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Designing service for a personnel agency in the social and health care sector

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**Designing service for a personnel agency in the social and health
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Vuokratyövoiman välittämiseen keskittyvän palvelun muotoilu sosiaali- ja terveysalalla

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Opinnäytetyön tavoitteena oli kehittää uusi palvelukonsepti Yritys X:lle, joka välittää vuokratyövoimaa sosiaali- ja terveysalalla. Yrityksellä on useita eri palvelukokonaisuuksia, mutta tässä työssä keskityttiin lyhytaikaisen vuokratyövoiman tarjoamiseen eli työsuhteisiin, jotka kestävät alle viikon ja joissa asiakkaiden tilaus tulee korkeintaan muutaman päivän varoitusajalla. Yritys X on hiljattain kokenut paljon sisäisiä muutoksia ja haasteita, joiden johdosta uuden palvelukonseptin luominen nähtiin tarpeelliseksi. Konseptia haluttiin kehittää palvelumuotoilun keinoin, jotta saataisiin asiakkaiden näkökulmaa korostettua. Konseptin arvoa pohdittiin erityisesti digitaalisten palveluiden tuomien mahdollisuuksien kannalta.

Teoreettiseksi viitekehikseksi valittiin Moritzin palvelumuotoilun prosessimalli ja varsinainen tutkimus voidaan jakaa kahteen toisistaan erottuvaan kokonaisuuteen joista ensimmäisessä pyrittiin kartoittamaan nykyisen palvelun rakenne ja toisessa keskityttiin luomaan uutta konseptia. Ensimmäinen askel oli luoda prosessikaavio palvelusta jotta ymmärrettäisiin sen nykytila ja erityisesti haasteet asiakkaiden näkökulmasta. Tässä käytettiin apuna tapaustutkimuksen työkaluja ja siihen kuului asiakkaiden sekä työntekijöiden teemahaastattelut. Seuraava vaihe oli uuden konseptin luominen käyttäen apuna liiketoiminnan mallinnusta. Tätä varten asiakkaille pidettiin ideahaastatteluita sekä kasvotusten että sähköisen lomakkeen avulla. Lisäksi työntekijöiden tietämystä hyödynnettiin kilpailijavertailussa.

Opinnäytetyön tuloksena luotiin uusi konsepti, jonka keskeisimpiin havaintoihin kuului se, että henkilökohtaisen palvelun arvo on niin suuri, ettei automatisoinnille ole tässä vaiheessa toimintaa perusteita. Palvelumallille on kuitenkin ominaista asiakkaiden suuri määrä ja suhteessa pienen volyymin tilaukset. Asiakkaat tulee priorisoida ja palvella heitä sen mukaisesti kenellä on suurin potentiaali kehittyä tuottavampaan suuntaan. Tämä lisäksi suuren asiakasmäärän hallinnointia varten on luotava asiakastietokanta, johon saadaan kaikki oleellinen tieto asiakkaiden tarpeista ja tilaustoiveista tallennettua. Myöhemmässä vaiheessa tätä voidaan kehittää edelleen esimerkiksi tarjoamaan tilauksiin jo vapaina olevia ja kyseiselle asiakkaalle soveltuvia työntekijöitä.

Vuokratyövoimaa tarjoaviin yrityksiin liitetään vahvasti mielikuva tavaroiden myynnistä. Sopimukset asiakasyritysten kanssa muistuttavat ehdoiltaan tavarakauppaa, ja alan negatiivinen julkisuuskuva työsuhteiden ehtoihin liittyen vahvistaa samaa käsitystä. Näistä syistä palvelumuotoilu on lähestymistapa, joka antaisi alalle uusia työkaluja. Perinteisesti tietojärjestelmäosaamisen näkökulmasta aihetta olisi lähestytty esimerkiksi toiminnan tehostamisen ja suunnittelutieteen tutkimuksen avulla. Tässä aihetta haluttiin kuitenkin tarkastella kokonaisvaltaisesti, joten valittu lähestymistapa oli tietoisesti erilainen. Opinnäytetyön tulokset osoittavat palvelumuotoilun hyödyllisyyden ja kannattavuuden vuokratyövoimaa välittävissä yrityksissä sekä myös tietojärjestelmien tutkimustyön kannalta. Maksavien asiakkaiden lisäksi palvelun kehittämiseen lisäulottuvuuden tarjoavat myös vuokratyöntekijät, jotka voidaan mieltää sisäisiksi asiakkaiksi.

Asiasanat: vuokratyö, sosiaali- ja terveysala, palvelumuotoilu, tapaustutkimus, käyttäjäkeskeisyys, automatisointi, hammashoitaja, suunnittelutieteen tutkimus

Mantere Riikka

Designing service for a personnel agency in the social and health care sector

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The goal of this thesis was to develop a new service concept for Company X which provides agency work in the social and health care sector. The company offers several different services but in this thesis the focus was on providing a short-term agency work. This means employments that last less than a week and the need for them comes rapidly with only a few days of notice. Company X has struggled with personnel changes and the need for a new service concept was seen as necessary. The chosen approach was service design in order to gain the customers' perspective on the new concept. The value of concept was considered especially from the angle of the possibilities that digital services can provide.

Moritz's service design process model was used as theoretical framework and the research can be divided into two different sections. The goal in the first stage was to map out the structure of the current service and in the second stage the focus was on creating the new concept. In order to understand the current stage and especially the challenges from customers' point of view a service blueprint was created. The tools of case study were used and it included theme interviews with the customers and the employees. The tool for creating the new service concept was a business model canvas. Idea interviews with the clients and benchmarking discussions with the employees were used to collect data.

As a result of this thesis a new service concept was created and one of the most important outcomes was that there is no need for automation at this stage because the personal service is valued highly. However the large number of small clients is a problem and therefore they need to be prioritized so that those who have the biggest potential to develop are served first. There is a need to create a client database that would contain every necessary small piece of information about different clients. Later on this should be further developed for example to offer the most suitable free employees to the received orders.

The trade of products is often related to the personnel agencies. Mainly that image comes from the terms of the client contracts and it is strengthened by the negative public reputation related to agency workers' work conditions. For these reasons the service design is an approach that would provide new tools in the field. The traditional approach of the Information Systems discipline would have been for example to concentrate on the efficiency with design science research. There was a need for more comprehensive view so the chosen approach was different. The results of this thesis indicate that service design is useful in the personnel agencies and also from the viewpoint of research and development of information systems. Furthermore the additional dimension on developing the service would come from the agency workers. They should be perceived as internal clients.

Keywords: agency work, social and health care sector, service design, case study, user-centered, automation, dental nurse, design science research

Table of content

1	Introduction	6
1.1	Defining this thesis.....	7
1.2	Previous studies and the structure of the thesis	8
2	Theoretical framework.....	9
2.1	Working as an agency worker	9
2.2	Short-term employments in the social and health care sector	10
2.3	Design in the Information Systems discipline	12
2.4	Utilizing the customer’s viewpoint with service design	14
3	Definitions and advancement of the development task.....	17
3.1	Description of the development methods	17
3.2	Service design understanding	18
3.2.1	Framework for the case study	19
3.2.2	Results from the interviews	23
3.3	Service design thinking.....	26
3.4	Service design generating	27
3.4.1	Idea interviews with the clients	28
3.4.2	Benchmarking discussions with the employees	29
3.5	Service design filtering.....	32
3.6	Service design explaining	34
3.6.1	Components dealing with the clients and value	34
3.6.2	Components dealing with money and costs	36
3.7	Service design realizing	37
3.8	Summary of data collection	38
4	Conclusions.....	41
4.1	Outcomes	41
4.1.1	Automation and personal service.....	42
4.1.2	Client database	43
4.2	Suggestions for follow-up studies	45
4.3	Relations to Information Systems discipline.....	46
4.4	Evaluation of the development task	48
	List of references	52
	Figures	55
	Tables	56
	Appendixes	57

1 Introduction

The agency work is an emotional subject for many. For example the trade unions have conflicting thoughts and some concerns regarding situations where a long-term labor shortage is solved with agency workers (Selin 2014). As a concept the agency work receives a lot of attention and negative publicity, for example Helsingin Sanomat refers to the field's reputation as the exploiter of non regular workers (Suominen 2013). The agency workers' share from the total number of employed in Finland in 2012 was only one per cent (Työvoimatutkimus 2013; Tilastokeskus 2013).

The attention that agency work gets in publicity seems even unreasonable when compared to the total number of employed. But it is also worth to be noted that the discussion and attention have led to improvements in legislation and regulation. The most significant changes have been made on the Employment Contracts Act by implementing the Directive on temporary agency work (HPL 2012).

There are many forms of agency work that vary depending either on the purpose of the user organization or the field of work. It can be a long-term employment lasting several months or it can be a sudden need for an employee that lasts only a few hours or a day. The agency work can also have a role as an unofficial recruitment channel in which the user company applies it as an extended trial period for the employee before hiring him or her themselves.

There are several different procedures in the field which also explain to some extent the general shady reputation of agency work. That is partially resulted from the large number of different operators. According to the Private Employment Agencies' Association HPL (Fact Sheet, 2013) there are 500 established companies operating in the field and only 260 are members of the association. The field aims at self-regulation by authorizing companies that operate according common principles and provide fair agency work (Reiluja vuokratöitä, 2014).

During the last few years the usage of agency work has grown steadily. In an annual study 28 per cent of the answering employees in 2012 evaluated that their employer had used agency work during last year. In 2009 the corresponding percentage was 18. (Työolobarometri 2013, 14.) At the same time the number of agency workers has decreased. In 2012 there were approximately 27 000 agency workers which is roughly 3, 9 per cent less than previous year. (Tilastokeskus 2013.) Basically this means that there are fewer agency workers and at the same time more user organizations.

1.1 Defining this thesis

In this thesis the agency work is studied in the social and health care sector. In that field the short-term employments are typical and both the private and the public sector often have continuing usage for quick surrogacy employees. This thesis concentrates on employments that last less than a week and the need for them is urgent. In other words, the employee is called to work with less than a week's notice. Commonly this means filling the shortfall related to sickness absenteeism of the regular staff.

In the field of agency work the terminology and way of thinking is often branded as providing personnel solutions to customers. For example, one big operator, VMP promises in its website that the company understands client's personnel challenges, offers models for co-operation and refers to its long-term experience on planning and executing personnel solutions (VMP 2014). At the same time the field's procedures in general are assimilated with the models from trade of products as will be shown later on.

Therefore it can be assumed that the development in the companies that provide agency work has been at least partially inverse: the common trend is on growing the share of service in companies that produce traditional consumer products (Miettinen 2011, 21) while personnel agencies are trying to apply their service as products. The desired image of the operating companies and the reality that is absorbed in the public don't encounter.

This research was made for Company X whose interest is in developing their own delivery process and finding critical problems that should be fixed. Company X is a subsidiary in a group that is one of the biggest operators in the field of agency work in Finland. Besides providing agency work the corporation operates in several different branches, offers consulting services, service center and outsourcing solutions and also executive search services.

Company X provides mainly regular and dental nurses to its customers and is focused on Helsinki metropolitan area. The business concept is interesting because Company X's own customers are also often competitors since they have their own lists of employees that they can use to fill the short-term needs. It is worth to be noted that Company X also provides long-term agency work and other recruitment services but these are not addressed here.

Recently there have been notable changes in Company X's personnel so it is vital to recognize the core business. Some of the older clients have been lost during the process and previous relationships have been damaged. The trust has to be partly rebuilt. Hence Company X needs to find new ways to create value for the clients in order to establish the foundation and to start growing the business again. Company X has multilateral problems. On the other end the

large amount of manual work requires rationalization. At the same time the loss of clients and the lack of routines indicate that other courses of actions are also needed.

The objective of this thesis is to develop a new service concept for Company X. The company operates in the social and health care sector and this thesis concentrates on the service of providing short-term agency work and in particular dental nurses. The development of the new concept is emphasized on the digital solutions that can help the process and it considers the needs of both; the clients' and the employees'.

1.2 Previous studies and the structure of the thesis

The previous studies and available research have concentrated mainly on the status and rights of an agency worker in general. Some reports in particular have focused on a certain profession, for example Palukka & Tiilikka (2007) have studied especially the agency working doctors. Tanskanen (2012) has also concentrated in his studies in the standpoint and status of an agency worker in general. There is a need for studying the field more in the perspectives of the personnel agencies. Also because often the field is studied in general, it is important to deepen the insight by doing a research in certain field and also in several professions to find possible differences.

There have been made a lot of studies in relation to service design. However earlier researches that would have been made especially from the viewpoint of agency work and service design weren't found. That might be because the field often is associated with different terminology as will be explained later on. The methodological discussion related to the Information Systems (IS) research has been extensive and concentrated especially on the division between natural and design sciences.

The structure of this thesis is as following: in the introduction chapter the agency work in general, Company X and previous studies related to this field are presented. In the second chapter the theoretical framework of agency work and requirements of working in the social and health care sector are issued. The concept of design in the Information Systems is discussed and the problems it might have as an approach related to this particular case. In addition the service design is presented and explained from the angles that are used in this thesis. The applied development methods are described in third chapter in detail. In the fourth chapter the main results of the research are listed and the future research topics are suggested. At the end of that chapter the research's value and generalizability are evaluated.

2 Theoretical framework

In this chapter the theoretical background is described in detail. The most relevant topics are the agency work in general, the social and health care environment and the design science research in relation to service design. This chapter tries to point out especially that agency work in the social and health care sector has some unique attributes that wouldn't exist in different circumstances. Some studies have shown that the agency workers in the social and health care sector can be considered as the elite of labor market. The agency work is also often associated with the trade of products and hence the service design offers new tools in developing this particular service.

2.1 Working as an agency worker

The agency work is described as one example of using flexible workforce. It changes significantly the traditional relationship between the employer and the employee since the employer moves the work to user organization and gets a payment in return. In several ways it reminds of the trade of products. The agency work as a phenomenon doesn't fit into traditional model of stakeholders in which an employee gives his or her work effort and gets salary, continuity and possibilities to advance in return. Now the work is done in the user organization which doesn't offer continuity and the payment comes from another company. (Viitala 2007, 185-187.) One example for modeling the agency work is presented in figure 1.

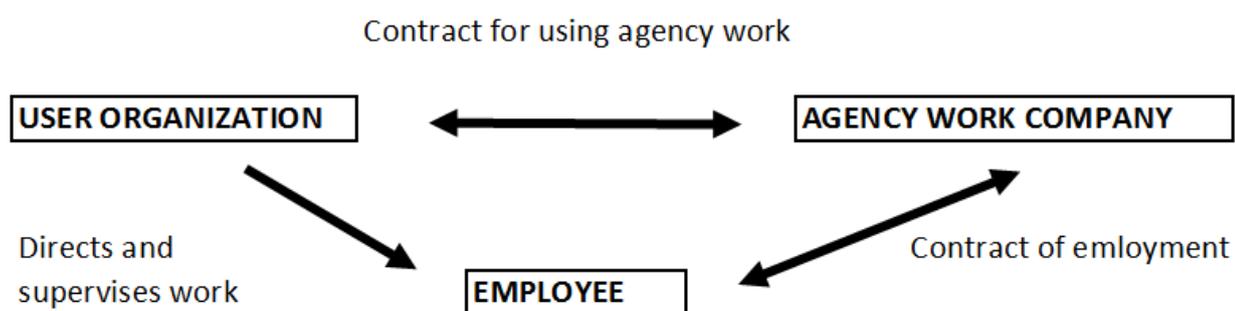


Figure 1: Model for agency work (according to Vuokratyöopas 2012)

Sädevirta (2002, 23-24) names this type of situation as polarization of the employership. He also refers to two different concepts that are the formal status of an employer and the factual leadership and monitoring. This means that there is incoherence in the distribution of liability. In practice this causes difficulties especially in situations where the agency workers are in unequal position when compared to the regular staff of the user organization.

Suddenness and rapidly changing circumstances are closely related to the agency work. According to a report on commonness and informing of temporary employment in agency work (Työ- ja elinkeinoministeriö 2013, 22-23) the most common reasons for using agency work are that it is both easy and simple and also that an agency worker is quickly available to come to work. Other reasons that user organizations gave in open answers were compensating the need of employees during seasons and difficulties in recruitment in certain fields.

The agency work is often presented in a negative way especially when considered the rights and the quality of life of the employees. For example Tanskanen (2012, 43-45) concludes in his thesis that agency work is remotely regulated field and the advertised flexibility is based on employees' constraint on being flexible. He also states that the quality of working life is lower in several aspects for agency workers. For example in Finland the salary of agency workers is lower, superior tasks are rare and part-time work is more common (Tanskanen 2012, 43-45). The social and health care sector may be an exception when examined independently as will be discussed in the following chapter.

2.2 Short-term employments in the social and health care sector

According to Palukka and Tiilikka (2008, 177) the agency workers in social and health care sector have stated that they have chosen agency work because it enables good wage level and both flexible and individual working hours. The agency workers in this field are described as the elite of labor market. This is explained by the fact that typical agency workers operate in the back office or in supporting tasks but in the social and health care sector agency workers often work in jobs where there couldn't be found regular staff. (Palukka & Tiilikka 2008, 182.)

Pohjanoksa and Perkkä-Jortikka (2004, 39) also conclude that in the social and health care sector the need for agency work comes usually from the sudden lack of employees after the exact resourcing of regular personnel. According to them the sufficiency of resources in completing the basic task is the central issue for the good level of care and coping with the workload. This gives more power to a single employee and limits the options of the employer on recruiting personnel.

The user organizations see agency work as a good way to get to know the other party and that can be applied also for the employee. It was seen as an asset that in temporary posts the agency work saved time from the recruiting. The challenge in the user organizations' point of view was that it was sometimes difficult to get trained agency workers. Introduction period lowers productivity. Some thought that the personnel agencies didn't understand enough from the needed know-how of the employees. (Työ- ja elinkeinoministeriö 2013, 88-90.)

The social and health care sector is exceptional when compared to that. The expertise of employees is verified by the professional practice rights that are granted by National Supervisory Authority for Welfare and Health (Valvira 2013). This ensures at least some level of skill even for the agency workers and the personnel agency needs to validate every necessary document during the recruitment process. The user organizations can rely on that.

In the social and health care sector one of the most interesting aspects from the previous studies is the experienced good status of employees and not relating to the company providing agency work. For example according to Palukka and Tiilikka (2007, 31-32) doctors working in an agency employment didn't see themselves as agency workers rather than as simply doctors. This indicates that these types of short employment relationships are normal in this field of work and not associated especially with the agency work.

The future predictions seem promising for the service that Company X provides. According to the review of Ministry of employment and the economy (2014) the labor shortage in the social and health care sector will continue. The survey is based on the short-term future predictions of the field. It is significant information that among 15 professions that suffer most from labor shortage two thirds are from the social and health care sector. Most of the shortage is on doctors and registered nurses. Regional differences are remarkable.

Helsingin Sanomat reported in November 2013 that kindergartens, schools and health-care centers have sudden needs for replacement employees daily. There can be as much as 500 open short-term jobs every day. In the public sector a company called Seure offers employees to over 3000 different places in the metropolitan area. (Tänään töissä, huomenna ehkä, 2013) The cities have a joint ownership in Seure and therefore the company has automatically a good position in providing substitutes in the public sector. In order to stand out as a private operator Company X has to provide something additional compared to Seure.

Company X's strategy has been on developing new services and finding new customers. The development of existing service hasn't been done systematically before and never by using tools such as service design. This approach isn't commonly used in the field in general but there is a need to change that. In the next chapter the thesis' relation to the discipline of Information Systems is argued. The chapter rationalizes the approach that has been used in this thesis which will finally lead to advantages and general characteristics of the service design that are presented in the final chapter of theoretical background.

2.3 Design in the Information Systems discipline

This thesis is a part of the research and development of Information Systems (IS) discipline. There are several ways to define the term information systems and for example Alter (2008, 451) suggests that an IS is a system in which human participants and/or machines perform work using information, technology and other resources to produce informational products and/or services for internal or external customer. The field has two trends one of which is more concerned with the theory (natural science) and the other with improving performance (design science).

Design science has been determined as technology-oriented and as a field that attempts to create things which serve human purposes. Suggestions for an appropriate information technology research framework have been presented in a way that they lie in the interaction of design and natural sciences. (March & Smith 1995, 253-255; Niederman & March 2012, 3) In relation to that Hevner, March, Park and Ram (2004, 80) present their own view from a general framework for Information Systems research as illustrated in figure 2.

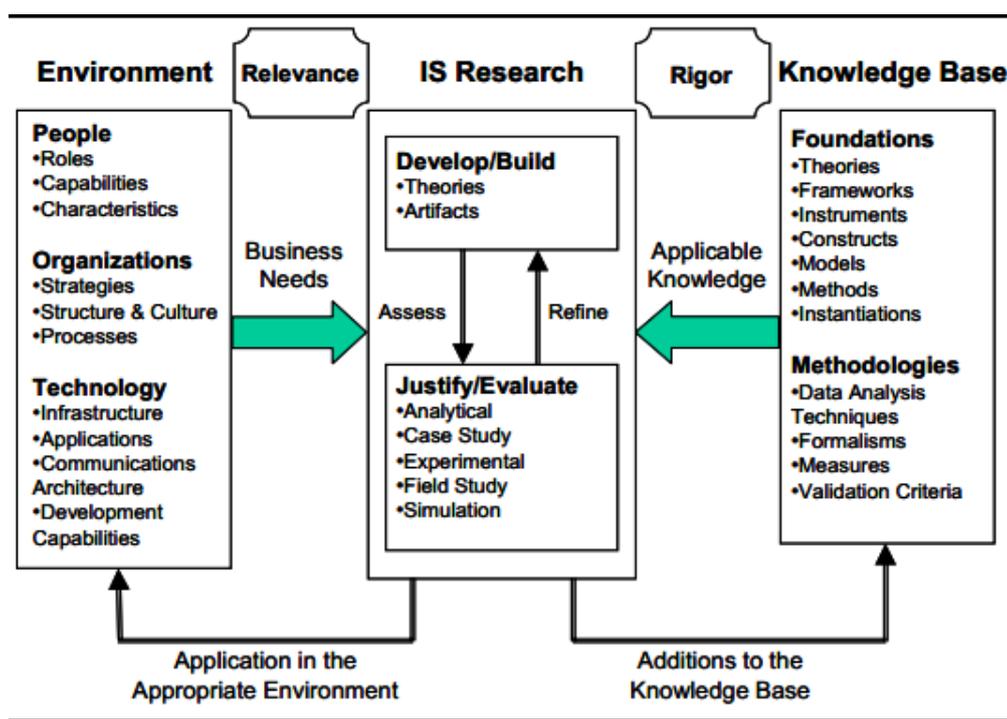


Figure 2: Information Systems research framework (according to Hevner et al 2004, 80)

This framework highlights the importance of two complementary phases in IS research that are behavioral science and design science. The behavioral science aims at finding the truth by developing and justifying theories that explain phenomena. On the other end the design science wants to achieve utility and the science addresses research by building and evaluating

artifacts. (Hevner et al 2004, 79-80.) These two complement and define each other. According to Niederman and March (2012, 2) both are crucial to the development of a cumulative body of knowledge that will define the IS discipline.

Company X wants to renew the business. They acknowledge that the current way to operate includes a lot of manual work and is highly dependent on the personnel. The previous changes in personnel have damaged the business and customer relationships and led to situation where there are no routines for daily operations. The ultimate target is to grow volumes but the means are yet left undetermined. According to Hevner and Chatterjee (2010, 5) the design science research can be determined as answering questions relevant to human problems via the creation of innovative artifacts. Hence in this thesis the traditional approach for design science research would be to create an artifact that would answer the need by enabling the business to be more effective and efficient.

The process of design science concentrates on problem solving. The fundamental principle in design science research is that in the building and application of an artifact is acquired knowledge and understanding of a design problem and its solution. The essential questions for the design science research are 1) what utility does the new artifact provide; and 2) what demonstrates that utility? (Hevner et al 2004, 82, 91.) March and Smith determine (1995, 253) these questions by asking 'does it work?' and 'is it an improvement?'

An innovation in relation to information systems would definitely help Company X to make the processes of providing agency work more efficient. The service itself has problems that appear in the form of lost clients and the small volumes of the existing ones. In relation to this the business needs seem more profound and larger. Nunamaker and Briggs also state (2011, 2) in an article dealing with the broadening the scope of IS that organizations face challenges so complex that they cannot be understood from a single perspective.

The business needs for the artifact come from the environment that is effected by people, organizations and technology as presented in the figure 2. It was chosen in this thesis to apply a framework that would enable a more comprehensive view of the business needs and especially the external point of view. In fact due to the prior loss in clients the customers' requests needed to be now the ruling component.

As Niederman and March present (2012, 10) there is a danger of allowing design science research to become associated only with building IT artifacts without evaluation in the larger behavioral context. Therefore the chosen approach was service design emphasized from the digital and technological perspectives. The method is described in the following chapter.

2.4 Utilizing the customer's viewpoint with service design

The importance of services has been emphasized even in fields of traditional product manufacturing. As for example Alakoski presents (2014, 10) there has been several business-logics that value different components. Especially popular during last few years has been the concept of service-dominant logic. Lusch, Vargo and O'Brien (2007, 6-8) state that the concept superordinates services to products and therefore inverts the traditional roles. They continue (2007, 17) that value is subjective and ultimately determined by the beneficiary who is also the co-creator of value.

Grönroos and Voima (2013, 133) want to specify the value creation more accurately and they represent the standpoint of customer-dominant logic (see for example Alakoski 2014, 10) where customer controls the determination of value and also the actual value creation. Value creation spheres in figure 3 present the roles and possibilities to influence for the customer and (service) provider in value creation.

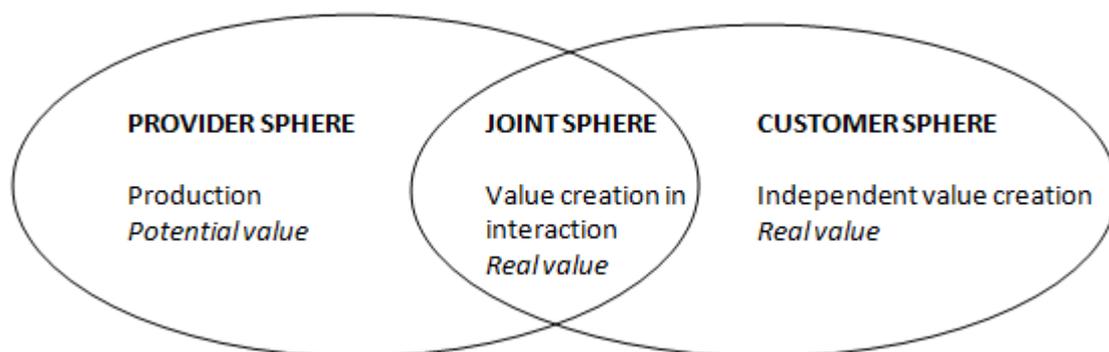


Figure 3: Value creation spheres according to Grönroos & Voima (2013, 141)

The provider or the company is responsible for the production process and in the provider sphere the company generates potential value that can be later turned into real value in use. In the joint sphere the customer is still in control of value creation but through direct interaction the provider may influence the process and serve as co-creator. The joint sphere can be broadened if the provider invites the customer to join as a co-producer to different points of the production process. In the customer sphere the value is created independent of the provider who plays only a passive role. (Grönroos & Voima 2013, 140-142.) Service design as an operation mode can be seen as a tool of expanding the joint sphere.

The usage of design in business has also experienced a chance. Tim Brown (2008, 86) describes it well by saying that the new meaning for design isn't in developing existing products rather than creating ideas. Miettinen agrees (2011, 25-26) by stating that the increased im-

portance of service production has had an effect on industrial design. She continues that instead of limiting design to shape, function or materials the current design concentrates on interactions between humans, products and technology.

Mager (2004, 31) recommends that designed services should be treated as any other product but the crucial difference is that services never reach the status of completion but are completed at the moment of purchase. Mager continues that in order to design there are three integrally-related components that are relevant: organization, interaction and physical appearance. Clark, Johnston and Shulver (2000, 72-73) state also that the service concept is more than the DNA of the service; it is a statement that summarizes the nature of service business and captures the form and function, value, experience and outcomes of the service.

When creating concepts, the target is often in challenging familiar ways to think according to Mattelmäki (2006, 29). In the beginning of innovation process paths that seem wrong in relation to final outcome might further new thinking and the creating of solutions. Mattelmäki has also described (2006, 25) the development in designing user experience by stating that understanding the feeling and experiencing user isn't enough; the humane and always changing social system that surrounds the experience should also be examined. This suggests that designers have to concentrate on moments that are unique and always dependable on various circumstances.

Services are co-produced between the users and providers and services create value only when they are used. The common problem is that they are treated like products and therefore each bit of a service is well designed but the service itself isn't. The customer on the other hand doesn't appreciate single touch point but instead judges the entire service as a totality. Services can't be fixed same way as products because they are formed in interactions between people. Therefore at the heart of service design is understanding people. (Polaine, Løvlie & Reason 2013, 22-24.)

The starting point of service design is designing items, environments and service processes that are related to services. It uses same tools as user-led research and the corner stone is the understanding of the customer. (Miettinen 2011, 22, 30.) Stickdorn (2010a, 34-35) argues that there is no common definition for service design, and he approaches the definition by outlining five principles of service design thinking: user-centered, co-creative, sequencing, evidencing and holistic. According to Miettinen (2011, 27) the design thinking is an important tool for service designer and it can be referred as a process of creative human centered design.

Even though there isn't a single solution on applying service design there are some characteristics that usually are associated with the concept. For example Miettinen (2011, 23-25) states that distinguishing processes for service design are iteration and co-creation. Iteration means repeating the different stages of development process and by doing that improving the outcome. The co-creation enables customer to build a suitable service experiment together with the company. There are many different process models for service design but usually they all have the iteration and co-creation highlighted at some level.

Brown (2008, 88-89) divides the process into three spaces which are inspiration, ideation and implementation. According to him the innovation is thought as a continuum that requires certain actions that aren't necessarily orderly steps. Stickdorn (2010b, 124-135) presents a slightly more complicated model that includes phases of exploration, creation, reflection and implementation. He highlights especially the meaning of iteration which leads to situation where it might be needed to take a step back in the process or even start all over again. That is why the process shouldn't be considered as prescriptive or linear.

According to Brown (2008, 88-89) in the first phase of the process the inspiration may come from a problem or an opportunity. Stickdorn also states (2010b, 124-135) that the service design process seldom begins with the customer. Therefore the exploration phase includes the understanding of the company which is providing the service and its culture and the role of service designer. The second task often is identifying the problem and the third one is visualizing these findings. In Brown's service design process model (2008, 88-89) the ideation stands for process that includes testing and developing solutions. This is common with the creation phase by Stickdorn (2010b, 124-135) which is all about testing and retesting ideas. It is essential to understand that this approach doesn't try to avoid mistakes but to test as many as possible of them.

In the reflection phase by Stickdorn (2010b, 124-135) the biggest challenge is dealing with the intangibility of services. This phase aims at generating a vision of a service concept in the mind of customers. Because it is vital to get emotional aspects of services included the prototyping should be done in reality or circumstances close to reality. The implementation phase requires a change that should be based on a consistent service concept. At this stage the motivation and engagement of employees is crucial. That is why the concept should be understood and supported. In Brown's model (2008, 88-89) the space for the implementation includes actions that lead the solution to the market.

Brown states (2008, 88-89) that the design process goes these spaces through many times and takes new directions after iteration and Stickdorn (2010b, 132-135) refers to iterative process which requires that change implementation is followed by another exploration to evaluate

progress. Hence both of these models address the importance of making changes to the process during the development and evaluating the results continuously.

3 Definitions and advancement of the development task

The goal of this thesis is to form a new service concept for the Company X and in particular in relation to the service of providing short-term agency work. Before it can be done the current service has to be understood and modeled and the roles of different operators need to be explained. Because the purpose is to improve the service it is logical to approach this development task with the tools of service design.

This development task has characteristics of a qualitative research mainly because the nature of the data. In comparison to quantitative data, qualitative data is based on meanings expressed through words, it is non-standardized and the analysis is conducted through the use of conceptualization (Saunders, Lewis & Thornhill 2003, 378). Robson (2011, 19) agrees and lists among other things as typical features for qualitative social research that situations are described from the perspective of those involved and generalizability of findings is not a major concern. When using service design as a method the emphasis is by nature in the perspective of those who are involved in the process.

3.1 Description of the development methods

The methods and tools of the service design have been used in this thesis. The goal is to understand the service and after that to form a new and improved service concept for Company X. The chosen service design process model is Moritz's (2005) and presented in figure 4.

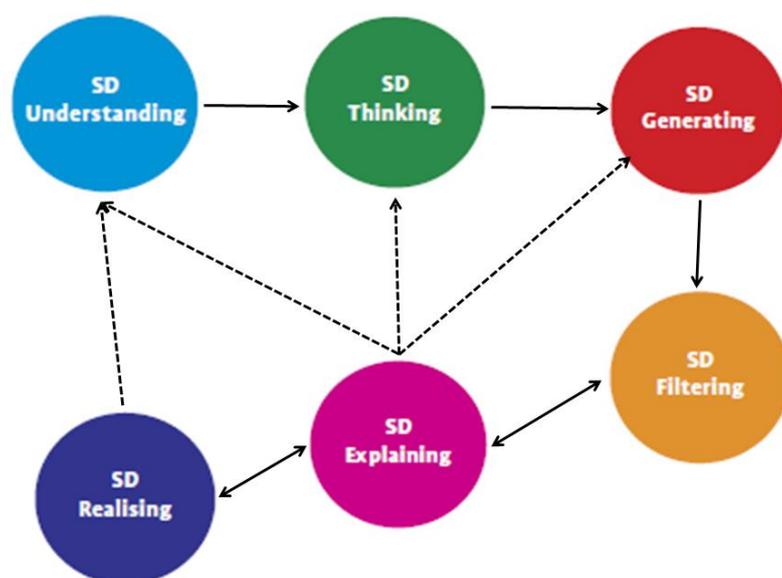


Figure 4: Service design process model according to Moritz (2005)

The process model includes six different categories which have two different functions. The first one is to create a framework that is simple and generic and helps to understand service design. The second function is establishing what different mind-sets are needed during the process. It is important to understand that instead of being a short-term project service design continues to evolve the service on an ongoing basis. (Moritz 2005, 123, 154.)

There are several other service design process models but this one was chosen because it has more steps than some of the other models and therefore it enables to do versatile sub studies in more detail. It enabled examining the process through smaller progress steps so that changes could be made to the original plan if that seemed necessary. According to Miettinen (2009, 62) the process of service design uses methods that are generative, formative and predictive and it can use several methods to concretize a new offering or innovation. She also states (2011, 35) that in the service design project the different models are rarely followed exactly rather than the method is chosen and applied according to the ongoing project.

The following sub chapters describe the development process according to Moritz's service design process phases. The process includes several different data collection methods that are finally summarized in the chapter 3.8.

3.2 Service design understanding

In the first stage of the process the design team is decided and objectives are set. The available resources are listed and timeline is put forward. These initially specified boundaries can be changed later on during the process. The goal is to research the latent and conscious needs of the client and the stage underlies the whole process. Completing this ensures that results of the design are true to reality, relevant and appropriate. (Moritz 2005, 124-125, 154.)

In this development task the used tool for understanding the service was a case study. In certain way every project can be considered as a case study because they take place in certain time and with certain people. The most defining characteristic for a case study is concentration on a particular case or small number of cases studied on their own. (Robson 2011, 136, 142.) According to Benbasat, Goldstein & Mead (1987, 370) a case study research is viable information systems research strategy i.a. since information systems can be studied in natural setting and theories generated from practice. This case study was planned and executed according to Yin (2009).

According to Bitner, Ostrom and Morgan (2008, 73-74) in the beginning of defining the service it is essential to articulate clearly the service and the types of customers which are focus of that. In this case study the service is providing agency workers to fill the client's urgent need for additional work. The need for this kind of service comes usually after the regular staff has sickness absenteeism and it lasts less than a week, normally 1-3 days. After that even though the sick leave would continue the client would typically have other ways to repair the staffing deficit.

3.2.1 Framework for the case study

The customers are both public and private operators in the social and health care sector that require dental nurses and normally nothing specific know-how. The certain level of education and professional practice rights is a necessity. The customers operate in the Helsinki metropolitan area or in the big cities near it. The usage of service can be a single experiment for the client or a continuing need.

Shortly, the research design for the case study can be understood as a logical plan for getting from here (initial questions) to there (answers for these questions). Five components for a research design are especially important: study's questions, its propositions, unit(s) of analysis, the logic linking the data to the propositions and the criteria for interpreting the findings. (Yin 2009, 26-27.) These are described in the following section from the viewpoint of this particular case study.

The approach was to understand agency work in this field and also to visualize it with service blueprint. The purpose of this research was to get an understanding of Company X's current situation and to recognize notable defects in the process. The chosen approach for this was the case study because that particular research strategy focuses on understanding the dynamics present within single setting (Eisenhardt 1989, 534). The research question for the case study was: How can the short-term agency work be understood and designed in the social and health care sector?

The data for the analysis was collected during four in-depth interviews (in addition one drawing) that took place in the summer of 2013. To form a general view of Company X's process, it was important to interview parties with different roles in the delivery process that included current customers and agency workers. The consultant of Company X participated by drawing the process from his perspective. The same task was also carried out by other interviewees in addition to the actual interviews.

The research question was approached through the standpoint of Company X, by interviewing its stakeholders. Before the interviews some propositions were formed. These were based on the preliminary discussions with the consultant of the company and they also were supported by the researcher's years of working experience in Company X. These propositions were formed to support the interviews and themes that should be addressed and they were following:

- The customers are not committed to Company X (or any other actor) because in short-term staffing needs it doesn't matter who provides the employee
- The customers and Company X's representatives use several different communication channels which make the interaction complicated
- The customers have several preconceptions that affect on their reservation regarding agency work and employees
- It is difficult to estimate in advance the need for agency work

The criterion for interpreting the findings is to recognize possible rival theories. In this case study this is considered through customers' and employee's experiences with other personnel agencies and other solutions for using supplemental staff. For example many customers use also directly their own list of employees that do short work gigs. It is also common that employees have experience from other personnel agencies.

The interviews were open and followed only some pre-determined themes which are listed in the appendix 1. These themes were tested with a pilot interview that was conducted via phone with one customer. After this the customers' preconceptions were added to the themes of interviews. The pilot also proved that the customers do have experience on other ways of filling the urgent need of a short-term work.

The interviews took place at July 2013. One of them was carried out in Company X's premises and three in different locations in the Helsinki Metropolitan area. An average duration of an interview was one hour. The shortest lasted only 45 minutes and the longest one hour 30 minutes. In addition to the data there was the consultant's drawing. In the beginning of every interview it was explained that the purpose of this study is to develop the service of Company X. The answers that were given could not be later on combined with the interviewees and Company X would not find out who had said and what. That information would stay only with the researcher.

One crucial point of the interview was the drawing task in which the interviewee was asked to draw the agency work process from own perspective. During the action it was possible to ask specified questions. The drawing was an additional method for gathering data since in a case

study the goal is to obtain a rich set of data surrounding a specific research issue, as well as capturing the contextual complexity (Benbasat, Goldstein & Mead 1989, 374). This was the first step towards forming the service blueprint. The service blueprint was seen as a good tool for expressing the results of this case study because it works as a part of analysis and it also helps to generate new ideas.

The consultant and employee were a practical addition to interviews because they could comment on the processes that a client doesn't necessarily experience. For example the recruitment or the instructions that Company X's representative gives to employee so that he or she can go to the work location. The units of analysis for this case study were the opinions of operators. They are qualitative and can refer to actual speech or the drawing that was done during every interview. The opinions are related to the service that Company X provides and this was verified by using common themes in every interview.

The fact that a service blueprint was chosen in advance as a tool to present the results affected also on the analysis of the results. The service blueprint is a tool that helps to understand the big picture of service. It can be seen as a map of different touch points and the user's journey and also the about the processes that happen backstage. There isn't any typical or a standard model for the blueprint and the model vary depending on the project and its purpose. (Polaine, Løvlie, Reason 2013, 91-94.)

The blueprint is suitable for testing existing services by providing a platform that systematically pilots different user journeys through the system. The actions of the customer are essential for the creation of the model and often also the starting point. The blueprint helps to highlight areas where resources should be concentrated. (Polaine, Løvlie, Reason 2013, 96; Bitner, Ostrom, Morgan 2008, 72.) Because of this the blueprint was seen as a appropriate method in providing material for the following steps of the service design process by pointing out the crucial parts of the service.

After the data was collected it was reorganized in order to form a model which in this case was the service blueprint. The case study results were analyzed so that they would help to form a service blueprint as a model of the current situation. There isn't any standard model for the service blueprint but there are some common factors that provide a good starting point for the design. The service blueprint consists typically of five components which are: customer actions, onstage and backstage contact employee actions, support processes and physical evidence (Bitner, Ostrom, Morgan 2008, 72).

These components formed the preliminary categories for analysis and the grid for the blueprint. They were reinforced with the category that describes the methods and tools used for

data processing during the service of providing agency work. The data from every interview (notes and drawings) was broken into smaller parts. As Miles and Huberman (1994, 9) state regarding qualitative data; it is rarely immediately accessible for analysis but require some processing; for example raw field notes need to be edited, corrected and typed up. In this phase of the development task the interview notes and comments were processed in a way that even a certain facial expressions to specific questions were typed up.

After the processing of the notes was completed the data units were in fact sentences that had been said during interviews and words describing certain expressions or ambience. Miles and Huberman argue (1994, 9) that processing the field notes is a bit problematic due to the fact that they are strongly based on the observation of the field worker. Especially challenging was changing the drawings into a verbal form for the purpose of analysis. As explained the most important role for the drawing was to provide the opportunity to ask more specific questions during the interviews. But the drawings in itself were also informative and needed to be included in analysis. Silverman describes (2011, 323) this type of visual data as quasi-experimental since it is generated because of the request of the researcher.

One widely used way of analyzing visual data is the semiotics. It shows how signs relate to one another in order to create and exclude meanings. (Silverman 2011, 327-334.) In this context it meant that it was important what the participants draw in which order and what they left out from the drawings. These observations were typed up and therefore the visual data was transferred into similar form than actual notes related to interviews. After this was done the processing of the data was complete. The units of data were now re-positioned under the main components of the service blueprint. Then the customer steps were categorized after the example of Polaine, Løvlie and Reason (2013, 98) under following headlines: Aware, Join, Use and Leave. At this stage data was also reduced.

When this was completed the key themes were highlighted. Those were units of data that repeated in several categories and especially the information about crucial steps of service and previous difficulties. Finally hypotheses were tested based on the preliminary propositions that existed. Negative explanations were interesting in particular and in this case the most revealing thing was that even though clients had been disappointed in the service level before they still kept on making orders. They didn't consider other service providers seriously. Finally all of the information was refined in the form of a blueprint.

The blueprint can be seen as the appendix 2. The path of the simplified version of the service is described next shortly in written. After the customer and Company X have made the contract for using agency work, the customer makes an order. The consultant receives the information, sends message to every available agency worker that is listed for Company X and also

suitable for customer's task. Then the employees either decline the offered job to the consultant or accept it. If there are many employees that are interested in the offer, usually the first one gets the job. The consultant confirms the arrangement to the employee and to the customer. After that he gives the necessary additional information regarding the work location or billing and makes sure that the payroll has all the needed facts available.

When the employee arrives to the customer's premises he gets the introduction and does the required work. After that the agency worker fills the actualized hours to Company X's time tracking software. Then the customer approves the hours by using the same software and the payroll makes the invoice accordingly. After the customer has paid the invoice, he normally doesn't communicate with Company X until a similar situation occurs and the process starts all over again. That might be the situation even if there has been complaints regarding the employee or the service in general.

3.2.2 Results from the interviews

Case studies have some general methodological issues that can be seen as problematic when considering the validity of the study. For example Lee lists (1989, 35) four problems that are controlled observations, controlled deductions, replicability and generalizability. Dubé and Paré have also concluded more recently (2003, 620-626) that there is a need to make improvements in order to improve rigor in case studies in the IS field, especially in documenting data analysis.

In this case study these problems are issued with trying to describe the analysis process rigorously. The chosen tool service blueprint limited options for conducting the analysis so the reorganizing of the data was rather controlled. The results are now described first from the general point of view based on direct comments that interviewees made. Then the issues that stood out from the service blueprint are specified in relation to the preliminary propositions that were presented earlier. When considering the general impression after the interviews were made, the state of the current service seemed slightly negative. The customers felt definitely disappointed and insecure after the changes in Company X's personnel and therefore in the procedures. The common attitude was even sarcastic and speculative in relation to how long the current contact person would last.

In the drawings one client saw the process as very straightforward, they described only the order phase. Then they expected to Company X to take care of the rest quickly. Other two clients described the usage of agency work as more flexible and mobile situation. The sickness absenteeism of regular staff was seen as an inevitable problem that they had to deal with regularly. They both had other options that they always tried before contacting Company

X. Because the agency work was the final solution for them the expected outcome was also petite.

Every client commented on the service hours. One told an example about confirmation messages for the order that had arrived after the closing hours of client. As a result nobody saw the message until the agency worker arrived at the next morning. Other example was also that the most common time to get the sick notes from regular staff is in the early morning. Therefore it is crucial to reach Company X's representative at that time. There had been some problems with that previously. One client stated that some of the orders are acknowledged but some are left without any comment. That kind of situations have also been problematic when Company X has confirmed that an employee Z comes to work and after that someone else has arrived without a separate notice.

The employee that was interviewed was very pleased with agency work. She can do weeks where she works long days every day and balance that whenever she wants and needs to by doing less work. The biggest difference compared to other operators was that in the private sector the work assignments are more versatile. She thought that the relationship with Company X was distant. She didn't know anything about the firm and felt like she wasn't really in an employment with the company.

The first proposition issued that the customers are not committed to any actor because in short-term staffing needs it doesn't matter who provides the employee. This was only partially true. The current customers that participated in the interview didn't have much experience from the other operators in the field. They used Company X's services because the company has a reputation and name on the field of social and health care. So most times the client just suffered without help if Company X couldn't deliver workforce. But it became also clear that this situation wouldn't last and other service providers were under consideration.

The second proposition suggested that customers and Company X's representatives use several communication channels which complicate the interaction. This proved to be true. Usually the customer has one channel that they prefer. When they don't get the reply from Company X as fast as they need they start to use the supporting channels. Often the need is so sudden that they use whatever channel is available at the moment.

According to the third proposition the customers have preconceptions regarding agency work that influence on their reservation. This was partially true; customers do have their own preconceptions but once they have started using agency work it isn't an issue anymore. The most ruling presumption was that the customers have really low expectations regarding the quality

of work and skills of the employees. Especially employees with foreign background were seen as problematic due mostly the language problems.

The final proposition was that it is difficult to estimate in advance the need for agency work. This proved to be true according to the clients because they used agency work in situations where somebody from the regular staff was sick. There were some days where they could expect absenteeism (in the beginning and at the end of workweek) but because they didn't want to order in advance in order to avoid unnecessary costs they had to operate with a short-term notice.

The service blueprint and the interviews highlighted some notable issues in the process that are presented below. Based on the interviews the impression strengthened about elite employees in the social and health care sector. Both the clients and the consultant from Company X stated that it is difficult to find workforce. The employee enjoyed that there was a possibility to choose own shifts and there was no anxiety that work would end. The freedom and salary above listings were also appreciated. The employee worked directly to some work locations and didn't see herself as an agency worker.

The same thing suggested also that there are problems with the roles of Company X and the client. Based on every interview it was unclear for example who carries the responsibilities of an employer or who gets the information about agency workers sickness. Because the roles are unclear Company X might suffer from employee shortage partially due the transition where the agency workers start working directly to the clients. That might seem as a small and insignificant transition to other parties but for Company X the damage is notable because they lose both the employees and profit and bear alone the costs of recruitment.

The rapid action is the most important thing for the clients and if this happens they will settle even for low quality in an emergency. This was interesting to find out and it is related to the proposition about customers' preconceptions. The assumption often is that the agency workers aren't the most competent form of work so clients expect the adequate level. One client even stated that there has to be a reason why these employees do agency work and doesn't have a permanent work place. Regardless from the expected outcome the clients always want the employee fast. One problematic part according to the interviews and the service blueprint is the customer's waiting time that happens between the order and the confirmation from Company X.

There were also some indicators about the need for continuity. The clients expect that the employees make the preparations for the next day at the end of evening shifts. Many had experiences about employees that just left the workplace as it was (without cleanup) because

they wouldn't come back the next day. The one interviewed employee had also noticed that one of the most important things to do is the cleaning up and preparations even if she would never return back. She saw this as a matter of professional pride.

Many of the previous findings support the fact that the importance of introduction is enormous. That is the one thing that the client has to do for the agency worker and that takes time from the actual work. It is fair to say that the clients want to handle this very quickly and even give it up if possible. That is why they also prefer to receive the same employees from Company X when they order. The time-consuming parts of the process are getting the employee familiar with the premises, the daily routines and even finding the proper work clothes.

Finally, the most troubling factor for the clients was the lack of consistency. That was the result from the personnel changes of Company X, also the variability of agency workers and even the several communication channels that they were forced to use when they needed the reply. They weren't sure if the announced employee would actually arrive or even if their order had been received in the first place.

3.3 Service design thinking

Everything that was accomplished during the previous stage will found the basis for work in the service design thinking phase. The tools that are used in this section will help to set the criteria, strategy and refine the direction. In this stage the leaders of the organization should be involved in order to combine new insights with the initial objectives. (Moritz 2005, 155.) The service design thinking often has an intermediary role and it functions as setting parameters for the other categories. It should give direction and guidelines for the whole process of service design. Often in a short or small project this part is executed with natural common sense. (Moritz 2005, 128-131.)

In this thesis this part was conducted with creating a mind map about critical points of the service and the probable causes for them. This was founded on the results of the case study. The mind map was seen as a reasonable tool to understand the big picture and to outline the strategy for the following stages. The purpose was to concentrate on problems that were addressed in the service design understanding phase and to find the focus for service design strategy. The mind map can be seen as appendix 3.

The conclusions related to the findings that were the basis of the mind map are presented in the following. The clients have low expectations and therefore it is not difficult to surprise them positively. This fact is important to accept and utilize as well as possible. The most ef-

fective tool for this is the profound introduction for employees. The current information about clients is mostly silent. It would be important to create fact files from every client and save the essential information for agency workers somewhere that it is easy to access. That includes information for example regarding the work location, arrival instructions, work clothes and anything general that is possible to provide without the clients' representative. It is especially important to collect the clients' expectations about the actions at the end of each day.

The proper introduction provided by Company X can also assist with committing employees. The demand of work force exceeds the supply in this field so it is necessary to accept the concept of elite work force and to treat the employees accordingly. Sending employees to work locations with minimum amount of advance information causes unnecessary disappointments and distrust. The turnover of employees is also notable because of the changing personal circumstances; short-term agency work isn't suitable in every life situation.

The need for rapid actions was clear and therefore the process should be automated as much as possible in order to create predictable procedures. Currently the replies are depending on the consultant's personal communication possibilities. There is a need to create automatic messages as a part of process and at least a message that confirms the order to the client immediately. The channel used in making the order should also be always consistent. Some small adjustments would help making the process more predictable for the clients.

The chosen strategy for service development has two important standpoints. The first one concentrates on furthering the automation. The goal is to have communication and administration of short term gigs done with as little manual work as possible. The second standpoint of service design strategy is the positive surprise. This aims at preparing the employees and giving the customers opportunity to experience something positive that they wouldn't expect from an agency worker.

3.4 Service design generating

The generating phase is all about developing relevant ideas into strong concepts. The entire service experience needs to be designed in every detail. The essential part of this stage is that it is founded on previous steps and decided strategy. This part of the process should be free, innovative and visionary but not random. The basic principles of a brainstorm can be used so that any idea is allowed. (Moritz 2005, 133, 155.)

In this thesis the generating stage was approached by co-creating ideas with the customers and employees. The purpose was to have idea interviews where preliminary ideas could be

tested and developed. The discussions with the employees concentrated on the benchmarking and customer interviews were short idea interviews in order to gain an understanding about the possible and needed changes. It was relevant to find out also the things related to the current service that shouldn't be changed. These meetings followed same structure but were kept as short and informal. In addition there were questionnaires with similar structure sent to certain group of customers.

3.4.1 Idea interviews with the clients

The goal of customer idea interviews was to gain a perspective on the needed and necessary changes and to have some ideas co-created together with the customers in order to strengthen the strategy of positive surprise. The focus of the interviews was targeted from the viewpoint of the needed introduction for the employees. The applied themes are listed in table 1. Themes are based on previous situations and questions that the new employees have presented to the representatives of Company X. At the same context the service level of Company X was issued and referred to possible improvements. The idea interviews were approached in two ways, with face to face discussions and with email questionnaires.

THE ENTRANCE	Easy to find	The locked doors	Parking lots
THE RECEPTION	Keys	Introduction	Locker room
AFTER THE FINAL CLIENT HAS LEFT	Wishes	The preparations for the next day	
AT THE END OF A DAY	Locker room	Keys	Clothes
SOMETHING ELSE			
SERVICE LEVEL	Improvements	Satisfaction	Disappointments

Table 1: Themes for idea interviews

One big client of Company X has several branches. The themes of the questionnaire were discussed face to face with one person in charge. She replied to themes based on her own branch and was responsible on forwarding the questionnaire by email to other branches. It would have been better to conduct every interview face to face but that couldn't be done because it wasn't approved by the client. Nevertheless because the client is significant the answers were seen as important to the thesis and in improving the service.

The second approach in these was to have idea interviews face to face with other clients. The emphasis on these interviews was the improvement of the service and also the introduction of the employees so the structure was rather similar than in the questionnaire. Other significant basis for these idea interviews was to highlight the things that would get the client to use Company X's service more often.

The results from these idea interviews followed same principles that had been addressed also previously during the service design understanding stage. It became clear that most of the clients were used to using agency work and they had clear procedures for them. But they also highlighted that even though the required skill level is usually in the basic know-how, they want employees to commit and to do the whole days work. The feedback from the service level of Company X was that recently there have been a lot of improvements. In the following is listed the positive and negative comments in relation to service experiences.

- previous contact person has had bad organization skills, mix-ups with orders and confirmation messages that were send during night
- agency workers use their own phone during shift (when administrating the arriving work offers for the following days)
- payment for skilled agency work; nothing less
- no employees to evening shifts available before (now the client doesn't even ask)
- the agency worker should participate in the medical service
- the agency worker should ask for help when they don't know what to do
- Company X should use the same agency worker for the same client as often as possible
- the speed of response to the order has improved lately
- Company X has been able most of the times to arrange employees with rather short notice
- the agency workers should have the client's representative's phone number in case they are late
- adequate language skill is essential

3.4.2 Benchmarking discussions with the employees

The idea with the benchmarking interviews was to get also the employees involved in the process. Two employees participated and they both had a lot of experience from several other operators that provide short-term employees in the social and health care sector. The first employee had several decades of working experience and she emphasized more in particular the importance of the actual working environment. According to her the good personal chem-

istry between the dentist and the dental nurse is more important than the relationship in a marriage. Company X's role wasn't that important and the ways to operate were rather similar than what the competitors had. She bypassed the subject quickly.

The other employee had noticed that the clients used other service providers at the same time. So because she was listed as an employee to several personnel agencies she occasionally had the same gig offered from several sources. Then she could choose the one that pays better salary. This was an interesting comment because it revealed some concrete evidence about utilizing the position of an elite employee in real life. This employee actually preferred Company X as an employer mostly because the consultant replied to her messages also outside regular office hours and the salary was also slightly better.

Only two employees were interviewed mainly because there weren't others that had volunteered. That might be because Company X is seen as a distant party whose role isn't that important in relation to the actual working environment. This was obvious also after both of the benchmarking interviews because both employees stated that different operators in the field had rather similar ways to operate. The significant differences came from the actual working environments and the salary. So the client list was meaningful and employees who do short-term employments for living actually choose the gigs also based on the reputation of clients.

The employees had several suggestions on how the service could be improved. Some of these are more related to the actions of the client but because Company X can try to effect also on these especially by discussing with the new clients, they are presented in the following.

It was seen as a problem that sometimes the shifts are scheduled in a way that the nurse has exactly the same working time than the dentist. That isn't realistic because the nurse is expected to do preparations, the clean up and to participate in the medical service. There should be an option for flexible working hours at the end of each shift in case there isn't time to do the clean up. That would make it possible for the nurses to do the necessary work but it wouldn't mean an automatic cost to the client. The hours would be invoiced only if they were actualized.

Especially in the private sector the clients order at the last minute and only in the situations where there is no other option. This makes the circumstances for an agency worker more difficult and requires working under a lot of pressure. That strains the employees unnecessarily. This is an issue that Company X can't do much about but they can emphasize the negative effects of the last minute orders when talking to the clients.

Currently there are nurses with several different backgrounds. Some of them have a lot of experience and want to do their work so that clients are pleased. But also there are few nurses that don't necessarily speak Finnish very well or are interested only on the compulsory tasks. Company X should stand out from competitors by providing only the highly trained and experienced nurses. That would make a difference for the clients according to the benchmarking interviews. This follows the similar thoughts behind the strategy of positive surprise that was chosen for the service development.

The software that Company X uses in reporting the actualized hours was seen as easy to use. The surprising news for the employees was that the clients can also access the same system. They had been under the impression that only the representatives of Company X used the system. They didn't see much room for improvement in the software and both of the employees concluded that the electrical way of reporting actualized hours is much better than the previous method where clients had to sign paper lists at the end of each shift.

Surprisingly the automation didn't get much support from the employees. They both supported the idea that it would be an improvement if they could state their shift requests online but they preferred that the maintenance of these would still be manual by using text messages and phone calls. They said that before there were a lot of problems with communicating for example because some of the confirmation messages were not received or sometimes there were double bookings but currently the situation had improved. Even though the present situation is better it should be remembered that if the volumes grow it is expected to be more difficult to maintain the process manually.

The automation didn't get support either from the clients. They preferred that they could order by using several methods and when they needed. They also emphasized the importance of employees that had worked there before and knew the habits of the client in advance. The personal service seemed important. At this stage of the process it was decided that the strategy of automation wouldn't be that crucial when developing this new concept. As a result the planned interview with the system specialist wasn't executed (described later in the chapter regarding the summary of data collection).

Bottorf and Sobol (2012, 35) support this decision. According to them customers respond poorly to services that feel automatic, overly scripted or robotic. They also state that customers want to be treated like a person with specific needs. This similar thought also came through from the idea interviews. Regardless of that the lack of consistency was seen as very problematic so the usable solutions will require balancing between those two options. These can't exclude each other.

These previous comments have been only a general summary of the notes presented during the co-creation phase. The actual analysis with all stages is presented in the following chapter.

3.5 Service design filtering

In service design filtering the purpose is to select ideas and to combine concepts. The best and most relevant ideas should be chosen. This means that they should be valued against specific criteria. (Moritz 2005, 123, 137.) This part of the service design process was executed by doing the analysis for the collected data. There is no standardized approach when analyzing qualitative data. Some approaches require very structured methods and some rely much more on the researcher's interpretation. A qualitative analysis generally does have some common activities which are: categorization, unitising data, recognizing relationships, developing categories and developing and testing hypotheses. (Saunders, Lewis & Thornhill 2003, 379-381.)

The analysis of qualitative data can be described as a continuous, iterative enterprise. The analysis consists of three concurrent flows of activity that are data reduction, data display and conclusion drawing and verification. (Miles & Huberman 1994, 10-12.) The data reduction is a process where the data from field notes is selected, focused, simplified, abstracted and transformed. It is a form of analysis where data is organized in a way that final conclusions can be formed. Saunders, Lewis and Thornhill describe (2003, 381-385) this by first classifying the data into meaningful categories which may be derived from theoretical framework or from the data itself and then adding units of data under appropriate categories. This is a selective process which has the effect of reducing and rearranging the data.

After the data is reorganized into the categories the key themes and patterns or relationships are searched. As a result some of the original categories may be changed. (Saunders, Lewis & Thornhill 2003, 381-385.) Miles and Huberman (1994, 11) state that at this stage of analysis activity data displays are created that can be described as organized, compressed assembly of information which permits conclusion drawing. In the service design understanding phase the service blueprint functioned as a data display which enabled conclusions from the current stage of the service.

According to Saunders, Lewis & Thornhill (2003, 381-385) the final phase of analysis is when based on the data the hypotheses are developed and tested; especially important is to look for alternative explanations and to explain why negative cases occur. The conclusion drawing starts already when collecting the data but they need to be verified. These meanings that are emerging have to be tested for their plausibility, sturdiness and validity. (Miles & Huberman 1994, 11.)

This research is a combination of inductive and deductive approach. The first steps are more inductive because when trying to understand the service the approach is comprehensive. It has some theoretical framework as assistance but the main goal is to gain a complete model about the service level at current stage and to form a theoretical base for follow up. At the second part the approach is more deductive because it uses the blueprint as a foundation and also aims at forming a business model canvas.

The data from the idea interviews and benchmarking was approached deductively. This means that the goal was from the beginning in developing the service blueprint and forming a business model canvas. The idea interviews and benchmarking discussions were designed from this point of view and the data was analyzed so that the grid could be drawn. The used data was interview notes, summaries of interviews and notes of the interviewer that included ideas for development. This data was processed with similar tools than during case study, facial expressions, single comments of the researcher, sentences and choices of words were typed up so that they could be categorized.

The building blocks of the business model canvas formed the categories for the data. These blocks were: customer relationships, customer segments, value propositions, channels, revenue streams, key activities, key resources, key partners and cost structure. After these were labeled the data was grouped under these headlines. The chosen framework guided the analysis so that the data reduction was also done during the processing of the field notes. That was accompanied by the goal of finding improvements. The key themes were recognized rather quickly because in most of the interviews the same topics repeated.

After that the data under each category was reorganized into displays in order to find out causes and relations. The ultimate goal was to answer to the question how the service could be developed when creating the new concept. The forming of these displays was a result of trying to express every building block of the business model canvas with 1-2 sentences. Eventually these displays formed the final structure of the business model canvas that can be seen as appendix 4. The chapter 3.6 maps out the new concept in detail commenting the content of every building block.

After the displays were created they needed to be tested and therefore preliminary conclusions verified. This was done by concentrating especially on the negative examples of the service levels that had been referred to during the case study research. For example one client during a case study interview complained that they didn't get a confirmation message from the received order. That was issued with the displays by stating that key resource is a brand consisting of excellent service, value proposition based on quick delivery and maintaining

channels by collecting continuous feedback. The preliminary question when verifying the analysis was: would the interviewed clients and employees be disappointed with the new concept?

3.6 Service design explaining

According to Moritz in the process of service design explaining phase the goal is to enable understanding. The purpose is to make concepts tangible, point out future possibilities and to give overviews. The explaining maps the processes and illustrates it. One possible outcome is a service prototype. (Moritz 2005, 123, 140, 154.) In this research the desired outcome for model was the business model canvas. This was chosen because it was seen as a more advanced version from the blueprint and it would give Company X more tools for future considerations especially from the business point of view. It would present the new service concept comprehensively.

The business model canvas demonstrates how a company intends to make money. The concept must be simple, relevant and understandable but not oversimplifying. (Osterwalder & Pigneur 2010, 15.) By choosing a presentation about a business model was seen as the most comprehensive way of showing possible improvement points for Company X. The model of business model canvas presenting the new service concept can be seen as appendix 4.

3.6.1 Components dealing with the clients and value

The business model canvas is build up from nine components. The first one is the customer segments. The company must distinct different customers by some criteria. After that a conscious decision has to be made on which customers are served and which are ignored. The rest of the business model can be built around the understanding of specific customer needs. (Osterwalder & Pigneur 2010, 20.)

Based on analysis Company X has a lot of clients that make regularly or more rarely small orders for 1-2 shifts. The business of providing agency work for short-term is profitable if there is a volume so that there are several customers and enough orders to keep the employees employed. It is a part of business that simply exists and it is reasonable to maintain because the shortage of labor will continue in the field of social and health care. These clients that order short-term can later on develop into more profitable clients that use for example recruitment services or need agency workers for a longer period of time.

In the short-term employments there are three different customer segments. First one is the clients that use the service as their final straw. They order at the last minute, scale the shifts

to minimum and still often expect that they get highly competent employee. The second client segment has problems in recruitment and atmosphere so the need for service is constant. The problems can also be geographic so they have difficulties in finding employees that will come to a certain area. They don't expect much from the employees. The third group is the clients that don't have their own temporary employees. They also need constantly services but the difference is that they can order with a longer notice.

Because volumes are important in this type of service it is recommendable to serve all of these groups but to prioritize the service. First should be the clients that haven't got their own temporary employees. Secondly those who need constantly service because of their own problems and finally the last straw group. It is central to remember that each of these groups is valuable because clients can develop into something else and they all help to increase the number of orders so that the employees have more work and options to choose from.

The second component of the canvas is the value propositions. This is the reason why clients choose a certain company over another; it solves a problem or satisfies a need. These values can be qualitative or quantitative. Newness is an element that responses to needs that clients didn't know they had. Tailoring services to a specific need of a certain customer creates value and so does the correct price. (Osterwalder & Pigneur 2010, 22-25.) The fitting value promise depends on the type of business and customer segment.

Based on the interviews customers had different expectations depending on the utilization rate. Some appreciated that the employee knows the basics while others emphasized that they want the fully qualified "super nurses". The employees themselves had professional pride to do their work well. The clients hoped that they would get the same employee each time they order and appreciated previous knowledge about the systems and software that they use. The value proposition formed as follows: Providing quickly skilled employees that have all the necessary background information.

In the third component the concentration is on the channels. These can be seen as clients' touch points in the service and have a significant role in the customer experience. Channels have five distinct phases that are awareness, evaluation, purchase, delivery and after sales. (Osterwalder & Pigneur 2010, 26-27.) Based on the interviews the clients used whatever channel was available in the moment of despair. Company X should concentrate on making sure that existing clients can give feedback and know what kind of different service possibilities Company X can provide. For example one client was under the impression that Company X didn't provide nurses in evening shifts so they didn't even try to order. The channels are emails, phone calls and text messages for contacting orders and the emphasis on continuous contacts and maintenance of existing customer relationships.

The fourth component of the canvas is customer relationships. It should be clarified what kind of relationships the company is going to achieve with each customer segment. The variation is from personal to automated. (Osterwalder & Pigneur 2010, 28.) Company X is in the situation where many of the clients are using the service only occasionally but some have more potential to grow as stated before in the customer segments. If there was more opportunities to focus the service Company X should concentrate the personal service to more potential clients and use automation with the random orders. Now it is recommendable to serve everybody with a personal touch in order to have depth in the relationship and to find the potential.

3.6.2 Components dealing with money and costs

The fifth component is the revenue streams. This represents the cash that is generated from each customer segment. There can be several different pricing mechanisms. At this case prices are based on renting. The two main types of pricing are fixed and dynamic mechanisms. In the fixed mechanism the prices are predefined and based on static variables and in dynamic pricing the market conditions count. (Osterwalder & Pigneur 2010, 30-33.)

Company X should maintain both types of pricing mechanisms. The fixed price can work on normal types of orders where the only variation can come from how urgent the required delivery is. The other possible tactic would be to separate the basic dental care and orders that require something specific know-how (e.g. surgery) and to price them differently. Dynamic pricing should be used with clients that show potential to order more and want to develop the relationship. Some prices could be negotiated if the client agrees on ordering more with certain conditions.

The sixth component of the canvas is key resources that represent the most important assets required to make a business model work. These resources can be financial, intellectual, physical or human. (Osterwalder & Pigneur 2010, 34.) The most important resources for Company X are intellectual. The company should have now committed personnel that are willing to work hard in order to retrieve the clients' trust. They have to build a brand that includes skilled nurses and excellent service levels. This can take time but it is a good tactic to execute the company's value proposition and to continue on surprising the clients positively.

The seventh component is the key activities. It determines the most important things a company must do to make the business model work. In problem solving businesses the key activities are related to coming up with new solutions to individual customer problems. Activities such as knowledge management and continuous training are typically important here.

(Osterwalder & Pigneur 2010, 36-37.) For Company X one of the most crucial key activities is the recruitment process.

The recruitment has to be continuous and of high-quality. The need for the agency work is permanent but the personal circumstances of the employees change. The short-term employmentships might be a good option for a while but then a certain percentage of the employees will move on. The turnover rate is high. Therefore it is important to recruit all the time and to invest in skilled agency workers. Other key activities are sales and training of the current staff.

The eighth component is the key partners. The partnerships can exist for many reasons and they often are the cornerstone for many business models. The reasons can be economy of scale, reduction of risks and acquisition of particular resources or activities. (Osterwalder & Pigneur 2010, 38-39.) Company X can capitalize on other subsidiaries of the same corporation. These are other companies that provide also agency work but operate in different field. Their client contacts and connections could be used. Other important partners are the schools in the social and health care sector. That is a good channel to reach the future agency workers and especially potential elite employees. The clients are in a way partners too because in this field they are highly networked. The good service levels will cause recommendations and bring new clients.

The final component of the canvas is the cost structure. It should describe the most important costs related to the business model. Cost-driven models focus on minimizing costs and value-driven don't care about the costs that much but instead focus on creating value. (Osterwalder & Pigneur 2010, 40-41.) This is a bit difficult for Company X because the costs are an issue and the goal is to minimize them. The biggest single cost is salaries of the agency workers and other personnel. But because the emphasis is on skilled personnel and committed consultants this shouldn't be compromised. Company X should invest on the skills and know-how. Other important costs are related to marketing. That has two sides, the potential new clients and also the potential new employees. The strong brand requires a good image in both markets.

3.7 Service design realizing

In the service design realizing the purpose is to explain ideas by specifying business plans and guidelines for implementation. These recommendations and suggestions will either be approved and put into action or tested and evolved further. At this implementation and delivery stage guidelines are provided. Because services are never perfect this stage should not be

considered as ending of the design process but instead as a new beginning. (Moritz 2005, 123, 145, 155.)

Company X should use the business model canvas in the future and make a conscious decision to concentrate on serving value to clients. That is a strategic decision that will affect on many factors related to the business. The new concept is founded on that idea. Some suggestions on tools that could help this process are made in the chapter 4 dealing with the outcomes. Company X has few different customer segments that don't differ now significantly from each other when valued by cash but the future potential counts. Therefore the service level should be always personal and good but the clients should also be prioritized.

The process of service design should be taken systematically into part of regular development process. As it showed already clients have valuable opinions and suggestions that should be taken into account. The next time this process is recommendable to do again is when the volumes have grown a bit and customer segments separated from each other more. The service levels should be evaluated constantly.

The corner stone for the new service concept is the dedicated personnel. Company X can't afford to have changes in that because some level of trust has already been established with the skeptical clients. The new concept is founded also on providing personal service and it can be harnessed quickly.

3.8 Summary of data collection

In table 2 is presented the collected data from different sources and its relation to the development task in general. It also shows the planned part of research that was later abandoned due to the redefining of the strategy for service design process.

Subject	Participants	Timeline	Relation to research
Case study	Pilot, 3 clients, 1 employee, 1 consultant	July 2013	Current situation and service level / SD understanding
Idea interviews / face to face	4 clients	January - February 2014	Strategy: Positive surprise / SD generating
Benchmarking	2 employees	January 2014	Strategy: Automation / SD generating
Idea interviews / applied email	6 clients	January - February 2014	Strategy: Positive surprise / SD generating
Interview with the system specialist	1 specialist from Company X	NOT COMPLETED	Strategy: Automation (SD generating

Table 2: Sources of information

In the case study the data was collected from in-depth interviews of the actors and it was linked to propositions by forming a design with the service blueprint that exemplifies the process of using the agency work in the social and health care sector. From this design it was expected to find problems and issues that need improvements and also that give evidence for the case study's propositions. One crucial point of each interview was the drawing task where the interviewee was asked to visualize the service from their point of view.

After the pilot there were five interviews in the case study. These included one consultant of the company (who participated only in the drawing), three clients and one employee. The main weight was on the customers because the service design as a concept emphasizes the role of the customer. The idea was to have those clients participating that have a solid experience on Company X's service. One client was from the public sector and two from private but they all provide dental services so they use dental nurses as agency workers. Company X provides also regular nurses and the process is rather similar but it is not included in this thesis in order to keep the structure more simple.

The total amount of complete case study interviews was four and in addition one drawing. At this level of case study that seemed enough because answers were partially dealing with the same issues. Later on it would be recommendable to have more interviews but for this sub research question this was enough to gain an understanding about the current situation. The collected data was notes from each interview and the drawings.

In the idea interviews the goal was to brainstorm together with the client and to find concrete improvement suggestions for Company X. The purpose was to apply the strategy of positive surprise that was resulted from the case study. Ten clients participated to the interviews. The interviews were executed partly as face to face (4 clients) and the rest by email using the same framework. These were conducted during January and February 2014 and included two dental operators from the public sector and eight from the private sector. All of them operate in the Metropolitan area. The participants were selected based on the fact that they all had used Company X's services recently but the usage was not regular or predictable.

The data from the face to face interviews was open notes and summaries that were written after each interview. The data from email questionnaire was collected by using the same framework as in face to face interviews and it concentrated on one big client and its sub branches. The questionnaire was first explained and shown to one representative from the client who forwarded it to her colleagues. The questionnaire had open topics that the participants could comment freely and the bullets were based on questions that Company X's employees had presented previously to consultant. The client has nine active branches that use agency work in the Metropolitan area and six of them returned the questionnaire in time.

The expected outcome of the idea interviews was a huge number of different improvement ideas that could be used later on at the service design process. The goal was to accelerate brainstorming by using open questions such as: What would it take for you to use the service more often? It was important that ideas were not criticized at this point so the data was also a result of taking notes of these conversations.

The benchmarking interviews with the employees related to the strategy of automation that was resulted from the case study. Two employees participated and they were chosen on the basis that they had experience also from the other short-term employers and they volunteered. They were called to the office and asked to discuss about Company X and agency work in general. Company X's time tracking software was addressed in particular and asked how it should be improved. The interviewer kept notes about the discussions and after the interviews the notes were transcribed.

When planning the research it was also seen usable to interview a system specialist from Company X that could provide facts related to system possibilities. This part of research was related to the strategy of automation. This interview was abandoned later because preliminary results indicated that instead Company X should concentrate more on personalizing the service. Later on when the volumes grow the interview would still be recommendable.

4 Conclusions

In this chapter the most significant findings and outcomes for Company X are presented. After that the possible topics for follow-up studies are discussed in general field and also in relation to this particular case. The possible contribution that this thesis has to offer to the field of Information Systems discipline is considered also. Finally the contribution, validity, reliability and generalizability of this thesis are argued as critically and objectively as possible.

4.1 Outcomes

The most significant outcome of this thesis is that Company X can utilize the new service concept which is presented in the form of business model canvas. In this chapter development suggestions are presented that can form the framework if the new concept is deployed. These are considered especially from the point of view of the possibility for different digital solutions that could assist and further the growth of business.

Before the new concept could be formed the current service had to be understood and modeled. The service can be understood as presented in the service blueprint that can be seen as appendix 2. This is one possible view about the service and it is founded on the case study interviews. The next phase was the discussions with the stakeholders to co-create something new. Based on the idea interviews with the clients and the benchmarking discussions with the employees many good suggestions came up on how the current service could be improved. As a result the business model canvas (appendix 4) was formed. That presents the recommendable definitions of policy for Company X.

The business model canvas has been built on the idea that every building block follows the chosen strategy, which in this case was the element of positive surprise provided with the work of elite employees. It is crucial when building a possible trademark of the future that different elements of the service fit to chosen strategy. Especially important it is for personnel agencies since they have to serve ordering clients as well as agency workers who can be considered as internal clients. As a summary here are the elements that make the new service concept coherent and strong:

1. Skilled and professional agency workers
2. Personal service
3. Decisions that support volumes
4. Background work and introduction

When these components are followed and executed the foundation for new growth and a new type of business has been created. This concept is suitable for services or businesses that operate with a short-term notice and the competition in the field is hard. The renewed service is the most valuable when the labor shortage results in the fact that prize can't offer robust solution to stand out and providing quality is the only option.

In addition this chapter offers tools and courses of action that can support the business model canvas and deployment of the new concept. The emphasis is on the digital solutions because at the current model the service requires a lot of manual work and it is questionable whether it is even possible to grow volumes with the current staff and tools.

4.1.1 Automation and personal service

The automation was studied during this thesis and was one of the research strategies after the mapping of the current service had been done. That was mainly because the manual work needed to be minimized and the consistency of the service was criticized. However the preliminary results from the idea interviews and discussions with the employees indicated that the focus should be on the personal service. The contradiction is worth to be noted and in this context the chapter considers the chosen policy and the trends of future.

The clients all wanted to have return for their investment and also expected to have agency workers that were familiar with their specific habits. The interesting fact was that at the same time they had very low expectations and the overall attitude towards agency work was very negative. Earlier from the theoretical framework and also from the discussions with the employees came the idea about the elite employees in the social and health care sector. This should be used as the key strategy instead of automation on creating value for the customers and building up the brand for Company X. By using this strategy the pricing should be focused more on the direction where a skilled employee costs more than an employee who does only the basic dental care.

The personal service was highlighted also with the employees. Because the employee turnover among agency workers is big Company X should pay attention to committing the current skilled staff. The salary level is one way to make sure that the employees are satisfied but that can't be the only competitive factor. Company X should also take care of the good employees and tell forward if clients give positive feedback on the employees. The criticism should also be addressed so that the employee could have the possibility for personal development.

In relation to this the recruitment process needs to be of good quality. Company X needs to concentrate on finding the elite employees so the recruitment channels and the reputation of the company are important. Currently Company X can use recruitment tools that help interviewing a large volume of employees by video. For the purpose of short-term employments that isn't recommendable because the concentration needs to be on quality and skill.

There were three relevant customer segments according to the new concept. Especially interesting group is the clients that have most potential to grow and develop into something more profitable. The sales were one of the key activities for Company X and it needs to be focused so that the most potential clients can be found. It is relevant to find out if the potential already exists in the current customers and therefore in the sales. The automation can also be promoted differently for different segments. When the usage for the service is seldom and consistently with small volumes the automation of service can be more easily justified.

Even though the automation currently didn't get the support it required the company can still make decisions that will sustain it in the future. For example some attention already needs to be paid to the communication channels. As it showed in the results the clients want to use whatever channel is available but Company X can still choose the preferred way and try to emphasize that. For example a single email address that several representatives from Company X can access would ease arranging internal substitution. When small strategic steering is made towards the automation the future growth of volumes will be easier to organize.

4.1.2 Client database

The second clear statement for utilizing digital solutions in the service came from the fact that the company has a large number of small clients. There is a notable need for a client database which came up for the first time already during the service design understanding phase. Currently Company X has software that is designed to assist in sales but the need is in a more practical level. The current program could be extended or the database could be entirely separate.

Company X has an uncountable number of small clients, active and potential that can order only a few times per year. Maintaining the practical information related to these is currently manual. For example if some client has special wishes there is not a clear place where these could be written down so that for the next time the information could be easily retrieved. This database could list all of the practical information about the client that should be told to employee as an introduction. It could also list the employees that have worked there before and recommend those that have had good feedback from the client.

In relation to the advantages of the database the employees that are sent to different work locations should have as profound advance information as possible. For example one client hoped that an employee would have her direct phone number so that in case they were late, they could call and notify directly to the client. The agency workers should know every possible detail in advance, for example what kind of entrance the location has, who will let the employee in, and does the client provide work clothes and so on.

The database could also support the providing of the skilled employees by including the information regarding different skills. The first step on making sure that the clients receive skilled agency workers is to create a skills survey from the employees. Naturally each one of the employees have been interviewed by a representative from Company X at some stage but certainly skills have developed and been reinforced since then. Doing this type of survey regularly would ensure that Company X would know the skill level of the employees in real time and it would be possible to create inclusive listings for example about different software that employees can use. This information should be used in the client database.

In addition one single thing that each client in this research pointed out was the importance of the medical service and the clean up. Many of them had experiences where an agency worker didn't participate in the medical service or didn't do the clean up at all. The clients emphasized on how important it is at the end of evening shifts to prepare the room for the next day even though the employee herself wouldn't come back again. This is a significant thing because every client mentioned this either during the case study interviews or the idea interviews. In the public sector the medical service is often a separate function where nurses can't participate but still Company X should make sure that their employees all can and are willing to take part in it whenever it is necessary. This could also be documented in the database in order to guarantee quality.

As a conclusion the future of the digital solutions seems promising even though the idea of automation was turned down at this time. It's undeniable that the personal service is important for both clients and employees and it should be taken care of. Later on when the volumes grow the possibilities for automation should be examined again. Even now some actions can be done so that the future changes are easier to execute.

The suggestions for the new service concept that were recommended above offer plenty of room for further development. For example later on the client database could be combined and reinforced with employees' shift requests. After that the system could recommend for a certain client the most appropriate and available employee in real time when the actual order arrives.

4.2 Suggestions for follow-up studies

There are two different approaches to the possible topics of future research. This includes the themes that are related to this particular case and more generally the themes that are related to the fields dealt in the theoretical framework. It seems that previous research related especially to the agency work has been very constrained.

As stated before, Company X should take service design as a natural and continuing part of the development process. That is a strategic decision, which is never fully completed but an ongoing process. The service levels should be measured regularly and also included with new meters such as the employee turnover or the frequency that the clients order. The success of the new service concept has to be evaluated and necessary changes considered regularly. If the company executes the client database they should also examine how employees' experience on introduction has improved.

In relation to the employee turnover Company X could utilize the employees that have already departed the company. The reasons and possible points on development haven't been studied systematically before. It would be recommendable in order to improve the employer image. In this same context it would be reasonable to study Company X's image among possible future employees. Good places to start would be the schools that educate future professionals into social and health care sector in the Metropolitan area.

Also one crucial point that caused problems to the service in general was operating with short notice of time. The clients felt that they couldn't make the order before the regular staff reported as sick. This caused the short-term orders and the urgent solutions that make the quality of service suffer. Often the most experienced employees that are at the same time most wanted for the clients are given shifts first and in advance. From the business perspective it would be important to find out ways to make the process more predictable.

Therefore the client statistics about the absenteeism of the regular staff and the usage of the agency work should be examined. That could enable finding patterns that would help to predict the need of the supplemental staff. For example it is already known that Mondays and in general beginnings of every week are busier due to the regular staff's absenteeism. The field suffers from the short-term orders because the probability that the most wanted or suitable employee is found is smaller in relation to the order time. This study would help both the clients and Company X to improve the collaboration. Some level of short reaction time has to be accepted but even small changes in that could really make a difference.

The previous studies related to agency work have often concentrated on the field in general and there is a need for a domain-specific analysis. This thesis and some other studies have shown that employees in the social and health care sector are in fact somewhat in the position of elite employees. They have the opportunity to choose the working locations, hours and sometimes even salaries. There is a need to study separately fields like for example commerce, construction, industry and catering. That way can be found out if the negative impressions that are generally associated with the agency work are in fact related to a certain field(s).

The social and health care sector itself can also be studied more closely. Many companies in that field use short-term employees and might actually have their own lists of employees that they call directly when they need a fill-in quickly. There are continuing problems on finding the skilled employees in the field. The most obvious approach is to examine it by dividing the operators into the public and private sector and finding out the differences there. The salaries have raised, labor shortage challenges and there are several operators competing in the field. These form a complex network for which the most ruling and important requirement is guaranteeing the level of basic care in Finland.

The field of agency work has also been studied before mostly from the perspective of the employees. It should be studied also from the viewpoint of the operating companies. As stated before there are several companies and a variety of different procedures. What differences can be found for example among the companies that offer agency work in the social and health care sector? What kind of systems they use when managing short-term orders from clients? What kind of recruitment processes they have and how they maintain the skilled employees? Service design as a method has also given potential for future research. In the following chapter this is addressed in particular related to Information Systems research.

4.3 Relations to Information Systems discipline

The used methodology in this thesis exemplified an untypical approach to Information Systems (IS) discipline. That was a conscious decision as described before because the problems that Company X had needed to be examined comprehensively. During the process the emphasis remained on the digital solutions and even though the customers expressed that the timing for automation wasn't right the results and recommendations considered what should be done to ease the technological development in the future.

By using the framework of design science research this thesis would have aimed at building an artifact, some kind of technological solution that would have made Company X's processes more effective. Because the chosen approach was service design the client requirements

were examined carefully and valued highly. That gave guidelines for what kind of digital solutions would assist in the future but also showed that there are more urgent matters in the service that need to be repaired. The traditional approach of IS discipline would have also provided the solution but then it might have escaped that the preliminary research question was in fact larger and needed a more comprehensive approach.

Hevner et al (2004, 98) argued as well that the danger that lies in applying the design science research paradigm is that the technological artifacts are overemphasized and even though well-designed they are useless in real organizational settings. March and Smith acknowledge (1995, 254) the same problem by stating that since artifact performance is related to the environment where it operates, incomplete understanding of that environment could result in inappropriately designed artifacts.

The service design allows including the surrounding environment thoroughly. By applying this approach it was possible to consider the service concept and its needs so that the possible future digital solution would have a real use value in the operating environment. Hevner et al also recommend (2004, 100) that since design science takes a simplistic view of the people and the organizational context it should be combined with behavioral and organizational theories to develop an understanding of business problems, contexts solutions and evaluation approaches.

The IS design process is naturally strongly influenced by organizational constraints since information systems are deployed in organizational settings. In a some way design in IS can be assimilated with architecture since there are objective, structural calculations due to the materials but they need to be used in parallel with more subjective design decisions based on socio-cultural norms and expectations. (Kuechler, W. L. & Vaishnavi, V. 2008, 12.) Service design offers a method that can combine these two.

Service design by its nature doesn't automatically emphasize technical aspects. Instead it provides an all-round tool that can be applied from the viewpoint of chosen elements. Hence the recommendations for the future research and development of design research in information systems are that since business related problems often can't be solved with a single solution the emphasis should be on the problem specification. One approach to execute that would be to apply frameworks that are wider than traditionally but which would be emphasized from technological aspects.

Nunamaker and Briggs argue (2011, 8) that the only justification for building an information system is focusing on ways to create value with information. That summarizes the core of IS that can be approached in several ways; service design can most definitely be one tool for

that. Because as Niederman and March state (2012, 12) only through the combination of design science and behavioral research that theories are developed that are truly central to the IS discipline. As a conclusion the service design as a method would answer the need of broadening the scope of IS requested by Nunamaker and Briggs (2011, 2) as referred to earlier.

4.4 Evaluation of the development task

The purpose of this thesis was to create a new service concept for Company X. That need came from problems that they had had as a result of changing personnel and partly customer distrust. The timing seemed right for renewing the service. That goal was accomplished and the new model for the concept has been presented in this thesis. The new concept wasn't deployed but only recommended so the usability and advantages in practice couldn't be tested.

Possible problems when deploying this concept can occur if the representatives of Company X won't be able to change the daily routines. The company is rather small and it is easy to fall back into old habits if the change isn't followed and consistent. For example if the database is created the maintenance will take additional time in order for the database to serve its purpose. Some of the clients also have many years of experience on using the service so they have developed own routines which may be hard to change.

When considering the reliability and generalizability of the study in general it is important to keep in mind what Mattelmäki stated (2006, 30): when creating concepts or designing in general it is a necessity to tolerate uncertainty and openness; the designing process is open, flexible and iterative. This thesis hasn't emphasized the generalizability mainly because it is so focused on the certain company and its customers. The dealt data has also been qualitative which complicated the issue even more.

Nevertheless the field of social and health care sector suffers from employee shortage as discussed so there is a need for this type of research and in some form of generalizability. That concerns both the clients and companies like Company X. Hence it is important to find out ways how employees could be committed on certain employers. The concept of elite employees should be accepted more widely and utilized as well as possible. That could give tools to the field and employers to cope with the labor shortage.

The field of agency work might not be that familiar with concepts such as service design. As it was discussed before the usage of agency work is often assimilated with the trade of products. The current development has shown that the service-dominant logic inverts traditional

roles of products and services and when developed even further the customer's role in value creation is highlighted. Therefore it would benefit the field of agency work to use tools such as service design in development.

The field has also some PR-work to do due to the negative public image that is commonly related to the concept of agency work. By using tools such as service design it is possible to develop functional concepts that can change several preconceptions. As Grönroos and Voima state (2013, 142) when direct interactions between the customer and the provider occur at an early stage of production the joint sphere (see chapter 2.4) can dominate value creation. By applying this way of thinking the operating company can take a bigger and more active role in co-creation.

The quality of this study is analyzed considering construct validity, internal validity and reliability which are referred for example by Yin (2009, 40-45). According to Robson (2011, 87) there is no single way for determination of construct validity. He continues that any one way of collecting data has problems so that answer might be multiple methods of data collection. In this study the data has been collected from face to face interviews, e-mail questionnaires and the drawings of the interviewees.

According to Robson (2011, 159) triangulation can help to counter all of the threats to validity. Wynn and Williams add (2012, 803) that the principle of triangulation reflects the importance of including multiple approaches to support causal analysis based on a variety of data types and sources, analytical methods and theoretical perspectives. Robson lists (2011, 159) four different types of triangulation by Denzin which are data, observer, methodological and theory triangulation. In this study has been used mainly methodological and theory triangulation.

The main source of evidence has been the interviews of different operators. Because their roles have been different they have supported each other and given different angles to the development task. As Wynn and Williams state (2012, 803) the issue with triangulation is the potential to abstract to a clearer understanding of the causal factors, not repeated confirmations. The researcher has worked for Company X for several years in payroll and now later on as a consultant which has provided some background information to the development task. Also archival records and documentation have been studied to form the theoretical framework.

Internal validity is accomplished when a study can plausibly demonstrate the causal relationship between treatment and outcome (Robson 2011, 88). This study had some problems that can effect on the internal validity. For example the chain of evidence is a bit difficult to es-

establish due to the fact that the person responsible for the research also works for Company X. Therefore probability for having the subjectivity to effect on the results is larger. Nonetheless every conclusion was traced backwards to evidence and made sure that an external observer could also examine the conclusions. However it is more likely that winding up with the similar outcomes would require that the researcher has at least some level of previous experience from the field of agency work.

Robson states (2011, 159) that in flexible designs researchers need to be thorough, careful and honest in carrying out the research in order to establish reliability and also to be able to show others that this has been accomplished. In relation to this a research database has been created regarding this study. It includes the data that couldn't be attached to this thesis. For example the original drawings from the case study interviews were not added to this report because the quality of drawings would have suffered. But the database includes them and also notes from interviews and researchers comments. So the raw data can be restored for independent inspection if needed. In addition it would have improved the quality of this study if every discussion would have been recorded and then stored to the database.

In general the study had some problems. The fact that there were only three employees that were interviewed compromised the confidentiality. There was also settled one additional interview with an employee that would have improved the situation but that agency worker never showed to interview place and didn't answer on any messages after that. But the confidentiality was noted and the researcher conducts daily several interviews as a part of her job anyway so that made it possible that the employees participating in this study aren't recognizable.

The results can also be affected by the fact that there have been reasonably many changes in Company X's personnel and policies. The clients felt clearly disappointed and even frustrated at some level. Because of that it would be recommendable to conduct this or similar study again after the current staff has stabilized the situation. There was also the problem with the scope of this development task. The theme of this thesis had several aspects that needed to be included and examined. There would have been material to several studies from different fields and that has partially led to situation where some of the themes in this thesis have been referred to rather promptly.

The service design in general offered a useful tool in developing a new concept. As stated before there are several different models for service design process that can be applied according to the case. Therefore it offers multiple approaches and possibilities to change the process if preliminary results indicate that. It enables also to emphasize the studies differently for example from the technological aspects. The service design also highlights creativity

and inventive ways on creating something new together with the clients. That is extremely suitable when a company wants to stand out from its competitors by offering personal service in a field that has several operators and some of which (i.e. Seure) have already established their position through for example ownership.

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Figures

Figure 1: Model for agency work (according to Vuokratyöopas 2012)	9
Figure 2: Information Systems research framework (according to Hevner et al 2004, 80) .	12
Figure 3: Value creation spheres according to Grönroos & Voima (2013, 141)	14
Figure 4: Service design process model according to Moritz (2005)	17

Tables

Table 1: Themes for idea interviews	28
Table 2: Sources of information.....	39

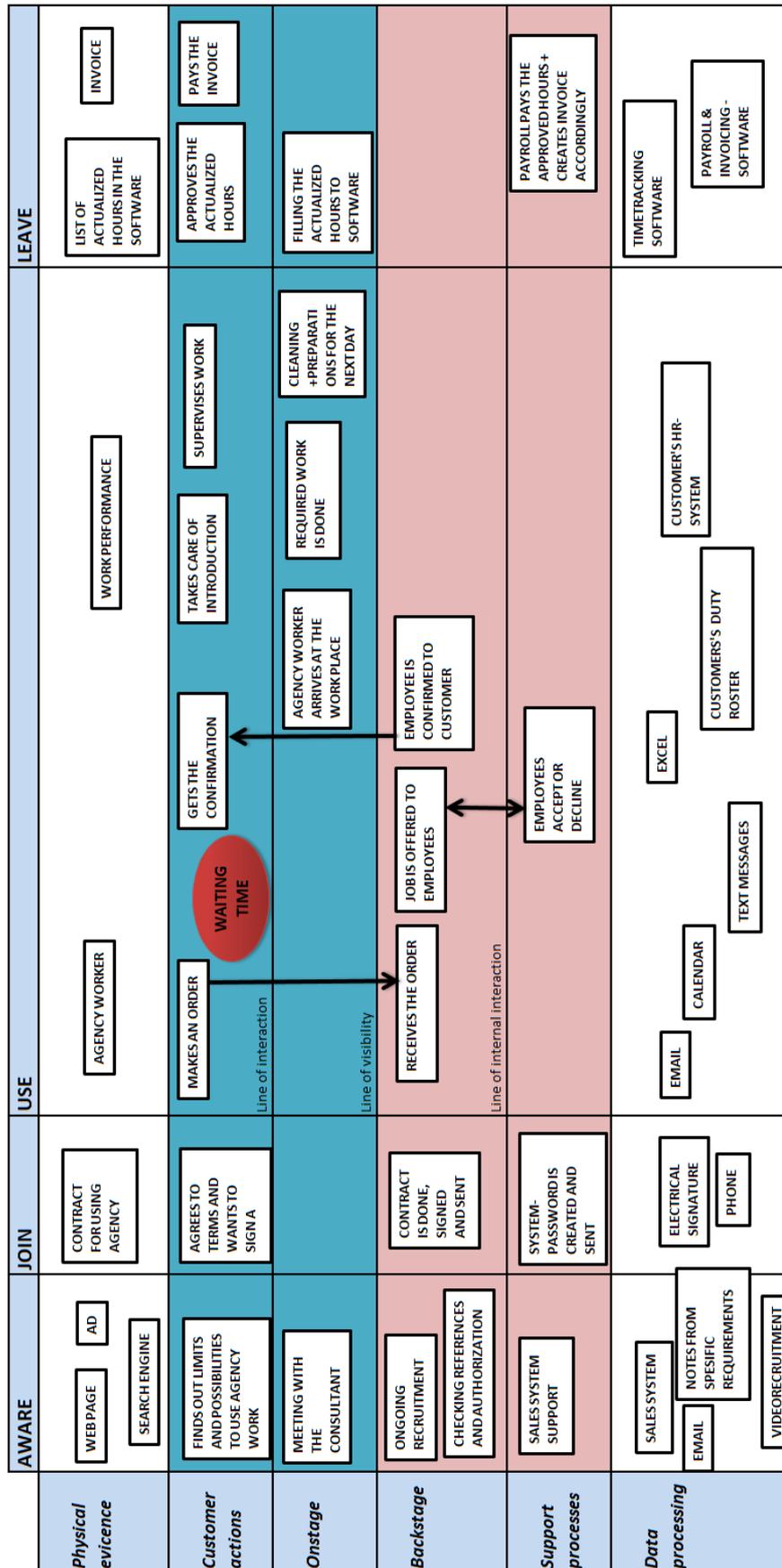
Appendixes

Appendix 1: THEMES FOR OPEN INTERVIEW / customer / employee / consultant	58
Appendix 2: The service blueprint	59
Appendix 3: Mind Map.....	60
Appendix 4: The business model canvas	61

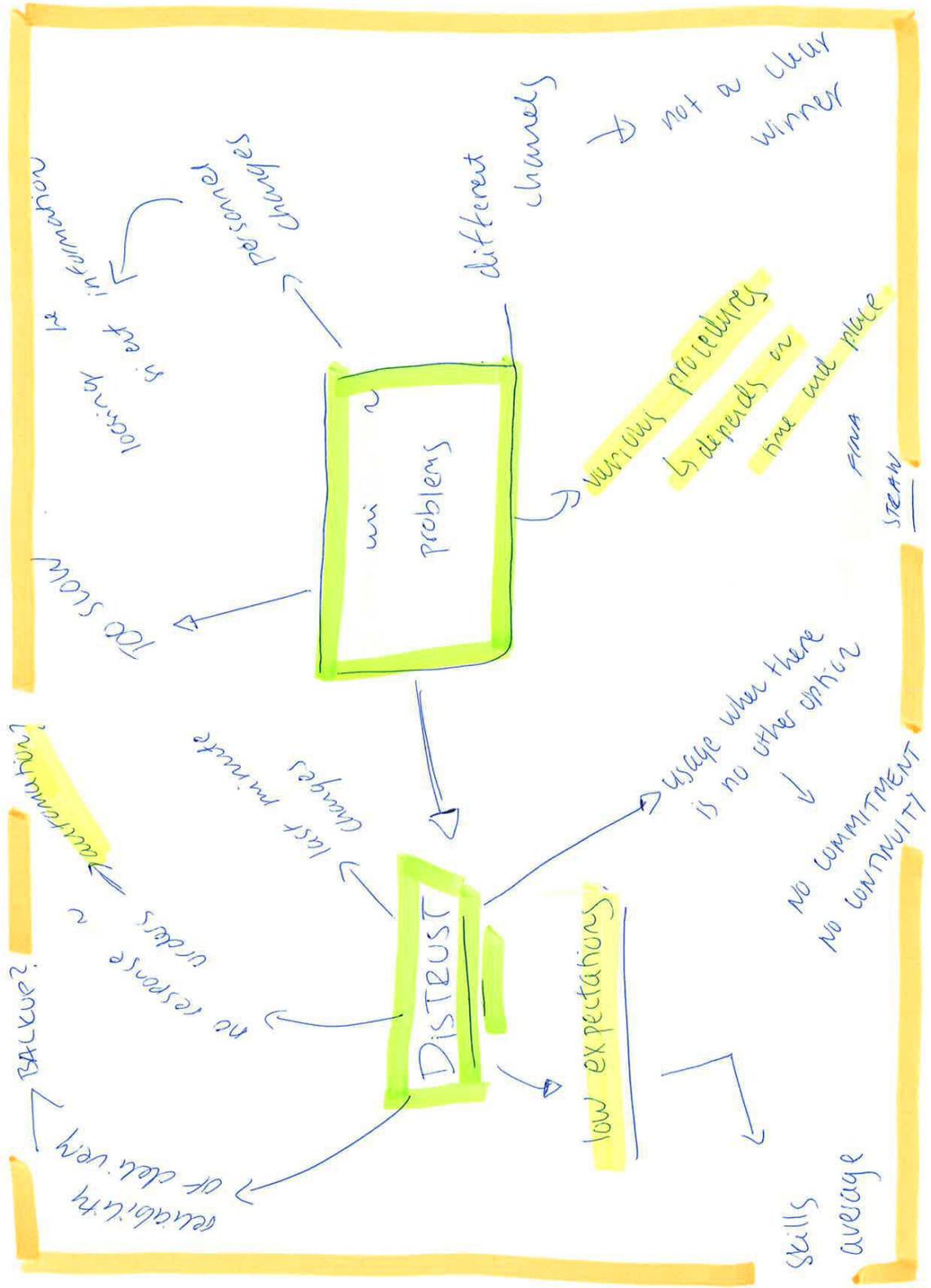
Appendix 1: THEMES FOR OPEN INTERVIEW / customer / employee / consultant

- describe your current work
- describe a situation where you need an agency employee / describe a situation where you get an order from client / a job offer from Company X
- the experiences from other companies providing agency work / preconceptions
- opinion of the field of agency work
- communication channels
- describe a good experience
- describe a failed experience
- the know-how of employees / introduction to work
- other ways for getting surrogacy work / other work gigs / a new employee
- the drawing
- feedback

Appendix 2: The service blueprint



Appendix 3: Mind Map



Appendix 4: The business model canvas

<p>Key partners</p> <p>Other subsidiaries of the same concern</p> <p>Schools in the social health care system</p> <p>Satisfied clients that have networks</p>	<p>Key activities</p> <p>Recruitment Sales Training</p> <hr/> <p>Key resources</p> <p>Intellectual resources: Committed personnel and the strong brand around skilled employees and excellent service</p>	<p>Value propositions</p> <p>Providing quickly skilled employees that have all the necessary background information.</p>	<p>Customer relationships</p> <p>Excellence on personal service</p> <hr/> <p>Channels</p> <p>Email + txt + phone calls</p> <p>Feedback and continuous contacting</p>	<p>Customer segments</p> <p>1) No own temp. work 2) Own problems 3) The final straw</p>
<p>Cost structure</p> <p>Personnel costs, salaries. Marketing costs related to clients and agency workers</p>		<p>Revenue streams</p> <p>Fixed prices with variables such as urgency and required skill Dynamic prices when there is potential to grow</p>		