



Designing Experiences in Preventive Healthcare - CASE: Neosmart Health

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**Designing Experiences in Preventive Healthcare -
CASE: Neosmart Health**

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The purpose of this thesis was to improve customer experience in the preventive healthcare industry. Neosmart Health's holistic healthcare service was used as a case example. The thesis aimed at identifying the crucial steps and gaps in the customer journey. Extensive research in the case company was progressed by acquiring a deep understanding of customers' needs, ambitions, pains, and behaviour from a holistic wellbeing perspective, considering also the driving forces of social and technological trends. The thesis also aimed at determining what outstanding customer experience in preventive healthcare consists of. The role and impact of service design in improving customer experience in the industry was examined.

The theoretical foundation for the thesis investigated experience design through the progression of economic value, customer-dominant logic, and service marketing and management, focusing especially on customer experience. Human-centered design approaches, in other words, service design, design thinking, and innovation were applied during the development project. The selected design process was "Framework for Innovation", complemented by applying the mindset of human-centered design. The service design process included stages of discover, define, and develop.

In the discover stage, methods such as expert interviews, desk research, contextual customer interviews, and service safari were used to uncover deep insights of customer experience attributes and health perceptions in both preventive and reactive healthcare industries. Analysis and modelling of the data in the define stage were accomplished through open and selective coding and affinity mapping. The key customer insights were transformed into personas and a stakeholder map, which contributed to mapping the customer journey in a workshop following an iterative process. The refined service concept, presented in the develop stage, resulted in the creation of a new service design method, the Customer Journey Blueprint. Detailed visualization of the improved service concept was complemented by outputs of an ideation workshop. The Blueprint served as a roadmap for future development projects to further improve customer experience in the case company. The concept overview with key features and benefits for different stakeholders highlighted the importance of recognizing human experience when designing services, experiences, or transformations in the preventive healthcare industry.

The thesis provides both scientific and practical value for the healthcare industry, private sector organizations, service designers, research institutions as well as consumers. The scientific value relates to examining the relations between human-centered design, customer-dominant logic, the progression of economic value, customer experience and preventive healthcare. Knowledge of service innovation and customer insight in the preventive healthcare industry are extended. Additionally, the thesis addresses opportunities for modern healthcare companies in driving and facilitating innovation and contributing to the paradigm shift from reactive healthcare to a more personalized and preventive approach with the use of human-centered design. Furthermore, the study contributes to the service design approach, process, and methodology in developing modern healthcare and wellbeing services. Finally, the thesis provides practical value for the healthcare industry through the identification of deep customer insights as well as mapping and designing a related customer experience.

Keywords: Customer Experience, Human-Centered Design, Human Experience, Service Design

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1 Introduction - A Paradigm Shift Towards Preventive Healthcare

Have you ever booked a doctor's appointment if you were not feeling sick? If you answered "NO", you're not alone. Why would you even consider? I doubt you are surprised by the following facts, but you may be surprised by the consequences: According to World Health Organization (WHO, 2018), non-communicable diseases (NCDs) such as cancers, diabetes and cardiovascular diseases claim the lives of 41 million people every year (over 70% of all deaths globally). In Europe, over 85% of all deaths and 75% of all diseases are attributable to chronic conditions like diabetes and cardiovascular diseases (EPHA, 2019). Every third working-age person in the EU lives with a chronic disease and over half a million Europeans under the age of 65 die prematurely of NCDs each year. One-third of Finnish adults determine their perceived health average or worse (THL, 2018).

Figure 1 shows that healthy life expectancy in Europe is estimated at 64.2 years for women and 63.5 for men (Eurostat, 2019). This represents 77 % and 81 % of the total life expectancy for women and men respectively, meaning that people spend on average 15 to 19 years of their lives being sick. This is about 1-2 days per week if spread evenly across the lifetime. Not only is this a gloomy outlook for our citizens, but chronic diseases also cost over €700 billion every year to the EU economy in treatment costs and lost productivity. Heart diseases alone cost about €1 billion per day.

Here is a silver lining for the optimistic; most chronic diseases are preventable. A genetic component is involved in some cases, but the highest risk comes from lifestyle: diets, exercise, tobacco and alcohol use. More than 50% of Europeans are overweight - this is the biggest gateway to all kinds of NCDs. The situation is even worse in the Americas. Next to promoting healthier lifestyles, prevention and early diagnosis are the most powerful tools to combat chronic disease. For example, 90% of the women diagnosed with the earliest stage ovarian cancer survive for at least 5 years, compared to 5% of those who are diagnosed with the most advanced stage (Cancer Research UK, 2018). Unfortunately, disease prevention is easier said than done in practice. Not only is prevention just a tiny fraction of healthcare budgets - 2.8% on average in Europe (WHO, 2014) - there are not enough healthcare professionals to work with prevention: there is a lack of 230 000 doctors in Europe already now in 2020 (EDJN, 2018), and there will be an estimated shortage of 16-19 million health professionals by 2030 on a global scale (WHO, 2016).

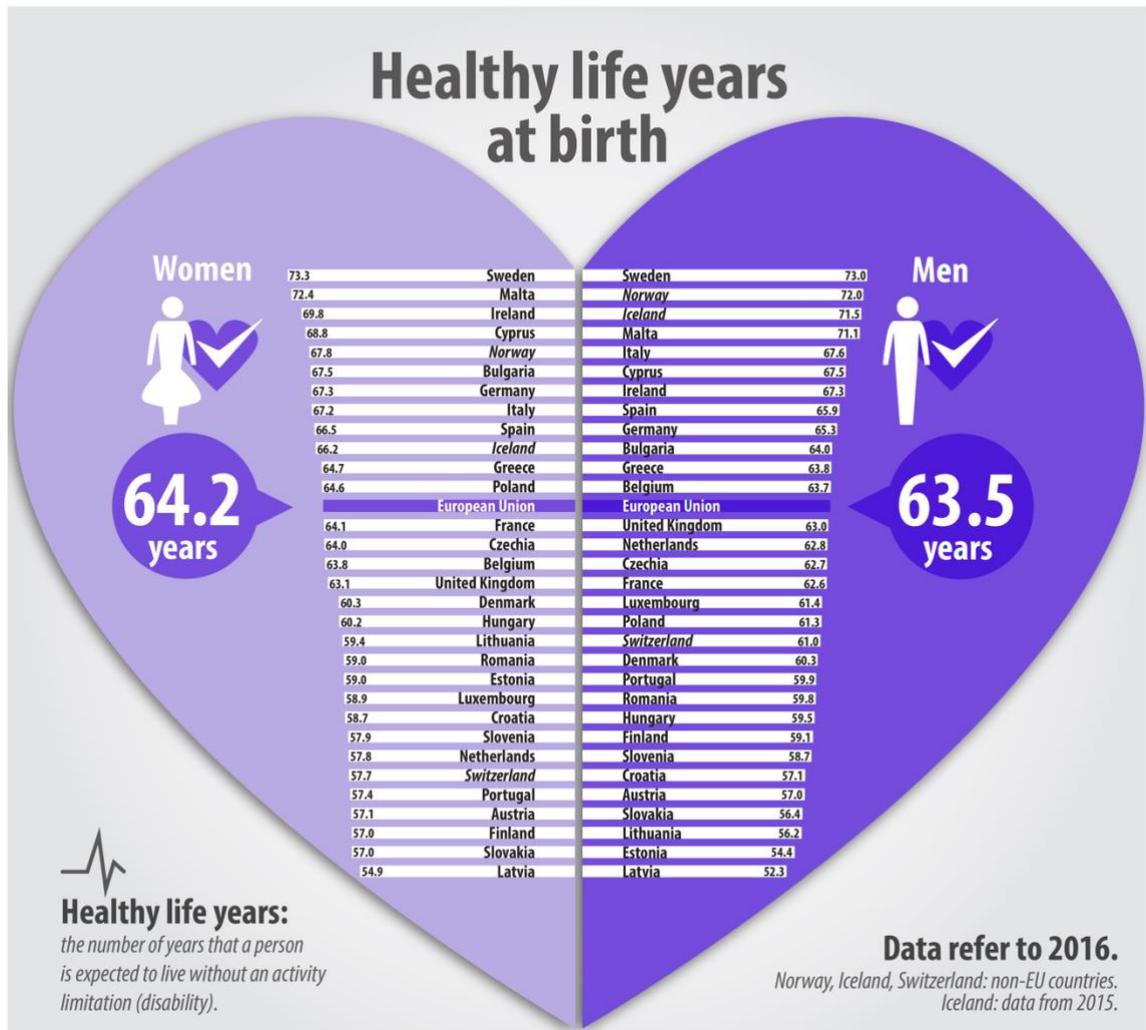


Figure 1: Healthy life years at birth. Eurostat 2019

Simultaneously in 2020, we are witnessing a rise of wellness economy, a colossal \$4.2B industry encompassing diverse sectors, such as preventive and personalized healthcare, nutrition and weight loss, fitness, mind & body and health tourism among others (GWI, 2018). The wellness economy enables consumers to incorporate wellness activities and lifestyles into their daily lives, offering value through experiences, rather than services. Wellness economy can be seen as an extension of transformation economy, in which human needs and ambitions capsule opportunities which companies uncover to design and guide people through life-changing and lasting transformations (Pine & Gilmore, 2011).

A paradigm shift from reactive to preventive healthcare is emerging. According to a study (Goldman Sachs, 2016), wellness is a daily, active pursuit for millennials. Millennials exercise more, eat smarter and smoke and drink less than previous generations. They are using digital apps to track training and activity data, and online information to find healthier nutrition. Labrique (et al. 2013) consider mobile and web technologies as strengthening tools for health

systems, enabling unseen ways of decentralizing, coordinating and expanding the quality and equity of care. According to Holeman & Kane (2019), as digital technologies play a growing role in healthcare, traction gained by human-centered design in global health is increasing. There's a need for a global mindset shift in how we perceive healthcare and prevention. Research shows that by adding 15-20 minutes of sleep per night, significant improvement in individual wellbeing would occur during their lifespan (Walker 2017). This would result in tremendous global economic savings. Together the rising interest towards health and wellbeing, and a paradigm shift from reactive towards preventive healthcare represent the social phenomena in this thesis.

Signals indicate that frustrations towards average-at-best customer experiences caused by one-size-fits-all healthcare solutions are diminishing trust towards reactive healthcare services (Dalbey, 2019). What kind of approach could be used to uncover the underlying needs of these customers? The trends towards expanding customer expectations, valuation of services and experiences, and digitalization have made service design a growing discipline (Reason et al. 2016). Schneider and Stickdorn (2010) describe service design as a multidisciplinary field of science, process and methods, that provides knowledge for building services through an iterative process. Incorporating a design thinking mindset can influence the corporate success (Curedale, 2013). Combined with refined technologies, service design can elevate customer experience substantially due to its co-creative and organisational border-crossing nature. Due to the personal and emotional nature of health, should healthcare providers incorporate more empathy in the design process? As services commoditize (Pine & Gilmore, 1998, 2011), it is worth asking whether people are willing to invest in their health through meaningful experiences and seek guidance through long-term transformations, and can preventive healthcare support them by offering and delivering human-centered design solutions? The opportunities presented by service design, as well as the challenges of enhancing customer experience in healthcare, form an interesting combination and determine the scope of this thesis, particularly interesting to the author; developing customer-driven innovations, enhancing customer experience, and driving success. The next chapter describes the company of the case study, its current challenges and connection to the social phenomena.

1.1 Case Company: Neosmart Health

Disease prevention relies on anticipatory actions that can be categorized as primary, secondary, and tertiary prevention (Leavell & Clark, 1979). In preventive healthcare, patients can explore their health status and proactively adjust to their momentary health conditions. Diseases and disabilities are affected by various factors such as genetic predisposition, disease agents, environmental factors and lifestyle choices. The ability to collect, structure and process high volumes of data enables gaining a deeper understanding of the human as a whole, thus revolutionizing healthcare (Neosmart Health, 2020).

Neosmart Health is a deep data analytics platform focusing on primary preventive healthcare. The Finnish company was established in 2017 and the Helsinki flagship clinic began its operations one year later. From the healthcare industry perspective, the company aims to enable every healthcare professional globally to deliver preventive healthcare services. To accomplish this, the company is developing a platform that enables medical professionals to get deep insights from analytics in their daily work. Neosmart Health believes that healthcare should focus on optimizing health comprehensively rather than only treating illnesses. The company has a bold vision to democratize preventive healthcare and make a positive impact on the lives of more than one billion people. (Neosmart Health, 2020)

From a human perspective, Neosmart Health helps customers to optimize their health, understand their body composition, the importance of metabolism, lifestyle and diet in maintaining health. By collecting deep, meaningful and sensitive data, the medical experts can understand human as a whole, help people to stay healthy and prevent chronic illnesses. *”Extensive and specific health biomarkers allow the team to determine preventable risk areas of each individual such as cardiovascular diseases, diabetes, gastrointestinal diseases and many others, which enables us to provide preventive and personalized healthcare for individuals. Based on comprehensive medical tests, customers receive a personalized report, plan and recommendations to optimize their health given by professional medical staff. The patented technology, analytics and services are tailored for the wellbeing of every customer.”* (Neosmart Health, 2020)

Neosmart Health’s methodology is scientifically validated, comprehensive approach which includes measuring over 5000 data points consisting of health biomarkers, environmental factors, lifestyle, nutrition, immunity, biology and genomics, as shown in Figure 2. Analyzing and understanding individuals comprehensively enables medical experts to gain preventive insights while machine learning algorithms assist doctors in the diagnosis and disease risk prediction. Neosmart Health encourages the customer to maintain and track healthy lifestyle changes, providing support throughout their health optimization journey. (Neosmart Health, 2020)

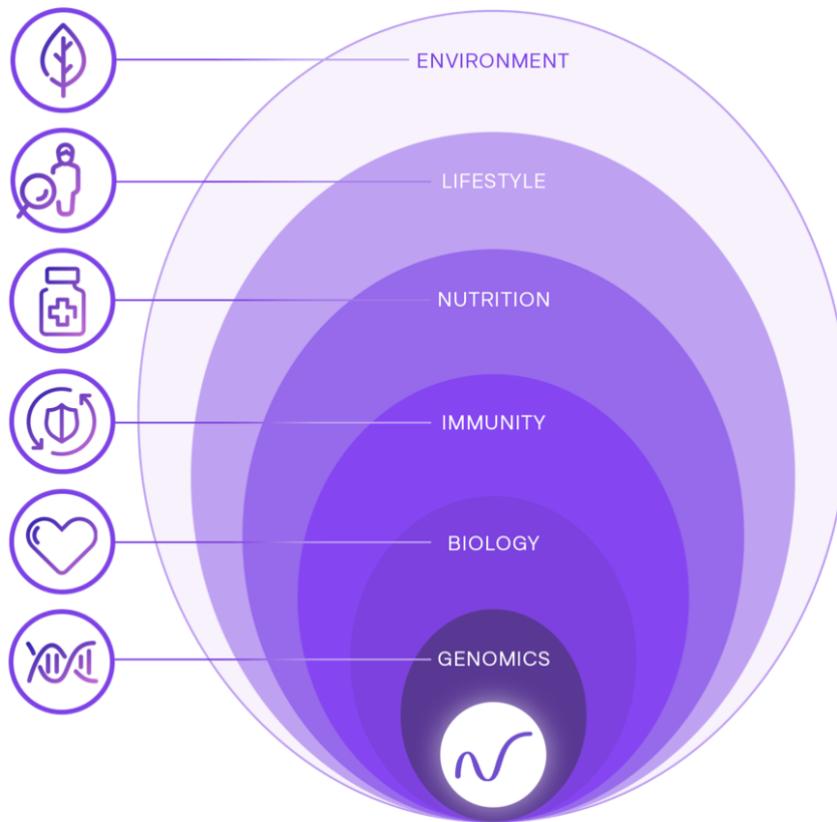


Figure 2: Determinants of health. Neosmart Health, 2019

During the first stages of the thesis process, the author of the thesis stumbled upon a quote *“There is only one boss - the customer. And he can fire everybody in the company from the chairman on down, simply by spending his money somewhere else.”* Sam Walton, the founder of Wal-Mart, was definitely onto something with this bold statement. Since being founded 1962, Wal-Mart has grown from a small grocery store to be the biggest retailer in the world (Forbes, 2019), to forfeiting its top position to the internet-age giant, Amazon, a company considered to deliver a best-in-class customer experience (Forbes, 2019). The combining factor and keywords with these two retail giants are *“Customer Experience”*.

According to Nurmela (2019), CEO of Neosmart Health, one of the company’s strategic focus areas is to pursue a best-in-class customer experience, that will ultimately become a benchmark in the industry. The company employs a diverse group of experts from medical, science, technology and business, thus laying a sound basis for customer-centric innovation. Mason (et. al. 2015) states that to stay ahead of accelerating customer expectations - important in designing and staging outstanding customer experience - the company culture should be built on a trend-driven foundation. The strength of it is inclusiveness, keeping people informed and offering a chance to participate in the discussion. Healthcare industry has been researched to

put less than average attention towards customer experience, which has resulted in poor service customer-perceived service quality (Lee et al., 2016). Nurmela (2019) states that besides approaching health from a disruptive angle, Neosmart Health is ready to challenge the status quo in healthcare also from a customer experience point-of-view by making it a strategic priority. Neosmart Health's challenge was recognized; as a startup, still determining organizational processes, the company did not actively manage or measure customer experience, nor did it have reliable customer insight to help determine gaps during the customer journey. Furthermore, since no similar services had been discovered, looking into best practices through inspiring and mature industry rivals were impossible. Initial research questions started to formulate and as discussions with the case company proceeded, and a decision was made to actively start this extensive research process.

1.2 Research Questions, Objectives and Limitations

This thesis is a research-oriented development project, which aims to create new professional knowledge to serve as a grounding for future projects (Ojasalo, 2014). Service design is utilized as a methodology for researching, determining and innovating during the case example: designing customer experience in preventive healthcare - Case: Neosmart Health. The process model used to guide service design is Framework for Innovation (Design Council 2015), complemented by Human-Centered Design (IDEO, 2011). As this study is conducted in a particular organizational environment within a limited period of time, it can be defined as a case study. Case studies are suitable for contemporary sets of events, such as this study case, and topics the researcher cannot control (Yin 2014, 3-4, 14). According to Yin, case studies try to answer questions such as "how" and "why" a phenomenon works.

Thesis started by identifying the challenge within the case company. Customer-centricity and world-class customer experience were determined as a strategic focus, yet CX was not consistently managed or developed. No existing comparison of customer experience between reactive and preventive healthcare industries was discovered, justifying the need for establishing a customer-centric research and development project. Being still an emerging approach in western society, it was not clear whether customers are familiar with the central elements of preventive services. The thesis author was appointed to lead service design-related projects within the scope of the thesis and during the process determine the role of service design in improving customer experience in the industry.

Research purpose is to improve customer experience in preventive healthcare. Research aim is to identify crucial steps and gaps in the customer journey at the case company, but also examine the role of service design in facilitating the development of customer experience practice and emergence of innovation culture and in a startup. Research questions are formed based on existing data as following:

RQ 1: How does the customer understand preventive healthcare services and its central elements?

RQ 2: What does exceptional customer experience look like for preventive healthcare customers?

RQ 3: What's the role of service design in improving customer experience in preventive healthcare?

Research question 1 sheds light to the current customer perceptions of preventive healthcare services. The question is researched mainly via qualitative interviews (insights presented in chapter 4.1.5.). Interview data of over 90 potential customers paints a clear picture of their mental models towards personal health, preventive healthcare as a medical approach, experience in using preventive services and the influence of health technology. Finding answers to RQ 1 benefits not only the case company, but the whole healthcare industry by providing explicit and deep insight from the customer perspective, helping the industry further develop services, stage experiences and/or guide people through health-related transformations.

Research question 2 gives valuable information about key ingredients that customers expect from preventive healthcare services. Comparison between reactive and preventive healthcare and customer experiences from both disciplines are investigated to determine the building blocks of exceptional customer experience in preventive healthcare. Customer insights reveal causalities that help understand the motivation behind the selection of medical services and acknowledge the importance of empathic design in healthcare

Research question 3 is explored by selecting a wide range of service design methods and assessing their relevance and effectiveness during the process of improving customer experience in preventive healthcare. Answers to RQ 3 adds value to the service design community cross-industry, from startups to mature organizations, and especially those currently working with or initially identifying the importance of designing experiences and transformations from customer-perspective.

Finally, it is worth recognizing the limitations of the thesis. From a theoretical perspective, studying customer experience is limited to aspects that support the thesis purpose of improving customer experience in preventive healthcare. Furthermore, company confidentiality delimits what can be disclosed in the report. Although numerous prototypes were created during the process, they cannot be used as detailed examples. Thus, the final stage of the design process (Deliver) - which usually concentrates on delivering concrete concepts created during the process - will be excluded from the report. Although the concept of human experience is discussed throughout the thesis, ethical aspects related to personalized healthcare services are not covered.

1.3 Structure of the Thesis

This thesis is constructed according to a research-oriented development project process. The chapters are written in a logical order, traversing a narrative arc in five main parts, as illustrated in Figure 3.

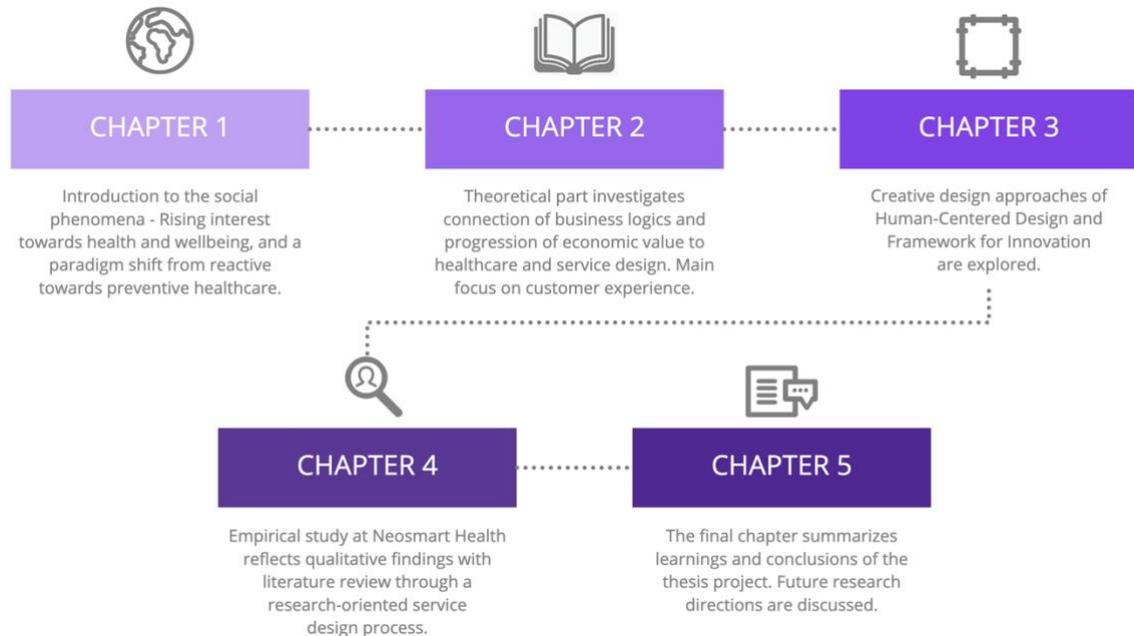


Figure 3: Structure of the thesis.

Chapter one demystifies this beguiling thing called preventive healthcare; what it is, what it is not, the consequences of not implementing it, argues whether reactive medicine is enough or not and why a holistic, preventive approach is crucial for rather than survival, comprehensive wellbeing of people. Chapter one also introduces the social phenomena - the rising interest towards health and wellbeing, and a paradigm shift from reactive towards preventive healthcare.

The objective of the theoretical part of this study is to create an understanding of different forces transforming today's healthcare business. Therefore, the theoretical part investigates the connection of business logics and progression of economic value to healthcare and service design. The main focus of chapter two is in exploring various experiences - especially customer experience - closely related to the social phenomena. Then we direct attention towards human experience and its importance over customer experience in the healthcare industry. In summary, chapter two is a wake-up call to service providers that claim to be customer-centric, theoretically explained.

Chapter three introduces the fascinating world of service design, concentrating especially on creative and innovative approaches of Human-Centered Design and Framework for Innovation.

Chapter three offers food for thought for the design community, especially those working in industries, where human-centered design methods are appreciated. Furthermore, managerial benefits, as well as the employee perspective, are considered through the Framework of Innovation.

Chapter four offers passage to the empirical study conducted at the case company, Neosmart Health. From peering into the brains of nearly 100 qualitative interviewees and two workshops, insights that could shape an industry will be revealed. The chapter will unpack the obvious and not-so-obvious reasons for the concept of health and explore why so many of us find it hard to invest in our wellbeing. In this chapter, the design process will be transparently presented, with the exception of non-disclosable, business-sensitive material. General details of the factors that influence designing experiences in the preventive healthcare industry will then be advised.

Finally, chapter five subsequently summarizes the learnings from this thesis, applicable cross-industry. Concluding the thesis with optimistic hope, a roadmap of ideas is laid out for those with genuine interest in ever-improving services through a customer- or even human-centric perspective.

It is worth noticing that this thesis is conducted progressively. Nevertheless, each chapter can be read individually, and out of order, without losing too much of its significance. Therefore, I invite you to enjoy the thesis in whole or in part, all according to your personal preference.

1.4 Terminology and Key Concepts

The terminology defined below is for the reader to better understand how the thesis frames and discourses the key concepts that are mentioned throughout this work. The definitions help to perceive the topic of the thesis more holistically and see the relations of different practices and disciplines even though some of the defined concepts are not in the exact scope of the study. The terminology also presents a few abbreviations that a reader should familiarize with before reading the thesis.

Health

The World Health Organisation (WHO) defines health in their 1948 constitution as ‘a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity’ (1948). This is consistent with the biopsychosocial model of health, which considers physiological, psychological and social factors in health and illness, and interactions between these factors. It differs from the traditional medical model, which defines health as the absence of illness or disease and emphasises the role of clinical diagnosis and intervention. The WHO definition links health explicitly with wellbeing and conceptualises health as a human right

requiring physical and social resources to achieve and maintain. ‘Wellbeing’ refers to a positive rather than neutral state, framing health as a positive aspiration. This definition was adopted by the 1986 Ottawa charter, which describes health as ‘a resource for everyday life, not the object of living’. From this perspective, health is a means of living well, which highlights the link between health and participation in society.

A major criticism of WHO’s view on health is that it is unrealistic because it leaves most of us unhealthy most of the time (Smith, 2008); few, if any people will have complete physical, mental and social wellbeing all the time, which can make this approach unhelpful and counterproductive (Godlee, 2011). It fails to take into account not just temporary spells of ill health, but also the growing number of people living with chronic diseases and disabilities. In the context of this thesis, customers’ perceptions of health (Chapter 4.1.5) are considered a major element influencing their lifestyle choices as well as customer experience in healthcare services.

Prevention of Diseases

Disease prevention relies on anticipatory actions that can be categorized as primary, secondary, and tertiary prevention (Leavell & Clark, 1979). *Preventive healthcare* in this thesis refers mainly to primary prevention whereas *reactive healthcare* refers to tertiary prevention, illustrated in Figure 4. Primary prevention aims at intervening before the disease process initiates (Wallace, RB. 2006). This is the environment in which Neosmart Health mainly operates. On a population level, examples of primary prevention include vaccinations, altering risky behaviours and banning selected substances. Secondary prevention includes screenings in the earliest stages, before the onset of symptoms, for example, mammography and blood pressure testing. Tertiary prevention manages disease post-diagnosis to slow down or stop disease progression.

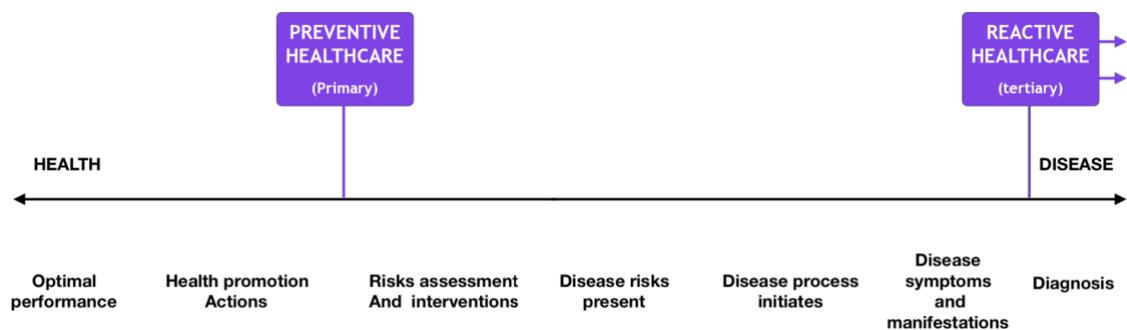


Figure 4: Point of action during health process. Primary vs. tertiary approach (Karjala 2019)

Preventive healthcare takes a proactive approach to prevent illness, disease or other health problems. Disease and disability are affected by environmental factors, genetic predisposition,

disease agents, and lifestyle choices and are dynamic processes which begin before individuals realize they are affected. The modern approach to preventive healthcare is so-called “*P4 medicine*” - predictive, preventive, personalized and participatory (Vogt et al. 2016). The above-mentioned medical concepts will be described in this thesis as “*preventive healthcare*”. According to Vogt (et al. 2016), preventive healthcare approaches human health from a holistic perspective. Hood (et al. 2012) describes the characteristics of preventive healthcare as following: First, it offers a shift from the population-based one-size-fits-all medicine to personalized medicine, which takes into account the factors that define each individual. Secondly, it emphasizes a prospective and proactive practice which focuses on predictive assessments of future health to facilitate disease prevention and health and wellness optimization. Thirdly, according to its participatory aspect, it enables customers to shift to the role of agents driving the revolution. Self-monitoring with health technology (wearables) helps track progress during the process. In the context of this thesis, customer experience in preventive and reactive healthcare are investigated and compared further in Chapter 4.

Service Design

Service design is a human-centered, holistic, evidencing, co-creative, sequencing, and iterative approach that helps in choreographing processes, technologies, and interactions within systems to co-create value (Stickdorn et al, 2018). It is the activity of innovating and improving service experiences and the organizational processes and strategies to provide the experience (Moritz, 2005). In this thesis, service design is one of the key principles that shape customer experience design. The empirical part (Chapter 4) of the thesis examines customer experience mostly through the constantly evolving field and methodology of service design.

Human-Centered Design

Human-centered design in this thesis is seen as an overarching term describing different service design practices, and therefore, seen also as the main principle for customer experience design. Human-centered design is a creative approach for problem-solving highlighting the human needs, desires, and experiences through increased empathy during the design process when designing services, experiences and transformations (Giacomin, 2012). The approach uses techniques which communicate, interact and empathize with the people involved to improve their wellbeing, satisfaction, accessibility, and sustainability. Thus, in the context of this thesis, it is closely linked with Human Experience (HX). Human-centered design is covered more thoroughly in Chapter 3 of this thesis.

Customer Experience (CX)

Customer experience is understood as the emotions or acquired knowledge which customer gets when interacting with a service provider and the elements of a service context (Zomerdijsk &

Voss, 2010). An experience begins before any direct contact with the company and continues after contact has ended. (Meyer & Schwager 2007.) Similar to employee experience, customer experience is derived from the touchpoints along the customer journey. Improvement of customer experience is one of the main goals for service design (Miettinen, 2017). In the context of the thesis, customer experience is considered the main focus of improvement during the empirical development project. Customer experience is approached from various angles throughout the thesis, namely in Chapter 2.1.

Employee Experience (EX)

Employee Experience (EX) refers to the employee's subjective and holistic perception of the relationship with their employing organization, derived from all interactions and encounters at touchpoints along the employee's journey (Hazzenzahl, 2010). Employee experience is impacted by a collection of organizational factors that employee interacts with, evoking certain emotions that represent qualities of the experience. Employee experience is seen as one of the emerging subjects for further research within the case company. EX exists in close relation to customer experience throughout the study although the approach itself is not in the main research scope of this thesis.

Human Experience (HX)

Where customer experience focuses on all moments of interaction with a brand, human experience (later described as HX) investigates the human context and emotion more comprehensively, thus widening the spectrum to unmet need fulfilment existing outside of customer touchpoints (Hazzenzahl et al. 2013). Recke (2017) adds that HX is more about purpose than consumption or usage, turning the mental focus from a consumer/customer or user to human. Some experiences are not primarily about customers or tasks but create a significantly deeper emotional reception within the person going through that experience. Polaine (et al. 2013) suggests the person is entitled to expect value in the delivery of services/staging of experiences on a human level due to the nature of experiences for example within healthcare. Human experience is closely related to human-centered design throughout the thesis.

Experience Design

Experience design is the practice of creating and designing experiences that go beyond products, services, environments, and events. The approach focuses on experiences that add quality, value and enjoyment for people before a concrete design outcome. Experience design, as a term, can be used to describe multiple design practices such as interaction design, industrial design, visual design, and user interface design (Hazzenzahl, 2010; Wendt, 2015). In

this thesis, experience design is recognized as one of the underlying principles contributing to designing meaningful customer experiences.

Design Thinking

Design thinking connects a creative design approach to solving business problems (Tschimmel, 2012). It drives repeatable innovation and business value (Curedale, 2013). Design thinkers aim at understanding the holistic nature of situations and offer solutions from a customer perspective (Brown 2009). Design thinking is a human-centered, iterative, multidisciplinary, and innovative approach combining human needs (desirability) to business objectives (viability) and technological possibilities (feasibility) (IDEO, 2011). This thesis examines the concept of design thinking the way it is perceived in the managerial discourse. This means introducing design thinking on an organizational level in the case company to increase innovation capabilities.

2 The Emergence of Experiences and Transformation

Chapter two details the theoretical framework around Service Marketing and Management, focusing especially on Customer Experience. The contents of this chapter are linked with the development project, presented later in chapter four. From a short historical introduction of paradigm shifts in economy to traversing briefly through customer value creation, and focusing on experiences in more detail, the theoretical framework is built.

Progression of economic value

The short history lesson starts from agrarian-based Commodities Economy in which natural products such as plants and livestock were farmed and either consumed by the farmer or brought to market for compensation. The industrial revolution, that started in the late 18th century, enabled manufacturing and commercialization of standardized goods (Goods Economy), or tangible products, that were available to users via retailers. Companies used these products to create meaning for the customer, who at this point was considered a passive receiver of whatever the company offered (Storbacka et al. 2001).

The prominence of Service Economy in the mid-1980's commoditized the goods-dominant industry. People started treating goods as a commodity and no longer cared, who manufactures them. As the attributes and specifications of goods were similar, price became the most important deciding factor. Providers delivered services on-demand and customized to meet the customer's needs. Customer traded cost for convenience and mentally purchased a desired end-result instead of a product (Pine & Gilmore, 1998). Pine (2018) describes the basic distinction between services and experiences as "*What versus How.*" Services are the what,

the functional activities you have to do. At a doctor's office, you have to check people in, get their address and medical information, then direct them to or lead them to a room to continue with examination, whatever it might be. You have to perform the services. But how you go about doing that? That is what turns any mundane interaction into an engaging encounter or experience. There is a difference between the terms "*service*" and "*services*" (Dube & Lindberg-Repo 2004). For example, a barbershop is a professional service (part of many services) that offers a haircut as a service. Whether a business offers services or a combination of products and services, the common indicator is an interface with an actual customer, whether through interpersonal interactions or technology (Bitner et al., 2008). Successful online service companies such as Amazon and Google rule the list of most valued global brands (Inc.com, 2018) and are consistently found on top of lists also when it comes to best customer experience.

The progression of economic value described in Figure 5 shows fundamental changes in the very fabric of the economy. Pine & Gilmore (1998, 2011) argue that even services have recently become commoditized. The cost of making a phone call or using the internet has declined and consumers choose their service provider based on the lowest price. Now, digitalization made the world smaller and easily accessible to the customer, simultaneously increasing the power of choice between companies, products and services as they are all just a click away. This has resulted in a paradigm shift in economic value to Experience Economy (Pine & Gilmore, 1998; 2011). Experiences are now distinct economic offering, alongside goods and services. Customer is no longer satisfied with a commoditized product, or even a service. Instead, they are in search of sensational, shared moments, staged by the company (stager). Pennington (2016) characterizes the intelligence of a company through the entire staff knowing exactly the experience they are required to stage.

In today's economies customers don't seek products or services, but enriching experiences (Pine et al. 1999). The focus of customer-centric companies on relationships has not disappeared but also shifted towards experiences. Storbacka (et al. 2001) continues that experiences offer the most relevant meaning and enable viable business possibilities. A company has to focus on designing and staging not just a single experience, but rather a series of experiences that add value to the customer (Pine & Gilmore, 1998). To achieve this goal, a company has to focus resources in first of all gaining understanding on customer's ability to absorb new information and preferences on how, where and when to inform of these new opportunities. Thus, designing and facilitating appealing, engaging and meaningful experiences has become the competitive platform for building organic growth (2014, Dube & Lindberg-Repo). According to Bitner (1992), "the service experience encompasses all elements of the service process and activities that the customer carries out, relates to, and interacts with over time. It encompasses the end-to-end process from the customer's point of view". Bitner's comment about the customer perspective represents well the recent service marketing and

management literature and research, where service experience has been discussed often with a specific customer experience focus.

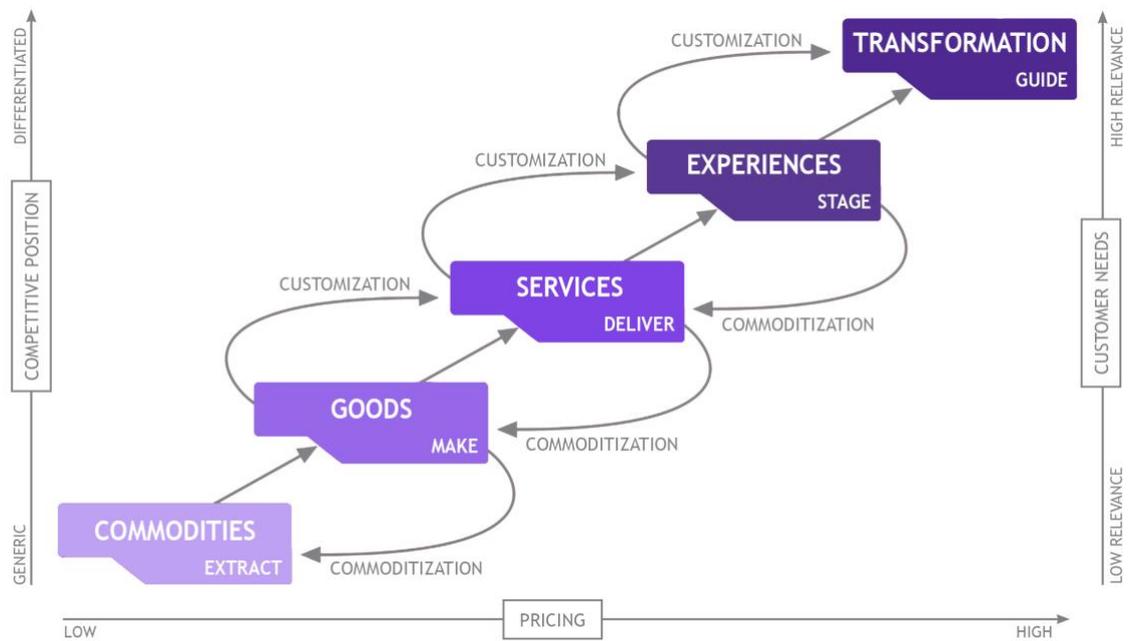


Figure 5: The progression of economic value. Pine & Gilmore (1998, 2011)

Prahalad & Ramaswamy (2004) have criticized the concept of experience economy by Pine & Gilmore (1998) for its lack of customer co-creation and emphasis of the producer in the value creation process as follows: “As value shifts to experiences, the market is becoming a forum for conversation and interactions between consumers, consumer communities, and firms. It is this dialogue, access, transparency, and understanding of risk-benefits that is central to the next practice in value creation.” Pine & Gilmore have acknowledged these concerns in the updated version of Experience Economy (2011). They also go beyond experiences to predict the next era being Transformation Economy (Figure 5). According to Achaparro (2018), this transition is already visible on a cultural level, continuing that “people are willing to pay for experiences that have the potential to change the way people live, work, and play”. In Transformation Economy, aspirants (customers) are guided through experiences which result in a sustained change in their life. Thurston & ter Kuile (2015) uncovered six emerging themes, relatable to Transformation Economy: personal and social transformation, purpose finding, creativity, desire for community and accountability. Driven by these attributes, today’s customers offer a new opportunity for companies that look into the future of customer experience.

Business logics highlight the importance of value

Here, the very core of innovation is customer value, and success becomes within the grasp of companies that can gain customer insights and deliver based on the true needs of customers. To understand the emergence of value, it's useful to familiarize with the most dominant business logics. The old way of looking at, rather than understanding, markets and business is referred to as goods-dominant logic. Goods-dominant-logic (later G-D-logic) reviews that value is embedded in goods. A manufacturer creates value from available resources while producing a good and sells the value through goods to a consumer, who obliterates the value as soon as the good is consumed. Thus, value is transferred directly during the exchange of goods. Changes in the global economic value and commoditization support Vargo & Lusch's (2004) ideology of Service-Dominant Logic (later S-D-logic). S-D-logic includes no producer or consumer, only actors who exchange service for service. Value is co-created and determined by the beneficiary of service, not by the producer as in G-D-logic. Service-dominant-logic states that value is created, not exchanged. Value creation process does not end with the sale and distribution of the product, instead, the beneficiary continuously derives value during the process of using and maintaining the service, thus integrating resources. (Lusch & Vargo 2004.) By understanding the beneficiary actor's process and needs, the producer is enabled to integrate resources to support the beneficiary. The service provider cannot deliver value; it can only offer a value proposition (Lusch & Vargo 2004). What the author does not fully agree on is the company's role as sole facilitator of tools, skills and products to facilitate this value creation. The problem breaks down to use of resources and feasibility. A company simply cannot use endless resources to solve the customer's problems. Due to business and financial restrictions, a company needs to critically assess the feasibility of a service and limit, for example, the level of personalization to have a chance of reaching desired levels of profitability.

Building on service-dominant logic, Ojasalo & Ojasalo (2015) present two additional contemporary business logics focusing on customer value creation: Service logic by Grönroos (2011) and Customer-Dominant logic (CDL) by Heinonen et al. (2010). Different from S-D-logic, in service logic customer controls the value creation in their own processes and the company is only a supporter of value creation. The second contemporary business logic, Customer-Dominant-logic emphasizes understanding of customer's life and context before, during and after the service. Companies only seek opportunities to help customers create value. It aims to understand customers' logic in fulfilling their needs and experiencing value. The emergence of value happens when service is embedded to the customer's context and the company understands which processes customers participate and need inputs to support them through meaningful experiences. (Ojasalo & Ojasalo 2015.)

In a preventive healthcare context, understanding customer's anxieties and ambitions before, during and after service is crucial as companies seek opportunities to help customers create value by supporting their journey towards better-optimized health. Thus, customer-dominant logic initially proves the most prominent business logic for preventive healthcare industry. CDL

is a concept relatable to the current understanding of service experience, but also a topic of critical discussion. Understanding the customers context throughout a longer period of time is elemental. Company's role and responsibility during these stages require levels of personalization. The potential problem breaks down to use of resources and feasibility. Company needs to constrain themselves of doing whatever it takes to solve the customer's problems and use endless resources when accomplishing it. Due to business and monetary restrictions, a company needs to critically assess the feasibility of a service and limit the level of personalization to have a chance of reaching desired levels of profitability.

Economic offering and innovation

Compared to for instance product development, the field of research in service innovation is still young, and there's plenty of room for new academic knowledge on the subject. What are the differences between product and service innovation and why is product innovation considered simpler? According to Bitner (et al. 2008), products are of often tangible, static items with physical properties. Services are fluid, dynamic and constantly co-produced in real-time and often depend on interpersonal delivery systems. In other words, humans are usually involved throughout the process. Intangibility and customization of services are highlighted versus the tangible and standardized nature of goods (Pine & Gilmore, 1998), as visualized in Table 1. Impacts, whether they're positive or negative, are seen in taking customization one step further. According to Ha (2019), there are signs where digitalization, globalization and AI are resulting in hyper-personalization. For example, the fast-food chain McDonald's is aiming at a more personalized, "Amazon-like service experience", where a customer is offered menu items based on past purchases combined with for example weather. On the positive side, this might add to the ease and speed of the service experience by offering based on purchase history. Applying this approach across industries requires also responsibility from the service providers, so the number of available options (visible to customers) will not become too limited to services or products with only similar characteristics, ultimately limiting the customer's world view. A similar problem occurs with internet search engines, which suggest search results based on user's search history, delimiting chances of discovering something entirely new. From a business logic perspective, these actions link to S-D-logic because they can be identified as company-centric. To prevent that from happening in healthcare context, preventive healthcare services need to ensure that designed solutions are based on understanding the customer context from a wider perspective, characteristic to customer-dominant logic.

Economic offering	Commodities	Goods	Services	Experiences
Economy	Agrarian	Industrial	Service	Experience
Economic Function	Extract	Make	Deliver	Stage
Nature of Offering	Fungible	Tangible	Intangible	Memorable
Key Attribute	Natural	Standardized	Customized	Personal
Method of Supply	Stored in bulk	Inventoried after production	Deliver on demand	Revealed over a duration
Seller	Trader	Manufacturer	Provider	Stager
Buyer	Market	User	Client	Guest
Factors of Demand	Characteristics	Features	Benefits	Sensations

Table 1: Economic distinctions during different eras. (Pine & Gilmore 2011)

Dube & Lindberg-Repo (2014) further characterize services as heterogeneous, inseparable and perishable. Their attributes arguably apply also with experiences, as illustrated through an example: a visit to the doctor's office at Neosmart Health raises emotions and questions already before the appointment; it can be for instance anxiety about the upcoming experience for someone new to preventive healthcare or enthusiasm of getting detailed information about personal health, that most people are unaware of. The experience is heterogeneous as the customer journey in reactive healthcare is much different. The personal and personalized aspects of the experience are revealed and amplified throughout the process. Moments are intangible, customized for every person due to the personalized nature of the offering, and perish during the experience but remain memorable because the guest is invested in learning new information about their health. Finally, the experience is inseparable from the stager (company, Neosmart Health) that supports value creation of the guest (customer) throughout their journey, although parts of the experience do not happen in direct contact with the stager. Experiences are further covered during the upcoming chapters.

2.1 Customer Experience

Customer experience should not be confused with the term service experience. Service experience represents an end-to-end set of experiences that add value to a service. Traditionally, service marketing and management literature has examined service experiences often from customer perspective (Helkkula 2010). Service experiences can also be examined from a managerial or employee perspective (Helkkula 2010; Giacomini 2014).

Customer experience (later described also as CX) is a sum of all interactions between a customer and a company, service or brand (Gentile et al., 2007). Meyer & Schwager (2007) describe customer experience as a subjective and internal response that customer has to any direct or indirect contact with the service. In addition to subjectivity, Helkkula (2010) adds that customer experience is also intersubjective. Individuals do not operate in isolation but are a part of different groups, therefore often influenced by other sources of information besides

their personal perceptions. Watkinson (2012) emphasizes also the qualitative aspect of every interaction, as every experience is perceived by an individual's sensory and psychological faculties. Figure 6 illustrates that customer experience is not a rational decision but an actual, wholesome experience influenced strongly by emotions and subconscious interpretations always made by the customer (Löytänä & Korteso, 2011).

Gentile (et al., 2007) divides customer's involvement with the experience on different levels; emotional, rational, physical, sensorial and spiritual. In other words, customer experience is not about *what* something does, it is *how* it does it (Watkinson, 2012). Thus, companies can never dictate customer experience. However, companies can choose what kind of experiences they design and ultimately attempt to stage (Leino et al., 2017). Pine & Gilmore (1999) argue that creating distinctive customer experiences can provide substantial economic value to companies. Solis (2018) describes an experience as "an emotional/sensory reaction to a moment" and explained that it can be measured by how you react and what you take away with you.

Leino (et al. 2017) argues that customer's direct and indirect interactions with a service can be further divided into physical, digital and subconscious encounters. Direct contact typically takes place during the purchase, use, and service stages. It can include a customer visiting your website or social media channel or doing research that affects their purchase decision. The quality of service or a product doesn't solely affect the customer experience, but also the expectations the customer has towards them. Indirect contact can be for instance word-of-mouth recommendations, reviews or advertising that the customer encounters. Therefore, customer experience is built as a sum of how customers engage with your brand and the experiences they have, remember and share (Solis, 2018). An individual's experience is constructed by their past experiences (Helkkula 2010). Additionally, the experiential regime reaches beyond the current time, as individuals create imaginary customer experiences that might take place in the future.

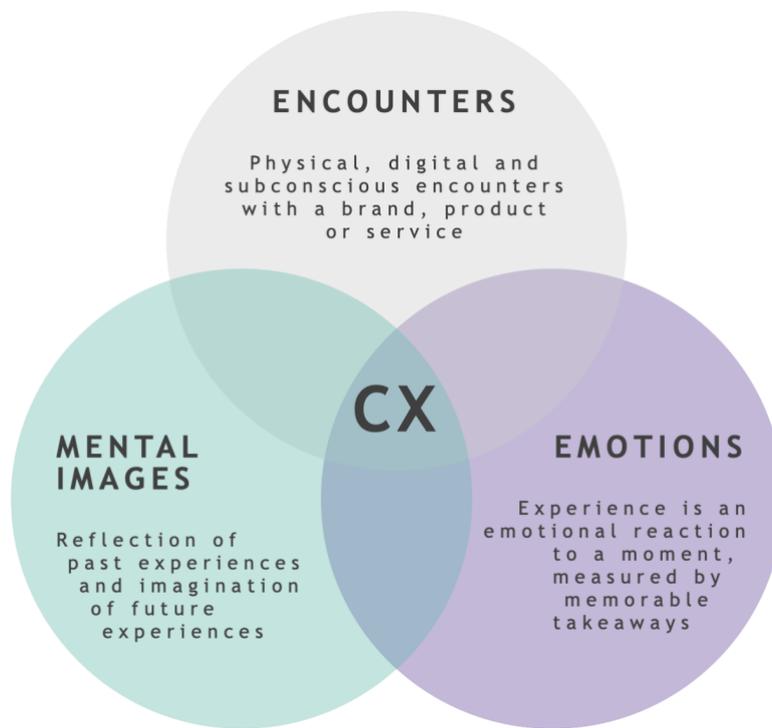


Figure 6: What is Customer Experience

Successful customer experience improvement requires a strategic approach

Although the definition of customer experience is simple, it manages to capture all the key elements and is even more relevant now than what it was 20 years ago. In an often-cited study by Bain & Company (2005), 80% of the companies surveyed believed that the experience they were providing was superior, while only 8% of customers mentioned encountered a superior customer experience. According to a 2015 Forrester research on CX, 73% of companies globally told improving customer experience is a strategic priority. Simultaneously only 1% said their CX is on an excellent level. In Finland though, another study by Talent Vectia (2015) showed that only 40% of leadership considered customer experience as a source of competitive advantage. This number was even smaller in the Finnish healthcare industry. The data can be interpreted from a managerial viewpoint that CX has caught the attention of leadership on a global scale, resulting in increased awareness and understanding toward it, visible through critical assessment of a company's own customer experience.

Majority of companies are responsible for customer experiences without giving them a strategic focus, not to mention actually designing them for a multichannel environment (Frow & Payne, 2007). Frow & Payne (2007) further highlight the management of customer touchpoints based on qualitative data, a perspective well-suitable for service design according to the author. Designing and staging a good customer experience is not easy, and ignorance towards customer insight often creates a gap between the individual's and the company's perception of customer

experience. The reason for this gap might be to some extent a consequence of non-existent CX strategy or inconsistent customer experience management (CEM). A good question to ask at this point: “Does our company’s customer experience happen by accident or by design?”

CX Strategy steps	Questions / comments	Description / actions
Create a CX vision	Has the company determined a CX vision? "Unique customer experience" is not enough for a vision	Enlightening - builds mutual understanding of a desirable future CX Emotional - inspiring, interesting, showcased from customer POV Actionable - Concrete touchpoints and building blocks for implementation
Communicate CX vision	What is the goal? Fundamental change in CX or simple improvement of margins?	Communicate the vision thoroughly throughout the organization. Everyone must understand their role in the equation.
Gain customer insights	What is the gap between the needs and wants of customers and what they actually experience?	Gain understanding of the customer needs, aspirations and problems. Determine touchpoints and current service interactions
Current CX vs. future CX	How can the company gain a customer experience advantage against competitors?	Customer insight will help in gaining knowledge about current state of CX. Use this as a baseline for future CX.
Build a CX roadmap	At which point in the experience should the company concentrate to have a real impact?	Prioritize short term and long term projects, that enable reaching the vision
Roles and responsibilities	How do the overall capabilities of the staff support the CX the company wants to provide?	Determine responsibilities and ownerships for strategy projects and enable implementation of CX strategy. Build multidisciplinary teams.
Measure and improve	Which touchpoints are the most critical to measure?	Set KPI's and measure with NPS. Remember the importance of qualitative data.

Table 2: Creating a customer experience strategy. Modified from Boyarsky (et al. 2016); Falay von Flittner (2019)

Building a customer experience strategy helps to manage CX coherently (Table 2). The first step is to determine a compelling, engaging and realistic vision for the customer experience - the north star that guides the organization towards an improved CX. Falay von Flittner (2019) emphasizes the importance of connecting customer experience vision to essential managerial elements of the company such as brand promise and business strategy. Importance of knowing your customers cannot be highlighted enough. Attributes of a CX vision consist of a compelling value proposition, emotional connection, expectations and commitment of the organization and simplicity (van der Meulen, 2015). Co-creating a CX vision with actual customers is well-justified as it helps capture the very essence of customer needs. Communication of the customer experience vision must happen on a theoretical and emotional level Falay von Flittner (2019). Simply sharing a PowerPoint presentation will not engage the personnel in the process. Setting up a CX vision is just the starting point, as, by itself, a vision will not affect the customer experience.

Service design methods such as service blueprinting and customer journey mapping alongside complemented by customer research help identifying gaps in the customer experience. Innovation and co-creation are useful for finding solutions that smoothen or erase the gaps during the customer journey. After an innovation process, ideas are transformed into

executable projects, which are then added and prioritized to a customer experience roadmap that guides the organization through implementation of strategy. Solis (2018) highlights that the whole customer journey doesn't have to be designed perfectly all at ones, but rather re-create paths that allow contiguous steps during the journey complement the experience by for example simplifying a task.

Finally, customer experience needs to be measured. After all, there is no point in designing what you think will be a world-class customer experience and then not determine suitable key performance indicators (KPI's) to measure and prove the effectiveness of development work. One of the most commonly used customer experience measurement system is the Net Promoter Score (NPS), which indicates the customer's willingness to recommend the service to their friends or colleagues (Reichheld 2003). The scoring system of 0-6 (detractors), 7-8 (passives) and 9-10 (promoters) will help in calculating the NPS as following:

$$\text{Promoters} - \text{Detractors} / (\text{number of replies}) \times 100 = \text{NPS}$$

It is worth reminding that open-ended questions should be emphasized with NPS surveys to gain qualitative data. Grigore (2018) highlights the benefits of open-ended questions through the following examples: "What was missing or disappointing in your experience with us?" The question encourages the customer to give constructive criticism towards the service. Since many people hesitate in giving negative feedback, the question suggests it is acceptable and welcomed to criticize. "How can we improve your experience?" - activates passives to give a practical suggestion on improving the experience. "Which features do you value/use the most" - When a service or experience consists of multiple features, it is useful to familiarize oneself of the feature(s) that customers value the most. If a feature is never mentioned in these questions, it is not necessarily useless but gives the design team concrete information to grasp for decision making. Finally, "What is the one thing we could do to make you happier?" represents a question that offers the service provider to close the feedback loop and simultaneously delight their customers. According to Arussy (2011), a company can avoid commoditization of services by supporting customer value-creation and innovating especially at stages during and after the actual service. By asking this question, service provider can show customers that they want to support the customer's value creation processes and success in applying the service also in the future. Application of NPS can be found in chapter 4.2.1.

Customer Experience is about Exceeding Expectations

There is a healthcare service provider in Finland that decided to focus on body parts that keep the human body moving, providing treatment for injuries and illnesses. The author of this thesis (in this case: customer) embarked on an ad-hoc service safari to their clinic in 2019 due to a sports-related injury that had happened weeks before the actual appointment. Word-of-mouth recommendations towards the clinic had set the expectations of the customer a bit above

regular standard of a doctor's visit. The experience started with a smooth booking experience. An appointment to a highly praised specialist was successfully made already for the next day. Free parking in front of the clinic, warm reception and clear guidance offered a good start. The experience at the doctor's appointment proceeded in a very professional and well-planned manner, and the customer was given information about the proceedings continuously. The diagnosis was well-explained, and it was time next for an MRI to validate the diagnosis. According to previous experiences, the customer thought it was going to take at least a few days to get scheduled for the MRI, not to mention the hassle with health insurance to get the expensive procedure pre-approved. This was not the case this time. The health insurance company happened to have a representative office in the same building, a decision to proceed with the MRI was made in minutes and the actual MRI scheduled right after that, also in the same building. It felt like the customer's time and effort was acknowledged and needs carefully considered. Flawless transition of information throughout different touchpoints and a perfectly planned and executed process made this experience extremely convenient, memorable and valuable. It is safe to say, that this particular experience exceeded customer's expectations with flying colours.

Digitalization and rise of wellness industry provide a valid platform full of opportunities for a company that's able to design and offer a customer experience that exceeds customer expectations. According to Löytänä (et. al 2011), the characteristics of such CX can be personal, adding to personality, genuine, relevant, tailored, presented at the right time, shareable, durable, clear, consistent, valuable before and after purchase, visibly valuable, emotional, surprising and productive. Adding this checklist when designing and iterating the current and new customer experiences for Neosmart Health's customers, has a chance of providing competitive advantage to the company and improved service quality to its customers.

To fully understand the essence of customer experience, it's also worth considering its building blocks from a psychological point-of-view, and think of questions like "What kind of feelings does our customer experience result in"? According to Löytänä (2015), You can look at CX from four different angles: First, CX that supports customers self-image refers to for example situations where a customer has received either very complementing or positive customer experience that empowers their identity. On the contrary, very negative experiences with customer service that customers take as a personal insult, are the ones they also tell forward, which in worst case might cause unfixable damage to the brand. Second, great CX surprises and creates an experience, causing a strong positive emotion, for the customer. Third, CX needs to also be memorable. Mediocre and bland services can be easily replaced with more exciting ones. Finally, CX that makes a customer want more, is what every company desire to achieve, regardless of the company's ability to manage customer experience. A customer who is pleased to the extent that the service has exceeded their expectations is usually a customer that will return.

Polaine (et al. 2013) argues that what is most important to look for is variation in quality between the service touchpoints and the gap between expectations and experiences. When people get what they expect, they feel that the quality is right. Whether it is a premium or a low-cost service, a minimal gap between expectation and experience equals greater customer satisfaction. Besides measuring customer's willingness to recommend a service or brand (see previously mentioned NPS), measuring the service quality is highly useful in comparing the performance of a service to customer's experience (Dube & Lindberg-Repo 2014). Most recognized and influential among them are the perceived service quality model (Grönroos 1984) and the GAP model of service quality (Parasurman et al. 1985).

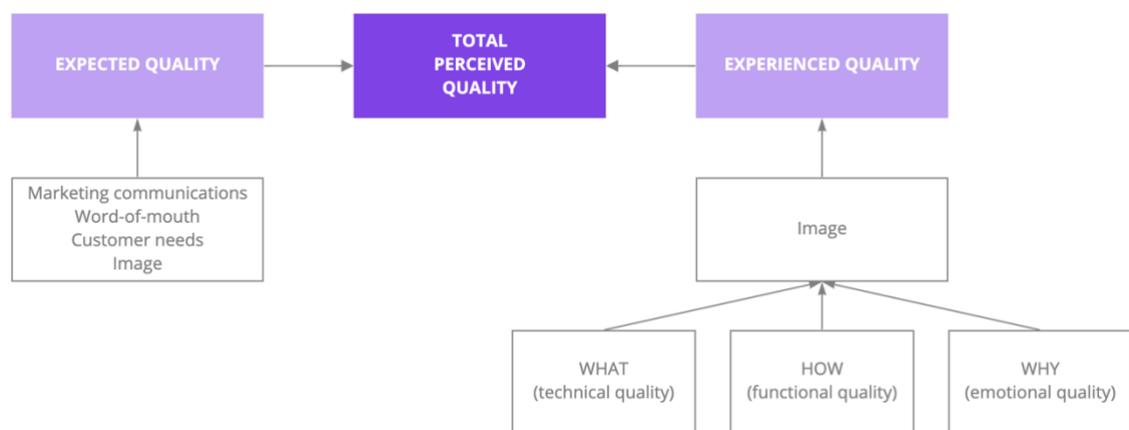


Figure 7: Perceived Service Quality Model (modified from Grönroos 1984)

The afore-mentioned story can be interpreted through a modified version of Grönroos' model, illustrated in Figure 7. Human-centered design emphasizes the importance of purpose and customer's emotion when examining an experience (IDEO 2011). Thus, the element "Why (emotional quality)" was added in the model. Service provider's image and marketing efforts combined with word-of-mouth and customer needs created expectations. The actual experience consisted of technical, functional and perhaps above all, emotional quality, compared to service provider's image. *Total perceived quality = experienced quality - expected quality*. As mentioned before, the experienced quality exceeded expectations.

Figure 8 demonstrates the GAP model, which measures service quality as the net difference between customer expectations and the experience of a service (Parasuraman, 1985). The gap between expected and experienced service is referred to as the customer gap in service quality. The customer gap occurs because of any, or a combination of, the four provider gaps presented in the model below.

Customer gap = Experienced service quality vs. Expected service quality

Service provider: Gap 1 + Gap 2 + Gap 3 + Gap 4 = Gap

Service Provider Gap 1 occurs when service providers do not understand the customer expectations of the service. Essentially, gaining customer insight and understanding through qualitative data helps to narrow or eliminating Gap 1.

Service Provider Gap 2 emerges when service providers are unable to convert their perceptions of customer needs into suitable service concepts and their subsequent design. The service designer's ability to capture the essence of customer insights and convert them into meaningful experiences plays a significant role in avoiding Gap 2.

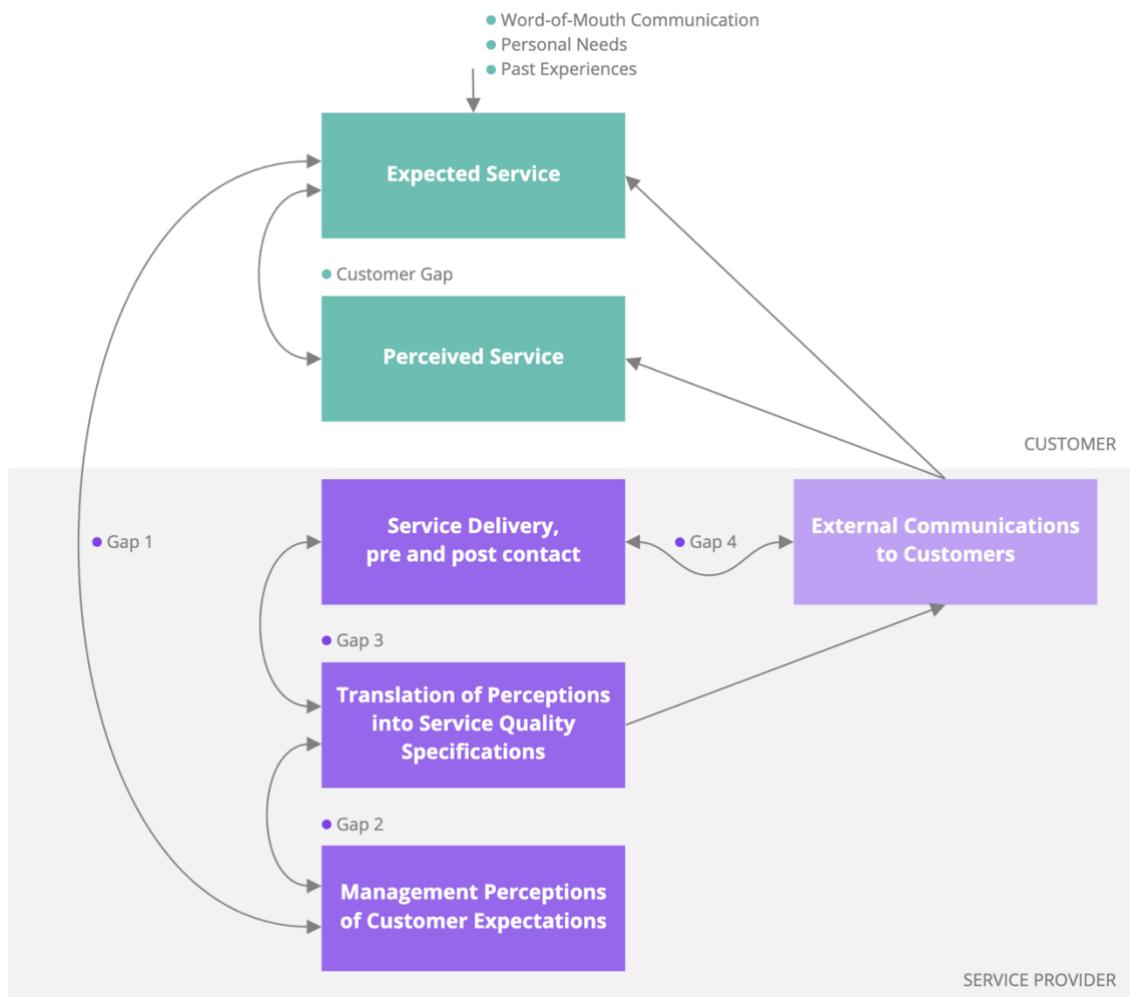


Figure 8: Service Quality GAP Model (Parasuraman et al. 1985)

Service Provider Gap 3 lies in the domain of service delivery, reflecting the difference between conceptualized service and delivery of service. As mentioned before, the overall capabilities of staff highly influence the delivery of a service or level of staging the experience (Boyarsky et al., 2016; Pine & Gilmore, 2011)

Service Provider Gap 4 demonstrates the difference between service delivery and the service promise communicated by the service provider. Gap 4 emerges when service promises (in the

form of marketing communications) turn out inconsistent with service delivery. In the context of this thesis, the GAP Model was used parallel to customer journey mapping and service blueprinting to determine gaps in the customer experience of the case company. The findings are described in Chapter 4.

Value of Improving Customer Experience

Improving CX can be seen important from human-centered design perspective (Chapter 3.1) to ensure viability, desirability and feasibility of services and experiences (evident through customer-perceived value) and to drive business and growth through service quality (IDEO 2011; Dube & Lindberg-Repo 2014). According to Dube & Lindberg-Repo (2014) customers who perceive reception of high service quality, favour the service provider through better evaluation and increased loyalty, resulting in higher revenues, as seen in Figure 9. High service quality also enables higher price premium, resulting in higher margins.



Figure 9: Link Between Service Quality and Growth (Dube & Lindberg-Repo 2014)

According to Heinonen (2004), the concept of customer-perceived-value considers benefits received from service (service quality) and sacrifices made by the customer (price, time and effort). Thus, customer-perceived-value can be determined as the customer's net value perceptions based on benefits and sacrifices with overall process, outcome, time, and location dimensions.

$$\text{Customer-perceived-value (CPV)} = \text{Perceived Service Quality (Benefits)} - \text{Price (Sacrifices)}$$

The connection between CX and Customer-Dominant-logic (CDL) is recognized through value creation. CDL emphasizes understanding of customer's life and context before, during and after the service. Companies seek opportunities to help customers create value. CDL further aims to understand customers' logic in fulfilling their needs and experiencing value. The emergence of value happens when service is embedded to the customer's context and the company understands which processes customers participate and need inputs to support them through meaningful experiences. (Ojasalo & Ojasalo 2015). In pursuit of improving customer experience,

the company benefits from identifying how customer perceives value throughout their experience with the service or brand. Building a link to healthcare, Pine (2018) concludes that companies use the experiences to guide customers to change, to help them achieve their aspirations. And all of healthcare, clinics, in particular, are really in the transformation business, built on top of experiences. Pine (2018) continues that “Transformations are life-transforming experiences. Experiences that change us in some way. And nobody ever goes to a clinic without having an aspiration, whether for themselves or their kids or another loved one. They have aspirations, and the bottom line is about helping them achieve those aspirations. Fundamental to clinics is providing the outcomes that people want. Pine recognizes according to research, the better the patient experience, the better the outcomes. And that is the bottom line.”

2.2 Employee Experience

Employee Experience (EX) refers to the employee’s subjective and holistic perception of the relationship with their employing organization, derived from all interactions and encounters at touchpoints along the employee’s journey (Hazzenzahl, 2010). Employee experience is impacted by a collection of organizational factors that employee interacts with, evoking certain emotions that represent qualities of the experience. Employee experience was initially recognized as one of the emerging subjects for further research within the case company, as presented through internal expert interviews (see Chapter 4.1.1).

Polaine (et al. 2013) connects EX to service design which is also about designing with people and not just for them. “People” does not just mean customers or users, but also the people working to provide the service or stage the experience, often called frontline or customer-facing staff. Their employee experience, both in terms of their professional knowledge and their engagement in the job, is relevant to the success of a service for two key reasons:

Satisfied staff equals happy customers, so including them in the design of services helps ensure their commitment also in delivering the service as a positive experience. Involving staff in creation and improvement of service not only adds to their level of engagement in delivering high-quality service but also enables proactive, continuous service improvement as employees learn about the complex ecology of the service they provide and use of innovation tools and methods. Along with customers, the frontline staff is often the real experts. Their insights are frequently as valuable as customer insights, which both offer great potential for the design projects, something that managers and marketing people may never experience first-hand. Connection of an organization to the employee experience is similar to that of customer experience, as seen in Figure 10. Employees, similar to customers, are driven with motivations, needs, expectations, and wants, both of which share a connection with the organization in question (Mäenpää, 2019).

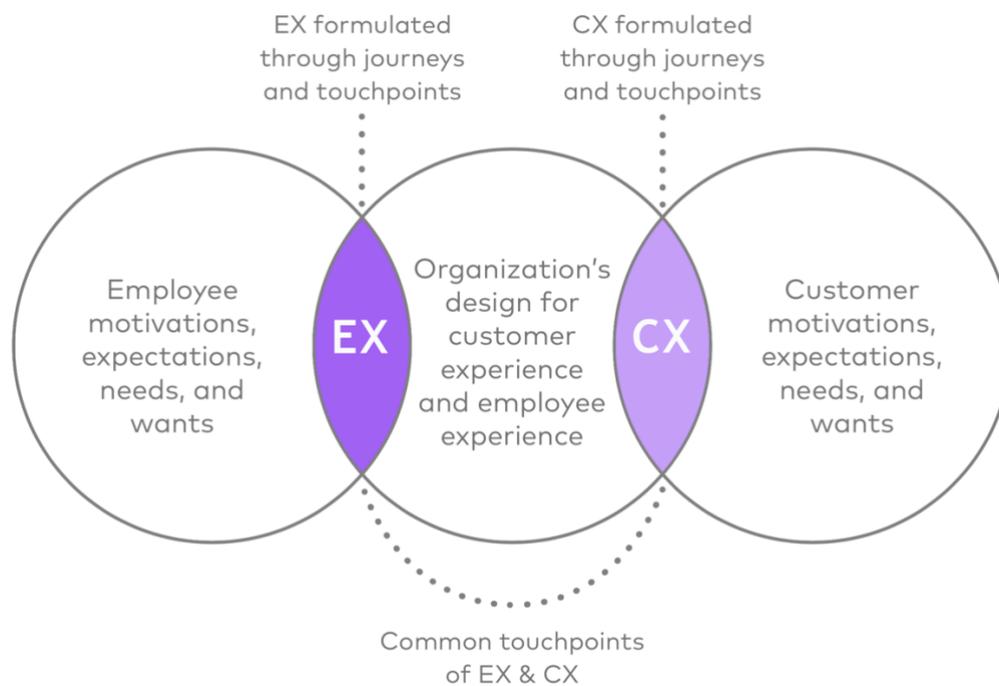


Figure 10: Connection between an organization, EX and CX (Mäenpää 2019)

Factors that Impact Employee Experience

Mäenpää (2019) describes factors that impact employee experience as following: *purpose* is one of the main foundations of EX as it gives deeper meaning to work and how their effort contributes to the organization on a wider scale. *People and organization culture* create the core of the social work environment. *Strategy and vision* clarify future direction and employees' role in it. *Leadership and management* can affect all other elements of EX, in good or bad. At best, *employer brand* has the power to create positive emotional connection and sense of meaning starting from early stages of employment. *Organization structure* influences how people interact and form relationships in a workplace. *Roles and responsibilities* should support competencies of employee and offer opportunities for growth and career development. *Work processes and activities*, when well-designed, can reduce complexity of work. *Physical environment* can support open and supportive culture. Use of up-to-date *technology and tools* increases productivity. If an employee needs to work around to complete a task because of limited access to suitable tools, employee experience might suffer. *Services and products* that enable the employee in better work-life balance, improve overall employee experience.

Many of the above-mentioned factors have been recognized at the case company, yet their design due to the startup nature of the company is still evolving and is in need of resources. Significance of these EX factors contribute to improvement and delivery of customer experience. Embracing these factors increases odds of building a healthy, inspiring organizational culture that lives and breathes preventive healthcare and customer-centricity.



Figure 11: Value of Employee Experience Design (Mäenpää 2019)

When the deciding factors of EX are designed to meet the expectations and needs of employees, business value, that employee experience design generates, can be recognized (Mäenpää, 2019). Morgan (2017) argues, that an organization must master the physical, technological and cultural environments to actualize business benefits, described in Figure 11. In addition to be seen as positive end results, these elements can be seen as driving forces, highly desirable for any organization to pursue. The elements in Figure 11 create a connection between employee-, customer- and human experience. By attracting and retaining the best professionals and satisfying their needs and expectations by creating a sustainable and happy organizational culture, filled with diversity, and engaging them strategically, staff will be motivated to innovate in pursuit of outstanding customer service, resulting in increased customer satisfaction. As a by-product, profitability and stock prices have a healthy possibility to grow. This can create a snowball effect, resulting in a highly valued employer brand and a world-class customer experience.

2.3 Human Experience

We do not wake up in the morning as customers. We do not go to the laboratory at the doctor's office to have our samples taken thinking, "I am the end user of this blood sample tube." Before anything else, we are human. We are messy, inconsistent and perhaps most of all, emotional. According to Stephan & Dunlop (2019) "human experience starts with the premise that an individual's beliefs, values, feelings, and ambitions are even more important because they form the foundation for who they are and what they want from the organizations with which they choose to engage."

Where customer experience focuses on all moments of interaction with a brand, human experience (later described as HX) investigates the human context and emotion more comprehensively, thus widening the spectrum to unmet need fulfillment existing outside of

customer touchpoints (Hazzenzahl et al. 2013). Recke (2017) adds that HX is more about purpose than consumption or usage, turning the mental focus from a consumer/customer or user to human. Some experiences are not primarily about customers or tasks but create a significantly deeper emotional reception within the person going through that experience. This happens often when interacting with a healthcare service. Health is a very personal subject and healthcare services not only impact a person on a physical wellbeing, but also affect who that person is. Polaine (et al. 2013) suggests the person is entitled to expect value in the delivery of services / staging of experiences on a human level due to nature of experiences within healthcare. Polaine continues that human experience contains a wide range of emotions from smaller everyday experiences - achievement at work, a child's first word or a casual encounter with a friend - to emergence of deeper feelings - joy, embarrassment, shame or relief to mention a few. In healthcare for example, human experiences leave often a long-term mark on the person, but from service design perspective they often comprise of short-term experiences that stick to a person even for a lifetime.

According to Polaine (et al. 2013) human experience has significant influence on overall brand experience, affecting the long-term bottom line of commercial services. If things go south on a human experience level, not only does it cause frustration or a tricky economic equation - damage the brand or result in missed future sale - but something affecting the development of people's lives. White (2018) advises that the transition from CX to HX considers the human context in which brand experiences are embedded. Immersive methods such as longitudinal digital ethnography is used to understand beyond moments of brand interaction, but the life context in which those moments happen. Stephan & Dunlop (2019) continue that identifying and understanding human needs and emotion before they are expressed, improves the experience significantly. In many cases globally, people have no alternative to service provider of healthcare services, especially in the public sector, where often government-run organizations lack incentive and resources to improve service quality. In preventive healthcare, understanding a person's context before, during and after service is crucial for the service designer who seeks opportunities to help people create value by supporting their journey and staging a more human experience. Berry (et al., 2002) argue that healthcare, especially in emergency rooms in a hospital setting, has lacked focus on the emotional aspects of human experience. Berry (et al., 2002) continues that recognizing and acting on clues is the key to improving human experience. Anything that can be perceived or sensed or recognized by its absence, is an experience clue. Clues on functionality help fixing logical and practical issues of during an experience, whereas emotional clues enable exploration and design of the human experience.

Need	Description
Autonomy	Feeling that you are the cause of your own actions rather than feeling that external forces or pressure are the cause of your action.
Competence	Feeling that you are very capable and effective in your actions rather than feeling incompetent or ineffective.
Relatedness	Feeling that you have regular contact with people who care about you rather than feeling lonely and uncared for.
Stimulation	Feeling that you get plenty of enjoyment and pleasure rather than feeling bored and understimulated by life.
Security	Feeling safe and in control of your life rather than feeling uncertain and threatened by your circumstances.

Table 3: Overview of a set of needs suitable for Experience Design (Hassenzahl et al. 2010)

According to Hassenzahl (et al., 2010), human needs set the stage for experience design. They further categorize a list of needs (Table 3), that help a designer characterize and determine a meaningful and positive experience. Customer data acquired during this thesis (chapter 4) suggests that one of the basic needs related to health and preventive healthcare is autonomy. Preventive healthcare guides customers through transformations but necessary actions needed throughout the journey of health optimization need to be performed by the customer, thus having autonomy over their own health. Customer's competence in improving their health needs to be supported by the service provider as customers desire an evidence-based roadmap with concrete steps. Need for relatedness and stimulation highlight the fulfillment that occurs through personal development. Healthcare aims at enhancing feeling of security by adding self-awareness through medical data and tools for health optimization.

3 Human-Centered Design and Innovation as Premise to CX Improvement

This chapter introduces two creative approaches selected as the frameworks for the design process. Human-Centered Design (IDEO, 2011) was chosen to sculpt the mindset of the author towards more empathic design practices. Framework for Innovation (Design Council 2015) convinced the author as being the most compatible framework for this project. It is an updated version of the well-known double diamond-model (Design Council 2005), offering a familiar process through the four stages of Discover-Define-Develop-Deliver, but adding layers of Engagement and Leadership in the overall picture, making it easily understandable and communicable for organizations with limited experience or competence in service design. As the name implies, the framework puts emphasis on innovation, which is a suitable approach for improving customer experience. Polaine (et al. 2013) suggests that by building resilience into the design, services will adapt better to change and perform longer for the customer. When design consistency is applied throughout the service elements, the human experience will be satisfying and fulfilling. When the service performance is measured correctly, proof that service

design results in more effective employment of resources—human, capital, and natural - becomes available.

3.1 Human-Centered Design

Human-centered design (later described also as HCD) is a creative approach to problem solving. HCD is further characterized as problem-driven, activity-centred, and context-bound (Winograd & Woods 1997). Cultivating empathy is central to human-centered design philosophy, thus making HCD closely relatable to Human Experience (HX) (IDEO 2011). Designing and creating solutions through empathy helps the design team to blend their expertise with the needs of people. Empathy means recognition and deep understanding of the realities, problems and ambitions of people you are designing for. Understanding the problem mentally though is only the first half; ability to create desirable, viable and feasible solutions with a connection to emotions enables possible breakthroughs (IDEO, 2011). Winograd & Woods (1997) argue that designers shape the coordinative and cognitive activities of individuals in the pursuit of their goals in a specific context. According to the International Standards Organization (ISO, 2010), human-centered design is a complex practice characterized by six principles:

1. the design is based upon an explicit understanding of users, tasks and environments
2. users are involved throughout design and development
3. the design is driven and refined by user-centered evaluation
4. the nature of the process is iterative
5. the design addresses the whole user experience, including the context in which the user finds him/herself
6. the design team includes multidisciplinary skills and perspectives

Although a universal definition for HCD is yet to be agreed upon, theories, methods, values and mindsets that can be placed under the human-centered umbrella all emphasize a more holistic attitude toward the human person, including the co-operative and social dimensions of humanity (Holeman & Kane, 2019). They continue that especially in healthcare, HCD offers a pragmatic approach by accompanying healthcare workers and communities.

Whenever human-centered design is applied, the initial output is viewed through three distinct lenses; *desirability*, *feasibility* and *viability* (IDEO 2011). *Desirability* refers to the aforementioned deep understanding of human needs, in other words, empathizing with the individual. If a healthcare service feature does not help the individual to reach their goals, the chances are it will be discarded by them. The two following attributes build a link to the business behind services. *Feasibility* means recognition and application of technological advancements. Current wellness economy has evidenced the use of technology and health wearables. Preventive healthcare service providers need to evaluate the skillsets of personnel regarding technological advancements and build skillsets that enable innovation in this area.

Viability highlights the importance of business objectives that support growth. Solutions that have been evaluated to have a high success rate in supporting business growth, are viable in the long run. A successful combination of these three attributes offers a prominent setting for meaningful innovation.

In the context of this thesis, HCD is considered a mindset best suitable for creative processes in healthcare, rather than actually representing different stages during the process. For this purpose, Framework for Innovation (Design Council 2015) was recognized better suitable. To offer comparison, HCD process (IDEO, 2011) is illustrated in Figure 12. HCD process is covered through three simple stages of *Hear*, *Create* and *Deliver*. The *Hear* section guides through the research part of the process, the *Create* section helps in translating learnings and insights into concrete solutions, and the *Deliver* section takes the design team from ideas and prototypes to implementable solutions. During the *Deliver* section, a learning plan is created to measure and continue iterating of the design. The HCD process is easy to understand when explained but lacks the detail and dimension illustrated in the Framework for Innovation (presented in chapter 3.2.).

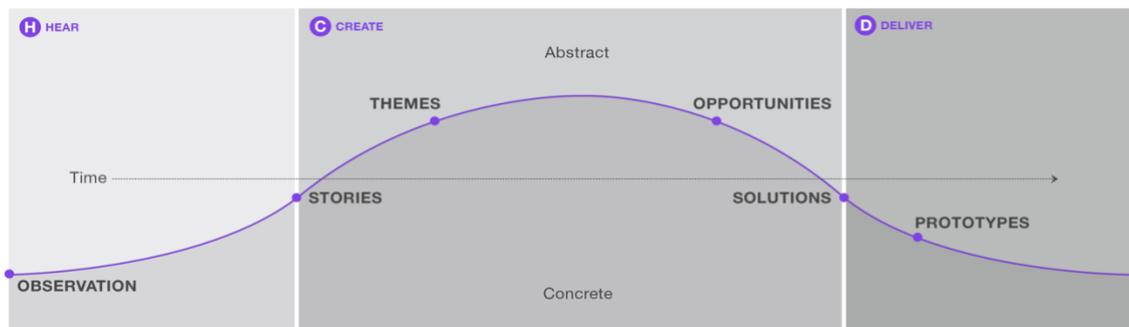


Figure 12: Human-Centered Design process (IDEO 2011)

According to Paré (2017), experiences are increasingly the focus of the design. In the digital era, it's important to connect with people emotionally at every step during their journey and map how every experience unfolds. Krippendorff (2004) suggests that human-centeredness takes seriously the premise that human understanding and behaviour goes hand-in-glove; The characteristics and attributes of artefacts or services are inseparably linked to users' perception of them, how they imagine interacting with them, use them or communicate about them with others.

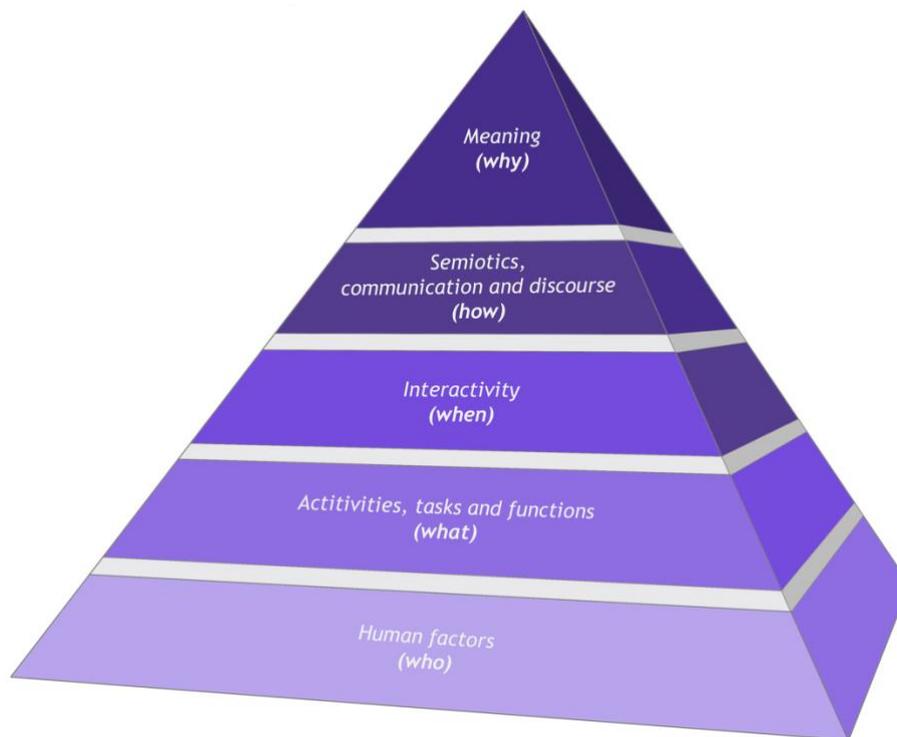


Figure 13: Human-centered design pyramid (modified from Giacomini 2014)

Giacomini (2014) describes that today's HCD is based on the use of techniques which empathize, communicate, interact and stimulate the people involved, obtaining a deep understanding of their desires, needs and experiences - transcending often what the people realized themselves. The natural focus of questions, insights and activities lies with the people for whom the product, service or experience is designed for, rather than within the material and technological attributes of the artefact, as summarized in Figure 13. Examples in the form of questions from the case company help explain the contents further;

1. Who is the person? Does the design reflect the characteristics, desires or experiences of the person?
2. What are the person's goals when using this specific service? What kind of activities, tasks and functions support value creation in the person's context best?
3. When does the person interact with the design?
4. How do people feel and think about the design?
5. Why would the person use this design?

Thus, HCD is distinct from traditional design practices. It encourages us to look beyond technology solutions to more systemic challenges and opportunities (Holeman & Kane, 2019). Giacomini (2014) argues that designs whose characteristics answer questions and curiosities higher up the pyramid are expected to offer a wider range of benefits to people, and to embed themselves deeper within people's minds and everyday lives, enabling a memorable

experience. Introducing a new meaning in people's context can be expected to offer abundant opportunities for brand development and commercial success, as historic examples such as Apple iPods - that gave a new meaning to the way music was consumed - suggest.

The model of HCD proposed in Figure 13 has elemental similarities to those of the "golden circle" proposed by Sinek (2009). Specifically, they prioritize the "why", "how" and "what" questions identically, as the apex of the HCD triangle and the centre of the "Golden Circle" both contain the issue of most decisive effect. According to Giacomini (2014) HCD, practised in its basic form, leads to products, services, systems and experiences which are perceptually, physically, cognitively and emotionally intuitive.

Matheson (et al. 2015) connects the dots between preventive healthcare and human-centered design; "Bridging the knowing-doing gap in the prevention of chronic disease requires deep appreciation and understanding of the complexities inherent in behavioural change. Strategies that have relied exclusively on the implementation of evidence-based data have not yielded the desired progress. The tools of human-centered design, used in conjunction with evidence-based data, hold much promise in providing an optimal approach for advancing disease prevention efforts." Matheson (et al. 2015) continue that by directing the focus towards education and application of human-centered design techniques among healthcare professionals on a wider scale, their effective ability to bring substantial results in disease prevention, that have eluded the healthcare industry for decades, will rapidly multiply. This, in turn, will increase the likelihood of prevention by design.

3.2 Framework for Innovation

"Design Council's Framework for Innovation helps designers and non-designers across the globe tackle some of the most complex social, economic and environmental problems." (Design Council 2015). The approach transforms the way organizations develop and deliver their services. At the heart of the Framework for Innovation is the Double Diamond - a clear, comprehensive and visual description of a design process. Since its launch in 2004, the Double Diamond has become a household choice for designers around the world.

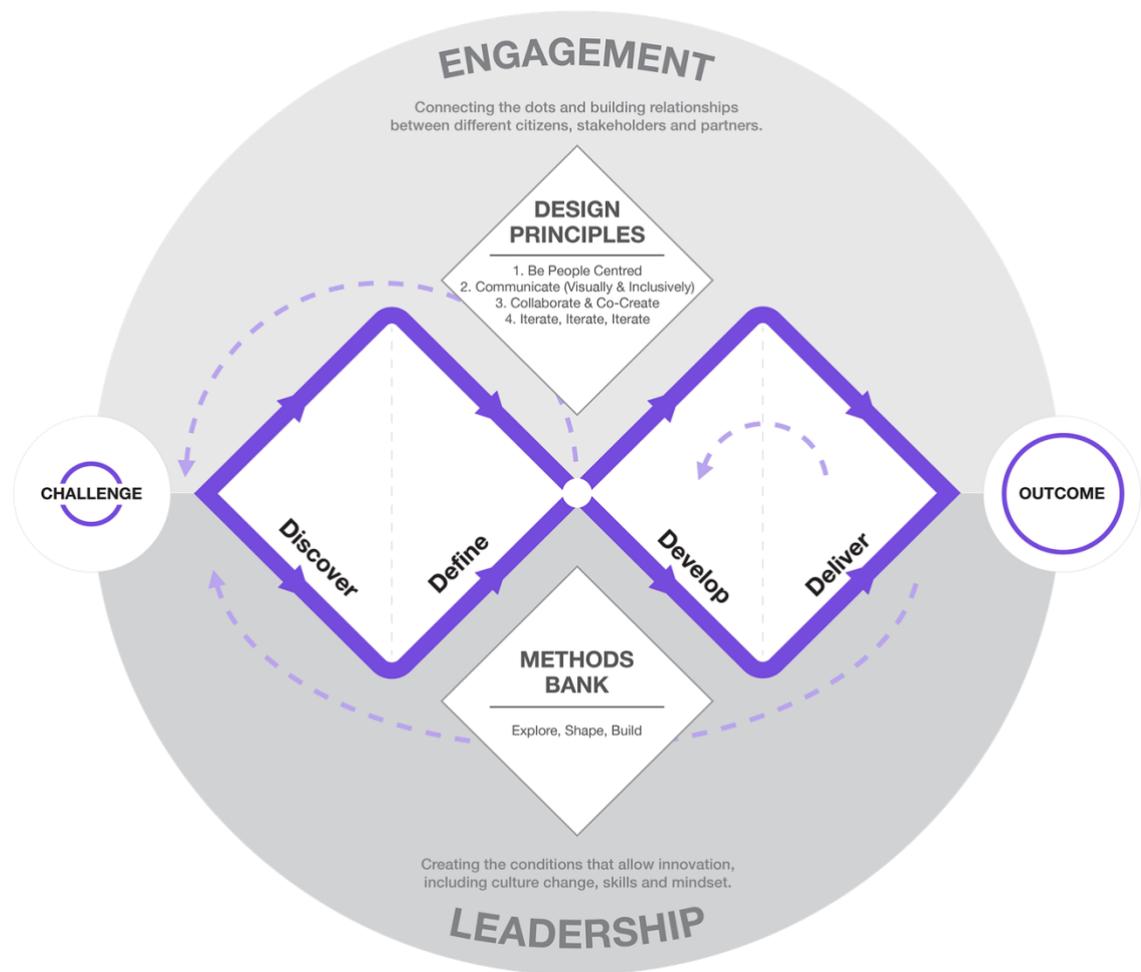


Figure 14: Framework for Innovation (British Design Council 2015)

In addition to highlighting the design process, the updated framework also includes the key principles and design methods, but also emphasizes the importance of a suitable organizational culture needed to achieve significant and sustainable positive change through design. Design Council's Double Diamond clearly conveys the design process in an understandable format. The two diamonds represent a process of exploring a challenge from a wide and deep perspective (divergent thinking) followed by focused action (convergent thinking) (Design council 2015). The updated model was chosen - not only because the Double Diamond is widely used, clear and easily understandable - but for its additional change leadership and design principles layers. The case company, Neosmart Health, is still in the early phase when it comes to company culture building. Thus, actively embracing innovation through change leadership would benefit the company in the long run. The design principles in the updated model support a human-centered approach and highlight the use of collaborative methods.

The first diamond helps people understand, rather than simply assume, what the problem or challenge is (Design Council, 2019). This involves interviewing and spending time with people

who are affected by the issues. The first part of this creative problem-solving model, discover, highlights a mindset of divergent thinking. The goal of this approach is to research and analyse alternative approaches that ultimately help in finding a stable solution (Curedale, 2013). The insight gathered from the discovery phase helps the designer in defining the challenge (Design Council, 2015). The mindset shifts from divergent to convergent thinking, leading to best answers based on data and thus leaving no room for ambiguity (Curedale, 2013). For example, defining the current customer journey of a service helps in identifying possible gaps within the customer experience. Similar methods can be used to improve also organizational aspects such as the employee experience, which is in direct link with CX. The second diamond encourages people back to a divergent mindset, aiming at finding multiple answers to the clearly defined problem, seeking external inspiration and co-designing prototypes by joining forces of a multidisciplinary design team with personal involvement from customers. According to Stickdorn (2010), Services, as co-created value exchanges, are fundamentally human interactions. They are often characterized by human-to-human exchanges, much like in healthcare. Delivery involves taking different small-scale solutions to the test in an iterative process, rejecting those that prove undesirable or scalable and improving the ones that are more likely to succeed according to customer feedback (Design council 2015).

It is important to notice that the Framework for Innovation is by no means a linear process. The author of the thesis learned something new about the underlying issues in the case company numerous times just to return in the beginning. The iterative nature of the process enables the creation of truly holistic and human-centered solutions as more versatile insights transform into themes that represent actual desires of people. Considering technical, organizational and commercial aspects with prototypes will help determine, whether the selected solutions can be feasible or financially viable (IDEO, 2011). It should also be emphasized that no idea or solution is ever finished. An essential part of Framework for innovation and service design, in general, is to constantly get feedback on how services are working, and how to further improve them.

Framework for Innovation outlines four core principles that enable the adoption of more effective working culture for problem-solvers. Table 4 lists these principles. The first principle of putting people first builds a connection to HCD, as both creative approaches emphasize deep understanding of people throughout the process. The old adage “A picture is worth a thousand words” is relevant to service design. Simple illustrations often speed up the process of getting and keeping involved stakeholders up to date. Collaboration in multidisciplinary teams and involving professionals from different, relevant business units enrich the outcomes of service design processes. Co-creation can be done internally within the organization but adding real customers in the equation keeps customer insight and aspirations constantly in the minds of the design team.

Principle	Description
Put people first	Start with a deep understanding of the people using a service; their desires, strengths and aspirations.
Communicate visually and inclusively	Help people gain a common, shared understanding of the challenge or problem and ideas
Collaborate and co-create	Work proactively together and get inspired by what others do and accomplish
Iterate	Iterate consistently to spot errors early, avoid risk and build confidence in your ideas

Table 4: Core Principles of Framework for Innovation (British Design Council 2015)

Framework for Innovation can be adopted with a selected portfolio of design methods which help to identify and address design challenges and achieve successful outcomes (Design council 2015). The British Design Council has categorized these methods as *Exploratory* (challenges, needs and opportunities, *Shaping* (prototypes, insights and visions) and *Building* (ideas, plans and expertise). The selected methodology should always serve the purpose of the design process, so limiting oneself to working with only selected methods regardless of the project, limits both the outcome of solutions as well as the development of the service designer. In the context of this thesis, the methodology adopted in the Framework for Innovation will be fully disclosed in Chapter four - the empirical part of the thesis - making it easier for the reader to relate to the context.

Creating a culture of success goes hand-in-hand with the principles and elements, that successful employee experience design can accomplish (see Chapter 2.2). The problems we face today require the ability to work with other organisations and determination to support people to be part of co-creating solutions. One good idea is not enough. The participatory nature of service design is well validated as diverse and multidisciplinary teams support the emergence of more sophisticated solutions to choose from. As important as the process and principles the organizations adopt, is the culture of an organisation and how it connects with partners, customers and citizens (Design Council 2015).

Leadership is needed to encourage innovation, build skills and capability, authorise for experimentation and continuous self-development. Strong leadership also encourages agile and open projects with experimental nature. At Tesla, failure is a welcomed option (Tahara, 2018). The company CEO, Elon Musk, even pushed the idea one step further in a famous quote: “If things are not failing you are not innovating.” Polaine (et al. 2013) argues that Service design and innovation go hand-in-hand. Insights that drive innovation confidently answer the question: “Will our offering make sense in the context of people’s lives, and will they find it valuable?” Engagement with people who are delivering ideas and receiving them is needed, without discarding partners who might have their own set of excellent ideas in contribution. Developing and maintaining connections and building relationships is as important as creating ideas.

Polaine (et al. 2013) continues in innovation projects the insights research focus is slightly different from improving an existing service. With a steady customer base and existing competition in the market, one can assume that people understand how the service is used and that it is of value. In these cases, the focus is on discovering failure points and opportunities for enhancing the experience. The research scope is allowed to be narrower and look less at unfulfilled needs and more at usage in context. What Polaine describes here creates a dilemma at the case company. Does having an established service but offering it in a relatively unknown industry mean that you are allowed to assume anything about how people do or do not understand how the service is used or if it is of value to people? The author of the thesis says no. Instead, a healthy dose of customer insight, described in the next chapter, is needed.

4 Improving CX in Preventive Healthcare - CASE: Neosmart Health

The empirical part of the thesis focuses on a development process, planned and executed at the case company, Neosmart Health, during 2019. The becoming chapters showcase key findings from qualitative research and link it with the service design methodology used to pursue customer experience improvement at the case company. Furthermore, the reasoning behind and answers to the research questions of this thesis reveal are revealed through logical continuum.

Saldaña (2011) defines qualitative research as an umbrella term for a wide selection of approaches and methods used to study non-fictional, natural social life. The collected data is primarily characterized as nonquantitative, consisting of textual materials (interview data, documents, field notes), visual materials (photographs, videos and artefacts) and/or internet sites documenting human experiences. Traditionally, research in healthcare has been quantitative and experimental in nature - take for example clinical and biomedical research. Pope & Mays (1995) highlight the importance of conducting qualitative research in healthcare - not only because qualitative description is a prerequisite of good quantitative research - but also because it can help identify social consequences for individuals that experience a healthcare service. In healthcare context, qualitative research helps in understanding how and why people conceptualize preventive healthcare services in their personal context.

This study focuses on qualitative approach with an emphasis on the *discover* phase, which Schneider & Stickdorn (2010) consider as one of the most important parts of a service design process. Additionally, the study takes a phenomenological approach to the paradigm shift from reactive healthcare towards preventive healthcare. The purpose is to come to an intimate awareness and deep understanding of how individuals experience and pursue improved wellbeing and discover their ambitions and needs regarding healthcare services.

The goals of qualitative research are dependant of a particular project (Saldaña 2011). In the context of this thesis, qualitative research sought to understand individual and social complexity of preventive healthcare services. The baseline of current customer experience at Neosmart Health was discovered by following the Framework of Innovation and exploring the outcomes of the project in form of actionable development projects and future roadmap. Simultaneously, qualitative research focused on determining customers' understanding, attitudes and motivations towards preventive healthcare services and pursued defining the building blocks of outstanding customer experience in healthcare based on customer insight.

The importance of qualitative customer data is highlighted by Osterwalder et al. (2010) by disclaiming that companies rely too often on market research and forget to explore the customers' desires and needs. Building healthcare services from the customer-centric perspective and looking through the customers' lenses is enabled only by gaining deep insights on their health routines, anxieties and expectations, healthcare experiences, environment and technology to name a few. As the theoretical framework suggests, looking at identified themes and recognizing the customers' context before, during and after actual interaction represents main aspects in customer-dominant logic of what companies need to pursue: gathering insight of what customers expect from a service, what they are going to do with the service, and what they are trying to accomplish. In the end, customers do not look for services, they look for solutions to their problems.

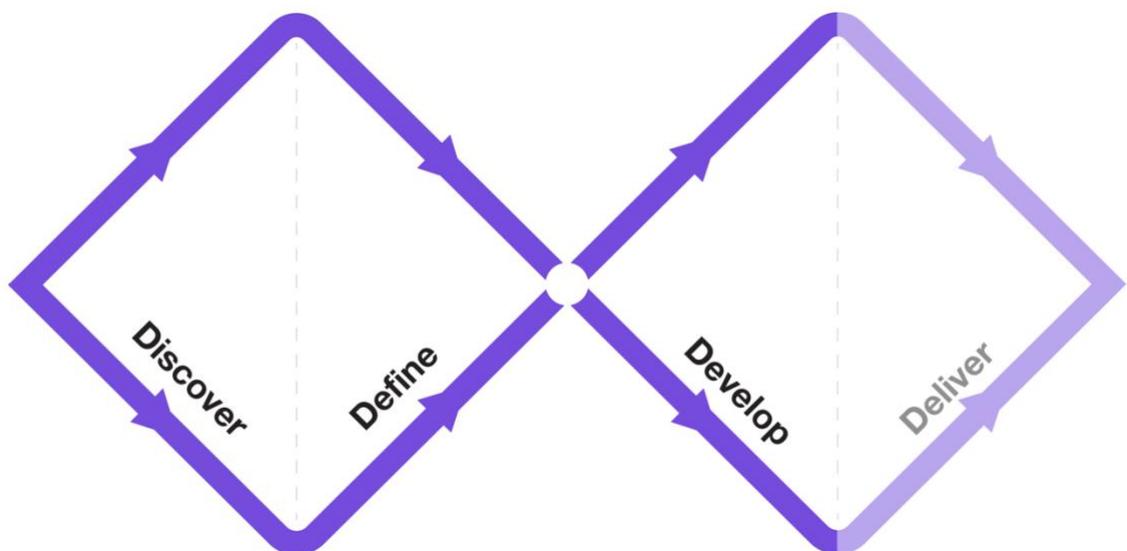


Figure 15: The empirical part of the thesis following the Double Diamond (IDEO 2004)

The empirical part of the thesis is divided into three parts, based on the Double Diamond (Figure 15). Schneider & Stickdorn (2010) highlight that although a design process is often non-linear in nature, it is possible to articulate an outline structure. It is important to realize the iterative nature of this approach, noticed also by the author in practice during the process. The **discover**

phase consists of data collection and analysis. After analysing data, broadened knowledge helps **define** the current state of customer experience in the case company. Based on customer insights and selected definitions, innovation takes place and prototypes are **developed**. Finally, an overall picture of the customer experience is obtained, serving as a roadmap towards elevated CX. Testing and iteration of multiple prototypes took place in the **deliver** phase, but this part was excluded outside of this thesis due to business-sensitive company confidentiality.

4.1 Discovering Deep Healthcare Insights

*“Assumption is the mother of all f*ck ups”* goes the famous quote from the movie *“Under Siege 2”*. The first diamond helps people understand, rather than simply assume, what the problem or challenge is (Design Council, 2019). This involves interviewing and spending time with people who are affected by the issues. The first part of this creative problem-solving model, discover, highlights a mindset of divergent thinking. The goal of this approach is to research and analyse alternative approaches that ultimately help in finding a stable solution (Curedale, 2013). The upcoming sub-chapters describe the process of customer insight discovery in more detail.

Qualitative data in this thesis consists mainly of five different sets of contextual interviews as described in chapter 4.1.2. Interviewee groups consisted of internal experts at the case company, potential customers and existing customers. Additional qualitative data originated from a comprehensive industry and competition analysis (chapter 4.1.1.), NPS questionnaire (chapter 4.2.1.) and service safari (chapter 4.1.3.). During the planning phase of the thesis, it was evaluated by the author, that together these separate data sets would provide an adequate amount of information necessary for discovering deep insights about the topic at hand.

4.1.1 Desk Research - Benchmarking the Competitive Landscape

Benchmarking is the practice of systematic evaluation of business processes and performance of an organization to those considered as the industry bests (Spendolini 1992-a). Heinonen and Strandvik (2015) suggest, that competition in the field affects what the customers see and hear, thus influencing their overall perception and for example expectations over a service, making competitor’s a part of the customer’s ecosystem (See chapter 4.2.1. Stakeholder Map). Spendolini (1992-b) recommends that organizations in their start-up phase - such as Neosmart Health - would address their benchmarking activities with the following mindset: 1) Seeking change and being action-oriented 2) Being open to new ideas 3) Focusing on the improvement of practices and 4) Introducing and maintaining discipline. According to the author, all of these attributes also link well to the case company as well as the thesis purpose of improving customer experience. In the context of this thesis, benchmarking and desk research was conducted from two specific angles. First, since the industry of preventive healthcare did not seem to be widely mapped, the goal was to familiarize with other companies and services that shared elements of medical approach or other specific qualities relatable to the Neosmart

Health service. The research was limited mainly on preventive healthcare industry. Second, looking into future trends in healthcare were recognized as useful to gain innovative direction.

1) Competitive landscape

The companies working on modern healthcare software focus on analysing focused data sets: genetic data, a specific anatomic field (e.g. cardiology, neurology), or disease (e.g. cancers). Simple analytics that comes with wearables (e.g. Fitbit, Apple Watch, Polar Flow, Garmin Connect) only show reactive results for what they measure (e.g. heart rate). DNA-based recommendations have become popular due to several companies offering easily administered home test kits (e.g. 23andMe). They are not direct competition to the case company, as genetic info forms only a snapshot of a human's health.

The competitive landscape was thoroughly researched by looking into industry trend reports, startup and investment reports and utilizing selected keywords for internet search engines to discover. Data from 75 companies was gathered in a predetermined spreadsheet that was divided thematically (Figure 16). Research themes included information about the service's business landscape, healthcare focus, service features and customer experience based on customer reviews and website analysis. The business landscape provided concrete information about the competitor's origin, size, financial information, investment rounds, current geographical focus and coverage, current topical news and quickly determined strengths and weaknesses compared to the case company. Customer experience mapped the existence and active use of the competitor's channels of interaction, such as availability of an app, web portal, chatbot or physical clinic. Also, the review suggested whether the service helped the customer to track health progress, improve routines, make healthy choices, map overall health or increase motivation, or a combination of these features. Healthcare focus explained the focus and comprehensiveness of the competitor's service from a preventive healthcare perspective, whether the service was generic or personalized, and the medical methodology to gain knowledge of the customer's health.

Figure 16: Competitive landscape research spreadsheet with 75 companies

The knowledge gained during the competitive analysis helped to understand what kind of companies were successful so far in the preventive healthcare industry, based on for instance successful investment rounds, increased market share, service popularity or praised customer experience. Next, the author compiled the competitive landscape based on the gathered and analysed data (Figure 17). Services were placed on a map based on the comprehensiveness of the service’s medical approach and whether the very nature and essence of the service were closer to reactive of preventive healthcare. The desk research indicated that only a few companies try to discover a truly holistic perspective on the customer’s health, determined by the comprehensiveness of data points gathered from a customer. Furthermore, many of the seemingly close competitors were determined by their service features and logic closer to reactive healthcare, regardless of their expression of being a preventive healthcare service. Surprisingly, the analysis found plenty of space in the comprehensive analytics sector. According to a healthcare study (MDH 2015) that comprehensive, real-time analytics could have prevented 1.3M unnecessary visits to hospitals and ERs in a single US state during one year.

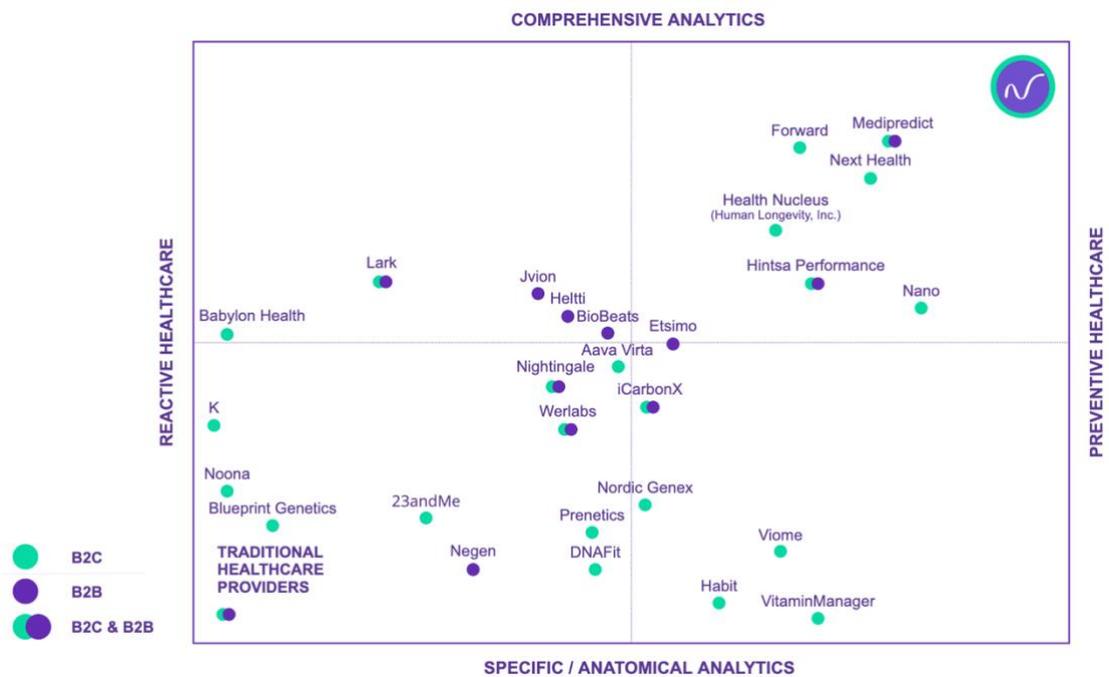


Figure 17: Neosmart Health’s competitive positioning in the preventive healthcare industry

Based on the market feasibility analyses, a systematic approach for comprehensive and preventive healthcare and technology does not exist on a wide scale. There are several indirect competitors coming in from reactive healthcare (traditional medical care providers) and vertically (either anatomically, symptoms or chronic diseases) focused companies. Nevertheless, the competitive analysis is promising for Neosmart Health as the service of the case company is not faced with a wide selection of direct competition. The competitor analysis

was considered a valuable asset to further develop the service concept (Nurmela 2019, personal communication).

2) Trends

Globalization and digitalization have removed barriers and brought people closer together, turning them into global citizens (Berger, 2018). Take for example WeChat, becoming a vital factor in the Chinese healthcare market (CBinsights, 2020). With 1,1B monthly users, WeChat's app ecosystem influences the healthcare market by offering managing of health data, book appointments, telehealth, primary care access, chronic disease management, consumer and provider facing knowledge platforms to mention a few. An all-empowering health app focusing on holistic primary care is still missing from the market. The global accessibility to services is shaping customer expectations across industries. Mason (et. al, 2015) divides the so-called expectation economy into three strands: rising quality, positive impact and personal expression. All three strands can be fit rather seamlessly into the customer insight from the preventive healthcare industry. First, as a vast variety of services are available and more emerge continuously, customers demand rise of quality to meet their personal needs. If reactive healthcare fails to meet their expectations in improving their health from mainly treating illness to optimizing health and uncover their full potential, a spot for creative destruction opens and is filled with modern, often digitalized healthcare service options. Industry disruptors such as Neosmart Health aim at shaping the expectations across the whole healthcare industry. Second, consumers look for services and experiences with companies that successfully communicate their vision and deliver a positive impact on consumers, society, or even have a global impact. An example of high-scaled global impact is clearly stated in Neosmart Health's vision of positively influence the health of over 1B people in the future. Third, instead of just having more (possession), consumers expect to be more. They are looking for experiences and services that enable them to reach their full potential and become who they want to be. According to Finnish pro athlete, Oskari Mörö (2019), Neosmart Health has enabled his full return to competition with comprehensive and personal care and reach new heights on his career.

Chipchase (2010) argues that "even the simplest situations and interactions are rich with meaning and ripe with opportunity". New healthcare opportunities rise with the help of new technology such as wearables that measure the customer's health. According to analysts, Apple's wearables segment has already surpassed the mac computer, measured by sales (Reisinger, 2019). Another trend report shows that the wearable medical devices market size was valued at over USD 9 billion in 2018 and is expected to witness 39.4% CAGR from 2019 to 2025 to a value projection USD 87 billion. Growing awareness initiatives and implementation of fitness programs globally, especially in emerging nations will accelerate the adoption of wearable medical devices to manage physical activities. (Ugalmugale et al. 2019) As new

technology is adopted, it's beneficial for Neosmart Health to be able to spot early those innovations, that have the potential to become widely adopted. This technological advancement helps in bringing down costs and enable more accurate and expanded medical results through valid data.

A Healthcare trend report by Cramer (2019) predicts a few relevant trends that influence the industry Neosmart Health operates on. Out-come-based healthcare brings focus from one particular symptom to the entire patient. Preventive healthcare is on the rise. "A greater focus on individual genetic makeup, wellness, early detection, screening, vaccinations, diet and exercise – and even mental health awareness and treatment – are all indicative of an increasingly holistic approach to healthcare." The influence of technology on patients and doctors will be one of the biggest changes during the next years as healthcare customers become more self-empowered to take their health into own hands. The doctor's role in preventive healthcare becomes more of an interpreter of data. The paradigm change from symptom-treating to preventive healthcare will create a demand for disruptive business models and perhaps creative destruction inside the industry.

4.1.2 Qualitative Interviews - Main Source of Customer Data

Interviewing is not solely about asking questions nor should it be compared to a normal conversation setting. The type of questions asked and the researcher's ability to listen, empathize and react in what they hear during an interview determine how well they as an interviewer are able to dig deeper for information that can be turned into meaningful insights (Saldaña 2011). Semi-structured, contextual interviews were chosen as the method to gather information as they provide a flexible technique to uncover customer insights in case studies (Drever 1995). According to Drever (1995), the general structure of the interview is established by deciding the main themes and questions to be covered during the interview. Portigal (2013) suggests a more detailed structure is left to be worked out as the interview flows forward, and the interviewee is given a fair degree of freedom in generating stories around the topic of discussion.

According to Portigal (2013), it's best to start the process by checking your worldview at the door. Starting with a blank page and cultivating one's curiosity enables an open-minded and often better-quality interviews. Portigal (2013) continues that brain dumping - getting everyone to empty their thoughts on the subject - on for example post-its will create a common base that helps the research team in preparing for the interview and research problem from different angles. Building rapport and concentrating on the interviewee by listening and focused body language help in building trust and moving towards the "tipping point" of the interview when something insightful is often revealed.

Van der Pijl (et al. 2016) suggest that mastering questioning is paramount to understanding people care about and why. Examples of a bad question would be like “Would you buy a product which did X?” or “Do you think this is a good idea?”. Closed questions will lead into either people answering what they think you want to hear or a simple yes/no. Instead making comments like “Why do you bother?” or “Talk me through the last time that happened” will help interviewees in revealing their true thoughts on the subject. Rob Fitzpatrick (2014) described three simple rules to live by when asking the “right” questions:

1. Talk about the interviewee’s life instead of your idea
2. Ask about specifics in the past instead of opinions or generalities about the future
3. Talk less and listen more

The observation and interviews before it naturally aimed at giving us data that we could process and modify into insights. According to Heinonen (2018) “insights are crystallized forms of understanding that support the creative work or decision making”. The objective of the analysis part is to gain clarity and perspective that guides one through the fog and gives direction for decision making. It’s important to stay analytical when going through the data collected with the team. One option is using an affinity diagram to organize findings and start discovering patterns as seen in Figure X. Portigal (2013) described analysis as breaking larger pieces of data into smaller ones, thus introducing synthesis, a combination of multiple pieces into something entirely new, for example building themes and defining opportunities from the data. Sensemaking (Madsbjerg and Rasmussen, 2014) is a process followed during this thesis and is essentially built of the following steps: 1) Frame the problem as a phenomenon 2) Collect the data 3) Look for patterns 4) Create key insights 5) Build the business impact.

Table 5 determines interviewee groups that consist of internal experts at the case company, potential customers and existing customers. Data gathered from the interviews will be covered next.

Group name	Number of interviewees	Relationship with Neosmart Health	Research focus	Research methods	Data acquired	Data acquired by
Group 1	8	Internal experts	Industry introduction, Neosmart Health service introduction Employee experience	Qualitative interviews	Feb-March 2019	Author of the thesis
Group 2	40	Potential customers	Market segmentation, perspectives on health	Qualitative interviews, desk research, co-creative workshops	2018	3rd party consultancy
Group 3	11	Existing customers	Perspectives on health, CX in healthcare, health technology	Qualitative interviews, desk research	April-Sep 2019	Author of the thesis
Group 4	7	Potential customers	Perspectives on health, CX in healthcare, health technology, UX in website	Qualitative interviews, desk research, card sorting	September 2019	Author of the thesis
Group 5	77	Potential customers	Marketing focus, perspectives on health, market research	Qualitative interviews, desk research	Fall 2019	Aalto university MSc students

Table 5: Qualitative interview data sources of the thesis introduced

1) **Expert interviews** are particularly useful when the research team wants to learn a vast amount of industry-specific information in a short period of time, when there is already existing research on the topic, to understand the history or regulations of a topic that might affect the implementation of design solutions or discover details about new technology or competitors (Silvermann 2000).

Eight semi-structured, contextual interviews and discussions with selected company employees were conducted during the spring of 2019 to identify different roles within the company and their interdependencies during different stages of the customer-facing service. The participants represented different roles and disciplines within the company as seen in Table 6. Besides serving as an introduction for sketching the outlines of the company's service blueprint, the expert interviews set out to reveal possible challenges within the employee experience. The interviews were recorded by taking notes during the discussion.

Interviewee	1	2	3	4	5	6	7	8
Gender	Male	Female	Female	Female	Female	Female	Male	Male
Role	VP, finance & business development	Director, clinical operations	Doctor, MD	Science project manager	Nurse	Biomedical laboratory manager	VP, marketing & business development	President & CEO

Table 6: Basic descriptions of expert interviewees.

Customer-centricity is the key ingredient to success and improving the healthcare industry. All employees discussed this topic and saw great potential in following this rule in practice. As CEO Marko Nurmela (Nurmela 2019, personal communication) pointed out: "When it comes to customer-centricity, it's important for us to walk the talk. The customer comes first, always. Our goal is to design our service from elements that are proven to result in the best-in-business

customer experience.” This comment would later influence the formulation of *Research Question 2: What does exceptional customer experience look like for preventive healthcare customers?*

Interviewees presented many interpretations of how to package and present the company’s holistic service to the customer. This data revealed a probable lack of alignment in understanding the very essence of the customer experience employees are expected to stage. One interviewee questioned the customer experience from a wider perspective: “Does the customer actually understand our medical approach and the whole idea of the service? Since such a holistic preventive healthcare service in Finland is never-before-seen, have we succeeded in packaging and communicating our service in an easily understandable and attractive way?” Similar opinions would, later on, be formulated into *Research Question 1: How does the customer understand preventive healthcare services and its central elements?*

From the interview data, it was possible to form an initial high-level understanding of the interdependencies of different work roles inside a preventive healthcare company. It also became obvious that understanding and mapping of the customer journey was crucial in order to gain consensus of an assumed customer experience. The assumptions would later be corrected with actual customer data.

The interviewees were open to sharing also their perspectives on the employee experience which is summarized next. Employees were extremely motivated in proactive and lean development of a customer-centric healthcare company, seeing faster visible results through effectively organized resources and streamlined processes, making sure the customer expectations meet or rather exceed the customer experience in the future. In order to succeed, there’s room for improvement by a more solid internal alignment of job roles and responsibilities, crystallizing and unifying the employee understanding over the service. Also, a definition of the customer and employee journeys on many detailed instances would benefit in future scalability of the service.

Expert interviews resulted in knowledge about dynamic and ambitious company culture, current team dynamics and employee experience as well as provided an expert perspective to the seemingly emerging industry of preventive healthcare. Finally, the expert interviews helped formulate two of the initial research questions for the Thesis: RQ 1:) *How does the customer understand preventive healthcare services and their central elements?* RQ 2: *What does exceptional customer experience look like for preventive healthcare customers?* Research Question 3 would be formulated based on the overall relevance of service design as part of determining and improving the customer experience in the preventive healthcare industry. The insights from expert interviews assisted in determining an interview guide for upcoming customer interviews (Groups 3 and 4).

2) 40 potential customers (later described as Group 2) were interviewed during a co-creation lab (3rd party consultancy and Neosmart, 2018) to recognize and define a customer segment most accommodating for the Neosmart Health service concept. Insights from this research served as an introduction to the author of this thesis of perspectives, opinions, ambitions, frustrations, expectations and main drivers of the recognized market segment about health. The interview structure and topics were determined by the 3rd party consultancy. Coming from four different countries, aged between 25-50, interviewees described only minor differences in their perspectives on life and health. Most interviewees expressed their desire towards continuous personal development and challenging yourself, curiosity towards new technologies and experiences, yet remaining grounded in terms of having stability in life by for example making proactively healthy lifestyle choices. Interviewees' frustrations are best described by a quote: "I want to be happy and healthy and to make the most out of my life, but daily responsibilities cause me to down-prioritize my own wellbeing and the things I love." (Female, 35, Sweden). Interviewees' description of health isn't described as the absence of illness, on the contrary; health was divided into two entities; 1) A *healthy lifestyle* is proactive and is dictated by the many small decisions we make every day. 2) *Health* describes how you are feeling, both physically and mentally, and is key to be able to do the things you love. Interviewees already use health apps and wearables to stay on track, mainly for four distinct reasons: 1) track progress 2) increase motivation 3) remind them to make healthy choices 4) give advice on how to improve routine. It's worthwhile to point out that the interview data indicates strong acceptance of preventive healthcare, with value emphasis on medical fact-based service, personalized long-term health plans, proactive yet supported health optimization journey and seamless technological integration with their lifestyle.

This data set served as the baseline of customer understanding, but as it was notable that the interviewees consisted only of a group of potential customers, and therefore lacked the voice and experiences of actual customers. In order to truly understand the current state of customer experience in preventive healthcare and especially that of Neosmart Health, data from existing customers would need to be collected.

3) Existing Neosmart Health customers (later described as Group 3) were invited to participate in a personal interview about perspectives on health, their customer experiences with both reactive and preventive healthcare (especially Neosmart Health), relationship with health technology (for example wearables and applications). The invitations were sent to a selected group of customers, who already had experience over the Neosmart Health service personally. **11 customers** in total participated in semi-structured, contextual interviews between April-September of 2019. These interviews were conducted by the author of this thesis. To make the interviews as convenient as possible, interviews were scheduled before or after the interviewees' personal doctor's appointments at Neosmart Health flagship clinic at Helsinki. Audio recording (with consent from the interviewees) was used to capture all verbal interaction

during the interviews to ensure no valuable data is missed. Afterwards, all the interviews were manually transcribed into text documents for upcoming analysis.

The selected interviewees represented different customer segments to gain enough versatility in the collected data. This would help in recognizing whether there are differences between how different customer segments view health and healthcare. The main objective of these interviews was to find answers to the first two research questions: 1) What does exceptional customer experience look like for preventive healthcare customers? 2) How does the customer understand preventive healthcare services and their central elements? In practice, an underlining factor with the acquired data was to identify gaps within the customer journey of the Neosmart Health service. Without the input and participation of actual customers, mapping the customer journey would be based mainly on assumption, knowledge of customer experience would lack depth and possible gaps in service quality would remain unrecognized. Relevant interview findings will be disclosed and further analysed in chapter 4.1.6. Interview guide for these interviews can be found in Appendix 1.

4) Seven potential customers (later described as Group 4) were interviewed during September 2019 implementing a modified version of the interview guide used previously with group 2. All seven interviewees were pre-identified as part of the main target segment of the case company. The main purpose for these interviews was to gain customer insights about Neosmart Health's website for rapid iteration of the company's main digital channel. A need for website development was recognized based on both sales and customer data. The customer data (interviews, discussions and NPS survey) showed signs of unclarity and misinterpretation with website content which was assumed to be one reason for suboptimal conversion rates. Simultaneously, comparing the interviewees' thoughts to previously acquired customer data about health, customer experiences with reactive healthcare services, expectations and impressions on preventive healthcare and perspectives on health technology deepened significantly insights on the Finnish market.

Interviewees were given a preliminary task of familiarizing themselves with Neosmart Health on an introductory level. No specific channel or method was recommended beforehand. Interviewees were then faced in an individual, face-to-face interview to discussion to uncover their findings. Open card sorting was used as a design probe with the interviewees to gain insights on the company website in order to re-design a more relevant web experience with. According to Szerovay (2017), card sorting helps to design a website's information architecture by enhancing organization and labelling. Open card sorting offered interviewees freedom not to only categorize certain labels but also suggest more relevant categories. Figure 18 illustrates an example of card sorting while also explaining the key features of the tool.

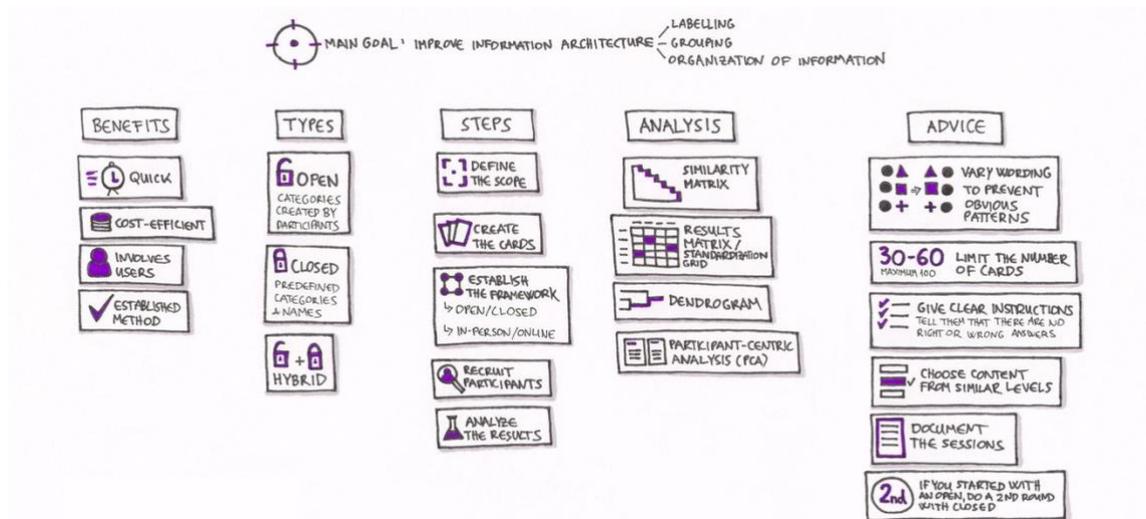


Figure 18: Card Sorting (modified from Szerovay 2017)

All of the interviewees stated that a company's website is the first channel and source of information whenever they familiarize themselves with a new product or service. This confirmed the importance and urgency of the website development project. Cooper (et. al 2014) argue that a good product (read here: website) helps the user to achieve their goals in a simple and efficient manner. Simultaneously, a well-designed product enables the achievement of business goals while adapting to technical limitations. Cooper's description of a good product was clearly in contradiction to the actual state of the company website. The interviewees were observed and interviewed while they browsed the company's website and detailed notes were written. The insights from the interviewees revealed crucial improvement areas. For instance, 0 % could describe the service concept from the landing page view without first scrolling or clicking to other sections. 100 % of the interviewees described their first impression of the company/service as non-medical-based. Most interviewees were able to find relevant information after scrolling and clicking to different sections and were mostly satisfied with relevancy of the content but mentioned many aspects that could be improved. The comprehensive insights gathered from customer data were translated development objectives and first-round improvements have already been published and will be constantly iterated from now on. Website development project-related insights will not be further covered in this thesis due to business confidentiality, but the project serves as one of the example initiatives that was implemented for improving customer experience during the thesis. Relevant interview findings will be disclosed and further analysed in chapter 4.1.6. Interview guide for these interviews can be found in Appendix 2.

5) 77 qualitative interviews (later described as Group 5) were conducted in co-operation with Aalto University marketing students during fall of 2019 as part of market research on the healthcare market, with main focus on constructing a solid knowledge base about interviewees'

perspectives on preventive healthcare from a marketing point-of-view in the Finnish market. The interview guide was created by the students under the guidance of their respective lecturers and in co-operation with Neosmart Health. All interviewees were given a task of recruiting and interviewing 2-3 people that they considered potential customers of preventive healthcare services. The choice of recording method was left to the interviewers, many of who chose audio recordings to capture all audio data. Insights from the customer interviews were discovered from the interview data inside small groups for optimal results and presented to Neosmart Health in several group presentations during fall of 2019 by the marketing major students, followed by a panel discussion further clarifying the insights. Extended presentation materials were shared afterwards with the case company for future use.

Interviewees aged between 18-63 consisted of multiple different nationalities, but mostly those of Finnish natives. The market research illustrated a timeline of historical views on health, followed by a more thorough investigation of the Finnish mindset towards health and healthcare, from past to present to future trends. The interviews also provided context in which health habits, frustrations and expectations collide. Relevant interview findings will be disclosed and further analysed in chapter 4.1.6.

4.1.3 Service Safari - Deepening the Customer Perspective

Service Safari describes sending the researcher(s) to do autoethnographic research to uncover insights regarding a particular experience. Stickdorn (et al. 2018) identifies that the aim of service safari is to immerse oneself in an experience. Detailed observation and documentation of findings build contextual bottom-up approach from the customer perspective, well-suitable for identifying possible gaps in the customer experience during the thesis. The British Design Council concludes that service safari brings more focus by tuning participants into service touchpoints, enabling interrogation of the customer experience in new ways.

The author orchestrated a service safari at Neosmart Health in October of 2019 by personally participating in a full-service experience of Neosmart Health's comprehensive package. The personalized preventive healthcare experience is offered to customers commercially in Neosmart Health's flagship clinic in Helsinki, Finland. This method was chosen to gain first-hand experience of the service and observe service quality during the process. The author evaluated beforehand that service safari would benefit the research by providing a deeper understanding of the customer mindset during different phases of the service. Furthermore, the author recognized the likely opportunity of identifying the seemingly unimportant details of the experience and pick the low-hanging fruits i.e. simple service features, that are easy to fix. Finally, the author had a personal motivation of gaining deep insights about personal health during the service safari.

In addition to the service safari at Neosmart Health, the author embarked on a mission to discover the level of customer experience at other healthcare services, for example treating a sports injury at a specialized clinic. Service Safaris at other healthcare service providers are not covered in this thesis but they assisted the author in determining the focus of the service safari at Neosmart Health. While planning the service safari, the author framed the purpose and aim of the exercise with the following questions: *What does it feel like to go through the process? Do customers understand how the service works and why selected actions take place? Does the service promise match expectations of the customer?* Being able to answer these questions would provide a better understanding of the customer mindset, how the service is perceived and information relevant for business decisions.

Service safari followed the Neosmart Health customer journey, simplified in Figure 19. During different stages of the customer journey and throughout the process, the author recorded actions that needed active participation by the customer, continuously evaluated the service quality, asked a lot of “stupid” questions and perhaps most importantly, described personal feelings, thoughts, needs and motivations by writing notes in a diary format.

Besides uncovering needs for service feature improvement - some of which were quickly prototyped and put into production - service safari enabled the researcher to focus on the emotional journey of a customer. Naturally, the emotional journey is subjective to each person, but together with the interview data, adding a detailed, personal and emotional experience layer into customer insights reinforces empathy in human-centered design projects, especially in healthcare. This was recognized right from the start of the process, as a customer needs to reveal their personal health history and mirror it to possible medical conditions and lifestyle choices of their close family. The customer needs to process this often-emotional data themselves and start simultaneously building trust towards healthcare professionals who need this data to form a holistic view on customer’s health. The emotions during different stages of the customer journey shifted from anxiety to excitement and from frustration to relief to name a few. From service design perspective, recognizing the existence of these customer emotions and including them into a customer journey map is essential, while they also help to determine the interdependencies of different actors in a stakeholder map.

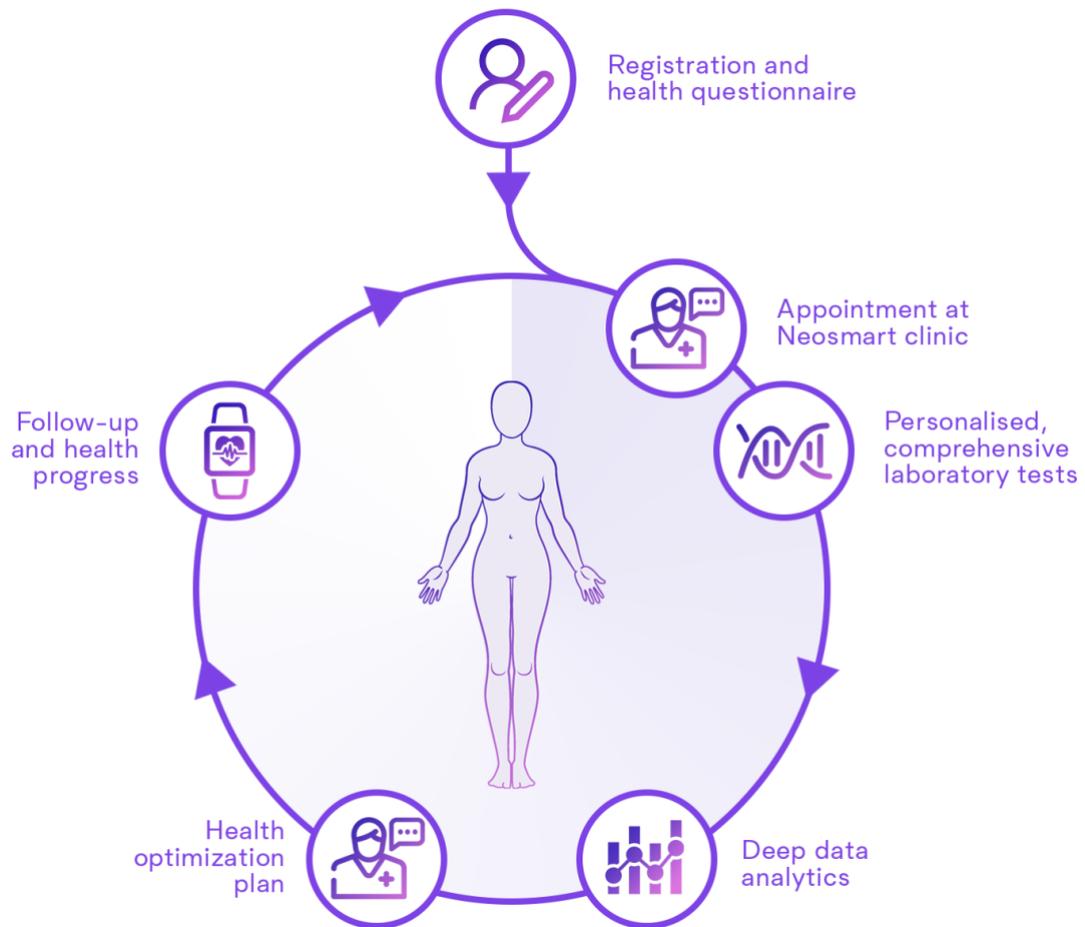


Figure 19: Neosmart Health simplified customer journey

The findings of the service safari are not elaborated in great detail in this chapter, but they were considered during data analysis (chapter 4.1.4.). However, this chapter will end with a quote from the author's service safari diary, as it represents the importance of recognizing the emotional journey of a customer, as well as if/how value emerges from the service. The following episode takes place after the author has received results from extensive medical tests but surprisingly is not going to receive a personalized health plan during the same doctor's visit:

"The nurse books me another appointment during which I'll get my health plan. After going home, I browsed through the results quickly and started thinking: How could the health plan be most effective and accurate to mirror my health ambitions? The medical staff at Neosmart Health know about my health history as well as present status [medical facts] but at no point has anyone asked about my health goals. Is the next step going to be just about fixing those numeric values [certain vitamin levels need adjusting] first and only then focusing on what I feel important? Is the practical solution going to be vitamins and nutrients? What about exercise, sleep and nutrition?"

I decided to send an email to both doctor and nurse with detailed thoughts about:

- *My starting point from a health perspective*
- *Near future and goals*
- *My expectations of the health plan*

This email should help the medical staff to get all the remaining details in order to conduct a truly personalised health plan. What I'm wondering is how can they complete a health plan for others if they don't have this information? At which point and how should Neosmart find out this information? A more detailed questionnaire? A nurse's interview? In many ways, the service culminates at this point in the health plan, and it should stay true to the company's service promise."

4.1.4 Data Processing and Analysis - Forming a Unified Understanding of Data

In this chapter, qualitative data gathered for this thesis is processed and analysed. The analysis highlights the mindset of consumers towards health, healthcare services and using wearables, identifies characteristics of customer experience in reactive healthcare services, determines the ingredients of great customer experience in healthcare and simultaneously seeks answers to the research objective and research questions. Using qualitative data from multiple separate interview sets, industry analysis and observation (service safari) resulted in data triangulation (Miles et al. 2014), where these independent measures supported findings.

Interview data from Group 1 was recorded by making written notes during the interviews. Interviews for Groups 3 and 4 were audio-recorded and transcribed manually by the author, whereas most interview data from Groups 2 and 5 was mostly already transformed into insights by other researchers. It was recognized that the latter might influence the analysis process. Thus, the author decided to start data analysis with clean interview data from Groups 3 and 4. Insights and available raw data from groups 1 and 4 were processed after initial themes and insights from Groups 3 and 4 were already formed, not to influence the outcome of data analysis or encourage in making light assumptions from the data.

A selection of transcription applications was tested to speed up the transcription process, but it became quickly evident that no such solution exists to capture the Finnish spoken language. Transcribing the data was started after all interviews were completed. In retrospect, this was a mistake from time management point-of-view. Transcribing the interviews took a considerably longer time than initially predicted. Thus, it is recommended for any researcher in the future to book time to transcribe interview recordings and field notes right after the interviews. This will ensure also, that no non-verbally communicated customer data is lost either. According to Silvermann (2000), there's a temptation of making observations while doing transcripts. This might result in common-sensed and ad hoc observations that don't serve

the process of analysing qualitative data. The question that puzzled before transcribing the data was “What is the level of detail that’s required in transcribing the interviews?” According to Mäkelä (2019), it is beneficial to transcribe what was recorded quite literally, and also describe the general mood and possible changes in the mood during interviews, as this will help to interpret the transcribed data after time. The interviews were transcribed with high precision and significant changes in the atmosphere were also highlighted.

Miles (et al. 2014) highlights the importance of having structural and conceptual unity with coding the material from the start. Categorizing specific codes and maintaining that list up to date, enables consistency when returning to the research material later on. Saldanã (2013) introduces three elemental methods; 1. Descriptive, 2. In Vivo and 3. Process coding, that serve as the foundation approaches to coding. Several effective methods such as emotion, values and evaluation coding can be sub-categorized under this foundation. The customer data from Groups 3-5 was coded using Miro, an online whiteboard for visual collaboration, as presented from a high-level perspective in Figure 20. For finding relevant clusters and themes from the data, affinity diagramming was used. It is a common method for bundling large bodies of information. With the help of an endless whiteboard available in Miro, the affinity diagram enabled naming, prioritizing and understanding relations between groups and data (Dam & Siang, 2018). Figure X illustrates the main categories; 1) health 2) customer experience in healthcare and 3) preventive healthcare, under which certain themes and sub-categories with detailed evidence are listed.

As the research questions influenced the structuring of interview guides to start with, it’s evident that there were some preliminary codes already available for the analysis part. Miles (et. al. 2014) argues that this should not influence the analysis. Vice versa, revising the coding is natural as the field experience continues. It is crucial to remember not to force-fit any material inside certain codes, but instead stay open to new opportunities if new codes emerge from the data. The transformation and coding of the data easily start inside the researchers head already in the latter part of the interview cycle especially if the interviewer is the same person as the one that does the analysis. Following a structured way of proceeding with the analysis prevents from missing some novelty aspects that are possibly scattered in the transcriptions. A combination of descriptive and emotion coding was mainly used to process the data in the thesis. Descriptive coding gave structure to the labelling of codes from the start, while emotion coding sought to emphasize interviewees’ feelings through comments and thus highlight the importance of empathy, essential to HCD.

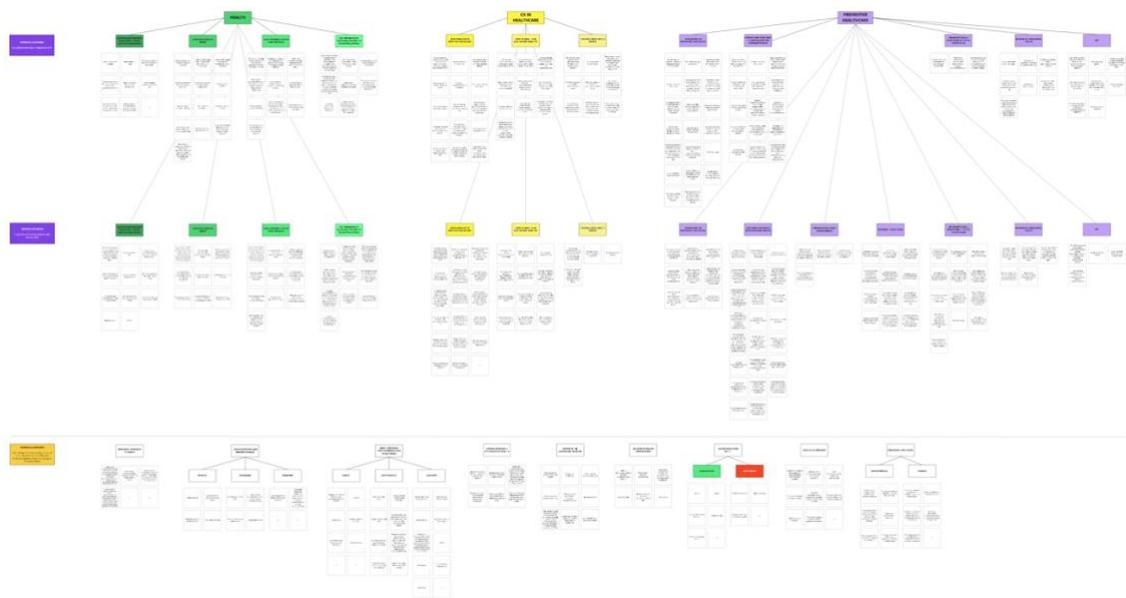


Figure 20: High-level affinity diagram - coding customer data with Miro

A combination of deductive, inductive and abductive analysis was used in this thesis to process the acquired data and form insights. Miles (et. Al. 2014) characterizes deductive coding as a provisional start list, generated prior to analyzing the data. The list may be inspired by for example research questions, hypotheses of the conceptual framework of the study. Expert interviews and following design process planning represented deductive coding in this thesis. During inductive analysis, findings will emerge progressively from the material, such as interview transcripts or any other qualitative source of material. The objective of inductive analysis is to find sequences, patterns and related talk that complement the research purpose (Silverman, 2000). Analysing qualitative interviews brought up a question, whether inductive analysis was better from a service design perspective as it leaves the research open for all opportunities, for example entirely new themes emerging from new data to give a new perspective and even new direction to service development. Brinkmann and Kvale (2015) describe abductive reasoning as finding the best possible solution to the determined problem. Abductive reasoning is often employed in situations of uncertainty. It involves forming a conclusion from the information that is known. This supports the recognition of abductive reasoning in this thesis as preventive healthcare as an industry is still finding its form. In addition to deductive and inductive approaches, abductive reasoning also proved a justified choice for the thesis. The social phenomena - rising interest and proactiveness towards health wellbeing and a paradigm shift from reactive towards preventive healthcare - has been approached with a certain hypothesis, coding revised based on collected qualitative material, but conclusions have also been based on the known information, using all three methods have been inevitable.

Main insights from the data are now presented thematically, starting with **Health** (Figure 21). Three distinctive categories emerged from the data summarizing the interviewees' perspectives on health. **1) Attitudes and mindset** demonstrate how the perception of health has transformed globally. A quote from an interviewee contains both the residual and dominant mindsets: "Health used to mean not being sick. That has changed. Nowadays, health means comprehensive wellbeing, both mental and physical." This attitude shift is visible interestingly in all age groups but triggered and amplified the most in the stage of adulthood, or alternatively after a health-related incident such as illness or trauma. The interview data, as well as global health and wellness trends, present that a holistic approach to health and healthcare is emerging. The pressure to act has shifted from healthcare professionals to the individual (consumer) as proactive, autonomous, rational and entrepreneurial subjects. Individual consumption choices that support investment in own human capital (health) is trending.

2) Being healthy constitutes of a combination of lifestyle habits, with respective personalized emphasis. Maintaining health is confounded by for instance busy routines and threat of generalized chronic diseases. Motivators of being (or becoming) healthy arise often from major health-related experiences but are in many cases from unselfish origin, as described by an interviewee: "I started to pursue a healthier lifestyle once we had our first child. All of a sudden, you had to be able to take care of others. Children mess up the regular schedule but sometimes create structure and rhythm to life". The ideal feeling almost every interviewee is seeking is holistic wellbeing, visible through energetic feeling throughout the day, without the constant worry of health issues.

3) Health sources are divided into people, places and things. Healthcare professionals such as doctors are considered the most reliable source of health-related information. Cultural change towards commonly recognized healthier lifestyle choices is visible besides through the acquired customer data, also in media. For instance, the popularity of alcohol use among young people has declined significantly in many western countries (Pattani, 2018). The popularity of social media

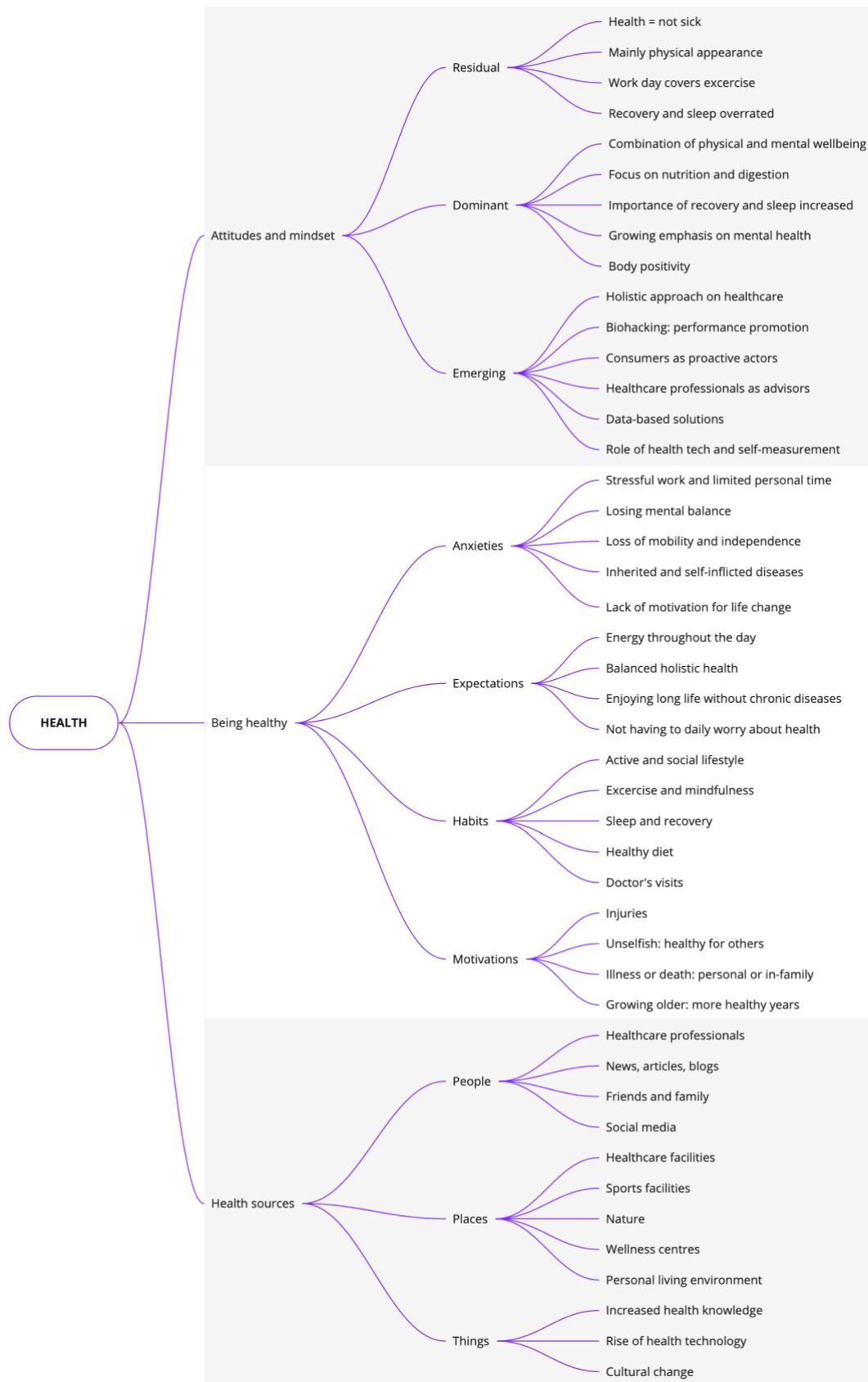


Figure 21: Emerging attitudes towards health favour a holistic healthcare service

and increased amount of available health information influences the opinions of people and stresses the importance of information source criticism. Is a self-educated social media influencer with a common interest towards healthier lifestyle a suitable source to publish trending diet recommendations? To what extent should daily tabloids, read by the majority of Finnish people, be used as health sources and even motivating people in transformation?

The author's perception is that health and wellness is to some extent defined and commodified by industry, and thereby is a resource that can be commercialized, bought and sold, and consumed. Wellness has also transformed from an industry into a culture; health is an achievement that provides social and cultural capital. This capital is sold via interpersonal interaction in the social economy, take for example personal trainer or lifestyle coaching services. An interesting perception relates to the construction of an individual's status and identity; in many cases status is determined by how well (not if) one participates in wellness economy and "performs" in health. "How well" can be measured with the help of wearables, comparing results in social media, and is finally determined by decisions undertaken in identity construction.

Furthermore, the qualitative data presents health as an investment, especially among active health enthusiasts. Their daily decision-making framework seeks to optimize ROI (return on investment) of consumed products and services for return on health. Many interviewees expressed the goal-oriented nature of their health actions. Not surprisingly, most interviewees wished to reach their health goals as easily as possible. A rational investor desires insider information (about their health) to make a sound judgment. This means people are ready to invest in seeking personal health facts through healthcare services and tracking with wearables. Personalized guidance about nutrition, exercise, sleep and mental balance is seen as a sound investment for the future. In addition to those seeking for increased efficiency during their health journey, others found fulfilment from the journey itself. Some of the interviewees portrayed a lifestyle in which physical and mental wellbeing was in (or soundly on its way to) balance, and their daily choices maintained that balance.

From the perspective of improving customer experience in preventive healthcare, the aforementioned data forms the core knowledge of customers' health ambitions and attitudes. This information is valuable as it provides the big picture of how health perceptions are shaped inside a specific culture, in this case mostly that of Finnish origin. Similarities between different nationalities occurred proving the universal nature of health. Still, it is worth investigating different cultural aspects when personalizing a preventive healthcare service to new markets.

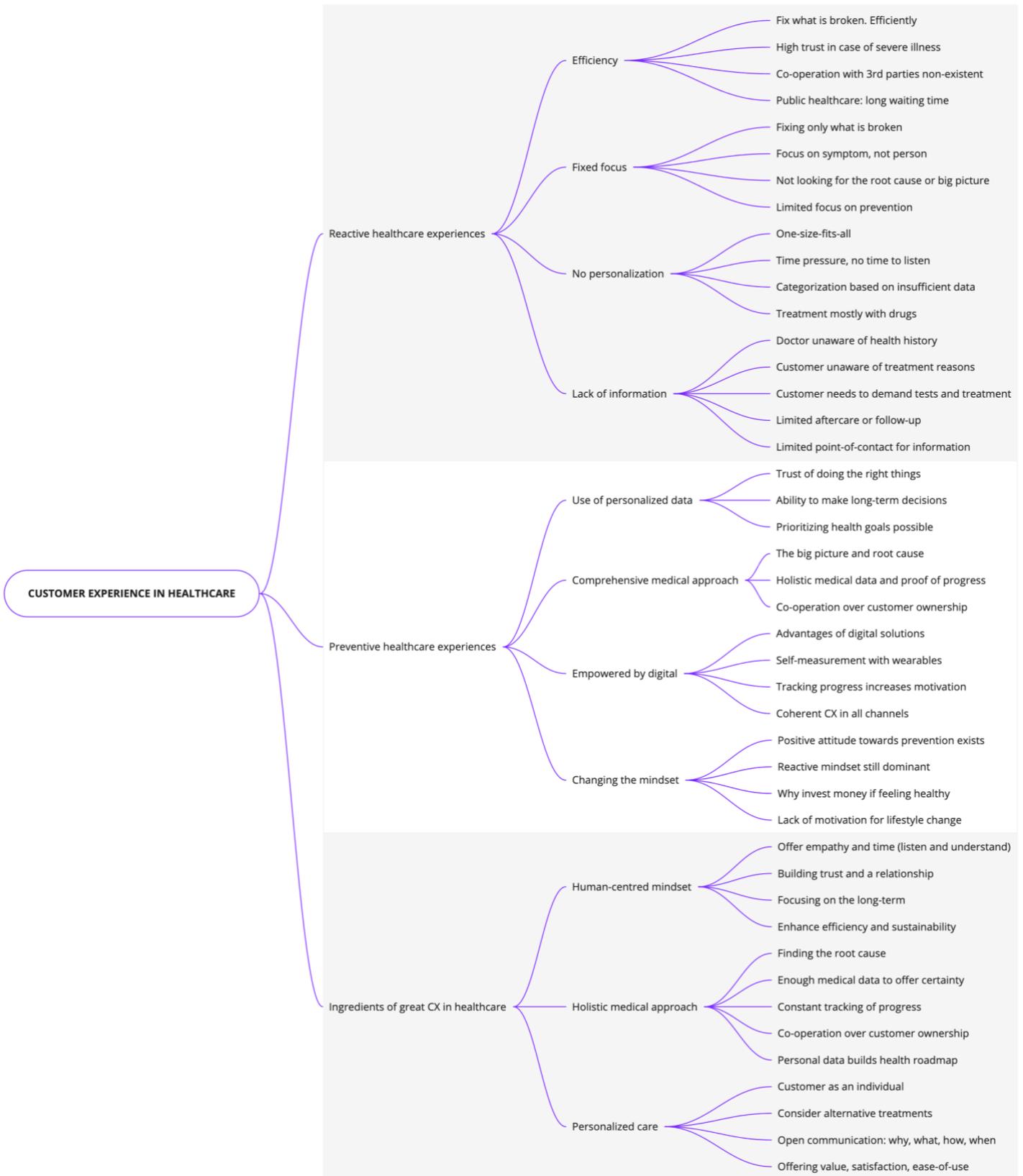


Figure 22: Comparing customer experience between reactive and preventive healthcare

The second theme, **Customer experience in healthcare**, builds a link between reactive and preventive healthcare services through customer experiences and ultimately highlights the significance of human-centered approach, visualized in Figure 22.

When asked about an experience with **reactive healthcare services**, almost all interviewees started telling a story that highlighted a negative experience. One interviewee described a common issue as following: “You can’t see the person if you’re just treating one detail of the body. I feel like the only thing that matters is the illness, not the person.” Another interviewee went into more detail when describing the Finnish healthcare system: “There are two kinds of doctors; ones that treat the left arm and ones that treat the right arm.” Based on interview data, reactive healthcare is focused on efficiently fixing an obvious health issue. Considering the current, dominant emphasis on efficiency in reactive healthcare, a highly focused approach can be justified. But according to the people that are treated, it often comes at the cost of customer experience. In many cases, doctors have been reluctant to address a health issue that’s not directly related to the main reason for the ongoing doctor’s appointment. Time pressure during short appointment times makes it harder to deliver personalized or comprehensive care. This has resulted for instance in the categorization of the customer only based on their BMI (Body mass index) instead of building a comprehensive view of a person’s health based on their health story or influence of daily medication. In case of severe illness, most interviewees mentioned they have high trust towards the national healthcare in Finland but struggle with the paradigm of having to become severely sick before receiving quality involvement from healthcare professionals and institutes. According to many customer stories, to receive treatment or adequate medical tests, the customer needs to be able to demand that service. The similarities of opinion were visible in all interviewee groups although it’s worth considering whether it’s more common to emphasize a negative experience. According to Vaish (et al. 2008), we attend to, learn from, and use negative information far more than positive information. Through this negative bias, negative experiences elicit more rapid and prominent responses than positive experiences (Carretié et al. 2001). Regardless of biases, the nature of modern customer behaviour and a sea of available service options should alarm companies to give greater focus towards avoiding negative service experiences.

Interviewees outside of Group 3 (existing Neosmart Health customers) had very limited personal experiences in **preventive healthcare services**. Nevertheless, most interviewees welcomed the idea of preventive healthcare and were familiar enough with the concept to describe its elements at a basic level. Those with more experience in preventive healthcare, for example, the Neosmart Health service, described the benefits through three categories: use of personalized data, comprehensive medical approach and being empowered by digital. The most impressive and often mentioned factor for Group 3 was the holistic approach of healthcare providers to first build a complete understanding of a person’s health based on comprehensive medical tests. Taking the time to find a root cause for discomfort or health issue helped in

building trust towards the service provider but also gave the respondents confidence that long-term decisions and a prioritized roadmap towards better health can be created together with the healthcare professionals based on facts instead of a gut feeling. This revealed to be a seductive thought also amongst other interviewees. Many expressed that they have the motivation for a change but lack direction and clear steps along their health journey. The growing number of digital health solutions and wearables enable self-measurement, defining health goals and following progress. The popularity of smartwatches and activity trackers has increased over the past decade and digital solutions that they're integrated with displays the data through compelling and motivating visualizations. Emerging products, such as the sleep quality-tracking Oura ring, are amongst the modern, less noticeable group of wearables that don't require constant attention or screen time from the user. Interviewees unite in a demand for a personalizable digital solution that combines comprehensive medical data to real-time data uploaded from wearables of their choice.

It became clear through the acquired data, that the variety of medical approaches in a sea of preventive healthcare services has made it impossible for the customer to form an understanding of a unified customer journey in preventive healthcare, as opposed to reactive healthcare. A preventive healthcare service's medical focus may range from a very detailed focus on only gut health or popular DNA tests to a more holistic approach that considers health through a wider lens. Although the concept of preventive healthcare was praised among interviewees, reactive healthcare mindset is still very dominant, in the Finnish market at least. Two quotes from Finnish interviewees summarize the fine line whether or not to convert from someone interested in the concept to an actual proactive preventive healthcare customer: "Why would I go to a doctor when I'm feeling OK. Although it's relatively easy to buy a 1.000 € smartphone, I struggle with investing the same amount to my health. I need some kind of a push to change my mind." The second quote: "Yes, this (preventive healthcare) is exactly what I need to improve my health. But, with a newborn baby and limited personal time, maybe I should wait until things settle down before getting tested." Naturally, a culture change on a national or even global level takes time, perseverance and resources.

As mentioned before, the comparison of reactive and preventive healthcare experiences is oftentimes biased. The personal and life-altering nature of health enforces the human experience. Thus, emphasis on experience design should be underlined in all healthcare sectors. Referring to Research Question 2; *What does exceptional customer experience look like for preventive healthcare customers?* The experiences of interviewees in both reactive and preventive healthcare, combined with desk research about the competitive landscape and benchmarking companies (in any industry) that have succeeded in great delivering customer experience, form the **ingredients of great customer experience** in preventive healthcare. Human-centered mindset is needed to truly empathize with people. Focus and commitment to a long-term health-improving journey build trust between the customer and service provider.

Efficiency, familiar from reactive services, together with sustainability of selected treatment leads to streamlined service. A holistic approach to health to find the root cause of discomfort or illness, a sufficient amount of personal health data and measurability of health improvement are all expected from the experience. Data offers certainty, improves self-confidence and a feeling of security while enabling designing a personalized roadmap to health optimization. Offering value, satisfaction and ease-of-use require innovative solutions focusing on personalized care and open communication. In the context of this thesis, the interview data provided specific information on determining the ingredients of great customer experience in preventive healthcare services.

The third major theme from the interview data demonstrates the perspectives and opinions of interviewees towards the case company, Neosmart Health, throughout their customer journey. This theme is presented in Figure 23. Most potential customers were not familiar with the Neosmart Health brand or service beforehand but were impressed with its specifications after becoming **aware** of its existence and characteristics. The vast majority of all potential customers choose the company website for the number one source of information when getting to know a new service. Building trust towards to company's offering consists of familiarizing with the relevancy of scientific or medical approach, customer reviews and even checking such details as personnel and company financials.

Although acceptive towards preventive healthcare, unclarity of the service process, pricing vs. derived value and unclarity of service comprehensiveness threatened onboarding during **consideration**. Motivators supporting onboarding derived often from negative experiences with reactive healthcare services or a growing interest in personal health. A desire for a long-term relationship with a reliable and innovative service provider is recognized as a key factor. Interviewees expressed a need for both motivation and professional authority to advise and challenge them by providing facts and easy-to-follow steps to reach their health goals. Successfully communicating the company purpose, service concept and emphasizing the benefits of different service features is crucial to increase conversion rates towards customership.

Service stage benefitted from human-centered approach during relationship building, personalization from start to finish and offering exclusive comprehensiveness compared to other services. Success in understanding the customer needs at the beginning of personalized service is essential to the holistic customer experience. Nevertheless, it is worth considering, how much personalization is adequate. Complementing an already comprehensive service package with more medical tests based on customer's medical condition is truly personalized, but in some cases, the increased costs of personalization exceeded the derived value. Many interviewees mentioned price as an important factor when choosing a service and one explicitly

expressed that the increased cost is the main reason for not recommending the service to friends or family (2019, Neosmart NPS survey).

Many interviewees prepared for upcoming visits to Neosmart Health by finding information proactively about subjects relevant to their health. Thus, the role of the service provider as an active, up-to-date and reliable source of information is essential during stages of indirect connection with the customer, for instance when waiting for test results. Providing added value through information leadership via a customer-preferred channel benefits the overall customer experience. Getting a personalized health plan needs to be well summarized, yet it needs to offer information with greater detail. Open communication and proactively explaining the what, why, how and when regarding results and next steps during the health journey.

Loyalty is the most challenging service stage in preventive healthcare according to the interview data. First, the technology has a central role in delivering a streamlined and coherent customer experience through features, that the customer values enough for even the slightest chance of brand loyalty. Receiving possibly life-changing medical results, understanding and committing to the next steps of adjusting lifestyle habits require visualized, easily understandable information about one's health and motivating and tracking throughout the process. This brings us to the second notion; What is the role of the service provider after the customer leaves the physical reception with their personalized health plan? If the service promise includes a statement of "Keeping people healthy", to what extent does the service provider want to live by this promise? One interviewee described their potential future health journey as following: "Finding direction and a step-by-step program towards better health sounds perfect. Having healthcare professionals that care about your health, set the direction based on my health facts and challenge you to achieve your goals is a huge bonus. After that, progress needs to be measured but during the process, I don't need holding hands." Some other interviewees were riddled, whether they would have the strength or motivation to follow by new routines. A digital solution that would motivate and track progress with customizable repetition would serve the purpose for both customer and service provider. Co-operation with other healthcare and wellness services is seen as positive. Not force-fitting the customer to your service if a better option is available, is a mature route from a customer experience perspective. Maintaining knowledge of the customer's health journey with third-party service providers is by no doubt a challenging scenario, but with the consent of the customer, it is possible and improves overall CX. The service provider's role after the actual service is a topic that has many implications for future research needs and design work.

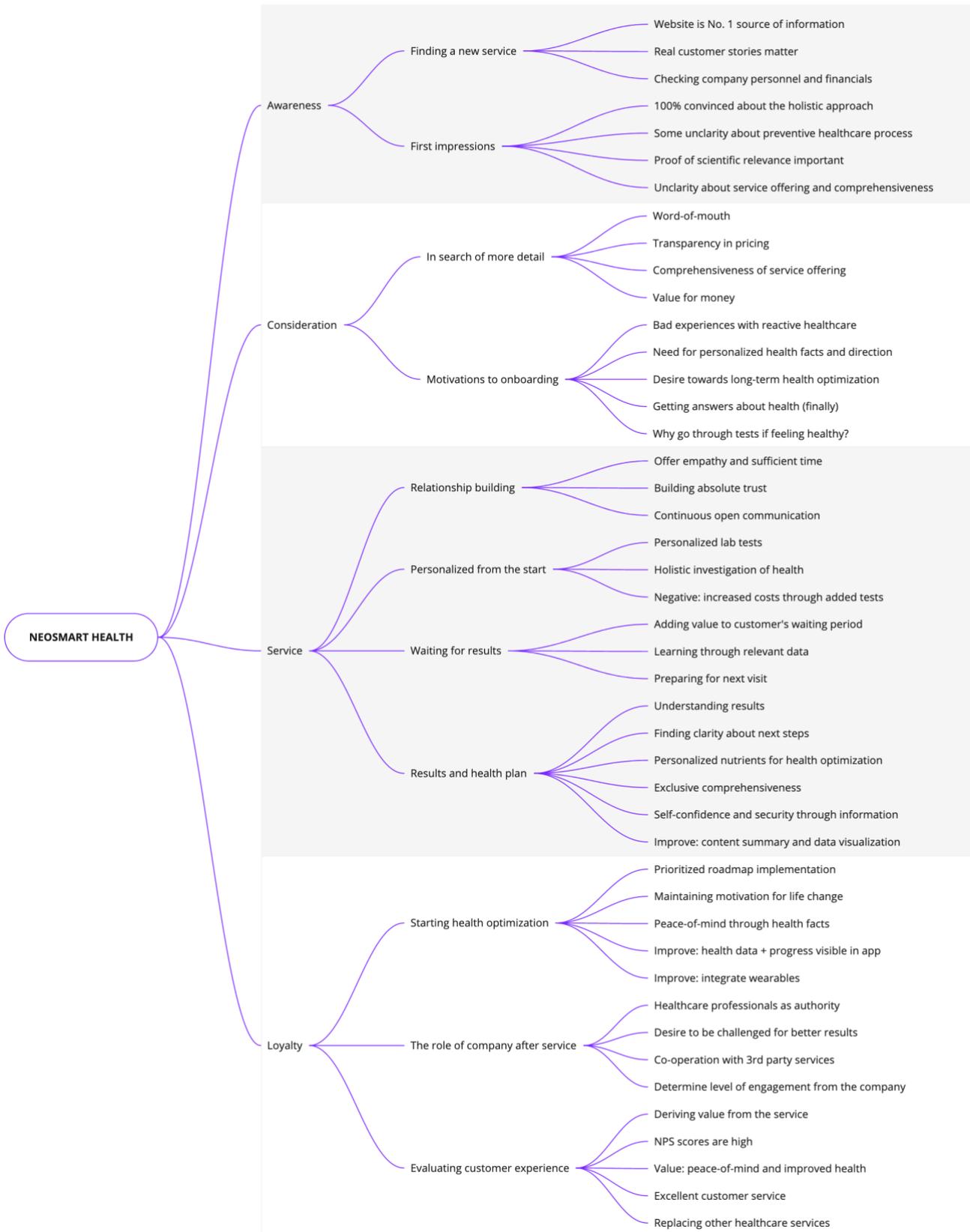


Figure 23: Insights about the case company, Neosmart Health

Finnish professional athlete, hurdler Oskari Mörö, evaluated his customer experience at Neosmart Health as following: “Neosmart Health professionals have a genuine interest in every customer’s requirements. I’ve been able to return to active training and successful competing because of the personalized service.” The NPS surveys and customer interviews complemented the level of customer service and the empathy it reflects in the overall experience. Although statistics showed a seemingly good level of overall satisfaction, many insights supported the need for improvement with identified gaps during the customer journey. Moments of truth described in the initial customer journey map were adjusted based on the interview findings and development of customer experience with the help of selected service design methods are presented during the upcoming chapters of the thesis.

Based on experience with conducting qualitative research and analysing the data both individually as well as in a small group, the benefits of group work arise. Working in a small group on the same subject provides alternative point-of-views and assists in evaluating the importance and relevance of selected themes while mapping them. This is relevant when working on qualitative data during service design work in a small company, in any industry. From conducting qualitative interviews to transcribing, analyzing and coding the data, to ultimately translating the findings into for example actionable business opportunities or validation of existing customer data, is very time-consuming work. Some of the tasks require complete focus and understanding the big, industry-related picture to be able to grasp novelties from the material. Other tasks, such as transcribing the interviews, can be completed in a more operational mode of work. In both instances, collaborating with other researchers, depending on group dynamics, brings more value in the process.

To summarize, the interview data showcased in this chapter formed concrete and coherent evidence that supported previously acquired customer data (Group 1) regarding selected topics of preventive healthcare, health and health technology and complemented it with subjective customer experiences. The insights presented in this chapter are considered valuable by the author from two main perspectives; First, building a coherent and comprehensive customer understanding is cannot be limited to only service specific features and opinions when applying human-centered design and customer-dominant logic. A deeper understanding of customer’s life also before and after actual service stage is needed. Secondly, providing this wider spectrum of customer understanding sets a solid foundation for service innovation. Service designers can implement lean development cycles, such as design sprints, on service features that target for instance the latter part of the customer journey to ensure continuum and deepen the customer relationship. Considering that the data ranged from global industry analysis down to a single customer, and insights were discovered from qualitative and quantitative sources, but also noticing that at the end of the interview cycle, data started to offer decreasing amounts of new insights, it is justifiable to determine that data relevance, volume and quality were on an optimal level.

4.2 Defining the Building Blocks of Current Customer Experience

The insight gathered from the discovery phase helps the designer in defining the challenge (Design Council, 2019). The mindset shifts from divergent to convergent thinking, leading to the best answers based on data, and thus leaving no room for ambiguity (Curedale, 2013). The upcoming sub-chapters describe how the research problems of this thesis formulated from the data, the reigning level of customer experience was measured and steps along the customer journey determined with the help of selected service design methods.

4.2.1 Measuring Experiences through NPS

During initial discussions for crystallizing the topic of the thesis, Nurmela and Koduvayur (2019. Personal communication), mentioned that Neosmart Health wasn't actively or systematically measuring the customer experience. NPS survey was recognized as a preferred method of collecting customer data, as experience, interest and belief towards the measuring system existed within the management. An NPS survey template and a light process to handle the collected data was rapidly designed and the survey sent to selected Neosmart Health customers in April 2019. The survey focused on the recent customer experience the participants had at Neosmart Health clinic in Helsinki, gathered quantitative information about recommenders, passives and extractors, that would form the NPS score. Qualitative data emerged from open questions in which focus was on reasons behind the given score (0-10) and thoughts on how to improve the service experience further.

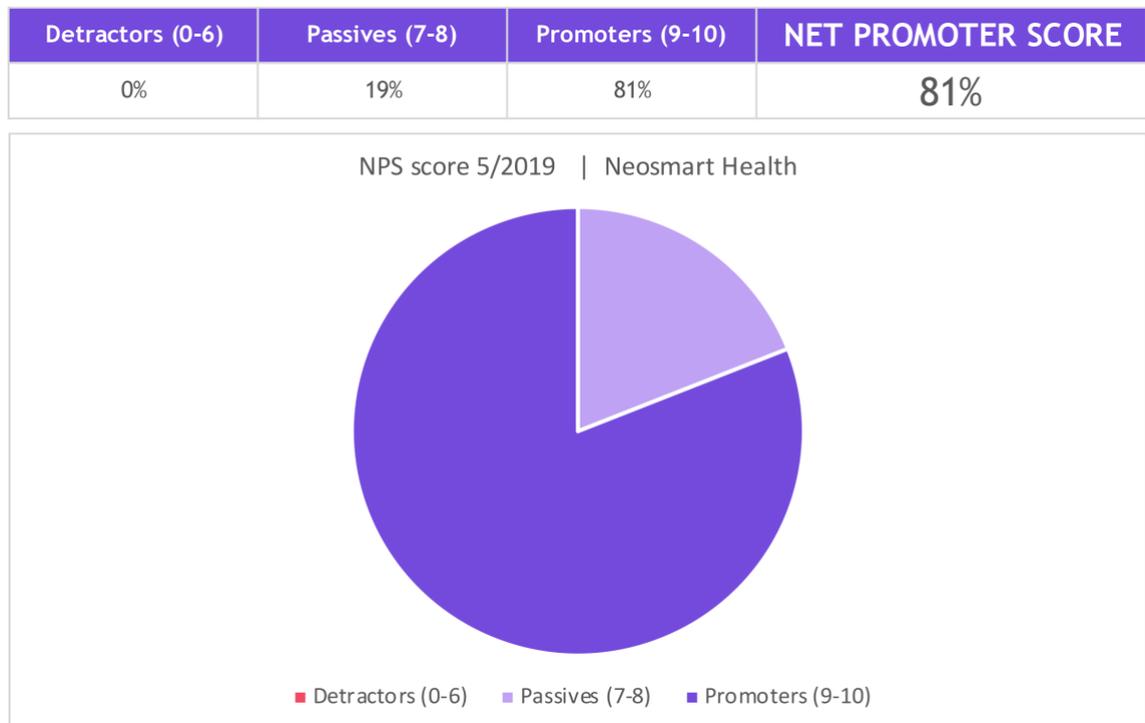


Figure 24: Measuring the customer experience with NPS (Neosmart Health 2019)

The results of the NPS survey were calculated and an excellent NPS score of 81% was formed, as visualized in Figure 24. Surprisingly, no detractors were discovered during the survey. The finding suggested that regardless of the ever-developing nature of the service, customers were willing to recommend the service. The open questions in the NPS survey revealed several small challenges that the customers were facing. Luckily for Neosmart Health, most of these challenges were recognized as low-hanging fruit, in other words, low budget and easy-to-fix.

The first NPS survey score and answers from qualitative questions gave direction for service development and served as a baseline for setting goals and improving the customer experience in the future. Future plans include designing and implementing multiple surveys and applying best-suitable measurement methods to cover selected service experience steps separately as well as expanding measuring from customer experience to also employee experience. This will help ensure that experiences at Neosmart are constantly managed and developed.

4.2.2 Stakeholder Map - Linking the Customer's Environment

Freeman (1984) describes stakeholder as “any group or individual who can affect or is affected by the achievements of the organization's objectives.” These individuals or groups are categorised to a visual representation of what is called a stakeholder map. Stakeholder maps enable exploration and analysis of the interplay between different stakeholders. According to Stickdorn (2019), a stakeholder map often reveals, how customer-centric the company culture is. This can be revealed for instance during a workshop by asking participants (company representatives), who they would put at the centre of the map. If they answer anything besides the customer, their mindset is anything but customer-centric.

During the spring of 2019, a stakeholder map for Neosmart Health was generated by the author. No previous stakeholder maps existed in the case company. The stakeholder map, visualized in Figure 25, was created based mainly on customer insight from Group 1 and interview data from expert interviews. At this point, only a part of Group 2 was interviewed but enough data existed to initiate stakeholder mapping. The map was later updated as more customer data was analysed. The purpose of the map was first of all to recognize different stakeholders that interacted directly with the customer (layer A) from the case company (layer B), but also understand the effect that external stakeholders (layer C) have on the customer. The initial stakeholder map was set to represent a boundary object to be used during the customer journey workshop (Chapter 4.2.3.) to enable experts from different fields to collaborate and work together on a goal. (Mäenpää, Suominen, Breite 2016)

The customer is directly influenced or encountered by certain Neosmart Health staff members, mainly clinical personnel. Neosmart Health's online presence covers the company website and all social media sites, governed by the company. What is more interesting and useful for the company to understand, is the role of different external stakeholders in relation to customer's

perceptions of health, their approach to using healthcare services and healthcare technology. The customer insight gathered for this thesis helped in building some understanding of the emphasis of different external stakeholders. “Some” understanding refers to limitations in customer data as third-party stakeholder influence was not the main focus of this thesis and was best represented by interview Group 4. Furthermore, prioritizing the importance of certain external stakeholders is highly subjective and time-constrained. Example: customer A might rank their parents’ opinions about the usefulness of wearable health technology over opinions of A’s friends. Temporal nature of A’s opinion is proved when A learns more about wearables’ usefulness in self-measurement in through blogs and exposure in social media, making A change start appreciating the idea of wearables more. A’s opinion might be further influenced after visiting a personal trainer at a gym, who would recommend a wearable to track progress during conditioning. Knowing to a more detailed extent, who are the external stakeholders that most influence the customer’s decision making, gives the company an edge for example when emphasizing different marketing channels.

In Neosmart Health’s case, customer insight shows that all potential customers consider a company’s website to be the number one source of information when introducing themselves to a new service. Whether it is B2B or B2C, designing the website to serve this purpose and present the most important information in an easily understandable form is decisive for a good first impression. Family, together with influence from surrounding society, is considered in many cases the basis of customer’s health perception when growing up. Individual lifestyle choices during the shift towards adulthood shape and influence of close friends grows. Millennials are grown in the internet era, and they are more used to critically approach health sources on the internet. Still, social media’s rise of popularity and for example influence of health-driven influencers in Instagram has made it more difficult for customers to determine, whether to choose one diet over the other or to pursue a certain superficial health ideal. Curedale (2013) argues that in addition to finding stakeholders with a positive influence on the customer, stakeholder maps also help in discovering risks, as stakeholders that hold power over the customer, might sabotage design outcomes.

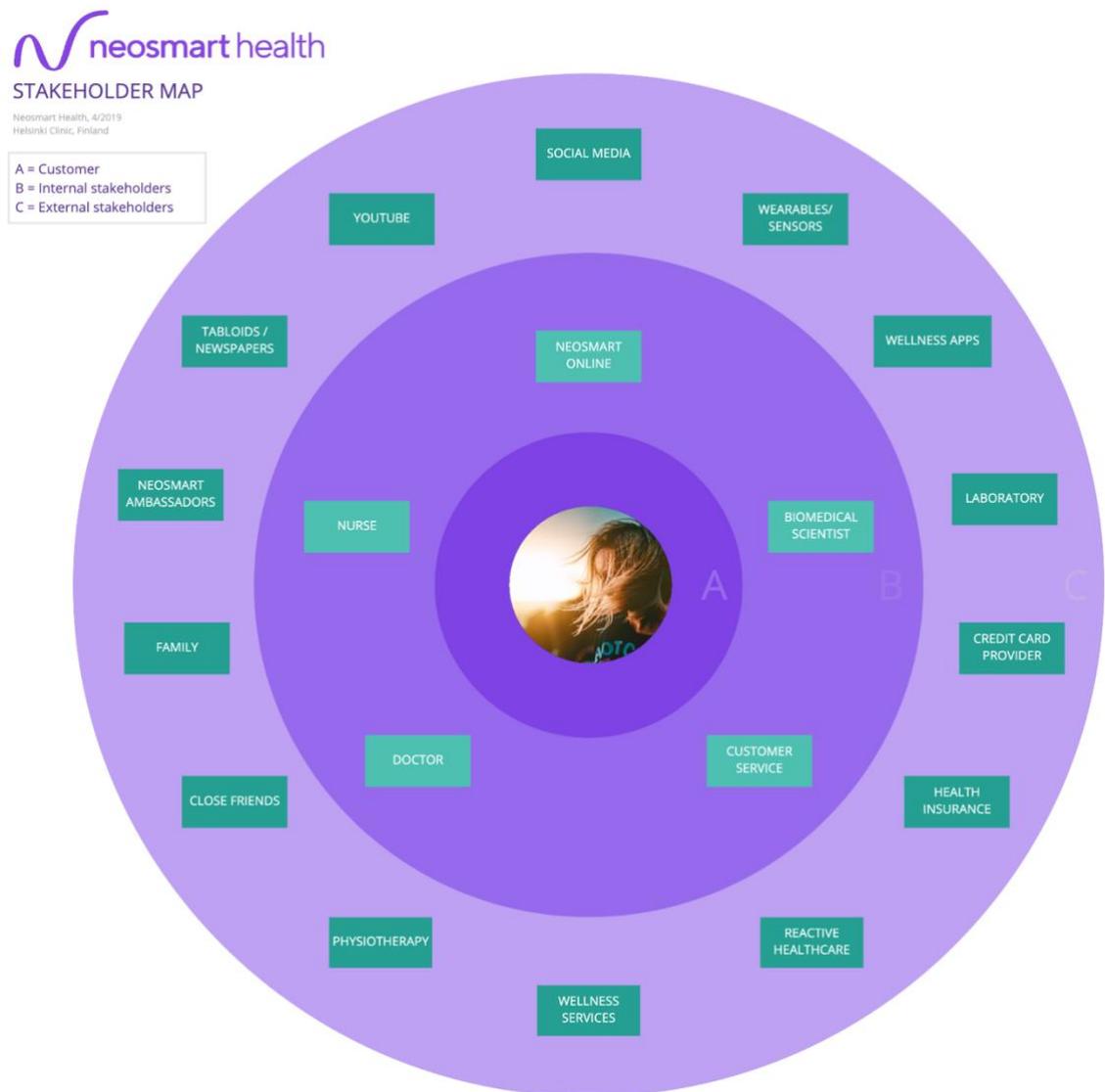


Figure 25: Neosmart Health stakeholder map

The customer data also suggested that customers appreciate the idea of open communication between service providers. One interviewee (Group 2) described this as following: “I welcome the idea of Neosmart Health taking overall leadership of over my health in terms of health information. Once my health baseline was uncovered through tests, I liked that Neosmart Health didn’t force-fit a specific service provider to help to fix my problem. In the future, I hope Neosmart Health would even communicate with for example my personal trainer to keep track of my progress beyond just medical data.” Having a connection to wellness services, physiotherapists and reactive healthcare providers to name a few, and building a coherent network of internal and external stakeholders, would unify knowledge of the customer, something to consider across industries beyond healthcare. According to Stickdorn (2019) trust is essential in any value network and basis of any business.

4.2.3 Personas - Increasing Empathy for the Design Process

According to their 2017 study on predicting customer behaviour, Netflix concluded that using mainly demographics such as age, gender and geography is garbage (Morris, 2017). Stickdorn (2019) agreed with Netflix's statement making an argument that generally traditional companies choose demographics because of easy availability and thus lack depth in design processes. Instead, looking into qualitative data, finding homogenous segments and creating archetypal representations, personas, for those segments, employees can empathize and remember different segments in more detail (Grudin & Pruitt, 2002). Empathizing to a persona makes it easier to create a suitable offering for them with reduced self-reference (Curedale 2013). Grudin & Pruitt (2002) suggest that traditional "user-centred" approaches often fall short in engaging designers or users, as social and political aspects of the design outcome are filtered out. When used in conjunction with other design methods, personas help draw upon powerful psychological stimulus to help restore those dimensions.

Customer interviews and insight (chapter 4.1.5.) revealed similarities in past experiences with healthcare services, main health-related anxieties, needs, goals and motivators interest towards health technology. The data analysis and customer insight provided a solid foundation of knowledge that the author converted into personas. One of the three personas created during the process is presented in Figure 26. The persona, Outi, is a married mother of two small children. Her perception of health has changed during recent years, first noticeable after experiencing periods of sickness that occurred too often and felt longer than before but mainly after becoming a parent. She felt that health had become more than the absence of sickness, but more that of comprehensive wellbeing, both mental and physical. She felt that she also had an obligation now to take care of herself better, since she was responsible for the wellbeing of their children as well. Before children, Outi had tried to find answers for her lack of energy and more occurring sicknesses through occupational healthcare but she felt not enough effort was put into finding the root cause of her health problem. Outi was recognized driven by personal development. She has always enjoyed challenges and is curious about new things, visible through for instance in her recent interest in tracking her sleep with her new Oura ring. She's grounded in expressing that she's wealthy enough to have the lifestyle she wants. She doesn't need all the money in the world. Still, during the past years, her schedule has become more hectic and she has come to accept that currently she does not have enough time to do the things she loved to do before children. She is also annoyed at herself for not using free time more effectively to take care of herself. Instead of a workout she planned, she ends up on the sofa and instead of that monthly massage she planned for better recovery, she manages to book a massage only three times a year. Outi feels motivated to finding out facts about her health down to the root cause and is hopeful of a physician that is genuinely interested in improving her health in the long run.



Figure 26: Personas reinforcing empathy for service development

Outi is merely a single representation of multiple personas discovered from the customer insight. Outi was also used as the selected persona when mapping the customer journey during the thesis.

Another end of the customer spectrum can be represented by creating a persona of a professional athlete. Neosmart Health has helped multiple professional athletes in further optimizing their health. With athletes, depending on their sport, finetuning their metabolism or reducing sick days with even a single day, might result in improvement of a well needed 2/100 seconds improvement during a 200 m sprint or a few centimetres needed in an Olympic qualifying contest. Think of an 8-year-old child versus a professional athlete. The focus in their needs and expectations differ significantly, thus raising demand for designing a suitable customer journey and experience. Creating different personas and understanding how their needs are converted into the service experience is a basis for a better, more personalized human experience and thus essential for improving customer experience in the context of this thesis.

4.2.4 Workshop 1: Combining a Customer Journey Map with Service Blueprint

One of the essential service design challenges revealed itself during interviews with CEO Nurmela (2019, Personal communication). Although the service concept seemed well prepared, no documentation visualized the service from a customer point-of-view. Furthermore, there was no documentation explaining the roles and responsibilities of staff members, their interdependencies or relation to the customer actions. This was recognized relevant as recently recruited employees struggled in perceiving the complex nature of different staff roles in relation to customer service. These two separate branches sparked the idea for the author to combine two service design tools, Customer Journey Map and Service Blueprint in a workshop.

Best-in-class organizations focus on complete customer journeys, not just selected touchpoints. According to a study by McKinsey & Company (2016), Organizations that focus on optimizing the customer journey perform better than those who do not. In fact, the study shows 20 % greater customer satisfaction, 10-15 % greater revenue growth and 20-30 % more engaged employees. Since delivering a best-in-class customer experience was determined as one of Neosmart Health's strategic focus, using mapping methods was considered a justified choice by the author.

The challenge was explored in more detail by interviewing staff members from different roles inside the company (see Chapter 4.1.1). This issue was recognized as one of the cornerstones in gaining baseline knowledge of the service from a customer perspective. Planning of the workshop started, and the author was given authority to invite the entire staff to participate. Besides gaining knowledge on the customer experience, another incentive for the case company was that of making an introduction of service design to the staff.

Customer Journey Map

Customer Journey mapping originates from Bell & Zemke's 1989 book *Service Wisdom*. Bell & Zemke referred to the process as "*cycle of service mapping*". According to the authors, a cycle of service is about what the customer experiences. All place, process or performance-related issues are examined from the customer perspective along their journey. The idea has evolved during the past decades into one of the most established service design methods, but the principle stays the same.

Pennington (2016) describes the standard component of customer programmes, Customer Journey Map (CJM), as a structured way to understand and capture customer's wants, needs, pains and expectations at each stage of their experience with the company. CJM is perfect for visualizing the entire customer lifecycle or even the most focused part of it to identify so-called moments-of-truth, make-or-break moments that might define the customer experience. Those can be previously hidden opportunities or customer pain points that need immediate solving.

Van der Pijl (et. al. 2016) emphasizes the importance of visual attributes regarding customer journey maps. Schneider & Stickdorn (2010) add that the map is based on assumption or customer insight and is current or future state. They continue that customer journey maps help organizations to find gaps in customer experiences and explore potential solutions. Just as a movie is structured as a sequence of scenes, a journey map is structured as a sequence of steps. Curedale (2016) highlights the emotional layers of experience maps, which focus on the emotional state of the customer. Curedale (2016) concludes that different elements can be selected as part of a customer journey map, depending on topical areas of interests.

The author recognized key benefits from mapping the customer journey for the case company as 1) identifying and understanding customer pain points to improve customer experience 2) reaching a status quo about the service within personnel and 3) introducing the service to new employees.

Figure 27 represents a basic customer journey map. In this example, the emphasis is on portraying the emotional journey of the customer. Thus, “*persona*”, customer’s “*thinking/feeling*” and “*emotional experience & effort level*” have required more space in the template. The practical part of the journey is mapped by filling in “*service details*”, “*steps*” and “*channels*”.

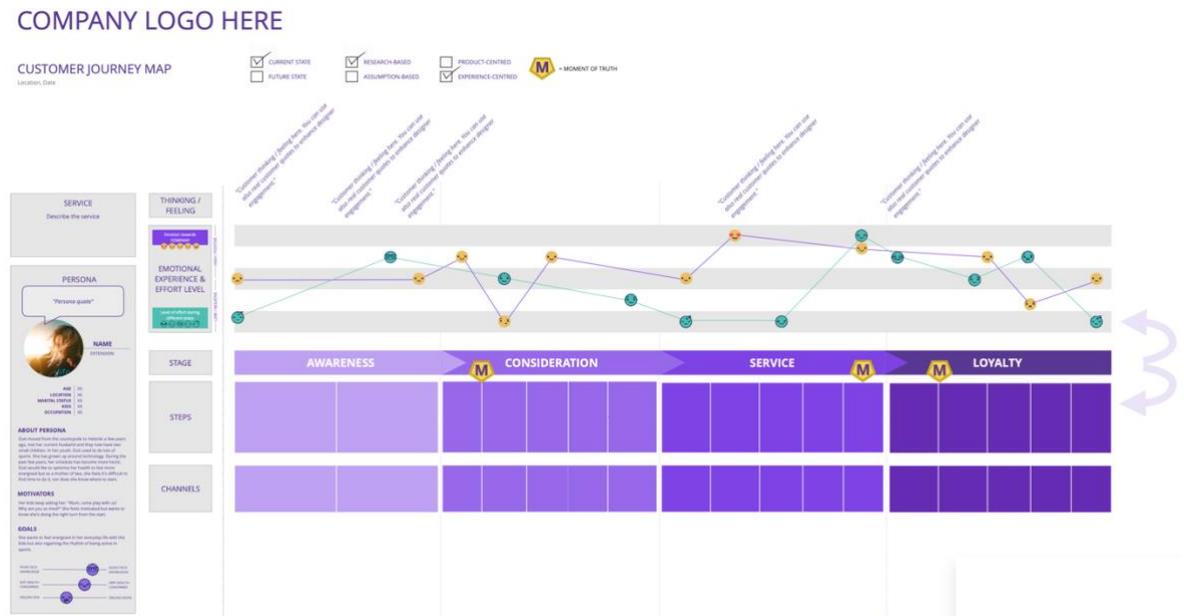


Figure 27: Customer journey map template

Service Blueprint

Service Blueprinting was introduced by Shostack (1984) as a rational, systematic process to designing new services or improving existing ones. Shostack (1984) argues that by identifying service process attributes, isolating potential service breakdowns, determining the amount of time required for service delivery and establishing a standardized service delivery, profitability will be ensured. Alternative methods of service delivery should be examined, and means of highlighting tangible evidence of the service for consumers identified and visualized in a service blueprint.

Bitner (et al, 2008) explains that service blueprinting provides a common platform for every stakeholder to participate in the service innovation process. It helps with recognizing roles and their interdependencies with others. Service blueprinting gives an overview of the current status of a service and provides insight for innovation and improvement. It facilitates both strategic and tactical innovations as it can be used on all levels of the organization. The visual nature of a service blueprint makes it a convenient way of storing and communicating innovation knowledge. It can clarify a company's competitive positioning by facilitating comparison during dual processes. Finally, service blueprinting is an effective tool for understating the ideal service experience, when applied within market research. The author considers a more adequate term than market research, is customer insight as it adds more depth in the process. The author also argues that value to the customer is the central purpose of all innovation. For this purpose, service blueprinting is a proven tool in revealing how the support of that value-creation is organized and executed in an organization.

As an ever-growing number of services increase their domination in world economies, companies have begun putting emphasis on co-creating memorable customer experiences and long-term relationships with customers (Bitner et al., 2008). This has created a need for customer-focused service innovation methods and tools, such as the Service Blueprint. Service Blueprints allow firms to visualize the service processes, customer contact-points, and from their customers' perspective also the physical evidence associated with their services. Furthermore, blueprints illuminate and connect processes that drive and support customer-focused service execution throughout the organization (Bitner et al, 2008). Service Blueprinting is found adaptable and effective in-service innovation, customer experience design, quality improvement and companies' strategic change into becoming a more customer-focused business. Service blueprinting is more precise than verbal description, and it can be zoomed in and out of different levels to identify potential failure points.

Figure 28 represents a basic service blueprint. For example, when customer X visits Neosmart Health, she first encounters a receptionist (frontline staff) and fills a personal information form (physical evidence). After a consultation with a doctor (frontline staff), customer X gives blood

samples (physical evidence) at the laboratory. Samples are processed by a third-party company (supporting process) and results are sent back to Neosmart Health. A biomedical scientist (backstage staff) analyses the results (physical evidence) which are then explained by the clinical staff to customer X. Line of interaction shows which party initiates each action, customer or service provider. When using the service blueprint method, innovation starts from identifying and stating opportunities during specific steps of the experience.

As it is visible through this example, a service blueprint focuses on the structure of a service and disregards the emotional experience of the customer. Thus, according to the author, basic service blueprints are not adequate to represent the voice of the customer in service innovation when implementing a human-centred design. Nevertheless, service blueprint offers useful additional elements when the goal is to demonstrate a service from customer perspective, highlighting the emotional experience, and simultaneously providing a glimpse of the interdependencies of different employee roles during the process.

COMPANY LOGO HERE

SERVICE BLUEPRINT

Location, Date



Figure 28: Service blueprint template

Customer Journey Blueprint - an addition to service design toolkit

As the first workshop was approaching in spring of 2019, the author contemplated options for different service design methods. The data from expert interviews (see chapter 4.1.2.) suggested that gaps within the customer journey need to be identified. This would only be possible by mapping the customer journey in the first place. There was a need for reaching the status quo about the interdependencies of different employee roles and showcase their connection to customer actions. The author identified both customer journey map and service blueprint as necessary tools to reach the goals of the upcoming workshop. The organization had been growing on a constant pace, and a visualization showcasing the whole service in-depth

from the customer perspective, as well as adding staff roles in the same output, would help in crystallizing Neosmart Health’s service offering to the entire staff. As a result, the author combined the two afore-mentioned methods in creating a new service design method, the Customer Journey Blueprint (CJB).

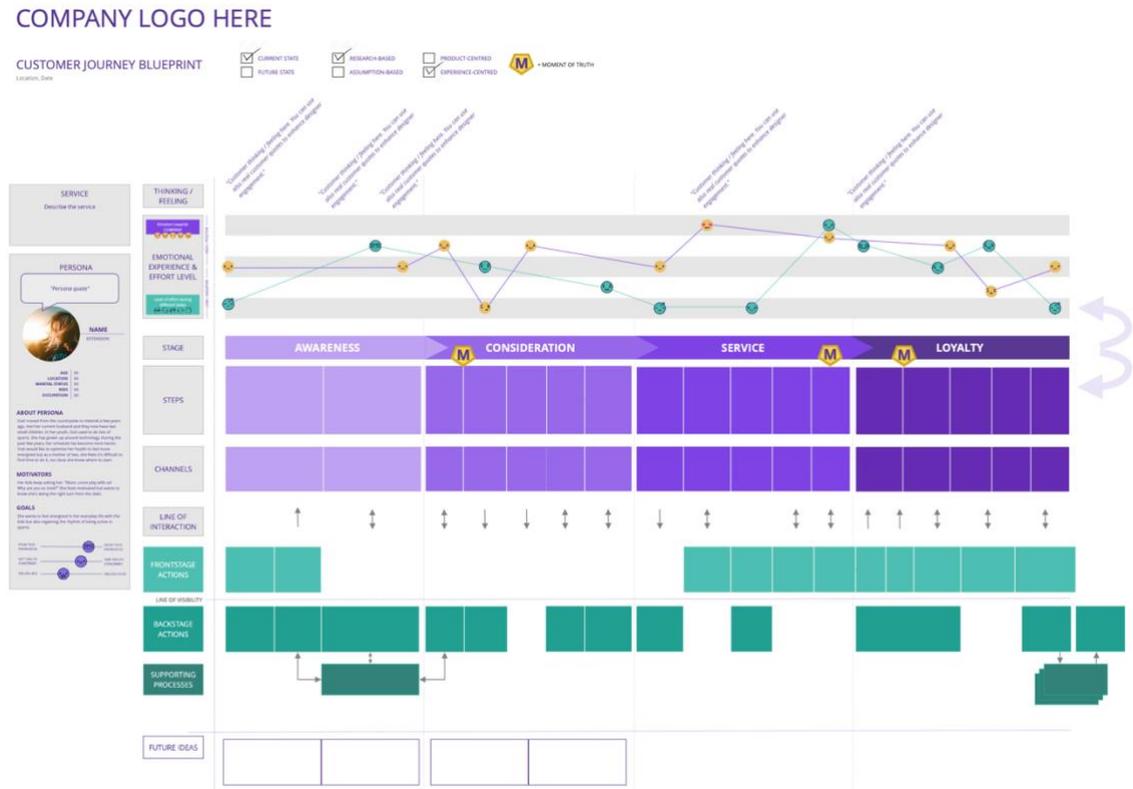


Figure 29: Customer journey blueprint template

Customer journey blueprint connects the customer perspective with corresponding company tasks. The elements visualized in Figure 29 are the same as the ones the author chose for this case study. The elements should naturally be chosen based on the design challenge at hand, but the aforementioned elements were identified by the author as the most influential and relevant in the process of improving customer experience in preventive healthcare. Customer journey blueprint as a method requires well-established customer insight to increase the reliability of direction when actual innovation takes place. Customer journey blueprint as a tool is a canvas best used in large format in workshops. Besides the elements introduced in previous chapters, CJB can also be used as an innovation tool. Future ideas or opportunities are directly filled in the canvas and placed during selected steps.

The output of using customer journey blueprint offers a comprehensive view to a selected service with a single image. Benefits include 1) easy shareability within the organization 2) visualization simplifies a complex service 3) working on a timeline enables zooming in and out during different stages.

Besides providing practical information to the case company and enabling the first application (and a likely iteration) of a new service design tool in a company-wide workshop, the author recognized two possible benefits of using this method, those of more academic value. First, customer journey blueprint connects well with human-centred design principles. Emphasis on emotional layers from customer perspective is elemental to both. Desirability is covered by recognizing human needs during the journey. The output of customer journey blueprint provides insight that helps determine and act on the viability (business objectives) of specific service features. Simultaneously, feasibility of technological possibilities can be projected and simulated when using the customer journey blueprinting in co-creative settings with selected technical stakeholders. Secondly, a connection to customer-dominant logic is evident, especially when using the method in preventive healthcare setting. CDL highlights the importance of understanding the customer's context before and after the actual service encounters. Customer journey blueprint offers a platform for mapping this deep understanding of the customer on a timeline.

Workshop 1: mapping the customer experience

Customer journeys are often mapped in co-creative workshops attended by stakeholders of the service offering. These stakeholders can consist of the frontline staff providing the service, management, customers who have experience in the service, and designers facilitating the process (Reason et al. 2016; Stickdorn & Schneider 2010; 2018). Vargo and Lusch (2014) argue involving customers in co-creation increases the value derivable from the service-in experience.

A two-hour workshop was planned, organized and facilitated by the author at Neosmart Health's Helsinki clinic during spring of 2019. The entire staff (about 20 people) was invited to participate and contribute filling the first instalment of the customer journey blueprint, as seen in Figures 30 and 31. Inviting the entire staff was supported by management. A workshop with people from various disciplines and backgrounds would enrich the conversation and output. A combination of frontline and background working staff would provide the most accurate and detailed information about different steps during the customer journey and most likely have some ideas on how to improve identified gaps. Management would gain valuable knowledge about actual customer encounters and the balance of transitioning to other stages of the service. The author had learned from the expert interviews that some of the staff had experienced the service as a customer as well, representing the voice of the customer during the workshop. Chronologically, at this point of the design process, the author had not yet interviewed actual customers, so the following step would be to complement and adjust the outputs of the workshop later during the process with deeper customer insight. The author recognized that lack of customer co-creation and only a hand-full of real customer insight meant, that majority of the material produced during the workshop would be to some extent, assumption-based. It was also recognized that one of the purposes of using the customer

journey blueprint was to set a foundation for upcoming customer research. For this reason, working with limited customer insight at this point was considered fully justifiable by the author.

The pre-phase of the workshop consisted of determining and booking necessary space for the workshop, determine suitable elements for the tool and design a personalized template for this event, acquire needed accessories (blank canvas, markers, post-its, tape) to sketch and ultimately fill the template, invite people to the workshop, plan a detailed schedule for the event, and make a plan B if something needs to be adjusted during the workshop. The expert interviews revealed that only a few staff members had any experience of service design. A PowerPoint presentation was designed by the author to guide through the workshop and support facilitation (See Appendix 3 for selected slides). Before the workshop, the author prepared the stage for the workshop and double-checked that everything works technically.

During the workshop, the author welcomed participants, claimed the role of a facilitator, and gave an introduction to workshop goals, rules and contents. The goals of the workshop were to create a visual snapshot of the service for current and future employees, help define staff roles and how their work can help improve customer experience. The output would also serve as the basis for upcoming customer research. The facilitator introduced the service design methodology and explained how and why it was chosen for the workshop. Next, the group was divided into pairs for a warm-up to stimulate the brain. The chosen method was “Yes, BUT or Yes, AND”. First, pairs were instructed to plan their dream holiday together. After the first comment, the other one always replies their idea and the sentence always has to start with “Yes, BUT...”. Second round, the reply would always be “Yes, AND...” The purpose of this exercise was to prepare participants’ mindset towards the more positive “yes, AND...” mentality, more suitable for creative workshops. Answering “Yes, BUT...” limits instantly the conversation whereas “Yes, AND...” stimulates the conversation to new heights.



Figure 30: Discussing the Customer Journey Blueprint canvas during Workshop 1

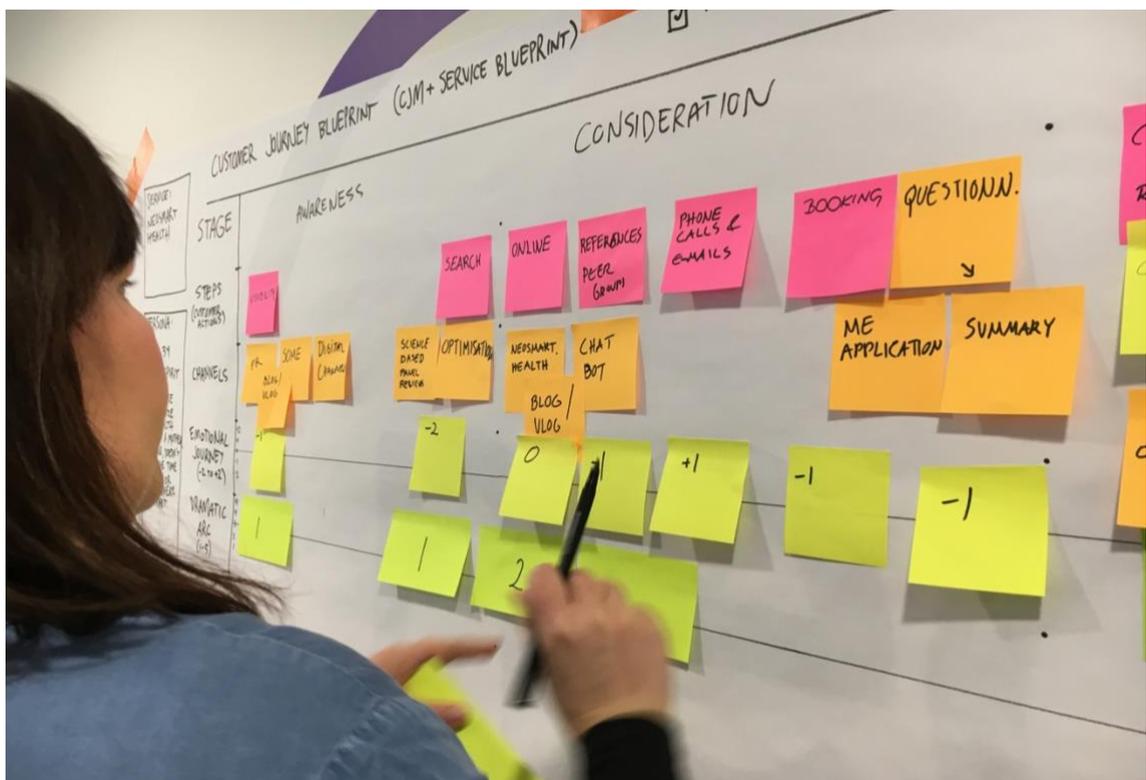


Figure 31: Filling the Customer Journey Blueprint canvas during Workshop 1

Next, the participants were divided into three groups, pre-determined by the author to add versatility of different backgrounds and professional specialties to each group. Each group was instructed to map a specific stage of the customer journey (Figures 30-32). Through occasional rotations, all groups were able to contribute to all service stages. After a break, similar rotation and mapping were conducted to “service blueprint” side. Finally, the united group were able

to identify a few moments of truth during the customer journey. The workshop ended with a feedback session and discussion about the next steps. Based on the feedback, the goals of the workshop were reached, and it was seen as a valuable exercise towards improving the customer experience.

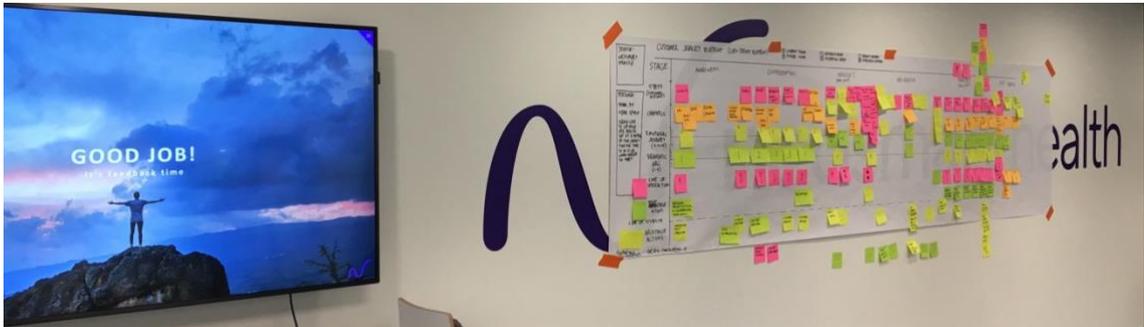


Figure 32: Customer Journey Blueprint canvas version 1.0 completed

After the workshop, the completed canvas was recorded with detailed photos and afterwards translated into its first digital format for further inspection (Figure 33) by the author. The digital snapshot was created from scratch using an online tool called Miro (<http://miro.com>). The filled canvas revealed certain moments-of-truth that were determined important enough for further research. The author found it necessary to continue gathering more customer insight to complement the CJB. This upcoming customer insight would provide necessary data to complement the first version and enable its transformation into a truly customer-centric one. After updating Neosmart Health's customer journey blueprint with customer insight, the next workshop would focus on innovating solutions.

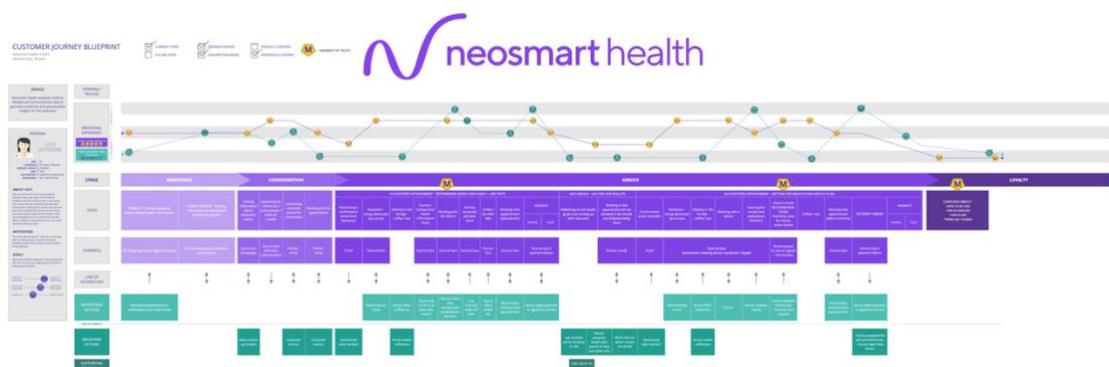


Figure 33: Neosmart Customer Journey Blueprint 1.0 visualized with Miro

At this point, it was clear to the author that the customer journey map would adequately support the customer experience improvement process. The method and tool both proved to be simple to use and understandable even though most of the participants had no experience in journey mapping or any other service design methodology. Combining the selected two tools

helped the participants to discover the interdependencies between different staff and customer actions, channels through which they're usually experienced and the importance of certain stages. This, in turn, opened up discussion and eventually generated preliminary ideas on how these stages could be improved and better designed from the customer point-of-view as well as measuring the success in those stages through NPS surveys. Translating the findings in a digital format helped newly recruited personnel in quickly identifying with the offered service and how their role is incorporated in facilitating the best possible service experience.

Based on the successful first application, the author concluded that customer journey blueprint is well-applicable as a managerial tool as well. First, it can be used to improve customer experience by pinpointing gaps during the customer journey and comparing them with frontstage / backstage staff actions during that step. Secondly, it can provide an excellent platform for innovation by connecting moments-of-truth within the customer journey with future ideas. Thirdly, linear to Framework for Innovation-approach (see chapter 3.2), the application of customer journey blueprint engages personnel and enables creating conditions that allow innovation within an organization. This supports the development of design skills and mindset and drives culture change. Furthermore, it follows the design principles of human-centricity, visual communication, collaboration & co-creation, and constant iteration, elemental to Framework for innovation (Design Council 2015). By selecting elements, that best serve the purpose of a specific design challenge, the tool can be personalized. This flexibility enables application in preventive healthcare organizations, serves the purpose for any startup or scale-up organization cross-industry and has potential to benefit the service design community.

4.3 Develop - Innovation Forming a Future Roadmap

Develop phase focuses on developing, testing and refining multiple potential solutions (Design Council 2005). The designer's mindset returns to divergent thinking, allowing room for innovation. After the first workshop (chapter 4.2.4) the author started collecting customer data that eventually transformed into insights (chapter 4.1.4). The procedures that were completed by the time the second workshop was in sight, had helped the author in the following ways: The initial customer journey blueprint was mainly based on assumption, but it helped the author to ask the right questions during interviews. Customer insight helped reveal the actual moments of truth during the customer journey. Mapping the journey helped to build and sharing knowledge within the company, get more connected and empathize better with the customers, understand the company's competitive positioning within the industry, and comprehend the what the ideal customer experience in preventive healthcare consisted of.

This chapter reports the findings of the second workshop, with a clear focus on ideation. It also covers the process of transforming ideas into innovation projects. A final version of the

customer journey blueprint is presented. Due to company confidentiality, prototypes that were created, tested and iterated during this thesis, cannot be shared and are thus excluded from this thesis. Finally, this chapter summarizes the design process.

4.3.1 Workshop 2: Applying Customer Journey Blueprinting for Ideation

An ideation workshop was planned and executed during Autumn of 2019 by the author of the thesis together with a student colleague. Ideation was recognized as the main focus of the workshop during initial planning. Specifically, steps during the customer journey where clear gaps in customer experience had been discovered by the author, were targeted. The aim was to provide concrete solutions that make the customer journey flow more seamlessly. Creating solutions demands for innovation that derives from design thinking.

Design thinking connects a creative design approach to solving business problems (Tschimmel, 2012). It drives repeatable innovation and business value (Curedale, 2013). Design thinkers aim at understanding the holistic nature of situations and offer solutions from a customer perspective (Brown 2009). Design thinking is a human-centered, iterative, multidisciplinary, and innovative approach combining human needs (desirability) to business objectives (viability) and technological possibilities (feasibility) (IDEO, 2011). According to Buchanan (1992), a solution-focused mindset is essential to design thinkers, as well as facing problems from a holistic perspective.

Idea generation is the process of systematically searching for new applications to existing problems or generating new ideas in accordance with an organization's requirements (Curedale 2016). Idea generation needs to follow a systematic approach to create ideas that match the company's situation and need, with the intent of an improved future result. When there is no clarity of actual customer need for targeting of idea generation and selection, time and effort is wasted on ideas which are not relevant to the customer or the business.

Workshop 2: Ideating on selected customer journey steps

While planning the workshop, following topics were discussed by the facilitators: motivation and resources for changing the culture towards supporting innovation, whether they have experience from outside facilitators or not, and how to measure success and return on investment for organizing such an event. According to Schwarz (2017), it's beneficial to discuss the above-mentioned topics in more detail with the client during the planning phase of any workshop that will be professionally facilitated. Based on insight from expert interviews, the management had

The goal of idea generation workshops is to create as many ideas as possible. Van der Pijl (et. al. 2016) raises a good point about ideation; regardless of how good your single idea might be,

impact is only created when ideas become additive and expansive. In other words, more is better. Therefore, in planning the workshop, ideation techniques that would ensure the quantity of ideas were emphasised. Inspiration for the workshop tool selection was provided by Board of Innovation (2019) and DesignKit (2019) that provided a wide selection of templates and instructions on their website. *How might we* (HMW) is a technique that supports ideation by turning a design statement into a question. For example, when discussing the waiting period between a giving your samples for prescribed tests at the laboratory and getting the results, a HMW could be something like “*How might we add value with content to the customer’s waiting period?*” *Brainwriting* is a technique where participants write ideas onto cards, pass them on to the next person, thus moving ideas around the group as participants build on the ideas of others. *Dream Big* is a technique where each participant dream up the most unattainable, extreme, and impractical solutions they can think of to a given problem. Narrowing down from the outputs and considering what makes the impossible helps new but more realistic concepts to pursue. After refining the generated ideas, they can be transformed into prototypes and continue on an iterative process towards production (Curedale 2016).

Lewis (2008, 151-153) has listed elements that enable keeping a workshop on track. Some of the mentioned elements are keeping up the energy levels by one’s own behaviour, introducing participants to each other, encouraging participation, and using transitions. As the workshop was held on a Monday morning, it was crucial to get people in the right mindset right from the start to get the most out of the short time reserved. In the end, as Lewis (2008) has stated, the facilitator’s job is to guide the group to an agreed-upon outcome. In this case, the outcome was to generate ideas to address two stages during the customer journey.

In service design, human-centricity should constantly be present. When planning an ideation workshop, it is useful to consider how different types of participants feel after taking part in it. The connection between ideation and the participants revealed the most likely challenge, in link with a quite common misbelief; being creative is some magical human feature and most people don’t see themselves as creative people. Customer-centricity has been determined as the cornerstone of all development at Neosmart Health. The staff is used to rapid startup culture and are no stranger agile decision-making, but lacks experience of executing innovation in a rapid, yet structured way. Carefully planning the methods that nurture creativity and help first in obtaining and then sustaining an innovative atmosphere, were considered crucial for the success of the workshop.

The anticipation was that the workshop would have somewhere in between 5-15 participants. Although Neosmart Health’s entire staff were invited to the event, it was clear from the start that workshop wouldn’t fit everyone’s tight schedule due to a busy season at the clinic. Five employees from diverse backgrounds and business units were finally able to be present during the workshop since the clinic staff was serving customers during the workshop day. The venue

for the workshop was Neosmart Health's flagship clinic, in downtown Helsinki. The venue was at the time divided into two parts, the clinic side (where customers visit) and the office side (where all the background actions take place). At the office, there was an open layout with convenient wall space for moving around and placing post-its full of ideas on the wall. There was also a chance to divide the group into two separate areas if needed. No pre-learning material was sent to the group to limit any prejudice or initial ideating from the upcoming participants. This would enable a clear mind for spontaneous ideation.

Although most of the planning was done inside the facilitation team, clear responsibilities were divided to meet the time pressure of the approaching workshop. A PowerPoint presentation was crafted for the introductory part of the event by the author, as seen in Figure 34. Beyond the introductory part, the presentation was designed to remind the participants of the ongoing task, in case the facilitators would, for example, be occupied with someone else. The presentation would also contain highlighted customer quotes, providing food for thought and creating a link to customer contexts during ideation.

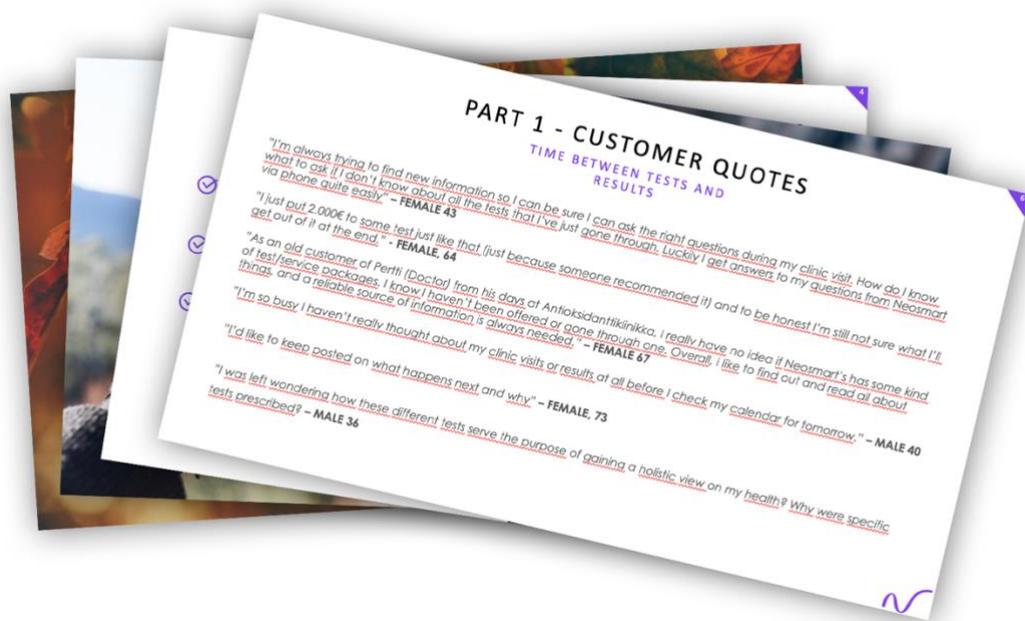


Figure 34: Slides from Workshop 2 presentation

Timing of the workshop was planned and perfected with live rehearsals between the facilitators, where time consumption of each step was tested. The tools and methodology, that would best serve both the ideation process as well as contribute to our task as facilitators to maintain an atmosphere of inspiration, were selected. According to Van der Pijl (Et. al. 2016), it is counterproductive to generate ideas all day. The whole workshop session was planned to last 2,5 hours. Facilitators predicted that this time might feel like a long time for ideating, at least for participants not familiar with the craft. After going into more detail of tool selection

and timing different phases of the workshop, the facilitators were already squeezing minutes from here and there. A limited timeframe that was available would not give participants a chance to start building anything tangible (such as a prototype) from the ideas. Nevertheless, it was concluded that would not present a problem as long as there would be well-executed follow-up soon after the workshop. The schedule was planned flexible, as forcing a too tight timeframe often suppresses the number of ideas (Lewis 2008). According to personal facilitation experience, some people warm-up and are able to start their creative engines a bit slower. It is beneficial for the outcome to always let people finish their thoughts on post-its instead of rushing into the next stage.

Workshop plans and stage setup were finalized during the morning of the workshop. The whole office space was reserved for the workshop and the group split into two parts to ensure complete focus on both customer journey stages separately and enable comparability of ideas. One facilitator used the open office space, while the other facilitator used the meeting room. In this way, the groups wouldn't be influenced by each other's discussions. Both workshop areas were equipped with a long paper on the wall for ideation, pens and post-its. The workshop timetable was planned in detail (see Appendix 4) to ensure sufficient time management and gather enough ideas during the reserved time.

Selected and prioritized customer testimonials from interviews were to function as boundary objects based. The selection was conducted by the author based on the thematical popularity of the quotation subject, revealed during data analysis. Boundary objects are artefacts that are part of different social groups - they are interpreted differently in different social groups but are still similar enough to facilitate communication across the boundaries. Boundary objects enable experts from different fields to collaborate and work together on a goal. (Mäenpää, Suominen, Breite 2016) Therefore, boundary objects initiate action. Boundary objects can be either co-created or serve as catalysts for the co-creation process (Kinnunen 2018). In this case, the boundary objects, customer testimonials were used as catalysts for knowledge co-creation.

The workshop started by recapping previous work done on mapping the customer journey workshop as well as presenting the updated, visualized customer journey to the participants. The workshop goal (generating ideas to address two stages in the customer journey) and rules (no phones or computers during the workshop) were highlighted to all participants. Participants were engaged from the start with a warm-up exercise (*1-2-3 clap, stomp, shimmy*) that made them relax and laugh. After the warm-up, the group of five participants were divided into two teams. The first team started with "how to keep the customer engaged during the period between the first visit and the results" and the second team focused on "how to add value and deepen the customer relationship after service."

As outlined in Appendix 4, 40 minutes of working time was allocated for each group and each customer journey phase. Initially, it was predicted that there was a lot of time for the task, but the workshop required strict time management to keep up with the plan. The two groups were also different - a task that was easily introduced to one group needed to be explained in more detail to the other group. Ideation also seemed easier to the other group compared to the other which seemed to struggle with the methods, such as How might we... and what to write on post-its. This required the facilitator to step up and guide the participants forward in their task to generate ideas. Verbal communication such as statements that encouraged participants to build on each other's ideas as well as nonverbal communication such as body language during individual brainstorming was used to maintain an atmosphere that would stimulate idea generation, encourage participation and keep energy levels up. According to Lewis (2008), the workshop is about the group and the participants and the facilitator needs to in some way blend into the background, while at the same time conveying enthusiasm and energy.

After each group had ideated solutions for each phase in the customer journey, the whole group came together to hear instructions for voting. The participants were given 5 votes to give to one or multiple ideas. After voting everyone came back together for a short feedback session both in verbal and written form (Figures 35-36). The participants felt that they were able to come up with more ideas than initially expected and felt that this workshop had brought value to the customer journey to improve on the specific phases. At the end of the workshop, the objective of the workshop was recapped and the next steps in the process communicated (see chapter 4.3.2.).



Figure 35: Workshop participants discussing Workshop 2 and giving feedback

“Red and Green”-method was used to collect feedback about the workshop and facilitation. According to Stickdorn (2018), this simple but effective feedback collection method helps in maximizing feedback input and contributes to the group dynamic in a short time before moving on to the next phase. Participants wrote one positive and one constructive feedback about the

workshop on post-its and the whole group discussed these topics afterwards, as seen in Figures 34. Monday morning (which was the only available option) wasn't considered the best time for an ideation workshop. This was in close relations with the fact that it turned out to be a busy time for the clinical staff because there happened to be several customer appointments simultaneously with the workshop. The workshop could have benefitted from a bigger variety in participant backgrounds and work roles. The feedback highlighted the positive effects of the workshop. The participants felt, that such innovating pushed them out of their normal mental box by offering no restrictions. Concentrating on specific parts of the customer journey was well planned because especially in such a tight timeframe. The goal and means to get there during the workshop were well structured and participants felt they were highly involved throughout the process.

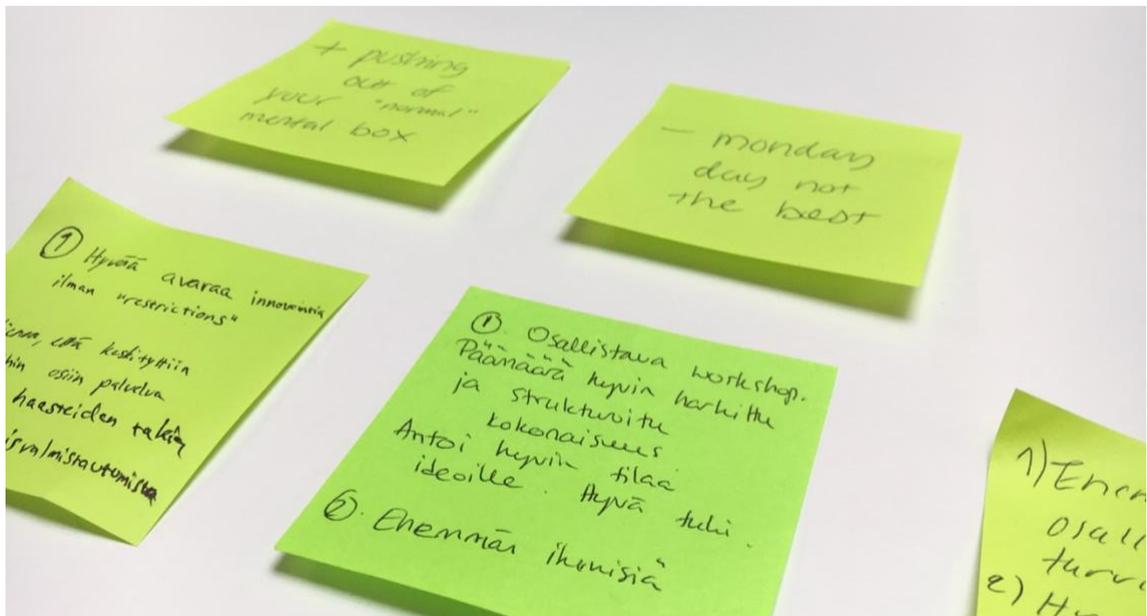


Figure 36: Feedback collected from Workshop 2

Finally, the facilitators stayed to record the post-its and the discussions during the workshop by taking detailed pictures of the ideation walls and making sure the context of each post-it would be understood correctly in the next phase. The post-its were added in their respective stage of the customer journey map for easy access.

To summarize, the workshop focused on addressing two phases of the customer journey and the objective was to generate ideas that would be used to improve the customer experience during these stages. The early stage of the innovation process includes idea generation and idea selection. Idea generation focuses on creating as many ideas as possible to be further analysed in later stages. In planning the workshop, techniques that would both generate a large number of ideas and also energize the participants during the whole intensive workshop were selected. During the workshop, the two groups demonstrated different approaches to the tasks at hand

and having different levels of energy. As facilitators, exhibiting energy by verbal and nonverbal communication, engaging participants with open-ended questions, and using transitions to guide them forward in their work is beneficial. Participants came up with surprisingly similar ideas, but also there were a few novel and innovative ideas that were selected for further development by the participants. Facilitators steer the group towards a jointly agreed-upon target, and they need to be sensitive about the mindset of participants, their energy levels and how they understand the tasks. The role of the facilitator is important in getting participants to generate ideas and thinking outside of the box. In retrospect, knowing the likely time-restrictions of the staff and its effect on the number of participants, recruiting actual customers and transforming the workshop into a co-creative event, would have most likely benefited the workshop.

4.3.2 From Customer Journey Blueprint to Projects and Prototypes

Following workshop 2, internal meetings were set up by the author to determine roles and responsibilities for each Neosmart Health team and a roadmap regarding future development projects. These development projects were based on the output (ideas) created during the workshop, prioritized according to customer insight. Viability, desirability and feasibility of the ideas were also used as prioritization attributes by the author.

The updated version of the Customer Journey Blueprint was complemented by adding most promising ideas to their respective steps during the customer journey. Sharing a high-resolution image of the blueprint with all current and future employees, as well as selected stakeholders, would benefit the organization by adding clarity in communicating the service concept. The detailed description of the customer experience would also serve as the base for future development projects. Figure 37 shows the finalized version of the customer journey map with ideas being represented in the bottom part of the map in white boxes.

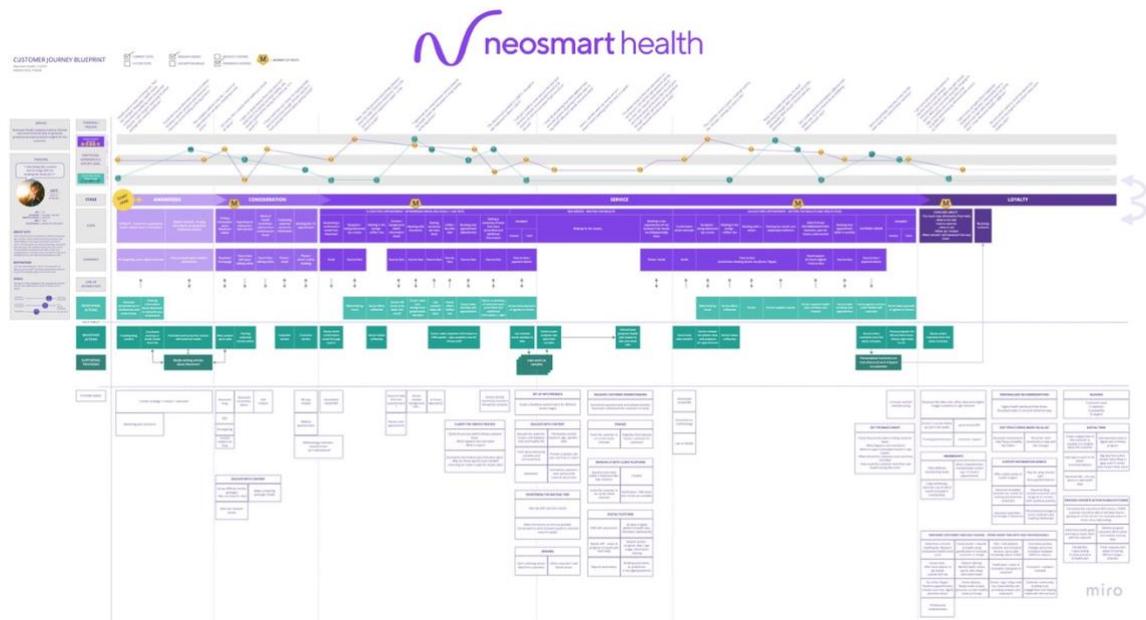


Figure 37: Customer Journey Blueprint, a final version including workshop output

The initial customer journey blueprint helped audit Neosmart Health's customer experience but was in many ways assumption-based. Customer insight gathered throughout the process revealed and validated moments-of-truth. It was until after the ideation workshop when the customer journey blueprint revealed its potential also tool to create roadmaps for future development projects. Ideas themselves were not directly actionable. The author compared the ideas to customer insight and prioritized them according to how often they were mentioned during the interviews. The author then communicated with corresponding teams and presented the ideas in a more actionable format. Figure 38 is a screenshot from a presentation that worked as a development roadmap for the company. The presentation consisted of nearly 30 ideas that were presented in the same format as Figure 38. *Customer quotes* (top left corner) inspired and added a layer of empathy for the design process. *Insights & summary* (bottom left corner) explained the idea and challenge the customers were facing. *Ideas/actions* (right side) provided an actionable and inspirational approach to support prototyping.

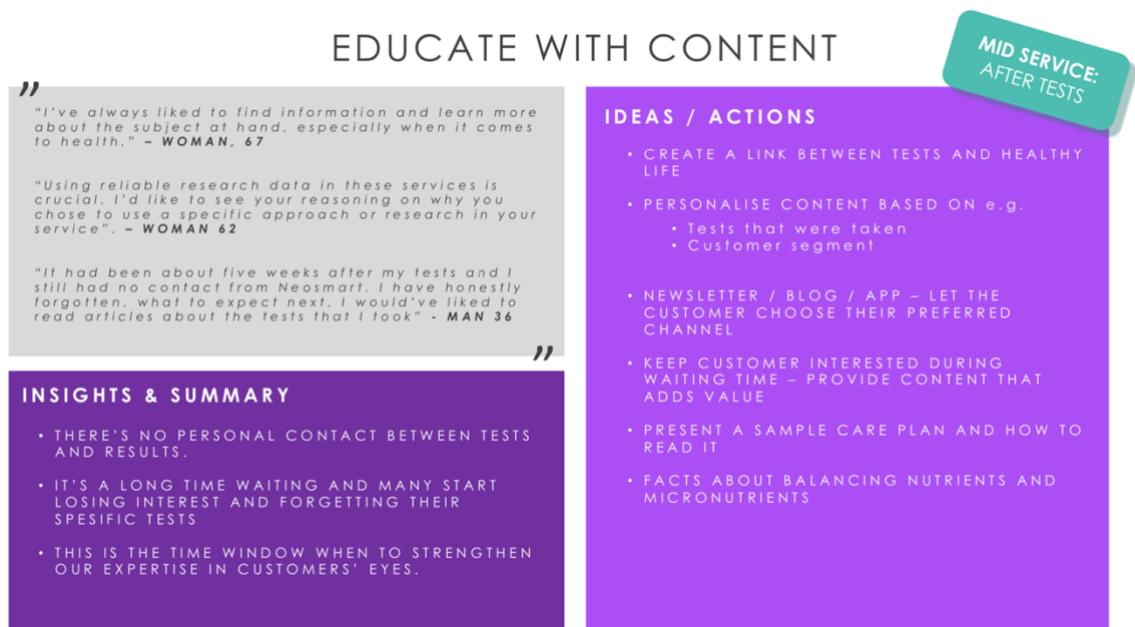


Figure 38: Example of actionable ideas for future development

Due to company confidentiality, prototypes that were created during the process, cannot be shared and are thus limited outside of the scope of this thesis. Nevertheless, the process of prototyping will be generally covered next. Unlike a product prototype, which is an object people can hold in their hands to get a sense of how it feels, service prototypes need to be experiences that enable interacting with multiple touchpoints as well as taking into account how those experiences unfold over time and in context (Polaine et.al. 2013). Curedale (2016) argues that prototypes are merely a tool to improve the design. In other words, constantly testing your ideas with people and iterating based on collected feedback. While prototyping, it is worthwhile asking, whether the customer understands the concept? Do they see value in using the service in their context? Are visual elements of the concept serving a purpose? For instance, the perception of value is one of the crucial factors in evaluating prototypes. If customers do not see value in using the service, they will quickly discard it. Features that support the customer's value creation process are more difficult to adjust than fonts or colours in a design, and they highlight how well the designer has understood the customer.

Figure 37 portrayed an idea of educating the customer with content. This example showcases one of the many ideas that were generated during Workshop 2 and was supported by customer insight. Customers had clearly communicated a lack of available and reliable information related to their health condition. This problem was amplified especially during the waiting period between tests and results. During this time, customers would have wanted to choose a channel of their preference (blog, newsletter etc.) and learn about a selected topic. The

solution was that a platform for a blog was designed and technically generated, as shown in Figure 39.

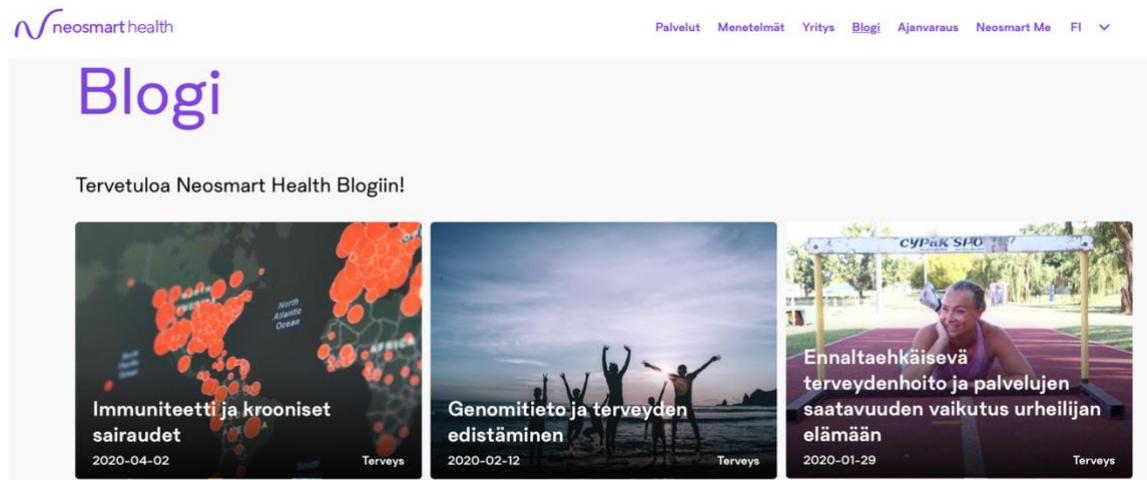


Figure 39: Neosmart Health blog has moved from prototype to production

A content strategy was crafted, and respective personnel advised on their duties regarding the blog. Healthcare professionals from the case company started writing and publishing blog posts about pressing health-related topics. The blog posts were naturally related to subjects linked to the service offering of Neosmart Health. Along the way, the design of the blog was improved through an iterative process of collecting and learning from customer feedback. As a result, customers were better informed about the relation of their medical tests to their health by highlighting the purpose and benefits of acquiring such health data. They were also more engaged with the service as relevant content directed them to actively learn about health-related topics. This, in turn, supported the whole customer journey and the case company's service promise of keeping people healthy. Furthermore, the blog added interaction between the service provider and the customer and deepened their relationship.

The example described above was one of many prototypes created as a direct cause of this thesis project. Most features were already tested with actual customers and iterated according to collected feedback. As the delivery and details of these prototypes are limited outside of this thesis, it is time to evaluate and present conclusions of the design process.

Summary of the design process

The design process of this thesis was a research-oriented case study. The study focused on forming deep insights about customer experience in preventive healthcare. Extensive data collection presented in Figure 40 showcases the design process. The collection of customers' thoughts, experiences, pains and desires about health, reactive and preventive healthcare and the case company, Neosmart Health was presented in the Discover phase. Triangulation of data

sources ensured reliability of acquired information and precise data analysis helped to form an understanding of customers' health-related contexts along with a wide timeframe.

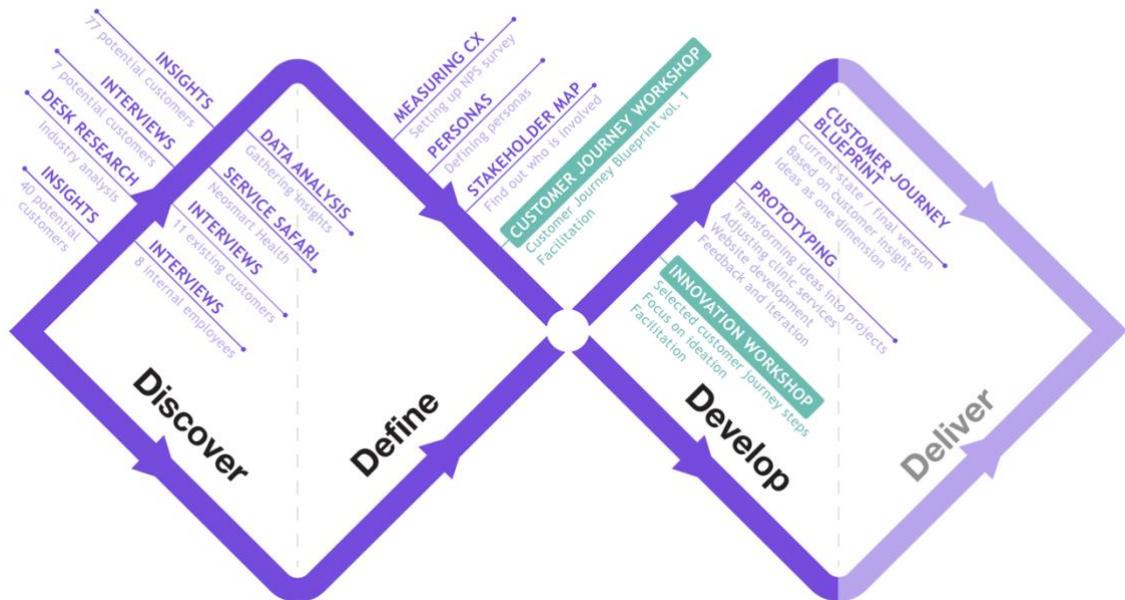


Figure 40: Summary of empirical study embedded into the double diamond

Furthermore, qualitative data helped the author empathize with the customers to follow the principles of human-centred design. Design principles such as visual and inclusive communication, familiar from Framework for Innovation (Ideo 2015), were followed by producing valuable content for the case study, such as personas and a stakeholder map. The iterative and collaborative nature of the design process, together with the challenge set demand for the creation of a new service design method, Customer Journey Blueprint. The visualized output of the tool portrayed the customer journey from experience-perspective, highlighting the emotions of the customers during different stages. Furthermore, it showcased the interdependencies of different employees in staging the customer experience. The managerial aspect of the customer journey blueprint cannot be undermined. Workshops that encouraged innovation and co-operation in multidisciplinary teams, paved the way for culture change within the organization. Employees, that were previously inexperienced with design thinking or service design methodology, managed to find a creative side of themselves by following the facilitators' advice. Several innovative ideas were generated to improve the customer experience during identified steps of the customer journey. Several prototypes were designed by the author together with respective teams to engage and support the customers' value creation process. Characteristic to customer-dominant logic, customers' context was examined holistically also before and after actual service encounters to truly influence the customer experience.

5 Findings and Conclusions of the Case Study

The chapter summarizes the findings and conclusions of this case study. Before answering the research questions, the development of the theoretical framework is linked to the empirical study while maintaining focus on the social phenomena. Finally, the value and relevancy of the thesis are considered and prospects for future research discussed.

The purpose of this thesis was to improve customer experience in preventive healthcare industry. Neosmart Health's holistic healthcare service was used as a case example. The thesis aimed at identifying the crucial steps and gaps during the customer journey. To accomplish this, the author conducted extensive research to gain a deep understanding of customers' goals, needs, motivations and behaviour from a holistic wellbeing perspective, taking also into consideration the driving forces of social and technological trends. Based on the customer insight presented in this thesis, the author was able to determine and visualize the customer journey of the case company. The task was an achievement made possible by the creation of a new service method, customer journey blueprint. The first application of the tool proved its potential as a managerial tool for improving customer experience by connecting customer insight and perspective with corresponding company processes. Customer experience improvement was enabled when innovation is directed at the gaps within the customer journey. The customer journey blueprint builds a connection to Human-Centered Design through its focus on emotional layers. Connection to Customer-dominant Logic appears when the tool is applied to understand the customer's context also before and after service encounters. Finally, customer journey blueprint offers a single-view introduction of the customer journey and interdependencies of different employee roles during the journey, especially beneficial when training new employees.

The theoretical foundation for the thesis investigated customer experience through progression of economic value, customer-dominant logic and service marketing and management. Human-centered design approaches, i.e. service design, design thinking and innovation during the development project were applied. The selected design process was Framework of Innovation, complemented with an applied mindset from Human-Centered Design. The service design process included stages of discover, define and develop.

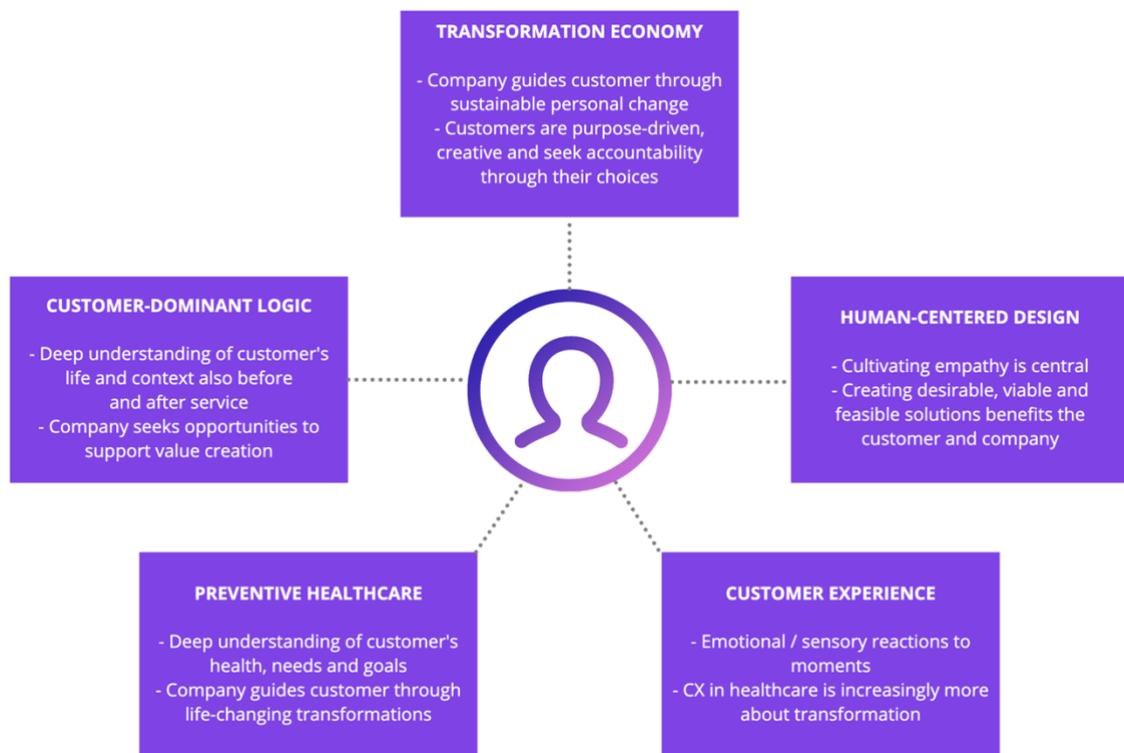


Figure 41: Linking the theoretical framework to the empirical study

Figure 41 visualizes the connection between the theoretical framework to the empirical study while maintaining a focus on the social phenomena. Customer-dominant logic emphasises on knowing customer's context before, during and after service (Ojasalo & Ojasalo 2015). The emergence of value happens when service is embedded in the customer's context. The company understands which processes customers participate and need inputs to support them through meaningful experiences. The preventive healthcare service of Neosmart Health commits to understanding the customer's health comprehensively by combining customer's health history with personalized medical tests. After the customer has received their health plan, the case company seeks opportunities to support value creation while building a long-term relationship with the customer.

Pine & Gilmore (1998) predicted beyond experience economy and introduced transformation economy. Transformation economy guides the customer towards aspirants through experiences which result in a sustained change in their lives. People are willing to pay for experiences that have the potential to change the way people live, work, and play. Achaparro (2017) anticipates that the future of design is in fact in transformational experience. Design is the process of envisioning and creating an experience that transforms. Solis (2018) describes experiences as emotional responses to moments. Paré (2017) portrays the holistic nature of an experience - "the sum of our interactions with the world around us". Achaparro (2017) concludes that truly transformative experiences are able to leave a permanent mark on the person changed by

them. Neosmart Health embodies these attributes; The core of the service is based on a holistic approach to improving health. With personalized and comprehensive baseline research of health, offering customers time and participating them in the process, the experience becomes emotional, as customer insight in this case study has evidenced.

Designing services, experiences or transformations in the healthcare industry benefits from an emphasis on human-centricity during the design process. This requires deep insight and empathy towards the target people of solutions. Healthcare services aim at disease prevention, whether the level of prevention is primary, tertiary or something in between. The broader aim of healthcare is at improving the quality of peoples' health and ultimately the quality of life comprehensively and with long-term impact. Whenever health is in the equation, the matter becomes very personal. Although differences between user-, customer- or human-centered design might feel insignificant, assimilating oneself with the mindset of empathic design - central to human-centred design - enables breakthroughs in creating meaningful and memorable solutions.

Expanding understanding during the design process also to social dimensions of healthcare services - what it means for the person and the social network around them, when that person is directed to a procedure or treatment - broadens the spectrum from the close family also to healthcare employees as internal stakeholders. Instead of limiting service design to processes and solutions with human-centred design approach - leading also the healthcare company culture change towards a common design culture to enable proactive development of an employee's work - could result in tremendous, industry-shaping results.

RQ 1: How does the customer understand preventive healthcare services and its central elements?

Research question 1 sheds light to the current customer perceptions of preventive healthcare services. In order to pick the brain of the customer, it was necessary to first gain thorough understanding of the business environment. This was accomplished by mapping the competitive landscape of Neosmart Health on a global scale, with a focus on preventive healthcare companies and the services behind them. The extensive desk research (see Figures 16 and 17) showcased 75 services presenting themselves as experts in providing a holistic analysis of the human health to prevent diseases and improve wellbeing, even optimizing performance in some cases. When consulting medical experts about the comprehensiveness of the medical approach in these services, lack of depth was revealed in many of them. The service promises were in many cases elaborate but when investigated beneath the surface, the companies' perception of a holistic health mapping consisted of only seemingly vast amount of data points, collected often from only a specific sample, such as DNA, genomics or stool sample. While these approaches provided insights that can be presented in a beautifully visualized format to the

end-customer, their highly focused approach failed to paint a comprehensive picture of a person's health. There were numerous examples where a focused approach of the service (23andMe), combining artificial intelligence or machine learning in the core of the business (iCarbonX and Nano), has resulted in successful global scaling of the service, hundreds of millions in investments or even reaching a unicorn status (over \$1B valuation, 23andMe, Babylon Health). The industry analysis showed rapidly increasing interest towards primary prevention, which aims at intervening before disease process initiates (Wallace, RB. 2006). Hood (et al. 2012) described the characteristics of preventive healthcare as following: First, it offers a shift from the population-based one-size-fits-all medicine to personalized medicine, which takes into account the factors that define each individual. Secondly, it emphasizes a prospective and proactive practice which focuses on predictive assessments of future health in order to facilitate disease prevention and health and wellness optimization. Thirdly, according to its participatory aspect, it enables customers to shift to the role of agents driving the revolution. Self-monitoring with health technology (wearables) helps track progress during the process. Interview findings summarized that a shift towards a wellness economy has already happened.

To summarize the customer insight, all interviewees thought a preventive, more personalized approach to healthcare is beneficial for the overall customer experience and necessary to shift the focus from treating illnesses to preventing them. A holistic approach that enables medical experts to identify the big picture, or researching the root cause behind a health challenge, was considered extremely valuable for long-term decision making.

Even though many interviewees were able to describe preventive healthcare as services, in which relevant health data is gathered and used to prevent illness from occurring in the first place, learning about Neosmart Health was their first actual contact to preventive healthcare services. As a first impression, most people were fascinated by Neosmart Health's medical approach. As one interviewee put it to words: "This is exactly what healthcare should be about." A comprehensive and personalized approach was considered to make prioritizing health goals possible. Above many other attributes, most interviewees valued how the use of personal health data would be used to improve their health. In other words, the trust of factually doing the right things from the start was something many customers had only dreamed of in the past. Interviewees saw also a strong link between technology and preventive healthcare. Many were already using or were considering the use of wearables to motivate and track progress of their health journey.

In the end, healthcare perceptions are deeply rooted in culture. When asked if potential customers would be willing to invest in their health preventively, the same way most people take care of their cars during yearly checkups, most people struggled with the thought. To the author, explanations of some interviewees sounded something like gambling; *"If I would know for sure that I will catch a life-altering medical condition, let's say cancer, I would definitely*

like to know in advance to prevent it.” said one interviewee. *“But for now, why would I go to the doctor if I’m feeling relatively healthy?”* the same interviewee continued. To some potential customers, fear of finding out something serious about personal health was a pressing reason not to enrol into preventive services. Most potential customers admitted that they would need a “wake-up call” to become motivated enough for a transformational change. By this, they referred to a serious medical condition that would happen to themselves or someone close.

Existing customers had a different perception of preventive healthcare services. Most of them expressed that they would not switch back to using reactive healthcare services unless they had to because of an accident or similar. Existing customers felt at peace about their deep knowledge of personal health data, even if it meant knowledge of stressful health conditions. Existing customers felt motivated to go the extra mile to improve their health holistically, track their progress throughout the process and recommend the same to their loved ones. They expressed clearly, they were not looking for quick fixes, but instead understood the long-term determination needed for possible behavioural change.

Compared to reactive healthcare, it was difficult for all respondents regardless of background to define a common customer journey for a preventive healthcare service. The reason behind this is related to the wide variety of different kind of services available for consumers. As the competitive landscape analysis suggested, comparing the features of different preventive services is difficult and time-consuming even for medical experts. Service providers claim to offer comprehensive and holistic insights about the customer’s health. In reality, who is to determine, whether a preventive healthcare service’s approach is holistic or comprehensive? If one customer feels a DNA-based test provides enough reliable data to provide personalized insights about their complete health, who is to say they are wrong? Is there a need for legislative determination in the industry or will commercial demand set the depth of service features eventually to a certain level? These intriguing questions are unfortunately not answered in this thesis but leave room for future research.

Finding answers to RQ 1 benefits not only the case company, but the whole healthcare industry by providing explicit and deep insight from health-related customer contexts, helping the industry further develop its services, stage experiences and/or guide people through health-related transformations.

RQ 2: What does exceptional customer experience look like for preventive healthcare customers?

Research question 2 gives valuable information about key ingredients that customers expect from preventive healthcare services. Comparison between reactive and preventive healthcare and customer experiences from both disciplines are investigated to determine the building blocks of exceptional customer experience in preventive healthcare. Customer insights reveal

causalities that help understand the motivation behind the selection of medical services and acknowledge the importance of empathic design in healthcare.

Interestingly and regardless of interviewee background, the ingredients of exceptional customer experience for preventive healthcare started formulating around the opposites of negative customer experiences in healthcare. This was a phenomenon the author did not steer the interviewees towards while conducting the interviews. When asked whether the interviewee can come up with memorable healthcare experience, most people started telling a story that portrayed a very negative experience. When discussing later the attributes for exceptional customer experience in healthcare, the same people would describe feelings, desires or needs that are the opposite of those described earlier during the negative experience.

The first category is described as the human-centred mindset. Offering empathy and time, or listening and understanding the customer, was considered extremely important by most interviewees. Simultaneously, customers value a service provider that is interested in improving their health in the long-term. Thus, building trust and were considered attributes that enable building sustainable customer relationships. Proactive follow-ups were mentioned to achieve consistent health development.

The second category related to a holistic medical approach. Instead of just treating a symptom or fixing a broken arm, interviewees gravitated for interest towards their holistic wellbeing. This means having enough medical data to claim certainty over the next steps. Most interviewees felt lost for direction. What would be your first step towards improved health? How does one prioritize the order of actions when it comes to personal health? Once a roadmap had been determined, most existing customers expressed their relief in just executing the health plan. There were exceptions though. Following a transformation routine if there's no urgent need in sight makes it easy for the customer to start slipping back to old routines. Constant tracking of progress was seen as a motivational factor. Also, it was considered necessary for evidencing purposes. How else would one know for a fact whether the gut microbiome was seeing improvements? Finally, the overall customer experience was speculated to improve if the service provider was open-minded to co-operate even with their competition if the customer's health required it. Interviewees did not find protectionism suitable or needed for a truly innovative company.

Personalized care was praised by all interviewees. This did not necessarily mean offering endless options, but it could be seen through for example treating the customer as an individual through open communication. One of the most important aspects was offering adequate amounts of information. Explaining why a procedure is recommended for you, what it demands from you in the near future, how it affects your health in the long run when to expect results

etc. Supporting the customers' value creation process means offering a selection of channels for communication and valuable on-demand content equals seeing the customer as an individual.

In the end, an ideal preventive healthcare service simplifies individual choice making. How? It emancipates the customer from uncertainty - in other words being unaware of one's personal comprehensive health status - and empowers them to attend to the things that matter the most to their personal health. A holistic preventive healthcare service substitutes for a decision-maker and problem solver when it comes to the customer's health.

The answers to RQ 2 offer relevant insights to all healthcare providers and are not to be glanced only through preventive healthcare glasses. The stories told by the interviewees are surely subjective, as are all customer experiences, but that should not limit service providers from applying well-designed processes, after listening to their customers.

RQ 3: What's the role of service design in improving customer experience in preventive healthcare?

To answer RQ 3, first, the author studied, evaluated and tested a wide range of service design methods, assessing their relevance and effectiveness for this study and the process of improving customer experience in preventive healthcare. secondly, it was evident to understand the current state of customer experience in healthcare. The research did not offer much to cheer about. According to Gingiss (2019), when it comes to customer experience in the U.S., healthcare was ranked last out of 25 industries. Dalbey (2019) found that only 49 % of consumers thought their healthcare customer experience was satisfactory. An NTT Data study (2018) showed that majority (62%) of customers report they are unable to accomplish their goals online, for instance accessing health records, searching for a doctor or paying bills. Additionally, 4/10 claim the online options are not relevant to them and are unhappy with how long it takes to complete tasks. Kuhn & Zanotti (2019) argue that CX is the next unknown frontier in healthcare. Not because there is not a linear path towards the goal, but because healthcare companies are unaware of what lies on the other side. Traditional healthcare providers have invested fortunes to infrastructure and healthcare systems that are not, let us say, the most agile to develop. Also, the industry is very siloed from customer perspective.

In the context of this thesis, the role of service design in improving customer experience in preventive healthcare is approached by covering the five principles of service design (Stickdorn & Schneider 2011). Table X demonstrates, how human-centric design digs into the core of experience design in healthcare. This can be demonstrated through desirability, feasibility and viability. A deep understanding of the customer's life also before and after actual service encounters enables true recognition of the contexts in which customers operate. This is also

essential to all preventive healthcare companies, as by no means does the experience stop when the customer leaves the doctor's office, if there even is one.

Principle	Description
Human-centric	Desirability: Deep understanding of human needs (empathizing) Feasibility: Recognition and application of technological advancements (wearables) Viability: Importance of business objectives to support growth
Co-creative	Engaging customers and personnel benefits a shaping industry. Co-creation creates cohesion, alignment and commitment and shapes the organizational culture Enables innovative atmosphere and long-term success
Evidencing	Services and experiences are perishable in nature. Evidencing progress throughout the customer's health journey makes their transformation more tangible
Sequencing	Services as continuous sequences: Helps the designer identify and eliminate gaps within the customer journey
Holistic	Service design embodies holistic approach in designing customer experience improvements. A holistic approach enables delivery of seamless, impactful and memorable customer experience

Table 7: Role of service design in improving customer experience in preventive healthcare

The co-creative nature of service design can be browsed from both the customer and employee perspectives. Allowing a culture of innovation and grasping the versatility of multidisciplinary teams motivates the organization. During the workshops organized by the author, this became evident. Innovating together towards a common regardless of one's professional expertise improved commitment and understanding towards the customer and the service concept the company offered. Developing a deep understanding of the customer's contexts increases chances of directing the design in the right direction. Inviting the customer to co-create on the other hand increases the chances of discovering novel solutions. Service design in healthcare requires evidencing throughout the customer journey to make transformation more tangible. Information leadership from the service provider and the ability to deliver accurate and valuable content at the right moment increases seamless transitions between touchpoints. Eliminating gaps from identified steps during the experience and embodying a holistic approach for the design, enables delivering sequences of flowing, impactful and memorable customer experiences.

Finally, answers to RQ 3 add value to the service design community cross-industry by examining and identifying relevant service design tools at a preventive healthcare setting. The applicability of mapping tools was proven highly productive and useful for improving customer experience. The first application of a new service design method, customer journey blueprint, was recognized as flexible and adaptable to a variety of purposes. Successful delivery of well-designed customer experience in preventive healthcare can result in a life-altering transformation. In this process, the role of service design becomes undeniably important.

5.1 Value and Relevancy of the Thesis

This thesis provides both scientific and practical value for the healthcare industry, private sector organizations, service designers, research institutions as well as citizens. The scientific value relates to examining the relations between Customer-Dominant Logic, progression of economic value, customer experience and healthcare. The knowledge of service innovation and customer participation in the preventive healthcare industry is extended. Additionally, the thesis addresses opportunities for modern healthcare companies in driving and facilitating innovation and contributing to the paradigm shift from reactive healthcare to a more personalized and preventive approach with the use of human-centered design. Furthermore, the study contributes to the service design approach, processes and methods in developing modern healthcare and wellbeing services and provides practical value through the identification of deep customer insights as well as mapping and improving customer experience.

5.2 Prospects for Future Research

Finding a balance between the development of customer experience and employee experience is a topic that was considered throughout this thesis project by the author. How are these two balanced and prioritized when it comes to appointing resources? This topic is especially interesting when the company is in its startup phase or has plans to scale up. As processes and organizational culture are still finding their form, the question is what are the best practices to design and manage this process?

The most interesting prospect for future research lies at the end of the mapped customer journey, when the customer has been served with a personalized health plan. Since the service promise is to keep people healthy and further optimize their health and performance, it is obvious that a long-term commitment from both the customer and service provider is needed. The question is where to draw the line of obligation or responsibility of the service provider in preventive healthcare? To what extent is the company responsible for delivering their service promise and at what cost? As Customer-Dominant Logic suggests, the company is expected to find opportunities to support the customer's value creation process in their context also before and after the service. The author found clear signals that the role of technology in guiding customers through life-changing transformations is becoming increasingly important. Simultaneously, the ability to incorporate nudging - in hopes of maintaining motivation and inspiration- and emotional intelligence into digital solutions adds to the list of attributes a good service designer needs in the healthcare industry. Human-centred design as a creative approach offers suitable tools and mindset to find solutions that enable seamless transition between touchpoints while sustaining empathy in the design.

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Appendix 1: Contextual interview guide - existing Neosmart Health customers

CUSTOMER BACKGROUND

Please tell me about yourself

- Age
- Married / Relationship / Single
- Children?
- Occupation
- Hobbies

CUSTOMER JOBS-TO-BE-DONE

- What does health mean to you?
- Health goals?
- Describe your ideal health. Is it attainable?
- Describe the feeling you'd experience during ideal health (energetic, secure)
- Describe your normal week. Are there any health-related events that bother / are meaningful / are important?

HEALTH / REACTIVE HEALTHCARE EXPERIENCES

- Has there been significant changes in your life, that made you think of health more actively? What? Why?
- How did your lifestyle develop after these changes?
- Please tell me about a memorable experience you've related to reactive healthcare
- How were you treated as an individual/customer?
- Did you manage to solve your health problem?
- Walk me through the customer journey. Was there anything surprising there?
- Did you understand why selected procedures were conducted?

NEOSMART HEALTH

- How did you find out about Neosmart Health?
- What was your motivation of coming here?
- Describe your emotional journey (before, during, after clinic visits)
- Expectations
- Did you prepare to clinic visits? How? Why?
- Comparing preventive to reactive healthcare, what kind of differences have you experienced as a customer?

- Did you understand why certain things were done / recommended throughout the process?

CUSTOMER GAINS

- What worked especially well?
- Features that exceeded expectations?
- Service highlights? What felt most important?
- What was of high quality? Why?
- What was easy to understand? Why?
- What would make your life even easier? Why?

CUSTOMER PAINS

- Describe the challenges during the process
- Features that didn't work? Why?
- Features that didn't match expectations? Why?
- How to improve the service?
- Which feature demanded for too much effort? Why?

TEST RESULTS / FUTURE

- Describe your thoughts about your personalized health plan
- What was hard to understand?
- Do you know the next steps during your health journey? Where to start?
- Describe your expectations towards Neosmart Health from now on
- Have your personal health goals changed now?
- How do you see the role of Neosmart Health regarding your health? (coaching, challenging, teaching, supportive etc.?)
- Which channels / mediums would you prefer for tracking your health data?

SENSORS, DATA & HEALTH TRACKING

- How do you track your health?
- Which services do you use? How? Why? Can you show me?
- What kind of wearables do you use?
- What kind of data would you like to get about your health?
- Anything to add?

THANK YOU!

Appendix 2: Contextual interview guide - potential customers

CUSTOMER BACKGROUND

Please tell me about yourself

- Age
- Married / Relationship / Single
- Children?
- Occupation
- Hobbies

CUSTOMER JOBS-TO-BE-DONE

- What does health mean to you?
- Health goals?
- Describe your ideal health. Is it attainable?
- Describe the feeling you'd experience during ideal health (energetic, secure)
- Describe your normal week. Are there any health-related events that bother / are meaningful / are important?

HEALTH / REACTIVE HEALTHCARE EXPERIENCES

- Has there been significant changes in your life, that made you think of health more actively? What? Why?
- How did your lifestyle develop after these changes?
- Please tell me about a memorable experience you've related to reactive healthcare
- How were you treated as an individual/customer?
- Did you manage to solve your health problem?
- Walk me through the customer journey. Was there anything surprising there?
- Did you understand why selected procedures were conducted?

PREVENTIVE HEALTHCARE

- Please describe in your own words how you understand preventive healthcare
- [EXPLAIN TO CUSTOMER IF THEY DON'T KNOW]
- Have you used any preventive healthcare service? How? Why?

NEOSMART HEALTH WEBSITE

I Asked you to get to know the company, Neosmart Health, beforehand.

- Describe how / where did you search for information. Why?
- Describe the information you found
- What kind of questions did you have before search?
- Did you find answers?
- Describe your feelings during browsing
- How did you understand the Neosmart Health service offering, describe.
- What information did you not find?
- Your expectations towards the service if you were to become a customer?
- What would you value especially?
- Future: How do you see the role of your doctor in the future?
- What kind of channels / mediums would you like to use to access your health data?

SENSORS, DATA & HEALTH TRACKING

- How do you track your health?
- Which services do you use? How? Why? Can you show me?
- What kind of wearables do you use?
- What kind of data would you like to get about your health?
- Anything to add?

THANK YOU!

Appendix 3: Workshop 1 - slides from the facilitation PowerPoint

CONTENTS OF THE WORKSHOP

2 HOURS TO MAKE MAGIC HAPPEN...
...AND CONTINUE LATER



INTRODUCTION

What is a Customer Journey Map?
What is a Service Blueprint?
Purpose and goals of the workshop



ORIENTATION

Warm-up
Divide into groups
One pen, many voices



LET'S DO IT

Creating the customer journey map
Feedback



PURPOSE AND GOALS OF THE WORKSHOP

- ✓ Create a visual snapshot of our service for all current and future employees
- ✓ The map will serve as one basis for upcoming customer research
- ✓ Find moments of truth in the customer journey
- ✓ Help define staff roles and how their work can improve the customer experience



WHAT IS A CUSTOMER JOURNEY MAP?

- ✓ A journey map visualizes the experience of a person over time, with a service, a physical or digital product, or a brand.
- ✓ The map is based on assumption/customer insight and is current-/future state
- ✓ Journey maps help us to find gaps in customer experiences and explore potential solutions.
- ✓ Just as a movie is structured as a sequence of scenes, a journey map is structured as a sequence of steps

WHAT IS A SERVICE BLUEPRINT?

- ✓ Extension of journey map that connects customer experiences with both frontstage and backstage employee processes as well as support processes
- ✓ Builds on the frontstage experience visualized in a customer journey map, but adds layers of depth showing relationships and dependencies between frontstage and backstage processes.
- ✓ Illustrates how employee processes are connected with each other and with customer activities




WARM-UP YES, BUT or YES, AND

- ✓ Pick a pair
- ✓ PART 1: Plan your dream holiday together. After first comment, the other one always replies their idea and the sentence always has to start with "YES, BUT"
- ✓ PART 2: Plan your dream holiday together. After first comment, the other one always replies their idea and the sentence always has to start with "YES, AND"
- ✓ What was the difference?

PART 1 - CUSTOMER

Grab your post-its and start mapping

<p>PERSONA</p> <p>Persona is your main actor. Build the journey looking through the persona's lenses.</p>	<p>STAGES</p> <p>The main phases on a high level, for example awareness-consideration-booking-service-post_service</p>	<p>STEPS</p> <p>A step is any experience the main actor has during the journey, e.g. encounter with doctor</p>
<p>CHANNELS</p> <p>Means of communication at each step, e.g. face-to-face interaction, phone call, etc.</p>	<p>EMOTIONAL JOURNEY</p> <p>Main actor's level of satisfaction during each step, from -2 (very negative) to +2 (very positive).</p>	<p>DRAMATIC ARC</p> <p>Illustrates main actor's engagement during each step, from 1 (very low) to 5 (very high)</p>

PART 2 - STAFF

<p>LINE OF INTERACTION</p> <p>The line of interaction divides customer actions and frontstage interactions. Does the line go one way or both ways?</p>	<p>FRONTSTAGE ACTIONS</p> <p>Shows the activities of frontline employees that are visible to the customer</p>	<p>LINE OF VISIBILITY</p> <p>Separates frontstage and backstage actions by frontline employees</p>
<p>BACKSTAGE ACTIONS</p> <p>Activities by employees that are not visible to the customer</p>	<p>SUPPORTING PROCESSES</p> <p>Activities executed by the rest of the organization or external partners</p>	<p>WHAT MIGHT WE DO?</p> <p>Ideas and suggestions on how to support main actor's steps and improve customer experience</p>



WHICH ARE THE MOMENTS OF TRUTH?

MAKE IT OR BRAKE IT STEPS THAT DEFINE THE CX

Appendix 4: Workshop 2 - facilitation plan

9.30 - Start and welcome

9.30-9.45 - Presenting the current customer journey and the earlier work

- Define the problem
- Define the goal of the workshop: Ideating solutions for two distinct phases of the customer journey

9.45 - Warm-up exercise (1-2-3, clap, stomp, shimmy)

9.50 - Start of ideation workshop: Divide the participants into two pre-defined groups

Customer Journey phase 1: Ideation about the “waiting time” between first doctor’s appointment and the results (in two separate groups)

1. Determine at least two “How Might We”s for the problem. For example:
 - a. How might we keep the customer interested and add value while they’re waiting for results
 - b. How might we speed up the testing process (7 min)
2. Brainwriting - write down 8 ideas each (8-10 minutes)
3. Participants introduce their ideas (5 minutes)
4. Group the ideas in categories together with the group (10 mins)
5. Do brainwalking - walk from category to category adding up to the ideas on the boards. (8mins)

10. 30 - Break 10mins

10.40 - Continue ideation workshop. Participants move to the next customer journey phase.

Customer Journey phase 2: Ideation about how to keep the customer relationship ongoing after the first instructions

1. Dream big: Think of the unimaginable: Ask participants to dream up the most unattainable, extreme, and impractical solutions they can think of to a given problem. Create a list of a few dozen wishes pertaining to the task at hand. Focusing on a selection of wishes, consider and discuss the ideas in detail, with the aim of triggering new but more realistic concepts to pursue. What makes them so impossible? How can that idea be scaled down? Which features of that wish could we integrate into this other approach? (30minutes)

2. Grouping ideas together (10mins)

11.20 - Getting the whole group together to vote for the best ideas. Each participants is given 5 points to divide between ideas.

11.50 - Wrap-up and feedback.

Feedback gathered by red / green method using “I liked..” and “I wish..” statements.

Presenting the next steps.

12.00 - Close the session

Record outputs by taking detailed photos