interact with it, beginning-to-end.

Initially, the hotel manager pressed the researcher to formulate the research and subsequent

solution according to the idea that the main issue the restaurant was facing had to do with communication between the staff and the consumers and thus suggested more interaction between the parts as a potential solution. The initial question, as follows:

"How could Service Design methods and tools support improvement in the communication between customers and The Square Hotel's restaurant employees for a better experience?"


Conversely, the interviews conducted as part of the research process pointed to a different problem - thus, the problem statement needed to be rehashed and reformulated. It furthers into becoming the building block of the case. Thus, the question became something slightly different (see opposite).

Resources

This section takes to an exploration of theoretical perspectives on customer experience and ways to identify needs and pains that relate to the main focus of the problem statement this thesis proposes to present. The goal is to verify whether or not existing literature can support the researcher in addressing the matter at hand.

Customer needs and pains are noteworthy terms within customer experience - among the first authors to address these notions were Carbone and Haeckel (1994) and Pine and Gilmore (1998). By “experience” Carbone and Haeckel refer to the “takeaway” impression shaped by people’s encounters with products, services and businesses (1994). Ever since, a number of practitioners and academics have adapted and discussed the idea of customer experience. The literature argues that within a given service, a customer (consumer) will always have an experience – good, bad or indifferent (Berry, Carbone, and Haeckel, 2002). Shaw and Ivens further that providing with good experience is very much important, since it directly influences customer satisfaction, and companies ought to try as they might in respects to exceeding customers’ expectations - “not only to delight them consistently by offering better products and services, but to win their loyalty by building a meaningful, memorable, total experience” (2002, p. viii)

Berry, Carbone and Haeckel argue that “companies must gain an understanding of the customer’s journey – from the expectations they have before the experience occurs and up to the assessments they are likely to make when it’s over” (2002, p. 1). Certain methods within the service design field can prove especially helpful in mapping customer experience. Elaborated by Stickdorn et al (2018), journey maps are supposed to visualize the overall experience of a



customer in respect to a given service - either physical or digital. This has the potential of providing clarification when it comes to needs and pains and may be used as a more grounding, palpable tool to find the gaps within customer experience and thereafter embark on a process of exploring potential solutions. A variety of touch-points can be identified in customer journeys which may help with identifying needs and pains (Lemon & Verhoef, 2016). The journey map may also facilitate a common comprehension between the different members of a group or team: "...it forms a boundary object that allows diverse teams to work together efficiently and creatively with customers' experience as the common denominator" (Stickdorn et al, 2018, p. 43). Stickdorn et al (2018) further explains that journey maps can be created in a variety of ways and under-strikes that an emotional journey has the potential of being mapped out: "...emotional journeys are graphs representing the main actor's level of satisfaction at each step" and continues into "an emotional journey visually reveals obvious problem within a specific experience" (p. 46).

Polaine, Løvlie, and Reason (2013) and Stickdorn et al. (2018) are the proponents of qualitative methods over quantitative research, and argue that it may aid designers to dive further into understanding the pains and emotions of the customers. As stated by Polit & Beck (2010) "The goal of most qualitative studies is to provide a rich, contextualized understanding of human experience through the intensive study of particular cases" (p. 1453).

Flick (2009) states that qualitative research may be employed with ease, without the use of quantitative methods - however, the reverse is not universally valid, since "quantitative methods need qualitative methods for explaining the relations they find" (p. 43). "In-depth interviews are one of the main methods of data collection used in qualitative research" (Ritchie & Lewis, 2003, p. 138). In-depth interviews come to fruitful use when demanding detailed information about a person's thought and behavior (Bjørner, 2015). Additionally, Berry, Carbone and Haeckel argue that one must conduct in-

depth interviews with both customers and employees, in order to “find out how people on both sides of a transaction feel about different aspects of an experience and the emotional associations that go along with it” (2002, p. 2).

Further, Polaine, Løvlie and Reason (2013) explain that “services are co-produced between providers and users”, elaborating that a diversely multiple range of actors should be approached in the design process to ensure both a holistic and comprehensive analysis of the customer experience (2013, p. 24). Van den Bosch & Rotmans (2008) also discusses that key stakeholders should be involved in the process, and they should represent parts who have both the willingness and the power to influence and shape the services. According to Freeman (2010), a stakeholder’s definition is “any individual of group of individual who can affect the achievement of the organisation’s objectives” (p. 46). Research focusing on stakeholder influence on project success points straight to the service provider and the end users as significantly more important than other stakeholders (Karlsen, 2002).

Polaine, Løvlie and Reason (2013) further that visualization and tangible props can uphold and sustain a better design process in a variety of ways. Field research where props can occur in an interview as a headlining object that guides the conversation, point to a push of the imagination of the respondents and to a removal of focus from nervousness or performance anxiety. Stickdorn et al (2018) pinpoint the boundary object as a tool which helps people with different backgrounds to breach communication gaps and share both understanding and knowledge, also with and about each other. They further detail that designers have the ability of “modifying existing service design tools or create new ones that serve again as boundary

objects with a common language that is accessible for everyone” (2018, p. 43). The boundary object introduced by Star and Griesemer (1989), bridges the social worlds and allows for productive communication amongst people and states - “the creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds” (p. 393). A boundary object may be used as the center of attention in a group of actors with contradictory or divergent perspectives (Star, 1989). Carlile (2002) describes how boundary objects may be used in product development and how they can build a common information space, because it “establishes a shared syntax or language for individuals to represent their knowledge” (p. 451) and “facilitates a process where individuals can jointly transform their knowledge” (p. 452).

As a direct application onto the hotel/service industry, several interconnected issues may be identified, most of which find root in lack of understanding between the involved actors. The hospitality industry has but a faint grasp on the consumers’ desires and habits, which makes the latter rotate from one establishment to another based on best offered value, relative to their budget constraints, rather than acting within a loyalty frame. Also, the industry fails to adapt to rapidly-changing technology, which in turn relates to communication (both internal and external, within a hospitality concept), but also a comprehensive modernization on all levels as opposed to what the industry stands for (Pandey, 2018).



Methodology

In order to provide insights into the systematic theories this study constructs itself upon, an adequate methodology was elaborated. This paper's methodological approach was inspired by Stefan Moritz' research and theory about service design as a new interdisciplinary, integrative field which possesses a structure that serves the purpose of improving and innovating across the gaps formed between service providers and users. The gap can be of complex and interactive experiences, design processes and systems (Moritz 2005).

The Double Diamond

For structuring the design process, the double diamond developed by the British Design Council in 2005 was chosen. The double diamond approach gives an easy visualization of the design process due to its simple shapes and

structure which are easily photographed. The model divides itself into four stages: discover, define, develop and deliver and remarks upon the divergence and convergence of the phases identified in the design process (Design Council, 2007). It represents an iterative and repetitive design process, which means that it is necessary to go back and forth between the phases (Stickdorn & Schneider, 2011) and continuously develop, adjust, refine and redefine during the entire spread of the design process.

The first stage, 'Discover', permits the designer to expand upon the knowledge on the subject matter and get an understanding of the people for whom they are designing, something done through desk research and field research. The next stage, 'Define', the designer interprets, puts into alignment and converges the findings and delves into

specific experience within customer journey in order to thereafter identify pain points. The third stage, 'Develop', consists of the designer practicing the divergent manner of thinking - once again, keeping an open mind and the start of the ideation process. the focus on generating as many ideas as possible and developing them further. The 'Deliver' stage comes last - here, the designer converges by making final choices and gets ready for delivery to the client, at the same time evaluating the complex concept of solutions and/or suggestions that is proposed to cater to the user's needs. Each stage contains a number of tools and methods which are intended to help the designer(s) in the venture of developing the project (Design Council, 2007).



II DISCOVER

Collection of data

Gathering information, also referred to as data collection, is an important part of the process. The researcher aimed to gather qualitative data in a systematic, reflective fashion. Employing different methods, mainly in the form of interviews and questionnaires, the researcher was provided opportunity to understand not only the customers' individual service experience, but also the perspective and context(s) of the staff, seated at the other side of the table (Stickdorn & Schneider 2011). In the case at hand, great care was

taken in understanding the service palette and the dialogues that were being engaged with the customers to achieve a comprehension of both their experience as well as their expectations.

According to Reason, Løvlie and Flu (2016), a service may be visualized and photographed as the 'what' and the 'how':

"The 'what' is the substance of the service, the elements that can be specified in a contract or agreement. The 'how' is the way it is delivered, the qualities and communications" (Reason, Løvlie & Flu 2016: 28).

Therefore, the focus lies on the

service experience in relation to the customers and also the manner in which it was provided. This proved to be important to the research process because a comprehension of the customers' own position during usage of the service is quintessential, just as much as a proper grasp of the challenges the staff faces in their day-to-day work life is. In order for this to happen, the shadowing and observation methods proved themselves very useful to the researcher since they reveal the real, palpable issue(s).

Desk research

This first section covers the first steps undertaken by the researcher in order to explore and understand the general context of the project.

When documents are used alongside primary methods of data collection, which will be introduced and elaborated in the next paragraph, they provide the designer with both the ability and the opportunity of painting a more accurate picture (Deacon et al., 2007).

Due to limited resources, such as, for instance, Trustpilot, TripAdvisor and both the hotel's own and the ARP-Hansen website, the researcher had to conduct extensive field research in order to dive deeper and bring the actual issues to surface.

The desk research provided with the ability of gaining some manner of

feedback, but most of it was related to room quality, the cleaning service and, of course, about the restaurant service - in turn, most of the latter was related to the food. (TripAdvisor, 2018; Square, 2018).

Ideally, the aimed-for goal was to grasp the perspectives of both the customers and that of the restaurant staff, hierarchically. The report is therefore constructed on a division between the customers' viewpoint and that of the staff. Hereafter, the field research is to follow.



Field research

The researcher sought to spend time devoted to field research with the involved actors to gain insight into areas of opportunity. In both instances, the research was conducted by way of observation, shadowing and interviews with stakeholders in respect to the current workflow. These activities helped immerse the researcher into the context and gave them leeway to accumulate experience about the daily workflow of the frontline staff.

Observations

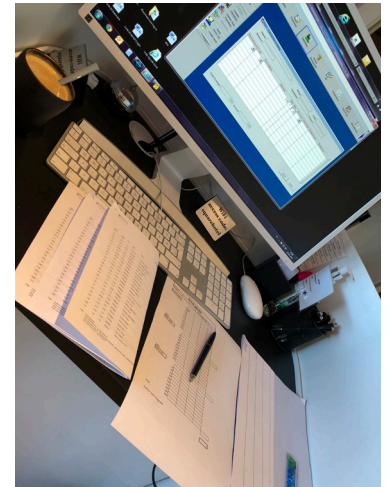
Apart from information collected via interviews and surveys, observations were employed as an ethnographic method for the exploration and collection of information by way of immersion into a foreign, unknown environment (Martin and Hanington, 2012).

Observation has as a strength the fact that it helps capture and comprehend the gap between what people do and what they say they do (Belk et al., 2013; Herbert, 2000). This kind of data may help in providing inspiration and ideas and further into making way for opportunities in the

sense of future improvement.

The purpose of observation was to gather insight into present structures and procedures so that one may understand how ARP-Hansen approaches the implementation of catering facilities in the hotel industry. This ensures that the context that is being designed for is appropriately and fully comprehended. Observations were, in addition, used to understand people and their context and to further learn how involved actors experience the service.

Participant observation involves the study of participants in a natural setting, with the aim of gaining insight into relations, activities and behaviours. The central factor in participant observation is empathy (Bjørner, T., 2015), so that one may gain a profound understanding of values,



behaviours and needs. The ability to observe behaviour and mannerisms as they occur also allowed the understanding of gaps between what ARP-Hansen states and what actually happens in reality.

Meeting the manager

The first stage of field research composed itself of several meetings that took place with the restaurant's manager, so that one may grasp a better understanding in respect to how things find both form and function within the restaurant, what the managerial perception is and how the service finds its way of delivery, as well as what the problem is from the manager's perspective.

Over the course of the the process, the researcher has accomplished the acquiry of a new perspective in terms of professionally-related service design potential in a given environment. As the process progressed, meetings with Ali, the restaurant manager in The Square Copenhagen, were entertained, and he provided with valuable feedback on the undertaking. The researcher kept the updates coming and communication, open, throughout the duration of the process by making use



of visualizations, such as, for instance, customer journey and emotional journey.

The researcher manifested high levels of interest in the pre-phase research and in the involvement of consumers and employees alike throughout the process. The research came to reveal both previously-undiscovered insights, as well as confirmed some hypotheses that the administration had already identified on their own.

As the number of physical meetings increased, so did the functional success of the transfer of awareness.

Qualitative approach

RESEARCH

When it comes to research within the realm of service design, may be both qualitative and quantitative in nature, but, in most instances, it has a tendency of falling mostly into the qualitative variety (Stickdorn & Schneider, 2011). This happens as a direct consequence of its focal point, which centers itself around the user: a scaled-down, qualitative study allows for a profoundly complete comprehension of both user behavior and motivation, without cutting down on the design process' ability to further into agility and iteration (Buurman, 1997).

The qualitative approach stresses upon the "socially constructed nature of reality, the intimate relationship between the researcher and that which is studied, and the situational constraints that

shape inquiry" (Denzin & Lincoln, 2011, pg. 8). As a consequence, it provides researchers with the opportunity to take a closer look at subjects' perspectives than through the more inferential quantitative methods (Denzin & Lincoln, 2011).

Also, a research approach that is qualitative in nature sacrifices a wide scope of the issue in favour of focus on the intricate detailing (Silverman, 2005). In this particular instance, 'detailing' is meant to refer to the specific nature of research subjects' perceptions, emotions and motivations (Silverman, 2005). For such plethora of detail to be ordered and organized reasonably, which may well be susceptible to interpretations of a vast variety, theoretical paradigms should be defined at the onset of any qualitative study (Silverman, 2005). Said paradigms describe the basic set of beliefs by means of which research methods, questions, and the analysis of results may be first organized and then justified (Denzin & Lincoln, 2011).

So that an adequate set of questions could be formulated in full accord with the intents and purposes of the research paper, an analysis was carried out by making use of the A.E.I.O.U. model in coordination with the 5-gap model.



A.E.I.O.U.

This model represents an organizational framework which serves the purpose of reminding the researcher to attend to, document, and code information under a guiding taxonomy of Activities, Environments, Interactions, Objects and Users,. The elements of the framework are not independent, but rather represent interrelated parts with critical interactions between each and every one of them. They are as follows (Martin & Hanington, 2012):

- Activities - goal-directed sets of actions. Which are the pathways that people take toward the things they wish to accomplish, including specific actions and processes?
- Environments - include the entire arena in which activities take place. For example, what describes the atmosphere and function of the context, including both individual and shared spaces?
- Interactions - between a person and someone/ something else, and represent building blocks of activities. What is the nature of routine and special interactions between people, between people and objects in their environment(s), and across distances?
- Objects - the buildings blocks of the environment, they are key elements, sometimes put to complex or even unintended users, possibly changing their function, meaning, and context. For example, what are the objects and devices people have in their environments, and how do these relate to their activities?
- Users - the people whose behaviours, preferences, and needs are being observed. Who is present?

AEIOU

Activities



Customers

Eating
Chatting
Listening to music
Drinking
Watching TV
Reading
Phoning
Using Internet

Staff

Cleaning
Doing dishes
Taking room numbers
Adding breakfast service to the room account
Filling the buffet
Informing customers

Environment



Hotel

Restaurant

Terrace

Kitchen

Interaction



Person-to-person

Employees are taking the room no. of each employee

Offering information to guests

Welcoming guests at the entrance

Person-to-object

Employees adding breakfast service to the room account

Filling the buffet

Cleaning tables

Customers using the facilities of the restaurant

Objects



Coffee/juice machine

Radio

Kitchen appliances

Dish wear

Buffet

Furniture

TV

Computer

Terrace

Users



Couples
Families
Business
Friends
Students
Children
Restaurant staff
Hotel staff

5-Gap model

- Service Quality Model

The 5-gap model is part of the SERVQUAL operational framework of Zeithaml, Parasuraman & Berry (1990), and proposes operations in order to improve customers' experience, by closing gaps possibly existing between customers' expectations and the performance of a service provider. The argument consist in that closing gaps 1-4, which constitute shortfalls within the service provider's organisation, one both narrows gap number 5 and improves the service experience. Therefore, this framework has been applied in order to analyse The Square's restaurant organisation and the performance of its service system. The gaps are as follows:

#1 - the knowledge gap; the gap between customer expectations and management perception.

#2 - the policy gap; the gap between

management perception and service quality specification.

#3 - the delivery gap; the gap between service quality specification and service delivery.

#4 - the communication gap; the gap between service delivery and external communication.

#5 - the customer gap; the gap between customer expectation and customer perception.

After analyzing and understanding both the A.E.I.O.U. and the 5-gap models, the table below has been compiled in order to better understand of the most important aspects that should be taken into consideration when formulating the questions for the interviews and questionnaires.

	A Activities	E Environments	I Interactions	O Objects	U Users
GAP 1 Expected service	What quality do clients expect from the activities in the restaurant?	What kind of environment do they expect interact with?	Do they expect to be served? Do they expect to do any work on their own?	Do they expect to use any objects?	What kind of staff do users expect to interact with?
GAP 2 External communication to customer	How is the environment communicating the quality of the service to the customer?	How is the environment communicating the quality of the service to the customer?	Is the restaurant communicating the actions/interactions of the customer within the service?	Is the restaurant using any particular physical evidence to communicate the fashion in which the service is delivered?	What kind of user is the restaurant communicating to/with?
GAP 3 Service Delivery	How is the service delivered? What kind of activities take place while delivering the service?	How is the environment helping in/with service delivery?	What the interactions take place when delivering the service?	What objects are being employed when delivering the service?	Who is delivering the service and who is the recipient?
GAP 4 Translation of perception into service quality	What activities are performed in order to emphasize the quality of the service?	How does the environment define the quality of the service?	How do interactions show the quality of the service?	Do objects play an important role in the quality of the service?	Who should deliver/emphasise/send out the quality of the service?
GAP 5 Manager's perception of the quality	What are the activities involved in the delivering of the service?	What is the environment classified as?	What does the interaction look like now?	What is the importance of the objects in the delivery of the service? What are they?	For whom is the service being delivered and who should be representing the service?

Interviews and Questionnaires

This section explores the report of a series of key-findings from the interviews that have been conducted. In-depth interviews are a major source of data when it comes to qualitative research as well as a manner of exploring perspectives and perceptions pertaining to informants. Further reasons for making use of such a method include the allowance they provide the designer with in order to gain cultural knowledge in relation to the context by way of the interaction with others (Moisander and Valtonen, 2006).

For insights regarding the customers' desired experience to be acquired, Patricio et al. (2011) propose usage of qualitative methods (for instance, in-depth interviews), to get a deeply detailed understanding of the different levels and dimensions of customer experience.

The authors stress that a qualitative study enables the "mapping of overall customer activity, service activities, and service tasks, which are related to the different levels of the customer experience" (p.184).

The perspective of Bryman & Bell (2007) enounces that there is a much greater interest in respect to the interviewee's POV in a qualitative approach, which thus matches Johnston & Kong's (2011) argument that, for a company to improve on customers experience, the service must be viewed through the eyes of the customers, for the informing of improvement approaches and activities, since experience of any nature is inherently personal.

A qualitative strategy composing itself of questionnaires is applied to customers, as well as staff members, aimed at understanding the customers' (staff's) desired experience, in lieu of elaborate interviews, due to circumstantial and resource constraints: the aim was to gather a multitude of various angles on the matter so that comprehension becomes broad in its spread. Interviews were further applied contextually to the staff and in an in-depth fashion to the restaurant manager, for

control purposes, as well as to provide with an aid in identifying the other party in the service play.

User Journey

According to Patricio et al. (2011), understanding of the general customer activity, service activities and service tasks is vital in order to comprehend the extent to which the different factors either enable or inhibit a potentially-desired service experience. Further, Zomerdijk & Voss (2010) propose 'The customer journey' to comprise of all activities and events that relate to delivery of service, all from a customer standpoint (p. 74). Such a method is further elaborated to be part of the service design framework, as it may be employed to understand the manner in which customers behave over the course of a journey, as well as what their feelings, attitude and motivation might turn out to be (Zomerdijk & Voss, 2010). A customer journey is, according to Hagen & Bron (2014), defined to be "a schematic representation (from the customer's perspective) of the provision of service offered by a (railway)

company. It consists of various episodes, including corresponding moments of contact" (Hagen & Bron, 2014).



Persona

The 'persona' is a tool within the service design field of work that serves the purpose of dividing users into certain types and thereafter facilitates the consideration of both their needs and their desires during the respective experience: "A persona is a profile of a typical user; it is a description of an archetypal user, synthesized from a series of interviews with real people and includes a name, a social history, and a set of goals that drive the design of the product [...]" (Perfetti). It sings to the vitality of understanding the needs of different user groups, which comprehension is then intended to be applied and implemented within the service.

Personas help the designer acquire an overview of the various participants and recognize the behavioural patterns they display, which then furthers with a filtering into stereotypes. Personas may be viewed as

a successful blend between fictitious and goal-oriented characters in that they base themselves upon data gathered from the real world, whilst the story manifests in such a way that the portrayal is context-relevant (Goodwin, 2009).



Perspective 1 - *STAFF*

The first perspective concerns the application of theoretical methods in supporting the analysis of the ARP-Hansen Hotel Group's organisational performance. So that data is properly collected and adequately subjected to comprehensive analysis, a theoretical framework and a number of qualitative methods were employed, such as, for instance, observation, interviews with front-line employees and meetings with representatives of the management.

- Process

In order to gather relevant details about the restaurant and the service itself, several meetings with the manager were put in place. The 'shadowing' method was also made use of so that light could be shed on the reality of the experienced service which would then, in turn, be matched to the results drawn from the interviews.

'Shadowing' was employed in the process alongside staff - the researcher would wear the uniform in order to blend into the environment and observe the daily drift to the greatest possible extent, so that identification of issues in real time could be undertaken.

Concomitantly, contextual interviews were undertaken as well, since the timing was ideal to extract as much information as possible - the supervisor would assign the questionnaires to the employees and then collect them a couple of days afterwards, whereupon they would be returned to the researcher.



Key findings from meetings with the manager/interviews

Having interviewed the restaurant's manager and followed-up with several meetings afterwards, the researcher concluded that, in the managerial perception, the employment of more educated staff was generally seen as a necessity, whereas the social interaction between the staff and the customers would have to undergo significant improvement, all the while boosting motivation of the employees. The main identified problem in the manager's perception was that the interaction between staff and customers must suffer a re-haul and expansion so that the experience would acquire a more personal nature.

Key findings from contextual interviews with employees

After undertaking contextual interviews which consisted of both observing and

shadowing as well as questions with two of the employees, the supervisors of the restaurant (since they are more involved in the process of 'running the show' much more in depth as opposed to other employees), it was deemed relevant to gather as much information as possible from such a plentiful source.

The two deal with the frustration of confused customers, who don't know, among other things - how to operate the coffee machines, can't find cutlery or have no knowledge about the fact that they have to wait at the entrance until the waiter comes and takes their room number, on a daily basis.

Furthermore, one the (potentially) most unpleasant and frustrating issues occurs when staff members begin clearing a table before the guests will have left, without knowing that the guests have only been away to replenish food or drinks.

Unremarkably, an aspect which impacts the staff to a great extent is a situation where they have to undertake two separate tasks at the same time such as, for instance, having to take room numbers off, say, 20 people standing in line at the door whilst, for example, having to help another guest who is confused in regards to the operation of the coffee machine or where might one find the tea.

Key findings from the employee questionnaires

The questionnaires with the employees brought forth a conclusion in respect to the fact that they possess more knowledge about the actual issues regarding the daily drift both they and the customers are going through.

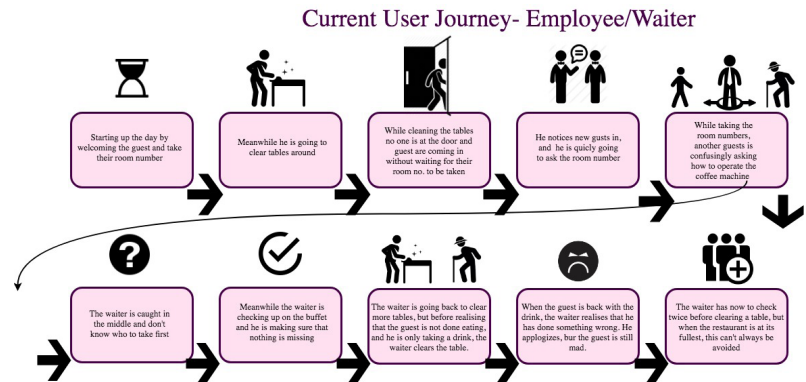
The evaluation method of the questionnaire was composed of questions and an emotional map, where participants were expected to mark how they felt across the progression of the process.

Both part-timers and full-time employees were involved in the questionnaire screening, with factoring in the level of involvement either one of the aforementioned has in respect to problems they encounter, respectively proportionate to the number of hours they spend at work. Both parties, however, reinforce the previously-identified issue of confused customers (upon arrival and throughout the experience), as well as the clearing of tables before time issue.

Current user journey

A user journey map provides with the ability to see, in much greater detail, what the current service process can be described as and what issues the staff has to cope with on a daily basis; this is naturally in tune with the standing point the service is being observed from - that is, the employees are, in this instance, seen as the users.

By way of a user journey map, the designer intends to describe the journey of a random user by means of highlighting the touch-points they will come in contact with while interacting with the service.



Persona

In the aftermath of the (qualitative-natured) interview with the manager, the two (contextual) interviews with the staff members of the restaurant and the other five questionnaires (interviews of the quantitative type), a significant amount of data about the users concerned had to be analysed. In order for a general result stemming from the research participants to be achieved, a set of interview profiles of the central (and most relevant) interviewee and of the focus group was concentrated. An interview profile is descriptive of the main features and character traits of the interviewee in what is called an initial persona format: name, age, occupation, pain points and a short story about them. The fully-fledged personas are not real people but, rather, “fictitious description of users” as Cooper (1999) defines them.



Name/Age: Erik/ 38 years old

Occupation: Restaurant manager

Erik has been working for Arp-Hansen Hotel Group for more than 8 years, and he is the restaurant manager at The Square hotel. Erik is working every day from Monday to Friday, from 6:00am to 14:00pm. He loves his job and he is even responsible for the interior design of the restaurant.

Goals:

- improve customer experience
- improve the communication between waiters and customers
- have an united team
- create a pleasant environment

Pain points:

- uneducated staff within hopsitality branch
- poor staff-customer interaction



Name/Age: Alice/ 24 years old

Occupation: Waiter (part-timer)
and Student

Alice is a 24 years old girl from Spain, who is studying her Bachelor degree in Economics, and working as a waiter for Arp-Hansen at The Square hotel. While she is at work, she is trying to do her best to give customers a good experience. By being a part-timer she starts her shift at 7:00am and finishes at 12:30pm during weekdays, where in the weekends she starts at 8:00am and finishes at 14:00.

Goals:

- provide customers with a good experience
- being able to handle everything
- team work
- organization

Pain points:

- impossible to fulfill customers expectations
- customer are way too confused
- missing customers at the door
- when too busy, can't face filling the buffet
- due to the big line at the door and many uncleared tables



Name/Age: Kevin/ 28 years old

Occupation: Waiter (full-timer)

Kevin is a 28 years old guy, and he is working for Arp-Hansen since 2015. Kevin is originally from Belgium and he is biking every single day his way to work. He is opening everyday at 6:00 am and leaving at 13:00 in the week days and at 14:00 during weekends. He is a very positive person and he is always giving his best in order to provide customers and his colleagues with a good vibe.

Goals:

- keeping track of all the guest that are entering the restaurant
- offering all the necessary help the customers need
- team work
- organizational

Pain points:

- impossible to fulfill customers expectations
- being caught in the middle while taking room numbers and another guest is asking for help
- not all the customers know that they have to wait before entering the restaurant
- everyone comes at once and the restaurant gets busy in between 9-10am.
- we clear the tables before the customers left, due to confusion.

Conclusion

After a run-through of the research regarding the staff perspective, which engulfs both the views of the manager and those of the staff, the researcher concludes by identifying the absolute presence of a gap in communication, owing to the fact that the management considers the communication and interaction between customers and staff and insufficient and in need of improvement, but, on the other hand, the staff is already well-acquainted with the needs of the customers, which do not concur with the manager's assessment.



Perspective 2 - *CUSTOMER*

As mentioned before, in order to further the process of seeking to improve customer experience within a given service system, the researcher employs the exploration of two different perspectives, with the first one - that of the staff - having been thoroughly analyzed above. By way of the same structure, theory and methods which are applied to the second perspective, the researcher finds support for analysis and profound understanding of the customers' view in respect to the desired ideal restaurant experience.

- Process

The visitation to the restaurant was conducted under the terms that the questionnaires would be placed on every table before the restaurant would open for guests. The staff received further instruction to replace completed questionnaires with blank ones when they would clear tables, in order for other customers to have material to fill out.

Staff that would greet the guests upon arrival

were instructed to also kindly ask them to fill out the questionnaires waiting at the tables in support of improving the service. In order to meet the target of completed questionnaires, the process unfolded itself over the course of four days.

Key findings from the customer questionnaires

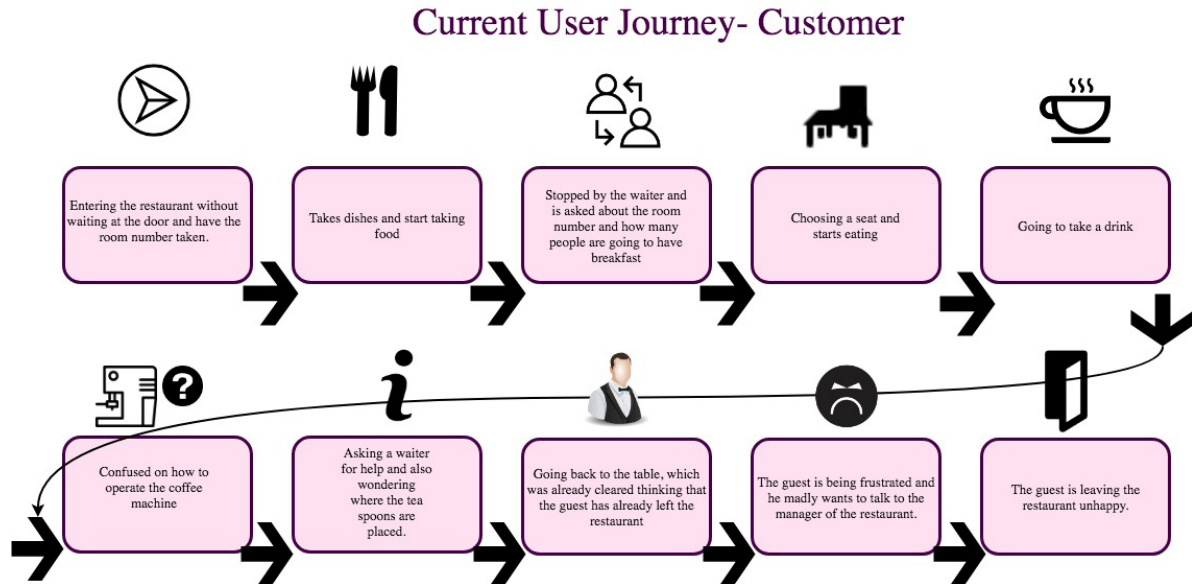
The analysis of each questionnaire concludes with the find that people are wrapped in confusion when it comes to the logistics of the restaurant, the use of the coffee machine, the entering and registering drift as well as the issue of tables being cleared before their usage is complete - all of these lead to frustration and annoyance.

In extracting data from the questionnaire, the extensive process is linked to that of affinity mapping, which will be elaborated upon further on.

Current user journey

Creation of a customer journey map gives an insightful opportunity as to how the current service process is perceived by the customers and what are the problems they encounter in its employment.

An emotional journey map supporting the candid reflection of what customers' attitudes, feelings and motivations are, through the filter of the service system as well as help identify the pain points currently comprised in the service.



Persona

Much like in the first perspective, the data gathered from the questionnaires was analysed and compiled into interview profiles. By applying the knowledge that an interview profile provides with a description of the main characteristics of the interviewee, initial persona formats were scrutinized following the name, age, occupation, expectations, frustrations parameters, as well as an additional condensed narrative about them.



Name/Age: Yu Yan/ 36 years old

Occupation: Nurse (guest)

Yu Yan is a 36 years old woman, who decided to visit Copenhagen for a short stay vacay. She booked her room through Arp-Hansen webpage. She is not a morning person on her off days, that is why she didn't purchase the breakfast when she checked in at the hotel. But the first morning she woke up hungry and she decided to go for breakfast without knowing what the rules are, or how/where she has to pay. She will ask the waiters in case she has any doubts.

Expectations:

- welcoming and helpfull staff
- fresh food
- calm/cozy atmosphere
- user friendly service

Frustrations:

- didn't know how to operate the coffee machine
- meanwhile, someone cleared her table before she even finished her meal
- no more available tea spoons



Name/Age: Niels/ 71 years old

Occupation: Retired (guest)

Niels is a 71 years old danish man, who is visiting Copenhagen together with his friend. They are coming from Aalborg and they are planning to stay in Copenhagen for 3 days.

Niels is expecting to have a relaxed stay at the hotel together with his friend. He booked the rooms through The Square Copenhagen webpage and they also purchased the breakfast when they checked in at the hotel. He likes to take his time in the morning, so he agrees with his friend to meet at the restaurant at 9:30 am for breakfast.

Expectations:

- welcoming and helpfull staff
- available tables
- table wear setted
- user friendly service

Frustrations:

- didn't find any available seats
- later on, when they came back, no one have been at the door and the waiter had to run after them and ask the room no
- not available napkins
- the waiters are too quick to clear up the tables

Conclusion

This perspective has contributed to the researcher understanding the customer point of view from an angle that is significantly different than that of the manager. This demonstrated the existence of an obvious gap between management perception of customer expectations and the expected service on the customers' behalf, and follows to show that the staff is in reality aware of the actual needs of the customers.

The gap model is further to be explored and elaborated upon.



III DEFINE

This phase made way for the structuring and acquirement of an overview in what concerns conducted research, the findings of essence and the raw, relevant knowledge that was garnered as a direct consequence of the 'Discover' phase.

After delving deep into researching the company and all related factors, the hypothesis is held up against the findings - user research demonstrates that there is no real need for an increase in interaction between staff and customers, but what is required is enhanced guidance and proper organization within the service.

Among the identified lacunae, those worth mentioning: customers are not aware of prices, there is no control over the influx of

guests and, as a consequence, the restaurant gets extremely packed, no evidence/track is kept in the event one is at the door and, as such, people can easily sneak in without having to pay - all of these impair the well-being, maintenance and functionality of this unit within the restaurant industry. The interviews, questionnaires and observations revealed that both customers as well as staff are dealing with frustrations caused by lack of structure and organization. From the staff's perspective, not missing customers becomes difficult in the instance their attention and/or presence is required elsewhere at the same time. Due to complaints regarding tables which require clearing, the staff makes an effort by trying to be as fast as they can, but sometimes guests are retrieving more

food or drinks while the waiter is clearing their table - hence, guests get mad and the waiter is placed in an uncomfortable position.

Juggling two tasks at the same time is impossible when, for instance, 20 people are in line at the door and, all the while, the staff is missing plates and, moreover, guests are asking for help.

On the guests' side, they are not always aware how the restaurant is meant to function, how the coffee machine works, or where they have to pay - then again, frustrations rooted in the same problem of returning to a cleared table.

It has therefore become clear that the real problem bases itself not on the interaction between parties, but rather on the organizational structure and the lack of adequate communication between the staff and the management.

The 5-Gap model

1. The knowledge gap

This gap represents the difference between the provided service expectations on the customers' behalf and the company's provision of the service, according to Zeithaml, Parasuraman & Berry (1990). The key factors resulting in gap 1 are as follows:

- Lack of market research
- Focus on a non-existing problem
- Lack of communication and customer needs

2. The policy gap

This gap has the tendency of arising from the management incorrectly translating the service policy into employee guidelines (Brainmates - Boosting People and Product Performance, 2018). The key factors leading to gap 2, as well as a possible way of closing the gap, could be achieved by being aware of:

- Lack of standardization
- Lack of perception of feasibility
- Poor service design

3. The delivery gap

This gap is defined as the reflection of service performance which reveals the weaknesses in the conduct employees. This tends to happen if and when staff members encounter hardships in respect to the management of customer questions and issues. The key factors that have gap 3 as a consequence and a possible way of closing the gap could be done by becoming aware of:

- Lack of product knowledge
- Poor human resource policies
- Lack of cohesive teams
- Poor employee-to-job fit
- Poor efficiency
- Insufficient guidelines

4. The communication gap

In the event over-promising in respect to advertising takes place and, thus, it does not meet the actual service delivery, a communication gap forms. The promise of more than can be delivered has as a consequence the increment of customer expectations and, will further lower perception of service quality when the warranty is not as expected. A key factor resulting in gap 4 and a possible way of closing the gap may be accomplished by becoming aware of:

- Tendency to over-promise

5. The customer gap

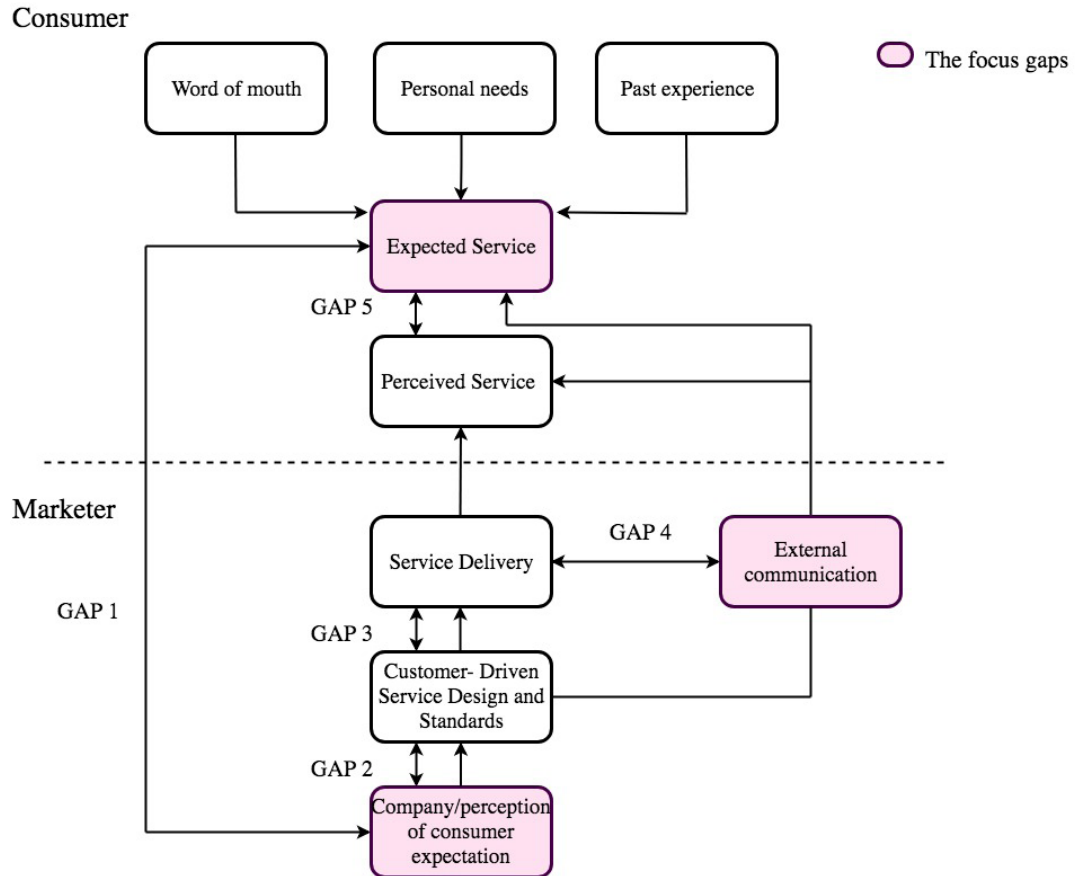
The primary difference between customer expectation and customer perception is that customer expectation bases itself on available resources which find influence rooted in cultural background, personality(ies), available information etc. On the other hand, customer perception derives from customer interaction with the provided service. This gap illustrates the disparity between the expected service and perceived service from the

standpoint of the consumer. Key factors that cause gap 5 and potential solutions for closing the gap could be attained by being aware of:

- Customer needs and expectations
- Clear understanding of the target market

Upon a closer dissection of the gaps, the researcher attempted to analyse each gap and firmly grasp which one(s) could be the biggest and further with trying to find a solution that would close it.

GAPS MODEL OF SERVICE QUALITY



After digging deeper into the 5-gap model, it is concluded that the most obvious gaps are gap 1 and gap 4. As reasoning: gap 1 represents the gap between customer expectations and manager perception - it is present and very important, because the problem here is that management does not understand the real problem, whilst staff member are aware of the real issue. Hence Gap 4 is just as much important since the external communication is mislead, not to the customers; rather, but between the departments, which furthers into leading to miscommunication with the customers.

Gap 1 - between customer expectations and management perception

In order to attain the capability of delivering a service of high quality, Zeithaml, Parasuraman & Berry (1990) instruct upon knowing the customers' expectation(s) as one of the most important steps at a starting point.

With the knowledge that gap 1 represents the difference between genuine customer expectations and that which the management perceives them to expect, the gap is suggested to stem from the lack of market research, improper upward communication as well as too many organisational layers.

After interviewing the restaurant manager, a noticeable gap enfolded - from the managerial viewpoint, the problem was insufficient communication between customers and employees, as well as employee professionalism, which, in the manager's opinion, is considered meager, wishing to hire staff which has formal education in hospitality and business.

During the interview, the manager also came forth with certain feedback papers, which get compiled every month from the company they collaborate with. Both good and bad feedback is contained in the documents and it regards hotel services, including the restaurant. A brief analysis of feedback from a few months back and up to the present confirmed that, when providing feedback, guests would focus more on hotel services (rooms, housekeeping etc.) rather than on the restaurant facilities.

Gathering insight from interviewing two employees and with an additional three filling in the questionnaire, it was easily noticeable that they were in possession of more knowledge about how people feel and what their expectations are in respect to the service. Most of their answers concur with the customer answers, for instance about the wait at the door for the room number exchange, or the issues with operating the coffee machine issues and the plates being removed before guests are ready to leave. This insight was been gathered via

the interaction with the customer elapsed on a long term period. During observation, many people were seen entering the restaurant while the staff would not notice them since they would be busy cleaning tables or answering customers' heed and call.

According to Zeithaml, Parasuraman & Berry 1990, complaints prove valuable for troubleshooting but it is not always sufficient to understand customer expectation; it may well be concluded that the restaurant manager's perception of customer needs is one that finds no true reflection in reality. Rather, the active staff's opinions coincide with those of customers. Therefore, in order to close this gap, the employees should inform the manager about the issues they face in their everyday life/ drift at work so the management becomes aware of the real needs of the customer. Only then can improvement of the service be undertaken in a reasonable, calculated fashion.

Gap 4 - between delivery of service and external communication

The fourth major cause of low service-quality

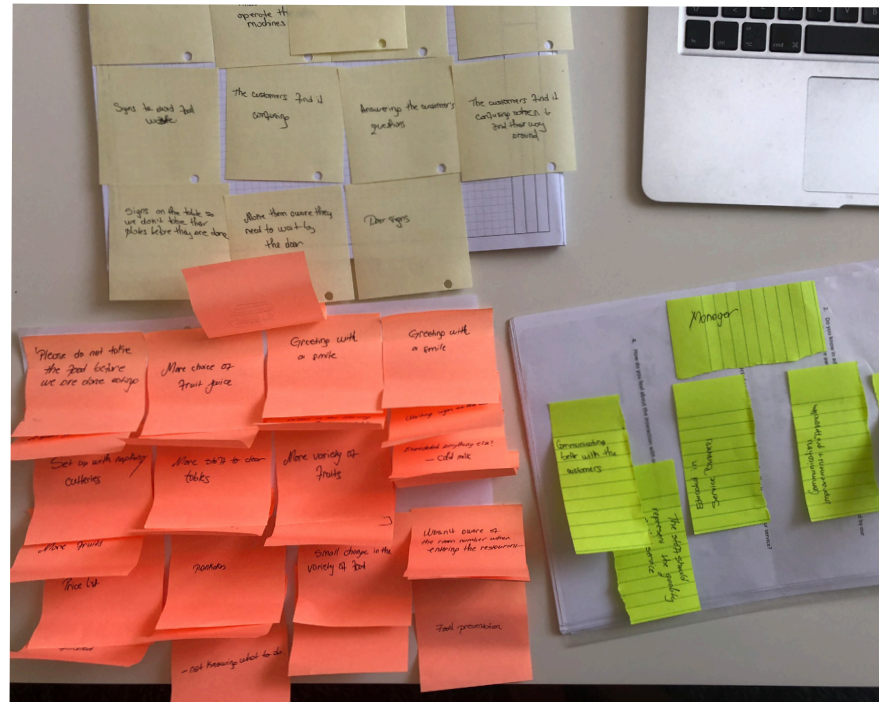
perceptions is suggested to be the gap between "what a firm promises about a service and what it actually delivers" (Zeithaml, Parasuraman & Berry, 1990; p.115). The authors propose that inconsistencies between the delivery of service and the external communication, also related to promises or absence of information in respect to certain aspects of the service delivery, can and will affect customers' service quality perception. Key factors which have gap four as a result include improper horizontal communication and the propensity to overpromise.

According to Zeithaml, Parasuraman & Berry (1990), communication between different departments in any given organisation are of necessity so that one may understand and achieve the common purpose(s) of the organisation. In the meetings with ARP Hansen's restaurant management, an existing gap between ARP Hansen management and The Square Hotel management was discovered. Even though they hold meetings regularly once every few weeks, it is deemed insufficient since the restaurant manager does not know of the real problem, thus he cannot further to the hotel management and this is how room is made for such

a gap. Moreover, as an example, straight from the Shadowing phase - it happened that one customer was very pissed because, when he called the reception to ask if they have a specific kind of salami and a special kind of juice, the reception responded positively, but when the guest showed up for breakfast the restaurant did not have the particular kind of food and the customer got very frustrated. From here one may deduce that there exists a gap of communication between departments. In order to close this gap, regular meetings with the supervisors from the restaurant, the restaurant manager and the hotel management are recommended.

Affinity diagramming

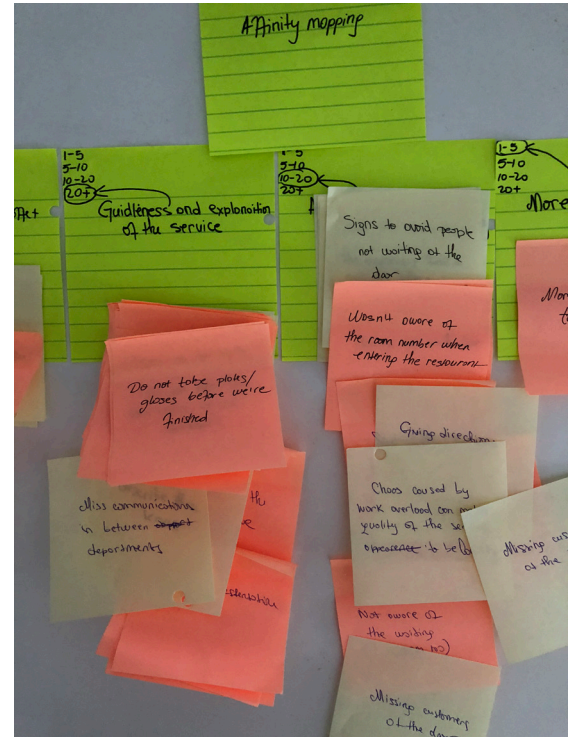
Affinity diagramming is a process employed for the externalization and meaningful clustering of both observations and insights stemming from research, and serves the purpose of maintaining the design teams grounded in the data along the design process (Martin and Hanington, 2012).



Affinity mapping is a tool used in creative processes in order to source ideas and data. The writing down of insights, lying them on a surface as means of visualization is a manner of interacting with data that is derived from the research (Beyer and Holtzblatt, 1998).

Conducted research in support of the thesis provided with meaningful and diverse insight into the behaviour of participants in the service play. Affinity mapping is made use of in order to get a firm grasp on an overview of opportunities as well as recognition of patterns present in the collected data. All the gathered insight from the interviews, meetings, as well as the findings from the observations were defined on separate post-its, placed on a large blank piece of paper and then grouped into related areas several times. Each area was afterwards given a headline and further discussed, based on gathered knowledge, so that different connections between the areas may be highlighted.

After the final clustering, it may be concluded that the issues of the greatest preponderance and frequency that both customers and staff have met are as follows: guidance around the logistics of the restaurant, not knowing about waiting at the door, clearing tables before finishing and staff overloaded with tasks.



Mind Mapping

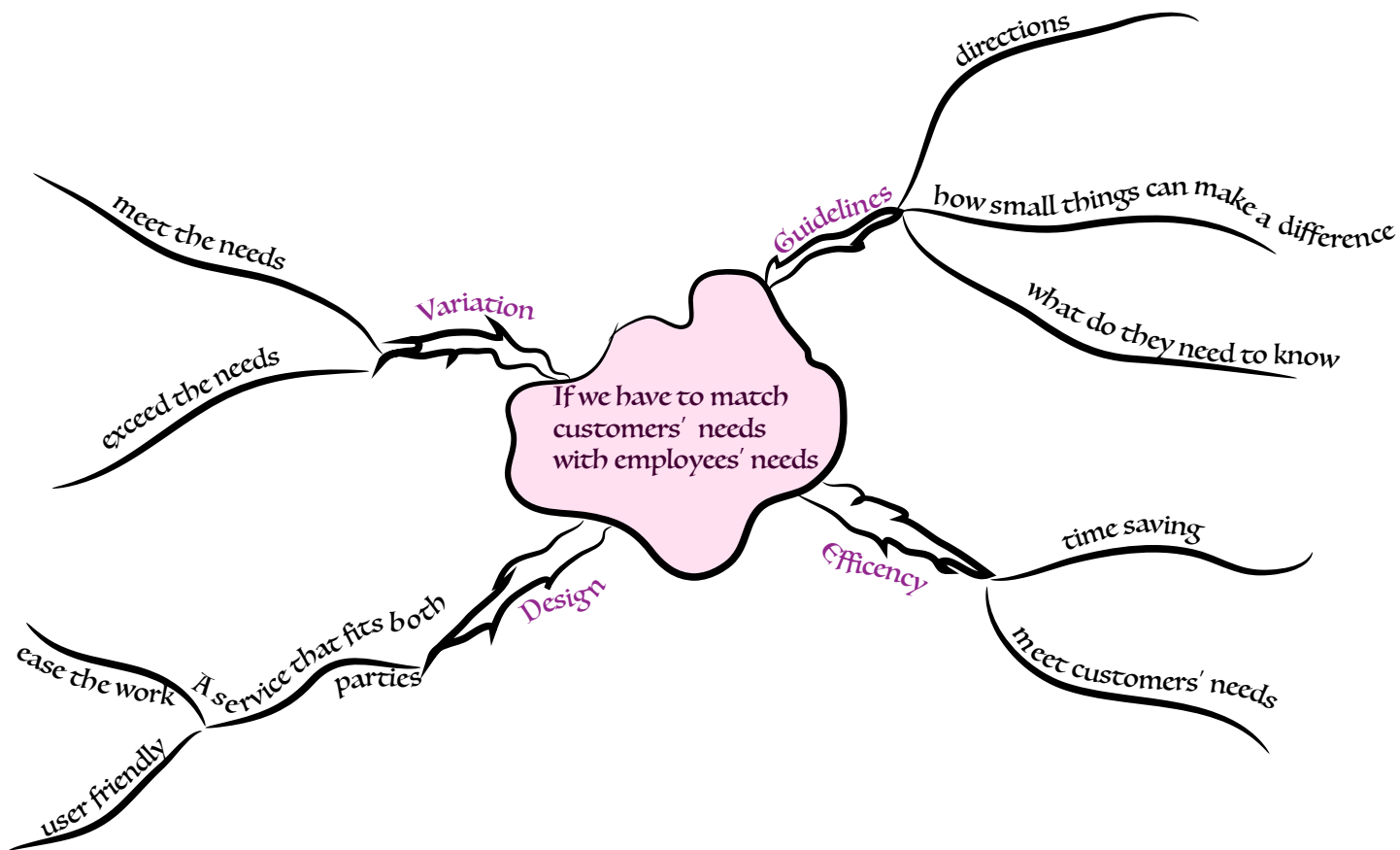
In the event a problem or topic has many moving parts, mind mapping provides with a method of visually giving structural organization in a problem space in order to better grasp and comprehend it. Mind mapping is a tool for visual thinking tool may help generate ideas and develop concepts when relationships among many pieces of related information are foggy and unclear.

Because of its visual nature that resembles a diagram, mind mapping represents a much powerful mnemonic device and may therefore be used to promote understanding and enhance the recall of a problem space (Martin and Hanington, 2012).

The focus question which serves as the fundamental theme occupies a central position and maintains the mapping process on its rightful track, in line with the topic. The extensions

that spread outward from the map's center signify the most vital areas which have to be fulfilled and represent the primary connections. As the spikes of primary connections are identified, each will further into revealing much more profound, more granular levels of secondary information which, later in the process, will constitute the meaning.

This tool is in truth a visual representation of principles that shall help the researcher better understand different ways of organizing and prioritizing information. The mind mapping process has helped provide a clearer view of that which should be considered during the ideation process.



IV DEVELOP

This represents the ideation phase, where the full extent of needs of employees and customers are taken under analysis. The 'develop' phase is comprised of a workshop involving the hotel's staff; afterwards, insights from the interviews, questionnaires, observations and workshop are gathered, and then the design brief is compiled, which advances the design challenges, what the problem is as well as its logistics.

First phase - IDEATION

Here, the aim was to identify the most valuable and realistically-achievable ideas for the researcher to further with the creation of the best possible and suitable solution(s) suit both parties in equal measure

- ease the staff's workload as well as provide guests with a pleasant, worthwhile experience, all finding base root and argumentation in the interviews, questionnaires, meetings and observations carried out during the 'discovery' phase.

During the ideation process, two different points of view were taken into consideration. A mobile app as well as a change of the actual service in the restaurant was considered. The benefits an app could bring in terms of service improvement were considered, as well as what could be included or changed within the physical, material dimensions of the restaurant.

A variety of ideas were considered, rooted in the results of the affinity mapping process, so that, at the very least the most important

of the requirements for both staff and guests are being met.

- Workshop

Once the first phase of the ideation process had taken place, everything was halted in favour of the consideration that a workshop may provide with enlightened perspectives from an angle not-previously-considered. In that sense, a meeting with the manager was set in place in order to settle the details of the workshop.

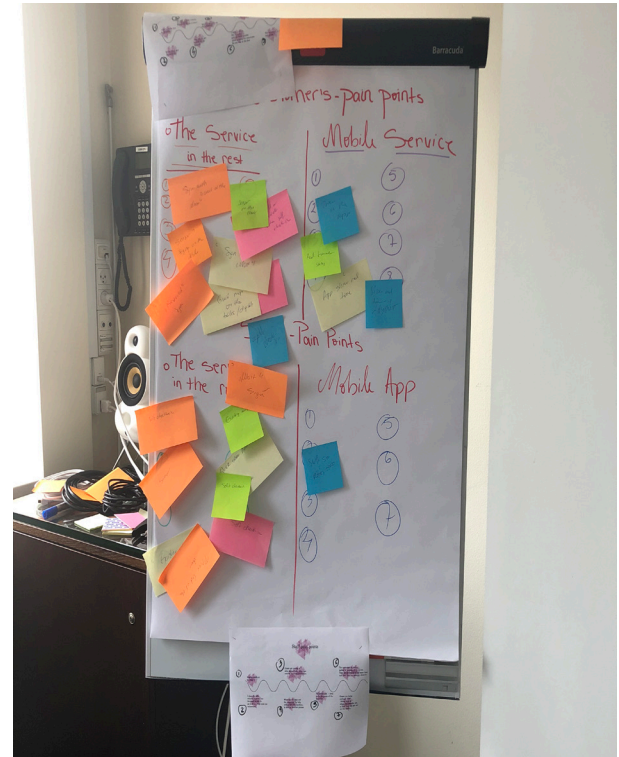


This workshop took place in one of the conference rooms after the work schedule of the employees concluded. The right candidates for this workshop were chosen with much care and consideration, so that the outcome of the workshop is optimal: the two supervisors, who are also full time employees, one full timer and the hotel manager himself. The manager's presence was important, since he was curious about the project and how this research project could help improve service, and he therefore insisted on participating, in the fortunate event he might be able to contribute with a helpful idea.

The workshop had begun with a brief introduction session for the project, held by the restaurant manager. He elaborated on the reasons for which a service designer's contribution is required and how they may help with the improvement of the service they offer.

In order to break the ice so as to make the participants feel more relaxed, a fun game, called the Game of Possibilities, was introduced and carried out. Time-wise it lasts about 5-6 minutes and requires one or multiple groups. Since there

was not a great number of participants at free disposal, individual participants acted on their own - they were each handed an object (napkin, notebook, keys, eraser etc).



The rules are as follows: each participant is to demonstrate a use for their object, whilst the spectators need guess what it is that which is being demonstrated. The player is not permitted to speak and the goal is for demonstrations to be original, even wacky, ideas.

Once a certain level of comfort was established between participants, pain point maps for both customers and staff were drawn on the board. Every participant was handed the pain point map and had as a task to come up with an idea for each of the illustrated pain points. They were thereafter handed sticky notes of two distinct colors: one for the service in the restaurant and one for the mobile app. The participants would then analyse the pain point maps and solve potential solutions for each of the pain points, either with service in the restaurant or with the mobile app - post-its were at their disposal, for easy carrying out of the task at hand.

Once all participants had completed the task, they individually presented each of their ideas in front of the others and would offer explanations as to how it would improve the service.

This workshop was performed only from the perspective of the staff - due to limited accessibility and overcrowded restaurant, since summer is high season for the hotel, carrying out a workshop with the guests was not accomplishable.

- Workshop outcome

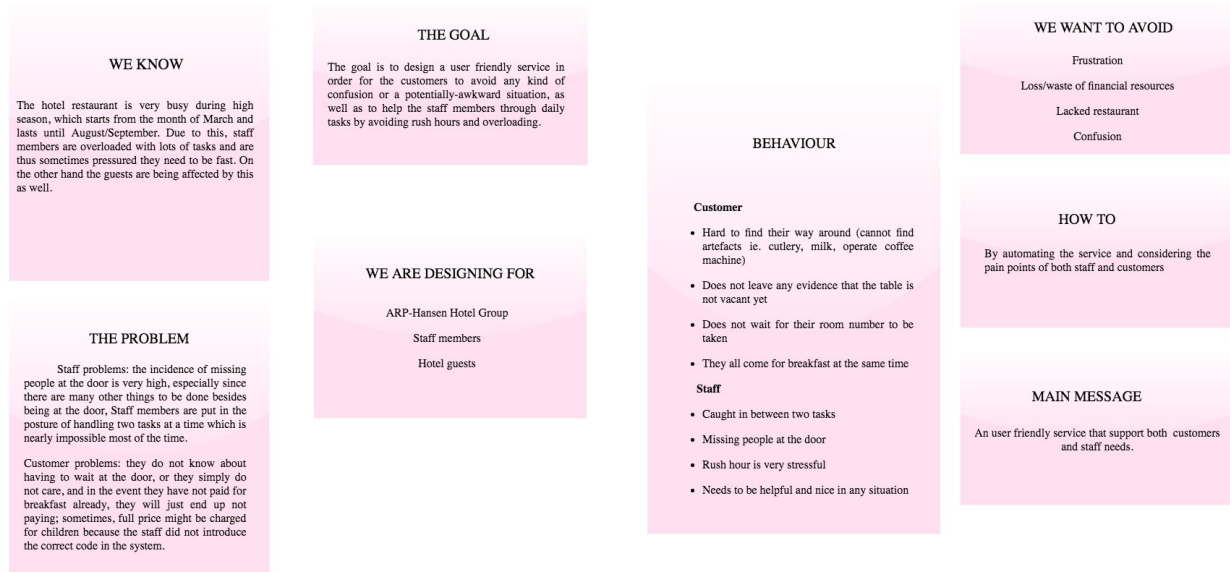
The workshop proved to be very helpful, since it aided in identifying possibly-potential solutions from a wider variety of perspectives. This in turn propelled the researcher into understanding both the positioning and whether the parties resonate with each other as well as if, how and where the ideas concur.

The researcher completed the workshop by assuming the part of a facilitator and then elaborated on how the issue would have a follow-up. Curtly, a brief evaluation session was held so that both the participants and the facilitators would provide feedback for the course of the workshop. Furthermore, the workshop confirmed the results of the first ideation session just as much as it brought fresh insight to the table, which in and by itself propelled the development of the service even further.

- Design brief

The design challenges are introduced and elaborated upon in the design brief by summing up the definition of the problem, identifying the designer, any relevant patterns of behaviour, specific pain points

and needs and the achievability of a goal in the event of a potential outcome. The design brief is employed as a tool in the 'Develop' phase and serves the purpose of guiding the course of the process - additionally, it contributes to the insurance that the final delivery finds base ground in insight.



Second phase - IDEATION

Within this second phase of ideation, the target was the generation of new ideas whilst incorporating ideas born from the carrying out of the workshop. In this train of thought, the IDEO Brainstorming rules were taken into consideration and followed in line with all the available, gathered insights.

In following the course of the brainstorming process IDEO rules impose, the ideation session ensures openness, creativity and supportive collaboration, altogether building upon reciprocal idea, The problem statement was reiterated and brought back into focus at the start of the ideation process and so was the target. The post-its were clustered so as to provide with an overview map of sorts that would then give way to identification of both similarities and patterns - each of these were then furthered with a label (headline) so that they may be discussed and dissected when further identifying potential ideas.

Final Service Concept

- Automation of the service

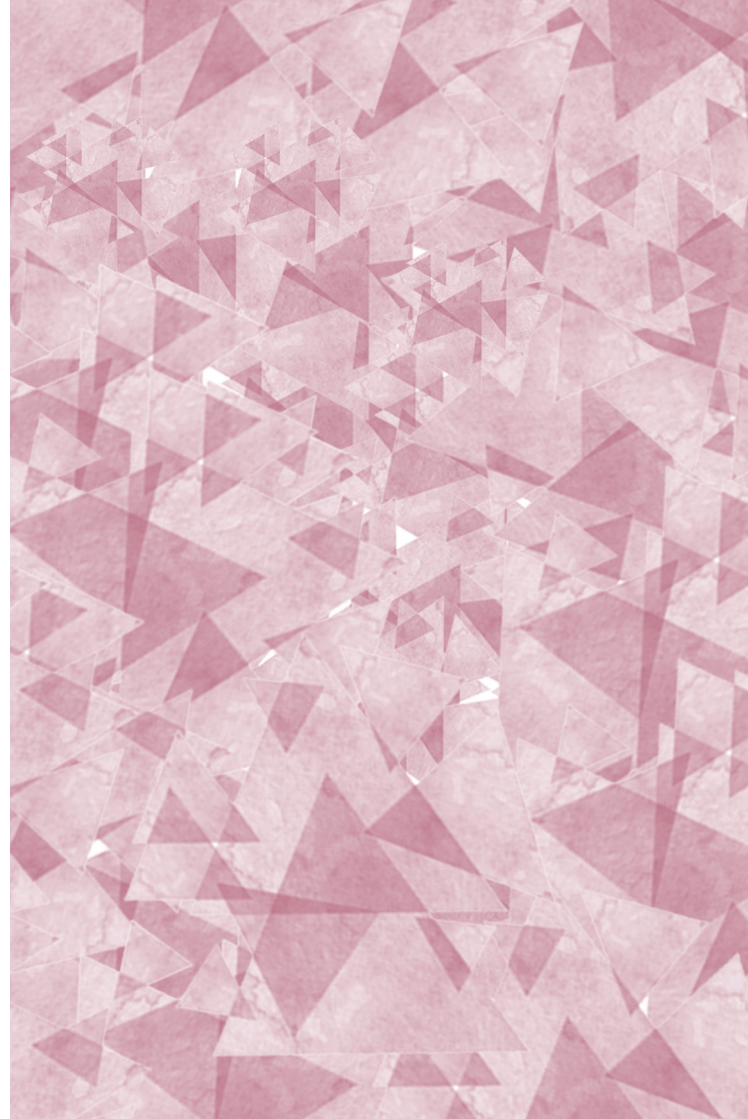
The idea is to provide the hotel guests with a pleasant experience, which naturally involves neither confusion, nor frustrations; in addition, it is also a target to let them know about the restaurant drift in real time so they may plan their visit accordingly, whilst also provide the staff with an easy-to-deliver service that efficiently allows them to carry out their job, without being placed in a situation that can prove to be both individually stressful and collectively disturbing - that is, it eliminates the possibilities of getting frustrated, confused and/or overwhelmed. and observations carried out during the 'discovery' phase.

During the ideation process, two different points of view were taken into consideration. A mobile app as well as a change of the actual service in the restaurant was considered. The benefits an app could bring in terms of service improvement were considered, as well as what could be included or changed within the physical, material dimensions of the restaurant.

A variety of ideas were considered, rooted in the results of the affinity mapping process, so that, at the very least the most important of the requirements for both staff and guests are being met.



PRODUCT REPORT



V DELIVER

The product report is the manifestation of the intent of presenting and describing the identified needs and pain points in respect to consumers and furthers into highlighting the key findings elaborated upon in the process report, ending in a potential service idea which may further be implemented within the ARP Hansen Hotel Group so as to catalyse improvement.

The product report is perceived to be the final hand-over from the process the thesis both bases itself and elaborates upon and its intended target is, most generally speaking, an relevant, interdisciplinary group.

Service design is a discipline in its establishment stage and is meant to become an approach to either

innovate or improve services - "to make them more useful, usable, desirable for clients, as well as more efficient and effective for organizations" (Moritz, 2005; page 5) and is also expanding into becoming a field of research. It is an iterative process that solves problems using design principles, which in turn helps identify opportunities or improve services. It revolves around a deep interest in comprehension of the people to whom one is designing for. Depending on context and situations the consumers may have different experiences and needs within a service of the same kind. It is therefore crucial to explore customer experiences holistically in order to understand the existing service and uncover needs and pain points as well as expand into discovering opportunities for improvement, which this thesis will

further explore upon (Design Council, 2017).

In that sense, the case presents itself as a cooperation between different actors - namely, the ideology behind the thesis module of the programme undertaken at Aalborg University, the entity presiding over the targeted hotel industry sector - ARP-Hansen Hotel Group, with its subsequent hotel The Square Copenhagen identifying as the direct provider of services and the researcher themselves.

Service Systems Design

The MSc in Service Systems Design offered at Aalborg University Copenhagen gives way to teaching, as follows: "...how to plan and organise people, infrastructure, communication, media and components of a service in order to improve its quality, the interaction between service provider, customers and the customers' experience" (Aalborg University Copenhagen, n.d.).

Project background

The present thesis has been initiated, conducted and written in collaboration with ARP Hansen Hotel Group and The Square Hotel Copenhagen. Internally, project supervision was lead by the restaurant manager and, separately, by school supervisor Nicola Morelli. The primary goal was to unravel and explore customers needs and/or pain points so as to initiate a search for potential solutions that have the capacity of improving the service, as well as its relationship with its users.

Instead of looking at the entire panel of services the hotel fans out for the consumers' own disposition, the thesis finds its focus within the restaurant and zooms in on the experience of the breakfast buffet service the hotel offers and

the way the consumers interact with it, beginning-to-end.

Initially, the hotel manager pressed the researcher to formulate the research and subsequent solution according to the idea that the main issue the restaurant was facing had to do with communication between the staff and the consumers and thus suggested more interaction between the parts as a potential solution. The initial question, as follows:

"How could Service Design methods and tools support improvement in the communication between customers and The Square Hotel's restaurant employees for a better experience?"

Conversely, the interviews conducted as part of the research process pointed to a different problem - thus, the problem statement needed to be rehashed and reformulated. It furthers into becoming the building block of the case. Thus, the question:

"How could Service Design methods and tools support improvement of an already-existing service, so that it provides ease in the work of the staff as well as help guide the customers throughout their interaction with the service?"

Project approach and process

A service design train of thought, encouraged as a new interdisciplinary and integrative approach was applied, in this paper, in order to structure, improve and/or provide possible gaps with novelty when contributing with a service (Moritz, 2005). In order to reveal tentative aspects which ask for potential improvement, qualitative methods were employed in the investigation of needs and pain points for both the staff and the customers.

Tentative Plan



The Real Process



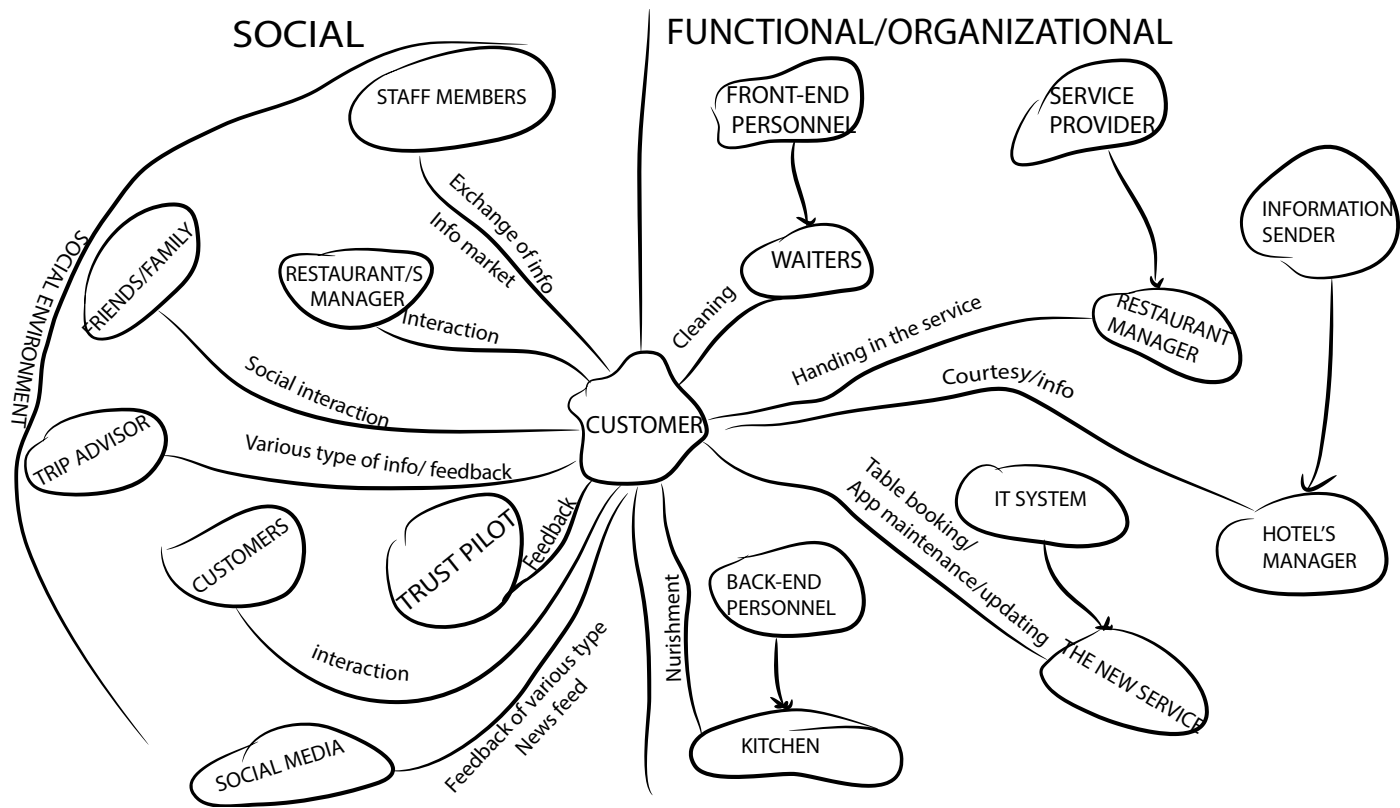
Across the paper, the primary aim was to design, plan and organize restaurant service so that it becomes easier to handle for the staff and easier to use for the customers - in other words, to improve the quality of the service. The suggestions in favour of change in service

Target group

The target group was identified to be comprised of two ramifications which represent the hotel guests and the staff members, respectively - two target groups were considered due to the belief in that deliverance of good service is a relationship of co-dependence between members of the staff who inhabit a healthy working environment and customers who enjoy a pleasant experience which brings satisfactory value to both parties.

The map sets focus on the direct and indirect relationships between the different actors which may be identified in the system; it also points out the

dependence of the system when it comes to infrastructural conditions, some of which concern high decisional levels and cannot be changed in any way. In this event, the design process should consider such conditions as external in respect to the system and focus on design solutions that fit such conditions (Morelli, 2006).

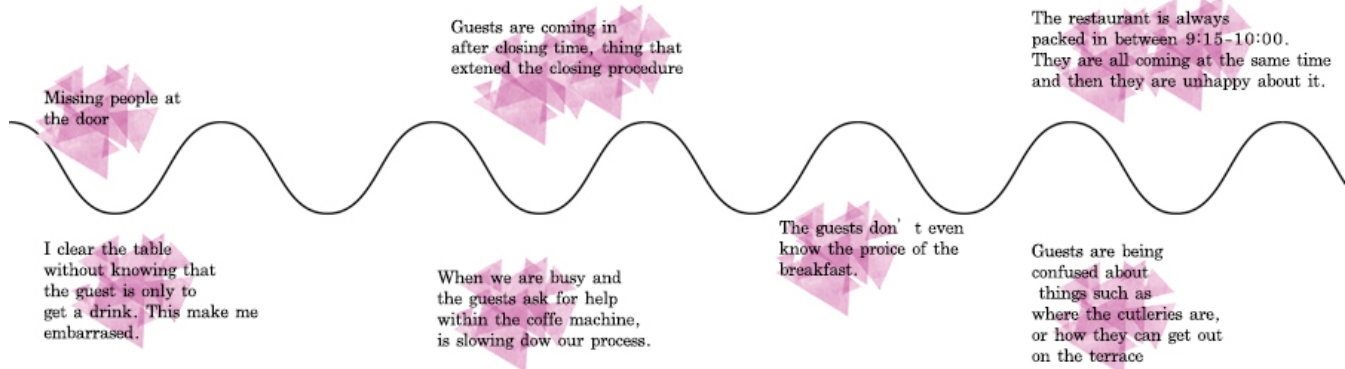


Pain points

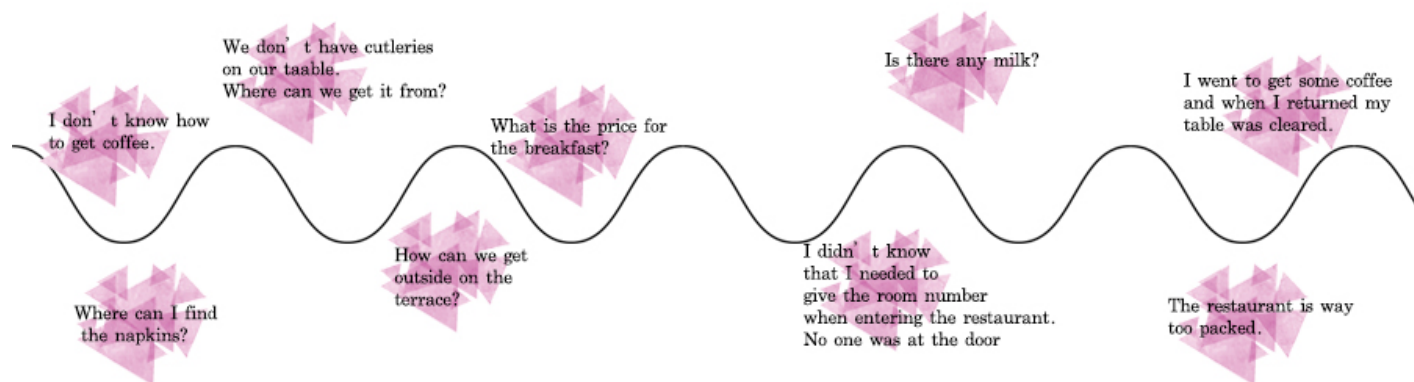
The exhibited pain points were classified as a consequence of the initially-undertaken analysis and collection of data of qualitative nature. They are intertwined with each other, and a connections between them were identified. It is, however, still

important to maintain the pain points separate so that one may grasp the wholesome, complete picture of the service. The pain points mentioned above were all subjected to thorough and careful analysis so the most suitable idea that has the potential of providing solutions to both parties may be induced.

Staff pain points



Customer's pain points



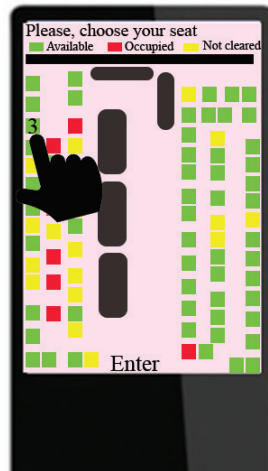
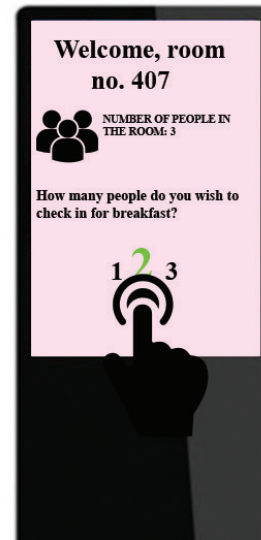
TOUCH POINT

Service Concept

Final Service Concept

- *Automation of the service*

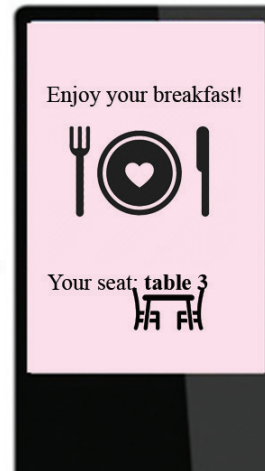
The idea is to provide the hotel guests with a pleasant experience, which naturally involves neither confusion, nor frustrations; in addition, it is also a target to let them know about the restaurant drift in real time so they may plan their visit accordingly, whilst also provide the staff with an easy-to-deliver service that efficiently allows them to carry out their job, without being placed in a situation that can prove to be both individually stressful and collectively disturbing - that is, it eliminates the possibilities of getting frustrated, confused and/or overwhelmed.

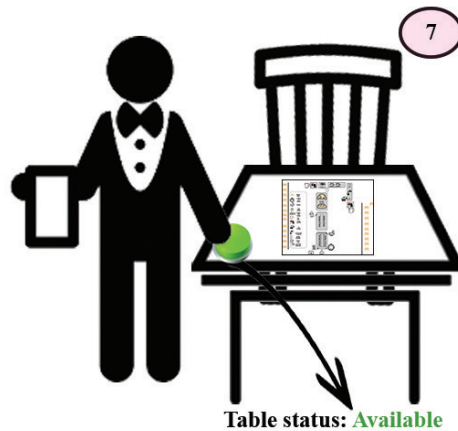
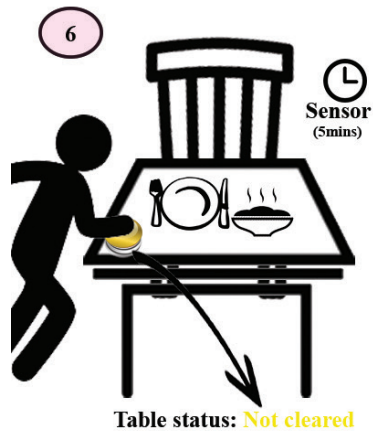
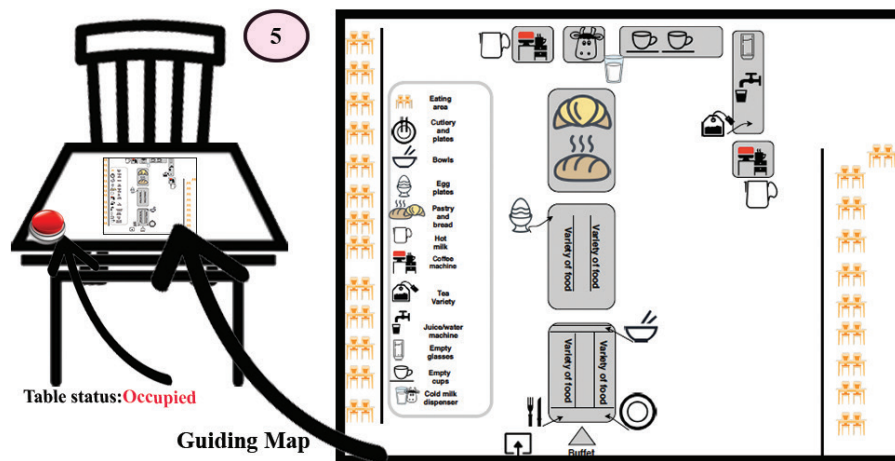


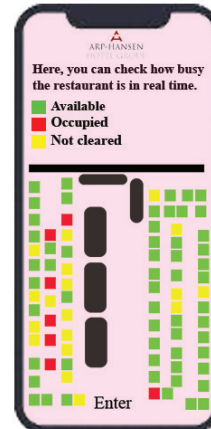
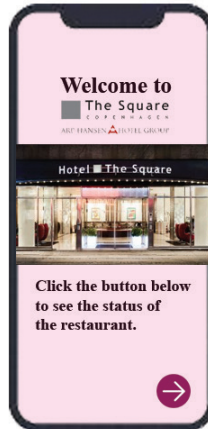
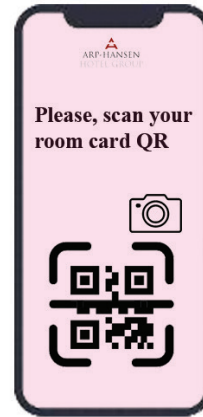
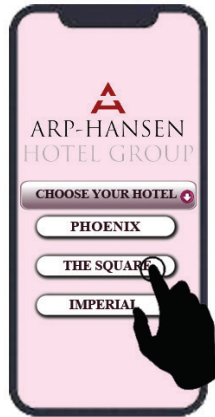
3



4





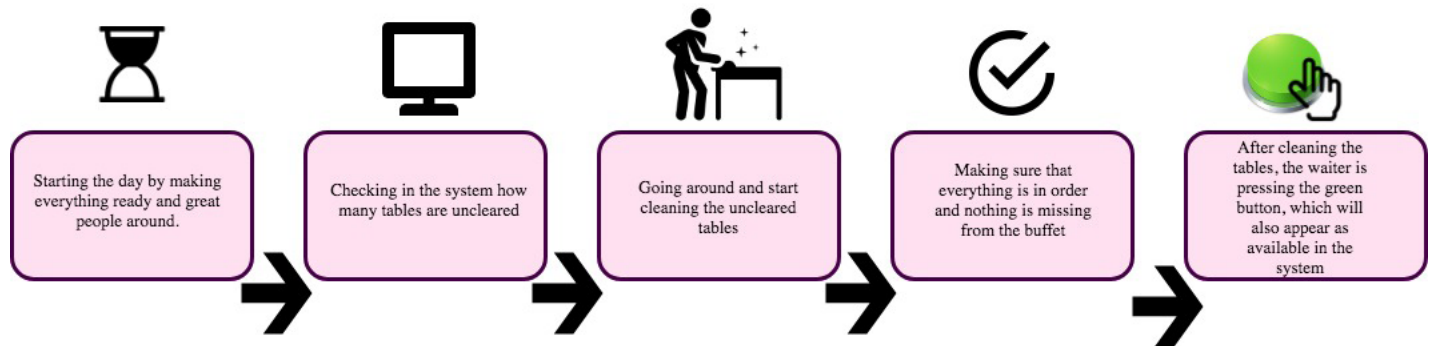


Customer journey

A user journey map provides with the ability to see, in much greater detail, what the current service process can be described as and what issues the staff has to cope with on a daily basis; this is naturally in tune with the standing point the service is being observed

from - that is, the employees are, in this instance, seen as the users.

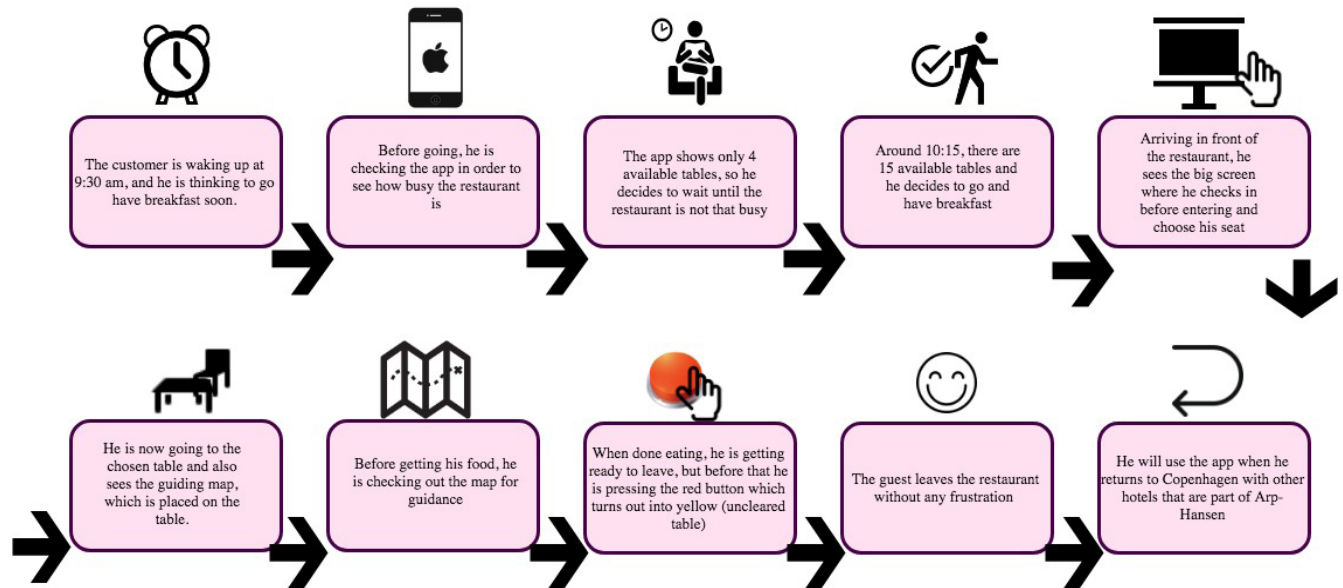
New User Journey- Employee/Waiter



By way of a user journey map, the designer intends to describe the journey of a random user by means of highlighting the touch-points they will come in contact with while interacting with the service.

This user journey map is a visual demonstration of the new service, and it shows what a customer and the staff members are going through while this is being service implemented, and how this will ease the work and improve the service quality.

New User Journey- Customer



Testing phase

The testing phase took place at the very end, once the workshop data, the desk research and the field research were put head to head, and when the idea that has the potential to rise up the restaurant revenue was prototyped, furthering into the testing phase was decided upon.

Due to the high season, the hotel status was booked with a “full house” for the whole period between April and ultimo September, this entails the restaurant being at its fullest capacity in this period. Due to this, testing of the whole prototype was not possible, so only a part of the whole service idea was tested. In that sense, the thought of something that would not disturb the guests or give staff members extra work was entertained.



Nudging

The nudging theory was used within testing phase and, according to Richard Thaler and Cass Sunstein, the concept of nudging is represented by “a relatively subtle policy shift that encourages people to make decisions that are in their broad self-interest. It’s about making it easier for them to make a certain decision. By knowing how people think, we can make it easier for them to choose what is best for them, their families and society” (The Independent, 2018).

In using and implementing the nudging theory, so that guests are subtly ‘nudged’ into finding their way around without asking the staff, by way of creating an instruction set in the form of a map that shows and explains how and where to find

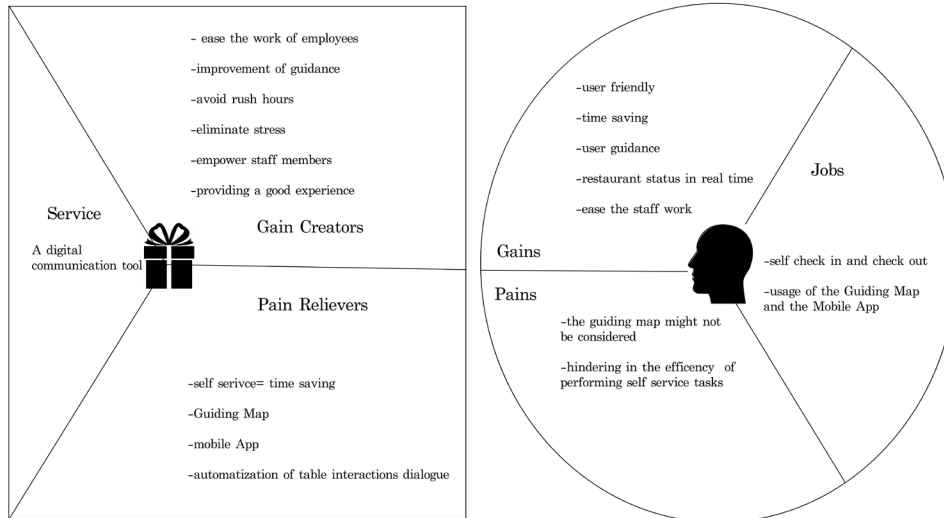
artefacts such as cutlery, napkins or where the coffee machine is and how it works, the guiding map was chosen out of the prototyped future service.

Multiple copies of the guiding map were printed out and further placed on the tables so the guests may have a look at it and make use of it if needed. In order to gather some form of feedback from our users, we had another evaluation sheet on the side, which gave them the opportunity to let us know about their experience.

Value proposition canvas

When considering to move in the direction of implementing the service concept, it is of importance to elucidate how it might contribute to an enhanced customer experience. Therefore a Value Proposition Canvas (VPC) was elaborated. The VPC explicitly states how the service releases pains and furthers into the creation of gains.

It is a tool that makes the visualisation of how the service will create value for customers, possible - this entails a visualisation of benefits that come with the new service (Osterwalder, Pigneur, Bernarda, & Smith, 2015).

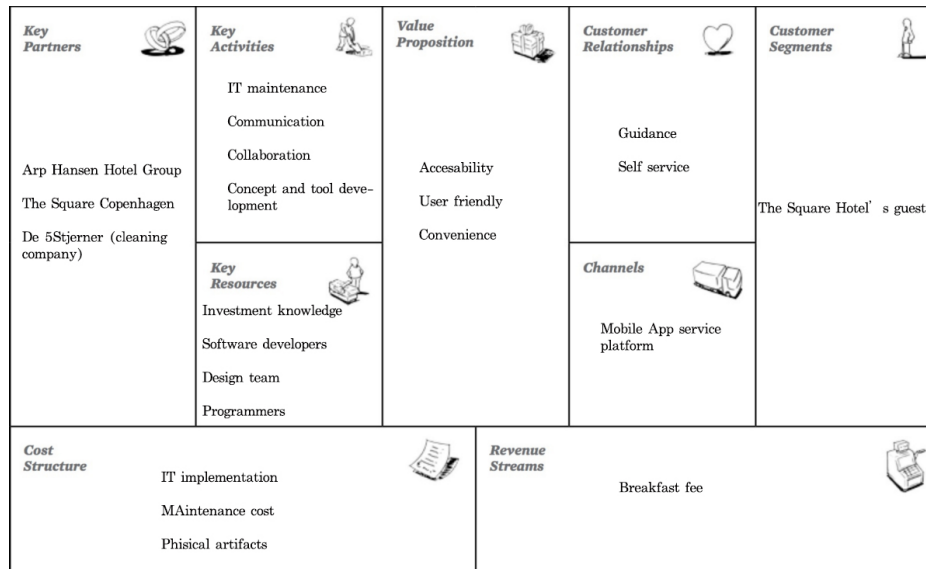


Business Model

In addition to the value proposition, it is crucial that the new service concept is communicated in an understandable strategy. The focus needs to be on the value when applying the new service as well as creating a common understanding of how the new service will contribute to the improvement of customer experience. If this is not clear, the reason

to disturb and interrupt the existing procedures inefficiently demands resources, whilst the success rate of the new service is significantly reduced. Thus, a Business Model Canvas (BMC) was pieced together so it may serve as contribution and be an active part of the service strategy.

The BMC serves as a visualisation for the creation of a common language, which is, in turn, intended as the foundation of a future business strategy (Osterwalder & Pigneur 2013).



- Customer segments

Due to the ambition of improving existing customer experience, the segment is represented by hotel guests, where the staff members are deemed just as important.

- Value proposition

The new service delivers the possibility for hotel guests to visit the restaurant at a time that suits them/their taste - depending on how they prefer the occupancy level of the venue; in this, they are granted independence and their frustrations, eliminated. The same applies for staff members - the service provides them with an organized and automatized system that permits a peaceful working environment, eliminates the probability of a need to perform two tasks at a time and relieves frustration(s) by having the smart tables which show whether or not guests have left.

- Channels

The service will be provided through a completely new system which manifests itself on a large screen that allows customers to check-in on their own and choose seats; this system is connected to the tables and chairs in the restaurant. There will also be a mobile application which is intended to allow customers to see the occupation status of the restaurant in real time.

- Key partners

The service has to be supported and implemented by its owner, the ARP-Hansen Hotel Group, which further on has the possibility of implementing this service in all the ARP-Hansen hotels.

- Key activities

For the service to operate accordingly, it is essential the system is always up to date, without any errors permitted since everything is meant to work through this service, as well as the maintenance for the mobile application which is linked to the entire service - everything must be on point. A key activity to ensure full customer satisfaction is therefore the keeping of the service in user-friendly constancy.

- Key resources

The IT department needs to ensure the full functionality of the service, as well as adequate communication between the staff and the management, in order to keep the map updated in the event of any change(s) within the restaurant's interior design and/or internal logistics.

- Cost structure

The main cost for the service will be the development and implementation of the IT system, which is actually all the service is based on. Maintenance and troubleshooting costs should also be factored in.

- Revenue stream

Customers are paying the booking of rooms either via the hotel - in this case, ARP-Hansen has no commission, unless the guests also purchase breakfast while booking the room; otherwise, they have the possibility of adding-on breakfast while checking in at the restaurant. Should they book their reservation through the ARP-Hansen website, they will therefore receive revenue.

Motivational Matrix

A motivational matrix was used to analyse the service in-depth and to better understand the motivation of several involved actors, as well as what they will give and/or receive to/from other actors, either directly or indirectly.

The motivational matrix was developed based on the idea of the concept, so as to define the needs and expectations of each of the actors in relation to the service, while also further revealing the connections between the actors and the service (Service Design Tools, 2016).

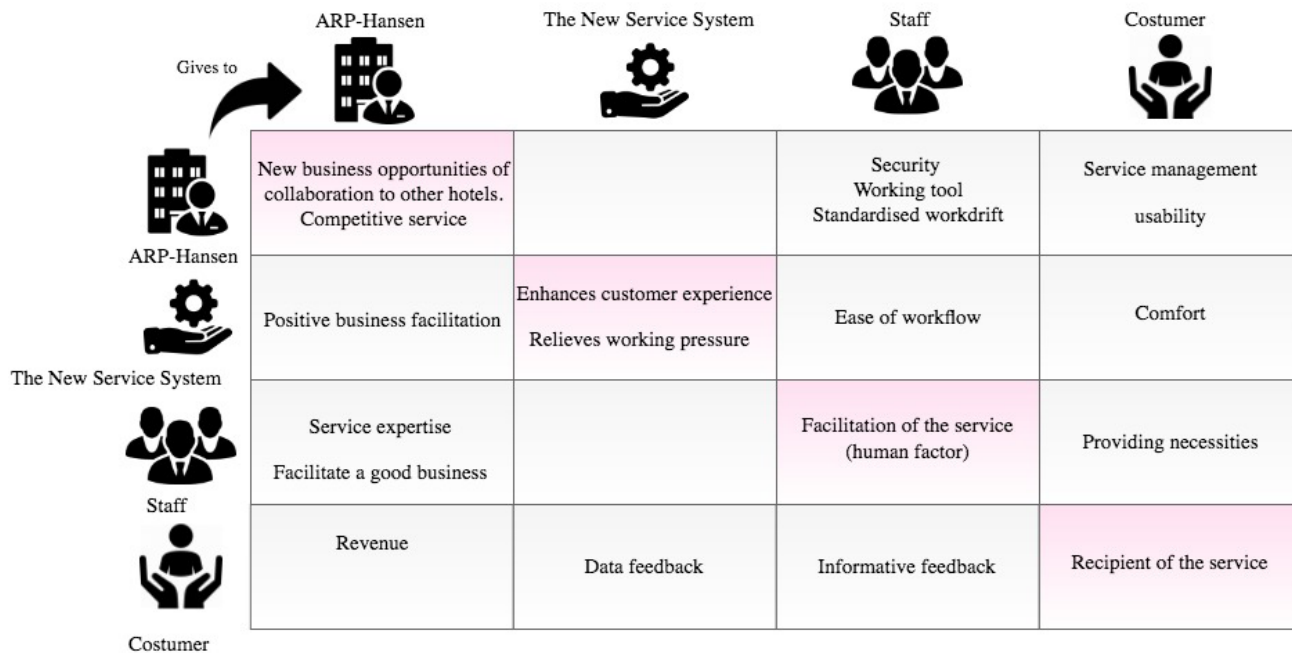
The most relevant actors, as described in the actors' map, were included in the matrix to better understand their motivation in terms of what they may offer each other. The goal was to grasp greater understanding of each actor's motivation for becoming a potential part of the new service idea.

The actors were positioned in the matrix both horizontally and vertically, with the vertical rows of

stakeholders defining who offers and the horizontal rows list who receives. In the middle, stakeholders intersect, and this is where the motivation of the stakeholder-to-be in the system is described.

Some actors may not bring contribution(s) to one another and therefore some of the boxes are kept/left empty. This tool provides with an overview in respect to the motivation of each potential stakeholder from their own perspective. The assumptions were made based on research undertaken with different stakeholders.

MOTIVATIONAL MATRIX



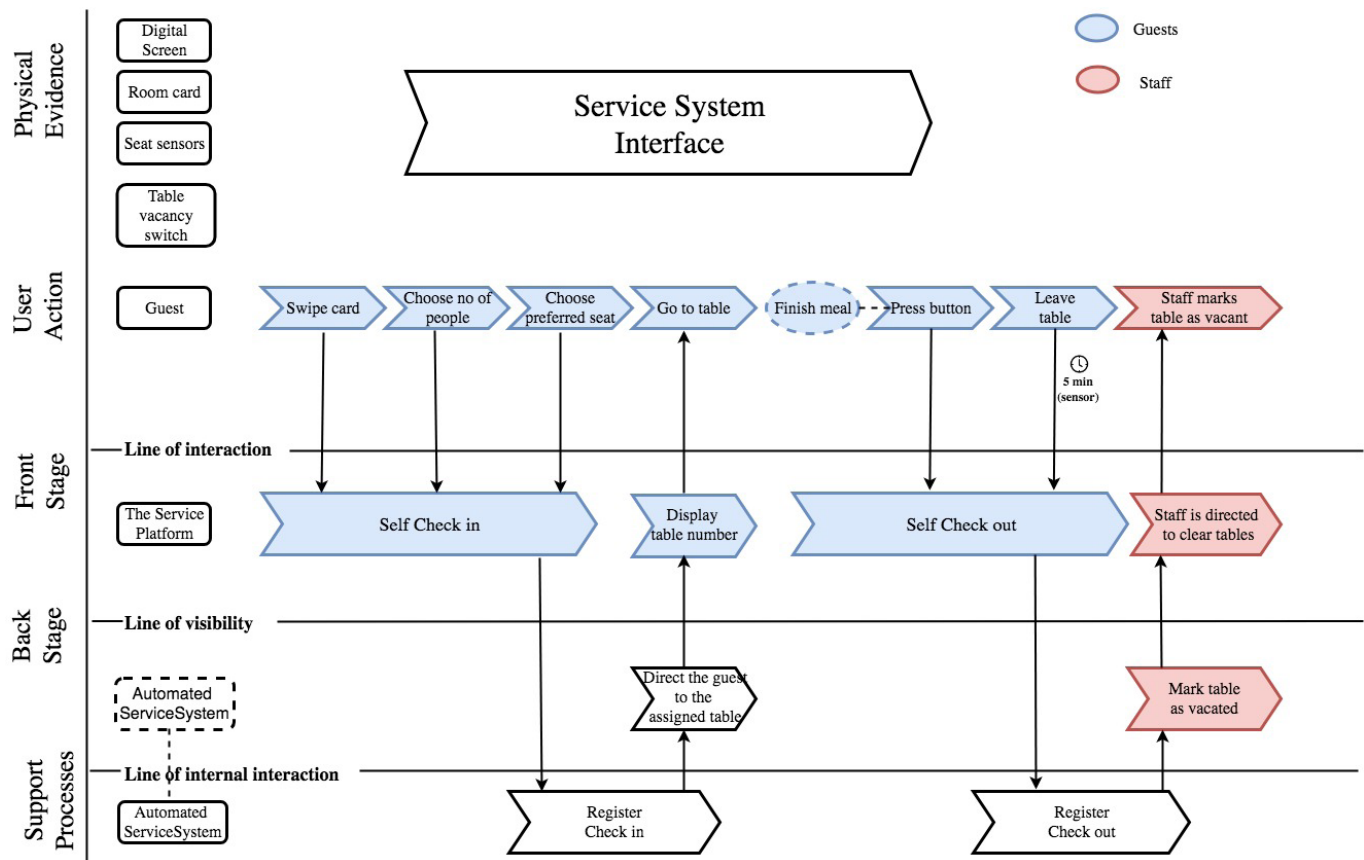
Blueprint

The service blueprint is a visual representation of the processes in the service system which flow alongside the passage of time. It is a combination of user journeys performed step by step - showing the touchpoints which represent the channel, most often for communication with the backstage, where stakeholders and their interactions position themselves within the journey. Moreover, it may include external processes, such as IT systems and databases which show where the information stems from. Blueprints may differ depending on the field of operation, the number of stakeholders involved etc., but it may be applied to any manner of services (Polaine, et al, 2013).

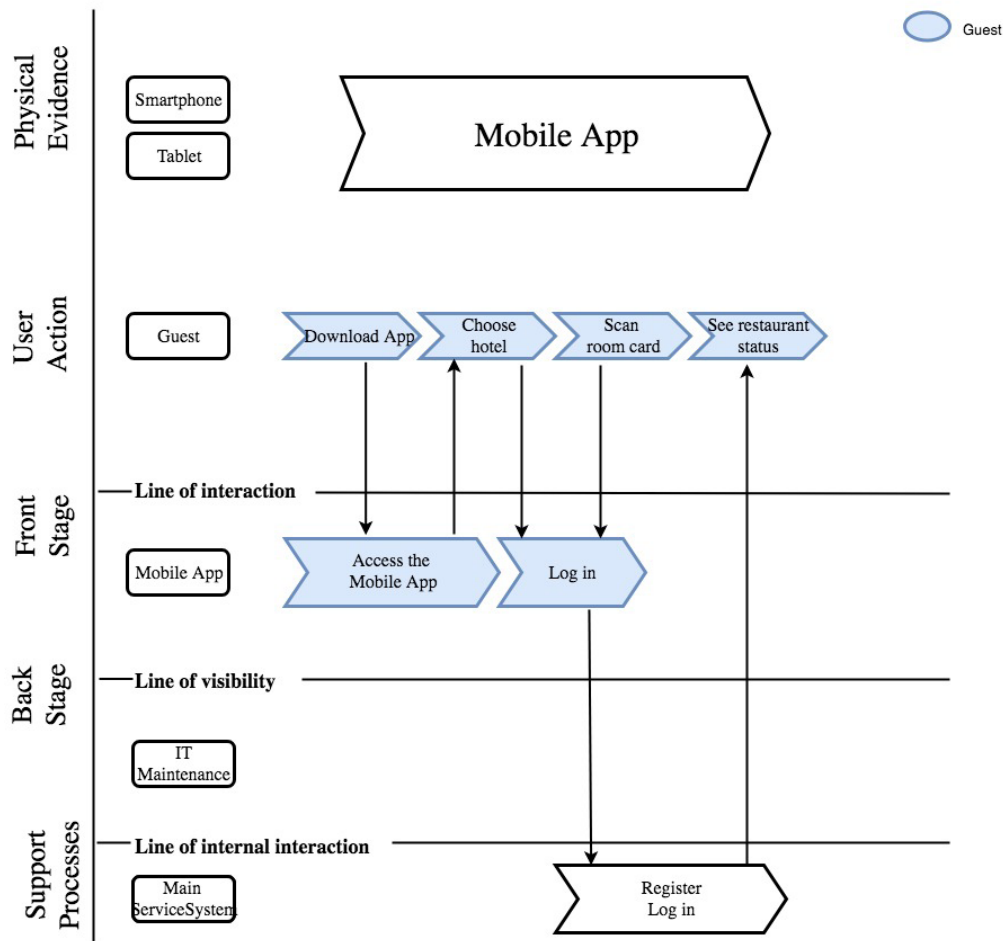
In order to better understand the service and the relationship between the different actors, as well as unite a common perspective as to how the new service is to be brought into functionality, a tool called the service blueprint was employed. Service blueprints are simple, clear representations

of the service as a whole, almost always in the form of a diagram. Therefore, a schematic visual with both perspectives of the user, the service provider and other relative institutions that may be involved is created. In doing so, each individual aspect of a service may be identified and thoroughly analysed by the designers, who are building up the service (Stickdorn & Schneider, 2013).

Two fully-fledged blueprints were brought to fruition, so that the respective sub-services may be fully and clearly comprehended. One blueprint refers to the check-in/out aspect of the improved service, whereas the second blueprint elaborates on the usage of the mobile app for checking the restaurant status.



Service Blueprint for the Mobile App





Further recommendations

Further recommendations that ARP-Hansen received from the service designer included the suggestion to carry out a testing phase in full once high season is over, so all aspects are thoroughly tested and adequately polished before any talk of implementation.

Should the service be implemented within a few years, it is highly recommended that this concept can and should be applied and made use of in all restaurants that are a part of ARP-Hansen.

VI CONCLUSION

The purpose of the Master's thesis was to answer the research question:

"How could Service Design methods and tools support improvement of an already-existing service, so that it provides ease in the work of the staff as well as help guide the customers throughout their interaction with the service?"

So that the research question may be answered, a proposition was made in the form of exploration of two different perspectives. One the one hand, the issue was observed from the perspective of the customer and comprised the application of theory and methods of support, the analysis of both expectation

and experience, so that one may adequately comprehend a given customer's desired experience. On the other hand, the perspective of the restaurant staff was explored so as to understand their struggle within the daily drift.

The thesis examined the relationship between service design and the restauration service industry. The focal point of the project was to both innovate customer experience within the breakfast service concept and to improve the working environment for the staff members, thus providing both parties them with benefits and a lightened, better experience.

From the desk research understanding was gathered in respect to who ARP-Hansen is, what kind of services they offer and the

hotels they preside over, as well as the collection of feedback from Trustpilot and Tripadvisor.

Further on, the field research was conducted, which provided with solid amounts of useful information. The interviews, observations and questionnaires were playing a very important role within and in favour of understanding what the problem was and how it may be solved by way of having full grasp on the user's expectations.

The workshop, conducted at a later stage within the ideation phase (round 2), did not do much to change the initial idea, but it helped in confirming the initial assumptions born in the first phase of the ideation process and reassured of the grounding in reality of the future services as well as its development.

Reflections - *DESIGN PROCESS*

Now that a holistic overview of the design process has been achieved, one may acknowledge that the starting point proved itself very confusing, since the researcher was unsure about which thread to grab and how to further follow it. A point was made out of the process having the capability to change its purpose once the discovery of the real problem is made and falls clearly into view. As stated previously, this abstraction is not dissimilar to the concretization of the restaurant manager stating that there is a problem regarding communication between staff and hotel guests, but upon analyzing the problem back and forth later, after having had several rounds of observations, meetings and interview, the researcher understood the real problem, which wasn't anywhere close to that which the manager had previously announced.

So that one may learn about the needs of both parties, an understanding of their pain points, their behaviours and their expectations was in order, first and foremost. This process was by no means easy one, which is the supervisor guidelines

were of crucial importance in the moments of struggle. A need surfaced for a great deal of flexibility on behalf of all participants - the designer, the manager as well as the staff.

Whilst during the educational program, the researcher would employ different tools so that one may grasp the benefits of each and every one of them, the thesis involved applying said knowledge and focusing it in a qualitative fashion - that is, each method employed at any given time or situation was chosen particularly because it would provide with the best possible output.

The design process itself demonstrated that busy environments are not always easy or comfortable to deal with, while research of either qualitative or quantitative nature may entail a certain degree of frustration, rejection and/or disappointment, since it involves working with people directly. Further, testing was limited due to logistical constraints which are impossible to either contain or control, which means only part of the prototype has actually had a run which can indicate the potential success/failure in the event of an implementation.

The process proved itself much a back-and forth- experience, especially when considering the progress of the ideation stage, which crosses a workshop that could have reset the entire process. It also entailed making use of new tools, in the sense that it was impossible to predict how well these tools could be applied to the developing project and whether or not they would deliver pertinent results.

Reflections - *PERSONAL LEARNING*

It was a challenge of a most personal nature, the task of undertaking an assignment of the thesis' proportions individually. It therefore proves invaluable to both personal and professional development, because it also entertains the ability and capability of applying criticism to one's own work. Furthermore, whilst the start might well be deemed frightful, with adequate confidence, work is brought to satisfactory fruition.

When compared to previous semesters and/or assignments, a sense of achievement in terms of a solid learning process is highlighted, with an undertone for independence. Both theoretical knowledge as well as practical experience was garnered and expanded upon by way of hereby paper.

REFERENCES

Aalborg University Copenhagen (2012). Curriculum for the Master's programme in Service System Design, the Technical Faculty of IT and Design.

Moritz, S. (2005). Service Design - practical access to an involving field. University of Applied Sciences Cologne

Design Council (2007), A study of the design process. Retrieved February 10, 2018, from [https://www.designcouncil.org.uk/sites/default/files/asset/document/ElevenLessons_Design_Council\(2\).pdf](https://www.designcouncil.org.uk/sites/default/files/asset/document/ElevenLessons_Design_Council(2).pdf)

Carbone and Haeckel (1994) and Pine and Gilmore (1998). S

Berry, L. L., Carbone, L. P., & Haeckel, S. H. (2002). Managing the Total Customer Experience. MIT Sloan Management Review, 43(3), 85-89. Retrieved from <https://sloanreview.mit.edu/article/managing-the-total-customer-experience/>

Martin, B. and Hanington, B. (2012). Universal methods of design. Beverly, MA: Rockport Publishers.

Pandey (2018). Hospitality service design. [online] Slideshare.net. Available at: <https://www.slideshare.net/AshishPandey277/hospitality-service-design> [Accessed 29 Jun. 2018].

Star, S. L. & Griesemer, J. R. (1989) Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology. 1907-39. JSTOR. Social Studies

Stickdorn, M., Lawrence, A., Hormess, M., & Schneider, J. (2018). This is service design doing – applying service design thinking in the real world: A practitioners handbook. O'Reilly Media.

Karlsen J. T. (2002). Project Stakeholder Management. Engineering Management Journal; EMJ 14(4). DOI: <http://dx.doi.org/10.1080/10429247.2002.11415180>

Moritz, S. (2015). Service Design, Practical access to an evolving field. KISD. Retrieved from <http://hci.liacs.nl/files/PracticalAccess2ServiceDesign.pdf>

TripAdvisor. (2018). The Square Copenhagen \$149 (\$ 1 9 8) - UPDATED 2018 Prices & Hotel Reviews - Denmark - TripAdvisor. [online]

Available at: https://www.tripadvisor.com/Hotel_Review-g189541-d278418-Reviews-The_Square_Copenhagen-Copenhagen_Zealand.html#REVIEWS [Accessed 28 Jun. 2018].

Square, H. (2018). Hotel The Square er bedømt "God" med 7,4 / 10 på Trustpilot. [online] Trustpilot. Available at: <https://dk.trustpilot.com/review/thesquare.dk> [Accessed 28 Jun. 2018].

(<https://www.arp-hansen.dk/om-arp-hansen-hotel-group/om-arp-hansen-hotel-group/>)

Reason, B., Løvlie, L. and Flu, M. B. (2016). *Service Design for Business. A Practical Guide to Optimizing the Customer Experience*. New Jersey: John Wiley & Sons, Inc.

Bjørner, T. (2015a). Research design. In T. Bjørner & H. Persson (Eds.), *Qualitative Methods for Consumer Research - The value of qualitative approach in theory and practice* (1st editio, pp. 23–24)

Moisander, Johanna, and Anu Valtonen. *Qualitative marketing research: A cultural approach*. Sage, 2006.

Buurman, R. D. (1997) User-centred design of smart products. *Ergonomics*, 40:10, 1159-1169

Stickdorn, M., & Schneider, J. (2011). *This is Service Design Thinking: Basics, Tools, Cases*. Hoboken, NJ: BIS.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed.). Thousand Oaks, CA: Sage.

Silverman, D. (2005). *Doing qualitative research: A practical handbook* (2nd ed.). SAGE Publications Limited.

Bella Martin & Bruce Hanington (2012) *Universal Methods of Design* p.10

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. Simon and Schuster.

Perfetti, C. 2016. *Personas: Matching a Design to the Users' Goals*. [ONLINE] Available at: <http://www.santarosa.edu/~kthornle/apgr72/Personas.htm>. [Accessed 29 May 2016].

Goodwin, K. (2009) Designing for the digital age: How to create human-centered products and services, John Wiley&Sons
Kamauff, J., 2010. Manager's Guide to Operations Management (Briefcase Books).

Cooper, A. (1999). The inmates are running the asylum. Indianapolis, IA: SAMS/Macmillan.

Beyer, H. & Holtzblatt, K. 1998. Contextual Design: Defining Customer-Centered Systems. San Francisco: Morgan Kaufmann

Bella Martin & Bruce Hanington (2012) Universal Methods of Design p.12

Bella Martin & Bruce Hanington (2012) Universal Methods of Design p.118

IDEO (n.d.). Brainstorm Rules. Retrieved April 25, 2018, from <http://www.designkit.org/methods/28>

Service Design Tools. (2009b). Motivation Matrix. Retrieved 10 May 2016, from Service Design Tools: <http://www.servicedesigntools.org/tools/20>

The Independent. (2018). This is what nudge theory means – and why you should care about it. [online] Available at: <https://www.independent.co.uk/news/business/analysis-and-features/nudge-theory-richard-thaler-meaning-explanation-what-is-it-nobel-economics-prize-winner-2017-a7990461.html> [Accessed 7 Aug. 2018].

Osterwalder, A., Pigneur, Y., Bernarda, G., and Smith, A. (2014). Value Proposition Design: How to Create Products and Services Customers Want. New Jersey: John Wiley & Sons.

Osterwalder, A., & Pigneur, Y. (2013). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. New Jersey: John Wiley & Sons

Nicola Morelli: Journal of Cleaner Production xx (2006) Developing new product service systems (PSS): methodologies and operational tools

Brainmates - Boosting People and Product Performance, (2018)

SAGE Publications Ltd. (2018). Qualitative Consumer and Marketing Research. [online] Available at: <https://uk.sagepub.com/en-gb/eur/qualitative-consumer-and-marketing-research/book235793#description> [Accessed 29 Jun. 2018].

