Towards a more customer-centric service concept:

Case My Pension online service

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Laurea University of Applied Sciences   Abstract
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It has been argued that the scope has been narrow and predominant, when looking at customer online behavior and thus proposed that instead of viewing e-services as a separate domain, they should be viewed as an important part of the customers' daily lives and embedded in their activities (Gummerus 2011, 70). Hence, this development project contributes to a holistic and human-centered approach in the design and development of digital and online services and service concepts. The development project was done for the case company Keva, which is Finland's largest pension provider serving 1.3 million public sector employees and pensioners. The objective was to develop a more customer-centric service concept for Keva's online pension information service My Pension (Omat eläketietosi in Finnish), through understanding different customer groups, exploring the customers' lives and contexts, and uncovering insights about the customers' needs on a deep level.

The theoretical knowledgebase of this thesis is grounded on customer-dominant logic and human-centered design. Furthermore, this thesis discusses the approaches and methods of user-centered design and service design, which complemented the holistic approaches of customer-dominant logic and human-centered design. Moreover, the topics of customer experience and user experience were also explored. To fulfill the purpose and objectives set for the development project, a qualitative research project, including interviews and a customer needs and ideation workshop with Keva's private customers and studying customer feedback reports, was carried out during fall 2016. The data from the research phase was analyzed through in-vivo coding and affinity diagramming, after which the analyzed data was used as a base for forming persona profiles, design drivers and use cases to be utilized in the development of new solutions. The development phase included two co-creative workshops for the staff of Keva during spring 2017. In the first workshop the participants mapped customer journeys, ideated solutions and developed future scenarios, which were then used as a base for prototyping and testing in the second workshop. After the workshops the results were captured as wireframes and a process visualization. Furthermore, a service concept vision statement of My Pension online service was defined and constructed into a visual form.

The results presented within this thesis serve as a base for further development of the service concept of My Pension online service. As it is stated in the limitations chapter, this thesis does not cover the final stages of the development process where the concept and its solutions are finalized and implemented due to time restraint and the scope of this development project. However, it presents suggestions on how to continue the development. The wireframes, process visualization and service concept vision statement serve as concrete and clear starting points for further rounds of iteration. During the development project it was recognized that there is a clear need for a more open discussion on retirement and pension issues — people should be seen as the individuals they are, rather than through their societal status as pensioners, for example. Acknowledging Keva's public status, the customer-centric and holistic service concept of My Pension online service developed within this thesis could serve as a launching point for that sort of public conversation.

Keywords: Pension, Digital services, Service concept, Customer-dominant logic, Human-centered design, User-centered design, Service design

Gröhn Saara Marianna

Kohti asiakaskeskeisempää palvelukonseptia: Case Omat eläketietosi

Vuosi	2017	Sivumäärä	93

Asiakkaiden verkkokäyttäytymistä on aiemmin tarkasteltu kapealti ja onkin suositeltu, että verkkopalveluiden erillisenä asiana tarkastelun sijaan ne nähtäisiin olennaisena osana asiakkaan arkea ja toimia (Gummerus 2011, 70). Tämän opinnäytetyön tarkoituksena on edistää digitaalisten ja onlinepalveluiden holistista ja ihmiskeskeistä suunnittelutapaa. Kehittämisprojekti tehtiin asiakasyritys Kevalle, joka on 1.3 miljoonan julkisen sektorin palkansaajan ja eläkeläisen palvelijana Suomen suurin eläkevakuuttaja. Työn tavoitteena oli kehittää syvän asiakasymmärryksen avulla Kevan Omat eläketietosi-onlinepalvelun (myöhemmin *My Pension online service*) palvelukonseptia asiakaskeskeisemmäksi ja asiakkaan kokonaisvaltaisen asiakaskokemuksen sekä elämän huomioivaksi.

Opinnäytetyön teoreettinen tietoperusta pohjautuu asiakaslogiikan ja ihmiskeskeisen suunnittelun periaatteisiin. Lisäksi opinnäytetyössä käsitellään palvelumuotoilua ja käyttäjäkeskeistä suunnittelua sekä niiden menetelmiä, ja keskustellaan asiakas- ja käyttäjäkokemuksen teemoista. Asetettujen tavoitteiden saavuttamiseksi syksyn 2016 aikana suoritettiin kehittämisprojektin tutkimusvaihe, joka sisälsi Kevan henkilöasiakkaiden haastatteluita, asiakasymmärrystyöpajan sekä asiakaspalauteraporttien tarkastelua. Kerättyä dataa analysoitiin in-vivo koodauksen ja samankaltaisuusanalyysin avulla, jonka jälkeen analysoidun datan pohjalta muodostettiin persoonaprofiilit, suunnitteluajurit ja määriteltiin käyttötapaukset, joita hyödynnettiin seuraavan vaiheen työpajoissa. Keväällä 2017 Kevan henkilöstölle pidettiin kaksi työpajaa, joista ensimmäisessä määriteltiin asiakaspolkuja, ideoitiin uusia ratkaisuja ja kehiteltiin tulevaisuuden skenaarioita. Toisessa henkilöstön työpajassa ideoituja ratkaisuja prototypoitiin ja testattiin. Työpajoista saadut tulokset talletettiin rautalankamalleina ja prosessin visualisointina. Lisäksi palvelukonseptin visio määriteltiin ja dokumentoitiin visuaaliseen muotoon.

Tässä opinnäytetyössä esitetyt tulokset muodostavat pohjan palvelukonseptin tulevalle kehittämistyölle. Kuten työn rajoituksia käsittelevässä kappaleessa on mainittu, ajallisten resurssien sekä työn rajauksen takia tässä opinnäytetyössä ei käsitellä kehittämisprojektin loppuvaihetta, jossa ratkaisut viimeisteltäisi ja implementoitaisi. Rautalankamallit, prosessin visualisointi ja palvelukonseptin visio muodostavat kuitenkin vahvan pohjan jatkokehittelylle tulevaisuudessa. Kehittämisprosessin aikana tunnistettiin tarve avoimemmalle keskustelukulttuurille koskien eläkeasioita – ihmiset tulisi nähdä ja kohdata yksilöinä, eikä heidän sosiaalisen statuksensa, kuten eläkeläisyyden, läpi tarkastellen. Kevan julkisen aseman huomioon ottaen, opinnäytetyössä kehitetty Omat eläketietosi-onlinepalvelun asiakaskeskeinen ja kokonaisvaltainen palvelukonsepti voi toimia uudenlaisen yhteiskunnallisen keskustelun avaajana.

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1   Introduction

Over the recent years, a lot of discussion on the extension of working life and the future sustainability of public-sector finances has taken place in Finland. Linking the retirement age to the extending life expectancy was encouraged by The EU Commission and in September 2014, the Finnish central labour market organizations and the State agreed on an extensive pension reform which came into effect in the beginning of 2017. (Eläketurvakeskus 2017).

According to Keva (2016) the highlights of the reform were the following:

- The former part-time pension was replaced by partial early old-age pension.
- Early old-age pension is discontinued.
- A new pension type, the year-of-service pension, was introduced.
- Starting from the beginning of 2018 the lowest age limit for retirement will rise gradually from 63 years to 65 years.
- Pension starts to accrue at the age of 17 by 1,5 % of earnings.
- After reaching the earliest age of eligibility for old-age pension applicable within each age group, people are able to receive a deferment increment of 0,4 % for each month of continued employment.

1.1   Retirement − A big life change

Apart from the recent pension reform, the prevailing discussion and atmosphere around pension related issues seems often to have a slightly negative tone of voice. It is understandable, since people are all the time being pressured to work harder and continue their careers longer and the prevailing discussion within the society may refer to pensioners merely as a cost (Syrjälä, Helsingin Sanomat 2016). Needless to say, taking the leap from working life to retirement is likely to cause a mix of emotions. For some the life change is more than welcome, as after retiring they have more time to do what they enjoy, but for others it can be devastating, especially if they are forced to retire due to disability. Retiring after a long working career can leave some feeling depressed, useless and lonely, as they struggle to find their new identity by figuring out who they actually are outside the their workplace and what to do with all the free time (Syrjälä, Helsingin Sanomat 2016).

According to a study conducted by Danske Bank and Kiinteistömaailma (2016), 70 % of Finnish working age people wish to travel and 60 % want to invest time in recreational activities after retirement. Yet at the same only 8 % believe that the statutory pension which they will receive will finance their dreams. They recognize the fact that personal savings are required but at the

same time 36 % of people are not able to estimate how much money they can put aside for their retirement days. (Danske Bank & Kiinteistömaailma 2016).

Moreover, according to a study conducted by Eläketurvakeskus (2017) almost half of Finnish people feel that their knowledge regarding pension issues is poor, or fairly poor. As we are well aware, that one day the majority of us will end our working career and retire, why is it that so many people think very little — if at all — about pension and retirement related issues? Is it because they do not want to think about the time they are old, because for them the issues are not relevant at the time, or due to the tone of the prevailing discussion?

Before pension and retirement related issues become relevant, the sole touchpoint to them may only be when people receive their pension record information letter from their current pension insurance company. Nowadays, people might receive the pension record via paper mail once a year, every three years or even not at all, depending on the person's age and if the pension insurance company has decided to offer the information only online. Furthermore, as private people can freely choose and change their insurance company, so can most companies. Thus, people may not even know for which pension insurance company the pension contribution from their salary is collected for. At the time of applying for pension, different pension types may also cause confusion and raise questions like which one should I apply for, which am I eligible for, or what if I would like to work a little less hours for the last year of my career, and so forth.

Offering pension and retirement related information online

To share information, answer questions and serve their customers in all kinds of pension and retirement related issues, many pension insurance companies offer online services. The demand for more and better digital and online services has increased exponentially, as digitalisation has revolutionized the way services and goods are being consumed, changed the needs and the way customers behave, the environments they act in as well as reshaped the market dynamics and the ways how businesses operate (Ilmarinen 2015). More and more services are offered online to make them more cost-effective and available for wider audience.

According to Gummerus (2011, 33) there are two larger phenomena behind the increase in electronic services; firstly, the growing number of service platforms available are offering access to people and secondly, customers are more willing to use electronic services. Including the rise of self-service technologies and advances in information communication, in particular the Internet, the technological development has opened new opportunities in firm-customer interactions (Gummerus 2011, 33).

Furthermore, customer- and user-centricity has become a significant viewpoint which guides innovation; forerunning companies' innovative concepts and novel modes of operating and thinking are based on deep customer understanding, which helps in recognizing new opportunities in value creation (Tekes 2012). Thus, also for pension insurance companies it is important to investigate these opportunities, explore the phenomena of digitalisation and its possibilities from different perspectives.

Keva, which is the case company in this development project, serves their customers online through their My Pension (Omat eläketietosi in Finnish) online service (Figure 1). The service aims in anticipating the user's needs, offering a clear understanding of different pension alternatives and providing personal guidance throughout the user's online journey and pension application processes. On average 50 thousand people log in to the service monthly (personal communication, Nov 11, 2016) and most of them use the service less than once a month (Keva 2016). As the service has the potential to reach 1.3 million users and Keva now invests heavily on the development of their digital and online services, in order to serve their customers mainly online, there is an obvious need for taking on a holistic approach and involving the customers and relevant stakeholders into the development process.

Figure 1: My Pension online service landing page (Keva 2017)

1.2   Purpose and objective of the development project

Previous research has had a predominant and narrow way of viewing the online behavior of customers and electronic services (e-services) have many times been treated as a separate domain. However, it is unlikely for customers themselves to view their online behavior as separate from their daily life and consumption behavior. In contrary, the customers' online behavior is more likely to appear as intertwined with other set of activities. (Gummerus 2011, 70).

Hence, the purpose of this development project is to foster and contribute to a holistic and human-centered approach in the design and development digital and online services and service concepts. In other words, when developing services, whether they take place in the physical or digital context, taking on a holistic approach by considering the service concept as a whole — including its different contexts of use, service channels and the entirety of the customer's journey — should be the standard way to operate.

The objective of this development project is to develop the service concept of Keva's online pension information service My Pension (Omat eläketietosi in Finnish) more customer-centric through understanding different customer groups, exploring the customers' lives and contexts and uncovering insights about the customers' needs on a deep level.

To foster the holistic approach and fulfill the objective of this development project, the following four research questions were set to guide the development process:

- What kind of customer profiles exists within the users of My Pension online service and what are their needs and lives like?
- How and what kind of digital and online services they use and what kind of roles the services play in their lives?
- What are the main use cases of the customers using My Pension online service and what are their experiences in using it?
- When dealing with pension and retirement issues, how could the customers' journeys be improved?

1.3   Key concepts

The key concepts outlining this development project are defined next.

Pension and retirement

Pension refers to a monetary benefit granted for a person based on their age, working career or disability, whereas *retirement* refers to the situation when a person retires from the working career (Kotimaisten kielten keskus & Kielikone Ltd. 2017).

Service concept

Goldstein et al. (2002) argue that in service design a *service concept* defines the how and the what, ensures the integration between them, and helps in mediating the customer needs and the strategic intention of the organization. Additionally, the service concept helps in concretizing the nature of the service and is a core element of the design process (Goldstein et al. 2002).

User and customer

The term *user* is used when referring to a person who is using a digital or online service of some kind. The term *customer* is used to refer to a person who is buying or utilizing the products or services of a company or organization.

Digital and online services

Digital and online services refer to services or information, which a company offers either online or through software or an application. An *online service* is offered over the Internet (Technopedia 2017), whereas a *digital service* is more of a broad term to describe any digital service which does not necessarily require an internet connection. The word *digital* refers to electronic technology which uses discrete values, such as zero and one, in generating, storing and processing data (Technopedia 2017).

Customer-dominant logic

Customer-dominant logic (CDL) refers to a theoretical framework which aspires to foster a holistic understanding of the customer's life, addresses the questions of how does value emerge for customers and how they are forming their experience of value through a sense-making process, when the service provider is participating in their activities (Heinonen 2010).

Human-centered design

Human-centered design (HCD) refers to The International Organization for Standardization's ISO 9241-210:2010 definition, which describes HCD as "*an approach to interactive systems development that aims to make systems usable and useful by focusing on the users, their needs and requirements, and by applying human factors/ergonomics, and usability knowledge and techniques.*" (ISO 9241-210:2010).

User-centered design

User-centered design (UCD) refers to the framework of processes and software design method methodology for developers and designers of digital and online services (Lowdermilk 2013).

Service design

Tuulaniemi & Söderberg (2011, 10) define *service design* (SD) as a systematic way of approaching service development and innovation, analytically and intuitively at the same time. Furthermore, service design can also be described as an interdisciplinary approach which combines methods and tools from different disciplines and is evolving by nature (Stickdorn & Schneider 2011, 22).

User experience

User experience (UX) refers to the design of digital interfaces, products or services and from a business perspective its best practices can help in defining how customers experience brands and businesses through digital media (Chesnut & Nichols 2014, 8).

Customer experience

Encompassing the entirety of a company's offering, *customer experience* (CX) is an internal and subjective response, which a customer has when in contact with a company (Meyer & Schwager 2007).

1.4   Limitations

The issues of *usability* and *accessibility* are usually closely considered when developing digital and online services. However, they will not be explored in depth at this stage of developing the service concept of Keva's My Pension online service.

According to Lowdermilk (2013, 5), *usability* studies how humans relate to products and its practices can be applied with basically anything. Chesnut and Nichols (2013) define usability also as a fundamental component of user experience (discussed further in chapter *2.2.1 User experience*). Moreover, as pointed out in ISO 9241-210:210, the concept of usability is broader than the common misconception that usability refers only to creating products that are easy to use; it can also include aspects which are typically associated with user experience, such as the user's perceptual and emotional aspects. With that said, as the concept of user experience is discussed in this development project report, it is considered to cover the topic of usability in regards of the scope and focus of this development project.

Accessibility instead refers to designing services or products in a way that they are accessible and usable for as many people as possible. Systems need to provide connections to and enable integration with assistive technologies, in order to be accessible and usable for people with disabilities. (ISO 9241-171:2008).

As the research questions presented in chapter *1.2 Purpose and objective of the development project* indicate, the main focus within this development project is put on exploring the lives and experiences of the customer, their use cases and journeys and developing the *service concept* of Keva's My Pension online service from those perspectives, not from the perspectives of web development or information architecture, for example. Therefore, due to the nature, purpose and objectives of this development project, whereas usability is covered to some extent with being embedded in the discussion of user experience, accessibility will not be discussed within this report.

Furthermore, as it is stated in chapter *3 Double Diamond design process and chosen methods*, this project follows the four-step double diamond design process (discover, define, develop, deliver). Due to time restraint and the scope of this development project, the last step of the process *deliver*, where usually the final solution is finalized, evaluated, produced and launched, is only covered until concept vision statement which is formed based on the user research and the first round of prototyping, testing and iteration. However, the final chapter *5 Summary and conclusions* includes suggestions on how to continue the development project. Due to confidentiality reasons from the case company's side, some details of the results from the prototyping phase are not included in this report.

1.5   Case company Keva

Keva, earlier known as the Local Government Pensions Institution, administers the pensions of local government, State, Evangelical Lutheran Church and Kela employees and is responsible for funding and investing the pension funds of the local government employees. Pensions are

funded with pension contributions which are collected from both employees and employers. Employing 550 people, serving 1.3 million public sector employees and pensioners and about 2,300 employer customers, Keva is the largest pension provider in Finland. It is an independent body of which' operations are based on the Public Sector Pensions Act and the Keva Act and supervised by the Ministry of Finance, the Financial Supervisory Authority and the National Audit Office of Finland. (Keva 2017)

Keva aspires to offer the best customer experience and have the highest competitiveness from all the pension funds companies by the year 2019 (Personal communication, Feb 15, 2017). By 2020 the main channel for pension application, interaction and communication is to be online, the application process time stable on the current level and letter mail reduced by 50 % (Personal communication May 12, 2016).

1.6   Structure of the development project report

This chapter presents the structure of this development project report.

The first chapter *1 Introduction* introduced the background of this development project, as well as the purpose, objectives and key research questions, key concepts, limitations and the case company. The second chapter *2 Frameworks and value creation in service development* presents the fundamental approaches, customer-dominant-logic and human-centered design, taken on during this development project. Additionally, it discusses the frameworks of user-centered design and service design, as well as the topics of customer and user experience. The third chapter *3 Double diamond design process and chosen methods* introduces the four-step design process and chosen methods applied in this development project.

The methodology chapter is followed by chapter *4 Results*, which presents the activities carried out during each step of the design process, as well as the analysis process and overview of the project's results, since the final results will not be presented in detail, due to confidentiality issues. The final chapter *5 Summary and conclusions* summarizes the phases and results of the development project, evaluates the process and results of the development project, suggests actions for future development of the service concept of My Pension online service and discusses conclusions.

2 Frameworks and value creation in service development

This chapter introduces and discusses customer-dominant logic (CDL) and human-centered design (HCD), which are the fundamental frameworks applied in the development process of the service concept of Keva's My Pension online service. Furthermore, it discusses the approaches of user-centered design and service design, as their frameworks and methods are applied in the development project. Alongside with them, also the topics of customer and user experience are discussed.

Below Figure 2 visualizes the frameworks, approaches and methodologies which form the encompassing theoretical framework of this development project.
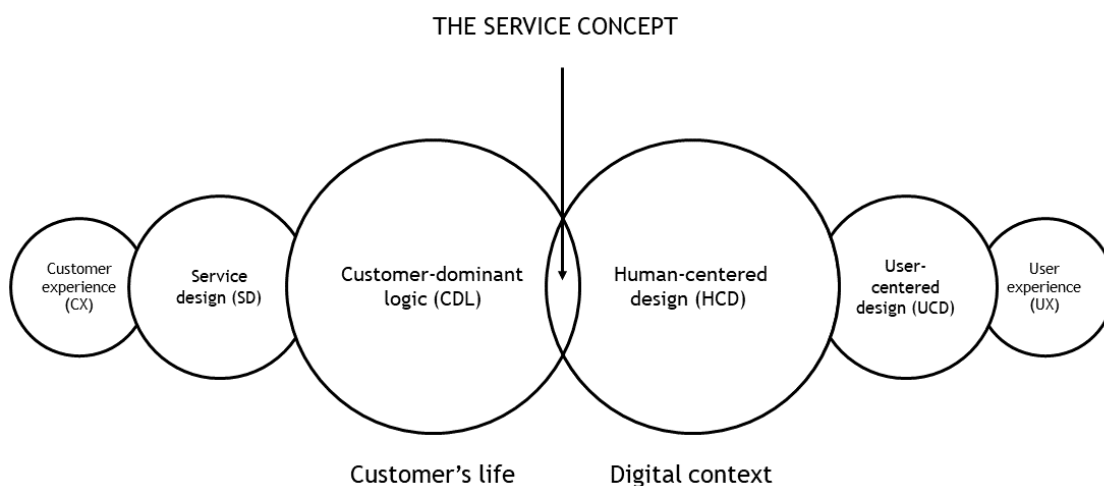
THE SERVICE CONCEPT

Customer
experience
(CX)

Service
design (SD)

Customer-dominant
logic (CDL)

Human-centered
design (HCD)

User-
centered
design (UCD)

User
experience
(UX)

Customer's life   Digital context

Figure 2: Overview of the frameworks and approaches applied during the service concept development project (Gröhn 2017)

2.1 Customer-dominant logic

According to Lusch and Vargo (2014, 3), to better understand and make sense of the world around us, it is in our nature to develop belief systems, also referred to as institutional logics. These logics guide and determine our behavior and many times they are adopted through education and provide a lens through which we can filter the information we are receiving (Lusch & Vargo 2014, 3).

Institutional logics, while they may seem comfortable and hard to shift away from, are not carved in stone, as if they were not required to change and evolve (Vargo & Lusch 2014, 3). When comparing to the 1920's, the fundamental human needs have changed over time and we are now saturated with material wealth, the consumption of products is no longer a resource

for good living (Polaine et al. 2013, 18). When marketing emerged in the beginning of the 1920's, the dominant logic embraced by the industry was goods-dominant logic (GDL) (Lusch 2007). GDL, also referred to as the *old enterprise logic* or *manufacturing logic*, argues that the central components of business and economics are the production and exchange of goods (Lusch & Vargo 2014, 4). In the mindset of GDL, the customer is not included in the value creation process (Lusch 2007) and value is seen to be embedded in goods through manufacturing processes (Vargo 2004).

In 1968 Fuchs argued that the service sector has become the largest element in the US economy since the end of World War II and other industrialized countries are following its lead (Fuchs 1968). When looking at where we are today, the World Bank's open data report shows that in 2014 services made up to 68,45 % of the GPD of the whole world (World Bank Open Data 2017). In Finland, the number was 70,4 % (World Bank Open Data 2017). Thus, it can be clearly stated, that services and the service sector make up a significant part of the world's economy. However, if adopting a service logic, Vargo & Lusch (2008) argue that actually all economies are service economies and based on exchange – service is always exchanged for service.

Emergence of customer-dominant logic

In the past decade, there has been a radical change in the role of the customer in service setting, as the power has shifted from companies to the hands of the customers (Voima 2010). It is no longer the company which decides how, where, when and by whom value of its goods or services is created.

Ever since Vargo and Lusch (2004) published their paper *Evolving to a New Dominant Logic for Marketing* discussing the new logic of marketing in attempt to replace the goods-dominant logic, there has been a lively discussion and debate upon the topic and how and by whom value is being formed and created. After releasing the paper introducing service-dominant logic (SDL) in the Journal of Marketing, several scholars have reacted, responded and elaborated on the new marketing logic of SDL, as pursued by the authors (Vargo 2008).

While SDL has continued its evolution and continues to do so, a challenging marketing logic, customer-dominant logic (CDL) introduced by Heinonen (2009), has emerged. The CDL perspective was first outlined within a research project funded by partner companies and the Finnish Funding Agency for Innovation (Tekes) between 2008-2011 and fundamental ideas describing the emerging marketing logic were presented by Heinonen and Strandvik at CERS (Gummerus & Koskull 2015, 114).

Heinonen (2015) describes customer-dominant logic as a marketing and business perspective which instead of products, service, systems, costs or growth is dominated by customer-related aspects and grounded in understanding customer's logic, as well as how firms' offering may be embedded in their lives. Heinonen (2010) argues that although SDL is indeed a step away from the highly provider-dominant logic of goods-dominant logic (GDL) and has developed the understanding of how marketing functions, it is still provider- and not customer-dominant by nature. Furthermore, Heinonen (2010) argues that SDL sees the customer as being employed by the company or as a partner in the co-creation process and thus, emphasizes a company-based view.

Figure 3 below presents the initial characteristics of CDL, depicting the connection between the service provider and the customer in general sense and illustrating their overlapping worlds (Heinonen 2015).
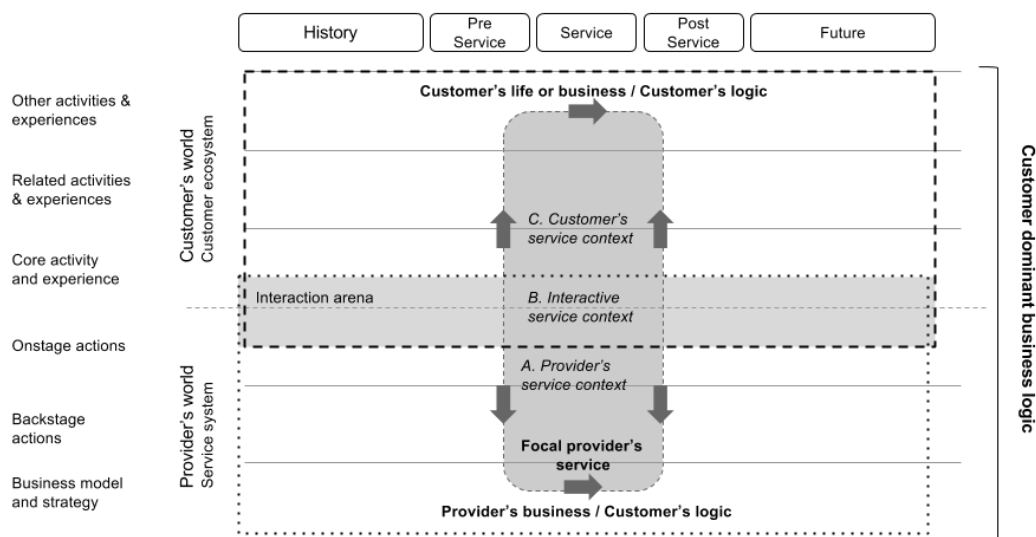

Figure 3: Customer-dominant logic of service. Modification of the original figure by Heinonen (2015).

In oppose to service, service provider or producer, or interaction system, in CDL marketing logic the customer is positioned in the center. Moreover, the CDL mindset shifts the focus from customer to a person, as Voima (2010) describes it. Furthermore, Heinonen (2010) underlines that in a company context CDL is not a mere concern for marketers, but rather a strategic issue; the focus should be on exploring how the company's services fit the customer's contexts and their activities, experiences and practices. Companies should find out what the customers are doing (or trying to do) with the service to reach their personal goals, instead of focusing on what it does to create services which customers *might* prefer. (Heinonen 2010).

Moreover, in the customer's life during a service process, the interaction between the service provider and the customer is only one part of all the other related and relevant activities and experiences. The customer's perspective comprises other activities and life as whole, not just the producer's service − services are never used in a vacuum. (Heinonen 2010).

Thus, the starting point should always be the customer's world, not the processes of the company (Voima 2010).

Below, Table 1 summarizes the essentials, or fundamental elements, of customer-dominant logic as a business perspective.

BUSINESS PERSPECTIVE	Marketing is seen as a revenue management and as a ubiquitous mental model with customer logic as a foundation for business.
CUSTOMER LOGIC	Customer logic is defined as customer's idiosyncratic reasoning of and their sense making about appropriate ways for achieving their goals and conducting their tasks.
OFFERING	Offering is a generic concept of the holistic entity the provider has designed and intends to provide/sell, containing material and immaterial elements to achieve its own goals.
VALUE FORMATION	Customer value formation is defined as customers' emerging behavioral and mental processes of interpreting, experiencing and integrating offerings in their daily everyday lives/businesses, with either positive or negative outcomes. Provider value formation is defined as the provider's evolving process of strategizing, designing and implementing offerings based on its capabilities and skills and interpretation of customer logic, with either positive or negative outcomes.
CUSTOMER ECOSYSTEMS	A customer ecosystem is defined as a system of actors and elements related to the customer and relevant to a specific service. This includes service providers, other customers (individual or business actors) and other actors (such as communities), as well as installed physical and virtual structures related to the service.

Table 1: The essentials of customer-dominant logic as a business perspective. Adapted from Heinonen (2015).

Outlining views on value formation, value creation and value co-creation

The role of value and means of value creation, formation, co-creation and emergence have been discussed and explored extensively during recent years' research. During the debate regarding SDL, it has been stressed that value creation calls for systematic consideration, as the core of marketing has shifted from production-oriented towards resource perspective, and value is seen to be co-created instead of delivered solely by the company. Value is considered to realize through customers' use of the company's offering and resources, in oppose to being embedded in goods and exchange. (Heinonen 2013).

To map out the most relevant approaches and frameworks in value creation in service and service development regarding this development project, three different views on value creation will be discussed and compared against each other next.

Service-dominant logic (SDL)

Through significant theoretical turns and modification of its foundational premises, service-dominant logic has been consolidated into a set of core axioms (Vargo 2017) of which the fifth was presented in 2016 (Vargo 2016).

The premises (or core axioms) emphasize the role of the customer in the process of value creation and how instead of goods, service is the fundamental base of exchange; service is always exchanged for service and all economies are service economies. Furthermore, the customer is seen as a co-creator of value, an integral part of the value creation process, for whom the company can only offer value propositions to. It is also argued that the company cannot deliver value, as value is always determined by the beneficiary. (Vargo 2008).

Service logic (SL)

Contributing to the discussion on SDL, its foundational premises and the debate on value creation, Grönroos (2011) argues that instead of being a co-creator of value, the customer is actually the value creator. Moreover, it is argued that firms are facilitators of value as well as act as co-creators of value in the customer's value creation processes, and that instead of merely offering value propositions, firms can directly or indirectly influence the value creation processes of the customers. Furthermore, it is stated that value is uniquely, experientially and contextually perceived and determined by the customer. (Grönroos 2011).

Customer-dominant logic (CDL)

Heinonen (2010) argues that the CDL approach differs significantly from the approaches which SDL and SL present, because they consider only the activities and experiences which are directly related to a service. Furthermore, Heinonen (2010) argues that SDL sees the customer as being employed by the company or as a partner in the co-creation process and thus, emphasizes a company-based view, whereas CDL aims in addressing questions of how value emerges for customers and how they form their experience of value through a sense-making process, when the service provider is participating in their activities (Heinonen 2010). According to Heinonen (2013), customer-dominant logic proposes that instead of restricting co-creation interactions only between the customer and the company, like in SDL and SL, value extends beyond the interactions of co-creation and consumption and emerges solely in the customer's sphere.

Voima (2010) argues that value formation may take place in both active and passive processes. In other words, value formation does not always require an active creator, like the customer or the company, but instead it can be formed and embedded in the accumulated customer reality, as customers interpret interactions through cognitive, mental and emotional processes (Voima 2010). Voima (2010) points out also that the reality of the customer and the customer experience is not isolated, but rather interconnected on multiple levels to other peoples' realities. Moreover, it is argued that value is not objective, nor it is purely subjective, but relative and at all times personal (Voima 2010). Finally, instead of contrasting products to service like SDL and SL, CDL considers services as well as products as the basis for value (Heinonen 2015).

To conclude, Table 2 summarizes and compares the value formation, creation and co-creation perspectives of customer-dominant logic, service logic and service-dominant logic, by comparing the logics' different views on how and where value is created, who creates it and what is the locus.

	SDL	SL	CDL
HOW	Not explicitly defined; implicitly, an all-encompassing value creation process including all actors involved.	A process including all actions by all actors involved, which ultimately leads to value for a user.	Value is based on an emerging process.
WHERE	Not explicitly included; implicitly, one value sphere for an all-encompassing value creation process in which all actors involved co-create value.	Value is formed in three distinct spheres; the customer sphere, the provider sphere and joint spheres.	Value is formed in the life and ecosystem of the customer and takes place in the control zone of the customer.
WHO	Customer determines value, provider drives and co-creates value (to which process the customer may or may not take part in).	The customer both creates and determines value. Customer drives value creation and provider may engage with the customer's value creation and co-create value with the customer.	Value formation is determined by the customer relative to alternatives on multiple levels, and based on customer's experience of fulfillment. Value formation is collective and may be shared. The value unit consists of different actor configurations.
LOCUS	Value determined by context, e.g. value-in-use, value-in-context, value-in-exchange, value creation	Value-in-use	Value-in-use, value-in-experience

Table 2: Value formation, creation and co-creation according to service-dominant logic (SDL), service logic (SL) and customer-dominant logic (CDL). Adapted from Heinonen (2013) and Grönroos (2014).

When looking ahead, the discussion on customer value formation and customer-dominant logic should be elaborated towards more context-specific directions, such as the context related to this development project — the context of digital and online services. According to Gummerus (2011, 70) the scope has been narrow and predominant, when looking at customer online behavior. Thus, Gummerus (2011, 70) proposes that in the future instead of viewing e-services as a separate domain, they should be viewed as important part of the customers' daily lives and embedded in their activities, since it is rather unlikely that the customer herself experience their online and offline lives and consumption as separate. As CDL proposes, firms should look at the customer's world as a whole and consider the entirety of the customer journey pre, during and post service, as well as the ever-changing channels of interaction.

Since the context of this development project is firmly related to digital and online services, it is in place to also discuss other approaches which are relevant to them. Thus, in the next chapter the approach of human-centered design and context-specific frameworks and approaches related to it will be discussed.

2.2 Human-centered design

According to Boy (2011, 5), human-centered design (HCD) is a creativity-driven, mandatory upstream process, which enables the design team to embed human requirements into the design of a system and is oftentimes scenario- and prototype-based. The aim is to gather issues of human factors among the anticipated users of the system, who may be direct end-users or for example people who maintain it. Through scenarios and mock-ups, the actors' requirements for the system can be detected. (Boy 2011, 5).

The International Organization for Standardization defines human-centered design (HCD) in ISO 9241 part 210:2010 in the following way:

"Human-centered design is an approach to interactive systems development that aims to make systems usable and useful by focusing on the users, their needs and requirements, and by applying human factors/ergonomics, and usability knowledge and techniques."

In ISO 9241-210:2010 it is also argued that by applying the approach of HCD effectiveness, human well-being, user satisfaction, accessibility alongside with sustainability are enhanced. The principles of HCD presented in Table 3.

PRINCIPLE 1	The design is based upon an explicit understanding of users, tasks and environment.
PRINCIPLE 2	Users are involved throughout design and development.
PRINCIPLE 3	The design is driven and refined by user-centered evaluation.
PRINCIPLE 4	The process is iterative.
PRINCIPLE 5	The design addresses the whole user experience.
PRINCIPLE 6	The design team includes multidisciplinary skills and perspectives.

Table 3: Principles of Human-centered design. Adapted from ISO 9241-210:2010.

The first principle argues that the design should be based upon an explicit understanding of users, tasks and environments. Furthermore, products, systems and services should be designed in a way which takes into account the people who will use them and other stakeholders affected directly or indirectly by the use of them, as well as the tasks they perform and the environment they interact within. The second principle argues that users should be involved throughout the design and development process, including the evaluation activities, and that users may act as a source of data. The third principle argues that design should be driven and refined by user-centered evaluation. In other words, as feedback from users is a critical source of information, user-centered evaluation should take place as part of the final assessment and acceptance of the product. (ISO 9241-210:2010).

The fourth principle underlines the iterative nature of the process, stating that the most appropriate solution most often requires iteration, which progressively eliminates uncertainty during the development process. The fifth principle states that the design should address the whole user experience, meaning that the process needs to take into account the users' strengths, limitations, preferences and current and previous expectations and experiences, as well as organizational impacts, user documentation, online help, long-term use and packaging. Finally, the sixth principle highlight the importance of design team, which has multidisciplinary skills and perspectives. The design and development team should be diverse, because projects benefit from a multi-perspective approach team with an extensive skillset. (ISO 9241-210:2010).

These principles highlight the importance of knowing the user and her requirements towards a service or product, as well as the need for multidisciplinary skills and perspectives within the design team, in the context of using a digital or online service. Yet, it is not emphasizing the holistic way of looking at the entirety of the customer's journeys' and world as heavily as customer-dominant logic. While the user may be seen as to be positioned in the center of the design process, and it is suggested that users would be included in every step of the design process, it is not thoroughly discussed how other aspects of the customer's life may affect the use of the service. As mentioned in the chapter *2.1. Customer-dominant logic*, CDL lacks research and application in digital and online service. Within this development project, human-

centered design may provide a more context-specific framework for those activities. Thus, the two approaches are applied in parallel.

When discussing human-centered design — especially in the context of digital and online services — oftentimes the concept of user-centered design (UCD) comes up. Whether people discuss HCD or UCD, they may even be referring to the same mindset or set of principles and frameworks. Based on the understanding which the ISO 9241-210:2010 document points out, that HCD is an approach and provides an overview on the human-centered design activities and does not cover the methods and techniques required for implementing it, hence, HCD could be defined as kind of an umbrella, under which the different frameworks and focuses of those frameworks for implementation are situated at. In other words, HCD sets the ground rules portrays the mindset, and UCD and its focuses (such as user experience, also discussed later on) put them to action by providing processes and methods for the design and development work. Thus, in order to apply HCD in a comprehensive manner, UCD framework of processes will be discussed next, as its methods will be applied within this development project.

2.2.1 User-centered design

In Finland, the emergence of user-centered design methods has been closely tied to the spreading of online services — although different physical goods have been the pioneering products of user-centered design, online services make up the critical mass which has introduced user-centered design methods to the wider audience. The main motivation behind the interest towards usability may be that since the use of the services is voluntary and a lot of competition exists in the market, companies are impelled to make their services as desirable and easy to use as possible. (Sinkkonen 2009, 17).

Lowdermilk (2013) defines user-centered design (UCD) as a framework of processes and a software design methodology for developers and designers of digital and online services. Emerged from the field of human-computer interaction (HCI, defined in ISO 9241), UCD provides processes and methods for development aiming in creating services and applications which serve the needs of the users. Applying user-centered design methods in digital and online service development ensures that the end product, or service, maintains good usability and creates a great user experience (UX). All decisions made on the design, functionalities and requirements of the product or service are based on data collected about the users and their needs, and not on assumptions or preferences of the development team. Thus, the end product, or service, developed by following the process and applying the methods of UCD is ought to serve its purpose well by fulfilling user needs, as well as being engaging and easy to use. (Lowdermilk 2013, 6-7).

Besides defining the business goals the service aims in achieving, an UCD process starts foremost from getting to know the customers and their contexts. User-centered methods of UCD allow the design and development team to take a deep dive in the world of their customers to empathize with them. By creating persona profiles based on user research, the design and development team can reach a common understanding of the direction the project should be heading towards and make sure that the needs of the customers are well met. Though prototyping and creating scenarios of the use cases and journeys of the customer, the team can assess for example the viability and desirability of the solution. Testing and iterating the solution before launching it on the market can save both time and money, as well as the nerves of the customer and the reputation of the company. (Sinkkonen 2009, 28-29).

Principles of user-centered design

As with other approaches to design such as HCD, user experience design or service design, principles are many times defined to outline the mindset and approach of the framework and its methodologies. According to Sinkkonen (2009, 35) when discussing UCD and more specifically web design processes, in addition to actual methods, user-centricity can be crystallized in to design principles which are presented below in Table 4.

PRINCIPLE 1	The service should support the users' natural ways of going about their tasks.
PRINCIPLE 2	The navigation of the service should be clear and efficient for the users.
PRINCIPLE 3	The user should always be aware of her location within the service, what tasks she is able to perform in her location, where she can navigate to from the location and how she can return to her previous location, if possible keeping in mind the wholeness of the service.
PRINCIPLE 4	The service must be easy to use.
PRINCIPLE 5	The design decisions of the service must be uniform and coherent.
PRINCIPLE 6	The service must include only the functions which its users need.
PRINCIPLE 7	The terms used in the service must originate from the users' world and concepts, or otherwise their meaning must be explained.
PRINCIPLE 8	The service must guide the users as much as needed.
PRINCIPLE 9	The content of the service must be relevant for its users.
PRINCIPLE 10	The visual design of the service must support finding relevant things in correct order and help the user in interpreting the interface correctly.
PRINCIPLE 11	The visual design of the service must support the brand of the company.
PRINCIPLE 12	According to needs, the service must support hierarchical diving, as well as process-like way of working.

Table 4: The principles of user-centered design for web design processes. Adapted from Sinkkonen (2009, 35-37).

In the first principle Sinkkonen (2009) argues that the service should support the users' natural ways of going about their tasks. The customer research should be conducted carefully in order to find out who the users are or who the users should be. To acquire information to be used as the base of web and content design, the development team should find out where and how the users are currently performing the tasks for which the service is meant to be developed for and what could make people use the service. (Sinkkonen 2009, 35-39).

The second principle states that the navigation of the service should be clear and efficient for the users. The navigation of the service should be built so that it is clear, it supports the users' mental models and things are easy to find. The findability of different things should be tested as early as possible. The third principle argues that the user should always be aware of her location within the service, what tasks she is able to perform in her location, where she can navigate to from the location and how she can return to her previous location, if possible keeping in mind the wholeness of the service. It is suggested that headings, names of links, breadcrumb trails and other supporting operations should be clear and informative and the visibility of different functions should be well taken into consideration. (Sinkkonen 2009, 35-39).

The fourth principle states that the service must be easy to use. To achieve that goal, Sinkkonen (2009) explains that the service should be built in an iterative manner. In other words, she encourages in prototyping, testing and fixing or having an expert review done, if needed. The fifth principle suggests that the design decisions of the service must be uniform and coherent. Thus, it is recommended that a guide of the interface would be done and the design work would be checked against it. The sixth principle underlines that the service should include only the functions which its users need and no more, or less. The functions which the users would use should be mapped out through user research and designing functions *just to be sure* should be avoided, as that time and money can be invested in something more necessary. Furthermore, Sinkkonen (2009) argues that any other extra function or feature besides the ones that the users will really use, weakens the usability of the service. The seventh principle states that the term used in the service should originate from the users' world and concepts, or otherwise their meaning should be explained. Sinkkonen (2009) suggests that during the user research phase a mind map should be created and all key terms and concepts should be tested in case there is any doubt about what something means. If common language or the vocabulary familiar to the users cannot be used, term should be carefully explained. The eight principle argues that the service must guide the users as much as needed. The need of guidance can be detected through user research, or latest during the testing phase. (Sinkkonen 2009, 35-39).

The ninth principle suggests that the content of the service should be relevant for its users. An understanding of the users and their behavior is achieved through user research, yet it should

be confirmed through testing that the content has been understood correctly. The tenth principle emphasizes that the visual design of the service should support finding relevant things in correct order and help the user in interpreting the interface correctly. Unless the visual design supports the users' intuitive use of the service taking in consideration also the context and cultural issues, the user might get lost and thus, unable to accomplish her task. For example, different colors and symbols may create confusion among users from different cultural backgrounds. The eleventh principle states that the visual design of the service should support the brand of the company. The brand image should be coherent no matter what the channel of service is, from website to application, brochures or physical store, so the user is able to recognize it. (Sinkkonen 2009, 35-39).

The final twelfth principle suggests that according to the users' needs, the service should support hierarchical diving, as well as process-like way of working. In other words, the hierarchy of the service should be designed together with the users to make it intuitive for them, as it rarely is so that the intuition of the designer is enough (Sinkkonen 2009, 190). If the service uses process-like way of working, the design should be based on interactive use scenarios of the service (Sinkkonen 2009, 199). (Sinkkonen 2009, 35-39).

The principles of UCD provide a solid set of guidelines for the design and development work of digital and online service, focusing on how the content of the service should be executed and what kind of requirements should be acknowledged when building it. When comparing the principled of HCD and UCD against each other, it seems clear how they differ from one another, although sometimes they seem to be viewed as one approach and framework, like explained earlier.

Since the context of this development project is closely grounded in the development of digital and online services, a need for context-specific design framework is evident. Thus, the framework and principles of user-centered design (UCD) are applied within this development project. The user-centered methods applied are introduced in the methodology chapter *3 Double diamond process model and chosen methods*. However, to explore and expand the understanding of methodologies and explore them from more holistic perspective, which relates more to the CDL way of looking at service development, the design discipline of service design will be discussed next.

2.3   Service design

Service design (SD) as a design discipline can be rooted back to the emergence of industrial design in the 1920's, when it was defined by a community of American designers. Apart from the US, in Europe The Bauhaus was a central school and movement contributing to the birth of

industrial design. What was common among designers in the US and Europe influenced by industrial design, was that they wanted to turn industrialization into a force of good by utilizing the new, industrial technology available to improve people's standard of living and satisfy the human needs. Until then, the impact and possibilities of industrialization had been realized in the World War I through the industrialization of the warfare, so the designers strove away from that. Instead, they put effort in designing efficient, useful and affordable products. (Polaine 2013, 18).

In the chapter *2.1 Customer-dominant logic*, it was described how also marketing emerged in the 1920's and from there, the marketing logic has evolved from the goods-dominant logic (GDL) view towards service-dominant logic, and further on to customer-dominant logic. From that chain of development, it may be deduced, that it goes hand in hand with the shift from designing products to designing services. Over time our focus has shifted from efficient production towards lean consumption and thus the value set has also moved from the standard of living to quality of life (Polaine 2013, 18).

As a field of expertise service design is still relatively new, as it has developed over the past 20 years and during that time professionals is design and other fields have practiced service design without calling it by that name (Curedale 2013, 4). According to Kuosa (2012) the formalization of service design happened in parallel with the concepts of design thinking and co-design.

Defining service design

Defining service design is challenging (Tuulaniemi 2011, 12). Tuulaniemi (2011, 10) defines it as a systematic way of approaching service development and innovation analytically and intuitively at the same time. According to Curedale (2013, 17) service design aims in finding an optimal balance between business needs, technology, people and context. Stickdorn & Schneider (2011, 22) argue that service design is an interdisciplinary approach which combines methods and tools from different disciplines and evolving by nature; the approach still lacks a common definition.

In academia, there has been several attempts to outline and capture the essence of service design, for example The Copenhagen Institute of Interaction Design (2008) defined service design as an emerging field which focuses on creating well thought experiences by combining intangible and tangible mediums. Moritz (2005) argued it to be a holistic, multi-disciplinary and integrative field, which helps in innovating or improving services in order to make them useful, usable, desirable from the customer's perspective and efficient and effective from the organizational perspective. Like Moritz (2005), also UK Design Council (2010) states that service design

helps in making services useful, usable, efficient, effective and desirable. Likewise, Mager (2009) points out the aspects of usefulness, usability and desirability for the customer and effectivity and efficiency for the supplier. (Stickdorn & Schneider 2011, 22-24).

Besides academia, also agencies have made their interpretations on the nature and characteristics of service design. For example, Engine service design (2010) describes it as a design specialism which helps in developing and delivering great services and aims in improving ease of use, satisfaction, loyalty as well as efficiency across environments, communications, products and people. Frontier service design (2010) on the other hand underlines the importance of knowing the customer, as they describe service design to be a holistic way through which a business can gain a comprehensive, empathic understanding of the needs of the customer. Continuum (2010) introduces a business-driven perspective, when it characterizes service design as a way of developing environments, tools and processes which help the employee in delivering superior service in line with the brand. Live|work (2010) zooms out of the spheres of the customer, employee and organization when describing service design as a creative and practical way to improve and innovate services through the application of established design process and skills. (Stickdorn & Schneider 2011, 24-25).

The above attempts to define service design all seem to agree on the view, that service design is holistic by nature, as it acknowledges the perspectives of both, the customer and the organization. The aspects of usefulness, usability and desirability, which according to Chesnut and Nichols (2014, 9) are the three fundamental measurements of good user experience, imply that the user experience is emphasized when applying service design and thus, the viewpoint of the customer is being acknowledged. Respectively, the aspects of effectivity and efficiency take the business perspective into account.

Principles of service design

Stickdorn uses the phrase *service design thinking* in the book *This is Service Design Thinking – Basics, tools and cases* to outline the thinking required when designing services, since there is no common definition of what service design is (Stickdorn & Schneider 2011, 26-27). Yet, whenever new solutions, services or products are designed and developed, again a set of principles usually guide the work. In the book Stickdorn argues that service design thinking is based on five principles listed below in Table 5.

	SERVICE DESIGN IS…
PRINCIPLE 1	**User-centric.** Services should be experienced through the eyes of the customer.
PRINCIPLE 2	**Co-creative.** All stakeholders should be included in the design process.
PRINCIPLE 3	**Sequencing.** The service should be visualized as a sequence of interrelated actions.
PRINCIPLE 4	**Evidencing.** Intangible services should be visualized in terms of physical artefacts.
PRINCIPLE 5	**Holistic.** The entire environment of a service should be considered.

Table 5: The principles of service design. Adapted from Stickdorn & Schneider (2011, 34).

The first principle concerns user-centricity. In order for a service to be user-centered, Stickdorn argues that it should be experienced through the eyes of the customer. The customer needs to be placed in the center of the design process, which requires a deep understanding of the customer. The second principle suggests that the design process should be co-creative, as in that it includes different stakeholders and creativity is encouraged. Co-creation fosters inter-action within the stakeholders and evokes co-ownership which has the potential of increasing the loyalty of the customer, as well as engagement in long-term. (Stickdorn & Schneider 2011, 34-45).

The third principle of sequencing refers to the thinking that as services are dynamic processes happening over a period of time, they should be visualized accordingly as a sequence of inter-related actions. The fourth principle of service design thinking states that since services are intangible, during the development process they should be visualized in a physical form through physical artefacts. Finally, the fifth principle concerns holisticity, meaning that instead of fo-cusing only in one part or environment of the service, the whole service environment should be taken in consideration when designing it. (Stickdorn & Schneider 2011, 34-45).

In this development project the principles of service design (thinking) are applied in supporting the approaches and frameworks of customer-dominant logic and human-centered design. Fur-thermore, in some parts it shares methods with user-centered design (discussed in chapter *2.2.1 User-centered design*), such as the use of personas and prototypes, but puts the focus even more on the holistic approach by taking the wholeness of the customer experience into consideration, like CDL suggests. Furthermore, the concepts of *customer journey* and *touch-points* which are discussed in the next chapter *3 Double diamond design process and chosen methods* are central concepts in service design and vital tools within the development process of the service concept of My Pension online service.

After discussing relevant frameworks and value creation in service development, experiences in service development from two different perspectives, user and customer perspective, will be shortly discussed next.

2.4 User and customer experience

In chapter *1.2 Purpose and objective of the development project* the objective of this development project was defined to be to develop the service concept of Keva's My Pension online service more customer-centric through understanding different customer groups. Moreover, the purpose was to foster and contribute to a holistic and human-centered approach in the design and development digital and online services and service concepts.

Thus, it is important to explore the concept of *experience* from different perspectives; first, the service *user*, and when taking a more holistic perspective and applying the approach of CDL and HCD, the *customer*. First, the focus of *user experience* is discussed in order to understand what should be taken in consideration when developing a digital service which provides a good user experience. Second, the focus of *customer experience* and ways of managing and maintaining it is discussed.

2.4.1 User experience

User experience (UX) is one of the focuses of user-centered design (Lowdermilk, 2013, 13) and a design practice aiming in creating user-friendly and delightful experiences for users. Chesnut and Nichols (2014,8) argue that in general, UX is usually associated with the design of digital interfaces, although it can also apply to various kinds of products and services. When looking at UX from a business perspective, its best practices can be used in defining how customers experience brands and businesses through digital media (Chesnut & Nichols 2014, 8). In short, UX could be described simply as a flow of feelings, which the customer experience when using a device, webpage or system (Kraft 2012, xv).

Fundamental measurements of good user experience

The three fundamental measurements of good UX design state that any UX design should be useful, usable and desirable. Useful as in that the content, features or functions of the solution serve common user needs, usable as in that the solution is easy and intuitive to use and desirable as in that on top of being useful and usable, the solution is engaging and compelling both visually and content wise. If the solution which one company is offering fails to meet the user's requirements and there are similar solutions available on the market, the customer is likely to seek better user experience from a competitor. (Chesnut & Nichols 2014, 9).

In addition to the three fundamental measurements of good UX, Morville (2004) introduces the factors of valuability, findability, accessibility and credibility (Figure 4) in the form of User Experience Honeycomb diagram. Within this development project the User Experience Honeycomb is applied in evaluating the user needs towards the service concept of Keva's My Pension online service in chapter's *4.2. Defining the basis for development* part *Creating empathy towards the customer through persona profiles*.
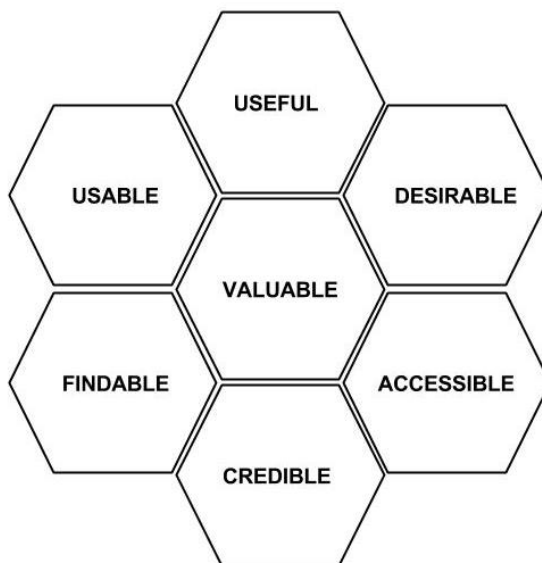

Figure 4: The User Experience Honeycomb. Modification of the original figure by Morville (2004).

Morville's (2004) aim was to expand the discussion beyond usability and help in prioritizing the needs the service should meet, for example if credibility is more important than accessibility, and so forth. Findability refers to designing web sites which are easy to navigate and different things are easy to locate, so users are able to find what they need. Accessibility refers to techniques, and also ethics, of designing web sites in a way, that people with disabilities are able to use them. Credibility concerns the issue if the users trust the information the web site offers. Valuability refers to delivering value to customers, sponsors and such stakeholders. (Morville 2004).

However, although Morville (2004) suggests that value is something that can be delivered, when discussing the concept of value this development project leans towards the holistic approach of customer-dominant logic which argues that value formation can take place in active, as well as passive processes and does not always require an antice creator but instead may be formed and embedded in the accumulated reality of the customer (Voima 2010).

Components of user experience

User experience (design) is also a multidisciplinary design practice which consists of different components; information architecture, content strategy, interaction design, usability and visual design (Table 6).

INFORMATION ARCHITETURE	Breaking down the most basic contents of a solution, website or screen, i.e. navigation, content organization, visual priority of page elements and interaction design.
CONTENT STRATEGY	Determining how, why, where and when content, as in any type of recorded information, goes into an experience.
INTERACTION DESIGN	Defining the journey and rules for user interaction with an experience, i.e. what happens when the user navigates or follows links.
USABILITY	How well the experience performs against user interactions, i.e. is the service or product easy and intuitive to use?
VISUAL DESIGN	Creating aesthetically pleasing and engaging experience which is consistent with the brand and contributing also to the usability factors, i.e. intuitive use.

Table 6: The components of UX. Adapted from Chesnut & Nichols (2014, 9-11).

Within the design, these components should be in balance together in order for them to form a solid basis for a smooth user experience. Therefore, creating a great user-experience of a digital — or physical, for that matter — service requires a careful consideration of all the components of the user-experience. Nevertheless, as underlined in chapter *1.2 Purpose and objectives of the development project*, this development project takes on a holistic approach by considering the *service concept* as a whole. Hence, it does not look closely into the development and design of the components listed in Table 6, but rather emphasizes on the high-level quality and fundamental principles of good UX when developing the service concept of Keva's My Pension online service. As the service is already an existing one, the key is to maintain and enhance the existing solutions and not design an entirely new service.

2.4.2   Customer experience

Meyer & Schwager (2007) describe customer experience (CX) to be an internal and subjective response which a customer has when in contact with a company, directly or indirectly. Furthermore, Meyer & Schwager (2007) point out that the customer experience encompasses the entirety of a company's offering, from customer care to advertising, packaging, ease of use, and so on. From a company perspective, different departments' work within the company may af-

fect the customer experience; separate decisions done by individuals within different departments may not always be informed by each other —thus they may not be aware how their decisions affect the customer experience (Meyer & Schwager 2007).

When working in silos, as the above way to operate could be described, the chain of command is vertical (Polaine et al. 2013, 19), which can be rooted back to the goods-dominant logic; the goods-oriented mindset embracing product manufacturing processes (discussed in chapter *2.1 Customer-dominant logic*). Polaine et al. (2013, 22) argue, that many service companies *think* that they sell products, when actually their offering could be considered services. Adding to that, when taking on the SDL view of Vargo and Lusch (2014, 11-12) who argue that in all economies and businesses *service* is the transcending and thus unifying concept of understanding economic exchange – or in other words, all companies exchange services, no matter if they are tangible or intangible by nature – one could come to the conclusion that all companies should pay attention to the way they operate, internally and externally, in order to offer frictionless customer experiences. Although working in silos make sense within the business units of a company, it does not make sense to the customer, for whom the experience consists of the entire offering of the company (Polaine et al. 2013, 22).

Besides people working in silos, also the management and organizational culture of the company seems to have major impact on how the customer experience ought to be. According to the survey conducted for 362 companies by Bain & Company in 2005, 80 % of them believed that they are delivering a superior experience for their customer and 95 % of the management viewed themselves as customer focused. On the contrary, only 8 % of the customers agreed that their customer experience had been superior (Bain & Company 2005). Since the survey was conducted over ten years ago, and the customer experience as well as the customer centricity of companies has been widely debated and discussed, one would think that things would have changed by now. However, according to the recent study conducted by Provad and Asiakaspalvelukokemus.fi (2017) 76 % of listed companies in Finland *do not* consider the customer experience or customer service to be strategically important issues (Asiakaspalvelukokemus.fi 2017). That is, although in companies' strategies the amount of words implying to customer experience has increased from 2016's 20,5 % to 24 % in 2017 (Asiakaspalvelukokemus.fi 2017).

The reasons behind choosing not to put focus on the importance of customer experience may vary, yet the challenge of managing it lies not only in the way a company itself operates. To successfully manage and maintain it, companies must take a look outside their own organization and investigate holistically how and what kind of services their customers use; as Meyer & Schwager (2007) point out, the expectations of customers are affected by their previous experiences and they compare new experiences against the ones they have had before. For example,

when a person visits a new doctor at the health center, the expectations towards the visit are presumably affected by the previous experience the person has had, both in good and bad.

However, according to Heinonen (2010) it is frequently assumed that the customer's experience can be orchestrated by the company and customers experience the service as designed. However, when adopting the CDL view it is argued that the experiences which arise from within the customers' own activities, are accordingly orchestrated by them individually, and not by the company. Elaborating on what Meyer & Schwager pointed out, that the customer's past experiences affect the future experiences the customer has, Heinonen (2010) proposes that experiences should be understood as interactions between the customer and the company which can happen in direct contact or beyond, as service experiences with one company make up only one part of the entirety and flow of interrelated service experiences the customer has in life. (Heinonen 2010).

As digitalization has changed the way we consume and make purchasing decisions (Asiakaspalvelukokemus.fi 2017), technology has made it possible for companies to serve their customer through several different channels and thus the challenge of creating a frictionless customer experience has become ever more complex. Like Cook (2014) states, people do not care or think about different channels, nor do their consider if their experience is a cross- or multi-channel or an omni-channel experience. They just want their current needs or desires answered conveniently and enjoyably (Cook 2014). Coming back to the earlier point of the organizational challenge when people work in silos, the different channels through which the company communicates and interacts with their customers, should be carefully taken in to consideration although the customer herself experiences them as one. Besides having a shared understanding of the company's strategy, values, vision, services and so forth, as well as knowing what other divisions are up to, also the awareness of what kind of service channels the customer utilizes, for what, in which order and situation, is crucial.

In chapter *2.1 Customer-dominant logic* CDL was introduced as a logic which aims in holistic understanding of the customer's life and as a guiding logic on which this development project is grounded on. Like most service companies, also Keva serves their customers via multiple channels, such as phone and online messaging service. Thus, as this development project takes on the holistic approach in developing the service concept of My Pension online service, also the other channels of service which Keva offers their customers, need to be considered accordingly. To conclude, it is not just the sole use of the My Pension online service that creates the user and customer experience for the customers of Keva, it is the entire customer journey from touchpoint to another, which calls for a holistic approach in development.

3   Double diamond design process model and chosen methods

The purpose of this chapter is to describe the design process and chosen methods applied during each phase the development project. The double diamond design process model and the chosen methods are introduced in parallel, as each phase of the process includes different methods.

The double diamond design process model

This development project proceeds by applying the four-step double diamond design process model developed by The Design Council in 2005. The design process model was developed through in-house research, where eleven companies' design processes were studied. The aim was to create a simple and graphical description of the design process. (Design Council 2005).

When discussing the process of design, oftentimes the concept of *design thinking* comes up. Design thinking could be described as a mindset which fosters creative problem solving. From a more concrete perspective, it essentially is an iterative process which guides design and development work. According to Brown (2008) design thinking is a discipline which utilizes the sensibility and methods of a designer to meet the needs of people, taking in consideration also the feasibility of technology and viability of business strategy, and converts them into customer value and market opportunity.

The design (thinking) process has been visualized and described in several ways, although fundamentally they all have a shared mindset and goal — to provide structure to the complexity of the design process (Stickdorn & Schneider 2011, 126). In addition to the double diamond design process model by The Design Council (2005) which is applied in this development project, other probably most known ones are introduced by Brown (2008) and Liedtka & Ogilvie (2011). Brown (2008) visualizes the design process as a cycle which includes three steps — or *spaces,* as he refers to them as; *inspiration, ideation* and *implementation.* Furthermore, Brown (2011) explains that during the design process the project will loop back through the three spaces, referring to the iterative nature of the process. Liedtka & Ogilvie (2011, 31-32) on the other hand extend the process to four steps — or questions — including *what is, what if, what wows* and *what works?* With their design process model, Liedtka & Ogilvie (2011, 31-32) emphasize the importance of visualization and propose altogether ten tools for each step of the process and discuss the topic of divergent and convergent thinking.

According to Stickdorn & Schneider (2011, 126) the context of the service which is being designed determines how the design process will look like. Since the context of this development project is grounded in design of digital and online services, yet the approach is to be holistic and not only underlining the digital and online aspect, the design process should reflect that. For example, during the development phase the chosen methods should support the holistic

way of developing solutions, meaning that besides taking in consideration the technical aspects of the solution, also the aspects in the life of the customer should be considered; how the solution fits into the daily life of the user and which factors may affect the use of it.

The main reason behind choosing to apply the double diamond design process model over many others, was that I considered it to visualize the design process in an informative way and the phases fit the nature of the development project well. The first phase *discover* encourages in taking a deep dive into the world of customers to discover underlying needs and possibilities. The second phase *define* proposes to define the challenges and narrow down the scope of the study. The third phase *develop* fits the aim of developing new, as well as existing, solutions together. Finally, in the last phase *deliver* the refined solutions are delivered for the customers. Furthermore, it clearly presents the divergent and convergent phases of the process.

The diagram in Figure 5 visualizes the phases of divergent and convergent thinking and introduces the four phases through which the design process of this development project proceeds. Next, each phase is introduced and accompanied by introductions of the chosen methods during each of them in chapters *3.1 Discover*, *3.2 Define*, *3.3 Develop* and *3.4 Deliver*. Figure 8 in the end of this chapter summarizes the chosen methods in each phase of this development project.
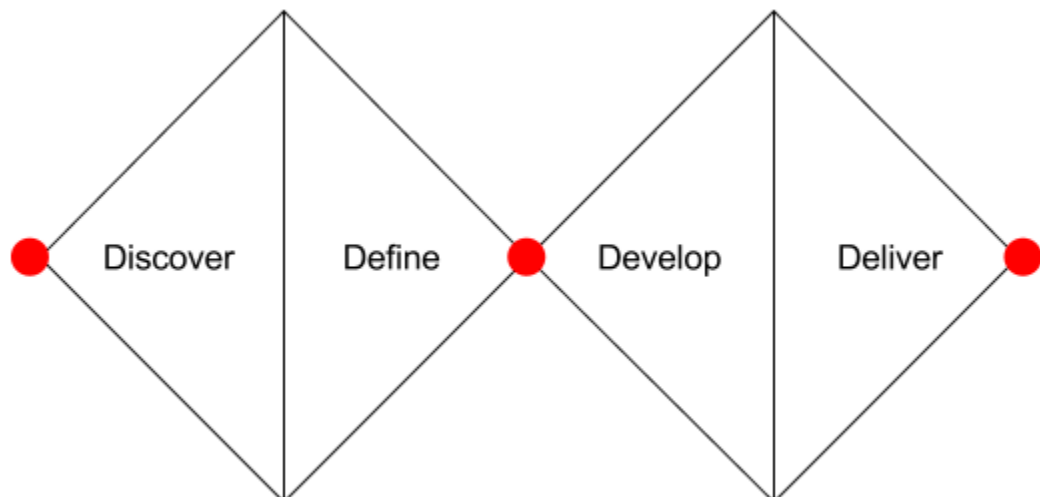
Figure 5: The double diamond design process model diagram. Modification of the original diagram by Design Council (2005).

3.1 Discover

In the first divergent phase *discover*, user needs are identified and initial ideas and inspiration is collected. The phase can include use of tools such as field interviews with the users, market research or design research groups. (Design Council 2005).

As the aim in the discovery phase is to gain deep understanding of the users' needs and lives, it is well in line with the approaches of customer-dominant logic, user-centered design and service design applied in this development project. Placing the users' needs in the center and getting to know their lives before jumping into developing solutions is mandatory in order to create delightful digital and online services which meet the user's needs and requirements and are effortless to use.

To ensure reliability and making sure I had versatile and deep enough data to answer the research questions and thus achieve the object of this development project, I chose to take on the approach of using mixed methods, also referred to as methodological triangulation (Silverman 2013,136; Mason 1996, 25). Silverman (2013, 137-138) does point out, that it should be carefully considered if the approach of using mixed methods fits the research context and remarks that applying mixed methods can be a winding road and lead to for example the situation that some parts of the data is left under-analyzed. However, due to the nature and context of this development project and the frameworks and approaches adopted, while acknowledging the words of Silverman (2013), I considered mixing (or triangulation) of methods to be the best approach to take up on.

In this development project the methods are prioritized with keeping in mind the holistic approach of customer-dominant logic. Since the research questions and chosen frameworks and approaches were highlighting the importance of recognizing the experiences and needs of individuals, to tap into them, interview was chosen to be the primary method of data collection. The secondary data collection method was workshop held for Keva's private customers, during which the I took the observer's role. Thirdly, reports of user feedback gathered from Keva's private customers were studied, mainly to complement findings from the field and offer something to compare the data against, but also to get an overview of use cases and needs of a larger group of Keva's customers. The chosen methods for analyzing the collected data was invivo coding, affinity diagramming and memo-writing. The analysis phase aimed in forming a base for defining the personas, design drivers and use cases in the second phase of the Double Diamond design process, define.

Interviews

There are several different methods for collecting data about the lives of the users. Besides different interview styles, in order to find out things about the daily lives of the users also methods such as *design probes* (Mattelmäki 2006) and *shadowing* (Stickdorn & Schneider 2011, 156-157) could have been useful to apply within this development project.

Design probes are used to help answer research questions. They are mainly based on self-documentation and approaches applied to user-centered design, yet they can also appear as interactive devices and systems. They explore the phenomena studied and the individual users, and during the probing period they can collect data and pick-up important signals for future work. Design probes can shed light on the user's daily life, issues faced and one's social, aesthetic, cultural environment, needs, feelings, values and attitudes. (Mattelmäki 2006, 11-12, 40). However, design probes do not offer the opportunity to interact with the user during the research phase.

Shadowing refers to immersing oneself in to the daily lives of the people who are being studied. Shadowing is especially useful when trying to detect problems which occur during the use of a service and gives the opportunity to document them on the spot. By being physically present and spending time in the situation and location where the service is used offers a holistic view, yet it lacks the opportunity to tap deeper into the problem and ask follow-up questions, for example. (Stickdorn & Schneider 2011, 156).

Nonetheless, stories have the potential to uncover unconscious needs of the user when listened with a careful ear. According to Anttila (1996) when in need for the kind of data which regards the attitudes, opinions, experiences and observations of different people, interviews or questionnaires may be considered as research methods. An interview may be described as a conversation between the researcher and the informant and it is a fast and easy way of collecting even large amounts of data, with reasonable amount of work (Anttila 1996). Where *design probes* may reveal interesting signals about the users' daily life, it may still call for a final interview in which the probing material is gone through, so the data will not be mis-interpreted. The case with *shadowing* is the same also. Thus, I decided that interview would be the primary method of collecting user data.

As the focus of this development project seeks to be more on what kind of implications the lives of the user offer for the development work, not what the user directly tells or how one acts, the chosen interview method was focused interview. A focused interview does not proceed by following a detailed and strict interview guide, but instead focuses on asking questions con-

cerning pre-determined themes around the topic and putting emphasis on capturing the inter-pretations and meanings the interviewee expresses (Saaranen-Kauppinen & Puusniekka 2006). The focused approach, where the researcher is able to catch interesting leads and explore them with follow-up questions during the interview, was considered to be the best method to gather rich data about the users and their lives.

The interview guide's questions were created around three themes which were derived from the research questions. As conducting a focused interview is a conversation like situation (Saar-anen-Kauppinen & Puusniekka 2006), to stay focused and create rapport with the interviewee, no notes were taken during the interview sessions. All interviews were conducted in Finnish and recorded with a smart phone recording application, to be transcribed and analyzed later on.

The first theme in the interview guide (Appendix 1) was the life situation of the interviewee, which mapped out the everyday life, pains, needs and joys of the interviewee. Second theme was use digital and online services, which aimed in finding out what kind of digital and online services the interviewee uses, what are the challenges one faces, what kind of actions one performs with different devices and so on. Thirdly, the interviewees were asked about their experiences on using Keva's My Pension online service and pension and retirement related is-sues, for example how do they feel about pension and retirement matters, what do they mean to them and what kind of communication and information regarding them they would appreci-ate. The interviewees were recruited through my personal network and Keva's customer pool.

Screening criteria for the recruitment process was the following:

- Pension issues should be in some way relevant for the interviewee, so they could pro-vide opinions and thoughts regarding the themes covered in the interview guide.
- The interviewees should have visited My Pension online service in the recent past, so they would be able to give comments about it.
- The interviewees should come from different life situations and professional back-grounds in order to reach diversity.
- The interviewees should be located within reasonable travel distance, as the interviews were to be conducted in person.

During Fall 2016 altogether nine interviews were conducted within two months' time. Two of them were done in Southern Savonia, two in Päijänne Tavastia and five in Uusimaa. Five of the interviewees were couple of years away from pension, one on part-time pension, one on old-age pension but still working and two on disability pension, of which the other one was on fixed-term disability pension. Eight of the interviewees were female and one male, and they were

born between 1950 and 1977. They came from various backgrounds, life situations and profes-sions, as required in the screening criteria; from architect to dentist and student to customer service manager, so many walks of life were featured.

Due to the limited time resources, the context where the interviews were conducted varied. Two of them were conducted in the homes of the interviewees, four were interviewed at their workplaces and three at Keva's facilities. It is difficult to say if the data would have been different if all of the interviews would have been conducted in the homes of the interviewees, but in my experience and considering this specific case and themes of the interview, I would argue that the difference would not have been significant. During the interviews a good rapport was achieved and the atmosphere was relaxed. The interviewees were happy to share their life stories and tell about their experiences with digital services and thoughts on pension and re-tirement issues. The interview data transcriptions were analyzed through *in-vivo coding*, a method which is introduced below.

In-vivo coding

Silverman (2011) defines the practicalities of coding to be highlighting a word, sentence or paragraph of text and then assigning a label on it. Labels can be descriptive, abstract or con-ceptual and form out of a single key word, be few words long or sentence. They can emerge out of something the interviewee has said, the words one has used or be modifications of phrases. (Silverman 2011, 68). The latter, which can also be referred to as in-vivo coding (Sil-verman 2011, 68), was used in analyzing the interview data transcriptions.

Customer needs and ideation workshop

Co-creative design and development workshops are led by a content-neutral *facilitator,* whose responsibility is to foster collaboration and synergy among the workshop participants, encour-age full participation, promote mutual understanding, foster inclusive solutions and cultivate shared responsibility (Kaner 2014, xx; 37). Workshops many times follow a process of *divergent* and *convergent thinking*, opening and closing. The process can be visualized in a similar way as the Double Diamond design process (Design Council 2005), as a diamond shape (Figure 6).

Before proceeding to action, it is good to start with a brief introduction to form a common understanding of the topic and agenda of the workshop and create safe space to encourage the participants to work collaboratively, feel free to express their opinions and ideas and fail. In the *divergent* phase of the workshop the participants generate alternatives, have free-flowing open discussions, gather diverse points of view and suspend judgement, where as in the *con-vergent* phase they evaluate alternatives, summarize key points, sort ideas into categories and

exercise judgement (Kaner 2014, 6). Depending on the topic and situation, one workshop can include on or multiple divergent and convergent phases.
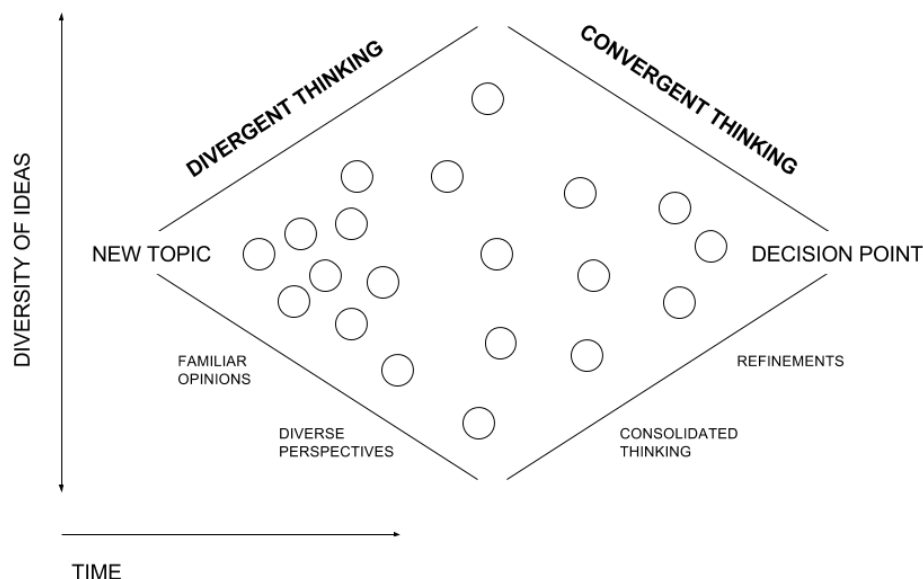

Figure 6: Divergent and convergent thinking. Modification of the original figure by Kaner (2013, 13).

As one of the key principles of UCD and service design is co-creation and involving customers and relevant stakeholders in the development process, in the discovery phase conducting a customer needs and ideation workshop was considered important. The customers are the specialists when it comes to their lives and actions and involving them in the development process supports the design, information flow and value formation (Tuulaniemi 2013, 116-117). Conducting a workshop for Keva's customers made it possible to gather more insights from the customers and capture development ideas co-created by the customers themselves.

A workshop for Keva's private customers, who are the users of the service, was carried out in November 2016. The aim was to gain information on how the customers use the service, what are their experiences with it and to collect information on their needs and ideas on how they think the service concept could be improved and what would be the most critical issues to fix. The 3-hour workshop was planned (Appendix 2) and facilitated by two Master's degree students from Laurea University of Applied Sciences. Besides providing the students with the assignment, giving comments on their plan before the workshop and acting as their contact person towards Keva, during the workshop I took the role of observing the participants and capturing data from group discussions.

The participants were recruited by Keva from their customer pool which had been established earlier in 2016, so it was an ideal time to include people from the customer pool as participants of the workshop. The screening criteria for them was the same as with the interviewees, with the exception that they were required to be able to take part in the workshop during a specific time at Keva's facilities. The aim was to recruit 6-12 people and in the end 7 people attended the workshop. The data from the the workshop was organized and analyzed through *affinity diagramming*, a method which is introduced next.

Affinity diagram

Affinity diagram, also known as the K-J Method and Affinity Charts, is a method (or tool) for arranging data in common themes or categories (Mindtools 2016). The analysis process proceeds in an inductive manner and aims in constructing and understanding of concepts emerging from the data (Goodwin 2009, 215). In brief, an affinity diagram can be formed in three steps; firstly, pieces of data considered to be interesting, important or valuable are written on sticky notes and stuck on the wall, secondly, the sticky notes will be clustered together according to similarities, and thirdly, the clusters will be labeled (Mindtools 2016). Affinity diagramming was chosen to be used in organizing and analyzing the data from the customer needs and ideation workshop, because it was considered to be a well-structured and efficient way to organize a large amount of mixed data.

Customer feedback reports

Keva collects monthly customer feedback concerning My Pension online service. In the online feedback survey people are asked to give number ratings according to how satisfied they are with the service, tell how often they use the service, what information they are looking for, how the service could be developed, and so forth. The respondents are also asked to give demographic information, such as their age and life situation. To process and analyze the feedback monthly, the answers are exported out as a spreadsheet where the data is easily available in graphical and text form.

Although this kind of documentation about user behaviors, opinions and needs reveal a lot of data about the use of the service and through that information many issues can potentially be fixed, it does not provide a deep understanding on the contexts and lives of the users, as required in this development project. Agreeing on what Cook (2014) has argued, feedback surveys alone are not capable in yielding insights which can be revealed through for example focus groups and observational studies. Nevertheless, they can provide important information, such as the most critical use cases and issues within them, as well as shed light on general issues

that should be taken in consideration when developing the service's functionalities and concept.

Keva provided me with the most recent customer feedback reports from September to November 2016, so the gathered interview data would match the current status of experiences towards the service. Between September and November altogether 1019 people answered the feedback survey online. The answers of the feedback were already sorted by Keva, so the documents offered a clear understanding on the key issues and challenges the customers were facing at the time. The data was presented in a PDF file, which displayed the answers as infographs, free text and tables (Figure 7). Due to confidentiality issues, the feedback documents will not be included as part of appendices.

Figure 7: Visuals from the Keva's customer feedback reports (Keva 2016)

Customer feedback reports were read through to understand what the content and get an overview on the current state of the service and the experiences of the users. The main reason for studying the feedback documents was that their data could complement findings from the field and the customer needs and ideation workshop and there would be additional data to compare the interview data against. Additionally, I would also be able to get an understanding of the main use cases as well as information on the needs of a larger group of customers. Since Keva had already sorted and processed the data, and I was more interested in people's stories and implicit needs, I did not choose to analyze it on a more deeper level, than aiming in understanding the current status of the service and finding out the main use cases. The most important use-cases were written down in a memo for further steps of the development project.

3.2   Define

The second phase *define*, aims in identifying the problems to be solved by interpreting and aligning the findings from *discover* phase. The convergent phase usually includes project development, management and project sign-off. (Design Council 2005).

Define phase within this development project included forming persona profiles, design drivers and use cases, which were to be used in the following phase of developing solutions. Persona profiles were chosen to foster empathy, design drivers to clearly state the intent behind the development task and use cases to map out the actual task the users are trying to accomplish. The methods are introduced in more detail next.

Persona profiles

Like it is central in for example CDL, Tuulaniemi (2013, 154) argues that in service design understanding the everyday lives of the customers is critical for both the designer and the company which is developing services. The information and insights regarding the customers' behavior, motives, values and fears gathered through customer research can be crystallized into customer profiles, which guide design and act as a tool for understanding for whom the services are being developed and why (Tuulaniemi 2013, 155-156).

Goodwin (2009, 229) describes personas as archetypes, which are meant to describe the goals and behavioral patterns of a specific group of people and are constructed based on cross-case analysis and inductive reasoning. They are created to support the work of the development and design teams, as well as to engage other stakeholders in understanding the needs and characteristics of the specific group of people. The most successful persona profiles usually include visual information and storytelling and thus work the best, as they are more easy to engage and empathize with. (Goodwin 2009, 229; Stickdorn & Schneider 2011, 178)

Above the descriptions of customer groups were referred to as customer profiles, archetypes, personas and persona profiles, also the same method may go by as user models or user profiles (Garrett 2002, 49). This development project adapts the name *persona profiles*, as it is considered to be the most descriptive for this context; *persona* indicates that the lives of the customers are being explored on a deep, personal level through interviews and workshops, whereas the word *profile* still implies the fact that it is a profile, which represents a larger group of Keva's customers which share the same characteristics. Using the wording *persona profiles* instead of only *persona* also underlines the fact that the method does not indicate that they are just visualizations of the market segments, roles or average users, like Goodwin (2009, 236)

points out, but instead the profiles are authentic descriptions of the customers based on research. Within this development project three persona profiles were created based on data gathered through interviews and the customer needs and ideation workshop.

Design drivers

Routio (2007) argues that design drivers could be described as the backbones of the design and development project, as they guide the teams and give inspiration. They are usually verbal presentations of the principles the new solution should aim in and can at times seem as obvious statements, though for some reason the service of may not reflect it. Like personas, design drivers too are formulated based on user research data. (Routio 2007)

Tuulaniemi (2013, 156) characterizes design drivers in a similar way as Routio (2007), but also emphasizes the fact that well-chosen and carefully assessed design drivers help in developing clear and strong concepts which include the most relevant goals of customers. Tuulaniemi (2013, 157) also underlines the link to customer profiles (or in this case, persona profiles) by pointing out that the customer needs within the profiles can help in defining design drivers; design drivers are crystallizations of what the service should offer and to which need it should answer to.

Like pointed out with persona profiles, also design drivers may go by different names. They could also be referred to as design principles, like Bowles et al. (2011) or Buley (2013) refer them to as. In the context of user experience design, Bowles et al. (2011, 64) describe design principles as sets of pithy and memorable statements which embody the desired experience of the website, as well as a set of criteria for measuring design decisions against. Buley (2013, 157) on the other hand defines design principles as a tool which helps in clarifying what the "personality" of the service is, what kind of feelings the service should convey. Design principles should be defined at early stage, so they may guide the design and additionally they can also help in generating ideas (Bowles et al. 2011, 65; Buley 2013, 157). In order to compose design drivers which are compelling, according to Bowles et al. (2011, 65-66) they should be brief and there should not be too many of them, the focus should be on guiding, inspiring and underlining what is unique about the experience instead of prescribing or dictating what to do, they should be project specific and memorable, not ambiguous, contradicting or overlapping.

In this development project the chosen name was design drivers, as the word *driver* is seen to be indicating the iterative nature of the development project. In this development project the design drivers for the concept development were derived out of the customer needs and ideation workshop affinity diagram. Before finalizing the design drivers on the spreadsheet formed through the affinity diagramming of the workshop data, the initial drivers were compared

against the analysis of the interview data to check the results match and see, if something was missing. Furthermore, in the end of the customer needs and ideation workshop the participants were asked to put their ideas on a timeline to map out the most critical areas of development, which helped in prioritizing the design drivers.

Use cases

Goodwin (2009, 309) defines use cases to be descriptions of the interaction happening between an actor and a system and usually presented as diagrams, such as UML (Unified Modeling Language). The point is not to present how the actor is feeling during or about the interaction, but simply just describe the task performed (Goodwin 2009, 309-310). According to Sinkkonen et al. (2009, 181) use cases are defined for the execution of the service and formed out of multiple use stories, which describe who is the user and what are the interactions one has with the service. Sinkkonen et al. (2009, 182) also state that use cases always have actors, which are advised to be built from personas.

In this development project, finding out the service users' main use cases was important, because it was considered to be important to study them more closely as part of improving the customer journeys of My Pension online service users; in order to enhance it, it was necessary to know what kind of tasks and how the user is performing when using the service. The key use cases of My Pension online service were drawn out of the customer feedback documents since they were considered to be the most relevant source of information, due to the number of people answering the feedback survey. Moreover, the interviews and customer needs and ideation workshop confirmed the use cases ranked in the feedback documents to be in accurate order.

3.3   Develop

The third phase of the Double Diamond design process is *develop*, again a divergent phase where solutions are developed, iterated and tested. The phase can include several different ideation, iteration and testing methods, workshops and multi-disciplinary working. (Design Council 2005).

Within this development project the methods for development were chosen to be co-creative workshops which included different working methods. The reason why workshops were chosen as a working method was that including the staff members of Keva to the development process was considered to be important in order to develop solutions which would take into account the needs, requirements and perspectives of the organization, as well as different stakeholders within Keva and make use of their expertise. To gather information from different stakeholders

within the case company I could have also chosen to conduct one-to-one interviews, but I chose to go about with the workshops because they combined the expertise of the participants from different divisions of the company with developing the solutions together.

In March 2017 two workshops were held for Keva's staff, the first one on March 10th and second on March 20th. The participants were recruited by Keva and the aim was to find 9-12 people from diverse positions and divisions to participate in the 4-hour workshops and in the end 9 people attended the first and 12 the second workshop. The participants were not required to be the same in both workshops. This added diversity; we were able to get more perspective on the issues and the participants were able to build on each other's ideas. In the first workshop the first group defined customer journeys, ideated the service concept and future scenarios and in the next one another group prototyped, tested and iterated the solutions. After the two workshops the solutions were visualized through wireframing, which together with the future scenario descriptions and visualizations would act as a base for next round of iteration.

Customer journeys, service concept ideation and future scenarios workshop

Curedale (2013, 119) defines *customer journey maps*, or customer experience maps, as a method for documenting and visualizing the customer's experience of interacting with a product or service, which allows the interactions to be accessed and analyzed. Likewise, Stickdorn & Schneider (2011, 158-159) describe customer journeys as visualizations of the service user's experience, which provide an overview of the factors that affect the user experience on a high level and often times are constructed from touchpoints that represent the user's interactions with the service. Furthermore, Tuulaniemi (2013, 79) argues that because service is a process, using a service means consuming an experience placed on a timeline. Moreover, Tuulaniemi (2013 79) elaborates that the customer journey is divided in sections of different lengths, which can be referred to as service moments that include service touchpoints. Touchpoints can take several different forms (Stickdorn & Schneider 2011, 158); they can be for example people, environments, objects and operations (Tuulaniemi 2013, 80). According to Curedale (2013, 119), when mapping the customer journey, firstly the customer journey to be analyzed needs to be identified, as well as the persona linked to the journey. Furthermore, Curedale (2013, 119) suggests that the customer journey should be defined on a timeline, which includes different stages from anticipation, entry, engagement, exit and reflection and post-it notes should be used to add positive and negative experiences on relevant parts of it.

For *ideation*, there exists several different methods, some suitable for bigger and some for smaller groups, some fast and others more time consuming, some which are done in silence and others within interaction. Furthermore, Stickdorn & Schneider (2011, 180) point out that some of them can act as ice-breakers, which can relax the participants so they are able to take part

more fully. As there is no lack of different tools, the challenge lies in choosing the correct ones for each situation to fulfill the goal and knowing when to swap the method used to another if the planned one does not work as hoped (Stickdorn & Schneider 2011, 180). Tuulaniemi (2013, 182) argues that the aim in ideation is to generate as many ideas as possible for the problem worth solving for and the approach should be uncritical and as the ideation proceeds the focus will be narrowed down. According to Kettunen (2001, 70) the reason behind highlighting the importance of generating as many ideas as possible is that the more ideas are found, the more like it is to find good ones within them. In the chapter *3.1 Discover* and more closely in the part which discussed the *Customer needs and ideation workshop*, the concepts of *divergent* and *convergent thinking* were discussed and presented in a visual diagram (Figure 6). The ideation process follows the same process of divergent and convergent thinking; ideation is either expanding (divergence) or contracting (convergence) (Tuulaniemi 2013, 182). After generating a lot of ideas without filtering them, some will then be eliminated and some combined, and after some more rounds of ideations, the feasibility of the remaining ones will be assessed (Tuulaniemi 2013, 182).

According to Stickdorn & Schneider (2011,184-185), *scenarios* are hypothetical stories which place concepts and prototypes in a context where they are easily relatable and thus accessible and engaging. Furthermore, Bowles (2011, 75) states that *scenarios* show users in their use context, as well as the emotional responses and interactions that happen outside the screen and they are useful especially when an interaction is challenging to communicate in other means, such as sitemap or user flow. A scenario can add an extra layer of context (Bowles 2011, 75) and when used together with personas, it can explain the motives why and how the persona comes to the website and uses the site in order to fulfill personal goals while also adding authenticity (Bowles 2011, 38; Stickdorn & Schneider 2011, 184). Adding to that, Goodwin (2009, 529) points out that scenarios can help in getting the stakeholders into the heads of the users and thinking outside the analytical frame. According to Bowles (2011, 38), a good scenario covers the entire journey of the user who is solving a problem, in other words it shows what happens before, during and after the interactions. Scenarios are many times textual, but can be brought to life by adding a layer of visualization, such as a storyboard (Bowles 2011, 38) which is a narrative tool used in the film industry, multimedia and product and user experience design (Curedale 2013, 239). Also Curedale (2013, 316) states that as scenarios can be used in predicting or exploring future interactions, in addition to presenting them in writing, they can also be implemented via different mediums like storyboards or videos.

The persona profiles, design drivers and use cases which were defined in the previous phase *3.2 Define,* were used in the workshop for inspiring, empathizing, informing and setting the context and scene. A customized customer journey canvas (Appendix 4) was the central tool for team work. The canvas was drawn by me with Inkscape software and it included swimlanes

for the current customer journey and future scenario as storyboards and their time of action and touchpoints, service channels, stakeholders and the emotional journey scale. The service concept ideation was conducted via silent and interactive brainstorming within working groups to generate ideas to be implemented in the future scenarios. To be prepared for the next workshop where the solutions would be prototyped by another group, the workshop concluded in group presentations of the solutions, which were recorded with a video camera.

Prototyping workshop

According to Warfel (2009, 3) prototyping many times leads to innovation, saves a significant amount of time and money and helps in concretizing ideas — it makes ideas tangible and something you can interact with. Adding to that, Lowdermilk (2013, 89) describes prototyping as a process where low or high quality mockups of applications provide something tangible that the users can test. Stickdorn & Schneider (2011, 192) on the other hand underline the experience side, as they characterize prototypes as simulations of a service experience. Furthermore, by Warfel (2009, 3-9) prototyping is generative, reduces misinterpretation and risk, as it creates a rapid loop of feedback. Like Warfel, also Lowdermilk (2013, 89) points out the effort saving factor of prototyping by stating that in the end it may save hours, when instead of spending time on something that ultimately doesn't work, you invest some time for building prototypes.

Depending on the context, prototypes can be either high or low fidelity. Bowles (2011, 88) suggests that in order to get the work done, it is useful to choose the lowest fidelity necessary, since less detailed work frees up time for other work. However, when deciding on the fidelity of the prototype the factors of the audience, time, life span and scope of the prototype, as well as who is building the prototype, should be taken in consideration (Bowles 2011, 88-89). Lowdermilk (2013, 89-90) points out that there is a risk when working with high-fidelity prototypes; the focus may be distracted from actual prototyping to the prototype itself, polishing the outlook of it or writing code, which is not the intention at that stage of the development process. When choosing the fidelity level of the prototype the perception of the user who will test the prototype should be taken in consideration, as the fidelity of the prototype may affect the feedback the user will give (Lowdermilk 90). For instance, if the prototype is high in fidelity, the user testing it may think that there is no point in giving any feedback since the prototype looks nice and close to being ready. On contrary, when the prototype is lower in fidelity, the user may feel more encouraged to give feedback on the functionality and core concepts. A lower fidelity prototype also gives the freedom of iterating the solution quickly and efficiently, for example a paper prototype is easy to fix in real time and on the go when the user is testing it. (Lowdermilk 2013, 90; Buley 2013, 193)

Prototypes come in all shapes and sizes; they can appear as rough sketches on paper, made into clickable mock-ups, be highly realistic and functional, take on the form of roleplay, and so on (Garrett 2002, 48; Stickdorn & Schneider 2011, 192; Buley 2013, 192). Most importantly, anyone can build them without any knowledge on coding or the visual arts, since you can use supplies all the way from everyday materials to software.

The participants of the prototyping workshop were offered different kinds of tools for proto-typing, as the prototyping kit included supplies for paper prototyping, design tool CoCo Cosmos as well as Legos and Duplo's. The reason behind offering different tools for prototyping was that the service concept could be prototyped in various ways; the participants could simulate interactions between different stakeholders, visualize complex situations and discover new possibilities with CoCo Cosmos, which is a visual and cocreative design tool (Laurea 2017), do process walk-throughs with Legos and Duplo's, or create paper prototypes of My Pension online service. In other words, the aim was not to prototype solely the My Pension online service, but the future scenarios related to the service concept of My Pension online service, which may occur within the physical or digital worlds of the customer.

To make sure that the results of the workshop would be well documented and usable as a base for wireframing, like in the end of the previous workshop, also the prototyping workshop con-cluded in group presentations of the prototypes, which were recorded with a video camera.

Wireframes

Warfel (2009, 4) defines wireframes as visual representations of functional page structures, kind of like the blueprints of a software. In other words, they communicate the functional pieces and their relationships towards each other in a visual way (Warfel 2009, 4). As they are meant to put focus on the basics, they many times come as simple black and white or shades of grey visualizations, which describes the parts of the product from one screen to another (Buley 2013, 181; Warfel 2009, 4). Buley (2013, 181) compares wireframes to skeletons, as they show what the product should look like and seem simple but have a lot of bones; they show how the system hangs together and form a complete and interconnected structure. Moreover, besides the actual frames which represent the basic functionalities, a wireframe usually in-cludes annotations on the intended behavior of the product, such as what happens when a certain button is pushes, and so forth (Buley 2013, 181; Garrett 2002, 129).

The difference between a wireframe and a prototype is that while a wireframe includes visual information, a prototype adds the layer of interaction; it allows you to experience the service and interact with it (Warfel 2009, 4). Yet, like prototypes, also wireframes can come in differ-

ent levels of fidelity (Garrett 2002, 130-131). Also, they can serve different purposes for different stakeholders; for people who are responsible for strategy, scope or structure, wireframes can give confirmation on that the end product is something they anticipated, whereas for people who are building the product, they can assist in answering questions about the functionalities of a site (Garrett 2009, 130).

The reason why I chose to draw wireframes after the prototyping workshop, was that the materials could be utilized efficiently in the future rounds of development. For example, if it would be decided that on the next round Keva's customers would be included in the process, it would make more sense for them to look at wireframes, rather than all the mixed data from the prototyping workshop.

3.4   Deliver

The final convergent phase of the Double Diamond design process is *deliver*, where the end solution, product or service is finalized and launched. It includes final testing, approval and launch, as well as targeting, evaluation and feedback loops. (Design Council 2005).

However, as explained in chapter *1.4 Limitations*, due to the time restraint and scope of this development project in the final phase *deliver,* the end solution or service will not yet be released, but instead the service concept is crystallized as a *concept vision statement* which is meant to be used as a guide for future development of the service concept.

Concept vision statement

According to Kantabutra (2010) scholars have argued for nearly three decades that vision is important to leadership, implementation of strategy and change. Yet, the corporate worlds have not agreed on a common definition for a vision (Kantabutra 2010). However, there has been propositions on different characteristics which a vision should embody, which are conciseness, clarity, future orientation, stability, challenge, abstractness and desirability or the ability to inspire.

Building on that, according to Business Dictionary (2017) a vision statement could be described as an inspirational and motivational statement, which aims in describing the future plans, hopes and goals of an organization. The point is not to discuss the prevailing state, but instead describe the what the organization's future directions, what it aspires to be or how it would like to be viewed. The message which the vision statement delivers to the stakeholders of the organizations should be clear and optimistic, yet realistic. (Business Dictionary 2017).

Lipton (1996) defines vision as something that focuses on the future, forms the foundations of the organization and when successful, engages people to work towards goals. Özdem (2011) in turn argues that vision statement refers to long-term objectives of the business and along with mission statements, they are a vital part of company's strategic planning (Özdem 2011). The key difference between a mission and a vision statement is that a mission statement always refers to the current state and context and describes how the company plans to achieve its goals, whereas a vision statement concerns the future, where the company is aiming to be and how it is going to get there (Business Dictionary 2017). Lipton (1996) argues that managing a company with a vision can generate benefit for the organization in five ways; firstly, a vision enhances a wide range of performance measures; secondly, a vision promotes change; thirdly, a vision provides the basis for strategic planning; fourthly, a vision motivates individuals and facilitates talent recruitment; fifthly, a vision helps keep decision making in context.

Within this development project the concept vision statement aims in guiding the future development work of the service concept of My Pension online service. The concept vision statement was defined as a final step of the development project, so it would serve as a clear and future-oriented starting point for continuing the development work. The concept vision statement was put together and visualized with Adobe Illustrator.
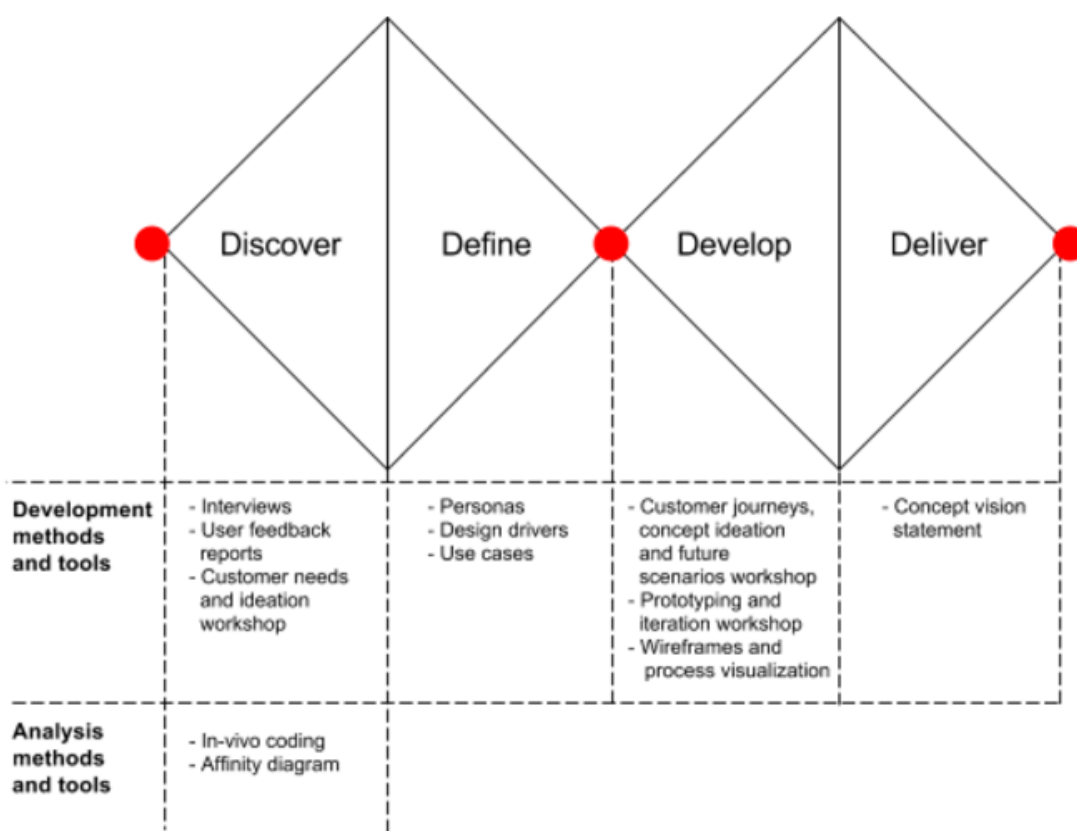
Figure 8: Overview of the chosen methods and tools for development and analysis of the development project. Modification of the original diagram by Design Council (2005).

4   Results

After introducing the methods applied in this development project in the previous chapter, this chapter introduces the results of the development project. To answer the research questions presented in chapter *1.2 Purpose and objective of the development project* and develop solutions for the concept, first a qualitative research project was carried out during Fall 2016. The primary method for collecting user data was interview and to complement and compare against the data gathered through interviews, a workshop for Keva's private customers was held and customer feedback reports were studied. The data was analyzed by in-vivo coding the interview transcriptions to form insights, and by using affinity diagram to sort, analyze and crystallize data from the customer needs and ideation workshop for the synthesis phase, where personas, their main use cases and design drivers were defined to support and guide the design and development of the service concept and its concept vision statement.

4.1   Discovering customer needs and insights

This chapter presents the execution, analysis and insights of the discovery phase where interviews were conducted, customer feedback reports were studied and customer needs and ideation workshop was carried out.

Interviews: Getting to know the customers' lives

As the approach of this development project is grounded in customer-dominant logic, the rich data gathered through interviews would not result in meaningful and insightful analysis if it were to be analyzed through a very strict form of analysis, say for example content analysis, which would better serve the analysis of quantitative data (Silverman 2011, 66). The aim was not to isolate cold facts from the data, but to find connections, create and understand concepts, explore the users lives, contexts and empathize with them, to be able to develop solutions that are easy and delightful to use and serve the needs of the customers.

The interview data was prepared for analysis by transcribing the interview audio recordings. I considered it to be important that I transcribed the recordings personally, in oppose to outsourcing the task. It allowed me to get back in touch with the interview situation, hear the tones of voice of the interviewees and the way they told their stories to catch implicit messages and interpret the data while listening and transcribing.

After all nine interviews had been transcribed, the analysis phase was started by writing memos (Figure 9) from each interview to clarify, get rid of data that was considered irrelevant and discover emerging codes. Memos were text documents, where I described the interviewees life

situation, use of digital and online services and pension and retirement related issues, made notes and aimed in interpreting what the interviewee had told and expressed between the lines. Each memo was in average three pages long.

Figure 9: Memos of each interview (Gröhn 2016)

After memo-writing, each memo was read through carefully, line by line, and followed by in-vivo coding (Silverman 2011, 68), which was carried out by first separating lines considered relevant or insightful from the text, and then coding them by assigning a label for each. The texts and codes given to them were then arranged on a spreadsheet (Figure 10). In addition to coding, the demographic information of each interviewee was listed on the spreadsheet as well.

Figure 10: Coding and arranging the interview data on a spread sheet (Gröhn 2016)

As the sorting and coding proceeded memo after another, it became more easy to start piecing and grouping data together and arranging codes to create the categories. The fact that the interview guide had three distinct themes, made it easier to extract codes and categories from

the data. An example from in-vivo coding of the memos and categories formed through coding is presented below (Figure 11).

Elämäntyyli	- lomillaan viihtyy kotimaassa ja tekee mielummin vaikka pikkureissuja Porvooseen ystävien kanssa, kuin lähtee ulkomaanmatkalle. - haaveilee joku päivä muuttavansa ulkomaille, mutta ei kaipaa matkustelua ympäriinsä.	- He eivät matkustele paljoa nykyään ja ovat enemmän koti-ihmisiä. - Kotona kesällä pihatöissä ja kasvimaalla riittää tekemistä.	- Arkisin he käyvät miehensä kanssa kävelyillä töiden jälkeen, tapaavat ystäviään ja matkustelevat muutaman kerran vuodessa.
Työn merkityksellisyys, oma identiteetti	- työ iso osa elämää, ei kuitenkaan kaikki, elämä ole pelkästään sen varassa - haluaisi jatkaa työssään mahdollisimman pitkään. - hänellä on kiinnostava työ johon on itse saanut vaikuttaa ja olla monessa mukana - työssä innostus lisää innostusta. - Työelämään liittyen hänellä on tavoitteita, jos ne eivät toteudu ei sekään maailmaa kaada		- työ on tärkeä asia, määrittelee itseään osiltaan sen ja ammatin kautta
Sosiaaliset kontaktit, yhteisöllisyys ja merkityksellisyys	- vaikuttaminen, osallistuminen ja ihmisten kanssa tekemisissäolo hyvin tärkeää	- Viikonloput vierähtävät kotihommissa ja nykyään he yrittävät ottaa myös hänen äitinsä mukaan toimintaan mahdollisimman paljon.	
Arki	- tykkää elää tavallista arkea	- Arki on parasta aikaa ja hän elää miehensä kanssa hyvää ja ihan tavallista elämää.	- aika menee viikolla normaalin arjen pyörittämiseen - arki on voimaannuttavaa ja hän on iloinen, ettei ole mitään vakavia sairauksia
Tavoitteiden saavuttaminen, täyttymys	- rentoutuu tekemällä käsitöitä, niissä näkee heti konkreettisen tuloksen, kun työssä taas ei. - asettanut itselleen elämässään paljon pieniä tavoitteita, joiden saavuttaminen tuo iloa.	- PT:n ohjaus on hänestä ollut koko elämän paras päätös, kunto on parantunut huimasti ja paino tippunut.	- keväästä syksyyn pieni puuhastelu ja kukkien laitto omassa puutarhassa rentouttaa ja tuntuu terapeuttiselta, kun voi vaan tehdä ajattelematta ja näkee kättensä jäljen - pienet onnistumiset tai jos töissä jokin asia menee hyvin - opiskeluissa edistyminen tuo hyvää mieltä

Figure 11: Example from the in-vivo coding and categorization of the data (Gröhn 2016)

Examples of the categories formed based on the in-vivo coding of the memos are presented in the left-hand side of the Figure 11. Here, the categories are connected to the first theme of the interviewguide, life situation, and include categories such as *lifestyle, meaningfulness of work and self-identity, social contacts, communality and meaningfulness, everyday life and achieving goals and fulfillment*. Some examples of the lines of text separated from the interview memos, on which the categories are formed out of, are presented in the white columns of Figure 11. As each theme in the interviewguide resulted in forming several categories, the findings and insights emerged from the data will be discussed further next.

Findings and insights

Portigal (2013, 5) argues, that the insights hidden in your research data will not appear like magic, but you need to work towards them and have a good plan to follow. It became clear, that although the coding and analyzing process was time-consuming, the trick was to trust the process and the key codes and categories would start taking form. As the interview guide was based on three different themes based on the research questions, the findings and insights derived from the interview data analyze are presented accordingly.

Theme 1: Life situation

The first theme of the interview guide aimed in exploring the everyday lives, attitudes, dreams, needs and challenges of the interviewees. This would form an understanding where they come from and what kind of personalities they are, to be able to interpret for example their reactions towards technology and digital and online services.

When discussing the interviewees about their life situation and everyday life, it became obvious that social interactions — be it among friends, family, colleagues or people encountered in voluntary work — were highly important for every interviewee. The feelings of belonging in a group and self-relevance were highlighted, as well as the feelings of fulfilment and joy when accomplishing goals. A simple way of life and little things in their everyday life made them happy, and many told how they now have a more relaxed attitude towards life and its hurdles than they used to when they were younger. They are more confident in expressing what they like and don't like and act accordingly; if you want to spend your free day in pajamas or take an ex tempore trip to another city, you can and do not have to answer to anyone. In turn, for some the freedom had its disadvantages, as the independency and being left outside the working life was not self-chosen.

One of the interviewees stated, and many of them implied, that to some extent they define their identity based on the work they do. If we look at this through demographics, within this sampling especially the ones who were highly educated, specialists or in managerial positions emphasized this point. They were also the ones who had continued, would have been willing, or were planning to continue working on retirement. To them working and self-actualization through their work was as important as it was in their private life. People who came across as being less satisfied with their work and the balance between it and their private life were expressing more distress. They were not motivated to continue in their current job after retirement, but felt that they would rather seek meaningful work and new social groups from some voluntary organization or community college, for example. The reasons behind it, which many disclosed, was the pressure coming from loads of work, feeling that the work they do does not correlate with the salary they earn, that they are not able to influence their work and the speed of change is chaotic. The basic human needs of being treated fairly, trusted and appreciated were common among all interviewees.

Theme 2: Use of digital and online services

The second theme of the interview guide aimed in finding out what kind of digital and online services the interviewees use and how they feel about them. It also looked into their use of different devices to find out what kind of things they perform on each, since the customer journey and service experience should be as frictionless as possible no matter which channel(s) the customer is using.

The technical skill-level of the interviewees and how comfortable and active they are with the use of digital and online services and devices varied, as some were more open to adopt new technologies and use digital and online services, than others. Those who were more skeptical and uncomfortable with using technology and digital and online services, expressed feelings of uncertainty, self-doubt and frustration. This implies that their resistance actually arises from their own insecurity and fear of not knowing how to deal with new technologies, as they might not understand how they work, how to use them and if someone can take advantage of their inexpertise. Some felt stupid and embarrassed because they had trouble in using some digital or online service, whereas others clearly expressed how they think that some systems are just not designed with the user in mind and that it is not their fault that they struggle with using them.

Many of the interviewees, but especially the more uncertain ones, also brought up the issue of changing how some digital or online service works. Even the most insecure ones told how they are very comfortable with using for example their bank's services online, because they have developed a routine for using the service and thus are confident and trustful in paying bills and handling their finances online. But once something changes, they need to learn a new routine over again, and the feelings of uncertainty hit them again. Moreover, the language and terms used in communication were brought up, especially when discussing for instrance governmental services. It was pointed out, that many people do not understand the terminology and language used, and when they receive decisions or information regarding their say, benefit application which is infested with legal points and strange terms, they get confused.

Most of the interviewees had a smartphone, laptop or computer and a tablet, but it was clear that the smartphone and laptop were the main devices for using digital and online services. Smartphone was used for communication, taking photos and browsing the internet, laptop or computer almost exclusively for handling so called "official things", like taking care of bills, booking trips or work related things. Tablet was left for little or no use at all, as it was used for browsing and checking small things from the Internet or watching TV-programs and movies. Security issues were discussed to some extent, but for the most part the interviewees felt that taking care of their things online was safe and they were aware of the possible security issues which might occur due to their own actions, like opening a harmful attachment of a suspicious email.

There was a quite strong division between the ones who actively looked for information and solutions independently online when facing problems with a digital or online service, and those who were more eager to call the customer service number to seek advice. Those who preferred the personal contact appreciated the fact that someone is listening to them and they felt that

it was easier to explain the issue over the phone rather than trying to look for a solution by themselves. On the other hand, the difficulty in finding the correct number to call and waiting on the line for someone to pick up, or having to talk to a robot to be re-directed to the right line to wait on, raised feelings of frustration. This was also one of the reasons why the ones who were capable, rather tried to figure out the solution independently instead of waiting on the customer service line.

When discussing about alternative channels for customer service, it became clear that many would appreciate a chat service, where they could quickly get an answer to their question while handling their issues online. It was considered a good channel for asking simple questions and receiving fast answers, however, people were not willing to share their personal information through an online chat service, because they were concerned of the security issues and that they were not aware to whom they actually were chatting to. Email or messaging services did not seem to be a popular channel of communication, as the answer was seen to be taking more time. Couple of the interviewees had used video chatting for negotiations and all of them considered it to be a good alternative to offer, although it seemed that still not so many would actually need it regarding pension and retirement issues.

Theme 3: Pension related issues

The third and final theme of the interview guide concerned pension related issues and the use of Keva's My Pension online service.

With many, already the word *eläkeläinen* (meaning pensioner) raised mostly negative emotions. The mutual feeling was that the word pigeonholes people and the society tries to force people in a certain role; after retirement, you are of no use or purpose in this society, you should accept the role and stick to it. Even discussing retirement and pension, especially at the workplace, was experienced as it was a taboo. Yet, the experiences of their own or their colleagues and closed ones proved the negative image wrong. It was acknowledged that retirement is a big life change, but it does not mean that you should stop living; even though the conditions change, the needs of belonging and meaning remain, one just needs to find their personal way of fulfilling them. Though retirement was seen and experienced a crisis of a kind, it was still seen in most parts as a positive thing. That is, of course, when the retirement had happened as expected, after a long working career. The interviewees who were forced to retire either partially, for a limited time or permanently due to some disability, the life change hit much harder as none of them were expecting that they would not be able to work a full career.

As required in the screening criteria for the interviewees, all of them had visited Keva's My Pension service online at some point. Overall, most of them were happy with the service and

told that they had found what they were looking for, however majority had visited the service only few times or once. None of them had filed applications through the service and only one had used the messaging service. The use cases mentioned during the interviews were checking pension record, using the pension calculator and looking for information on different pension alternatives and status of the application. The most common reason why none of those interviewees who had already retired had filed applications online via My Pension service, was that a person in their company's HR had filed the application for them. The ones who had not yet retired, told either that they will find out what to do when the times comes or that they had heard about this "pensions person" at their workplace who will take care of the application and other paper work for them in the future. In order to speed up the application process and avoid excess paperwork and middlemen, this brings up the challenge of encouraging people in filing their pension applications online.

In couple of the interviews came up, that the line between My Pension service and Keva's public website (keva.fi) seemed to be vague; some interviewees talked about them like they were the same thing. They mentioned how much information the site offers, but how for them it is hard or frustrating to find the information what it relevant for them.

Customer needs and ideation workshop: Involving the customers in the development process and mapping their needs

A group of 7 Keva's private customers attended the customer needs and ideation workshop in November 2016. After setting up the space, distributing working materials ordered from Keva and Laurea, welcoming the participants and a short agenda introduction, to activate the group the workshop was started with a warm-up exercise *Jana* (meaning "line"), where the participants were asked to place themselves on the line marked with masking tape on the floor, where the other end represented a heavy user of the My Pension online service and the other end a beginner. After placing themselves on the line the participants introduced themselves and described shortly their experiences with the service. The warm-up provided information on what kind of activities the customers performed within the service and was followed by splitting up into working groups and *word association* (Figure 12) exercise, where the participants were asked to pick out words, printed on pieces of paper, which they thought described Keva and My Pension online service. The words were placed on a target board in a way that the ones which they considered were most descriptive, were placed closest to the center. This exercise aimed in making sure that all participants were on the same page of what is being discussed and orientating them for the next phase.

Figure 12: Word association exercise (Gröhn 2016)

First, the groups which were formed for the word association exercise, were re-assembled in new working groups. The next exercise, which aimed in collecting preliminary ideas on how to develop My Pension online service, was *Me-We-Us*. The participants were first asked to think about the situations they had been using My Pension online service and then sharing their thoughts with the rest of the group. The sharing discussion was followed by thinking together what they felt was still missing and should be added to the service and writing their thoughts and ideas on a whiteboard. Next, they proceeded to *Idealogi* (meaning "idea log"), where based on the discussion and ideas within their group, the participants were asked to write down ideas to be shared with another group. During discussions with another group's members, they could then "steal" idea elements from each other in order to develop their own ideas. Again, working groups were mixed and the refined ideas were introduced to another group. This stealing and developing was continued for a couple more rounds, after which the exercise was concluded in documenting, presenting and choosing the best ideas, before taking a coffee break.

After the break the groups came together and continued working together by placing the chosen best ideas on a timeline. The ideas were placed on the timeline in a way that the most urgent ideas to be implemented were placed near the beginning of the timeline, and the ones which could be implemented later on closer to the end of it. The exercise was done in silence and everyone was allowed to move ideas along the timeline. After the ideas had found their stable

place, the end result was discussed together to ensure unanimous opinion on the order of implementation. The workshop was concluded with *Puhuva keppi* (meaning "talking stick") exercise, where the participants could give feedback on how they had experienced the workshop.

Figure 13: Workshop in action (Gröhn 2016)

As mentioned before, throughout the workshop my role was to observe and document the groups' discussions, working and results. The field notes that were taken during the workshop proved later on to be very helpful and insightful, when analyzing the documentation from the session. All results, such as handwritten papers and clusters of sticky notes from activities performed during the workshop were photographed, so they could be transcribed and analyzed later. The session was also recorded with an audio recorder and smartphone recording application, so the I would be able to listen to specific conversations or check things from the recordings during the analyzing phase.

Analysis process

The analysis tool for processing the data from the customer needs and ideation workshop was chosen to be affinity diagram. Because most of the data processed was already on paper, I decided that affinity diagramming would be done on a spreadsheet to keep things in place and easy to store. Affinity diagramming began by transcribing the workshop data from pieces of paper, photographs and sticky notes into a spreadsheet, after which the data was read through carefully. When similar comments, ideas or insights were encountered, they were grouped inside the same cell. Before moving on to labeling the groups, the notes and observations I had documented during the workshop were added alongside the groups to complement the data. The notes included some early insights which had emerged during the observation, so it was

easy to start processing the data for further use. To conclude the affinity diagramming, the results were pasted on another spreadsheet table to arrange the results according to the time-line the customers had set for implementation (Appendix 3).

The workshop shed light on the needs of the customers using My Pension online service and resulted in concrete and prioritized ideas, which were easy to grasp and formed a solid base for further ideation and development. The key insights, findings and development ideas from the workshop were embedded in the design drivers, which are presented in the next chapter *4.2 Defining the basis for development*.

As explained earlier, besides mapping Keva's private customers' needs, the participants were asked to ideate new solutions to be implemented in the service concept. Furthermore, during the workshop the participants were asked to choose the best ones, which should be imple-mented within a certain timeframe. Those ideas were embedded in the affinity diagram and into the design drivers. The ideas which were not chosen to be implemented in the near future were also considered to be valuable, and for that reason they were listed in the affinity diagram file (Appendix 3) too and moreover, are presented below in Table 7.

IDEAS CONCERNING THE APPLICATION PROCESS	• Notification every time the application is handled • Estimations on how long each phase of application handling takes • Contact information available for each handing phase
IDEAS CONCERINING CUSTOMERS OF DIF-FERENT AGES	• Tailored services and communication for different age groups • Relevant information regarding pension issues for young people • Pension information for young people as part of the on-boarding process at workplaces
IDEAS CONCERNING KEVA'S OPERATIONS	• Peer support groups facilitated by Keva • Students offering support for using Keva's online services • Support and public lectures at libraries • Chat service

Table 7: Ideas which were not chosen for implementation in the near future (Gröhn 2016)

4.2   Defining the basis for development

After gathering and analyzing the data from the interviews, private customer workshop and user feedback reports, persona profiles, design drivers and main use cases were defined to form the base and starting point for the next phase of the double diamond design process, develop. This chapter introduces the persona profiles, presents design drivers and the main use cases of the customers using Keva's My Pension online service.

Persona profiles: Creating empathy towards the customers

Persona profiles based on the interview data were created to support the concept development and classified according to their relations with pension affairs. This chapter introduces the persona profiles which were created as a result of the analysis of the interview data. In addition to introducing each persona profile, its use case and intent is introduced, the persona profiles' needs will be reflected against the UX honeycomb (Morville 2004), which was introduced in chapter *2.4.1 User experience*.

Heikki, 60

The first persona profile created based on the research data was Heikki (Figure 14). Heikki is a 60-year old building inspector who is divorced and lives with his partner in Oulu. Heikki has three children and grandchildren. During summer Heikki and his partner travel the Nordic countries with their recreational vehicle. He likes to tinker around with small repairing projects and enjoys the normal daily life. Working takes a lot of energy and he feels that nowadays he does not recover as quickly from work as he used to when he was younger. As he is approaching his retirement age, he is now thinking if it would be possible to cut down working hours a little bit already before retiring altogether. A lot of questions go through his mind, such as what type of pension would be the right one and how would he be able to cope financially, if for example he would retire partially. He is not very confident in using technology and uses online services as little as possible. Also the terminology and style of communication when discussing pension related issues is sometimes confusing to him.

Heikki needs help in finding the most suitable pension option, the service providing the information needs to be well-instructed and logical to use and the style of communication needs to be easy to understand and terminology explained in layman's terms. The design drivers concerning Heikki's case are *Understandability: explain terminology and complex issues in layman's terms when talking about pension issues* and *Peers: persona profiles, stories and their example cases to better understand the pension issues and options*. The use case is using pension calculators.

Figure 14: Heikki's persona profile (Gröhn 2017)

Marita, 57

The second persona profile was Marita (Figure 15). She is a 57-year old HR specialist who lives with her husband in Tampere and has two children and grandchildren. Her job is challenging at times but she enjoys it very much, as it she can affect it and make a difference. In her free time, she takes part in organizational work, goes to pilates and travels with her husband. She is a very active person and considers taking care of herself to be important, because she wants to be in a good shape after retiring. The prevailing negative tone in discussions concerning pension and retirement related issues annoys her. She thinks about retirement in a positive way, as then she is free to do whatever she wishes, like study art history, spend time with her closed ones and maybe even work a little bit. She has a clear plan on retirement so she does not think about it that much.

Marita likes to take care of things online whenever it is possible and wants to get them done at once and in an efficient way, no matter what the time or place is. She appreciates timely communication and wants online processes to be smooth. The design drivers concerning Marita's case are *Information accessibility: service and information available regardless of the time and place* and *Targeting: relevant services and information for different groups*. The use case is checking pension record.

Persoona

Motivaatio
Marita suhtautuu eläkeiän lähestymiseen positiivisesti, koska sitten hän saa tehdä juuri sitä mitä hän haluaa. Eläkkeellä hän haluaa opiskella taidehistoriaa, viettää aikaa läheisten kanssa ja ehkä tehdä vähän töitäkin. Suunnitelma eläkkeelle siirtymisestä on selkeä, joten hän ei juurikaan ajattele asiaa. Asiat hoituvat kyllä sitten, kun on aika. Marita hoitaa kaiken mahdollisen asioinnin aina vakuutuksista matkavarauksiin ja veroasioihin sähköisesti, jos vaan mahdollista.

Välinpitämätön — Utelias

Kärsimätön — Rauhallinen

Kriittinen — Luottavainen

Eläke on uusi elämänvaihe ja mahdollisuus. Viihdyn nykyhetkessä, mutta todennäköisesti tulen viihtymään eläkkeelläkin. "„

Tarpeet ja tavoitteet
- Saan asiat kuntoon kerralla
- Viestintä on minulle ajankohtaista
- Sähköinen asiointi on sujuvaa ajasta ja paikasta riippumatta

Kipupisteet
- Oleellisen tiedon löytäminen massasta
- Tahdon nopeita vastauksia
- Keskusteluilmapiiri eläkeasioissa on negatiivinen

Teknologia

Tarvitsee tukea — Itseohjautuva

Aloittelija — Tehokäyttäjä

Epävarma — Rutinoitunut

Vapautta odottava
Marita, 57

Tampere
HR asiantuntija
Naimisissa
2 aikuista lasta ja lastenlapsia

Bio
Marita asuu miehensä kanssa Tampereella kerrostaloasunnossa ja työskentelee HR asiantuntijana. Vaikka työ on ajoittain haastavaa, hän pitää siitä sillä hän voi itse vaikuttaa siihen. Vapaa-ajallaan hän on mukana järjestötoiminnassa, harrastaa pilatesta ja matkustelua miehensä kanssa. Hyvinvoinnista huolehtiminen tärkeää, sillä hän haluaa olla hyvässä kunnossa vielä eläkkeelläkin.

Figure 15: Marita's persona profile (Gröhn 2017)

Paula, 39

The third persona profile created was Paula, 39 (Figure 16). She is a 39-year old woman who works at a kindergarten. She lives in Mikkeli, is engaged to be married and does not have children. Her job is hard both physically and mentally but the children bring a lot of joy to her life. She is an athletic and energetic woman who enjoys taking part in many activities. She goes to zumba classes, swimming and agility with her to dogs. A while ago she suffered a car crash which led to a long sick leave. Having to drop out of work and not being able to attend her hobbies came as a shock to her. Currently Paula is waiting on a decision regarding her application for cash rehabilitation benefit. She would like to get the application process over with to be able to attend rehabilitation, get better and return to normal life as soon as possible. She does use technology and online services, but would rather deal with issues person to person.

Paula needs timely information and transparent communication regarding her application process and to be reassured that her things are handled professionally. As the application process takes a long time, she feels as if it is going nowhere. She is concerned on her financial situation and her diminished working ability, and the fact that her daily life has undergone a significant change, worries and scares her. The design drivers concerning Paula's case are *Transparency and the service promise: communicate and deliver* and *Security: clear communication on security policies* and the use case is checking pension application status.

Figure 16: Paula's persona profile (Gröhn 2017)

Reflecting the persona profiles' needs against the UX honeycomb

The user experience honeycomb by Morville (2004) was introduced in chapter *2.4.1 User experience*. In the context of My Pension online service, when looking at the needs of the persona profiles defined above, it can be stated that some of the aspects which Morville (2004) presents regarding good user experience, for different persona profiles some aspects matter more than others. Whereas Heikki needs the online service to be easy to use (usable) and information understandable (useful), Marita underlines the information accessibility and efficiency (findable) and Paula appreciates transparent and efficient application process (credibility).

While all aspects are relevant for everybody to some extent, the aspect of credibility is highlighted with all; the information must come from a trusted source and be accurate and up to date. Also the aspect of usability is important for all, as a good user experience demands good usability from the service. Moreover, all persona profiles need the information to be valuable and understandable to them. When discussing the aspect of valuability, Morville (2004) argues that value is something that can be delivered. However, this development project takes on the holistic approach of customer-dominant logic which suggests that value formation can take place in active, as well as passive processes and does not always require an antice creator but instead may be formed and embedded in the accumulated reality of the customer; value is not objective or purely subjective, but relative and at all times personal (Voima 2010). Thus, it is considered that while My Pension online service and the refined service concept aims in offering

information, which is relevant and considered valuable by its users, the service itself cannot deliver value per se, as value emerges within the customer's reality.

Design drivers: Setting the design drivers to guide the design and development process

The design drivers derived out of the affinity diagramming (Appendix 3) of the data from customer understanding and ideation workshop are presented below in Table 8 in the order of urgency to implement defined by the private customers of Keva.

TRANSPARENCY AND THE SERVICE PROMISE **Communicate and deliver**	Many raised the issue of not really knowing how long it takes for their applications to be processed, through how many hands and loops the application passes, and who is handling their application or case in progress. The need for transparency in application handling and a clear communication and efficient delivery of the service promise was underlined. Also, in the cases when an application receives a rejection, the need for presenting clear arguments why it was rejected were called for, as well as the need for respectful, open and humane treatment.
PEERS **Persona profiles, stories and their example cases to better understand the pension issues and options**	For someone who has not dealt with pension related issues, searched for information about different pension options or considered their own retirement plan, the time when they have to think about those issues may be confusing. For some people getting to know and understand different options may be easier, if they get the chance to relate to someone. In other words, persona profiles and their example stories were considered to be helpful by the participants when looking for information on new things, like pension options.
UNDERSTANDABILITY **Explain terminology and complex issues in layman's terms when talking about pension issues**	The industry specific terminology and jargon, which people do not come across in their daily life, had caused confusion among the participants. Thus, it is important to find a common language and explain complex terms and issues in layman's terms.
INFORMATION ACCESSIBILITY **Service and information available regardless of the time and place**	The visits from Keva's pension specialists on the field were well-liked, but also the participants pointed out that there could be more communication and interaction on the field. Maybe that way pension related issues could come to the attention of more people and they would start thinking about them and looking for information more actively. Accessibility of information, regarding extending service times and focusing on developing alternative service channels like chat service, were highlighted significantly.
TARGETING **Relevant services and information for different groups**	Related to the previous driver of information being available at all times and throughout different channels, the timing of offering information on pension related issue was stressed. Communication and services on the issues should be targeted at relevant customer groups and profiles at the right time.
SECURITY **Clear communication on security policies**	People were quite trustful regarding the online security of using My Pension online service, but it was still mentioned that a clear statement on the security policy of the service would be good to have in the My Pension online service.

Table 8: Design drivers (Gröhn 2016)

Use cases: Defining the main use cases to be developed

Use cases were detected in all forms of data collected, as they were discussed and mentioned during the interviews, private customer workshop and asked about in the user feedback documents. The most reliable source of information was considered to be the user feedback documents, where the use cases within the service were listed and ranked according to how many of the customers answering the feedback survey had performed each of them. The most typical use cases among the service users are presented below in Table 9. Other use cases include tasks such as changing the bank account number, asking about pension related issues, ordering text message alerts and so forth, but to narrow down the scope of the development project and keep focus on the most crucial use cases which the customers are struggling with, the following three were chosen to be developed.

USING THE PENSION CAL-CULATORS	Keva offers their customers the possibility to estimate the amount of the pension they are eligible for through using calculators within the My Pension online service. For example, customers who are approaching retirement, can make calculations regarding the estimated amount of old-age pension. Furthermore, customers who are looking for an option to lighten their work load, as they are approaching their retirement age, can make calculations on partial early old-age pension. Also, customers can make calculations on how much more pension they are able to accrue in case they choose to continue working after their retirement age. (Keva 2017)
CHECKING THE PENSION RECORD	A pension record consists of two parts, which of the first shows the amount of pension accrued and possibly the customer's personal retirement age, and the second part a detailed list of the person's employment and earnings. Keva does not send out pension records to their customers on paper, but in turn offers them the opportunity to check their pension records online to review the information, make additions and report on mistakes on it through My Pension online service. (Keva 2017)
APPLYING FOR PENSION OR CHECKING PENSION AP-PLICATION DECISIONS	Keva's customers can apply for different types of pension and check decisions on their applications through My Pension online service (Keva 2017).

Table 9: The most typical use cases within My Pension online service (Gröhn 2016)

4.3 Co-creating solutions for the new service concept

This chapter introduces the planning, execution and results of the two workshops, which were carried out in March 10th and 20th 2017 for Keva's staff within their facilities. The original plan was to have only one 1-day workshop, where the entire process of defining the customer journeys, service concept ideation, future scenario development, prototyping, testing and iteration would have taken place. Due to people's availability to participate, the process was split in two separate workshops. However, in the end it proved to be the right thing to do, as it allowed

the process to become even more multidisciplinary; in both workshops the participants came from several different divisions of Keva and only couple of them were present in both workshops, which meant that the results from the first workshop could be revised from new perspectives and iterated accordingly.

Customer journeys, service concept ideation and future scenarios workshop: Involving the staff of Keva in the design and development process

The first workshop involving for staff members of Keva was held March 10th 2017 at Keva's facilities in Helsinki. The aim was to define the current customer journeys and based on them, ideate new solutions and future scenarios. The materials needed for the workshop, such as papers, sticky notes, markers and so on, were pre-ordered from Keva and the customer journey canvas (Appendix 4), persona profile descriptions and empathy charts were printed out beforehand at Laurea's facilities.

The workshop plan and schedule (Appendix 3) included diverging and converging phases. The workshop begun with an introduction to the development project, the agenda of the workshop and key concepts and tools which the participants would working with. To activate them, raise energy and create a safe space, the introduction was followed by a warm-up exercise *Boom-wow-Wow-WOW-BOOM*, which adapts the idea of dramatic arc known from storytelling and the movie industry. After explaining how many stories and engaging movies adapt the idea the dramatic arc, where tension is build up towards the end of the movie, and how the same idea can be applied to customer experience, journey and service concept development, the participants were placed standing next to each other and divided in four groups. All groups were assigned to act out the tension building process; the dramatic arc. From my sign the first group would say out loud a firm *Boom!*. The second group would continue with a small, but impressed *wow*, third a bit louder *Wow* and fourth a more louder WOW before the big *BOOM!* by the last group. At first, the participants were a bit hesitant to go along with the exercise, but after a couple of rounds they were seemingly more relaxed and ready for action.

As I had set up the working space before the participants arrived, after the warm-up exercise the participants were asked to form three groups by count to three and move on to their working stations. Each working station included a customer journey canvas, persona profile description and an empathy map attached on the wall so all group members could see them. The groups were asked familiarize themselves with the persona profile (Figure 17) they would be working with by first reading the persona profile description in silence and then sharing their thoughts about it with the rest of the group.

Figure 17: Getting to know the persona profiles (Gröhn 2017)

After discussing together the groups were asked to fill out the empathy map (Figure 18), which was meant to foster empathy and encourage the participants to really jump into the shoes of the persona profile. The empathy map included four sections; what the persona thinks and feels, says and does, hears and sees.
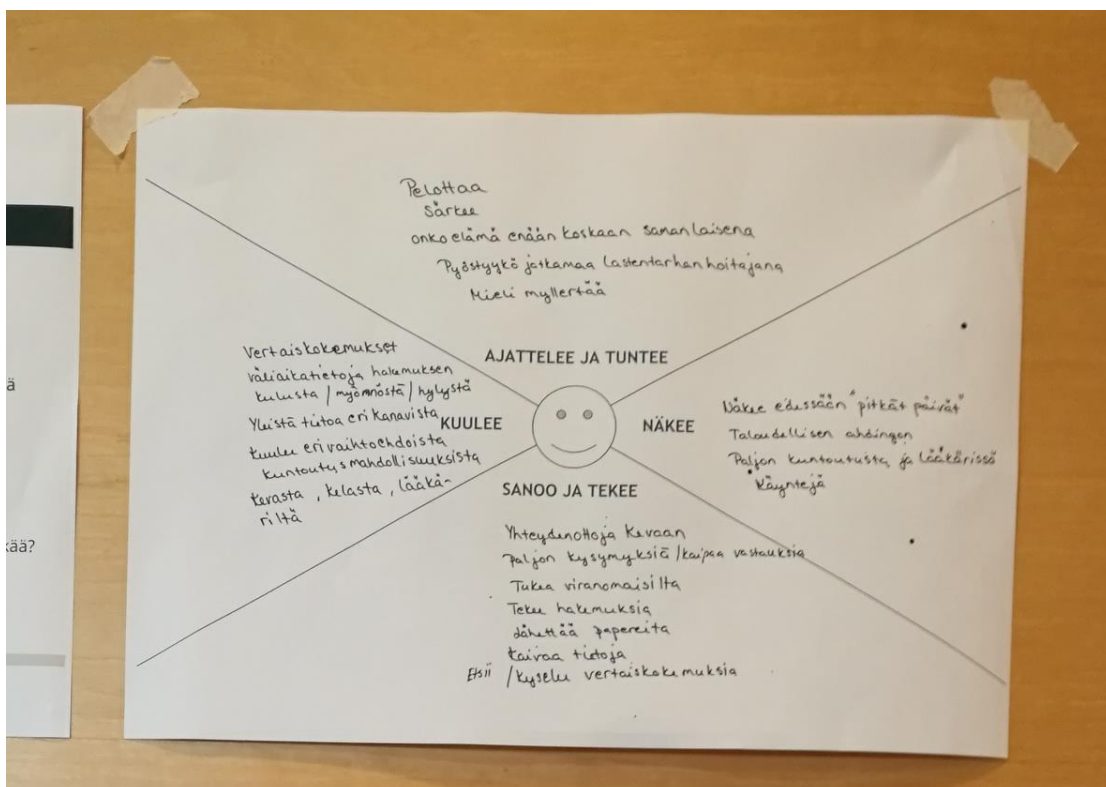
Figure 18: Empathy map of Paula (Gröhn 2017)

After filling out the empathy maps, the groups moved on to working with the customer journey canvas. First, to set the ground for the development work, the groups were asked to describe the current journey of each customer connected to the given use cases. They began by discussing and writing down the customer journey steps (or touchpoints) on a separate paper and after agreeing and finalizing all the steps, wrote them down on the canvas touchpoint boxes and defined the timeframe within which the journey takes place. Next, they visualized the journey touchpoints by creating a storyboard of the journey steps using sticky notes and placing them on the canvas accordingly or drawing directly on the canvas' storyboard boxes. Finally, before moving on to the next phase, they defined the service channels, devices and the stakeholders connected to each touchpoint. To emphasize and visualize the emotional side of the journey the participants mapped out the emotional journeys of the persona profiles on a scale from -2 to +2 by grading the emotion of each touchpoint and finally forming a graph by connecting the dots place on the emotional journey scale.

Next, the groups were asked to explore and discuss the persona profile's current journey and map out situations, which could include or be considered as pain points from the perspective of the persona profile. The participants wrote their observations and pain points on sticky notes and placed them on the canvas accordingly. They were then asked to choose three main pain points, write them on sticky notes and place them on separate blank papers. The chosen pain points would act as a starting point for ideating solutions in the next phase. At this point, the 4-hour workshop had proceeded to half way, so it was time for a short coffee break.

After the break the groups continued working by forming *How might we…? (HMW) questions* for each pain point they had selected. They wrote the questions on the papers the paint point were placed on and beginning from the first pain point forward, stated to brainstorm ideas based on the HMW questions, first in silence and then sharing and discussing within the group. The aim was to collect as many ideas as possible and then start reducing and refining some of the ideas. After the brainstorming phase reached its natural ending point, the groups were asked first to cluster similar ideas, and then go through each of them together by discussing if some of them could still be combined, built on or crystallized in some way. After that they were asked to choose one idea concerning each pain point to be evaluated in the next phase.

During the break, I had drawn *Desirability/Feasibility* grids for each group on A3 papers. The groups were instructed to evaluate the chosen ideas according to the desirability and feasibility of them and then placing the idea on the grid accordingly. After evaluating each idea, the participants were explained that the idea which was placed closest to the top right corner would be the one which they would continue to work with. Yet, they were advised to consider if the remaining ideas could be somehow tweaked, in order for them to be more desirable from

the perspective of the customer and feasible from the perspective of Keva. Furthermore, they could park the remaining ideas for further application.

The ideas which were considered to be the most desirable and feasible acted as a basis for defining new customer journeys, meaning future scenarios, for the persona profiles. The groups again went through the process of defining the journey of the customer, touchpoints, emotional journey, stakeholders, channels and devices, but this time in future context including the solution(s) they had come up with during the ideation. To conclude the workshop, each group presented their future scenarios for the rest of the participants. All of the groups' presentations were recorded with a video camera so besides the materials they had produced during the workshop, the recordings could be used as a starting point in the prototyping phase.

The customer journey canvases and other materials (Figure 19) which the groups produced are not stylized, re-drawn or discussed in detail within this development project report, because they are working documents, not deliverables. The materials were utilized in the next phase, during the prototyping workshop, of which' results will be presented as an overview. This is due to confidentiality reasons; as stated in the chapter *1.4 Limitations*, some of the more detailed results will not be included in this report.
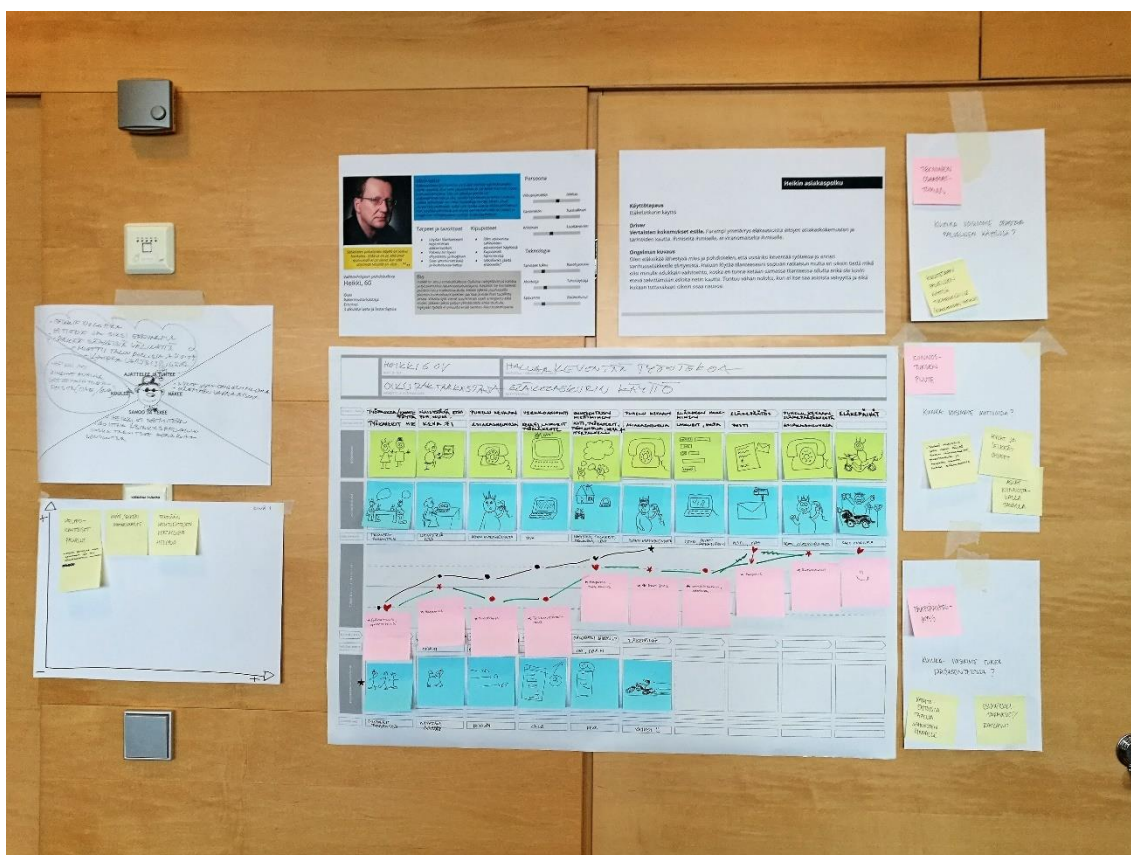
Figure 19: Results from the workshop (Gröhn 2017)

Prototyping workshop: Prototyping the future scenarios and solutions with the staff

The second workshop involving for staff members of Keva was held March 20th 2017, again at Keva's facilities. The aim of the second workshop was to refine the future scenarios and proto-type solutions based on them, which would then be tested and iterated. The materials from the previous workshop were utilized so there was no need to order more, but for prototyping purposes I borrowed Legos, Duplo's and CoCo Cosmos from Laurea and bought aluminum foil for the warm-up activity.

The workshop plan and schedule (Appendix 3) included diverging and converging phases and we started the workshop with a short introduction. After the introduction, the participants were divided into working groups. In order to familiarize them with the persona profiles and their future scenarios which they would be prototyping, they were shown the presentation videos recorded in the previous workshop. After watching the videos, the prototyping tools were shortly introduced.

Next, the groups were asked to explore the materials produced in the previous workshop and based on them and the future scenario presentation videos, they were instructed to individually make *a foil sculpture* (Figure 20). The theme was *Your interpretation of the persona profile's service experience based on the future scenario*. After some minutes of molding the foil sculptures the participants were asked to present their sculpture and share their thoughts regarding the service experience within their group. The exercise worked as anticipated; presentation discussions raised a gabble and giggles; people seemed to get relaxed and in a more creative mood.

Figure 20: Sculptures from the warm-up exercise (Gröhn 2017)

The workshop continued with recognizing those cases within the future scenario, which could be prototyped. The groups were asked to list them on paper and discuss case by case the related stakeholders, what it would take to get from current situation to the one presented and could the solution be iterated or made more concrete in some way.

After iterating the solutions to be prototyped, the groups were asked and instructed on choosing an appropriate prototyping tool. Two groups chose to perform paper prototyping for Heikki's use case of pension calculation (Figure 21) and Marita's use case of checking her pension record (Figure 22) and one group chose to Paula's application process with CoCo Cosmos (Figure 23). After the first versions of the prototypes were nearly done we held a short coffee break.
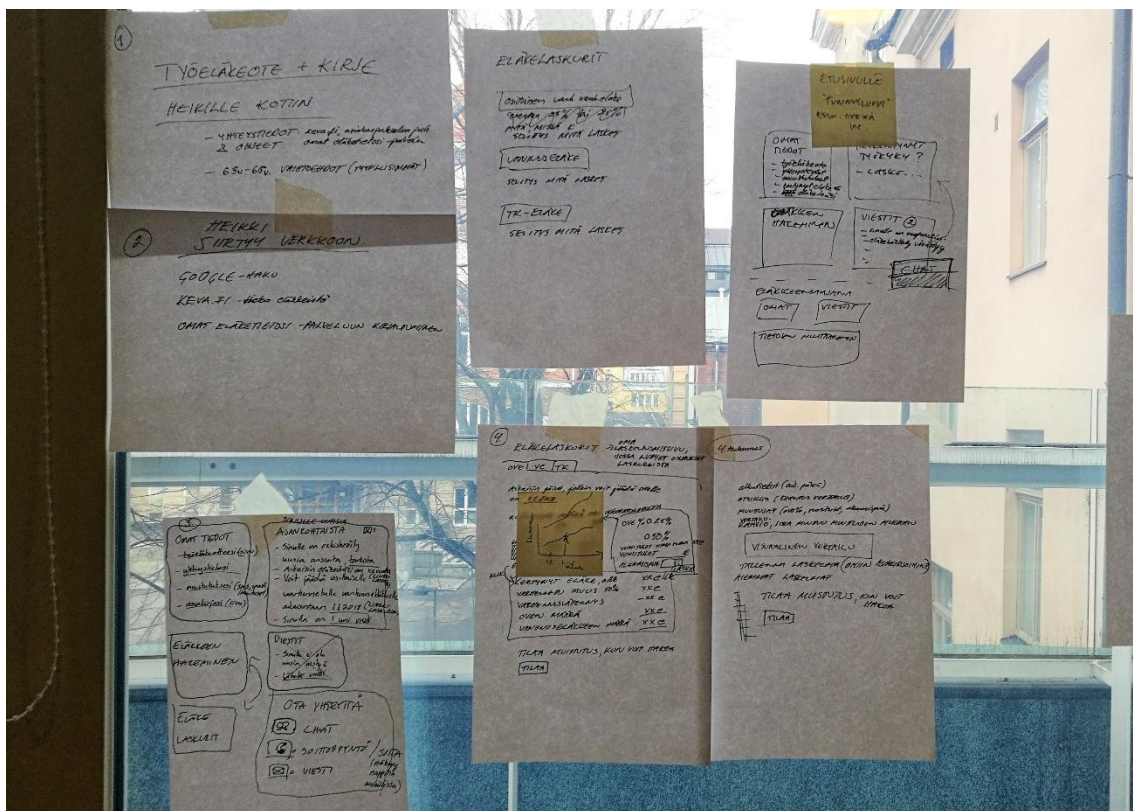
Figure 21: Prototyping Heikki's use case with paper (Gröhn 2017)
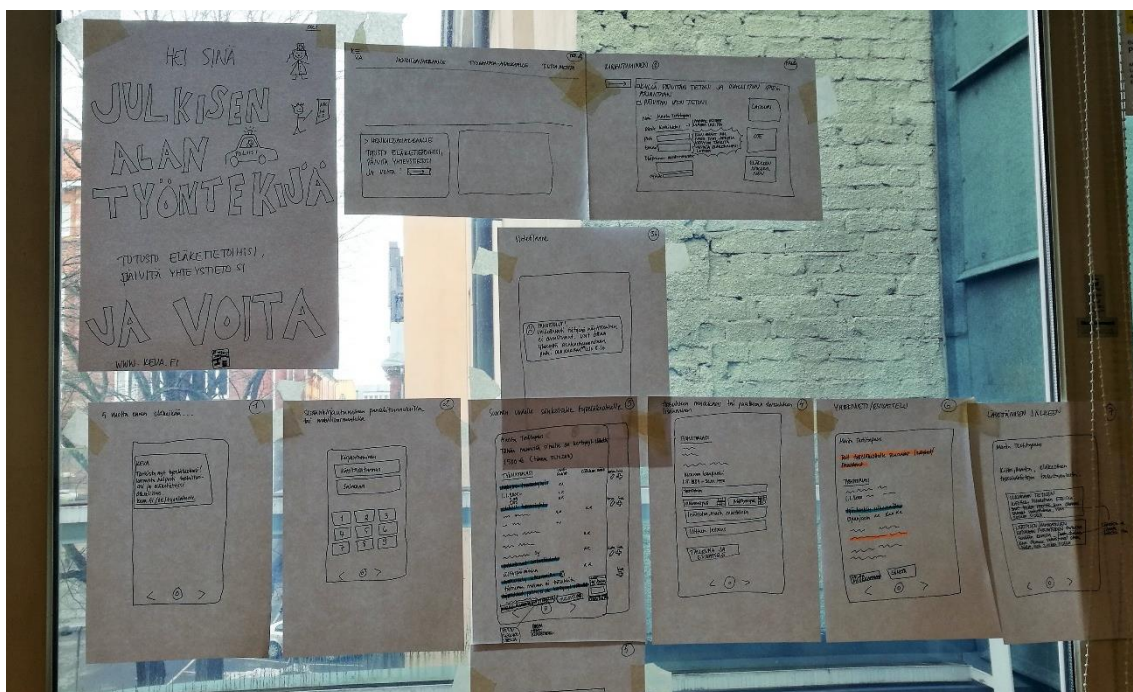
Figure 22: Prototyping Marita's use case with paper (Gröhn 2017)
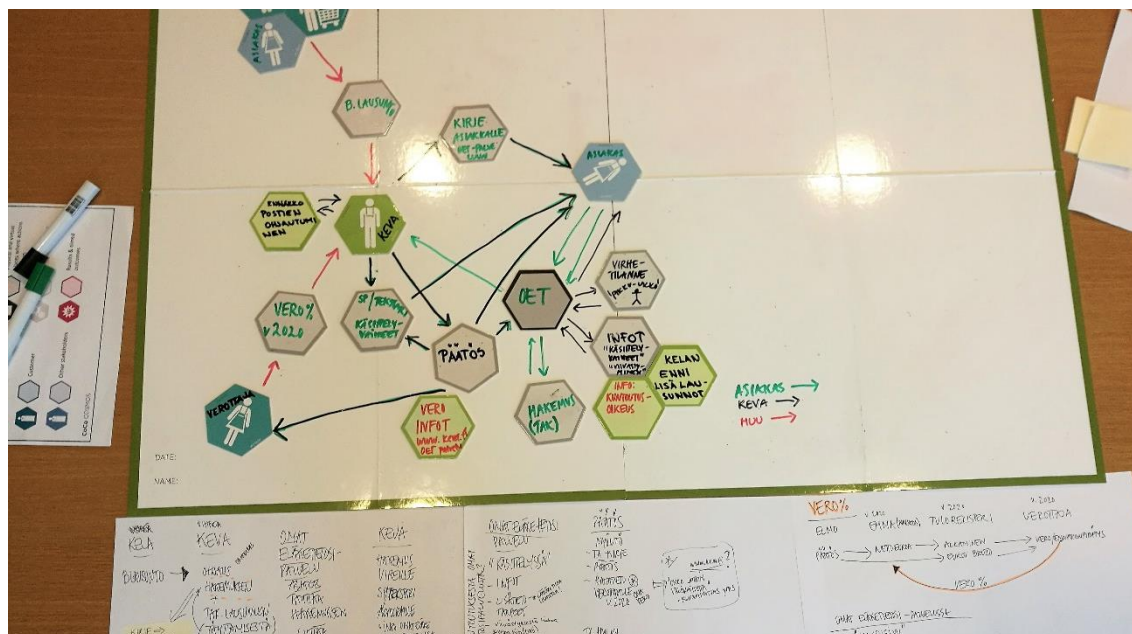
Figure 23: Prototyping Paula's pension application process with CoCo Cosmos (Gröhn 2017)

After returning from the break the groups were asked to finalize their prototypes for testing and choose roles; one would go to another group to perform as a user who tests the prototype, one would be the person who leads the test and the remaining group members would observe the test and make notes. When ready, the testing was started with the test leaders' introduction to the persona profile, it's challenges, needs, goals and use case, so the person who was be testing the prototype would be able to take on the user's role. After the testing was done the groups were asked to go through the feedback which the person testing the prototype gave and the notes the observing group members made. Based on the information they had, they iterated the prototype and started to get ready for presenting their prototype for the rest of the participants. Again, the presentations were recorded with a video camera for further steps of development.

Creating wireframes and modeling the results from the prototyping workshop

The materials from the prototyping workshop were carefully documented and saved for creating wireframes and modeling the solutions. The reason why I decided to in a way re-document, or refine the results, was that I wanted the data to be ready for further iteration and development rounds in the future. The data needed to be easy to store and take into use when continuing the development process of the service concept of My Pension online service. The suggestions on how to continue the project are presented in the final chapter *5 Summary and conclusions*.

I started processing the data from the workshop by watching the presentation videos and gathering the key points into a single text file. The documentation from the materials produced

within the workshop supported the writing, as I could elaborate on some parts with the help of photographs taken. Next, I started to make more refined and precise versions of the paper prototypes by creating wireframes of them with Adobe Illustrator (Appendices 6-8 and 9). Instead of drawing only in black and white, as wireframes many times are done, I decided to do the wireframing by partly lending the existing graphic elements which the My Pension online service has by using screen capturing and drawing similar elements with Adobe Illustrator. Using ready elements was more efficient timewise and that is why I chose to use them as much as possible, but also the fact that Keva's style guide and graphical instructions for web remains the same and does not require re-designing, I considered it to be logical to use the elements and visuals which are the correct ones. Since one of the groups decided to use CoCo Cosmos for prototyping Paula's application process, the modeling of the process was done by creating a visualization of it with Adobe Illustrator (Appendix 10). The wireframes based on the paper prototypes and the visualization of the application process are introduced below, use case by use case.

Heikki - Using the pension calculators

Heikki's use case was using a pension calculator. The first frame presents the landing page on which Heikki arrives after signing in to My Pension online service with his personal online banking codes. Compared to the current landing page, the new landing page offers significantly more information that is relevant for Heikki, as well as a chat window through which he can ask questions from a pension specialist. As Heikki wants to know more about different pension options and make comparisons, he chooses to follow the link leading to the page which offers information on them. In contrary to the current situation, instead of going back to Keva's homepage, Heikki finds information on different pension options in My Pension online service. The page also informs Heikki that in case he is not eligible for applying pension now, he can order a text message or e-mail notification letting him know when he can apply for pension and that he can easily file his application through My Pension online service.

Since Heikki has been considering to cut down his workload, he is most interested in the option of partial early old-age pension. Below the introduction to partial early old-age pension Heikki notices a link leading to the pension calculator in which he can make calculations and comparisons to help him decide, if partial early old-age pension would be the right choice for him and when would it be a good time to apply for it. By following the link, he arrives on the partial early old-age pension calculator page. First, the top of the page shortly summarizes what partial early old-age pension. Below the introduction Heikki finds information about the factors on which the calculation he is about to do will be based on, as well as a notification stating the earliest date Heikki can start partial early old-age pension.

Figure 24: Caption of the early old-age pension calculator wireframe (Gröhn 2017)

Heikki enters the required information in the calculator and starts the calculation (Figure 24). Due to confidentiality reasons the visuals which appear as a result of making a calculation are not presented in Appedix 7 or discussed here in detail. In short, the aim is to visualize the difference between calculations, in order to help Heikki decide which would be the most suitable time for him to apply for partial early-age pension.

After Heikki has compared different options he decides to save the comparison of the calculations to come back to them later on. By choosing "Save", Heikki lands on a page which informs him that his calculation has been saved into his documents and offers link to return on the pension options page or on the landing page of My Pension online service. The current calculators within My Pension online service do not provide the calculations in a visual form, neither is it possible to save them for further inspection. The wireframes for Heikki's use case are presented in Appendices 6-8.

Marita - Checking the pension record and making changes on it

Marita's use case was checking the pension record. During the prototyping workshop came the idea that Keva could have a mobile application, through which customers could check and make changes on their pension record easily and on the go.

By using her mobile phone, Marita opens Keva's mobile application and signs in to My Pension service. She lands on the front page of My Pension mobile service and notices a box called "Update your information" and a link leading to the pension record page. By following the link, she lands on the new pension record page, which first shows her pension accrual. Below that Marita sees a notification stating factors which may affect her pension accrual and her pension records. After the summary, she finds buttons for adding information and making changes. As she has noticed an error in her pension record, she taps on the button "Make changes". In case she would have chosen to only add information, a form where she is able to enter the information would open below the last item on the pension record list.

Figure 25: Caption of the mobile view wireframe of updating pension records (Gröhn 2017)

Choosing to make changes lands her a on page, which first provides guidance on how the changes can be made, and below lists the information she may change (Figure 25). She taps on the item she wishes to modify and enters the new information in a pop-up window and taps "Save". After saving the change, she previews the information before tapping "Send". After choosing to send the updated information Marita lands on a confirmation page which informs her that she the information she has provided will be checked and that she will receive a confirmation via text message or e-mail that the changes have been updated on her pension record. Whether she receives the confirmation in a text message or e-mail depends on which one she has chosen as her primary channel for receiving notifications from Keva.

Currently, customers can view their pension record as a PDF-file through My Pension online service and in case they want to make changes on it, they need to file the changes separately; they are not able make changes directly on the PDF-file. The complete versions of the wireframes for Marita's use case are presented in Appendix 9.

Paula - Pension application process

Originally, Paula's use case was checking pension application status. However, during the prototyping workshop it was decided that it would be good to focus on developing and prototyping the pension application process in order to make it more efficient, transparent and supportive.

Since Paula has suffered an accident, the process begins from the doctor's office. As Paula's working ability has diminished significantly, her sick leave will be long and she will be in need for rehabilitation, the doctor suggests to Paula that she would apply for cash rehabilitation benefit from Keva. Paula agrees and the doctor tells her that the document stating her medical report B will be sent directly to Keva and that Keva will contact her soon. When Keva receives Paula's medical report B, a specialist checks it and send a message to Paula asking her to file her cash rehabilitation benefit application in My Pension online service and if possible, also attach a statement from her employer.

After Paula files her application she is able to track the handling process via My Pension online service and see an estimation on how long the application processing will take. Should there be any delay, Keva's specialist would contact Paula personally to explain the reason behind the delay, before she herself would contact Keva. Furthermore, by recognizing Paula's situation, the service offers relevant information, such as information regarding rehabilitation, to her. She is also encouraged to check and update her personal information, if needed.
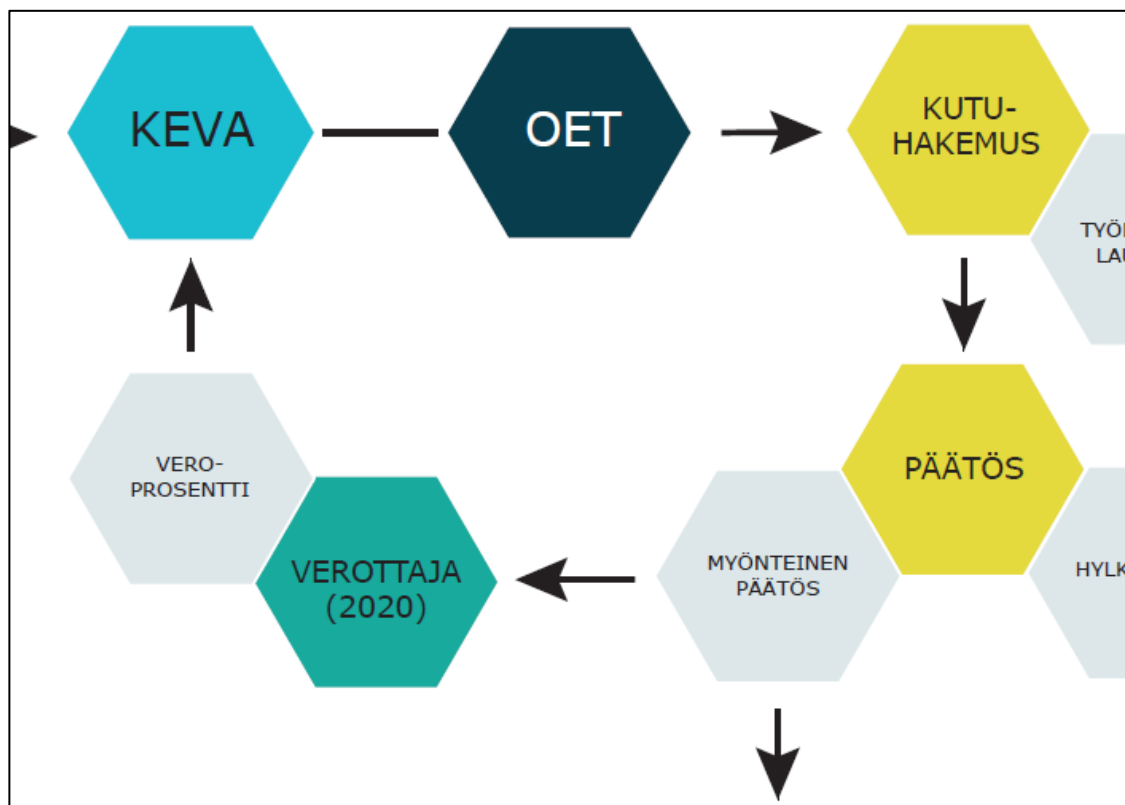
Figure 26: Visualizing how the tax office could send Paula's tax information directly to Keva after receiving an announcement that she has been granted cash rehabilitation benefit (Gröhn 2017)

After Keva has processed Paula's application, she receives message from Keva stating that stating that the cash rehabilitation benefit is granted for her. After granting the cash rehabilitation benefit for Paula, Keva is in close contact with her and her employer through-out the rehabilitation phase. Currently, Paula would still need to get a tax card from the tax office and deliver it to Keva, but within the new application process the decision that she has been granted the cash rehabilitation benefit would go directly from Keva to the tax office, who would in turn send Paula's tax card for the benefit to Keva (Figure 26). In case the decision would have been negative, Keva would send Paula a message including information about the decision made and the phone number of the person who has been processing her application, from whom she could ask more information. The complete figure of the pension application process is presented in Appendix 10.

4.4   Delivering the service concept vision statement

This chapter discusses the service concept vision statement (Figure 27 and Appendix 11), which was crystallized based on all the data that was gathered throughout this development project. The data from interviews to workshops and beyond, all were explored once again to find the

key insights, needs, challenges and opportunities I was able to recognize and document for and with the customers and staff of Keva.

I began by drafting the aim, content and service promise on a text file by combining data from the research phase and development process — such as the design drivers — and making some desk research regarding company vision statements.

The main starting points for crafting out the vision statement were the following:

- It should include a clear and aspirational service promise
- It should present the key principles of how Keva serves their customers via different service channels
- It should capture the holistic spirit in development of online services
- It should be visual and engaging, as well as easy to understand and internalize by the whole staff of Keva

After I had defined the content of the concept vision statement I started building a visual presentation of it with Adobe Illustrator (Figure 27).

Figure 27: Service concept vision statement of Keva's My Pension online service (Gröhn 2017)

The main heading presents the service promise, which is that Keva supports its customers in changing life situations and offers the best customer experience. The sub-heading under the service promise states that the customers are able to take care of their pension related issues though different channels, anytime and anywhere.

The bullets in the bottom part of the Figure 27 state the key principles according to which Keva should serve their customers. The first bullet states that the communication is understandable, targeted and anticipatory by nature, and that Keva's processes are transparent towards the customers. The second bullet states that Keva offers information regarding pension related issues in layman's terms and by giving real life examples through authentic stories about their customers' experiences. The final bullet states that Keva's service is personal, professional and human-centric.

5 Summary and conclusions

This chapter summarizes the phases and results of the development project, evaluates the process and results of the development project, suggests actions for future development of the service concept of My Pension online service, and finally, discusses conclusions.

Summary of the development project phases and deliverables

The purpose of this development project was to foster and contribute to a holistic and human-centered approach in the design and development digital and online services and service concepts and the objective was to develop the service concept of Keva's online pension information service My Pension (Omat eläketietosi) more customer-centric through understanding different customer groups, exploring the customers' lives and contexts and uncovering insights about their needs on a deep level.

In order to outline, give structure and reach the objectives set for the development project, the following research questions were posed:

- What kind of customer profiles exists within the users of My Pension online service and what are their needs and lives like?
- How and what kind of digital and online services they use and what kind of roles the services play in their lives?
- What are the main use cases of the customers using My Pension online service and what are their experiences in using it?

- When dealing with pension and retirement issues, how could the customers' journeys be improved?

Due to the holistic nature of the research questions, a deep and an extensive understanding of different theoretical frameworks, approaches and methodologies was vital. The context of the development project was not solely grounded in the development of online and digital services, but extending to cover the wholeness of the customer journey and lives of the individuals. Thus, a mix of frameworks, approaches and methodologies formed the theoretical framework of this development project. Customer-dominant logic and human-centered design were the fundamental frameworks and approaches taken on during the development project. User-centered design and service design provided important methods and tools for development and contributed to the holistic approach of CDL and HCD. The topics of customer experience and user experience were also explored, since the service experience which Keva provides for their customer takes place in both physical and digital channels.

To answer the first two research questions discussing the different customer profiles, what are their needs and lives like and questions regarding their use of digital and online services and the role those two play in their lives, a qualitative research project including interviews and customer needs and ideation workshop was carried out during Fall 2016. Furthermore, the third research question aiming in finding out what are the main use cases the customers perform within My Pension online service and how they experience it, was researched by exploring Keva's customer feedback reports and comparing the information against data gathered through interviews and customer workshop. The research phase which took place in the first phase of the double diamond design process *discover*, resulted in diverse data about the lives and need of Keva's customers, as well as a cohesive understanding of their habits in using online and digital services. The data provided a solid starting point for the next phase *define*, where persona profiles, design drivers and use cases were defined.

The fourth and final research question asking how the customers' journeys could be improved when they are dealing with pension and retirement issues, was explored in the next phase *develop,* where the persona profiles, design drivers and use cases were used as a base for the development of new solutions. The phase included two co-creative workshops for the staff of Keva. In the first workshop the participants first mapped current customer journeys, ideated solutions and developed future scenarios, which were then used as a base for further iteration of the solutions through prototyping and testing. In the final phase of the double diamond design process *deliver,* a service concept vision statement of My Pension online service was defined and constructed into a visual form.

Evaluating the process and results of the development project

Due to careful planning the development project was successfully carried out in time and the objectives set for it were fulfilled, as stated above when discussing how the different phases and deliverables of the project answered to the research questions posed. When reflecting on what could have been done differently, I feel that we could have spent more time on the two co-creative workshops where the staff of Keva developed new solutions for the service concept. Both workshops could have easily been full days, instead of 4 hours. Unfortunately, this was not possible due to the limited time resources of the staff. Especially the future scenarios and prototype iteration part could have made use of more time. Furthermore, I think that in order to truly foster empathy towards the customers, it would have been useful to include the staff already during the research phase. For example, members of the staff could have taken part in conducting the interviews or, making observations in the customer needs and ideation workshop for the private custome, or take part in forming the persona profiles, and so forth. Unfortunately, this could not be arranged, due to limited time and resources.

In any case, each project is different and each have their limitations, but with this development project I think the time versus work done were in quite good balance. Of course, the settings would have probably been different if I would have done the project internally as an employee of Keva; to get to the point where the project go to could have taken less time, but in turn the outside perspective would have been lost. Nevertheless, it is good to acknowledge that you can always go deeper and include different stakeholders in numerous ways.

As the development project was done for a case company it was important to hear their feedback on the new, more customer-centric service concept which they hopefully would take further on towards implementation in the future. The feedback was gathered through during a meeting where the results of the project were presented. The key points from the case company feedback were the following:

- Through the development project the use of service design methods within different projects has been fortified, especially within the digital services department.
- The project has been firmly based on a broad expertise in service design and executed within close interaction with the customers and in co-creation with Keva's staff and its different stakeholders.
- The new service concept and its' deliverables can easily be applied into the future development of My Pension online service.
- The development project was carried out within agreed schedule and the different phases of it have been reported to the case company, which has been able to give comments on clear and well-justified solutions.

Suggestions for future development

Keva can easily take action on continuing the development the service concept of My Pension online service by carrying on the iteration process of the prototypes developed and tested. The wireframes and process visualization serve as concrete and clear starting points for further rounds of iteration, before testing them with the customers and the staff, gathering feedback, and finalizing the solutions for implementation. I encourage Keva to take the solutions further within diverse development teams, as it proved to be a productive and fruitful way of working. For example, during the two workshops carried out with Keva's staff, the participants were specialists from different divisions of the company which resulted in very perceptive feedback. Furthermore, the participants seemed very motivated to develop the solutions and prototypes, as they were able to pitch in and share their knowledge, as well as take part in create something new. This kind of motivation and dedication plays a key role in co-creative development of services, as including stakeholders in the process engages them in the implementation of new solutions, processes and change.

Based on the experiences from the development process, I underline the importance of co-creative, agile and iterative manner of working — solutions should not be developed in silos, but rather in co-creation with different stakeholders and through efficient rounds of iteration. This applies to all companies developing services in different contexts, not only to the ones developing digital and online services.

Conclusions

It seems evident that different life situations and people's attitudes generate a variety of needs towards the service and thus, I encourage all companies developing digital and online services, to look beyond the surface and take a deep dive into the worlds of their customers. Like Heinonen (2010) argues, companies should be studying their customers' processes within their own contexts, as well as understanding the different types of input required to supported them, in order to discover potential value of a service. Instead of merely focusing on developing some specific functionalities of a service, companies should aim in facilitating, supporting and enhancing their customers' activities.

The importance of putting the customer in the center of development is crucial, as the contexts and channels of services through which the customer is in contact with the company are ever-changing. Like encountered in the research phase of this development project, the fact that customer may sometimes feel stupid if they do not know how to use a service, should be considered alarming. Online and digital services are foremost developed for *human users*, hence it

is never the user's fault if the service does not serve the user's needs or it is not intuitive, easy and delightful to use. When developing online and digital services, unless the customers are closely involved in the design and development activities, there is a risk of taking the wrong path. Furthermore, change and development is necessary in order to offer better services, but all changes should be carefully considered and even more importantly, the way they are implemented should be well thought of. The users should not be forced to learn new tricks, unless it truly enhances their user and service experience.

Based on the findings from the field, it can be stated that pension issues raise a mix of feelings; some people are more neutral, others look forward in retiring and some do not even want to think about the issue, let alone discuss it. Moreover, the needs and feelings of a person who has just suffered a car crash and will be facing a long rehabilitation are probably quite different from someone might be close to retiring, but who has a stable life situation. We all are individuals and our life situations are change, from time to time and one context to another. As the insights from the interviews showed, most people interviewed within the research phase of this development project saw retirement and pension as a good thing, because for them it represented freedom and self-determination. If this is the case among the interviewees who come from various backgrounds and life situations, where does the negative tone actually come from and who or what cultivates it? Could it be, that one reason behind the negative tone is that when we talk about extending working careers, people might think that it means that we are required to continue working full-time, when there actually is alternative pension options available? And how familiar people actually are with different pension alternatives? Understandably, people who do very stressful work might not even want to hear about them as their current load of work weighs them down so much. Yet, what would happen if information regarding different options would be better, or more compellingly, available when needed? And what if they would be discussed more openly?

To conclude, after carrying out this development project it seems obvious that the discussion on retirement and pension issues should be more open and people should be seen as the individuals they are, rather than through their societal status, for example. Most of us will retire someday one way or the other, so I would argue that it is a common advantage and also responsibility, that we start actively changing the tone of the conversation when discussing pensioners, retirement and pension related issues. A pension insurance company like Keva is an influential actor, which has great potential to lead and facilitate the public conversation in changing the mindsets and attitudes towards pension and retirement issues. The new, more customer-centric service concept of My Pension online service can serve as a natural launching point for that sort of conversation. Moreover, it can set an example for other companies to take up on a holistic and human-centered approach in the design and development of digital and online services and service concepts.

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Figures

Tables

Appendices

Appendix 1: Interviewguide (Gröhn 2016)

HAASTATTELURUNKO

Nimi:
Ikä:
Sukupuoli
Eläkeikä:
Ammatti:
Asuinpaikka:
Elämäntilanne lyhyesti:

1 OSA - ELÄMÄNTILANNE
- Kerro elämäntilanteestasi?
- Kuvaile elinympäristöäsi?
- Millaista on arkesi ja miltä se tuntuu?
- Minkälaisia haasteita kohtaat elämässäsi?
- Minkälaisista asioista haaveilet?
- Mikä liahduttaa?
- Mikä ärsyttää?

2 OSA - DIGITAALISTEN PALVELUIDEN KÄYTTÖ
- Minkälaisia digitaalisia palveluita käytät?
- Kuinka usein käytät digitaalisia palveluita?
- Millä laitteilla käytät digitaalisia palveluita?
- Minkälaisia haasteita kohtaat käyttäessäsi digitaalisia palveluita?
- Tuleeko mieleesi esimerkki erityisen hyvin toimivasta palvelusta?
- Jos jotakin tietoa ei löydy esim. pankkipalvelussa, mitä kautta lähdet asiaa selvittämään
    - käytätkö esim. verkkoneuvontaa?
- Mikä liahduttaa?
- Mikä ärsyttää?

3 ELÄKEASIAT JA OET-PALVELU
- Mitä ajatuksia sana "eläke" sinussa herättää?
- Minkälaisia suunnitelmia tai haaveita sinulla on eläkeasioihin tai eläkeaikaan liittyen?
    - oletko ajatellut esim. osa-aikatyötä tms?
- Miten hoidat eläkeasioitasi?
- Minkälaista informaatiota kaipaat eläkeasioihin liittyen?
    - kaipasitko missä vaiheessa?
    - onko jokin asia tullut yllätyksenä?
- Millaista olisi hyvä viestintä eläkeasioista?
- Jos saisit valita, miten hoitaisit mieluiten eläkeasioitasi ja miltä palvelu näyttäisi? Missä se toteutuisi ja miten?
- OET-palveluam käyttö; miten olet käyttänyt palvelua ja miksi? Mikä liahduttaa ja mikä ärsyttää?

Appendix 2: Workshop schedule for November 11th 2016 (Leino & Visti 2016)

Appendix 3: Workshop schedules March 10th and 20th 2017 (Gröhn 2017)

KEVA 10.3.2017 henkilöasiakaspolut workshop

Vaihe	ALUSTUS	V	LÄMMITTELY	V	RYHMÄYTYMINEN	V	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	T	V	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	V	PITCH	V	PITCH	V	CLOUSAUS
Mitä	Agenda + tiedis		Bwwwib harjoitus (dramatic arc)		Ryhmiin siirtyminen		Persoonlin syventyminen		Nykyinen aspo		Painpoints			Ratkaisujen ideointi		Ideoiden arviointi		Ideoiden klusterointi valitseminen 3 kpl		Skenaariot +uusi aspo		Pitchin valmistelu		Pitching		Kiitos, apladit ja next steps
Miten	Slidesetti		Seisten rivissä		Jako kolmeen? (persoonittain)		Empatiakartta		Journeymap		Journeymap			HMWbrainstorm		De-Fe grid		Klusterointi, hiljainen äänestys		Journeymap		Keskustelu		3min pitch + 1min palaute + 1min vaihto X3		Slidesetti
Tavoite	Orientointi		Energiat nousuun, safe space		Ryhmäytyminen		Emootien luominen		Nykytilanteen kartoitus		Kehityskohteiden tunnistaminen			Ideoiden generointi		Toteutus-kelpoisuus		Valinta		Uusi asiakaspolku		Esittelyn valmistautu-minen		Ideoiden raundittaminen ja palaute		Recap
Tarvikkeet	Slidet		-		Persoonaprintit A3		Empatiakartta		Journeymap Tussit Post-It		Journeymap Tussit Post-It			A4 Maalarinteippi Tussit Post-It		Totteutus-kelpoisuus		Tussit		Journeymap Tussit Post-It		A4 Tussit post-It		Videokamera		Slidesetti
Kesto	15	2	10	0	5	2	15	2	50	1	5	13	1	35	1	10	2	5	1	40	1	5	1	15	2	2
Aika	9:00-15	9:15-17	9:17-27	9:27	9:27-32	9:32-34	9:34-49	9:49-9:51	9:51-10:41	10:41-10:42	10:42-10:47	10:47-11:00	11:00-01	11:01-36	11:36-37	11:37-47	11:47-49	11:49-54	11:54-55	11:55-1235	12:35-36	12:36-41	12:41-43	12:43-58	12:58-13:00

V = vaihto
T = tauko

KEVA 20.3.2017 prototypointi workshop

Vaihe	ALUSTUS	V	RYHMÄYTYMINEN	V	LÄMMITTELY	V	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	T	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	V	TEHTÄVÄ	V	PITCH	V	CLOUSAUS
Mitä	Alustus päivään		Ryhmäytyminen		Folioveistos		Ratkaisujen jatkokehittely		Prototypointi		Prototypointi		Prototypointi		Testaus		Iterointi		Pitchin valmistelu		Pitch		Clousaus ja next steps
Miten	Slidesetti		Edellisen pajan osallistujat samoihin ryhmiin		Foliosta muovailten		Joku menetelmä?		CoCo Cosmos, Legot, kynä ja paperia		CoCo Cosmos, Legot, kynä ja paperia		CoCo Cosmos, Legot, kynä ja paperia		Think out loud protocol		Omissa ryhmissä		Omissa ryhmissä		Ryhmä kerrallaan		Slidesetti
Tavoite	Orientointi		Ryhmäytyminen		Persoonaan tutustuminen		Ratkaisujen konkretisointi protoja varten		Ratkaisujen visualisointi ja prototypointi		Ratkaisujen visualisointi ja prototypointi		Kehityskohteiden määärittäminen		Ratkaisujen jatkokehitys		Esittämiseen valmistautuminen		Ratkaisujen esittely		Clousaus
Tarvikkeet	Slidesetti		-		Alumiinifoliota		??		CoCo Cosmos, Legot, kynä ja paperia				Muistiinpano-välineet		-		-		Videokamera		Slidesetti
Kesto	25	2	2		10	5	20	5	20	5	60	15	20	2	15	2	20	2	10	2	20		5
Aika	12:00-12:25		12:25-27		12:27-37	12:37-42	12:42-13:02	13:02-07	13:07-14:07	14:07-22	14:22-42	14:42-44	14:44-59	14:59-15:01	15:01-21	15:21-23	15:23-33	15:33-35	15:35-55	15:55-16:00		

V = vaihto
T = tauko

Appendix 4: Customized customer journey canvas (Gröhn 2017). Inspired by Mr. Thinkr
https://s3.eu-central-1.amazonaws.com/cxindustries-website-assets/smaply/tem-
plates/smaply-mrthinkr-journey-map-a2.pdf. Accessed Feb 30.
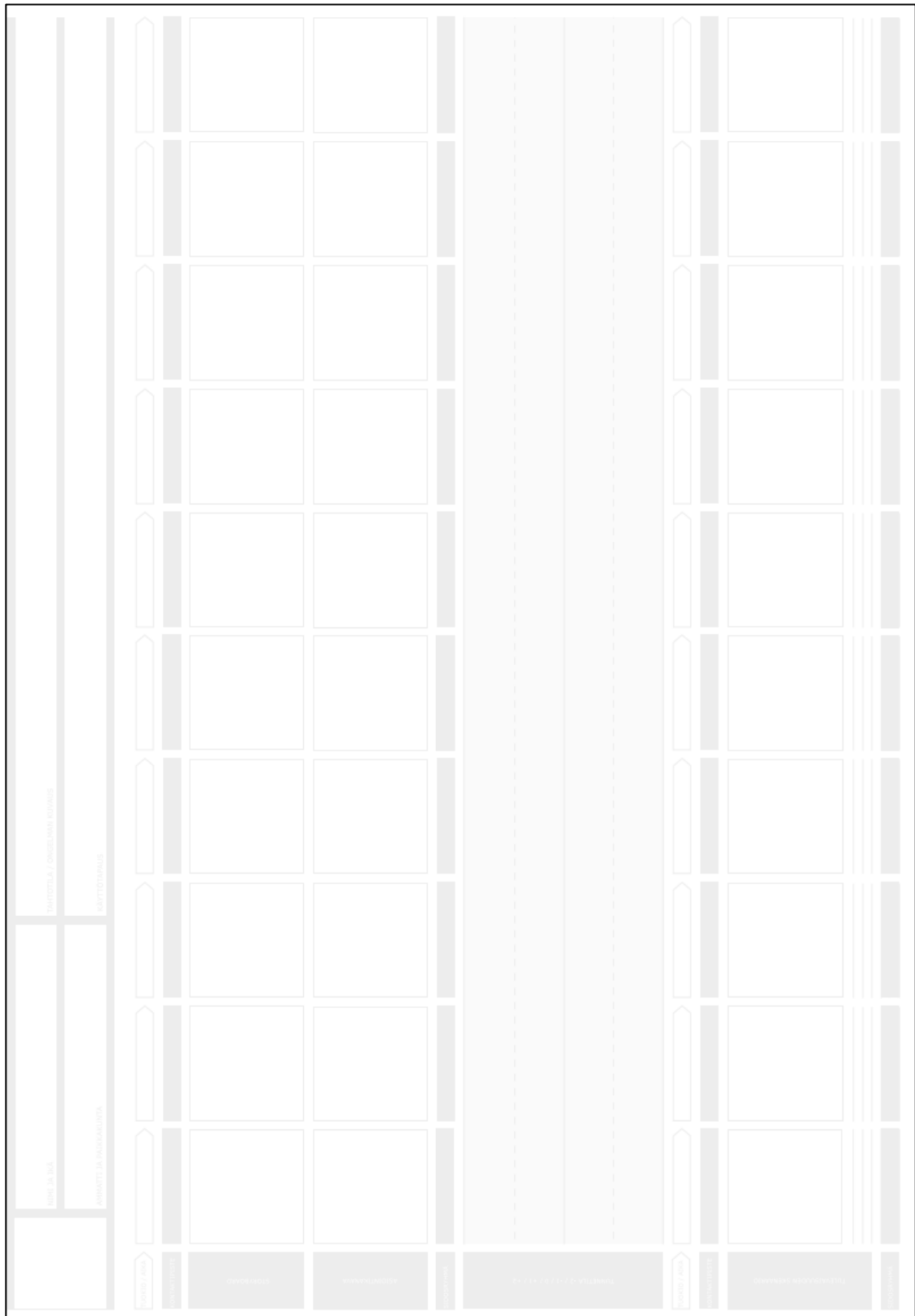
Appendix 5: Results of the affinity diagramming of the customer needs and ideation workshop Nov 16th 2016 (Gröhn 2016)

1. LÄPINÄKYVYYS JA PALVELULUPAUS	2. VERTAISUUS	3. YMMÄRRETTÄVYYS	SAAVUTETTAVUUS	PALVELUJEN KOHDENTAMINEN	TIETOTURVA
- käsittelyajoista tiedottaminen - käsittelyprosessin läpinäkyvyys - palvelulupaus ----------------- - perustelut päätöksille - kunnioittava kohtelu	- eläkeasioiden ymmärtäminen vertaisten kautta	- käsitteiden avaaminen - kansantajuisuus	- jalkautuminen kentälle - palveluaikojen pidentäminen ja kanavien laajentaminen	- palvelujen kohdentaminen eri ryhmille ja profiileille	- selkeä viestintä tietoturvasta
- käsittelyajoista ilmoittaminen eri hakemusten osalta vastaanottokuittauksen yhteydessä - kuittaus asian käsittelystä - hakemusten käsittelyajat lyhemmiksi - miten käsittelyajat voivat olla niin pitkiä? - avattava käsittelyaikoja ----------------- - oikeus saada puhua päätöksen tekijän kanssa - oikeus saada puhua hakemuksen hyljänneen lääkärin kanssa - oikeus saada tietää päätösten perusteista ja tekijöistä - hakemusta käsittelee lakimies ja muita esim. johtaja,yleislääkäri, ammattiuden lääkäri tai muu vastaava	- esimerkkihenkilöitä, joiden "eläkeasia" kerrotaa (työsuhteet, eläkkeenkertyminen, aikatauluja, mitä on tehtävissä) - eläkkeen maksamisen alku	- aakkosluettelo eri eläkkeistä ja muista asioista sivustoista - määritelmät / sanasto - termien selityksiä (sanasto tms.) - käsitteiden määrittelyä mukaan tekstiin - Kevan sivuille oma erillinen sanasto eläkkeisiin/työelämään	- Kevan vierailut isojen työnantajien luona - vierailuja kevasta työntekijöineen suurten työnantajien työpaikoille - jalkautuminen kansan pariin > opastus, tiedottaminen, myös nuorille esim. kouluihin - lähipalvelupiste pääkaupunkiseudulle esim. 2-3 päivää/kk ----------------- - ilta-aikoja henkilökohtaiseen palveluun - puhelinpalveluaikoja venytettävä - chat puuttuu	- ikärakenteen huomioiminen	- tietoja eri yhteydenottomahdollisuuk-sien turvallisuudesta
- Jos eläkehakemuksen laittaa sähköisesti, kuittaus olisi tärkeä, asiakas tulisi pitää ajan tasallaselkeästi ja paremmin, käsittelyn seuranta läpinäkyvämmäksi! - Joissakin hakemuksissa kestää kuukausia, eteneminen ja proaktiivinen viestintä tärkeä erityisesti näissä! - Jollakin kestänyt saada vastaus sähköpostiin kuukausia, proaktiivinen viestintä?? - Huomioidaan asiakkaan viesti, vastausaika tietoon, PALVELULUPAUS SELKEÄSTi ESILLE!! - Käsittelyajat LÄPINÄKYVIKSI; miksi toisissa hakemuksissa kestää kauemmin kuin toisissa, mikä on todellinen syy?? > vaikuttaa muihin tahoihinkin esim. KELA ei voi välttämättä ratkaista henkilön asiaa kun KEVALla kestää käsittely - Tavoitekäsittelyajat näkyviin "niinkun KELAlla ja selitykset miksi käsittelyssä kestää, läpinäkyvyys!! - Väliaikatietoja käsittelystä, "jotain konkreettista", kuittaus asian käsittelystä ----------------- - PERUSTELUT PÄÄTÖKSILLE	- Esimerkkihenkilöiden kuvauksia; persoonia eri työuritta, mitä juuri hänen pitäisi ottaa huomioon missäkin vaiheessa? >STORYTELLING!! Ks. mitä kuvauksia Kevan sivuilla jo on? "muiden kokemuksista voi oppia"	- Termistöjen avaaminen, eläkkeen ABC, tekstissä selitykset, kansantajuinen kieli! >onko asiat selitetty yhtä hyvin OET-sivuilla, kuin Kevan perussivuilla joissa ne kerrotaan kansantajuisesti - Aakkosellinen sanasto määritelmineen - "IHMISELTÄ IHMISELLE, EI VIRANOMAISELTA IHMISELLE"	- tunne, että minun asiaan paneudutaan (henkilökohtainen eläkeneuvoja) - Palvelua virastoajan ulkopuolella, erittäin tärkeä asia; voisiko olla online neuvontaan vs. Danske bank ja Nordea, eläkeasiantuntijan vastaanotto > varaa aika neuvontaan - "onko palvelua neljän jälkeen?"	- huoli siitä, miten ryhmät jotka ei käytä sähköisiä palveluita, otetaan huomioon	- keskustelua chatin turvallisuudesta; "mä en laittaisi sitä kautta " - Onko turvallinen, olisi hyvä kun sivuilla selkeästi kerrottaisi tietoturvasta esim. chatin yhteydessä, se antaisi vakuuttavan ja luotettavan kuvan palveluntarjoajasta - Tieto, että viesti on vastaanotettu ja kuka sen on saanut, pitäisi saada (haluatko keskustelun kopion sähköpostiisi esim..) - "epävarmuus on inhottava"; menikö viesti perille

IDEAT	IDEAT	IDEAT	IDEAT	IDEAT	IDEAT
- nettisivuille omiin tietoihin tulee merkintä kun hakemus on saapunut, kun sitä käsitellään, käsittelyajan ennuste - onlinetieto netissä missä mennään ja mistä voi tiedustella asiaa missäkin vaiheessa (häiritseekö käsittelyä??) > Palvelua! - ilmoitus asiakkaan puhelimeen/ sähköpostiin käsittelyvaiheiden etenemisen mukaan > tieto ei lisää tuskaa	- vertaistukea, "et ole yksin ongelmien kanssa" - asiakasraateja lisää - asiakasraatien lisääminen - asiakasraatien tai vertaisryhmien lisääminen vanhoille tai nuorille		- opiskelijoiden rekrytointi Kevan "helppoihin neuvontatehtäviin" tai tietokoneen käytön ohjaamiseen Kevan omilla sivuilla - "atk-taidottomille" yleisluentoja, jossa käydään hakemuksen kommervenkkejä läpi > esim. kirjastoissa - yleisöllä olisi mahdollisuus kysyä, pyytää neuvoa atk:n käytössä - neuvontapuhelin "helppoja" kyselyitä varten - chat mahdollisuus kysyä - mobiilipalvelu	- eri ikäryhmille erilliset palvelut, esim. nuorille apps - palveluja erikseen nuorille ja vanhemmille - oma appsi työelämässä oleville nuorille > oman asemansa ymmärtäviä nuoria - tietoa esim. ulkomailla työskenteleville nuorille - nuorten aikuisten tietoisuus tulevista esim. työnönperehdytyksen yhteydessä (sairaus, kuntoutus, työkokeilu, paluu takaisin työelämään)	
- reaaliaikainen seuranta, proaktiivinen viestintä; "ei tarvitse joka päivä käydä kattomassa" - Hakemuksen kulku; asiakas saa ilmoituksen aina, kun hakemusta käsitellään "asiakkaalle kilahtaa ilmoitus " > tiedot voi käydä katsomassa OETstä (tapahtumaloki)	- Vertaistukea eri asiakasryhmille		- Verkkopalvelujen ohjaamista, esim opiskelijoita voisi rekrytä tähän		

Appendix 6: Wireframes for Heikki's use case (Gröhn 2017)

Appendix 7: Wireframes for Heikki's use case (Gröhn 2017)

Left wireframe:

Omat eläketietosi

Kirjautunut käyttäjä: VAKUUTETTU HEIKKI VILLE Kirjaudu ulos

Etusivu | Työelämeote | Eläkelaskurit | Hae eläkettä | Omat eläkirjat | Omat viestit | Tilaa ilmoitus | Valitse asiointikieli

Tilaa tekstiviesti-ilmoitus sinulle saapuneista asiakirjoista Tilaa ilmoitus -sivulta

Eläkevaihtoehdot ja laskurit

Mikä on vanhuuseläke? Kuka voi saada kuntoutustukea? Kuinka paljon eläkettä voin saada?

Eläkettä kertyy 1,5 % vuodessa 17 vuoden iästä alkaen. Mitä pidempään jatkat työssäsi, sitä enemmän eläkettä saat. Jos jäät eläkkeelle ennen eläkeikääsi, eläkkeesi määrä pienenee hieman. Jos taas jatkat työskentelyä vielä sen jälkeen, kun olet täyttänyt ikäluokkasi alimman vanhuuseläkeiän, eläkettäsi korotetaan 0,4 prosentilla jokaista lykättyä kuukautta kohti. Lue lisää eläkkeen määrästä.

Tutustu alla eri eläkevaihtoehtoihin ja mieti, mikä sopisi parhaiten juuri sinulle. Eläkelaskureillamme voit laskea arvioita eläkeiästäsi sekä vanhuus eläkkeen, osittaisen varhennetun vanhuuseläkkeen sekä työkyvyttömyyseläkkeen määrästä. Halutessasi voit myös tallentaa laskelmaa ja palata niihin myöhemmin.

Mikäli et ole vielä oikeutettu eläkkeeseen, voit tilata muistutuksen, kun voit hakea eläkettä. Eläkkeen hakeminen onnistuu helposti hakemuspalvelumme kautta.

Vanhuuseläke

Voit jäädä vanhuuseläkkeelle, kun eläkeikäsi täyttyy ja työsuhteesi päättyy. Eläkkeelle ei ole kuitenkaan pakko jäädä vielä tuolloin. Mitä pidempään jatkat työskentelyä, sitä enemmän eläkettä saat.

- Vanhuuseläke

> Laske arvio vanhuuseläkkeestä

Osittainen varhennettu vanhuuseläke

Osittainen varhennetun vanhuuseläkkeen voit saada 61-vuotiaana, jos et saa mitään muuta työeläkettä. Osittain varhennetulla vanhuuseläkkeellä voit jatkaa työntekoa tai lopettaa sen kokonaan – miten sinulle itsellesi ja työnantajallesi parhaiten sopii.

- Osittainen varhennettu vanhuuseläke

> Laske arvio osittaisesta varhennetusta vanhuuseläkkeestä

Työkyvyttömyys- ja osatyökyvyttömyyseläke

Voit hakea työkyvyttömyyseläkettä, jos työ- ja toimintakykysi on heikentynyt siten, etteivät työtehtävien uudelleenjärjestelyt tai ammatillisen kuntoutuksen toimenpiteet riitä palauttamaan sitä. Jos työkykysi on heikentynyt, mutta voit jatkaa työssäsi aiempaa kevyemmällä työmäärällä, voi osatyökyvyttömyyseläke olla sinulle sopiva vaihtoehto.

- Työkyvyttömyys- ja osatyökyvyttömyyseläke

> Laske arvio työkyvyttömyyseläkkeestä

Kuntoutus- ja osakuntoutustuki

Kuntoutustuki tarkoittaa määräajaksi myönnettyä työkyvyttömyyseläkettä. Kuntoutustuki voidaan myöntää, jos arvioidaan, että työkykysi on mahdollista palauttaa hoidon tai kuntoutuksen avulla. Osakuntoutustuki on oikea vaihtoehto silloin, jos työkykysi on heikentynyt mutta voit vielä jatkaa työssäsi aiempaa kevyemmällä työmäärällä.

- Kuntoutus- ja osakuntoutustuki

Työuraeläke

Työuraeläke on tarkoitettu niille, joilla on pitkä työhistoria rasittuneisuutta ja kuluneisuutta aiheuttavassa työssä. Työuraeläke voi alkaa aikaisintaan 1.2.2018.

- Työuraeläke

Perhe-eläke

Perhe-eläkkeellä turvataan lesken ja alaikäisten lasten toimeentuloa työntekijän kuoltua. Myös entinen puoliso voi saada perhe-eläkettä.

- Perhe-eläke

Taloudellinen tuki

Taloudellinen tuki ei ole eläke, vaan omaisille maksettava etuus. Taloudellista tukea maksetaan omaisille kunnan, valtion, kirkon tai Kelan palveluksessa olleen työntekijän kuoltua. Etuudesta käytetään joskus myös nimeä ryhmähenkivakuutus.

- Taloudellinen tuki

Muutostilanteet

Työttömyyden tai muun muutoksen uhatessa eläkkeelle jääminen voi olla yksi vaihtoehto. Tutustu työttömän eläketurvaan ja miten Keva voi auttaa sinua muutostilanteessa.

> Lue lisää

^ Mikä askarruttaa? Kysy eläkeasioista chatissä!

Eläkeneuvonta
arkisin klo 8.00–16.00
020 614 2837

© Keva   23.5.2017 15:53:31   3.6.8.1

Right wireframe:

Omat eläketietosi

Kirjautunut käyttäjä: VAKUUTETTU HEIKKI VILLE Kirjaudu ulos

Etusivu | Työelämeote | Eläkelaskurit | Hae eläkettä | Omat eläkirjat | Omat viestit | Tilaa ilmoitus | Valitse asiointikieli

Tilaa tekstiviesti-ilmoitus sinulle saapuneista eläkirjoista Tilaa ilmoitus -sivulta

Osittainen varhennettu vanhuuseläke

Eläkeuudistuksessa osa-aikaeläke poistui ja tilalle tuli osittainen varhennettu vanhuuseläke.

Voit jäädä osittaiselle varhennetulle vanhuuseläkkeelle, jos
- olet täyttänyt 61 vuotta
- et saa mitään muuta työeläkettä.

Osittaisella varhennetulla vanhuuseläkkeellä saat joko 50 % tai 25 % sinulle jo kertyneen eläkkeen määrästä. Tämän saat itse valita.

Työtekoa ei tarvitse lopettaa tai edes vähentää. Työn lopettaminen tai vähentäminen ei kuitenkaan ole este eläkkeen saamiselle.

Laske arvio ⓘ

Eläkearviosi perustuvat rekisterissä olevien tietoihisi. Lopullinen eläkkeesi määrä voi poiketa laskurin arvioista muun muassa ansioissa tapahtuvien muutosten vuoksi. Laskelmassa on huomioitu kaikki yksityiset ja julkiset ansiot, eläkettä kerryttävät sosiaalietuudet sekä elinaikakertoimen vaikutus.

Jos olet syntynyt vuonna 1965 tai sen jälkeen eläkeikäsi on arvioitu ja se saattaa muuttua.

Voit jäädä osittaiselle varhennetulle vanhuuseläkkeelle aikaisintaan DD.MM.YYYY. Tilaa tästä muistutus.

1 Valitse osittaisen varhennetun vanhuuseläkkeen prosentti
   ● 25 %
   ○ 50 %

2 Syötä osittaisen varhennetun vanhuuseläkkeen alkamisajankohta *
   DD.MM.YYYY

3 Syötä vanhuuseläkkeen alkamisajankohta
   DD.MM.YYYY

4 Valitse arvioansio ennen osittaista varhennettua vanhuuseläkettä
   ● 29642,16 €/vuosi (arvio rekisteritiedoista)
   ○ Oma arvioisi ennen osittaista varhennettua vanhuuseläkettä
   _____ €/vuosi

5 Arvioitu ansio osittaisella varhennetulla vanhuuseläkkeellä olleessasi
   15000,00 €/vuosi *

LASKE ARVIO ⓘ   PÄIVITÄ   TALLENNA   TYHJENNÄ

Valittuasi "Laske arvio" laskelma tulee näkyviin alla olevaan kuvaajaan.

Voit syöttää laskuriin useamman laskelman vertaillaksesi eri vaihtoehtoja. Syötettyäsi uuden laskelman pohjatiedot, valitse "Päivitä laskelma". Jos haluat tallentaa laskelman, valitse "Tallenna". Jos haluat aloittaa laskelmien vertailun uudelleen, valitse "Tyhjennä".

Viemällä hiiren kuvaajan päälle näet tarkemmat tiedot laskemistasi.

^ Mikä askarruttaa? Kysy eläkeasioista chatissä!
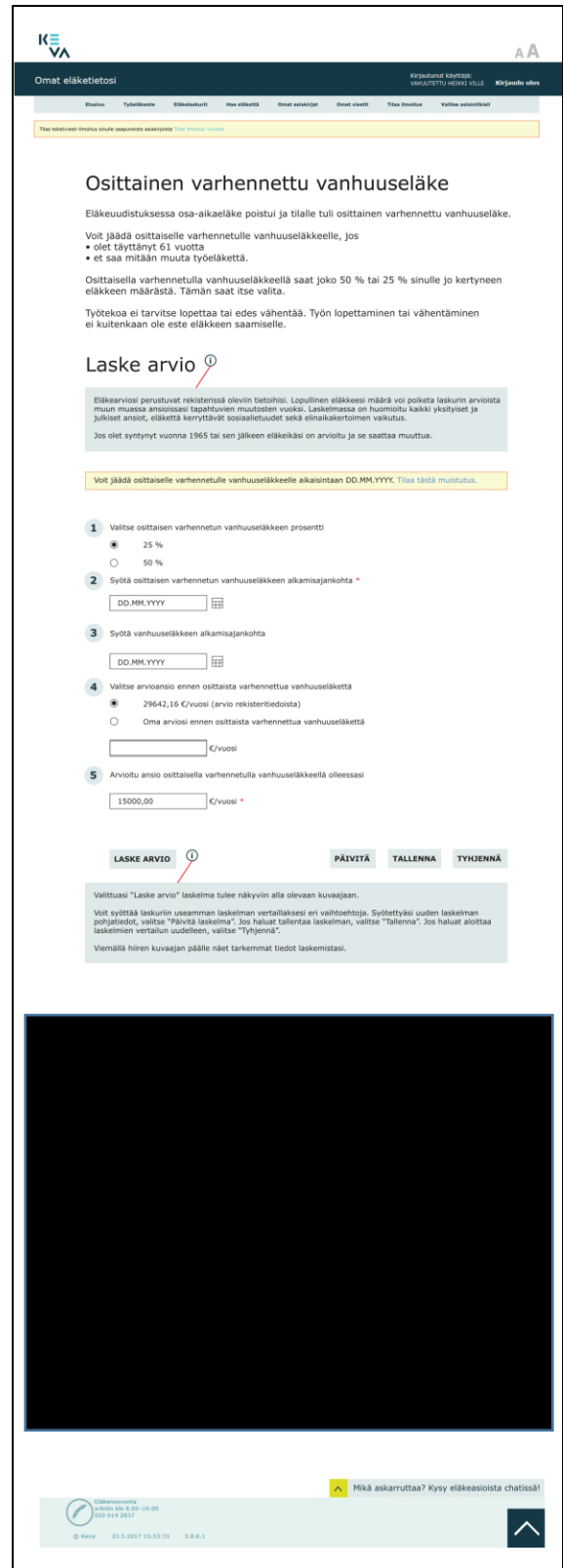
Eläkeneuvonta
arkisin klo 8.00–16.00
020 614 2837

© Keva   23.5.2017 15:53:31   3.6.8.1

Appendix 8: Wireframes for Heikki's use case (Gröhn 2017)

Appendix 9: Wireframes for Marita's use case (Gröhn 2017)

Wireframe 1 (confirmation screen)

KEVA

Omat eläketietosi

Kiitos työeläkeotteesi päivittämisestä!

Ilmoittamasi muutokset tarkastutetaan ja saat tiedon työeläkeotteesi päivittymisestä 3 viikon kuluessa tekstiviestitse/sähköpostilla.

Siirry palvelun etusivulle

Wireframe 2 (edit earnings screen)

KEVA

Omat eläketietosi

Päivitä työeläkeotteesi tietoja tai lisää uusi ansiotoiminta

Eläkepalkka ja karttunut eläke esitetään vuoden 2025 tasossa.

Ilmoita muutokset tietoihisi näin:
1. Valitse ansiotoiminta jonka tietoja haluat päivittää napauttamalla.
2. Jos haluat lisätä puuttuvan ansiotoiminnan työeläkeotteellesi, valitse alta "Lisää uusi ansiotoiminta"
3. Syötä päivittettävät tiedot avautuvaan ikkunaan ja valitse lopuksi "Tallenna"
4. Kun olet päivittänyt kaikki haluamasi ansiotiedot, valitse sivun alareunasta "Lähetä".

TAMMI TYÖNANTAJA
DD.MM.2011-DD.MM.2017
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

TAMMI TYÖNANTAJA
DD.MM.2000-DD.MM.2010
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

TAMMI TYÖNANTAJA
DD.MM.1992-DD.MM.2000
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

⊕ Lisää uusi ansiotoiminta

Lähetä

Wireframe 3 (pension accrual screen)
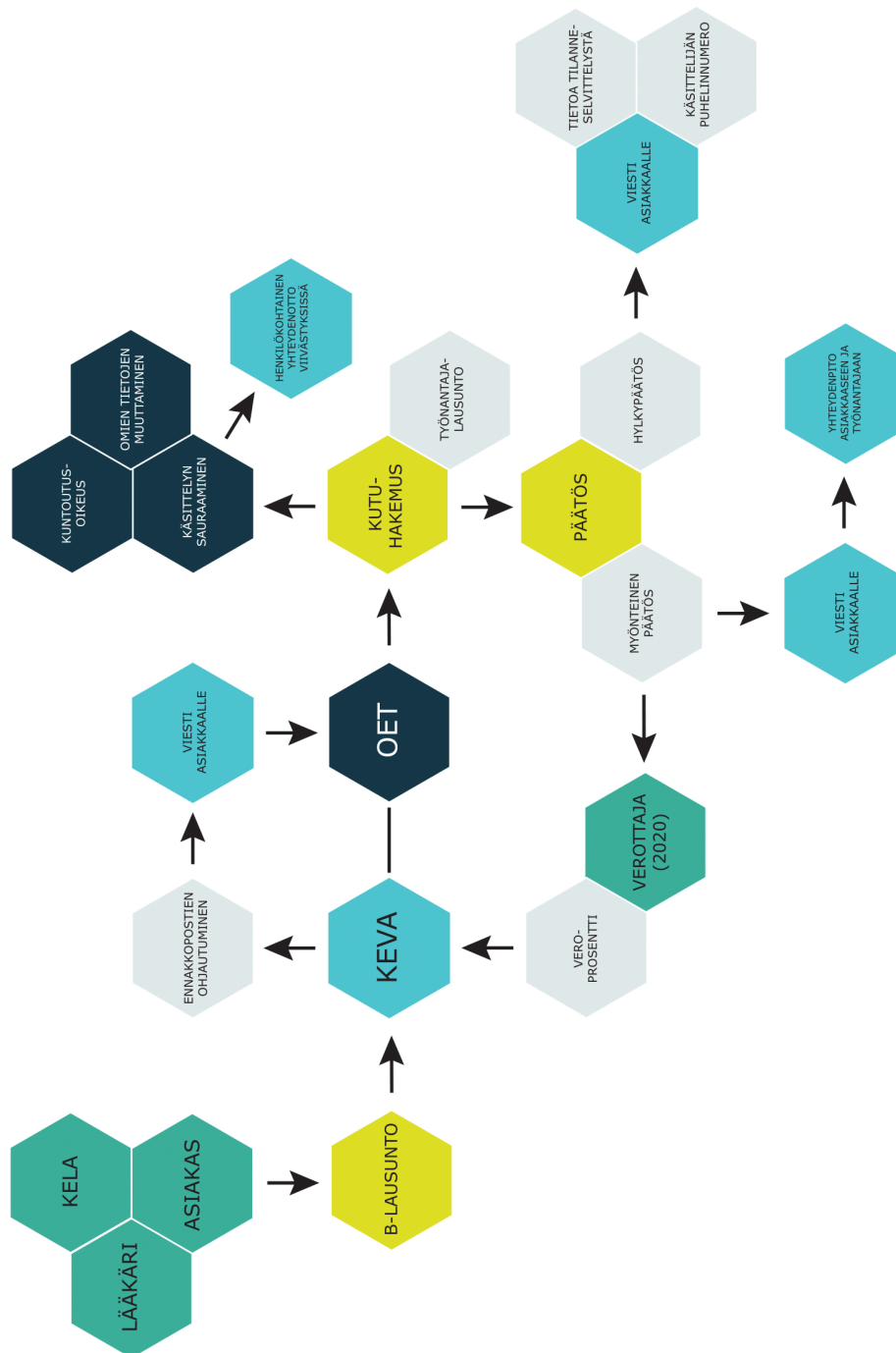
KEVA

Omat eläketietosi

Eläkekertymäsi on

1674,50 €

Ajalla dd.mm.yyyy-dd.mm.yyyy

Eläkkeen karttuminen dd.mm.yyyy saakka

Eläkepalkka ja karttunut eläke esitetään vuoden 2025 tasossa.

Eläkkeen määrään vaikuttavia seikkoja

Eläkettä laskettaessa kurkin vuoden työansiosta vähennetään palkansaajan eläkemaksua vastaava osuus ajalta ennen vuotta 2017.

Jos olet työskennellyt ulkomailla tai saat ulkomaan eläkettä, silä voi olla vaikutusta Suomen eläkkeeseesi.

TAMMI TYÖNANTAJA
DD.MM.2011-DD.MM.2017
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

TAMMI TYÖNANTAJA
DD.MM.2000-DD.MM.2010
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

TAMMI TYÖNANTAJA
DD.MM.1992-DD.MM.2000
ELÄKEPALKKA
ELÄKE
€/KK
2654,21
6,84

YHTEENSÄ
ELÄKEPALKKA
ELÄKE
€/KK
XXXXX,XX
1674,50

⊕ Lisää uusi ansiotoiminta
⊘ Muokkaa ansiotoimintatietojasi

Wireframe 4 (menu screen)

KEVA

Omat eläketietosi

PÄIVITÄ TIETOJASI
> Työeläkeote
> Yhteystiedot

AJANKOHTAISTA
> XXX
> XXX

ELÄKELASKURIT
> XXX
> XXX

HAE ELÄKETTÄ
> XXX
> XXX

OTA YHTEYTTÄ
> XXX
> XXX

Appendix 10: Visualization of Paula's application process (Gröhn 2017)

Appendix 11: My Pension online service concept vision statement (Gröhn 2017)