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Creating Service Concepts for Finnish Elderly Care

Case: Virtual Interactive Care Service

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This thesis looks at creating service concept by evaluating the research project of Virtual Interactive Care Service. The research project was initiated and implemented by the author together with Hovi Group Oy and Suomen kotilääkäripalvelu Oy. The goal was to provide a virtual care service business that uses interactive and stimulating activities to improve the wellbeing of elderly people in Finland.

The study employed qualitative research method by reviewing existing works particularly on service concept, and extensive primary research through interviews and the case pilot. The theoretical part of the thesis looked at care service business in Finland with focus on regulations and the public sector to understand factors that affect the decision makers of towns and cities when buying care services from private providers. The case pilot was tested in 2015 with elderly residents in five different care service units owned by Hovi Group Oy. The commercial viability of the concept is checked on a business model canvas tool, which is identifying the value proposition.

The concept pilot received positive interests from participants and the media. The findings show that elderly people who are the target users are virtual care enthusiastic. They want to be involved in creating the service concept, but they are not necessary the service paying customers. The scalability of the business is questioned as the concept's value based on interactivity is lost when more than five groups were connected to one activity event.

With the greying population increasing, the proposed concept could be a possible area from which innovative virtual care services can be developed for Finnish elderly care. The thesis encourages further research on the concept with the paying customers it identified because, creating a service concept without the customer is a recipe for failure.

Keywords	Service concept, virtual interactive care, virtual care, care services, service business, Finnish elderly care

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Acronyms and interchanging words

VIC Services Oy: Virtual Interactive Care Service Ltd
WebRTC: Web Real-Time-Communication

Care service units: Nursing homes & Elderly homes
Paying customers: Service buyers & Customers

1   Introduction

The economic impact of the aging population is gaining traction as a serious problem especially in developed countries. Given the surprising increase in life expectancy and reduced birth rate, the panic is high for the government and the masses. And more problems are seen with declining number of motivated caregivers and indisposed elderlies in nursing homes, which translates to rising costs in health and social care services (OECD, 2014).

Finland is no exception. The need for private social services has been growing mainly because of the increasing aging population. Some municipalities contract from or jointly develop care services with private providers. Given the growing population of elderly people, private care service businesses can be expected to grow to keep up with the increasing demand for health and social care services (Sosiaali- ja terveysministeriö, 2016). This positions the care service sector as an attractive industry to investors who are interested in innovative care service solutions, which can be operated on a profitable business model (Tekes.fi, 2015).

Interestingly, technological advancements mean that service concepts that apply innovative modes of health and social care service delivery can be explored, and one area where solution is sought for is virtual care (Krakaur, 2014). In a definitive approach to explain virtual care, Mercy heritage, which according to their websites developed the first dedicated virtual facility in the world, explains virtual care as follows:

> Virtual care integrates telemedicine technology with real time electronic health data. Telemedicine explains the ability of a health care provider to serve and interact with patient in different locations (mercy.net, 2016).

A virtual care can enable care work to be done in different places from one point of delivery. It can streamline high value tasks in care service processes with the help of computer features, which reduces workload or need of caregivers' physical presence in the clients' homes. Consequently, the social care experience of the clients and their families can be improved as well as the engagement of the care service provider with the

care workers. This means that humans are still at the centre of virtual care service such that in creating a virtual care service concept, the focus of the technology is to be fit for humans first and then the healthcare system (Icarehealth.co.uk, 2013).

In the same line of thought, the service concept of Virtual Interactive Care represents how an interactive care service can be realised virtually. It offers new possibilities to care for the increasing aging population in Finland. It plans to improve the wellbeing and the social care experiences of elderly people with stimulating and interactive activities via Internet. A form of virtual care especially for those limited by mobility.

1.1 Background to the thesis

In evaluating the level of services in the Finnish healthcare system, the Organisation for Economic Cooperation and Development OECD, encouraged Finland to improve its health and social care system to meet the rate of aging, which they predicted would be higher than other European countries by 2020 (Oecd.org, 2016). As can be seen from figure 1, Finland is undergoing a major age-dependency shift.
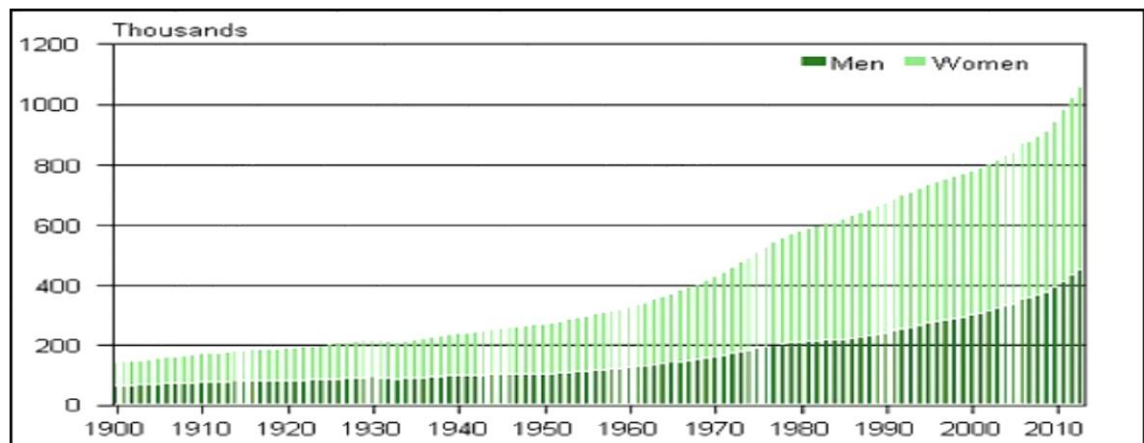

Figure 1.Number of persons aged 65 and over in Finland (Stat.fi, 2015)

Looking at figure 1, this demographic change is dramatic. Nearly every fifth person in Finland is 65 or older. The greying population is a common challenge for many developed countries as baby-boomers who are born after the end of 2nd World War, are beginning

to retire. It appears that exploring an innovative care service solution could be valuable to the Finnish Healthcare system.

As a developed nation, Finland is providing elderly care services such as elderly homes, ordinary sheltered housing, health centres running long-term impatient care, and assisted living services through regular home care services or sheltered housing units with 24/7 assistance (Säkkinen, 2010: 16-17). In 2011-2012, the City of Helsinki through Forum Virium Helsinki with Palmia, Aalto University, Arctic Connect Oy, and Tunstall Oy tested a virtual care service. The idea was to enable caregivers such as practical nurses to perform virtual visits to Palmia homecare clients. The focus was to support independent living of homecare clients using two-way videophones and web camera to be in contact with the clients in order to provide 24/7 surveillance and care (Forumvirium.fi, 2016).

Elderly people independently at homes, institutionalised at nursing homes, or supported with homecare services including 24-hour surveillance, are facing a problem yet to be properly addressed. In an article published by the Alzheimer society in the UK, a lack of social support, social isolation, boredom, and side effects from certain medications or traumatic events like death of a spouse are all causes of depression and anxiety. The signs of depression and anxiety were also listed as feelings of isolation, inactivity, problems with remembering, and thoughts of death and suicides (Alzheimers.org.uk, 2016). According to the study of health and functional capacity in the Finnish elderly population, 6,5 percent of men and 13,2 percent of women who are 65 years or older are currently depressed (European Union, 2008).

Depression is a real problem among elderly people. Unfortunately, the elderly people suffering from depression are mostly treated with antidepressants, anti-anxiety medications such as bentsodiazepine, parozetines, and sleeping pills, etc. On these medication leaflets are descriptions of dementia-like symptoms of incoordination, risk of falling, fatigue, forgetfulness, weight gain, and mental decline as possible side effects from the use of the drugs. While it is not clear whether depression leads to dementia, it is clear that significant percentage of people suffering from Alzheimer are depressed and medication is not the best possible cure. In providing care services for Finnish elderly care,

less thought has been given to finding non-medical approach to the problem. While virtual care solutions have been considered for homecare clients, the need to treat depression and dementia non-medically with virtual care were not explored.

The service concept of Virtual Interactive Care Service was conceived from an effort to provide solution to the social problem of loneliness and mental problem of depression suffered by elderly people in Finland. It is a spinoff project from the author's original idea of to establish an activity club for the elderly. It originated from the author's work with the elderly as licensed practical nurse at both public and private healthcare service providers for ten years. During this period, he observed clients in elderly homes sad complain of boredom, loneliness, and unimportance feelings of being socially isolated. Their complains are symptoms of a depression problem. He saw a gap in the care service processes where the use of medications to treat anxiety and depression are highly preferred over non-medical alternatives in which less or no medication is required.

To do something about the problem, the service business idea of to establish a daytime activity club for the elderly was born in 2014. This was called" virtual elderly club" which would be organising fun activities to keep elderly people active and prevent them from getting depressed. As a part of his studies in Metropolia Business School, the author had his internship at Hovi Group Oy, where the "virtual elderly club" idea was polished in mentor-meetings with Mr Jussi Peltonen, the CEO of Hovi Group Ltd. Hovi Group Oy competently develops turnkey innovative concepts, which aim at to improve care services in Finland and abroad. The group was established in 2008. It operates many strategic business units it developed in a partnership with local entrepreneurs that provide care and wellbeing services (Hovikoti.fi, 2015).

The author was approved to test the elderly activity club in Villa Ilo and other Hovi Group's franchises during his internship there as a new business developer. With the Hovi Group's franchises located across Finland, the question of how to make the idea virtual arose. At this point, Mr Jussi Peltonen informed of a Video-communication platform being developed by Suomen kotilääkäripalvelu Oy. Suomen kotilääkäripalvelu Oy is

a family-owned company providing staffing services and health services to Finnish companies. It was founded in 2004 and currently employs 200-300 professional healthcare people each year. The company serves as a meeting place for health care personnel, as well as private and municipal service providers (Terveydenhuolto.com, 2016). Following a meeting with the owners of the Suomen kotilääkäripalvelu Oy that found common objectives with the author's idea, and the benefit to Hovi Group clients, the virtual elderly activity club metamorphosed into Virtual Interactive Care Service concept.

The pilot project of the thesis took place in 2015, and mostly within Hovi Group Oy. Elderly people in 4 different care service homes and a few living independently at home, were connected together in the concept pilot using a live video streaming interface over the internet. Suomen Kotilääkäripalvelu Oy provided the technology and played valuable roles for the activity event transmissions. The author's role was to develop the concept by pilot testing Virtual Interactive Care Service for customers' desirability in Finland. This means introducing the concept within Hovi Group, at different strategic business units of the group, and working with partners needed to facilitate the concept creation process. It also involved collecting and analysing test results from the perspective of the target users to provide actionable insights for developing the business model for the service concept. One of the activity events was broadcasted abroad from the French Riviera suggesting the service concept could be offered nationally and internationally.

For elderly people living outside of the Finnish capital regions, isolated in places where closest healthcare centre could be 0,25 – 1,5 hours drive away, and for some of who do not have a driving license, or for the dying cancer patients for who what matters is how they feel, feel less pain, innovating the Finnish social and healthcare system to include virtual care service solutions, which provides care services to the aging population could be useful. Despite few studies around virtual care in Finland, this thesis is the only case study dealing with integrating social activities with technology to provide a virtual care service that offers stimulating activity care, fosters togetherness, social interactions and supports the overall wellbeing of elderly people in Finnish elderly care.

1.2   Objectives and scope

The objective of this thesis comprises of the value of the research to the stakeholders as well as to the literature on creating service concepts. This thesis was a case study aiming at identifying the feasibility and the customers for a service concept. The target was also to create a business model. While the goal of the case project pilot was to provide a virtual care service that delivers stimulating and interactive activities for elderly people, the main objective of the thesis is to evaluate and present the service concept of Virtual Interactive Care Service. Therefore, the thesis analyses the proposed service concept possibilities as a care service business in Finland.

The scope of the thesis covered mostly elderly people in care service homes in Finland but not in hospitals. As a pilot case, the thesis scope involved obtaining resources like people, firms, and information and technology that the service required in order to satisfy stakeholders' expectations. Thus, identification of the case project key stakeholders was paramount to delivering desired outcomes (Edward 1984:46). The key stakeholders of the case pilot project were the service users targeted i.e. the Finnish elderly people, and people involved in providing elderly care service, which include the children of the elderly people, their closest relatives, social workers, cities and towns, the media and private care service providers in Finland. The thesis is providing an example of creating service concepts and so could help other stakeholders like students, entrepreneurs, and organisations that are interested in the subject.

The research questions revert to the thesis objective to understand better if the case project could possibly be a feasible virtual care service concept through which a Finnish private healthcare business can be developed. In explanatory case, the "why" and "how" questions fit the context as such questions deal with operational inquiry (Yin 2008:9). Hence, the research questions asked were:

Why is the concept a feasible service for private care business in Finland?

This question ponders the meaning of the service concept and its likelihood of being a private care service business in Finland by looking at legalistic issues such as regulations

to understand who the paying customers are in Finnish elderly care, and what influences the decision to purchase from private care service providers.

How to know if the service concept is desirable by the prospective users?

This question searches to know how elderly people would react to the service concept. It examines practical issues such as the role of the target users in finding and testing the technology required in creating the service concept. It tries to find an answer to whether profitable interests in Virtual Interactive Care Service exist for the target group, the elderly.

On what kind of business model will the concept be commercially viable?

This question tries to understand the proposed concept's service offering and what should be the working business model. The aim is to identify the concept's value for the stakeholders' -the users, the buyers and the service provider especially from checking the concept's operational costs against the main revenue sources. It also considers whether the service concept is scalable.

1.3   Methodology

When the type of research questions asks "how", "why", with no control of behavioural events and focuses on contemporary events rather than historical events, the method is a case study (Yin 2008: 7 -10). The nature of this thesis is action-based research, which relies on contemporary qualitative data.

Methodology here refers to the research approach used for the thesis. It encapsulates the scope in logic to present mainly, how data is gathered and analysed for the research. It can be defined as the collected factual material commonly accepted in the scientific community as fundamental to validate research findings (library.uoregon.edu, 2016).

Two modes of data were used, primary data and secondary data. The primary data was collected by conducting in-depth interview for the concept case (see appendix 1), from the case pilot (see appendix 2 & 3), and from the project pilot in focus group. In-depth

interview is applied to research because it uses open-ended questions to probe into someone's head (often a stakeholder) to uncover underlying motives, incentives, and interpretations the researcher cannot discover in other ways (Patton 1990: 173).

The secondary data, which was data collected from existing works developed the approach to the thesis problem. It formed the theory for the service concept, which the case tried to validate. It also provided the theoretical understanding of the need for the case and the premise of understanding care service businesses in Finland.

The case concept pilot, which is the project in focus group discussed in chapter 5, is the action-based part of this research. It provided the extensive primary data in its own creation process. As common with planning and prototyping a service, the design is not necessary uniformed, but it needs to map the process, which is specific to the concept implementation (Dervojeda et al. 2014:4). The process is iterative in nature and it involved three stages:

- Stage 1: This was the first stage known as the ideation phase. It identified the problem the service will solve, who has the problem, and the resources required to solve the problem e.g. target users & key stakeholders.

- Stage 2: The second stage was the co-creation phase, and the goal was to understand if the concept value conceived is shared with all actors involved either as inputs to delivering the prospective service and the operations involved, or potential purchasers of the service, e.g. users. It involved taking actions together with the key stakeholders.

- Stage 3: The third stage was the concept offer phase, which is where analyses of the co-creation process are made in order to either present the service value created or identify areas of further development.

All the phases of the case pilot process fed into one another. They constructed specifically the case project pilot in focus groups. As can be seen from the thesis modes of data collection in figure 2, the case project pilot in focus group is one source of primary data used in the thesis.
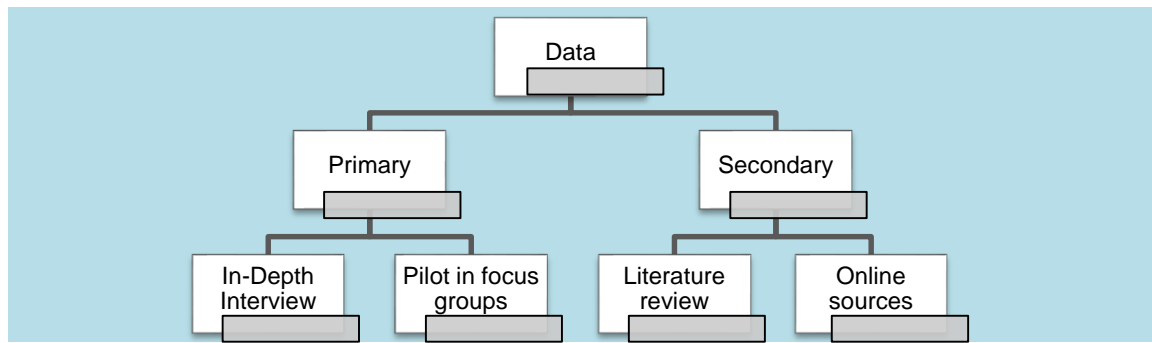
Figure 2. Thesis modes of data collection

The thesis modes of data collection represent how both primary and secondary data came together to form the thesis. Starting with secondary data through literature review of books and online sources, it continued with primary data through depth interview and the case concept pilot project. It outlines the methodology of gathering data for the research. Figure 2 showed that this thesis is an explanatory research case with both theoretical and empirical data.

1.4   Thesis structure

The structure of the thesis is composed of 7 chapters. It Started with the first chapter, which introduces the reader to the thesis problem, the background, objectives, and research questions, the methodology applied to answer the research questions, the scope and the structure. Chapter 2 begins the literature review that examined care service business in Finland under private care service providers, the regulations that affect providing care services to the elderly, and the public sector as a buyer. Chapter 3 continues with theory on service concept to define what it is, and the process of creating a service concept. Chapter 4 introduces the business model as an analyses tool for checking commercial viability and identifying the customer value proposition.

The theoretical parts conferred in chapter 2, 3, and 4 guide the empirical parts conferred in chapter 5. This chapter applies the theory with the case concept pilot and the creation process. It also analyses the pilot outcomes to give preliminary findings, which integrated the theoretical part and led to the results in chapter 6. Chapter 6 also provides the key

findings of the study as well as the answers to the thesis questions. The closing chapter 7 discusses recommendations of the research with critiques, and benefits of the study.

1.5 Limitations and validity

The scope, which outlines the parameters of what the project includes or excludes, could also be a constraint to the quality of thesis. The scope of this thesis is narrowed down to the target users, the elderly people, and not wider even though similar service concept has been also tested for the disabled in Sofiakylä (Nokian Uutiset, 2015).

The analytical approach may clutter the author's own biases considering deep involvement with the thesis project, and where words such as "believe" is used. Therefore, the outcome to certain level may be abstract. Another limitation is that regulations in Finnish elderly care and current legislation on care services do not have clear definitions of providing stimulating activities as a care service that can be done by virtual techniques. This may limit the relevance of the research.

The validity of the research is constructive when two variables support multiple sources of evidence that confirms the same operational inference claimed by the investigator. It justifies the credibility, reliability and conformability of the data used to draw conclusions on the subject matter. It judges the trustworthiness of the qualitative findings by considering careful use, interpretation, and structuring of data in a transparent way for the reader (Carson et al. 2001: 67).

Virtual Interactive Care Service project was tested in separately located focus groups of elderly people in care service homes provided by Hovi Group Oy, and with team efforts of Suomen kotilääkäripalvelu Oy. The activity events were also published in different business websites and by credible media source like the Helsingin Sanomat (HS.fi, 2015). This verifies the study as an interest to so many people and organisations, but also presents a criticism about the reliability since the publications could be lacking the opinions of the actual buyers. The thesis questions searches for the service buyers.

2 Care service business in Finland

2.1 Private care service providers

In order to introduce a virtual care service concept as a possible private care business in Finland, investigation of the state of private care service is needed. The public and private health and social care service industry is the largest employer in Finland. The industry employs 373300 people and employs the highest number of women (Sosiaali-ala.fi, 2016). Calculating with the Finnish population data, it means that 6, 8 percent of Finns work in the social and healthcare sector (Stat.fi, 2016).

To determine the share of private care businesses in Finland, two aspects where observed, the number of workers the sector employs and the amount of money spent. As of 2010, the private social service providers employed a total of 61 800 people, of whom 31 900 people worked in organizations and 29 900 people in businesses. In the following year, a total of 2, 99 billion euros, which is 31, 8% of the spending on social services in 2011, went to the provision of private social service in Finland (Sosiaaliala.fi, 2016).

Finland is a welfare state such that social care and health care go hand in hand, and the both are here referred to as care services. Private care business refers to privately owned business that provides care services in Finland. The Finnish National Institute for Health and Welfare, a research and development body, published the shares of public, private businesses and non-profit organisations with the following conclusions:

> The private social and health care is fastest growing and developing industry in Finland. The growth is fastest in care services that offer assisted living services for the elderly care, children protection and services for the disabled. Basic developments suggest growth of the public sector has continued. The share of private care companies in terms of euro amounts has grown faster. While the private sector could bypass the public sector growth rate, the impression that local government services are heavily outsourced does not hold true. Statistically, municipal outsourcing grew only one-percentage points each year for the period 2005-2010 (THL.fi, 2016).

The private social service providers in Finland involve limited companies, private organisations and foundations. Many of these actors operate nationwide. The most common of the services provided are elderly care homes, homecare services to elderlies at home, and to the disabled. A small fraction of care services provided by the private sector

includes institutions for children, youths and family care, and day care centres. Some private social service providers are family-owned businesses where the owners are heavily involved in the daily operations. And some function as a chain of strategic business units in a holding company, or a group that provide strategic partnership through franchising. The main role of private social services is to complement social services provided by municipalities, and provide alternatives for the service users (Sosiaaliala.fi, 2016).

The above paragraphs indicate some opportunities for creating service concepts may exist for private social care businesses in Finland. However, the industry is regulated through public authorities and by legislation that guide care service provision. Regulations are necessary to ensure safe, adequate and equal social and health care services for the population. Therefore, no one can expect to establish a private care service business in Finland without meeting the legal requirements concerned.

2.2   Regulations

For the case concept, the applicable legislation is ones, which will affect the provision of the case service concept, the target users, and in general, care service provision. Therefore an understanding of the regulations on social care services, elderly care services, and private care service provision in Finland is studied. This section of the thesis is based on elderly care service act, the social welfare act, and the act on private social services. The regulations watch that the social and health care services support the capacity of older people and the elderly in Finland. They are available mostly in Finnish language as, Laki ikääntyneen väestön toimintakyvyn tukemisesta sekä iäkkäiden sosiaali- ja terveyspalveluista 28.12.2012/980, Laki yksityisistä sosiaalipalveluista22.7.2011/922, and sosiaalihuoltolaki 20,12,2014/130 (Finlex.fi, 2016).

> "All services meant for the elderly is regulated and the operations are controlled to remedy shortcomings identified according to the social welfare Act 55-57 §, Chapter 4 of the Law on private social services, the Public Health Act (66/1972) § 42-45: and the Act on Private Health Care the 4th and 5th chapter" (Finlex.fi, 2016).

Nevertheless, the basis for providing Social care services for the elderly is to provide services that improve, maintain, and support the functional wellbeing of older people. This means providing a service:

a) To support the well-being of the elderly population's health, functional capacity and independent living

b) To improve older peoples' opportunity to participate in the preparation of decisions, which affect their living conditions and in the development of services in their municipality

c) That increases an elderly person's access to high-quality social and health care services, as well as guidance to other available services in accordance with individual needs, and timely as required by the weakened functional capacity.

d) To strengthen an elderly person's ability to influence social welfare, its contents, and the modalities of the care services that is organised for him or her, as well as to decide in choosing which to use.

The goal for the legislation on elderly care is to encourage good health and independent living in old age. And to improve the elderly possibilities to access quality social and healthcare services according to their specific needs. It also means that for the case concept to be recognized as a social care service, the activities must contain wellbeing services that show how participating in it improves the elderly overall functional abilities.

In Finland, the provision of social welfare services is subject to authorization in respect of round the clock services. For 24/7 services, the private provider of social care service must make a written declaration to the municipality where the services will be provided. The municipality is responsible for the supervision of private services, social and health services or any other similar institution.

While the provision of private health care services is subject to license, no permit is required when the services are provided as a self-employed business. This does not mean that anyone can provide social and health care service as a sole proprietor because the National Supervisory Authority monitors all professionals of care services including those that are self-employed, for Welfare and Health, Valvira. In addition to Valvira, which is responsible for nationwide co-ordination and monitoring of social welfare and health, the State Provincial Office (Aluhallintovirasto AVI) has the primary responsibility

of supervising social and healthcare services in regional areas. Other influencing authorities include the National Institute for Health and Welfare (Terveyden ja Hyvinvoinnin laitos THL) that collects information on private healthcare and social care service (Sosiaali- ja terveysministeriö, 2016).

An entrepreneur in care service business should have knowledge of the above regulatory authorities as well as the caregivers' associations or unions, e.g. Superliitto if the employees are practical nurses (Superliitto.fi, 2016), and Erto, if the employees are specialised experts (Erto.fi, 2016). These unions negotiate collective agreements on working terms and salaries for social and health care professionals, and thereby influences legislation on care service practices.

2.3   Public sector as a buyer

According to the organisation for Economic Cooperation and Development (OECD), 75% of the healthcare spending in Finland was funded by public sources, slightly above the average of 72% in OECD countries. This indicates the public sector as a key stakeholder of care service delivery in Finland (Oecd.org, 2016).

The Finnish law mandates cities or towns to provide basic care for residents in their own municipalities. It is every municipality's obligation in Finland to ensure the wellbeing, health, functional capacity and independent living support needed by its elderly inhabitants. And also to safeguard the social and health care services provided to older citizens. The social and health care services must be in quality and scope measureable to the requirements of the elderly population, and organised in a way that they are equally available to the municipality's aging population (Finlex.fi, 2016).

The city or town can either provide care services through its own public health care and rehabilitation centres or buy the service from a private provider. From studying the regulations affecting private social service provision, the following four key players were identified as affecting the decision to buy care services in Finland. Namely:

- The client who will use the services

- The closest family relative of the client. For the elderly it is often the spouse, daughter, son, brother, sister, or a trustee
- The city's representative often a social worker
- The care service provider.

The role of these key players can be distinguished by looking at the public sector's process of purchasing care services and the payment options for the service fees.

2.3.1 Buying process of public sectors

This section is based on author's conclusions drawn from the legislation on support for the capacity of older people and the elderly in social and health services, the law on private social services (Finlex.fi, 2016), and also the interviews with chief executive offices of two different care service businesses that have experiences of supplying care services to public sector (see appendix 2 & 3).

The decision process of rendering social care services to an elderly person can be summed up to three stages. The first stage is when the client or his or her closest relative e.g. the spouse or the children, contacts the municipality's representative, the second stage is when the client service need is accessed based on applicable law (e.g. the legislation on supporting the functional capacity of older people) and if approved a service plan is made. The third stage is that the service provider provides the needed services. The municipality can provide services directly to the client or give service vouchers enabling purchase of similar service from approved private care service providers.

In accordance to the elderly care law, the municipality is responsible for ensuring that a person's need of social and health care services or wellbeing related services is comprehensively determined together with the elderly person and where appropriate, with their relatives, loved ones, or assigned trustee. The assessment of the client's service need must be made by an expert with a broad range of expertise and whose qualification either satisfies the law on social welfare professional qualifications or the eligibility referred to in the Act on Health care Professionals. The expert judgment of the service need must be based on what the elderly person needs, which has to comply with the Act on the status and rights of patients (Sosiaali- ja terveysministeriö, 2016). This stage

shows that the closest family relative of the client as well as the expert who assesses the service need are vital gatekeepers in the process that decides what kind of care services should be offered to the clients.

According to the present social care act, determining the service need should start immediately and be completed without undue delay (Uotinen & Porko, 2015):

a. When the elderly person has applied for the social care service assessment according to the social welfare Act

b. When an elderly person has made an application to the municipality in order to get social services to support living functionality or for coping with everyday life

c. Following any assessment where it is jointly estimated with the elderly person that he or she needs regular help or support for coping with everyday life and functional capacity

d. In reference to a notification by an elderly person, his or her relatives, loved ones, or appointed trustee that considers certain social services necessary to the elderly person or by circumstantial change in the life an older person regularly using social care service that the municipality organises.

The public sector buying process begins at the second stage of the decision to approve the care services requested following the client's contact to the municipality representative. When the municipality does not have resources to provide for the service required by the clients, the public sector is involved at this stage where the service needs of the client is determined (See appendix 3). In determining the service need, an elderly person's functional capacity must be assessed in a versatile and reliable assessment tool in order to produce a service plan for the clients. The service plan requires that the functional capacity must be assessed to determine the extent to which an elderly person is able to perform normal functions of life in a living and functional environment, and the areas where the elderly person requires support and help. The assessment must take into account the physical, cognitive, psychological and social functioning of the elderly person, as well as his/her surroundings, and safety factors related to accessibility in

housing conditions and accessibility to local services. The assessment is made by city's representative who is usually a social and healthcare worker qualified for such judgment.

The third stage is the decision stage. The client is either approved to receive the city's care services or not according to the assessment. The decision to grant an elderly person the right to use needed social services either made in writing or oral application, must be done within 3 months so that the elderly person's right to essential care is not compromised. The decision states what kind of service the elderly person needs and how it will be provided. In purchasing the needed service from a private provider, the decision also takes into consideration the regulations in subchapter 2.2 especially the service quality and the service fees payments (Finlex.fi, 2016).

2.3.2 Quality of service

The service quality is considered to be about the elderly. The responsibilities of the municipality include ensuring the service quality. So social and healthcare services offered to elderly people must be of high quality and have to be safe to the user, and should provide good treatment and care (Finlex.fi, 2016). The service quality is assured through the Regional State Administrative Agency (Aluhallintovirasto AVI), which directs and supervises social and healthcare services in regional areas. They are also known as the State Provincial office, and are responsible for granting the licences for providing different type of care services (Avi.fi, 2015). The quality aspect is viewed amongst other regulations on the basis of:

- Personnel: the care service unit must have qualified and enough staff to ensure the elderlies functional capacity and need for safety in delivering high-quality services

- Leadership: the care service unit must have a manager who is responsible for making sure the customer service meets the care service requirements of the law, supports and develops quality of service to be customer-oriented, promotes rehabilitative care approach, cooperation with various authorities and professional groups, as well as the development of the care practices.

- In-house control: The law also obliges the head of a unit that provides care service insures that the business entity organizes self-monitoring to ensure the quality, safety and appropriateness of the service provided. And for the self-monitoring, a self-supervision plan must be drawn up, which must also be publicly available. The cognizance of the plan is to monitor and develop the service unit's services with the elderly persons, their family members, and relatives, as well as to be the basis for regularly collecting feedback for the staff that is operating the unit.

2.3.3   Payment of fees

The payment of fees that arise from the use of private social services in Finland are partly paid by the client themselves and partly by the state. Payment of fees arising from social and health care services are reviewed every 2 years, and pegged to the state pension index. The following forms of payment is evident in paying for care services (Sosiaali- ja terveysministeriö, 2016):

1. Client pays: The municipality may purchase private health and social services and designate the right to use the purchased service to the client. In this case, the client pays for the service in accordance with the law on social and healthcare client fees. Concisely the fees can be free for the client, or partly paid by the client's city of residence based on the client's income and family circumstances (Finlex.fi, 2016).

2. Service vouchers: The payment for private social services purchased by the municipality can also be made using a service voucher. The municipality or group of municipalities decides whether to introduce service vouchers and to what kind of services it will give the bill. This promotes free choice and possibilities for the clients to purchase social and healthcare services from the private sector.

   There are specific rules related to service vouchers. Service vouchers can be used to purchase social and healthcare services which the city or municipality is obligated to provide. It is meant for all that need social and healthcare services. Get-

ting the bill requires that the city's or municipality's social and health care representative evaluated the person's need for the social service. Service voucher must be received from the health centres, social office or other municipal service units of client's hometown of residence (domiciliary), which also give additional information on service vouchers.

The value of the service voucher is determined as equal to all users or dependent on the users' income. However, the service voucher must cover the full cost of services that are free of charge for the customer according to the Act on social and HealthCare. If the service cost is more than the value on the voucher, the client offsets the difference and if the cost is less, the municipality pays only the amount agreed by the client and the service user.

Private care service businesses that want to accept municipality's service vouchers, as a form of payments must be approved to do so by the city or municipality in question. The approval could be made for private service providers which:

a) Meet the requirement of the Act on supervision of private social and health care operations

b) Is officially registered in the Tax prepayment registry known as Ennakkoperintärekisteri in Finland

c) Have insurance under the patient injury Act or other damage risk insurance.

d) Care services are at least to the equivalent level of municipal services. The municipality can impose additional requirements according to the client's needs, the service quantity, quality or services that improve the economic conditions of the city.

Legally, the requirements for approving service vouchers must be non-discriminatory, and evaluated based on objective factors. The city must withdraw approval if the provider of the services no longer complies with the above conditions. The clients purchasing private care services with service vouchers have the

same right as in purchasing other social and health services. And if the clients are unhappy with the services or service voucher value, they are also covered under the legislation on consumer protection (Sosiaali- ja terveysministeriö, 2016).

Health insurance covers part of the patient's fees for using care services e.g. where rehabilitation care that promotes an elderly person's capacity to remain at work is provided. The compensation is sought from Kela, the social insurance institution of Finland. The ministry of health and social affairs is responsible for developing and preparing health insurance legislation. The health insurance covers recovery expenses of illnesses, and loss of earning incurred. Each legal person permanently living in Finland is entitled to the National health insurance (Kela.fi, 2016).

The buying process of public sectors is handled by the municipality's purchasing department, which ensures that all public procurements utilise public funds efficiently. When the public sector realise providing some services is too expensive or that they do not have resources for that, they will look for the solution. In situations where the solution is needed from private providers, a selection process is initiated where tender documents will be sent to candidates.

As a general rule, five candidates are at least selected from candidates who applied to participate in competitive bidding. And depending on the amount of money the service will cost, the competitive bidding invitation can also be made for less than five candidates, if such a practice is objectively justified, and is not discriminatory to other possible candidates. It means that private service providers must submit request to participate in the competitive bidding in accordance with the municipality's criteria set, and be prepared to fare well in the negotiations involved. The competitive bidding is a complicated process, which could be informed openly to all service providers, for example, in the city's procurement websites, or by a restricted procedure where candidates are invited to tender offers based on suitability to the city's requirements (Merikallio. 2007:26 -27).

The competitive bidding also accesses the service concept of the candidates, the package of their service offering, and company's competence to provide the service according to

the care service regulations and city's own need e.g., the amount the service will save for the city either as a complementary service for what the city is already providing or should be providing, or as a key resource for the city in order to meet the care service need of its inhabitants as required by law. So, private service providers have to meet the city's specifications for the service need in order to participate and win in the bidding competition. It also means they have to teach the municipality to buy their service (See appendix 2 &3).

The city keeps a list of the private care service providers it approves to provide care services on its behalf, and those to which the city's service vouchers can be used for purchasing specific care services. The information of these private service providers, the services they offer, and the prices are publicly made available on the Internet or by other means (Sosiaali- ja terveysministeriö, 2016).

This chapter has shown that legislation affecting the target users influence care service businesses in Finland. However, more than 70 percent of private sector operators sold at least half of their services to municipalities in 2010. And 50 - 60 percent of private care service entire sales came from services offered to the public sector. The fact that municipalities are already purchasing from private sector creates opportunities for new service concepts by private operators in the field of social services (Lith, 2013).

3   Service concept

This section provides the theoretical foundation for the thesis based on literature reviews. It does so in three ways. First, by defining what a service concept is. Secondly by looking at the process involved in creating service concepts. And thirdly, guides the reader to understanding why the service concept case discussed in thesis is sought after by examining how a service concept leads to the creation of a service business.

3.1 Defining a service concept

Given the complexity of a service as defined largely from marketing and management viewpoint, the theories around a service concept are implicit. Kotler & Keller (2009) defined service as essentially intangible act of performance one party can offer to another that does not give ownership of anything for which a physical product may or may not be tied to its production. Fitzsimmons (2006) suggests that customers add valuable inputs to the developmental process of services to which he defined service as *"A time-perishable, intangible experience performed for a customer acting in the role of coproducer"*.

The intangible and non-physical elements of services points to services as activities as well as an inseparable function that creates benefit which the concept have to define for the customer and the provider. A properly composed service concept tweaks ideas into profitable services so that a service concept is the mechanism that shows the "service in the mind" of managers, employees and customers and could be a tool that construct communications, but also regulate various corporate functions. The refining discussions and developmental actions involved with service concept separates it from an idea which is an initial notion that when acted upon, may turn into a concept (Fitzsimmons & Fitzsimmons 2000:71-74).

Heskett (1986), defined service concept as how organisations would want its services to be perceived by its stakeholders and especially by customers, employees, shareholders and financiers. In other words, this means the value of the service proposition by the business. It suggests that service providers define customers' expectations before, during and after service delivery, but it fails to recognize that customers' view of a service and its value may be different from that of the service provider because, an idea of service exists in the customers' mind even when they have not experienced it before (Goldstein et al. 2002).

Edvardsson & Olsson (1996:149) point on the service concept as the prototype of a service that shows details of what customers' needs are, wishes on the need being satisfied, and how it is achieved. It is the indispensable part new service development (NSD) in understanding the service process as well as the service delivery system. Johnston,

Clark, et al. (2012:46 - 47) clarified the service concept to include the activity of the organization, which its operations would need to deliver.

According to Goldstein et al. (2002) the service concept is not only the how and what of service design but drives the design and development processes to link customer needs and a firm's strategic intent. It is the service blueprint that makes the nature of the service concrete as it finds the meaning and the overall process like strategy and culture or policies for the implementation of the service. It not only defines the "what" and "how" but also ensures integration between the how and what in the design planning that matches needed elements with the goal of to link business strategy with service design.

3.2 Service concept process

Creating service concepts are intertwined in on-going processes carried out at different levels within the organisation or even outside the organisation. This is because, a service concept require resources that are not only physical components like facilities, but also non-physical components for example processes and people's skills. In order to create a design or plan a service, major decisions will be made at the idea stage, the design stage and the service deliverable stage of the process. Since service providers can only deliver service after integrating or (outsourcing) the resources, the focus is to appropriately integrate the resources so that the right service is delivered to the target customer (Goldstein et al. 2002).

Jaakkola & Kaartemo (2010) indicates that these resources are contained in a service system, which provides the foundation of the service concept creation. And that it is dangerous to develop these resources in the service system such as people, organization's resources, and technology without the service concept. The attention should be on the elements of the service offerings. These resources are pointed out as the service elements inherent to the service design (Goldstein et al. 2002), which should be identified with activities to develop the service offering (Jaakkola & Kaartemo, 2010).

3.2.1 Service concept elements

The elements of a service concept can be found in resources the company already possess for example, facilities, technologies, culture, or be strategically acquired either in the process of developing or providing a service. They are the key components such as people, the technology, and the systems which form the concept contents, structures and its functionalities the firm requires in order to communicate what the service is, how the concept provide value, and to deliver the service (Jaakkola & Kaartemo, 2010). The elements are discussed further.

- People: People either as the service customers, employees or financiers who own companies that create or provide services are key role players who define the functions and values of a service. It explains why the adaptability of a service concept tilts more towards customers' engagement especially in marketing or communicating the service promise as shown in figure 3.

Figure 3. Service marketing triangle (adapted, Zeithaml et al. 2010).

When the role of any of the players e.g. the customer is unclear or misunderstood, the gap widens from that point of the triangle implying that creating service concept employs a paradigm of co-creation. In other words, the service value is being defined and created when customers are engaged in the process. This points to the changing role of the customer from the service consumer to that of the service value co-creator in value co-creation (Ramaswamy & Ozcan, 2014).

The service value co-creation stems from people's interaction with the systems and processes used in coordinating service activities in which they participates either as an individual or a member of a group. It is a design thinking approach where the role of the users changes to collaborators in developing the service so that the service is therefore user-driven. It is this co-creation process that becomes the actual basis of the value (Prahalad & Ramaswamy, 2004: 10). The elements are discussed further.

- Technology: Technology empowers customers and companies with awareness and options for technical methods and processes involved in a service. The nature of the service concept may lead to development of the technology required for the implementation or the other way around so that customers can respond to it. For example, the hardware and software required for realising a concept are crucial inputs to the service design. Technology is pursued to autopilot processes in the service, while it could enable effective operation and adoptability of a concept, it can also lead to achieving results totally different from the standardization (Grönroos, 1994). Technological changes powered by high-speed Internet and mobile data broadband like cloud computing, virtual reality will broaden connections that service providers have with customers (Dervojeda et al. 2014:11). As technology innovations are influencing organisation's actions with the customers and that of the customers with other stakeholders, computation thinking around artificial intelligence will decentralise real-time power of services (Fitzsimmons et al. 2000:66).

- Delivery systems: A service delivery system operates both the technology based and the non-technology based tools involved in a service concept. It outlines the frameworks of resources for getting the service to the customer (Edvardsson & Olsson 1996). These service delivery systems can be different in organisations that provide similar services and varied across customers segments. In functional services, delivery systems will integrate the organisation's vision, the customers' expectation, employees, quality control, facilities, etc., that brings the service inputs and the service output together. It acts as the feedback loop to the service concept from the performance data, which can be used in making changes to the service design (Goldstein et al. 2002).

3.2.2 Service concept design planning

The service design is a part of new service development where the idea is specified with the use of drawings and flowcharts to represent a service concept. It includes the problem recognition, solution brainstorming, and developmental actions in the service testing to a possible launch processes, which is affected by the strategy, culture and policies of the organisation involved (Han 2010:15-16).

Goldstein et al. (2002) proposed the model of a basic structure of the service concept shown in Figure 4. It shows the service concept as the bridge in the quest of the service design that enables integration of the customer needs to the design of the service to solve those needs. Without the service concept, understanding the appropriate integration of physical and non-physical components for creating the service will be missing. That means that the service concept examines what the service is, how it should be delivered to meet the customer expectation in a way that strategically meets the intents of the stakeholders e.g. the service provider (Goldstein et al. 2002:123-124).
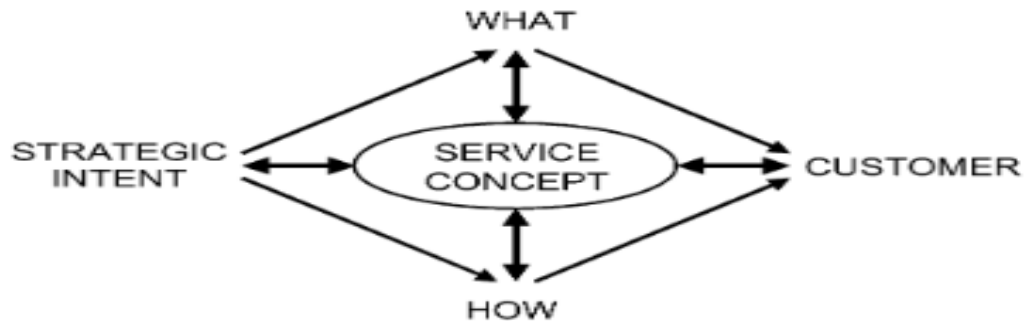
Figure 4.Service concept bridges the service design (Goldstein et al. 2002:124).

In creating service concepts, the service concept is the centre of the service design. It closes the gap in service design where the organisation's strategy focused on the "what" and "how" of the service design cannot miss satisfying the need of the target customer. It therefore propels the service design by capturing the firm's strategic goals to the service planning as shown in figure 5.
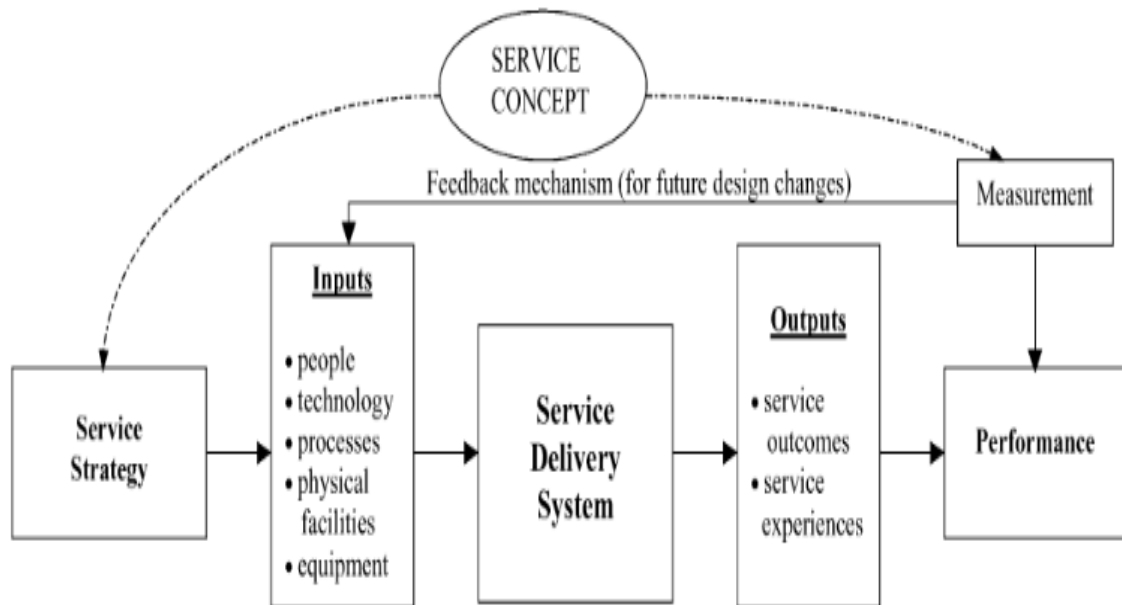
Figure 5.Service concept drives service design planning (Goldstein et al. 2002:126).

Dervojeda et al. (2014) indicates that in planning and prototyping a service, the service design is specific to the industry or the service concept. It is a conceptual activity, which outlines touch-points of planning and organising service components. For example, people, communication, and infrastructure that the design integrates in the service implementation to improve quality and the interaction between service provider and customers. The service concept design affects how business models are implemented as it reflects users experience and captures customers' insights from prototyping. It leads to possible improvements on ideas and processes, which can increase customer satisfaction and loyalty and reduces the firm's risks from unforeseen contingences or lack of knowledge relative to the service development (Dervojeda et al. 2014).

3.2.3   Service offering

Customers seek service to meet a goal they have, like to relieve a killing pain or bring certainty to volatility. Companies on the other hand develop services to penetrate into, or survive the market cycles, achieve growth, and remain competitive. The service offering aligns these diverse missions as customers make purchasing decision for a product or service based on the service concept, which are the service benefits that will satisfy their needs and meet their exceptions (Pycraft et al. 2007:142).

Service offering communicates value for example with price of the service. It adds up all elements of the service fulfilment, either as a core or supplementary product of a differentiated value, in order to develop the clients' confidence both in the service sales cycle, and in the delivery process. The service offering implies the service is productised when tangible features like people, technological systems, facilities, and real attributes are aligned with the intangible processes and experiences of the customer (Chattopadhyay, 2012:4-5). Sipilä's (1999: 24-26) concurs with service productisation in suggesting that creativity combined with unique expertise and practical actions can help a professional service stand out from others. Therefore, a "service is productized when its ownership can be traded".

Since customers with or without real involvement, would have a mental picture of the service, a service concept offering should capture both the organizations' perspective and the customers' perspective of the service value (Goldstein et al. (2002). Companies in service business struggle with communicating service offering to the customers because the object of exchange is often not made up of physical elements but rather a combination of processes, skills, intellectual capitals and materials. The service offering as shown in figure 6 should be the target for the service development (Jaakkola & Kaartemo, 2010).
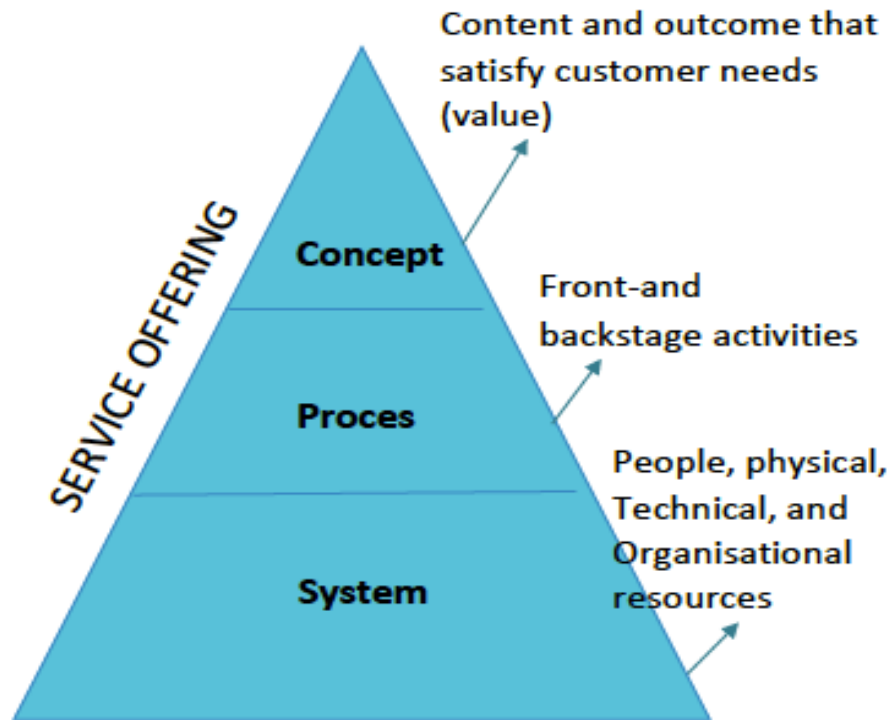
Figure 6. Service offering as target of service concept development (Jaakkola & Kaartemo, 2010).

The service concept is at the top of process and systems for developing the service offering. It is core to the service value being developed. And does not necessary change at the point of interaction with customers even though the process involved may change. Therefore, the focus of a service concept research should be on understanding what is the service offering of the concept being developed rather than the skilful execution of the project involved with the concept development (Jaakkola & Kaartemo, 2010). The service offering is the value proposition of the business to its customers. It is what the business offers to the customers in place of products. When a business has a service offering, it simply indicates its service has been productised.

4   Business Model

Business models have become popular for starting a business in the past decade. It is unlike the traditional business plan that barely survives when the plan encounters the first the customer. The business model has been described as a conceptual tool, visual representation and a strategic design template. It has no simple definition. The common component is that it explains the value the business creates, and the integral financial elements that is either realised or spent in the process. The business model also shows how all aspects of the business interacts with each other to not only create value but to deliver it to the customer as well as how the value generates revenues that flows back into the company (Steve Blank, 2010).

The use of business model provides the architectural mock ups for service concept development. This makes it possible to test assumptions with customers, get feedbacks quickly, and make adjustments as needed. It therefore protects start-ups from making expensive failures until it has tested, failed, adjusted, and validated the market potential of the concept. By this time, the model will describe the rational of how the organisation will create, deliver, and capture the value proposition (Osterwalder, et al. 2009: 14).

4.1   Business model canvas

Applying the business model canvas to service concept development is necessary for checking the concept commercial viability. It first understands the value proposition and also identifies key aspects of the service concept as a service business. Alexander Osterwalder & Pigneur (2009) popularized the canvas shown in figure 7. They conveyed a one-page representation of actionable building blocks with questions which, both new and existing business must ask in order to identify operational, strategic and marketing directions.
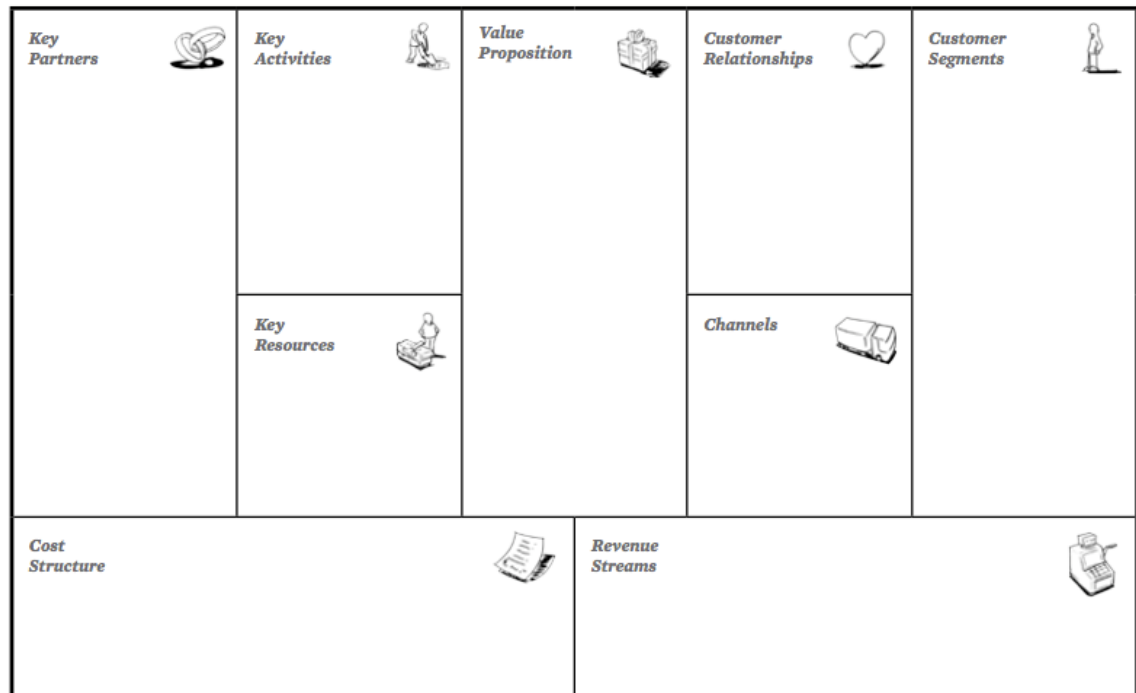
Figure 7. The business model canvas (Businessmodelgeneration.com, 2016)

The canvas portrays nine areas where further business questions must be asked as explained below:

- **Customer Segments:** For whom is the value created? Who is the most important customer - specifically, the customer without whom there's no business? What is the typical customer characteristics -demographics, location, behaviour etc.?

- **Value propositions:** What hooks the customer? What is the value delivered to the customer? How does the service concept solve the customer problem? Which of the customer needs are satisfied? What are the service minimum features upon which further developments can be made? The value proposition is the core differentiators for the business. It is the unfair advantage that is unique and not easily copied and shows why the customer buys the service and not from a competitor. The next subchapter 4.2 of this thesis explains this in details with "customer value production".

- **Channels:** How do our customer segments prefer to be reached? By which channels are our key partners and other businesses serving the same customer segment reaching them now? Which mediums works best for increasing sales and are the most cost-efficient? The channel block looks at how the value proposition will be delivered to the customer segment, also to raise awareness of the service and collect feedback.

- **Customer relationships**: How do we acquire, retain and increase customers? Which customer relationship is firmly associated to other areas of our business model? And how expensive are they?

- **Revenue streams:** What value are our customers very willing to pay? What is the pricing strategy? What values are they currently paying for and how are they making the payments? How would they prefer to pay? From which sources will the business generate the most income? How does each revenue stream contribute to the overall revenue the business generates?

- **Key resources:** What key resources are required to deliver on our value proposition such as assets, capital, supplies, and technology? Our channels of service delivery? Revenue streams and customer relationships. A key resource is the indispensable inputs to the business that if changed will pivot or change the entire service concept. In other words, it is necessary in creating, delivering, and capturing value specific to the paying customer.

- **Key Activities:** what are the key activities in our operations with our customer segments, key partner, revenue streams, and relationships, do our value proposition require? These are the key things the service concept has to perform well that give solution to the customers' problem.

- **Key Partners:** Who are the key partners? Who enables our supplies? Which key resources is the partner providing? What key parts of the service activities do the partner perform? Our world today is becoming openly interconnected and no business will do well without partners. The partners could be other businesses

that help with providing key resources and /or performing key activities that leverage the business model of the service concept. Good key partners could reduce transaction and operational risks and create a soft landing for a start up from strong brands, which can increases social proof for the new entrant.

- **Cost structure:** which key resources, and key activities incur the most cost? What costs are intrinsic to our business model? The cost structure allows the entrepreneur to determine portions of the variable cost and fixed cost and to check areas where cost can be reduced, especially in determining what price to charge for offering the service.

The essential business elements as found in the business model canvas is composing the analyses framework and the reasoning for presenting the service concept value, which key stakeholders and investors could use in identifying the value proposition.

4.2 Customer value proposition

Pigneur (2008) in a service concepts & scenario presentation defined a service concept as the value proposition, which explains the actual service, and the value or benefit perceived by customers of the service. In other words, creating service concept makes it possible to identify the service value for the customer. The customer value identified is an output from analysing the business model canvas. The analysis uncovers latent needs the customer has and also plugs out the customers' benefits from all the business resources integrated to create the service offering—a perceivable value.

Anticipating and validating the customer value proposition is the basis of choice for deciding the resources for delivering the service concept. It also offers competitive differentiation for the service provider.

The customer value proposition is the basis of choice in anticipating, validating, and deciding gainful resources, which are needed for creating the service concept. The concept benefit to the customer and the resources employed for realising the service. It is strategically important to the business ability to create a sustainable value. Meyer et al. (2013) identified three distinct areas of benefits:

- <u>Functional benefit</u>: is the clear tangible benefit the service provides, the hard benefit measured on the basis of price and performance. "How good is the Virtual Interactive Care Service?" The customer might ask, or "How much am I paying for it and why?" This can be referred to as the economic value. The reasoning is based on the risks the service mitigates when purchased for example by preventing a much higher cost.

- <u>Emotional benefit</u>: this leaves out the service measurable benefits. It is mainly concerned with "feelings" or "belief of value". The question the service user will ask here is, how will participating in the activities of Virtual Interactive Care Service make me feel? Happy? Sad? Excited? Depressed? Relived? Anxious? Etc. In B2B ventures, emotional benefits come in form of relieving untold frustrations in organising the groups, fixing broken equipment, or technology and network system required for providing alternative service.

- <u>Social benefit</u>: when the customer believes that he or she is helping others by using the service. "Does my use or purchase of this service in anyway help lonely elderly people?" "Is it hurting or helping the environment?" For example the proposed service concept of Virtual Interactive Care Service save the environment because, instead of twenty elderly people travelling to Korkeasaari in twenty different vehicles, they can access the activity event from the comfort of their homes without polluting the environment from their car fuel combustion. See figure 10 for evidence. The social value should not be underestimated when targeting young customers (like children of the elderly).

5   Virtual Interactive Care Service

This chapter discusses the action-based part of the thesis. It distils the reality from just having an idea to deliver activity care virtually to actually understanding why the idea should be acted on. Services develop from concepts, which differ from an idea when developmental actions are involved (Fitzsimmons & Fitzsimmons 2000:71-74). In order to present and evaluate the thesis case of Virtual Interactive Care Service, it is worth looking at how the service idea was built into a concept. It means understanding how a service unfolds from an idea to being a solution to a real problem.

Significant number of clients in Finnish elderly care has been identified as to suffer from depression, loneliness, boredom, worry from terminal ill health and associated illnesses. This is the premise for the concept pilot process, which as a part of the concept service design, should be unique to the case (Dervojeda et al. 2014). The three iterative phases in section 5.1.1 to 5.1.3 where the unique processes of the specific actions taken on the virtual elderly club idea. They formed the concept of Virtual Interactive Care Service.

5.1   Case concept pilot process

The case pilot discusses the pilot project done in focus groups to test Virtual Interactive Care Service concept in an actual care service environment, and to understand how the service could be productised. The case concept originated from the idea of how to provide activity day club for the elderly virtually. The first thing done was to interview target users to find out what type of activities they would like to participate in (See Appendix 1). This stage was undertaken in Villa Ilo.

5.1.1   Stage 1- Ideation phase

Villa Ilo is Hovi Group's strategic business unit that provides assisted home care for the elderly and people with special needs, also interval stays to enable the customers resume independent lives. It is located in Heinola in a facility formally used by the Rheumatism Foundation hospital after it closed down in 2010. The hospital premise, which is about

24000 square meters currently, works as a wellness hotel operated by Valolinna. Hovi Group rents some ward space for Villa Ilo from Valolinna.

Villa Ilo is the first of Hovi Group's strategic business units visited by the author. The study here focused on a new concept known as HoviKlubi that provides holiday services for elderly couples, and in which one of the spouses need special care due to illness e.g. Alzheimer, or some paralyses, etc. The couples come together. There were 5 couples during this time so in total 10 clients. The spouse that needs special care is known as the cared-for and the one that do not need care is known as the caregiver.

The idea of Hoviklubi is to care for the cared-for so that the caregiver (the healthy spouse) can have a holiday for the week. The holiday services are provided in partnership with the Valolinna Wellness hotel. The couple lodges at the Valolinna hotel can also choose to use additional wellness and spa services provided by the hotel. Villa Ilo is responsible for the health and social wellbeing of the couple.

The health and social wellbeing for the elderly couples especially those with physical disability required rehabilitative care, which also involved organising stimulating activities for the group. This was also the reason the author was there to study the group and based on the concept original idea of virtual elderly club. This five days study starting from 9.3.2015 to 13.3.2015 was based on understand what kind of social activities that should be provided in virtual elderly club.

Different kinds of interactive activities like playing cards games, bingo, and travelling in pictures followed after the coffee and tea times before dinner at about 4:30 pm. A few activities with the clients was done before they retired to their hotel rooms at 6pm. Breakfast and supper was served at their hotel parlour. The schedules and the activities were flexible and no one was forced to participate, as this was a holiday for them. The focus was to rehabilitate and improve the functional abilities of the clients such that both the cared-for and the caregiver spouse could get a break from their daily routines and relax, and go back home refreshed.

It was this group of elderly couple that the author interviewed to learn the idea of social care services and activities they believe will support their daily lives. The responses varied with gender. The women wanted activities that include music and traditional dances like tango and the men suggested playing games like petanque, chess, and boat fishing. Unanimously, the men and the women wanted to visit Natures Park where they can roast sausages and drink coffee, and to visit museums and historic sites. They said that events that encourages social contact shifts their thoughts away from their illnesses, and that they would like to be involved with developing the activity care idea (see Appendix 1).

It was after the study time at Villa Ilo that we (Hovi Group CEO and the author) got in touch with Suomen Kotilääkäripalvelu Oy, the relationship that shifted the idea of Virtual Elderly Club to Virtual Interactive Care Service. Following the agreement to implement the idea together, we became the service concept team, and proceeded to completing the ideation phase with the target users.

5.1.2   Stage 2- Co-creation phase

Co-creation process was not planned, it just happened at Syysviiru, the author's second research residence where he was testing elderly people's reaction to the concept. Syysviiru is another Hovi Group's strategic business unit located in Sammatti, about 20km from the centre of Lohja. It offers 24/7 nursing and rehabilitation care customised according to the clients' needs. Syysviiru has 3 floors rented from the historic premises of Työtehoseura TTS School owned by Lönnrot Institute and has space for 31 elderly people. The foundational idea of Syysviiru is to be a round the clock nursing home that is home like, with cosy furnishings, drug-free precisely less use of sleeping pills, full of indoor and outdoor activities and good food.

The test for desirability and reaction at Syysviiru was our first virtual test process. It started with observing and testing elderly people's behaviour when watching TV and their reaction to being filmed. The aim was to know how the elderly would relate to the activity events of Virtual Interactive Care Service. Computers were connected to Televisions at different floors as shown in figure 8. A bingo session and bowling activity was organised in the 3rd floor with the clients. Clients in the 1st and 2nd floor could see what their neighbours in the 3rd floor, and the 3rd floor clients could see what those in 1st and

2nd floor were doing and they could discuss with them even though they were at different floors of the same building.

Figure 8.Testing elderly reactions to being filmed in activities

As an outcome, it was noticed that the old people have no problems being filmed. They enjoyed the process especially when they saw themselves and their friends live during the activities, they were pointing to the screen and laughing. Another finding was that an elderly person with poor sight was not interested in the activity.

Seeing that the elderly enjoyed being the activity actors inside their home, it was necessary to see they have similar interest with activities outside of their familiar home. This test also allowed us to see how the technology used performs outdoors and in a wireless connection. This was tested by going to a morning walk with one elderly woman outside from the care service unit to the nature nearby, while the others inside the care wards could follow us from the TV as shown figure 9.

Figure 9.Testing elderly reactions being filmed outside

The elderly woman outside worked like a broadcast lady. She told the names of the trees, flowers, and birds she saw, and how the surroundings looked like while being filmed. She enjoyed the role. Basically, organising activities for the virtual service can be done in such a way that the service users can also be the content creators as well as the content consumers. The participants had no problems being co-creators.

5.1.3   Stage 3-Concept offer phase

The concept offer identification involved both the ideation and co-creation phases to get feedbacks for the stakeholders, and it continued to the formation of this thesis. It continued with the co-creation effort of the service concept with the target users to understand the technology required, the value proposition of the service created, and what customers will pay for it.

Determining the technology requirements already started in the first testing. However it was needed to be sure of what the technical requirements for the service should be. The principal stage for this test was in Hopeaharju and Hopeakoto, which was the author's third research residence. They are located in Noormarkku Pori and are both independent strategic business units of Hovi Group.

Hopeaharju is the root of the Hovi Group Oy tree. It was also a rooting place for Virtual Interactive Care Service. Hopeaharju was founded in August 1989 as the first private cares services home in Noormarkku for the elderly and people with mental disabilities.

Hopeakoto is a powered care service-housing unit completed in 2014 to meet the municipality's requirements of $21m^2$ for single client residence and $34m^2$ space for couple client residence. It provides customised and rehabilitative care services for elderly people to meet conventional expectations with outdoor activities, homemade foods, with activity experiences for the clients. Both Hopeaharju and Hopeakoto are located in the same big compound and they cooperate in daily activities planned for the elderly.

Prior the test in Hopeaharju and Hopeakoto, the technological requirements was planned to take advantage of free video-conference tools, and also already existing systems such as laptop computers, TV, projectors, and web-cameras that can be found in Hovi Group's units. The main system that enabled the previous tests in Syysviiru is an audio and video instant communication system called Jitsi. It is a telephony Internet protocols based on java that was originally created by Emil Ivov (Jitsi.org, 2015).

From the tests in Syysviiru, the concept was taking shape. Jitsi video quality was okay but freezes easily, and the voice quality was good. The technology needed required customisation. WebRTC was adopted. Like Jirtsi, it is free, web based, and an open project. However, it enables Real-Time Communications (RTC), and supports more browsers to provide a multilayer video conferencing platform. It is also an Application Programming Interface (API), which developers can customise. The developers at Suomen kotilääkäripalvelu Oy customised that to provide the interface link for piloting activities of Virtual Interactive Care Service.

The event shown in figure 10 was also for testing the service the technology required by the concept. It was hosted at Korkeasaari such that Hopeaharju and Hopeakoto clients could visit the Zoo virtually.

Figure 10.   Piloting at Hopeaharju and Hopeakoto – Virtual trip to Helsinki Zoo Korkeasaari

The author worked as the facilitator to the Hopeaharju and Hopeakoto clients. It involved planning and communicating the events, installing the necessary TV-Computer-Projector systems, organising the people and making the event interactive for the clients by asking questions from the participating audience as well as telling the audience answers to the tour guide (Broadcaster) at Korkeasaari.

Other Hovi Group strategic business units were also connected to the program and had own facilitators. All facilitators are in a mobile phone group call because sometimes, the sounds were not transmitting due to poor network. The facilitators heard clear voice

transmissions over the phone and repeated that to the audience. This activity was also published in the Korkeasaari website (Korkeasaari.fi, 2015).

Few challenges were experienced during this attempt. The weather was rainy. The system crashed three times. The voices broke or disappeared completely at some times. So we had to improve the technology and then plan the programme with better compositions. One week later another activity event was organised. The purpose was to test the assumption of the concept value and improving the technology. This was important for identifying the customer value proposition as well as delivering the value. For the concept value, the question asked was what is it that is important for the target users to participate in this type of events?

So far we have found that the elderly want to know more about when the next events will be organised. They discussed the events afterwards among themselves but we wanted to know more of what in it was the most interesting to them. To find out more about this, another virtual trip was organised to the Helsinki Ateneum Museum. Hopeaharju, Hopeakoto and Syysviiru were connected together. While it was not allowed to take pictures from that event, the feedback from previous week transmission enabled us to improve the quality by making it more interactive.

Some of the improvements were based on the questions asked to clients participating from various business units such as:

- How many of you have been to the museum before?
- Do you have favourite paintings you would like to examine today?
- What does this artwork describe?
- Who was the painter of this artwork?

There was a pause in-between the show when ice cream was served at the same time in all the strategic business units participating. The clients interacted when talking about the taste of ice creams they were having and from the various groups suggested themselves more things they would like to see from the museum.

The event was a success and with the clients' own words, a "super nice thing". They were thankful that they could participate in the museum exhibition at the comfort of their assisted service homes without traveling from Pori to Helsinki or from Lohja to Helsinki. What was learned here was that the elderly when suggesting more things they want to see from the museums forgot they were at different places, and that one hour is the length of time they can actively be involved without losing concentration.

One of the events was organised from the French Rivera. This was the most interesting because it was planned with feedbacks that were gathered from the ones before. The systems did not crash and it was widely followed by different mainstream media for example iltamakasiini.fi (2015), and the Helsingin Sanomat (HS.fi, 2015).

Prior this activity event, an email of the virtual activity plan is sent to facilitators in all care service units and individual participants. The plan tells precisely what the even is about, the time it starts, and the website link for accessing the real time broadcast, and also the group call dial in phone number and email address to send feedback after the event. In one of the media websites, the video of this particular event where the clients were talking of their experiences is published online, and can watched from the link: http://www.hs.fi/kotimaa/a1435549779010 (HS.fi, 2015).

5.2   Analysis and preliminary findings of the case piloting

This section provides the implications of the research from theory to practice. It discussed the analytical framework of concept case with theory. It raises the central points for addressing the research objective of to evaluate and present the thesis concept case of Virtual Interactive Care Service.

5.2.1   Case concept elements

The service concept elements discussed in subsection 3.2 were also identified with the case concept pilot. They were the key resources as summarised in table 1, which enabled the creation process that defined the elderly activity club idea into the concept of Virtual Interactive Care Service.

Table 1. Concept elements for Virtual Interactive Care Service

Elements	Explications
People	Elderly people, employees and managers at Hovi Group Oy and Suomen Kotilääkäripalvelu Oy
Technology	Open source video communication platforms E.g. Jitsi, WebRTC, Google hangout, periscope
Delivery System	Physical e.g. equipment and facilities at Hovi Group Oy at Suomen kotilääkäripalvelu Oy Non-physical e.g. Internet, feelings of participants and stakeholders

People: Elderly people were the target users of the concept. Employees and clients of Hovi Group Oy and Suomen kotilääkäripalvelu Oy were valuable contributors. They helped to communicate and coordinate the environment and the systems for the case pilot. This is to say that customers, employees and the firm that employ them are key participants in creating the service concept.

Those elderly people who were the focus pilot group were excited about the events. The main differentiator for them was that the events have to be interactive for them. To make this happen, the role of group facilitators who moderated the activities such as question and answer or sharing ice cream during the events was introduced. Each of the Hovi Group business unit has a facilitator with them. The event presenter will ask the participating unit one after the other some questions, e.g. how many people from Syysviiru has gone to Korkeasaari before? They will answer, the Syysviiru facilitator will then repeat the answer over the phone, and the presenter will repeat the group's answer again so that other participants from Hopeaharju and Hopeakoto, Villa Ilo, and Sofiakylä will hear. The role of facilitators is important because they keep their audience active and enthusiastic about what they see from their screen.

The ice-creams breaks at the event broadcast from Ateneum museum and glass of rose wines at the event from the French Riviera was another interactivity factor noticed. This worked so that 25 minutes into the broadcast, the live presenter calls for joint break and asks the facilitators to serve ice creams and wines to the clients (the elderly people

participating in the event). This means that all Hovi Group strategic business units connected. Syysviiru, Hopeaharju and Hopeakoto, Sofiakylä and Villa Ilo are able to have ice cream or drink wine in the same time. This was a breakthrough with the concept. It virtually removed the walls at each of the care service units at different locations such that all can be in one virtual space and do some activity together forgetting that they are at different locations. Therefore the service concept value for users is boundless fun interactivity.

Technology: Web Real-Time Communication technology was used for the case pilot. The software crashed during the activity events and it could not reload automatically following the crash. Suomen Kotilääkäripalvelu Oy reprogrammed it. By the time of the third event, the technology was able to reload automatically. However, it was not yet possible to record the live interactive events so that people could watch that afterwards. Also it was not yet possible to have a side chat to the screen and texts below the screen. That could also make the event more interactive such that facilitators could type in live comments from their respective groups for others to see. While it was possible to connect many strategic business units to the activity event, coordinating them such that the interactive nature of the event remained a challenge.

Delivery system: The technology of WebRTC used worked well in broadcasting equipment and computer systems at both Hovi Group Oy and Suomen kotilääkäripalvelu Oy. They facilitated the virtual nature of the service, which was delivered through the Internet. One reason why the software crashed frequently during the initial interactive events was due to slow Internet connection. The crash was only twice in the second event and there was no crash in the last broadcast. The crash was finally prevented by ensuring that both the upload and download ends are connected to a 4G network. The challenge still remains that an event may not be successful in areas with low Internet speed, 3G networks may work but may not work well for the service concept.

5.2.2   Service concept design planning from the pilot

Prior the pilot testing and until the last tests, it was not clear what the concept is and how to go about it. By taking actions on the idea to establish a care service business

that provides stimulating and interactive actives for elderly people, the resources required, or termed as the elements of the concept case, where identified. Figure 11 shows the service concept elements of the case, which is necessary for developing the design planning of the concept. See appendix 4 for the expanded version.
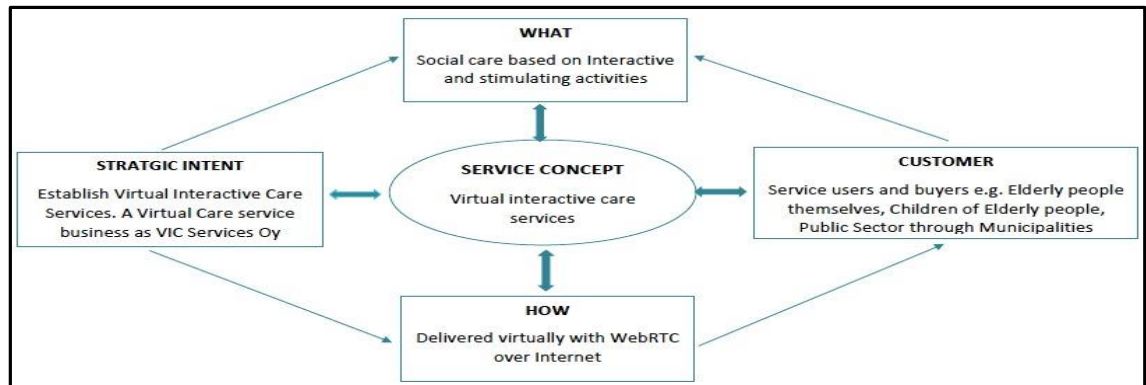
Figure 11.   Service concept of Virtual Interactive Care Service (adapted, Goldstein et al. 2002:124)

The role of a concept service design planning is not only to show the inputs and output of the concept process but also serves as the feedback loop to see were bottlenecks of the concept case were for future improvements as can been from figure 12. See appendix 5 for the expanded version.
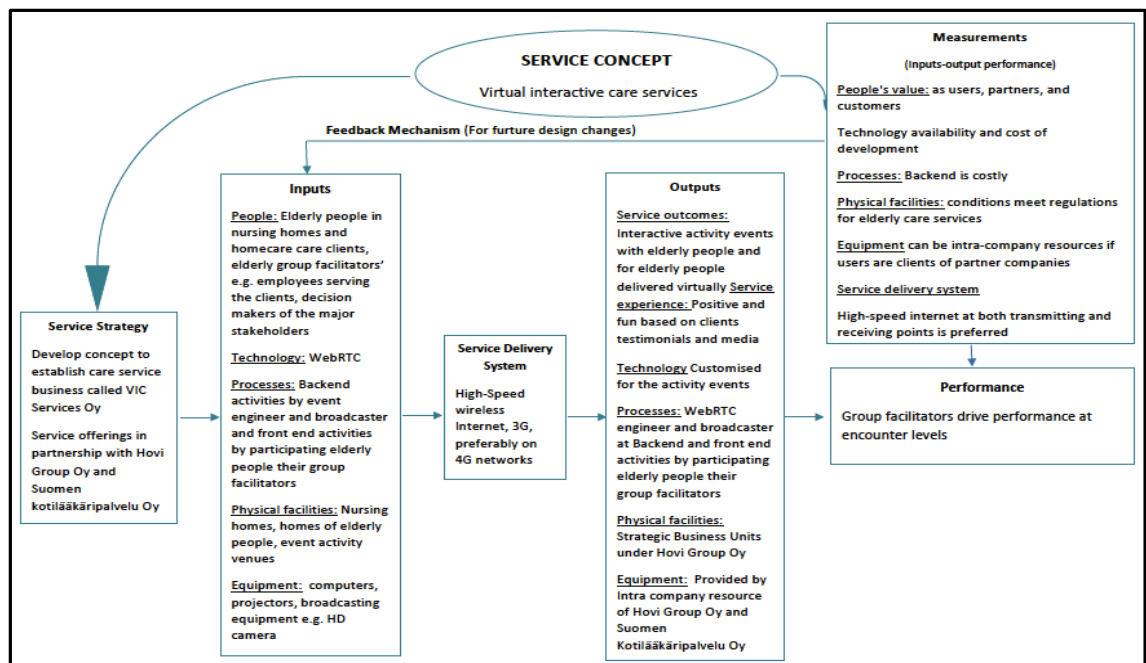
Figure 12.   Service design planning of the concept case (adapted, Goldstein et al. 2002:126)

One major feedback from doing the case pilot was that it was possible to connect as many business units as possible to one interactive event broadcast. However, since the interactivity is limited to activities that can be done during the events, and with the help of the facilitators, it becomes very chaotic after 5 strategic business units. There was not enough time space to take in comments and ideas from one strategic business unit to the other. For example, for a 50 minute activity event, 5 strategic business units are connected, gets 5 minutes to interactive, that's already 5*5 = 25minutes, 10minutes goes to doing an activity together which leaves -35-10+50= 15minutes only for the actual broadcast. And the main cost of the inputs came from the back end process arising from the paying the engineer and the broadcaster on the sender side. The facilitators and the target users are the receiving side attracted no cost, as they were employees of the Hovi Group nursing homes where the focus group resides.

5.2.3   Concept case service offering and pricing

In creating service concept, the service offering and pricing captures what value customers see and what investing stakeholders expect from the project as shown in figure 13. Triangle A is the Service offering as target of service development. It shows that the service outcomes at generated with answers provided by the systems and process involved as well as the tactics used (Jaakkola & Kaartemo, 2010). Triangle B is project development across organisational layers, which shows that the decisions relating to the service offering is influenced at all layers of the organisation (adapted, Simcoe, 2012). (See appendix 6 for expanded version of figure 13).
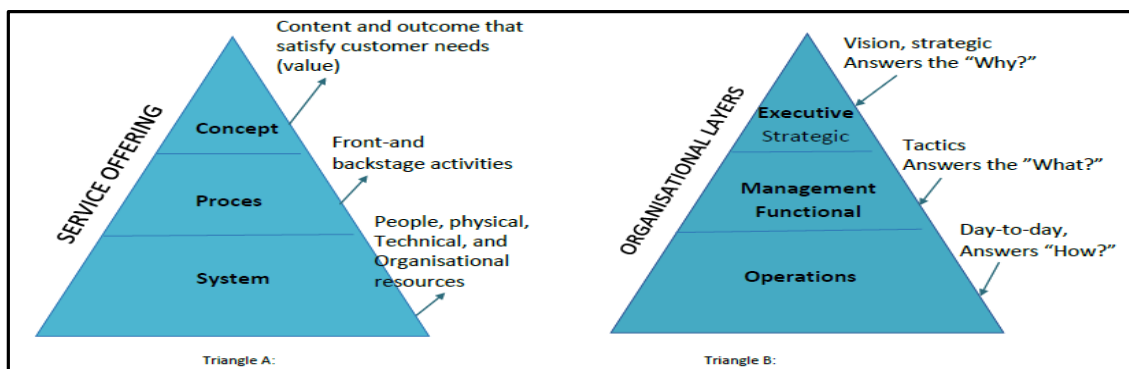
Figure 13.   Service concept offering is across organizational layers

The process entails the strategic value to the owners, the process to management and functional department and the system to the operational level, which is likely where the service interactions and encounter happen. It involves people as employees as well as customer for which the service is offered. Since the service offering also guides the business model, pricing the service concept gives an idea of the value perceived by the customer that at the time of the pilot was the nursing homes. It also told what the service could be offered for.

The business model canvas in section 5.3.2 indicated that there are costs, which can be inherent to the running of Virtual Interactive Care Service. The cost computed for the thesis looks only at costs incurred in delivering one activity event but not securing assets for the company setup so it is mostly operational. Fixed costs were not included. One revenue stream is charging "the service fee" from the customers – the participation fee. Determining a price for the service is necessary for making the service offer. The Mark Up pricing strategy shown in figure 14 was used in pricing the service offering of the case concept.

Cost + Pricing

MARK UP
40% = € 87,40

SERVICE PRODUCTISATION
COST = € 218,5

PRICE = € 305,90

Cost Break down

Back end	€Pay /event
System engineer	40
Event manager / guider	60
Front end coordinator	40
Event venue reservation	50
Variable cost total	190
+Contingency cost 15%	28,5
Total Cost of service prod	218,5

Figure 14.   Mark-up pricing for concept service offering

The straightforward approach determined the transaction cost of one interactive event and matched it to the expected margin. If the expected margin is 40%, it means that price per interactive event could be €218, 5 x1, 40 = € 305.90.

In order to determine the concept value, the care service manages at Hovi Group were asked what they as customers, are willing to pay for the stimulating and interactive events based on their experience and perception of the concept value to their businesses and their clients. The results came in as in figure 15.

Prospective Customer's opinion of concept 's price value		Mean Price=> €49,99 as Price/Event	1SBU	2SBU	4SBU	6SBU	8SBU	10SBU	12SBU
Hovi Group's SBU	Price €/Even	Price €/hr	%	1	2	4	6	8	10	12
Hopeaharju Oy	30	Total price/ Event	100 %	49,99	99,98	199,96	299,9	399,92	499,9	599,9
Hopeakoto Oy	20	Markup Desired	60 %	29,99	59,99	119,98	180	239,952	299,9	359,9
Syysviiru Oy	50	Service Productisation Co	40 %	20	39,99	79,984	120	159,968	200	240
Sofiakylä Oy	100	Invest. Stakeholders expectation 40%		122,4						
Mean price/Event	50	No of SBU to Break-Even	6,12 SBU=	305,9			Break-Even Point			

Figure 15. Determining concept value with price

From figure 15, it was assumed that each strategic business units will pay €49, 99 per event. If two events are organised per week x 4 weeks = €399, 92. This is affordable price for a private health care business unit to participate in Virtual Interactive Care Service.

With more subscribers and improved process with respect to the automating system requirements, it was expected that the price per interactive event could be reduced. However, eight nursing homes or care service business units should be participating in one event such that Virtual Interactive Care Service owners could generate € 239, 95.

To cover owners' interests, at least 60% margin on the costs was expected. The price of € 305.90 is already very expensive for a one strategic business units to pay at 40% margin on costs. To satisfy both owners and prospective customers, understanding where costs can be cut or shared is vital. One possible area to cut cost was from the concept's back end inputs. The cost from paying a professional broadcaster can be eliminated because anyone who can use a smart phone could work as a guide or an interactive event manager. Some travellers for example can through Virtual Interactive Care Service share their trips freely with elderly people systems. Removing the €60,00 cost from paying the event manager as shown in figure 14, it means that then cost break

down is reduced to €149, 50 and as result increases the chances of meeting the owners interest.

6 Research results

6.1 Summarising key findings of the study

Reverting to the research questions to provide answer to *why is the concept a feasible service for private care business in Finland?*

The research found that the demand of care services for 60+ year olds are on the increase and therefore presents a gap, which is an opportunity for introducing innovative concepts for starting a care service business in Finland. It also found that the fastest growing industry in Finland is the social and healthcare sector and the growth is driven by the demand for elderly care services. However, there is no definition of virtual care service in the Finnish elderly care legislation. It is safe to say that virtual care services are not yet popular in the Finnish elderly care.

It came out that the public sector through the municipality e.g. municipality's representatives such as a social worker or a trustee of an elderly person influence both the care delivery methods and the decision to purchase. Also are the closest gatekeepers in matters affecting the life of the target users e.g. spouses, and children of elderly people. They are the key decision makers in the process of buying care services from private providers. While the service users' health condition influences the decision to purchase a care service, the care service fees is paid for by the government relative to the user's income.

During the case pilot phases, the elderly people themselves and the nursing homes were considered to be prospective users and customers of the service concept. The research found that this is like an additional service for the nursing homes. It benefits the end users but the customers living at nursing homes don't have extra money because their income have been taken away to pay for the nursing home services, which they are using (See appendix 2).

Since the public sector through municipality representatives like the social workers are required by law to support functionality of elderly people, which includes social care, which can also be through stimulating and interactive activities, which Virtual Interactive Care aims at providing, they were also considered to be the service customers. The research found that the purchasing process of public sectors require competitive bidding which is won based on the service that provides better what the public sector is already providing, or should be providing with the cheapest price such that the municipality can save money from purchasing the service (See appendix 3).

The research reveals that spouses and children of elderly people have the real interest in the wellbeing of the target users. The government and the elderly themselves may not see the need for case concept service yet. Therefore, the spouses, and the children of elderly people are identified as the paying customers of the service concept asked for by the research questions. It implies that the user of a care service is not necessary the payer. Hence, the problem the thesis examined is not only the problem of the user but also that of the customers and regulators of care service businesses in Finland (see appendix 1, 2, & 3).

The care service business is highly regulated in Finland because care provision is first the responsibility of the government. It is also the government responsibility to regulate the quality of health care services. For the concept to be a feasible service for private care business in Finland, it is not only required to meet the requirements of the Finnish elderly legislation but can only succeed if the services it offers are complementing what the government is either providing or should be providing. The concept would have to proof how it is saving money for the public sector.

The second research question was *How to know if the service concept is desirable by the prospective users?*

This question is partly answered by theory as well as with the case pilot. From the theory, the research found that several definitions hold for explaining what a service concept is, service concept is not the same as an idea, which is initial notion that may turn into a concept following several discussions, brainstorming dissections and developmental actions (Fitzsimmons & Fitzsimmons, 2000:71-72).

In order to know if a service concept is desirable for prospective users, the creating team or organisation must come in contact with the prospective users and customers in a concept creation process. As described with figure 12 & 13, the service concept is the foundation of planning, designing, building, and managing a service organisation's strategic development together with the customers. Without the service concept, understanding the appropriate integration of physical and non-physical components for creating the service will be missing i.e. understanding a service delivery system would be almost impossible (Goldstein et al. 2002).

Identifying a concept value with a co-creation process prevents a mismatch in what the service (Virtual Interactive Care (VIC) service) intends to provide and what the customers expects. It proximally insulates the service concept from unacceptability. Therefore, it can be noted that creating service concept without the customers is a recipe for failure. (Prahalad & Ramaswamy 2004: 10), and so is developing resources in a service system without a service concept. It is dangerous because service development target is the service offering of the business model (Jaakkola & Kaartemo, 2010), which involves all layers of the organisation (Steve Blank, 2010; Simcoe, 2012a; 2014b; Osterwalder & Pigneur 2009). From the project pilot, understanding the value of Virtual Interactive Care as service concept involved having interactions with the target users, the people already serving the target users e.g. the employees working at the care service units where the target users are, and the owners of those care service units. Based on the case pilot and the associated literature studied (vis-à-vis Fitzsimmons & Fitzsimmons, 2000:71-72; Prahalad & Ramaswamy 2004: 10; Jaakkola & Kaartemo, 2010; Osterwalder & Pigneur 2009; Goldstein et al. 2002), the author proposes that a service concept value is only co-created.

Feedback collected through the users and customers engaged with the process of actions taken on an idea to form a concept is key to knowing if the service concept is desirable. The study reveals the role of prospective service users are changing so that they are co-creators of the service value. The profitable interest for the target group is that they enjoyed being involved with creating the service concept. The customer value of a service concept offering e.g. with the price they are willing to pay for it can be according to

their level of engagement in creating the service concept (Prahalad & Ramaswamy, 2004: 10).

From the concept pilot, the feedbacks from the users and participants as published in national newspapers shows interest in the concept. The pilot of Virtual Interactive Care Service case showed that it is possible to virtually support togetherness and communal spirit. It reduced boredom and loneliness, and gave participators hope and something to look forward to. It also provided accessibility to interactivity and stimulating activities outside immediate residence, a form of boundless care. The enthusiastic nature of elderly people in the concept pilot of Virtual Interactive Care Service is consistent to the report of the Virtual project conducted by the City of Helsinki through Forum Virium Helsinki presented under subchapter 1.1.

The case creation process and benefit of virtually providing fun boundless interactivity to target users and customers is congruent to latest thinking around value-based care, which revolves around client-centeredness in health service delivery. It can be the foundation for reconstructing a country's healthcare system (Porter & Lee, 2013). This thesis goes further to suggest that "client-centeredness" implies clients should be involved in the service creation process designed for their care. It proposes that the value of a service concept can be observed from how the customer understood the problem the concept is solving and desires to take part in solving the problem.

6.2 Business model of Virtual Interactive Care Service

The third research question was to understand *what kind of business model would the concept be commercially viable?*

The business model as described in chapter 4 is a "conceptual tool" necessary for identifying the service concept logic and for analysing how the key aspects (identified from the case pilot and theory) can function together in being a commercially viable private care service business. It presents the sense of value that the concept case proposes (Osterwalder & Pigneur 2002).

The canvas associates key partners, key activities, key resources and the cost structure as the elements that contribute to the efficiency of the value proposition. On the hand the, the customer segments, customer relationships, channels, revenue streams communicates the acceptability of the value proposition (Simcoe, 2012).

The proposed business model canvas of Virtual Interactive Care Service is presented in figure 16. See appendix 7 for the expanded version of the canvas. The canvas represents the 9 building blocks that composed the questions, which the case pilot answered with the iterative process of creating the service concept. Therefore the key component for the concept translating into a working business model is maintaining the core premise for human care while at the same time finding and transferring a sustainable social and economic interest perceived as a unique valued by the stakeholders.

Key Partners	Key activities	Value Proposition	Customer Relationships	Customer Segments
• Hovi group Oy • Suomen Kotilääkäripalvelu Oy • Old people´s nursing home (public & Private) • Developmental agencies like Tekes, Elykeskys • Voluntary workers • Associations where older people are active- churches-Libraries, movie theatres • Owners/managers of activitycentres where elderly people would like to attend, e.g culinary schools, knitting clubs, zoos, museums, national parks, etc	• Find activities elderly people want • planing, test and organise the activities e.g. three times per week • Continuous marketing and communicating of future fun and interactive activities to stakeholders through our channels **Key Resources** • Interesting activities • Programmer/ computer engineer • Customisable audio and video Web real-time communication (WebRTC) • Live feeder and facilitators • Technological equipments	**Functional benefits** • Less money spent on medications to treat depressions and relaxants • Improved memory from remembering places they have been before **Social benefits** • Interactive social activities • Relief loneliness and idleness through fun activities, dancing, music, and conversation companions in groups • Virtual access to meet and spend time with friends of similar values outside their homes or from other nursing homes both in Finland and abroad • Memorable events with fun virtual trips they would otherwise not be able to go because of disability. **Emotional benefits** • Stress relief for families for purchasing the service • Keep up with technology trend and developments around the world	• Long term contracts with users • Contracts with public sectors • Active in expos • Partnership with care service providers • Co-creating with users and partners **Channels** Offline • Nursing homes, churches, associations for seniors • Cold calls, emails, and meetings with gatekeepers • Direct mail of service catalogue to prospective gatekeepers • Articles in media local news papers Online • Website, social media sites like facebook, twitter etc	• Elderly people in Finland • Close to retirement or retired • People aged 55 and above who use home care services • Have mental disability like Alzheimer or handicaped • live in their own homes or in nursing homes • Lonely or show signs of depression • Those not able to travel • To start with, those who lives outside of the capital area • Service voucher providers and gatekeepers e.g public sector and their representatives i.e social workers for elderly people

Cost Structure	Revenue Streams
• Fixed: Technology development and equipment purchase • Variable: Operational costs from preparing and organising the activity events, and costs from securing paying customers • Reduce cost with voluntary workers who can help with organising by working as live feeders or facilitators. E.g students, retirees, holiday makers, anyone willing	• Per-users and participation fees e.g. 9e per individual or 49,99 per group/ event • Members monthly subscription payments also with service vouchers • Crowd funding gives ownership benefit of 20% discount for using the service • Business developmental aids from government e.g. Tekes, Elueksksus, etc

Figure 16.   Business model canvas from the case service

The goal is to see how the service concept value was created, delivered and captured as explained below:

- **Customer Segments:** The service concept value is created for elderly people in Finland who are 60 years old and above. The most important customer are

those elderly people who are not able to travel, those who are lonely or show signs of depression, and those that have mental disability and other handicaps. They are the customers without whom there's no business. The typical customer is retired, lives independently at home but uses some kind of homecare services or lives in a nursing home due to illness.

- **Value propositions:** The value proposition for the customer is access to experiential social interactivity for the users. This is a social benefit and also a functional one because it solves the users' problem of loneliness and depression, which can come from their sicknesses and lack of conversation companion. It also what hooks the customers because it solves their problem by reducing the cost of money spent on purchasing medications which would otherwise be needed to treat depression or alleviate the stresses the clients have. The emotional benefit comes from the stress relief for the families of the elderly people knowing that they are having fun and are not alone when participating in virtual interactive activity events. The social interactivity is the minimum feature of the service upon which further developments like bringing back past memories can be made. Doing that virtually is the unique solution, which is also the core differentiator for the business that may not be easily copied. It shows the customer why they should buy into Virtual Interactive Care Service.

- **Channels:** Offline channels through which our customer segments prefer to be reached are through gatekeepers like children of elderly people, appointed trustees like social workers, organisations where they are active like associations of elderly people, churches, and other voluntary organisations where elderly people are like lions club. Online sources include email newsletter, company websites, social media sites the gatekeepers use like Facebook, twitter, and YouTube. Article publication in main stream media like newspaper, giving radio talks and participation in Yle TV news are all channels our key partners and other businesses serving elderly people, the same customer segment is reaching them now. The mediums that works best for increasing sales and are the most cost-efficient is probably social media, main stream newspaper to raise awareness of the service collect feedback and reach gatekeepers. This include children of elderly people,

social workers or appointed trustees who are the municipality representatives with the purchasing decision making power.

- **Customer relationships**: We acquire customers through partners who are currently providing for them some kind of elderly care service. We retain customers by making sure that every virtual interactivity event is fun, interactive, and memorable for them. Also by providing the best customer service by listening and understanding activity wishes, encourage positive conversation within the groups so that they feel important, happy, and relieved. Providing discounts for referrals, constant marketing through our channels and actively seek for feedback for improving the value the service. Also, by participating in elderly care events and in all possible competitive tenders for care service providers are ways we can increase customers which is firmly associated to other areas of our business model.

- **Revenue streams:** It is not so precise yet what our customers are very willing to pay for. Based on our project research, we saw they are willing to pay 20euros to 100euros. The sources the business will generate the most income is from fees paid by users for participation, membership monthly subscription, and third party funding for example with crowd funding, and possibly government grants at the developmental stages. The pricing strategy will be partly subscription model and partly crowd funded. Subscription means that members get 10 percent discount price from the hourly price of the service per event, owners i.e. those who crowd funds the service get 20% discount from hourly price of the service per event, while referrals get 5% discount from the hourly price of the service per event transmission.

- **Key resources:** The key resources required to deliver on our value proposition are interesting and activities, customised audio and video Web real time communication (WebRTC) platform, computer to run the platform program and for coordinating the event transmission, other technological equipment like HDMI streaming video cameras, professional broadcast headset, and the live feeder who is the broadcaster of the events. At the receptors point, should be a computer with high-speed Internet connected to a large screen television or projector

and group coordinators who are also the event facilitators. Our channels of service delivery are, elderly people homes, and high-speed Internet connections to elderly people living in their own homes or in care service homes. The WebRTC engineer, live feeder, facilitators, and interesting and interactive activities to elderly people are the key resources which are indispensable inputs to the business that if changed will pivot or change the entire service concept.

- **Key Activities:** Organising interactive, social, and fun activity events that are delivered virtually are the key activities in our operations with our customer segments. It can be realized from creating and maintaining good relationships that focus on the value proposition for the customers and with our key partners. Constant marketing and communicating of fun and interactive activities to stakeholders should be done through our channels. These are the key things that need to perform well so that the business service can deliver on its promise as a possible solution the customers' problem.

- **Key Partners:** The key partners for Virtual interactivity care service were Hovi Group Oy, Suomen Kotilääkäripalvelu Oy, Helsinki Zoo in Korkeasaari, Ateneum art museum Helsinki and all those that participated in the concept pilot. Hovi Group Oy provides access to the elderly people who took part in the concept pilot. Suomen Kotilääkäripalvelu enables development of the needed technology, and both Korkeasaari zoo and Ateneum Art museum Helsinki were the activity centres used which were all key resources. Looking forward, a key partner would also include volunteers who can work as the live feeder, or coordinate and facilitate the activity events as well as government developmental agencies like TEKES, Elykeskys, and investors who can provide funding that leverages the business model to further develop the service concept.

- **Cost structure:** The cost drives comes from acquiring key resources which include developing the customised audio and video web real-time communication, computers, broadcast cameras and headset, internet payment, to enable the virtual transmission and the live feeder salary and the cost of organising the interactivity events. The preparation and coordination of the events especially from the sending point are the key activities that incur the most cost. They are also

intrinsic to our business model because the interactivity events could not be virtually provided without the live feeder and the WebRTC system controller.

The business model presented in figure 16 identified the customer value proposition. It is still a conceptual tool, which helps productising the minimum version of the service. Productisation makes it easier to price the service offering (Chattopadhyay, 2012:4-5). It means that to go into business solemnly based on the business model from concept pilot is easier. However, the challenges seen with maintaining interactivity when the number of groups connected are more than five has to be addressed to understand how the business can be scalable.

Clearly, the concept is new and it is not yet clear how best to systematically generate demand for the service until the value it proposes is clearly perceived. This points to an area for further studies. It also takes time and money to organise especially from the technical side- need for facilitators, scheduling, and operations require humans and is not yet automated. The revenue from the mark up pricing strategy employed shows that the service business model maybe not be profitable with voluntary workers performing the most expensive tasks, e.g. the role of facilitators and broadcasters (see appendix 2 & 3).

The pilot identified the concept value for the users but since the public sectors and children of elderly people were identified by this research as the paying customers, the service business value has to be clear for them too. Therefore, the concept should be presented to the paying customers e.g. to the children of elderly people as well as to towns and cities to see if they would become active partners in further testing. For the children of elderly people, it means encouraging their elderly parents living at homes to participate in further testing. For the public sector, it means providing finance and access to elderly clients of municipality's regular homecare services for further testing.

7   Conclusion

The study delved into value creation and co-creation with the prospective users of the concept pilot. But think of which value is more important for the paying customer, the economic or the social. For the public sector as buyers, the economic value is pivotal, for the user, the social value is. So the concept design may not be the fundamental factor to the case of Virtual Interactive Care Service but policies based on elderly care legislation. And that was why understanding the issues around municipalities purchasing care services from private care businesses was necessary.

The greying population is growing. Virtual Interactive Care Service concept has proven that this generation of elderly people are Internet savvy. They are not afraid of virtual care. Instead, they are very interested in creating service concept for new ways of care delivery. With technological advancements in Virtual Reality and Artificial Intelligence, the potential for the case concept also points to future possibilities of delivering care over the virtual space. Care service experience of the elderly can be improved by engaging them already with the creation process of services tailored to them. There is a strong debate on the high cost of elderly care for governments. The debates should explore virtual care solutions for non-medical approach to care for depression and Alzheimer prevalent in elderly people. Securing third party funding like grants can enable more developments of the concept because it can reduce the cost of care when one caregiver at one location is by virtual care enabled to serve more than one group of elderly people at different locations.

7.1   Recommendation for further research

The positive interest generated by Virtual Interactive Care Service concept as published in several media already gives a good mental picture of the service concept to the customers. (Johnston, Clark, et al. 2012:46 – 47). And as a concept, the "what", "how," "strategic intent" and "the customer" have been identified. (Goldstein et al. 2002:124).

Further research should look into what these specifications are especially with the opinion of the paying customers. For example by testing the service with the children of elderly people as well as the public sector to understand how much money they will save for buying the service.

In creating service concept for Virtual Interactive Care Service, the core elements and processes for the service design, development and innovation were also identified. Goldstein et al. (2002) left service concept to only what happens before and during the design and development of service. Jaakkola & Kaartemo (2010) continued the definition to include what happens in the service offering. The thesis argues that it also impacts the commercialization of the service offering for which a business model is required. It means that target customers viewpoints are not enough, their involvement in the concept creation process should not only be prioritised but should be encouraged to continue with the commercialization of the concept's service offering.

Further research on the virtual care services for Finnish elderly care should be continued. It could also look for metrics to measure the benefits of the concept for the major stakeholders. Another area to examine is on other elements outside interactive activities that could be used for defining the value propositions for the paying customers and the clients. And how the service can be extended and possibly be customised to other interest groups- hospital patients, school children both locally and internationally to improve the service scalability in profitable business model.

7.2 Critique

Time has passed since when the project of the concept case took place compared to the time of writing the thesis. Without flawing the accuracy of report, it rather gave time to the author and the co-creating partners interviewed to internalise the process and to provide objective view. However, the paying customer was misunderstood as only the service user and nursing homes during the case project piloting. Had the focus been on the public sectors as the service buyers, they should have been directly involved in the case concept development (See appendix 2 & 3).

A major assumption in the case was that the government would approve the service concept case as a social care service. Current legislations do not have clear definitions on virtual care delivery to involve stimulating activities for clients or patients without a doctor's personal contact. Also some data references are from Finnish sources, which were in Finnish language such that someone not familiar with the language may require additional help with translations.

7.3   Benefit of the study

In summary, the results of the research can be leveraged both for theory and for providing empirical data. From the theory, it could support companies in planning and developing innovative solutions with care service designs and with optimizing concept creation processes. Empirically, the data can be useful for social and healthcare service providers in Finland and institutions interested in developing virtual care services across the globe. It will hopefully also inspire others to perform further research and to investigate similar possibilities for elderly clients and hospital patients. Governments can adapt "care service co-creation" of "client-centeredness" as in Virtual Interactive Care Service to the public healthcare systems, in order to provide stimulating and interactive activities to the patients. Not only will it improve clients' satisfaction and increase their social care experiences, it can also contribute to restructuring the public healthcare systems. This is needed to meet the rapid up-trend in the demand for health and social care due to retiring baby boomers and increased life expectancy following advancements in medical technology.

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Target users Interview questions

Date: 11.3.2015. Time 4:30pm – 5:30pm (focus group interview)

Introduction: Thank you all for your time. You all came to HoviReisu with your spouses who are in Hoviklubi events for this week 9.3.2015 – 13.3.2015. Virtual Elderly Club is an activity care service concept being developed to provide stimulating activities events to elderly people.

The participants are HoviReisu clients and were eight in number. They are pensioners and are aged 65 years to 85 years old. They came to HoviReisu, which is a holiday trip organised by Villa Ilo, one of Hovi group strategic business unit in Heinola. The idea of the HoviReisu was that the five couples came together with their spouses so that the spouse that need care participates in Hoviklubi, an activity club organised by Villa Ilo while the spouse that did not need care will have a holiday from being the care giver. These couples were the focus group as they could be the prospective customers of the service concept. They were interviewed in a group. At this point, it is not yet clear what the concept is or how to go about it.

The interview was designed inform of a discussion. The goal was to specifically understand what types of activity events the concept should provide, and to know if they will be interested in the concept creation.

1. **What is a fun activity for you?**

Everyone has their own opinion of what fun is, if you are a musician, you will like to participate in music, for some it is culture another woman said, I will go to a place where there is music where we can discuss, person to person, (ihmiselta ihmiselle). I will be entertained if in those groups there are people I can help example with feeding.

2. **What else could you be interested in?**

Dancing, old style, not rap music, but tango, something slow without fast movements where those in wheel chair can also participate.

"It can be in a park where we can roast sausages and drink coffee" another lady exclaimed!

3. **How about the men, is there something you will enjoy?**

The nature said one man. For example, some walk in the forest where we can discuss everyday happenings like politics, current news from TV or Radio and our opinions about it. Some games I like to play is the question and answer game, card games like Uno.

A woman interjected, there is a good one called eläkeläinen – this game is like having a brain exercise and it is good for elderly people like us because you have to think, I can teach this. Another man shouted skip-bo, anything that involves social contacts that takes the thinking away from the usual day routines especially away from the sicknesses so that the pain doesn't feel that much is good. Another woman continued, in such places you can see that you are not alone.

4. **What will be that fun that even if you are tired you will still go or participate in it?**

Going to the nature, going to the waters with boats and to fishing.

5. **What are other activities e.g. those that happen outside the club hall you will be interested in?**

Möllky game, Pétanque, Ring tossing, and croquet games

6. **How does it sound if the activities include going to historic places?**

Making trips to museums will be fun, it is good to understand that people are different, I will not go to museum, if it summer theatres, sand beach where we can walk. I would like to organise quiz questions during trips, and the best three should be rewarded with some gifts.

7. Do you participate in any kind of stimulating activities, if yes what services?

Another women started, we have lived in Spain for some years and there is some Finnish community, the men likes to play the mölkky game, Pétanque and Chess. Some of us have travelled together to Estonia, our trip was financed by the Finnish gaming company called RAY a woman said, I have many contacts and could help organise trips for the activity club if needed.

She continued, It is not enough that I get involve in the service but that I have the possibility to participate in the concept development, I want to be heard and understood enough, so that I can say what in the service does not work.

Summary

Members of the focus group interviewed mentioned activities that they are interested to participate. Some of these are visit to the museums, playing pétanque, Ring tossing, and croquet games. For outdoor games, a walk in the nature, fishing with the boat and roasting sausages and drinking coffee in the parks, as well as having a walk in a sand beach. The target customer motivation was to have social interactions with other people, that take their thoughts away from their illness, and to have communication companion. They would also want to participate in developing the service and for their opinions to be considered especially by understanding that they may want different things at the same time.

Interview with Hovi Group CEO

Date: 13.4.2016. Time 9:00 – 10.15 (Phone Interview)

Introduction: Thank you for your time. Virtual Interactive Care Service is a care service concept being developed to provide interactive stimulating activity events to elderly people virtually. You and your organisation were participants in the concept creation with the pilot project. The following interview questions are a part of thesis study designed to evaluate the concept, and analyses its possibilities as a care service business in Finland. Thank you again for participating in this interview!

1. Background info

- Please tell your background and what you currently do?

My name is Jussi Peltonen. I work as the CEO of Hovi group, which means that I am leading the unit in Finland and in Spain. I am also one of the founders and owners. We started the group in 2008. Before that, I worked in Headstart Oy, which we started in 2005. I am currently looking for ways to internationalise Hovi group.

- How would you describe the concept of Virtual Interactive Care Service?

The idea of the service was originally coming from the need to bring different activities for our customers who are not able to travel. We are serving elderly people with mental disability, handicaps, this is why we think it is good to organise virtual interactive activities for them.

2. Why could the concept of Virtual Interactive Care be or not be a feasible private care service business?

The service itself got good remark and feedback. The technology required expertise so that the video breaks do not happen. The challenge is how to be cost efficient in providing the service, and how to find customers willing to pay enough for the service.

The cost structure include the person helping people in the nursing home to use the service, a back office support for the technology, the person to make the transmission, and the equipment. The part that required most preparation is the person who will make the life feed, and this will be better to be a volunteer.

The service concept was creating an activity that has not been witnessed before. But it is not crucial for the nursing homes especially for the small and medium care service providers. The mid players have been bought and the bigger players like Esperi would not necessary like to pay for this because of the tight requirements for nursing home provision. It means that the concept specifications have to be part of the competitive bidding document for care service provision. There is cost pressure from the municipalities, which at the moment are very tight on financial resources because they are struggling to take care of the people they should be taking care of.

- What did you like best with the concept of Virtual Interactive Care Service?

The best thing was to see the experiences the customers had. In the one organised from France, the person in one of the units started to recognise the places in the video, she had memory illness, it was remarkable that the activity event was able to bring the memory back

- In your opinion, what is the concept core value for the paying customer?

To provide experiences for people living at home, from your own world to be able to participate in your own way, otherwise it will be like watching TV. We cannot compete with video quality but with when the person is able to take part?

- Will your organisation purchase this service? Why and why not?

It depends on the cost. Hovi group could have a role in producing the service to its customers. The challenge is the potential amount of customers considering people living in old people homes. Only the big players could and they are very strict on cost. These

services have to be targeted to people living in their own homes. So it's very much about sales and marketing. This is like an additional service which benefits the end users, the customers living at nursing homes don't have extra money, their income have been taken away to pay for the nursing home services they are using.

- What is the biggest obstacle of Virtual Interactive Care concept- for the service users, for the service itself, and partners especially the public sectors as the service buyers?

To make sure the service has interactive part and to provide the service cost efficiently. Challenge is employer cost, which relates to operating, preparing and making the transmission

- Is there gap (possibilities and challenges) for Virtual Interactive Care Service in elderly care service delivery in Finland?

There's an interest for the service, the technology is there, but it would have to be sold from a voluntary point of view. In other words, the day-to-day activities should be running on a voluntary base. There are probably people willing to do this. The key is finding the person who will take the time and effort for it.

- How could the service concept be scalable? If not scalable, why not?

The main issue with the service is that it has to be interactive which means that the amount of people in the same event is a bit limited. If the concept is changed so that the live feed is not interactive, the concept value changes. It takes about one day to plan and prepare per transmission. Assuming 5euro/ hour of the activity event will be paid by the elderly person living at home, i.e. if the service is marketed to be similar thing as going to a gym, an activity event lasting for a specific time. If the cost is 200e per day and you have limited amount of people attending the transmission to not lose the interactivity, then it comes down to needing voluntary workers, who will provide this service so that the cost will not be too high. This is the gap that needs to be solved. The biggest challenge is scaling up the service.

3. Is the Virtual Interactive Care Service commercially viable? Why and why not?

There are many options for the activities and the technology is not very expensive. The many preparations required for transmitting the events is the main cost component to handle. The willingness of customer to pay is approximately limited. As was tested, we had 20euros to 100euros per hour. There is challenge in labour cost from the operational side. The challenge from the customers' side is the willingness to pay for the service.

- It seems that the elderly people who will be the service users are not necessary the service customers since they will not be the ones paying for the service themselves. Who would be the best paying customers and why?

The other target group could be elderly people living at homes, those not already in nursing homes. To sell to nursing homes, you have to do that through the managers of those homes. The owners of nursing homes are resource tight at the moment. The challenge is making sure they have the equipment. It appears the people living at home are very cost conscious as well. Further research should be to make sure how much they are willing to pay and are committed to pay. People say the service is nice but when it comes to actual payment decision they are reluctant to commit with resources.

- What is the paying customer value proposition? How can that be validated?

It comes down to the number of people attending to each of the event transmission, you cannot create big group for the transmission, so you don't get many paying customer for the transmission. You could sell to 100 people, but they are probably frustrated when they are not able to be interactive in the events.

- The public sectors is considered to be a good customer i.e. the service buyer for Virtual Interactive Care Service concept, What will influences public sectors decision to purchase Virtual Interactive Care Service?

It's arguable that the public sector will benefit from supporting this kind of service but how we see it is that they are struggling with finances. They are not able to provide all services required by law. If we are able to prove to the municipality that we are saving money, for example, with this service the person is able to stay in their own home longer, then it will be a different discussion and this will be very difficult to show with the concept

- What is the buying process of public sectors in purchasing care service from private care providers' e.g. how would VIC services become a care service voucher provider?

If the things they are purchasing is above certain limit, not sure the amount now but e.g. 100 000 euros, they will have a competition for it. As the service provider, you have to make specification for the service to participate in the competition. That means you will have to teach the municipality to buy the service. There could be a general agreement (Puitesopimus), which means that they can be several organisations that could provide the service for the municipality. They will organise the competition and based on their criteria, they will select who will provide the service.

At this early stage of Virtual Interactive Care Service, there will not be too much people competing. The competition tender is also made publicly. Service provider attends to the tender and the municipality make decision based on those who attend. The skills required are to fill in the papers in the right way as to not be banned from participating in the competition. You need to have a private limited company, and sufficient insurances especially responsibility insurance which for us it up to 1million euros. In some competition you can attend with a company you are going to establish but you are required to present whether the services will be profitable or not, and you could be locked to the contract for a given period say 5 years, so that even if you're not making profit, you still have to deliver the service as agreed in the contract. So it is important the person knows what he or she is doing. The biggest challenge is to get a green light from municipality that they are willing to make this kind of competition, because it takes a lot of resources from them to organise this. It comes down to telling them how the service is going to save them money.

- What are other realistic revenue options for the service concept? How should that be pursued? How can this be funded?

The institutional players like TEKES are one option, but it is very hard to get funding from this people. Eykeskus is another that works in similar level to provide developmental aids for businesses. There is a new government proposal called innovaatioseteli (innovation voucher) to remove barriers to entrepreneurship and improve operating conditions for small and medium enterprises. It is not yet clear when and how much this will be. A way to fund Virtual Interactive Care concept could be crowd funding. It could help to get the customer base for the service such that those who are owners of the company can get discount from using the service. This means that from the day one, we have to get 200 to 500 people who are investing 20e or more to the concept. These are potentially those with whom you can start to run your operations.

4. In Summary,

- Do you have more information you would like to add to this discussion? E.g. areas of further research, critique to the process used?

When you tell people you work in elderly care they are like, yes, that's the right place to be. It could be a tough environment to compete. For the service concept, it is necessary to match volunteers with the elderly people, some elderly people have specifics of what kind the volunteer should be e.g. A woman, in certain age. Some volunteer centres charge around 7e for the administration fee. Not everybody, willing to pay for the services,

- Would it be fine that your name and the name of your organisation is mentioned in the thesis?

Yes

Thank you!

Kiitos!

Interview with CEO of Suomen kotilääkäripalvelu Oy

Date: 20.4.2016. Time 8:00 – 9:00 (semi-structured)

Introduction: Thank you for your time. Virtual Interactive Care Service is a care service concept being developed to provide interactive stimulating activity events to elderly people virtually. You and your organisation were participants in the concept creation with the pilot project. The following interview questions are a part of thesis study designed to evaluate the concept, and analyses its possibilities as a care service business in Finland.

Thank you again for participating in this interview!

1. **Background info**

- Could you please tell your name, background, and what you currently do?

Name is of course Jani Korpela, entrepreneur, 12 years of experience from health care sector, 6years from IT, running at the moment four companies. CEO.

- How would you describe the concept of Virtual Interactive Care Service?

Modern way of entertaining people. Supported by technology based on Internet. The interactive part makes it different from TV. There are similar aspects if you think of the TV program Idols, but this gives certain freedom and more power in the side of the users. It is also real time interactive.

2. **Why could the concept of Virtual Interactive Care be or not be a feasible private care service business?**

Since we do distant psychiatry, medicine and education in many ways. I have a theory, which could be working. When talking about video interactivity, it can support face-to-face but never be face to face. It can work only when there's absolute need for that that

cannot be done any other way. If it possible for people to go to korkeasaari by themselves, they would prefer to go, but if you are really sick, you do not only need to see a doctor, you cannot trust yourself at that moment. You need to have absolute need the people cannot (solve) in any other way, it can work in elderly people home, but it gets to question of need and money

The elderly have the need. They are bored and need to be entertained. There's need wherever they live, but does the society have the money? I don't think so. The society is not thinking of taking care of the elderly like the family of the elderly person thinks. The concept of elderly care is wrong what does public sectors competitive bidding ask for? It is the cheapest price always, the cheaper your service can save for them, and the better your chance of survival will be. From my opinion, with less money you can never get best quality.

If we are talking about people living by themselves and their relatives, there is possibility to get somebody to pay for the service. If they understand they can survive longer at their own home, there would be the service need and the money also, but the difficulty is to get the scale. To find the first 1000 or 100 people who buy the service, and are they able to use the technology? It has to be very simple; there can't be more than one button.

People need to be educated of the service benefit. The concept activities need to be from so far away, so difficult that they cannot do it themselves. The pain needs to be killing the customer for them to subscribe to the service. Thinking about elderly, the virtual service has to be the part that does not require human touch, or so that the users are themselves the eyes and hands of the service.

Maybe children of the elderly people will buy this service as a mother's day or father's day present to their aging parents. They may buy a package for at least 2 months. If I would buy this service for my parents, I would be interested to test this first to see my parents can use the technology.

How to scale it up?

- What did you like best with the concept of Virtual Interactive Care Service?

It gives a good feeling. You realise you do something good. What we did was fun and good for the elderly people and lot of fun to be the entertainer.

- In your opinion, what is the concept core value for the paying customer?

Get the people happier, active, give them something to remember and share with. The core value is how we can make people feel, because most of them are happier after than before that one-hour session. This is part of healthcare, to entertain people, but nobody cares about the feelings of these people (elderly people). In Finland everyone can access healthcare centre not farther than 0,25 – 1,5 hours drive. In mental care services we measure how the people feel. If you're talking about dying cancer patients, what matters is how they feel, less pain. By participating in the virtual interactivity session, the elderlies are taking care of their own wellbeing.

- Will your organisation purchase this service? Why and why not?

I wouldn't buy if I were a nursing homecare provider. They are working for the system, and they (i.e. the healthcare system) are not interested in this service. But if I think of my parents, I would buy it. You could hook them somehow, if the service is interesting.

- What is the biggest obstacle of Virtual Interactive Care concept- for the service users, for the service itself, and partners especially the public sectors as the service buyers?

To find people willing to pay for it because the public sector is not interested in getting those people better, but keeping them the way they are, diminishing their wellbeing and getting them out (of the system) as fasts possible

- Is there gap for Virtual Interactive Care Service in elderly care service delivery in Finland?

There's huge gap to start operating this kind of business. Because everything new is resisted first, you need to know carefully the actual need and the person willing to pay for that and they will not pay for it unless there's absolute need.

- How could the service concept be scalable? If not scalable, why not?

To scale it up, the sender has to do the work for free. People would be interested in sharing their experiences for free. Travellers for example can share their trips with elderly people. To scale it up, it needs to be thought globally straight away. The user base has to be expanded.

3. **Is the Virtual Interactive Care Service commercially viable? Why and why not?**

You can count it cost of one broadcaster to 5 users, if the users agree to pay 10e per hour, that's 50euros, you see that for it to be scalable, some part of it has to be voluntary work

- It seems that the elderly people who will be the service users are not necessary the service customers since they will not be the ones paying for the service themselves. Who would be the best paying customers and why?

Example could be children of elderly people, because they have the real interest in the wellbeing of their parents, the government does not and the elderly themselves may not see they need this service yet.

- What is the paying customer value proposition? How can that be validated?

For the children of elderly people, we would need to have data. As we have seen already with the pilot, stories of people remembering things from their childhood, those who never talked in the past 2 to 3 months started talking from their experience with the session, then, they will buy. If you need to start explaining why the service is good, then it may not work

- The public sectors is considered to be a good customer i.e. the service buyer for Virtual Interactive Care Service concept

I don't believe the public sector will be a good customer because it is not something they are doing themselves at the moment, which you could do better. This is totally new thing, and the decision makers wouldn't get glory out of it for him or herself. If you think of public sector's decision makers, what is their benefit from this apart from getting the glory as this is their idea and they were the tough guys that made the idea happen.

- What will influences public sectors decision to purchase Virtual Interactive Care Service   i.e., how would VIC services become a care service voucher provider?

Cheap price, we need to proof that when they buy this, they can save money in one way or the other.

- What is the buying process of public sectors in purchasing care service from private care providers?

When they (public sector) realise something is too expensive, and they don't have resources for that, they start to look for the solution. One possibility where public sector maybe interested is if this solves a problem in kotihoito (Homecare services to the elderly people still living at home). There has to be data the people can stay longer at home when they use this service, and it needs to be proved somehow.

- What are other realistic revenue options for the service concept? How should that be pursued?

Children of elderly people, maybe from the public sector if we find the place they would be saving money, and before then we need the data from more pilot where that can be proofed. Considering grants, e.g. from Tekes, their money is only 50% so 50% has to come from somewhere else. If it truly works, we don't need money from TEKES, we already have done the pilot and we know 5 groups at a time is the max to keep the interactivity. The only problem is who buys it. If we go through 100 elderly people living at home, and you ask their children, you know, not only ask but also say you buy it now,

you give the money and I give you the service. Then we will know for sure if they are paying customers for the service because many people says yes they will buy but when it comes to commitment with their money, then you will know if the real answer was yes or no.

4. In Summary,

- Do you have more information you would like to add to this discussion? e.g. areas of further research, critique to the pilot project process used?

The voluntary part of the work is important, we need to have people (volunteers including elderly people) be the senders themselves, and share the feelings of what they are doing. This comes to the bottom of human need of to feel important.

- Would it be fine that your name and the name of your organisation is mentioned in the thesis?

Yes

Thank you!

Kiitos!

Service concept of Virtual Interactive Care Service

CUSTOMER

Service users and buyers e.g. Elderly people themselves, Children of Elderly people, Public Sector through Municipalities

WHAT

Social care based on Interactive and stimulating activities

SERVICE CONCEPT

Virtual interactive care services

HOW

Delivered virtually with WebRTC over Internet

STRATGIC INTENT

Establish Virtual Interactive Care Services. A Virtual Care service business as VIC Services Oy
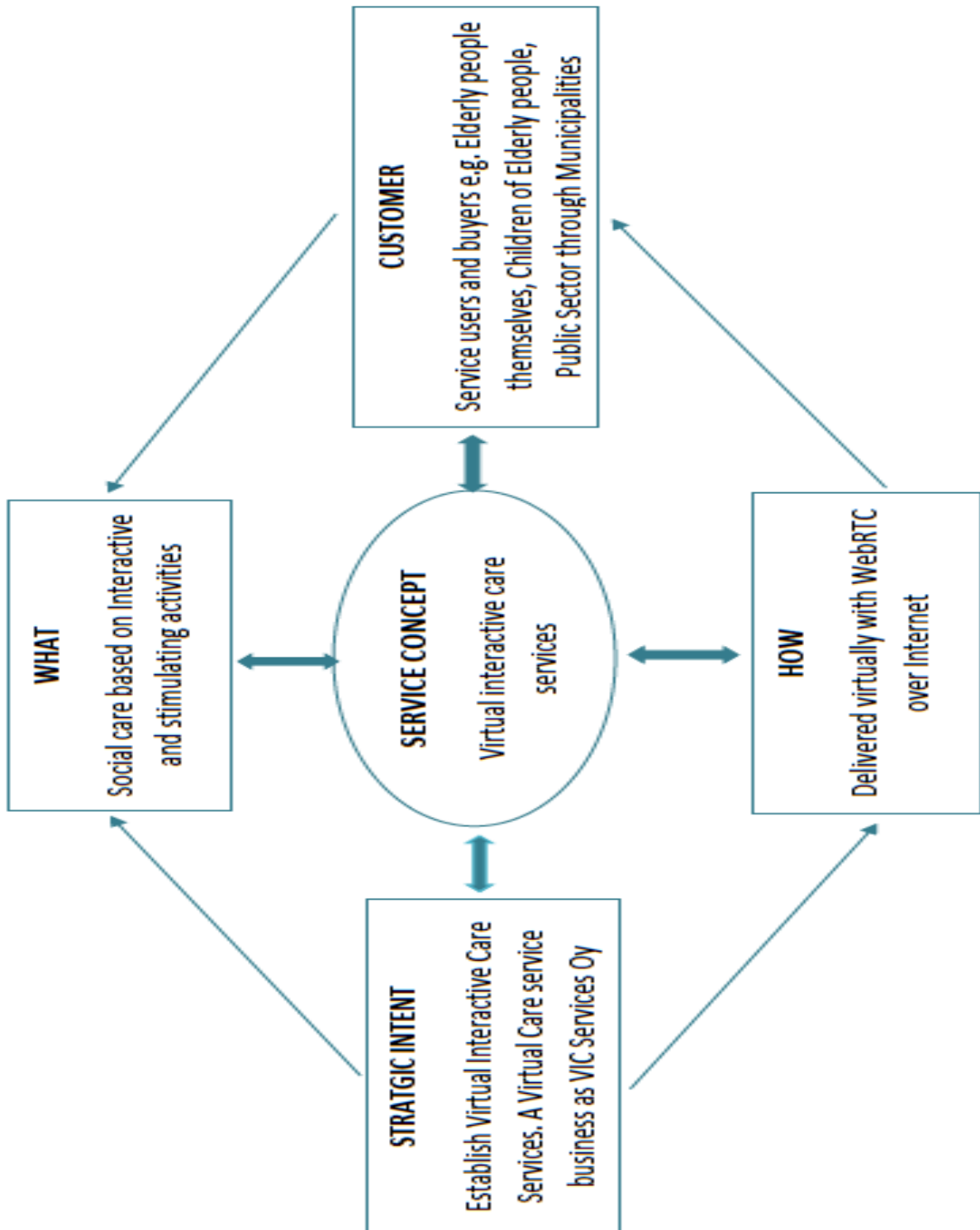
Service Design Planning of concept case Project

SERVICE CONCEPT

Virtual interactive care services

Feedback Mechanism (For furture design changes)

Measurements

(Inputs-output performance)

People's value: as users, partners, and customers

Technology availability and cost of development

Processes: Backend is costly

Physical facilities: conditions meet regulations for elderly care services

Equipment can be intra-company resources if users are clients of partner companies

Service delivery system

High-speed internet at both transmitting and receiving points is preferred

Performance

Group facilitators drive performance at encounter levels

Outputs

Service outcomes: Interactive activity events with elderly people and for elderly people delivered virtually Service experience: Positive and fun based on clients testimonials and media

Technology Customised for the activity events

Processes: WebRTC engineer and broadcaster at Backend and front end activities by participating elderly people their group facilitators

Physical facilities: Strategic Business Units under Hovi Group Oy

Equipment: Provided by Intra company resource of Hovi Group Oy and Suomen Kotilääkäripalvelu Oy

Service Delivery System

High-Speed wireless Internet, 3G, preferably on 4G networks

Inputs

People: Elderly people in nursing homes and homecare care clients, elderly group facilitators' e.g. employees serving the clients, decision makers of the major stakeholders

Technology: WebRTC

Processes: Backend activities by event engineer and broadcaster and front end activities by participating elderly people their group facilitators

Physical facilities: Nursing homes, homes of elderly people, event activity venues

Equipment: computers, projectors, broadcasting equipment e.g. HD camera

Service Strategy

Develop concept to establish care service business called VIC Services Oy

Service offerings in partnership with Hovi Group Oy and Suomen kotilääkäripalvelu Oy

Service concept offering is across organisational layers

Triangle B:

ORGANISATIONAL LAYERS

- **Executive** — Strategic — Vision, strategic — Answers the "Why?"
- **Management** — Functional — Tactics — Answers the "What?"
- **Operations** — Day-to-day, Answers "How?"

Triangle A:

SERVICE OFFERING

- **Concept** — Content and outcome that satisfy customer needs (value)
- **Proces** — Front-and backstage activities
- **System** — People, physical, Technical, and Organisational resources

Business model canvas of Virtual Interactive Care Services

Key Partners

- Hovi group Oy
- Suomen
- Kotilääkämpalvelu Oy
- Old people´s nursing home (public & Private)
- Developmental agencies like Tekes, Elykeskys
- Voluntary workers
- Associations where older people are active-churches-Libraries, movie theatres
- Owners/managers of activitycentres where elderly people would like to attend, e.g culinary schools, knitting clubs, zoos, museums, national parks, etc

Key activities

- Find activities elderly people want
- planing, test and organise the activities e.g. three times per week
- Continuous marketing and communicating of future activities to stakeholders through our channels

Key Resources

- Interesting activities
- Programmer/ computer engineer
- Customisable audio and video Web real-time communication (WebRTC)
- Live feeder and facilitators
- Technological equipments

Value Proposition

Functional benefits
- Less money spent on medications to treat depressions and relaxants
- Improved memory from remembering places they have been before

Social benefits
- Interactive social activities
- Relief loneliness and idleness through fun activities, dancing, music, and conversation companions in groups
- Virtual access to meet and spend time with friends of similar values outside their homes or from other nursing homes both in Finland and abroad
- Memorable events with fun virtual trips they would otherwise not be able to go because of disability.

Emotional benefits
- Stress relief for families for purchasing the service
- Keep up with technology trend and developments around the world

Customer Relationships

- Long term contracts with users
- Contracts with public sectors
- Active in expos
- Partnership with care service providers
- Co-creating with users and partners

Channels
Offline
- Nursing homes, churches, associations for seniors
- Cold calls, emails, and meetings with gatekeepers
- Direct mail of service catalogue to prospective
- Articles in media local news papers

Online
- Website, social media sites like facebook, twitter etc

Customer Segments

- Elderly people in Finland
- Close to retirement or retired
- People aged 55 and above who use home care services
- Have mental disability like Alzheimer or handicaped
- live in their own homes or in nursing homes
- Lonely or show signs of depression
- Those not able to travel
- To start with, those who lives outside of the capital area
- Service voucher providers and gatekeepers e.g public sector and their representatives i.e social workers for elderly people

Cost Structure
- Fixed: Technology development and equipment purchase
- Variable: Operational costs from preparing and organising the activity events, and costs from securing paying customers
- Reduce cost with voluntary workers who can help with organising by working as live feeders or facilitators. E.g students, retirees, holiday makers, anyone willing

Revenue Streams
- Per-users and participation fees e.g. 9e per individual or 49.99 per group/ event
- Members monthly subscription payments also with service vouchers
- Crowd funding gives ownership benefit of 20% discount for using the service
- Business developmental aids from government e.g. Tekes, Elukeksus, etc