

## MASTER

### Application and evaluation of the BASE/X framework in the healthcare domain

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Eindhoven, 4<sup>TH</sup> of April 2015

# APPLICATION AND EVALUATION OF THE BASE/X FRAMEWORK IN THE HEALTHCARE DOMAIN

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## Preface

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This master thesis project is the final phase of the master's program. During this project, I have received a lot of trust and support, both from the Eindhoven University of Technology and Lunet Zorg, which I am very grateful for. This trust and support has enabled this project. First, I would like to thank Irene Vanderfeesten, the University supervisor, for the effort, support, kindness, and time she had invested in this project. Bi-weekly meetings with Irene Vanderfeesten have given me confidence and guidance during this project. I would also like to thank Oktay Türetken, the University supervisor, for the time and effort he gave to provide feedback, meet with me, and the quick responses to my inquiries.

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## Management Summary

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Many businesses from diverse business domains are currently transitioning from an asset-oriented business focus towards a service-oriented business focus. For service-oriented businesses, products become part of the service delivery channel. These products can therefore be seen as add-ons to the offered services. The service-dominant logic of service-dominant businesses consists of three basic ingredients, namely a value-in-use focus, a network focus, and finally business agility. The BASE/X engineering approach supports this transition from an asset-oriented business focus towards a service-dominant business focus. The BASE/X framework covers the three main ingredients of the service-dominant logic and supports the application and implementation of this new logic within businesses. An analysis of the literature established that the BASE/X framework would be an excellent type of business engineering approach for healthcare organisations, as the current business models in healthcare do not fully support a network focus, while the BASE/X framework does. A network focus is highly important in the healthcare sector, because cooperation between different care providers is the only way an ultimate total care package can be offered. This cooperation is also required in order to handle healthcare changes, such as budget cuts and the aging population. The current business models in the healthcare sector with a network focus all have a particularly narrow focus. They focus only on one specific part of what must be included in a fully functioning network focus. The business models focus only on financial aspects, on identifying different parties, or on the ways in which interactions can be made possible between different parties. In contrast, the BASE/X framework fully supports a network focus within organisations, by providing a complete overview of the following aspects: the co-creation between different actors, how these actors interact, each actor's contribution, and how the actors share the costs and benefits of their business endeavours. This BASE/X framework has already been applied in multiple business domains, such as the mobility and financial sectors; however, it has not yet been applied in the healthcare sector.

Based on the fact that the BASE/X framework supports a complete network focus, but also has a service focus and agility, the BASE/X framework appears to be a suitable business engineering approach to apply in the healthcare sector. As the BASE/X framework would be suitable to employ in the healthcare sector, but has nevertheless never been applied in the healthcare sector yet, this master thesis aims to research its practical use for the healthcare sector. This master thesis research consequently introduced and applied the BASE/X framework to the specific healthcare context of the healthcare organisation Lunet Zorg and evaluated its introduction, application, and its value for this organisation. Within Lunet Zorg, the evaluation of the BASE/X framework led to a number of practical and theoretical recommendations that can improve the applicability of the BASE/X framework by healthcare organisations in the future.

This study has made use of two types of methodologies. The introduction and application of the BASE/X framework to the healthcare organisation Lunet Zorg has been relayed through the case study methodology. This introduction and application of the BASE/X framework has been accomplished through the organisation of workshops. These workshops focused on a section of the BASE/X framework, called the business pyramid. This pyramid supports the design of a service-dominant logic within a company. This pyramid consists of 4 layers, which all include one tool to support the application the specific layer. During each workshop, a specific layer of the BASE/X framework business pyramid was introduced and applied together with workshop participants. However, the workshops focused on the two top layers only, which are the service-dominant strategy and service-dominant business models. These layers each include a tool that supports the application; the strategy layer includes the strategy canvas tool, and the business model layer includes the service-dominant business model radar (SDBM/R) tool. The application of these two layers with the related tools was based on the specific "strategy-based, top-down" BASE/X business design sequence, meaning that the strategy acted as the starting point of the design sequence. These workshops included employees of Lunet Zorg as participants, which ensured that the applied BASE/X was suited to the

context of Lunet Zorg. After the BASE/X framework introduction and application in workshops, the BASE/X framework business design sequence and design, the tool application process and design, and the workshop results were evaluated based on the second research methodology, namely the evaluation methodology. The evaluation methodology consists of multiple evaluation methods which utilise different types of information to discuss different evaluation criteria. The evaluation methods used were a questionnaire, a focus group interview, observations, and finally a meeting with a BASE/X expert. These evaluation methods yielded information about the usability, effectivity, outcome quality and the applicability of the BASE/X framework within a healthcare organisation.

The information obtained during the evaluation led to the conclusion that the BASE/X framework would be applicable for use in the healthcare sector, after a number of adjustments are made relating to the BASE/X framework and the tools. The BASE/X is applicable based on the fact that a healthcare organisation can be organised on the basis of the BASE/X framework, a healthcare organisation can act according to the service-dominant logic, and recognised importance of the BASE/X framework by the first applied healthcare organisation during this project. However, there were a number of BASE/X application issues. These can be resolved through improvements concerning the BASE/X business design sequence and design, and the tool designs and application processes. The following improvements are recommended: first, the BASE/X framework business pyramid should be applied by the head of an organisation. The head of the organisation needs to apply the four layers of the business pyramid to ensure a service-dominant business logic design within the organisation. The people employed in the highest segment of an organisation, in contrast to middle management, are supposedly more objective, have greater authority, have long-term perspectives regarding managing and positioning the business, influence the future course of the business, and are better able to define the goals of the organisation. Thus, the heads of the business need to design the BASE/X framework to fully realise its successful implementation. Second, this study also indicated a recommendation concerning the tool of the second layer of the business pyramid, the SDBM/R tool. The recommendation is to generate sub-SDBM/Rs when the SDBM/R is of a high complexity level, including a huge amount of roles, because SDBM/Rs that are too complex are hard to read and are difficult to get an overview of the network. In cases of Lunet Zorg’s application of SDBM/R, for example for the client

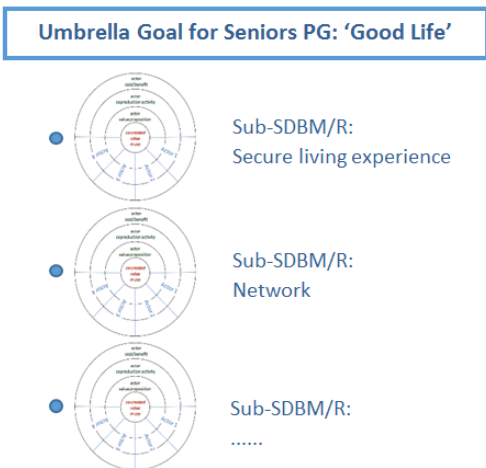


Figure 1 Example of an Umbrella Goal with Sub-SDBM/Rs

segment Seniors PG, it is recommended to divide the SDBM/R into multiple smaller sub-SDBM/Rs with single goals. All the single sub-SDBM/Rs from the original complex SDBM/R are part of realising the Seniors PG clients’ segments umbrella goal. The composition of sub-SDBM/Rs is able to realise the umbrella goal for the particular client segment. The use of sub-SDBM/Rs reduces the complexity of SDBM/Rs and ensures that the same goal will be reached as was intended by the first complex SDBM/R (Figure 1). Participants furthermore preferred a different BASE/X business design sequence in which the bottom layer of the business pyramid, the service-dominant business services, is first applied before the application of the two top

layers that concern the service-dominant strategy and business models. This BASE/X business design sequence is called “service-based, bottom-up”. This sequence is recommended when the head of the organisation encounters difficulties when applying tools related to the determination of the required services and the positioning of services that are needed during the strategy and business model application. The final recommendation is that the workshop facilitator needs to stay neutral and should avoid influencing the content of the workshop, because this can have a negative effect on participants’ attitudes. The recommendations discussed above constitute conceptual improvements. There are, however, also smaller and simpler recommendations related to practical improvements. For example, suggestions related to the most optimal

workshop program, and suggestions regarding the BASE/X workshop facilitator, such as deepening their knowledge of the sector related to a given workshop.

In conclusion, this master thesis research successfully addresses the lack of studies on the application and evaluation of the BASE/X framework in the healthcare sector through the application of the BASE/X to one case study and by extensively evaluating its application. Based on this application and evaluation, the research provides recommendations that guide the improvement and ensure a greater success for future applications of the BASE/X framework within the healthcare sector. These recommendations serve to reduce the number of BASE/X application issues and lead to more successful BASE/X framework tool results.

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# 1. Introduction

This thesis examines the application and evaluation of the BASE/X framework within the healthcare sector. This master's thesis is the final phase of the graduation project, which is based on a literature review and research proposal previously created. This chapter consists of two sections; the first section provides an overview of the project motivation resulting from the literature review and research proposal, and the second section covers the structure of this report.

## 1.1 Motivation

Many businesses from diverse business domains have long had mainly an asset-oriented business focus. This focus is currently shifting, however, to a service-oriented business focus. For these kinds of businesses that adopt a service-dominant business focus, the products become part of the delivery channel of the services and the products can consequently be seen as add-ons to the offered services. A service-dominant business requires three main components: value-in-use, agility and business networks. These three main aspects are supported by the BASE/X framework (Grefen, 2015), which is a business engineering approach. This business engineering approach can therefore be applied and implemented in service-dominant businesses or can be applied to support businesses that desire to transition towards a service-dominant business logic. This BASE/X framework is already being applied in several business sectors, however, it has not yet been applied in the healthcare sector. While literature analysis established that the BASE/X framework would be an excellent type of business engineering approach for healthcare organisations, these organisations require a network focus which is not fully supported by the business models that are currently in use in the healthcare sector. Namely it is of great importance to the healthcare sector to focus on the cooperation between different healthcare parties, because the required ultimate total care package can only be offered to all citizens through their cooperation. A total care package encompasses, for example, a dentist, pharmacy, physiotherapy, speech therapy, and psychiatrists. As each organisation has its own care specialisation with their own specific competences, no single organisation can provide citizens with the ultimate total package that covers all required care. A well-functioning cooperation is needed to deliver the required total care package, which entails focusing on a value network. A value network is a concept in which value is generated through the co-creation of multiple parties involved in a network (Peppard, et al., 2006). A business model with a value chain focus, on the other hand, emphasises the value flow moving from one organisation towards the customers (E. Lüftnegger, et al., 2013). This kind of business model only focuses on one single organisation and do not incorporate other organisations which could possibly be seen as partners of this organisation. Thus, a focus on a value network is necessary in order to be able to include multiple parties who participate in the co-creation value. For a successful delivery of a total care package, all the parties in the network should have business models that include a value network focus. This necessitated an investigation into the current business models used in the healthcare sector. During the investigation into the relevant literature, three types of business models were identified that have a network focus in the healthcare sector. However, each of these business models have a narrow focus. These business models involve different parties, but focus only on a specific element of a network focus. So they do not provide a total overview of all aspects concerning the cooperation between different parties. First, the accountable care organisation business model focuses mainly on the financial aspect. It does not focus on other aspects, such as the co-creation between actors, how they interact, or the contribution of each. Second, the community health business model focuses largely on identifying different actors, but does not focus on

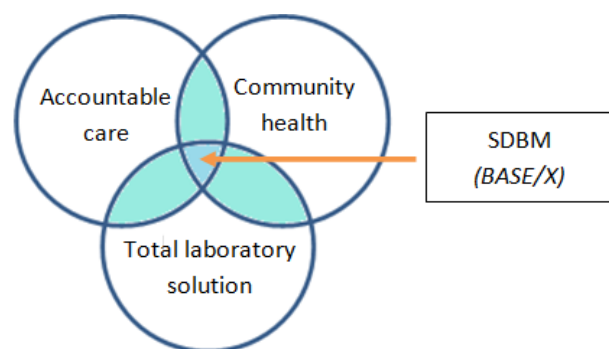


Figure 2 Current Business Models in the Healthcare Sector and the BASE/X

other aspects, such as how the different actors interact, or on financial aspects. Third, the total laboratory solution mainly focuses on how to make interactions possible between different parties; however, this model does not focus on a number of other aspects, such as each actors' contribution, or financial aspects (Figure 2). However, the business model of the BASE/X framework, called service-dominant business model radar (SDBM/R), fully supports a network focus within organisations, by providing a complete overview of the following aspects: the co-creation between different actors, how these actors interact, each actor's contribution, and how the actors share the costs and benefits of their business endeavours (Lüftenegger, 2014). With the exclusion of the three business models found in the healthcare sector with a value network focus, the other business models that were identified all apply a value chain focus. Relevant literature on this subject showed that the value chain focus is the standard focus of business models within the healthcare sector.

Thus, as the current business models in the healthcare sector do not support the required complete value network focus to deliver an ultimate total care package, new business models must be applied and implemented that do support this network, such as the SDBM/R. Additionally, the pressure to have a value network focus is also caused by healthcare changes. Healthcare is currently experiencing major changes, such as budget cuts and an aging population. The aging population, for example, means that retirement homes will continue to receive an increasing number of client notifications, while the number of retirement homes simultaneously declines due to cuts in the care budget. This will result in long waiting lists, and the elderly will be required to live a longer time than optimal in their own houses. In order to ensure that the elderly can live independently for a longer period, home-based care will be required. This care can be delivered by several parties, for example home care organisations, volunteers, and family and friends. When the clients cannot live independently anymore despite all available help, a place in a retirement home must be located. Close cooperation between the several parties that deliver care and support will be required in order to offer and align the care contributions of each party, to offer clients the complete care package they require to enable them to remain at home. Additionally, close cooperation between the retirement homes and the parties that deliver care and support to clients is of high importance. As the care-deliverers have daily contact with their clients, they can make an appropriate estimate of whether their clients can remain living at home, or whether they should be offered a place in a retirement home. Therefore, a value network focus is required instead of a value chain focus, in order to provide the clients the required total care package that then directly leads to appropriate intervention when living alone is no longer an option.

Thus, multiple healthcare organisations must collaborate in order to deliver the most suitable total care package to each citizen. Healthcare organisations cannot continue to focus on their own organisation alone, ignoring possible partners. In this way, parties that contribute to the care delivery process must evaluate their current business operations and investigate the changes that should be made in order to comply with the required value network focus. This is necessary, as healthcare organisations with a value chain focus that desire to transition towards a value network focus are required to apply and implement new structures and business models.

Compared to the business models that have been identified in the healthcare sector with a value network focus, the SDBM/R of the BASE/X framework appears to be a better business model to be employed in the healthcare sector (see paragraph 2.2 called "BASE/X Framework" for a further explanation of the BASE/X framework and the SDBM/R). The SDBM/R appears to be a better business model, not only because it incorporates cooperation between the different parties, and therefore has a value network focus, but also because the SDBM/R has a broad focus. It encompasses all required facets of a network focus, instead of the narrow focus used by the three business models found in the healthcare sector. Additional to the value network focus, the BASE/X framework moreover supports both a service focus and agility within

organisations, which are the main components of a service-dominant business logic and which is furthermore of great importance to healthcare organisations. Thus, the BASE/X framework is a business engineering approach that healthcare organisations can choose to apply in order to implement service-dominant logic inclusive of the three related main ingredients.

The BASE/X design and how it is constructed is as follows, the BASE/X framework consists of three pyramids: the business pyramid, the organisation pyramid, and the platform pyramid (Figure 3). The business pyramid supports the conversion to a service-dominant logic within a company. From the application of this business pyramid, organisations achieve a service-dominant business design. The other two pyramids handle the implementation of the service-dominant business design of the first pyramid. Each pyramid consists of the same composition of four layers that sequentially support the application of the service-



Figure 3 BASE/X Framework (Lüftenegger et al., 2013)

dominant strategy, business models, service compositions and business services. Each of these layers consist of a tool that supports the application of that specific layer. The service-dominant strategy layer includes the strategy canvas tool, the service-dominant business model layer includes the service-dominant business model radar (SDBM/R) tool, the service composition layer includes models available from established business process management practice, which are applied in a service management context, and finally, the business services layer includes the strategic positioning tool. The BASE/X business engineering approach consists of several possible business design sequences. Each layer of the pyramid may act as the starting point of design (Appendix 1, "BASE/X Business Design Sequence"). For example, the strategy layer, may act as the starting point of a design sequence known as "strategy-based, top-down". This design sequence begins from the identity of an organisation. On the other hand, the starting point can be the service-dominant services layer, which is called the "service-based, bottom-up" design sequence. This sequence begins from the capabilities of an organisation.

In conclusion, the BASE/X framework including the SDBM/R appears to be appropriate for healthcare organisations. However, businesses must change in order to implement this BASE/X framework and integrate the related new paradigm, namely the service-dominant logic, into their business structure. The BASE/X framework may be appropriate for the healthcare sector, but has not yet been applied. This led to the main purpose of this graduation project: **to apply and evaluate the BASE/X framework in the healthcare sector**. Achieving this purpose will lead to added value for healthcare organisations by ensuring a focus on issues that are highly important to healthcare organisations, and in addition, providing a more extensive application of the BASE/X framework than has been applied up until now. The BASE/X framework will be applied in a healthcare company as a case study. The case study makes it possible to apply and evaluate the BASE/X framework within a specific company belonging to the healthcare sector. The evaluation is based on a diverse set of gathered data about the BASE/X framework acquired during this case study. The data consist of information obtained through several evaluation methods, namely questionnaires, interviews, expert meetings, and finally information based on observations obtained during the application of the BASE/X framework in the specific healthcare context of the case study. This evaluation then leads to suggested improvements to BASE/X.

The next paragraph gives an overview of the structure of this master thesis report.

## 1.2 Thesis Layout

The structure of this master thesis report is as follows. Chapter two provides background information about the service-dominant logic, the BASE/X framework, and the suitability of the BASE/X framework in the healthcare sector. Chapter three describes the research methodology which consists of the case study methodology and the evaluation methodology. Chapter four details the introduction and the application of the BASE/X framework in a specific healthcare context based on the case study. Next, chapter five evaluates the introduction and the application of the BASE/X framework with a diverse set of information that has been obtained. Subsequently, chapter six discusses lessons learned, including conceptual and practical improvements, related to the BASE/X framework. Finally, chapter seven contains the conclusion of the master thesis project.

## 2. Background

This chapter consists of three sections, which focus on service-dominant logic, the explanation of the BASE/X framework, and the suitability of the BASE/X framework within the healthcare sector. The section on service-dominant logic elaborates on the paradigm shift to service-dominant thinking and this study's motivation to explore the BASE/X framework. The section on the BASE/X framework describes the structure of the BASE/X framework and how the BASE/X framework supports service-dominant thinking. The final section discusses the relevance of the paradigm shift to service-dominant thinking and the related BASE/X framework for organisations within the healthcare sector. This section furthermore outlines the specific healthcare organisation that was involved in this study.

### 2.1 Service-Dominant Logic

Businesses within diverse business sectors have long had an asset-oriented focus. This focus is currently shifting, however, to a service-oriented business focus. For businesses transitioning towards this service-dominant business focus, the products become part of the delivery channel of the services. The products, in turn, can be viewed as add-ons to the offered services. There is, moreover, a shift in importance from the value of the product to the value-in-use of the product. The businesses' recognition of this shift in importance can be caused by three factors (Olivia, et al., 2003). First of all, this shift can be customer driven, for example by customers' increased interest in complete solutions, the customers' focus on the business' core competences, and the decreased relevance of ownership. This shift can also be a strategic decision, because of the sustainable, competitive advantage that concurs with the paradigm shift. The competitive advantage of services is, among other reasons, due to the fact that services are difficult to imitate, that they are more labour intensive and moreover less visible. Lastly, this shift can be the effect of a financial decision, because of the continuous revenue stream and higher profit margins of services as compared to products (Baines, et al., 2009). This change in focus requires businesses to move from a goods-centred dominant logic to a service-centred dominant logic, called the service-dominant business paradigm. Making this change also demands of businesses that they carefully examine the ten basic principles of the service-centred dominant logic (Table 1) (Vargo, et al., 2004).

*Table 1 Overview of the Basic Principles of a Service-Centred Dominant Logic (Vargo, et al., 2004)*

Basic principles of the service-centred dominant logic:
The Application of Specialised Skills and Knowledge Is the Fundamental Unit of Exchange
Indirect Exchange Masks the Fundamental Unit of Exchange
Goods Are Distribution Mechanisms for Service Provision
Knowledge is the Fundamental Source of Competitive Advantage
All Economies Are Services Economies
The Customer Is Always a Co-producer
The Enterprise Can Only Make Value Propositions
A Service-Centred View is Customer-Oriented and Relational
All Social and Economic Actors are Resource Integrators
Value is Always Uniquely and Phenomenological Determined by the Beneficiary.

A service-dominant business furthermore requires three main components, namely value-in-use, agility and business networks (Lüftnegger, et al., 2013). The recognition of the concept of value-in-use has already been discussed above, as the importance of being a service-dominant business is recognised. Next to the value-in-use, companies also need to have a network focus to deliver an ultimate, complete solution to their customers. Several specific knowledge areas and their specific related equipment are generally engaged to reach the desired complete solutions. Companies cannot closely scrutinise all the different

areas of such a complete solution, because of limitations in time, costs and the capability of the company. Thus, companies can deliver a part of the complete solution excellently, but will perform less on other parts of the complete solution compared to other companies. A well-functioning cooperation is needed to deliver the ultimate complete customer solution. Cooperating with other companies will allow companies the possibility to focus only on their core competences and to outsource the rest to partner companies. Apart from cooperating with other companies, companies also need to collaborate with the customer as part of the complete solution, because the role of the customer has been changed by the paradigm shift. Due to the paradigm shift, the role of the customer changes from being a recipient of goods to being a co-producer of a service (Vargo, et al., 2004). A close interaction with the customer is therefore necessary because of the continued involvement of the customer in delivering the service. The required cooperation with both other companies and customers' demands a network focus. In contrast, the traditional value chain business focus does not support any sort of cooperation between companies. This focus namely only allows them to concentrate on their own organisation and other organisations which could possibly be seen as their partners are not incorporated into this focus, but are seen as competitors instead. The value network focus, on the other hand, is a concept in which value is created through the co-creation of multiple parties that are involved in a network (Peppard, et al., 2006). A value network focus is therefore necessary for including multiple parties and for supporting a collaboration between these parties, which is needed in order to deliver a complete solution to customers. Next to recognising the significance of the value-in-use and the network focus, business agility is required as well. Business agility creates a higher chance of survival and offers the opportunity to take advantage of market opportunities (Lüftenegger, et al., 2013).

Businesses that wish to shift to the service-dominant business paradigm need to change their business strategy and business models to let the services and business network be the central point of their business. This could be achieved with the implementation of the BASE/X framework, which supports all facets that are required to be a business with a service-dominant logic. The BASE/X framework provides support for a network focus, value-in-use and business agility.

## 2.2 BASE/X Framework

The BASE/X framework is a new business engineering approach, which allows for the conversion to a service-dominant business logic. The BASE/X framework consists of three parallel pyramids which are closely related to each other (Figure 4). The combination of these three pyramids ensures a service-dominant logic business design and implementation. The first pyramid is called the business pyramid, followed by the organisation pyramid and finally the platform pyramid. The business pyramid determines a new business design for organisations, based on the service-dominant logic. It accomplished this by providing insights into a new way of thinking and redefining the organisation through means of the service-dominant logic inherent to the BASE/X framework. Thus, the organisation's business design, based on service-dominant thinking, is considered in the first pyramid. The organisation pyramid and the platform pyramid cover the implementation of the new business design into the organisation. The business pyramid is supported by the organisation pyramid and platform pyramid in such a way that the organisation and platform pyramids need to adhere to the changes of the business pyramid and not the other way around.

The three pyramids consist of four layers, namely the service-dominant strategy, business models, service compositions, and business services. Each of these layers includes a tool that supports the application of the specific layers. First, the strategy layer includes the strategy canvas tool. Second, the business model layers include the service-dominant business model radar (SDBM/R) tool. Third, the service composition layer includes the models available from established business process management practice, which are applied in a service management context. Finally, the business services layer includes the strategic positioning tool (Grefen, 2015). These layers can be applied in several different sequences, and each layer may act as the starting point of the application (Appendix 1, "BASE/X Business Design Sequence"). When



the strategy layer acts as the starting point, the application sequence is known as “strategy-based, top-down”. This sequence begins with the identity of an organisation. When the business models layer acts as the starting point, the sequence is called “strategy-based, bottom-up”. In this case, this sequence starts from the goal of an organisation. Next, when the service composition layer acts as the starting point, the sequence is called “service-based, top-down”. Such sequences begin from the operations of an organisation. Finally, when the business services act as the starting point, the application sequence is called “service-based, bottom-up”, and these sequences begin with an organisation’s capabilities.



Figure 4 BASE/X Framework (Lüftenecker, et al., 2013)

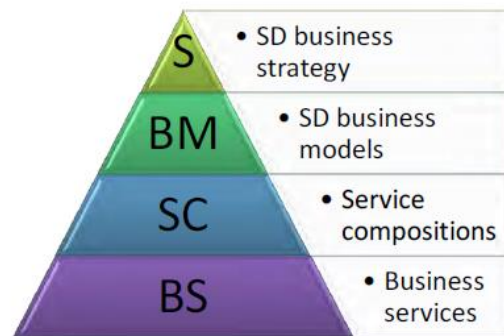


Figure 5 Business Pyramid of the BASE/X Framework (Lüftenecker, et al., 2013)

The BASE/X framework is appropriate for businesses that employ or want to employ the service-dominant logic because the BASE/X framework covers the three most important elements of the service-dominant logic. The BASE/X framework namely supports value-in-use, agility, and a business network. The business pyramid of the BASE/X framework already specifically covers these three elements of the service-dominant logic (Figure 5). This business pyramid can be separated into two sections, the first section includes the two top layers called the service-dominant business strategy and service-dominant business models. This top section covers the “what” question of a service-dominant business, namely defining the goal(s) of an organisation. The bottom section of the pyramid includes the two layers called service composition and business services. This section covers the “how” question of a service-dominant business, namely the way how goals of an organisation are reached in business terms. The following discussion explains in separate parts in what way this business pyramid supports the three service-dominant logic elements.

#### Value-in-use

The top layer of the pyramid already supports the value-in-use element, because this element is a focus area of the service-dominant business strategy. This service-dominant business strategy can be construed with the service-dominant strategy canvas tool (Figure 6). This strategy canvas tool consists of three parts: the value-in-use, the service eco-system, and finally the collaboration management. The value-in-use segment defines the company-wide, abstract customer, as well as the experience the business needs to deliver to their customer to achieve the company’s company-wide purpose (the defined value-in-use), and, finally, this segment also discusses the way in which the company interacts with the customer. This part ensures that the value-in-use element is covered by the BASE/X framework. In addition to the value-in-use element, this section also covers the customer’s needs that must be reached in order to achieve the defined value-in-use. This is included in the experience field, as the customer need is satisfied, and the defined value-in-use is accomplished, when the defined experience is delivered.

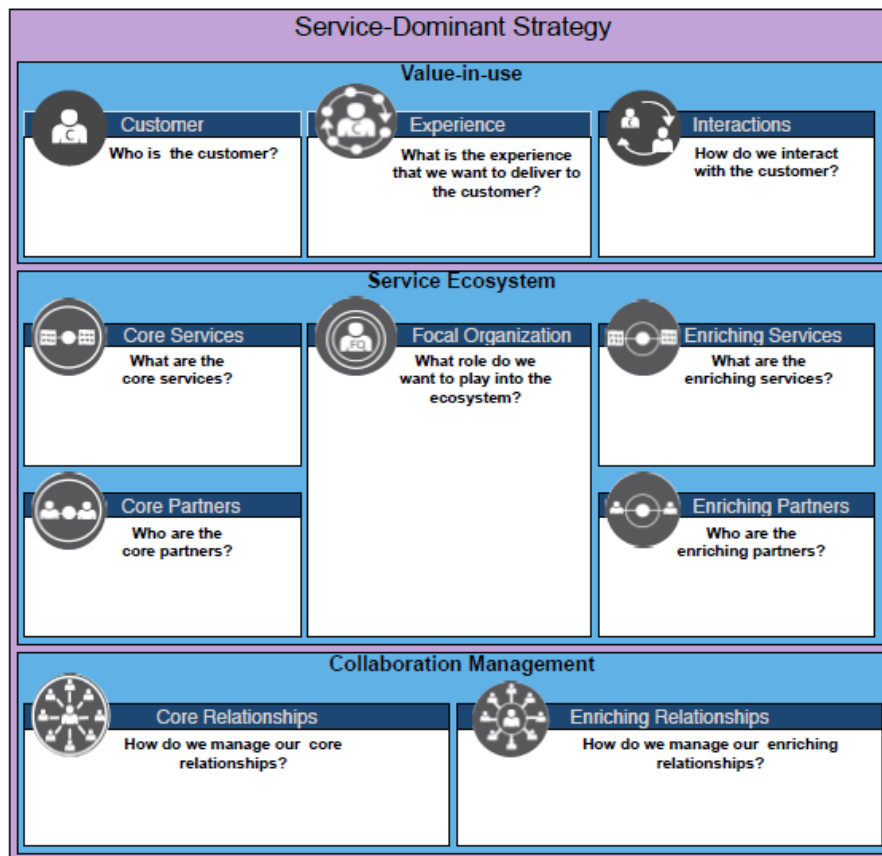


Figure 6 Strategy Canvas Tool (Lüftenecker, et al., 2013)

### Agility

The second element is agility; agility is supported by the combination of the strategic design loop and the tactical design loop (Figure 7). The strategic design loop is characterised by low frequency, high impact decision making, and long-term and large investments. In contrast, the tactical design loop is characterised by its high frequency, low impact of decision making, and medium-term and low investment. The strategy and the business services relating to the strategic loop will stay stable, while the business models and service compositions relating to the tactical loop will change when this is desirable within the business capabilities. The tactical loop supports the agility of a company, as it ensures a more flexible response to environmental changes. Additionally, neither a necessitated purely top-down approach (from a service-dominant strategy to businesses services, which can cause danger or rigidity in the business design), nor a purely bottom-up approach exists (from service-dominant business services to strategy, which can cause danger or chaos in the business design). However, all layers of the business pyramid can be a starting point; therefore, both the strategic as well as the tactical design loop can mark the change commencement point (Appendix 1, "BASE/X Business Design Sequence"). This ensures that the negative effects of both forced approaches will be avoided. Furthermore, a confrontation always exists within the "how" and the "what" (Figure 9), which ensures an analysis of the alignment of the organisation's identity and market offerings and an alignment of the defined organisation's capabilities and available capabilities (Grefen, 2015). This confrontation can assess the desirability or the feasibility of the business design.

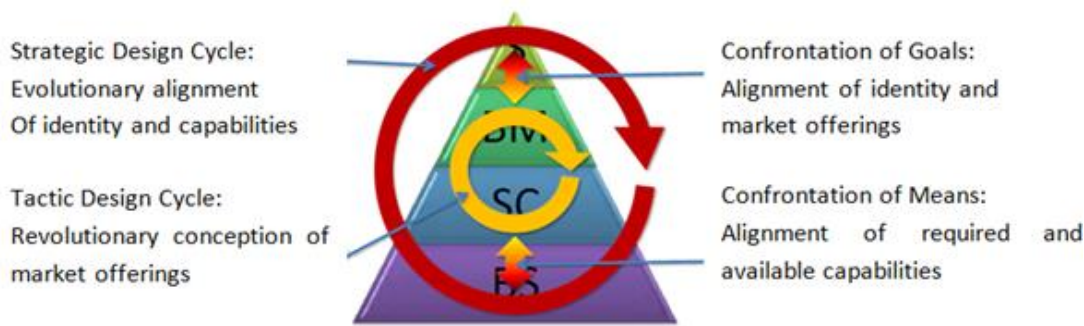


Figure 7 Business Pyramid with Strategic and Tactic Design Cycle (Lüftenegger, et al., 2013)

Network focus

The network focus element is, first of all, supported by the strategy canvas tool (Figure 6). As the service eco-system and the collaboration management parts of the strategy canvas tool support the network focus. These parts emphasise the required cooperation and the types of relationships held with multiple companies in order to realise the defined value-in-use. Apart from the strategy canvas tool, the network focus is also supported by the service-dominant business models included in the second layer of the business pyramid, which is called the service-dominant business models layer (Figure 5). The application of this layer is supported by the SDBM/R tool (Figure 8). SDBM/R has a radar form which encompasses multiple rounds and radial regions that represent different pillars. The SDBM/R tool includes four pillars, these four pillars are as follows: the co-created value-in-use, the co-creation management, the costs and benefits exchange, and the co-creation actors. The pillars can be identified by answering the following questions: “What?”, “How?”, “How much?”, and “Who?”. The first pillar covers the co-created value-in-use, the core of the radar model; this indicates the aim of the business model and consequently is a certain concrete value-in-use. This concrete value-in-use consists of multiple actor value propositions, which cover the value-in-use components with the related actors. The second pillar is the co-creation service management. This pillar includes the co-creation activities, which indicates the activities related to each actor. The third pillar is the benefits-costs exchange, this pillar represents the financial and non-financial costs and benefits for each actor. Finally, the SDBM/R includes the different actors through radial regions. The first three pillars are defined separately for each actor. Thus, the SDBM/R tool indicates among other things the different actors required to deliver a certain concrete value-in-use. The actors include the focal organisation (the central orchestrator in the network), partners, and the customer (Lüftenegger, et al., 2013).

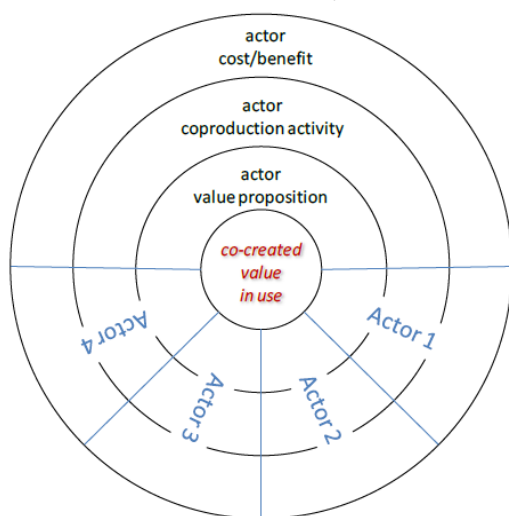


Figure 8 Service-Dominant Business Model Radar (Lüftenegger, et al., 2013)

Thus, it can be concluded that the first two layers of the business pyramid already support the service-oriented business focus and the network focus, both of which are of great importance to current businesses. However, the business pyramid has two further layers. The third layer consists of the service compositions, as each business model (each SDBM/R) is linked with one unique service composition. This service composition consists of a set of business services. These business services are covered by the bottom layer, the fourth layer, which is termed the service-dominant business services. Each service composition comprises a unique set of business services, however, a single business service can be used by multiple service compositions. The set of business services is stable like the business strategy, the service

compositions and the SDBM/Rs, on the other hand, will change when desirable. Finally, as seen above, the organisation pyramid and platform pyramid will support all the layers of the business pyramid, which ensures a successful implementation.

## 2.3 The BASE/X Framework Within the Healthcare Sector

The BASE/X framework is a suitable implementation method for businesses experiencing the paradigm shift of transitioning towards service-dominant businesses. The BASE/X framework is a new business engineering approach that is already applied in multiple business sectors for supporting the service-dominant business logic, for instance in the financial industry, the mobility industry, the document handling industry, international logistics, and traffic management (Grefen, 2014). However, the BASE/X framework has not yet been applied in the healthcare sector. The healthcare sector could be a suitable industry in which to apply this new paradigm, however, because of a number of reasons. First, the introduction (chapter 1 “Introduction”) concluded that cooperation between multiple parties, thus a network focus, is a requirement within the healthcare sector to deliver customers an ultimate complete care package. However, the current business models in the healthcare sector have a narrow network focus, because they do not provide a total co-creation overview. In contrast, the SDBM/R tool of the BASE/X framework incorporates the required broad network focus. The SDBM/R tool namely indicates the required actors of the value network, and it creates an overview of how the co-creation takes place between actors, how the actors interact and finally how the actors share costs and benefits within the value network. Second, an important aspect of the new paradigm and the BASE/X framework is the value-in-use focus. A value-in-use focus is of great importance to a lot of organisations within the healthcare sector, for example care organisation that already have a value-in-use focus. However, the value-in-use focus would be a change for asset organisations within the healthcare sector, such as medical equipment providers. Also, the BASE/X framework focuses on the costumers’ needs which is required to deliver a specific value-in-use, which ensures that the organisation is familiar with the experience they need to provide in order to realise a defined value-in-use. Lastly, the new paradigm shift also includes the agility of a company. Agility is also an important factor for healthcare organisations, because the offered services constantly need to fulfil the changing needs of customers and the organisations need to expand along with new developments. Thus, the three important facets of the new paradigm are all required within the healthcare sector. This information leads to the conclusion that the new paradigm and the BASE/X framework could be suitable and interesting for organisations within the healthcare sector.

The following segment of this text discusses an example of a healthcare organisation and the suitability of this organisation for the BASE/X framework.

### 2.3.1 Lunet Zorg

Lunet Zorg is a care organisation that delivers care to people with mental disabilities in the region of South East Brabant. Lunet Zorg’s main aim is to provide their clients with a “good life” feeling, together with its employees, volunteers, and partner organisations. This “good life” is the value that Lunet Zorg wants to offer to all their clients. The offering of this value can be called value-in-use, because it is based on services and must be experienced by clients instead of owned. Lunet Zorg’s clients are people with mental disabilities who receive care or support from Lunet Zorg, or both. The “good life” feeling can be achieved when clients experience the following: a safe, pleasant, and comfortable housing and living and an active life both at home and outdoors.

Lunet Zorg divides their care offering, that of a “good life”, over three different care areas, namely that of “*Specialistische zorg*” (“Specialist care”, through living at residential parks), “*Wonen en Zorg*” (“Living and Care”, through living in group houses intended for Lunet Zorg in neighbourhoods and villages), and “*ambulante zorg en dagbesteding*” (“ambulatory care and day care”, through living at own houses) (Figure

9). The “*ambulante zorg en dagbesteding*” concerns clients who live independently, but still receive guidance and care from Lunet Zorg. Lunet Zorg is not constantly responsible for these clients, as they only provide care and support when desired by the client. In contrast, Lunet Zorg is also responsible for providing constant care and assistance to the client groups of “*Specialistische zorg*” and “*Wonen en Zorg*”. However, the difference between clients of the care area “*Specialistische zorg*” and “*Wonen en Zorg*” is the intensity and complexity of the clients’ disabilities and their required amount of care and support. The care area “*Specialistische zorg*” generally consists of clients that require more care and assistance compared to the clients of the care area “*Wonen en Zorg*”.

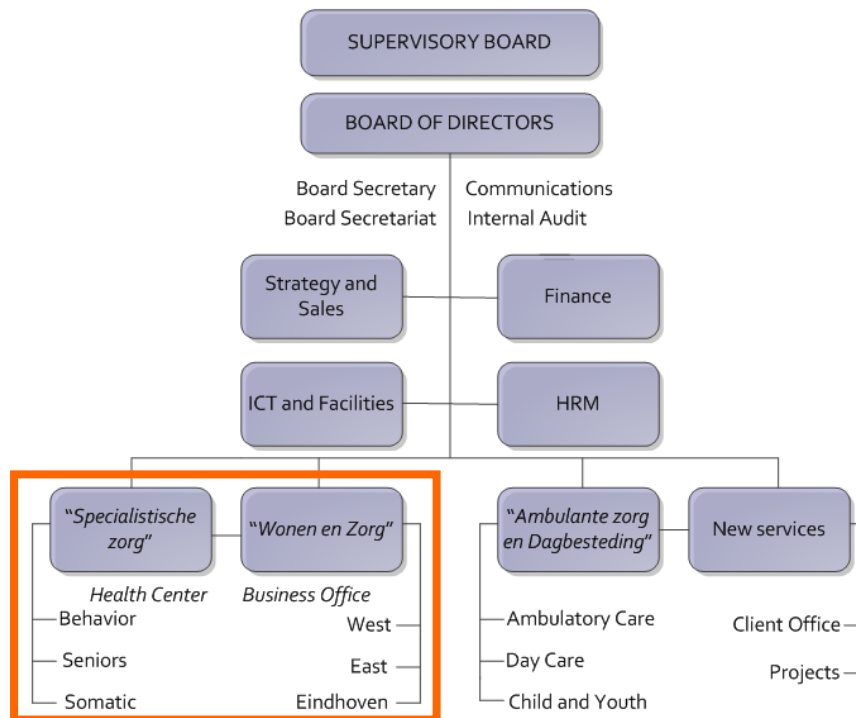


Figure 9 Lunet Zorg (Lunet Zorg, 2015)

The “good life” feeling is delivered to all their clients by providing them with a complete solution, which includes clients’ living, leisure time, and day care consisting of paid work, non-paid activities and school. Thus, Lunet Zorg offers its clients a complete service package, which entails that customers only need to contact Lunet Zorg and no other companies besides in order to receive a complete service package required for people with a mental disability. This complete service package will ensure that Lunet Zorg has a competitive advantage compared to organisations who only offer a single type of service. An example of an organisation who delivers a single type of service is “*Eindhoven Gehandicapte Sport (E.G.S.)*”, which offers different kinds of leisure sport activities for people with disabilities. When customers make use of single type service providers, they need to manage a lot of different organisations in order to receive the same care package as offered by Lunet Zorg. The complete service package offered by Lunet Zorg takes up less of customers’ time and energy, because it eliminates the need of customers to contact and manage all the possible, different types of service providers in order to guarantee a fluent sequence of the required services. However, Lunet Zorg does need to collaborate with other companies in order to deliver the ultimate complete service package. This collaboration can be achieved when Lunet Zorg has a network focus. It is furthermore important that all the network parties are familiar with the defined value-in-use to ensure that there is a common goal.

Thus, it is of great importance to have a network focus and to carefully communicate the value-in-use to customers and external partners within the network in order to ensure a company’s success. Additionally, it

is important that Lunet Zorg publicly displays the way it offers value-in-use to customers, so that customers recognise Lunet Zorg's excellent complete service package. Also, Lunet Zorg needs to focus on the clients' needs that are necessary in order to realise the value-in-use ("good life" feeling), because without satisfying the clients' needs, it is not possible to achieve the defined value-in-use of "good life". In conclusion, Lunet Zorg has a service focus and must develop a focus on customer needs and a network focus in order to realise and communicate the total service package of a "good life" feeling.

The BASE/X framework supports service-oriented businesses, ensures a main focus on clients' needs, and also encompasses a network and value-in-use focus, which makes the BASE/X framework an appropriate framework for Lunet Zorg. Lunet Zorg's interest in introducing and applying the BASE/X framework to their organisation derives from the organisation's recognition of the BASE/X framework's relevance for them. This study details the practical contribution of providing a guided application of the BASE/X framework in this specific healthcare context. Additionally, this application has resulted in added value for Lunet Zorg by receiving a guided introduction and application of the BASE/X framework within their company.

### 3. Research Methodology

Businesses need to change to support the new paradigm of the service-dominant logic, and this also applies to healthcare organisations. Changing your organisation to suit the new paradigm can be realised by implementing the BASE/X framework. This constituted the following main research objective of this study: **Apply and evaluate the BASE/X framework in the healthcare sector.** This main research objective is divided into three steps. The three steps encompass: the introduction and application of the BASE/X framework, the evaluation of the introduction and application of the framework and, finally, determining what aspects can still be improved concerning the BASE/X framework and the best way in which the framework can be applied. These three steps together were used in order to bring the main research objective to completion, as outlined in Figure 10. The three steps can be connected to different types of project contributions. The first step covers the practical contribution and the last two steps discuss the theoretical contribution of this study (Figure 10). This practical and theoretical contribution will be discussed separately in more detail below.

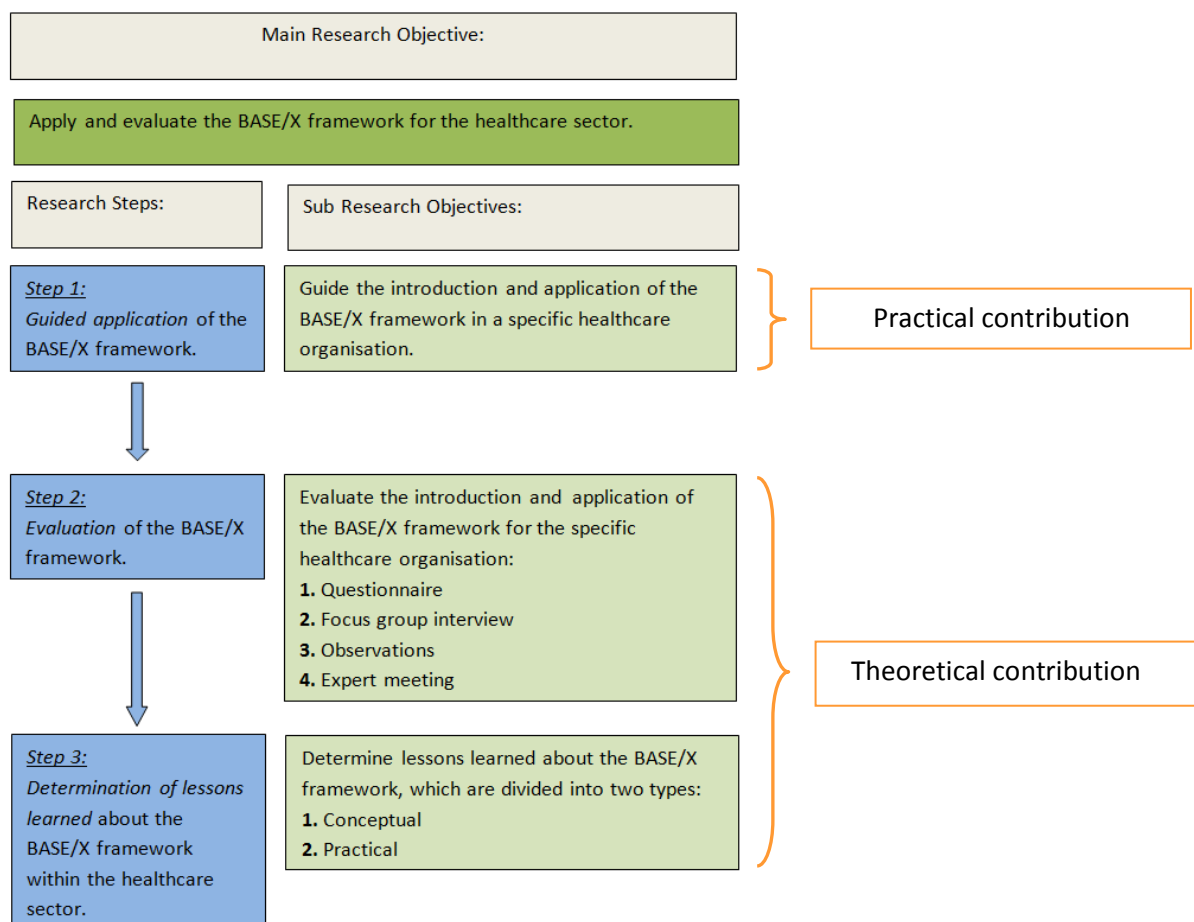


Figure 10 Master Project Approach

#### Practical contribution

As already discussed, the BASE/X framework has not yet been applied in the healthcare sector. This project therefore applies and evaluates the BASE/X framework within the specific healthcare context of the organisation Lunet Zorg. A guided introduction and application of the BASE/X framework within Lunet Zorg is the practical contribution of this project, see step one of Figure 10. The practical contribution of this study is realised by implementing a case study, which supports the introduction and application of the BASE/X. As already mentioned, this practical contribution also contributes to Lunet Zorg, by the fact that

Lunet Zorg was able to benefit from being part of this project by receiving a guided introduction and the application of a new, rising business engineering approach.

### Theoretical contribution

The theoretical contribution of this study can be discerned in research steps two and three of Figure 10. Research step two entailed the evaluation of the BASE/X framework based on the information obtained during the introduction and application of the BASE/X framework in step one. The evaluation consisted of multiple evaluation methods, which are discussed in further detail in section 3.2, “Evaluation Methodology”. The information obtained from these evaluation methods will be analysed and discussed separately in chapter 4, “Case Study”. The use of multiple evaluation methods ensured that the obtained information covered multiple areas of the framework’s application, such as its usability and effectivity. Finally, step three included a reflection on the conclusions that can be drawn from the application and evaluation of the BASE/X framework. These conclusions consist of lessons learned and can be divided into two parts, namely conceptual and practical improvements.

To date, the BASE/X framework has been applied and evaluated in a limited way; however, these two steps will expand this application, including to a new business domain, and provide an evaluation. The following two sections elaborate on the methodologies that were employed in order to complete the research steps. The first paragraph focuses on the case study methodology used for step one and the second paragraph discusses the evaluation methodology for step two.

## 3.1 Case Study Methodology

The introduction and application of the BASE/X framework in the healthcare sector is based on a case study research. The choice of a case study research was based on several reasons. First of all, as mentioned by Yin (2014), case study research allows for an in-depth examination of a ‘case’ within its real world context. A case study research moreover provides a full overview of a case’s complexity and its contextual conditions (Yin, 2014). Thus, the case study research method offers a realistic view on the application of the BASE/X framework within a specific healthcare context. Due to these reasons, next to an immediate application of a concept in an actual case, this type of research is very suitable for useful evaluations (Yin, 2014). Case study research is therefore an appropriate way in which to achieve the research objective of the first step and it can form the basis for the evaluation of step two. Additionally, as mentioned by Yin (2014), the case study is especially suitable for answering ‘how’ and ‘why’ questions. This research can indeed answer these questions, and in step one, a *how* question has been formulated in order to accomplish the successful achievement of this step’s defined research objective. The research question for step one is ‘*How to apply the BASE/X framework in a specific healthcare context?*’. Due to these reasons, the case study methodology is an appropriate choice for this project.

The case study included in this research focuses on the introduction and application of a section of the BASE/X framework. This research step did not include a complete BASE/X framework introduction and

application due to the fact that the purpose of applying the BASE/X framework within Lunet Zorg was to introduce Lunet Zorg to the concept of service-dominant thinking and the BASE/X framework. This was done in order to ensure that the main focus within Lunet Zorg is on their most important focus areas regarding clients’ needs, a value-in-use focus,

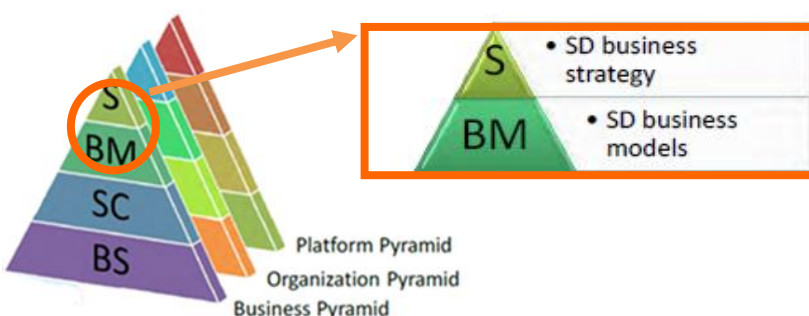


Figure 11 BASE/X framework Focus Areas (Lüftnegge, et al., 2013)



and a business network focus, which are already supported by the first pyramid (business pyramid) of the BASE/X framework. Thus, the introduction and application of the business pyramid was already sufficient in order to provide employees of Lunet Zorg with knowledge and experience concerning this new way of thinking, namely the service-dominant logic. It also already ensured that Lunet Zorg could redefine their organisation based on this service-dominant logic. Additionally, this master's project focused on the first two layers of the BASE/X frameworks business pyramid only (Figure 11). As the first two layers of the business pyramid with the related tools already include Lunet Zorg's important focus areas, namely network focus, value-in-use focus, and recognition of clients' needs. These layers are the top layers, called service-dominant strategy, with the strategy canvas tool and the second layer, called service-dominant business models, with the SDBM/R tool. Another reason for the limited introduction and application of the BASE/X framework in this study was time constraints. These time constraints were due to the fact that the master project has a scheduled time of only twenty-one weeks and the available time offered by Lunet Zorg was limited as well.

Additionally, the introduction and application of this BASE/X framework section has not been applied to the entire organisation. Instead, the BASE/X framework has been introduced and applied to a specific part of the organisation, namely the two care areas "*Specialistische zorg*" and "*Wonen en Zorg*" (Figure 9). However, the company-wide goal of providing a "good life" to all the company's clients was central during the application of the BASE/X framework. The choice for these two care areas was, first of all, because of the specific interest of the directors of these two care areas. The directors were interested in the BASE/X framework and how it would change and influence the thinking within Lunet Zorg and the way in which Lunet Zorg can be defined. Second, as this study included an examination of the applicability of the BASE/X framework within a healthcare organisation, this study also investigated whether a healthcare organisation can operate based on the service-dominant logic and whether a healthcare organisation can be defined using the BASE/X framework. Because this study purely researched the applicability of the BASE/X framework, it was not necessary to immediately apply it to the entire organisation. The framework must be applied to the entire organisation for the BASE/X framework to be deemed suitable for Lunet Zorg at the moment when Lunet Zorg desires to implement the BASE/X. The framework will be suitable when the organisation is able to operate using the service-dominant logic, when they can be defined based on the BASE/X framework, and when they recognise the significance of the BASE/X framework and its current new paradigm. Finally, only one section of the organisation was chosen for this study, due to difficulties by involving the head of the organisation in the execution of the research project. This difficulty is due to the necessary time investment, the availability of the head of the organisation, and the research phase, meaning that success regarding the application of the framework in the healthcare sector could not be guaranteed.

The case study research methodology is illustrated in Figure 12. The methodology commenced with the **problem identification**, which is the need for introducing and applying the BASE/X framework in the healthcare sector. This step was followed by the big iterative process box, which covers multiple steps. This set of steps was repeated for each specific workshop, since workshops formed the basis of this case study research. Each workshop focused on a specific tool (or layer) of the BASE/X framework, namely the application of the service-dominant strategy with the strategy canvas tool or the application of the service-dominant business model with the SDBM/R tool. The application of these two tools during these workshops was based on a specific design sequence. This design sequence was called "strategy-based, top-down" (Appendix 1, "BASE/X Business Design Sequence"). This indicates that first, the strategy canvas tool will be applied and second the SDBM/R tool. This design sequence was chosen because the required information for the application of the SDBM/Rs would be obtained during the application of the strategy canvas tool. The service-dominant strategy application namely determines the organisation's abstract customer and the company-wide purpose, which entails the company-wide (abstract) value-in-use the company wants to

offer to their abstract client. Additionally, the strategy relates the defined company-wide value-in-use with the required customer experience in order to realise the defined value-in-use to the customer. The determination of the organisation's abstract customer offers the possibility to investigate to which customer segments the abstract customer belongs. A group of customers can be called a customer segment when it consists of a group with a homogeneous demand. These customer segments are necessary for the application of the service-dominant business models, because each service-dominant business model is based on a concrete value-in-use for a specific customer segment (Grefen, 2015). Thus, during the workshops, the service-dominant strategy would be applied first and the service-dominant business models would be applied and adapted for use in this organisation afterwards. This application took place during three workshops. The first workshop introduced and applied the strategy canvas tool. The second and third workshops introduced and applied a SDBM/R. Each of these workshops consisted of different group compositions. For the application of the strategy canvas tool, participants were selected from both care areas of "*Specialistische zorg*" and "*Wonen en Zorg*", because the strategy needed to be company-wide. As a one-to-one relationship between the organisation and strategy exists. By involving both care areas the scope would be as broad as possible for this project. However, the SDBM/R workshops consisted of homogeneous groups, namely participants that support the same care area. Consequently, one SDBM/R workshop was organised for the care area "*Specialistische zorg*" and one for the care area "*Wonen en Zorg*".

The first step of the iterative process was the step **prepare workshop** which included all of the workshop preparations, such as booking a room, inviting participants, sending participants the required information, making a workshop programme, and developing and preparing a presentation. The next step was called **collect information, introduce and apply a specific BASE/X framework tool, and evaluate the workshop process and the BASE/X framework**. This step covered the actual execution of the workshop, which introduced and applied a specific tool of the BASE/X framework to a certain group of participants from both or one care area, "*Specialistische zorg*" and "*Wonen en Zorg*", by collecting information from the participants. The conclusion of the workshop includes a draft version of a particular BASE/X framework tool.

All the workshops were based on the same workshop programme, which, first of all, consisted of an introduction. This introduction discussed the following: the principles of service-dominant thinking, the BASE/X framework structure, and it explained the specific BASE/X framework tool designed during the particular workshop in more detail. After the introduction, the application of the specific BASE/X framework tool took place. Directly after the application, all the participants were asked to fill in a questionnaire concerning the usability of the tool. Finally, each workshop ended with a focus group interview.

The information that was acquired during a particular workshop could be reused for the preparations of the following workshops, hence the arrow that both points to step one and step two of the iterative process box. The next step was called **analyse gathered information and develop the digital BASE/X framework tool**. In this step, the draft version was translated into a digital version and the gathered information was analysed. This information could be reused for the preceding steps (i.e. the *prepare workshop* step). The digital BASE/X framework result made by the facilitator needed to be sent to all participants of the particular workshop. This was covered by the step called **share information**. All the participants could give feedback on the digital BASE/X framework result, in such a way that all participants would fully agree with the result. This activity was covered by the step called **receive feedback**. The feedback of participants would be incorporated in the step called *analyse gathered information and develop digital BASE/X framework tool*, where the feedback would be processed and an improved digital version would be made. The new digital BASE/X framework result would again follow the two successive steps called *share*

information and receive feedback. All the steps within this iterative process box could be repeated several times until all the workshops of the case study were completed and approved by all participants.

The final step of the case study methodology included the approved BASE/X framework design concerning the specific healthcare context. This step was called the **BASE/X framework**.

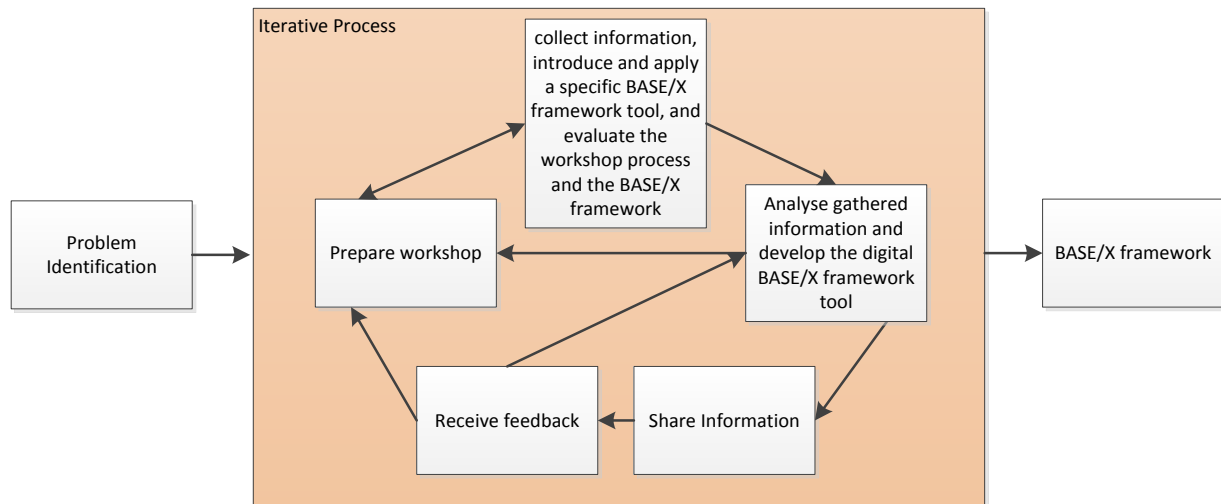


Figure 12 Case Study Methodology

### 3.2 Evaluation Methodology

This master project focuses for a large part on the evaluation of the BASE/X framework. This evaluation is based on information obtained before, during, and after the application of the BASE/X framework. Evaluating a case study and the related results requires the evaluator to rely on multiple sources of evidence (Yin, 2014). Thus, multiple evaluation methods were used to obtain information about the applicability of the BASE/X framework within the healthcare sector. These evaluation methods were aligned with an established list of required evaluation criteria. The project leader established a list of evaluation criteria with which a proper assessment of the BASE/X framework within the healthcare sector could be performed. The evaluation was based on the following set of evaluation criteria: usability, effectivity, outcome quality, and finally the applicability of the BASE/X framework in the healthcare sector (Table 2). This composition of evaluation criteria was composed by the project leader (Z. Vangangelt), because no literature is currently available about the appropriate composition of evaluation criteria for a complete evaluation of a tool or method. However, literature is available for evaluating software, but this literature on software is not appropriate for the evaluation of a tool or method.

Each evaluation criterion is linked to an evaluation method, which made it possible to obtain the required information for each evaluation criterion. The different evaluation methods cover both qualitative and quantitative information, as this decreases the chance of error and omissions (Kaplan & Duchon, 1988). Table 2 provides a complete overview of the evaluation criteria, evaluation methods, the type of information, timing, and the involved participants.

Table 2 Evaluation Overview (WS = workshop)

Evaluation criteria	Evaluation method	Type of information	Timing	Participants
Usability	Questionnaire •Closed questions (5 point Likert scale) •Open question	Quantitative Qualitative	During WS	All workshop participants
Effectivity and application process	1. Focus group interview •Semi-structure interview	Qualitative	During WS	All workshop participants

	2. Observations •During workshops (video- and audio records) 3. Questionnaire •Open question			
Outcome	Expert meeting	Qualitative	After WS	Expert
Applicability in healthcare	1. Observations 2. Questionnaire •Open question 3. Expert meeting	Qualitative	1. Before, during and after WS (observations) 2. During WS 3. After WS	1. & 2. All workshop participants 2. Expert

Each evaluation criterion with the related evaluation method, used during this project, is discussed in more detail below.

### 3.2.1 Usability

The evaluation criterion “usability” was investigated during each workshop. The usability criterion was related to the feelings of participants concerning the usability of a specific tool introduced and applied during a particular workshop. The evaluation criterion “usability” was investigated through the use of a questionnaire consisting of two sections: a closed and an open section. The closed questionnaire section obtained quantitative information and the open questionnaire section obtained qualitative information. The questionnaire was filled in by all participants of the workshops. The closed questionnaire section is based on the Method Evaluation Model (Moody, 2003). This Method Evaluation Model was chosen for this study, because it is a standardised and validated questionnaire. The questionnaire was used to measure the usability of the tool by the likelihood of its adoption evaluated in three different constructs. The three questionnaire constructs were as follows: perceived ease of use, perceived usefulness, and the participants’ intention of using the tool (Appendix 3.1, “Three Questionnaire Constructs”). These three constructs ensured that a broad view on the usability of the tool was obtained. However, the Method Evaluation Model was not fully implemented, because not all questions were relevant for the evaluation of the BASE/X framework tools. Some questions of the Method Evaluation Model questionnaire focus on the comparison between an old and new model. As this project only concerns the current BASE/X framework, these comparison questions were excluded from the questionnaire. Two more questions were furthermore added to the questionnaire. These questions were added because one original question regarding the Method Evaluation Model was required to be divided into three questions, in order to relate to all facets of the BASE/X framework rather than focusing on one alone. The added questions can be found in Appendix 3.1, “Three Questionnaire Constructs”. The questions of the three different constructs were asked randomly in the questionnaire; hence, the questionnaire is not divided into three constructs. The questions in random order will reduce the ceiling effect that can cause monotonous responses to questions belonging to the same construct (Chau, et al., 1991). The questionnaire consists of 16 questions that could each be answered on a 5-point Likert scale (Appendix 3, “Usability Questionnaire”). A score lower than 3 indicated a negative feeling, a score of 3 indicated a neutral feeling, and a score higher than 3 indicated a positive feeling towards the tool. Thus, a score of 1 indicated a strong negative feeling and a score of 5 indicated a strong positive feeling.

Next to the questions based on the 5-point Likert scale, each questionnaire contained an open question which covered qualitative information (Appendix 3, “Usability Questionnaire”, for a complete overview of the questionnaire).

A questionnaire that has to be filled in using paper and a pencil makes respondents more self-aware and more concerned about their self-presentation and judgments by others, which causes a low level of self-disclosure (Alvaraz Kuri, 2002). It is of major importance to receive honest answers, however, because

successful improvements can only be inferred and conclusions can only be drawn when respondents provide honest answers. Anonymity will move this self-disclosure to a higher level (Alvaraz Kuri, 2002). Respondents' names were therefore not asked by the questionnaire in order to increase the level of self-disclosure. Some other personal information was asked from the respondent, however, such as the respondents' gender, age, years of work experience at Lunet Zorg and if they had already gathered some knowledge of service-dominant thinking and the BASE/X framework. This information made it possible to investigate the influence of the respondents' personal situations on the questionnaire results, when desired.

### *3.2.2 Effectivity and Application Process*

The usability questionnaire is mainly a quantitative evaluation method. However, each workshop also consisted of purely qualitative evaluation methods. Compared to quantitative information, qualitative information is easier to translate into respondents' desired changes concerning the workshop or the BASE/X framework design, or both. This is due to the fact that qualitative evaluation methods allow for more explanations and new insights on these matters.

The usability questionnaire is based on relevant literature, however no literature could be identified that concerned appropriate evaluation methods that could evaluate the effectiveness and application process of a tool or method. The project leader has decided to integrate the effectivity and process evaluation criterion into the evaluation methods focus group interviews, observations, and the open questionnaire section of the questionnaire. These evaluation methods together should cover information about the design and application process of the BASE/X framework and related tools and about the facilitator's capacities, because the facilitator is also an important factor in the effectivity and process of the BASE/X framework and its related tools (Appendix 2, "Evaluation Criteria with Related Measures"). The evaluation methods will be discussed separately in more detail below. The focus group interview will be discussed first, the observations second, and the contribution of the open questionnaire section will be discussed last.

#### *Focus group interview*

Each workshop session ended with a focus group interview, which is based on a semi-structured group interview. The choice for a focus group interview instead of separate interviews with all participants was due to scheduling problems and the time that was needed to plan and to do the interviews with all of the participants. A focus group interview moreover generates a large amount of data in a relatively short amount of time in comparison to individual interviews (Rabiee, 2004). The group interview would furthermore cause discussions between participants through which information may be obtained that could not have been obtained through individual interviews. The focus group interview was based on a semi-structured interview, because the main aims of the focus group interview were to gather in-depth, tacit knowledge, and to gain the input of the participants. This latter aim would have been impeded by a fully-structured interview. The interview was developed by the project leader (Z. Vangangelt), because literature on this topic was lacking, as mentioned above. The interview was checked by an expert of the BASE/X framework who was also an experienced on facilitating BASE/X framework workshops. Appendix 4, "Effectivity/Process Application Interview Questions", provides an overview of the semi-structured interview. The list of questions merely acted as an outline with which to lead the discussion group, because other input of the participants was highly appreciated and was encouraged. Table 3 provides an overview of the questions and the related information that was obtained through each question.

*Table 3 Question Overview*

Question Number:	Information:
1	Feedback on how the workshop is given
2 - 6	Feedback on the application process and design of the tool
7	Do participants recognise the suitability of the BASE/X framework (tools) for the

	implementation of service-dominant thinking
8	Do they recognise the importance and the BASE/X framework for Lunet Zorg

The discussion group consisted of all of the participants of the workshop, these participants discussed the list of open questions that were asked by the facilitator. The facilitator had the task to lead the interview in such a way that all of the required information was obtained.

The facilitator fulfils an important task in whether or not a focus group interview is successful, because it is of great importance that these interviews are guided in such a way that the desired amount and depth of information is acquired. The facilitator needs to ensure a situation where participants feel relaxed and encouraged to engage and exchange their feelings, views, and ideas (Rabiee, 2004). Additionally, the facilitator needs to inform the participants of the following information: the purpose of the interview, their privacy, and that video and audio records will only be used for research purposes and will be deleted after the project (McLafferty, 2004) (see the next section of this chapter called 'Observations' for more details about the records). The facilitator furthermore must explain the aim of a focus group interview to the participants. The aim is that participants talk among themselves as well as to the facilitator, and that discussion should not be avoided. This is usually strengthened by using a round or oval table which encourages group conversation (Breen, 2006). However, the facilitator needs to ensure that participants speak individually and not talk over one another (McLafferty, 2004). Next to introducing the interview and asking the questions, the facilitator needs to urge and guide the debate in the right direction and level of depth, so it will reach a stage that could otherwise not have been reached (Kitzinger, 1995). It is important that the facilitator stays neutral, however, and only guides the interview: the facilitator's opinion must be disregarded (McLafferty, 2004). Next to the functions of the facilitator, the article of Hove and Anda (2005) also describes four challenges during the planning and executing of a semi-structured interview. Table 4 shows the four challenges on the right side of the table and how to deal with these challenges on the left side.

*Table 4 Semi-Structured Interview Challenges*

Challenge:	How to take care of it:
Recognise necessary effort	<ul style="list-style-type: none"> <li>•Take time to prepare the interview and delve into the subject (background information).</li> <li>•Take time to prepare the interview.</li> <li>•One hour planned for the focus group interview during the workshop.</li> </ul>
Ensure the right facilitator qualifications	<ul style="list-style-type: none"> <li>•The facilitator will read literature about how to guide focus group interviews.</li> <li>•The facilitator will delve thoroughly into the subject (BASE/X framework).</li> </ul>
Prevention of interaction issues	<ul style="list-style-type: none"> <li>•Participants sitting at an oval or round table to encourage group communication.</li> <li>•Create a familiar atmosphere and ensure their privacy.</li> </ul>
The right tools	<ul style="list-style-type: none"> <li>•Use a beamer to show the questions which makes it more clear and participants can read the questions by their own for their understandibility.</li> <li>•Flipboard to make notes during the interview when it is important or contributes to the results of the interview.</li> <li>•The focus group interview will be audio- and video-recorded, which allows to obtain verbal and non-verbal data (See the next section of this paragraph called "Observations").</li> </ul>

### Observations

The second evaluation method that was used to evaluate the effectivity and application process was based on observations. The entire workshop (introduction, application, and focus group interview) was observed by the facilitator. However, a facilitator does not have the ability to guide the workshop and observe all of the verbal and non-verbal communications of the participants at the same time (Rabiee, 2004). That is why

all of the workshops were recorded on video and audio. The video records not only filmed the PowerPoint presentation during the introduction or only filmed the facilitator or the participants during the workshop, because it is important that all participants and the facilitator are visible in the video records for the quality and amount of information (Hall, 2000). Video records of the facilitator yield information on for instance the facilitator’s functioning and body language. The video records of the participants, on the other hand, for instance provided information about participants’ body language and facial expressions, which creates the opportunity to obtain information about their interests, irritations or moments of confusion. These observations of the participants can be used to investigate, for example, difficult or confusing parts during the workshop and can be related to the effectivity of the BASE/X framework and the tool designs and application processes. Additionally, a complete overview of all of the workshop participants enables the analysis of the quality of the workshop guidance by the facilitator, the responses and attitudes of the participants among themselves, and the responses and attitudes between the participants and the facilitator (Hall, 2000). The video records therefore were able to obtain the following information: content information about the workshop and workshop material (BASE/X framework and specific tool), information about the facilitator and the individual participants and, finally, information about the cooperation between the participants themselves and the cooperation between participants and the facilitator (Table 5).

Table 5 Video Focus Areas

Video focus areas:
Facilitator functionality (respond to participants when needed, guides the workshop in the right direction etc.)
Body language participants (irritated, happy, angry, ignored etc.)
Facial expression participants (irritated, confused, interested, happy etc.)
Involvement participants (responds and inputs from all participants or from a limited group of participants, active of passive participation)
Cooperation (respect between participants, participants focus and defend only his or her own interest areas or high cooperation to come to one best solution)

Thus, the video and audio records created the possibility to analyse the participants’ verbal and non-verbal behaviour after the workshops were completed. The fact that these records can be reviewed after an event has taken place, is a big advantage of video and audio recording (McLafferty, 2004). The records can moreover be used as validity checks, as they create the option of closer scrutiny (McLafferty, 2004). However, the facilitator should ask permission from all of the participants to make video and audio records before the workshops start. The facilitator should explain that the records will only be used for personal use and for investigative purpose and will be deleted when the project is finished.

*Open questionnaire section*

Finally, participants could also voice their opinions and recommendations concerning the effectivity and the application process of a specific tool, the facilitator’s capacities, and BASE/X engineering approach in the open questionnaire section of the questionnaire. Thus the answers to the open questionnaire section always need to be checked for relevant information related to this evaluation criterion.

3.2.3 Outcome

The result of each workshop was discussed with a BASE/X expert. In addition to having BASE/X knowledge, the BASE/X expert also has experience in facilitating BASE/X framework workshops. The information that was obtained during these meetings covered the evaluation criterion outcome. During these meetings, the outcome quality of the applied tools to Lunet Zorg was checked and compared with the already applied tools within the technical sector (Table 6). The tool results were checked on the following

Table 6 Focus Areas Expert Meetings

Focus areas during the expert meetings:
Applied as prescribed
Completeness of tool
Comparison of tool results with other sectors (technical sector)

aspects: that tools have been applied as prescribed by Grefen and that the tool results were complete (Grefen, 2015) (Appendix 2, “Evaluation Criteria with Related Measures”).

The meetings were audio recorded, which created the option of listening to a meeting again after the event. This was preferable, because sometimes it is impossible to perform all of the following activities at the same time: to take minutes of all of the important remarks, to listen to the expert, and to guide the meeting.

### 3.2.4 Applicability in the Healthcare Sector

After all of the workshop evaluations and outcome evaluations, the applicability of the BASE/X framework for the healthcare sector was investigated. Applicability conclusions were drawn based on the information that was obtained previously, during, and after the workshops based on the evaluation methods’ observations, open questionnaire sections, and the meetings with an BASE/X expert. The information consists of verbal and non-verbal information obtained before, during and after the workshops, about the participants’ willingness and ability to change, the recognised importance of the BASE/X framework and service-dominant logic, and the quality of the results (Appendix 2, “Evaluation Criteria with Related Measures”). Thus throughout the project, an applicability focus was maintained, but conclusions about the BASE/X framework within the healthcare sector were drawn when all of the relevant information was obtained concerning the workshop evaluations and outcome evaluations.

### 3.2.5 Overview of Evaluation Timing

Figure 13 provides an overview of the timing of the evaluations during the project. The evaluations have been divided into three different types of evaluations. These evaluation types differ based on the evaluation methods, evaluation criteria, and the timing of the evaluation, as shown in Table 7 and Figure 13.

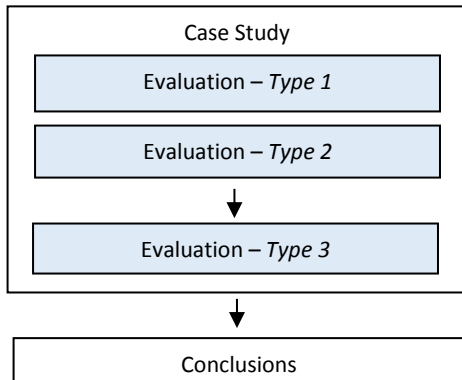


Figure 13 Evaluation Timing Overview

Table 7 Evaluation Types

Evaluation Type	Evaluation Method	Evaluation Criteria
<b>Type 1</b>	<ul style="list-style-type: none"> <li>•Observations</li> <li>•Questionnaire</li> <li>•Focus group interview</li> </ul>	<ul style="list-style-type: none"> <li>•Usability</li> <li>•Effectivity/process</li> </ul>
<b>Type 2</b>	Expert meeting	Outcome
<b>Type 3</b>	<ul style="list-style-type: none"> <li>•Questionnaire</li> <li>•Observations</li> <li>•Expert meeting</li> </ul>	<ul style="list-style-type: none"> <li>•Applicability in the healthcare sector</li> </ul>

All the types of evaluations were encompassed by the case study. Type one was performed during each workshop, where the information for the evaluation criteria of the usability and effectivity and process was obtained. The second type of evaluation was realised after each workshop, where the quality of the designed tools was discussed with an expert of the field. Furthermore, the obtained information during the case study from the open questionnaire section, observations, and expert meetings were used to draw conclusions concerning the applicability of the BASE/X framework within the healthcare sector. Finally, conclusions could be drawn and improvements could be suggested based on all the information that was obtained.



## 4. Case Study

This master project provided a guided introduction and application of the BASE/X framework in the specific healthcare organisation Lunet Zorg, which formed the practical contribution of this project (Figure 10). This chapter discusses this practical contribution, which is the first step of the research approach, by presenting the results of the applied BASE/X framework section regarding Lunet Zorg, namely the service-dominant strategy and business models BASE/X framework sections. This chapter is divided into two sections; the first section describes the results obtained from the first workshop related to the service-dominant business strategy, and the second section is related to the SDBM/R workshops.

### 4.1 Service-Dominant Business Strategy

The strategy canvas tool outcome is based on the results of the first workshop. This workshop introduced and applied the strategy canvas tool through the guidance by the workshop facilitator. Despite the facilitator's presence, the strategy canvas tool result is based on participants' ideas and opinions. The group of participants consisted of ten employees from both the care areas of "*Specialistische zorg*" and "*Wonen en Zorg*" (Table 8). This diverse group covered the middle management of both care areas (Figure 9). Figures 34 and 35 of Appendix 5.1, "Result Strategy Canvas Tool Workshop", illustrate the workshop setup and the result. This result has been digitised by the facilitator and sent back to all of the workshops' participants for feedback. The digitised and approved result is shown in Figure 14.

The strategy canvas tool result shows that Lunet Zorg maintains the position of a focal organisation (Figure 14). Lunet Zorg has obtained this position, because it is the organisation for which the strategy canvas tool is specified and the organisation with the most customer contact. The three sections of the strategy canvas tool (the value-in-use, the service eco-system, and collaboration management) is discussed one by one below.

Table 8 Workshop Group Setup

Function:	Represents:
Director " <i>Specialistische Zorg</i> "	Specialistische zorg
Manager Health Centrum	Specialistische zorg
Manager Behaviour	Specialistische zorg
Manager Seniors	Specialistische zorg
Manager Somatic & Business Office	Specialistische zorg
Director " <i>Wonen en Zorg</i> "	Wonen en Zorg
Manager West	Wonen en Zorg
Manager East	Wonen en Zorg
Manager Eindhoven	Wonen en Zorg
Programme leader, care research and development	Wonen en Zorg and Specialistische zorg



### The value-in-use

The value-in-use consists of three subparts, namely the customer, the experience, and the interactions. The customer section covers abstract customers, which are “people with a disability and residential demand”. All of the current clients have mental disabilities and a number of these clients also have physical disabilities. However, Lunet Zorg is working towards being an organisation that also accepts clients who only have physical disabilities. The customer in this tool is described in such an abstract way that it creates future flexibility to also focus on clients with only physical disabilities. This abstract customer includes multiple customer segments. First of all, a difference can be made between clients without and clients with community participation (Appendix 5.1, “Results Strategy Canvas Tool Workshop” Figure 36). The clients that live at the residential parks (clients of “*Specialistische zorg*”) belong to the group called ‘people living at residential parks’. Clients that live at houses intended for Lunet Zorg in neighbourhoods and villages (clients of “*Wonen en Zorg*”) belong to the group called ‘people living in community’. These two groups can both be split into different client segments (Appendix 5.1, “Results Strategy Canvas Tool Workshop” Figures 37 and 38). Each of these client segments required a different SDBM/R, as these client segments have different demands that must be met in order to achieve a specific value-in-use for a particular client segment (Grefen, 2014). Based on the figures presented in Appendix 5.1, it can be discerned that there are nine client segments in total, which indicates that nine SDBM/Rs are required to fulfil the demands of each client within the care areas of “*Specialistische zorg*” and “*Wonen en Zorg*” of Lunet Zorg.

Thus, the abstract customer includes “people with a disability and residential demand”. These clients all undergo experiences as the result of the complete care package that they receive. The experience goal is that clients have a safe, enjoyable, comfortable, and valuable living, day care and leisure time. This is a very broad experience, but this is due to the broadly defined “good life” feeling that Lunet Zorg wishes to offer.

Finally, the last step of the value-in-use is determining the interaction with clients. The interaction with clients is based on informal and formal, direct and indirect, individual and group interaction, and multidisciplinary consultation (MDC). Table 9 contains interaction examples for each type of interaction, in order to clarify the different types.

*Table 9 Different Types of Interactions and Examples*

Type of interaction:	Examples:
Direct	Personal care, conversations, activities
Indirect	Communication platform
Formal	Skilled and paid employees of Lunet Zorg who have contact with clients
Informal	Volunteers, client representatives etc. who have contact with clients
Individual	Individual conversations, personal care
Group	Group conversations, day care activities
MDC	Conversation with multiple specialised people

### Service eco-system

The next component of the service-dominant strategy is the service eco-system. The service eco-system concerns a business environment, which consists of the focal organisations, the core services and partners, and the enriching services and partners. As already mentioned, the focal organisation is Lunet Zorg and their purpose is to offer all their customers a “good life” feeling. This “good life” feeling is achieved when the clients experience a safe, enjoyable, comfortable and valuable living, day care and leisure time. The must-have (vital) services and partners that are required to deliver this experience consist of a large list of partners, namely twenty-eight external organisations. Each of these partners contributes to a section of the formulated experience that needs to be achieved. For example, in order to ensure safety, there are

partners like police, firemen, and demotic companies. On the other hand, the nice-to-have (non-vital, but useful) partners provide enriching services for the clients. This is marked by a much lower amount compared with the core services and partners. These services for instance include fitness, wellness, and other activities. An example of an activity is that clients can hang their wish in a wishing tree and some of these wishes will come true, because of sponsors that facilitate this. Compared to the twenty-eight core partners, the enriching partners consist of just three partners, namely sponsors, and fitness and wellness providers.

### *Cooperation management*

The relationships with core and enriching partners differ on multiple aspects. The described relationships are based on the most common types of relationships between the core or enriching partners and Lunet Zorg. These relationships have furthermore no bearing on the present and are based on future endeavours. Thus, the kind of relationships that Lunet Zorg is working towards achieving.

The relationships with core partners are mainly based on one organisation, thus a single relationship. Lunet Zorg is working towards having a single relationship with all core partners. Despite the single relationships, interdependency predominates. The core partners have furthermore been employed based on a financial interest, since these partners benefit from revenue and success. In addition, there is a difference between various core partners, as they can be categorised as partners that deliver a service based on support resources (for example dry cleaners, internet and telephone providers) or as partners who form part of the care delivery (for example, other care providers, such as the GGZ). The relationships with the first type of partners are formed purely on the basis of business, transactions, or functionality, while the relationships with the other care providers are based on business relationships that have a cooperative basis.

In contrast to the core relationships, the enriching services are mainly performed by multiple service providers; thus, there are multiple relationships at play. For example, Lunet Zorg has multiple sponsors with which they work. In the case of the sponsors, the relationship is additionally based on a relational relationship, as there are no direct financial interests, but rather the interest stems from for example charities or advertisements. Finally, these relationships with sponsors are based on cooperation. As opposed to with sponsors, the relationships with fitness and wellness providers are formed on a financial basis. Thus, within the enriching service partners, there is also a difference in the nature of the relationships, just as is the case with the core service providers.

## 4.2 Service-Dominant Business Models

The service-dominant business model layer of the BASE/X framework was applied during two workshops. Both workshops have applied one SDBM/R. One SDBM/R was made for the specific care area “*Specialistische zorg*” and one for the care area “*Wonen en Zorg*”. This paragraph will now separately discuss the two SDBM/R results in detail.

### *4.2.1 Business Model 1- “Wonen en Zorg”*

The second workshop focused on the application of a SDBM/R for the care area “*Wonen en Zorg*”. The care area “*Wonen en Zorg*” consists of multiple customer segments, which were determined during the service-dominant strategy workshop (Appendix 5.1, “Results Strategy Canvas Tool Workshop” Figure 38). This SDBM/R workshop focused on one of these client segments, namely “group living”. “Group living” includes clients that receive individual guidance and have the desire to live together with other clients. In addition to personal support, there is a focus on group processes and group dynamics. These clients prefer living in a group because it provides them with the opportunity to engage in joint activities, to help each other when needed, and it offers them a feeling of safety. These clients want to form a group, home, and family feeling with their housemates. Apart from their home, the outside world is also of great importance to these clients. Social participation is very important, like going to the church and the mosque, having a job if that is

possible for the client, and going to the local supermarket and bakery or to other local suppliers of goods and services. Thus, both the home and outside world are required for providing the clients from the client segment “group living” with a pleasant live.

The SDBM/R workshop consisted of four employees of the care area “*Wonen en Zorg*” (Table 10). Three of these participants were managers of the care area “*Wonen en Zorg*”. These participants made it possible to fill in the SDBM/R according to the desires of the clients from this client segment. The participants investigated and determined the specific required value-in-use for this client segment, all of the required roles, all value-in-use contributions, and the related costs and benefits of each role. Figures 39 and 40 of Appendix 5.2.1, called “Result SDBM/R – “*Wonen en Zorg*””, show the workshop setup and result. The result establishes that one of the radar circles, actor coproduction activity, is not determined during the workshop. This radar circle is not completed because of a lack of time and energy of the participants. However, some activities of specific roles were orally discussed during the application of the other radar layers. The workshop facilitator has filled in the activity layer with the obtained information of the participants during the workshop and this is based on the facilitator’s own discretion. The completed and digitised radar by the facilitator has been sent to all participants for feedback, to ensure that the radar has been digitised correctly and that the activity layer is filled in properly according to the participants’ opinions. The approved SDBM/R result is shown in Figures 15, 16, and 17.

*Table 10 Workshop Group Setup – “Group Living”*

Function	Represents
Manager West	Wonen en Zorg
Manager East	Wonen en Zorg
Manager Eindhoven	Wonen en Zorg
Programme leader, care research and development	Specialistische zorg and Wonen en Zorg





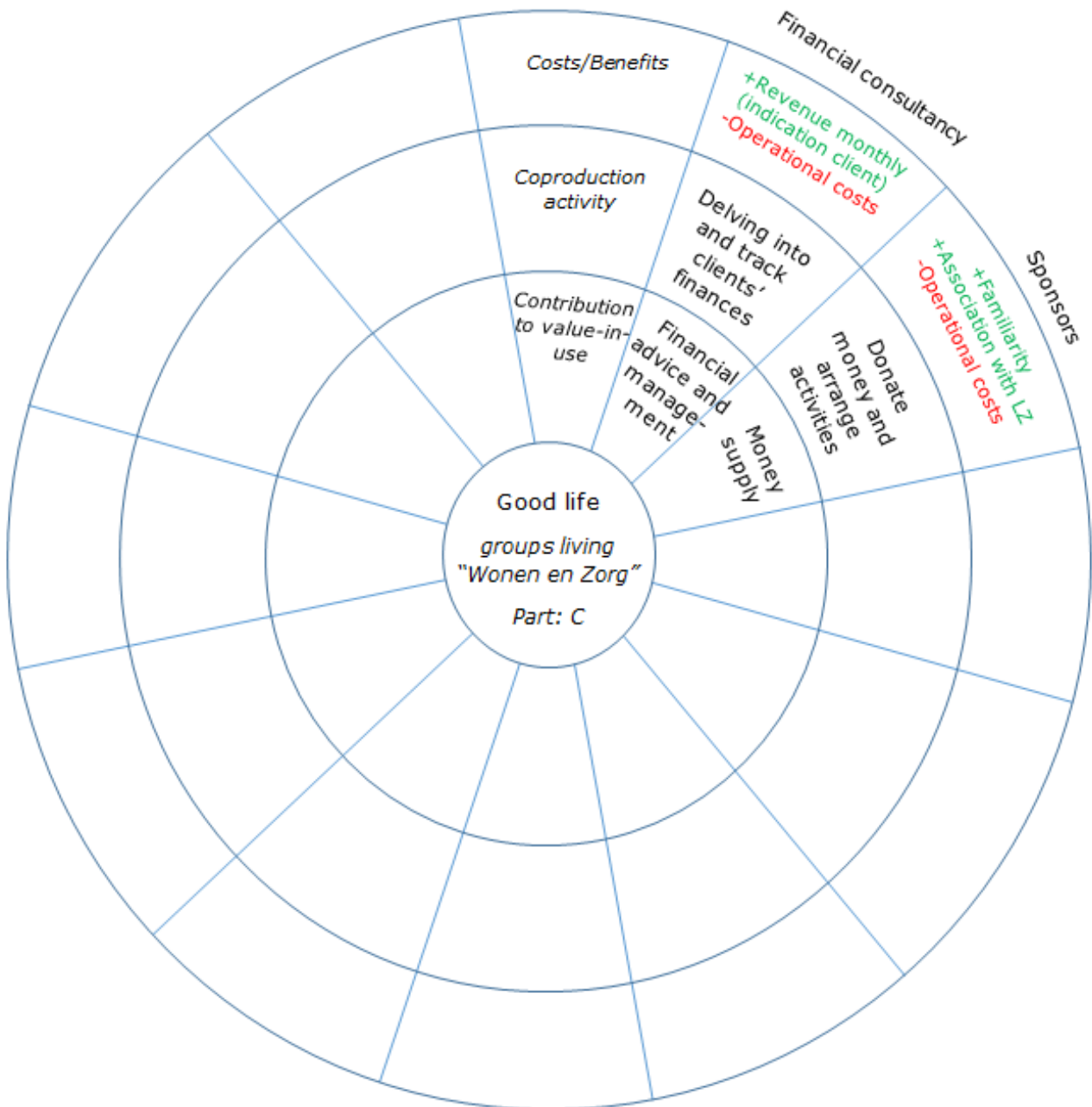


Figure 17 SDBM/R Workshop – “Wonen en Zorg” - Digital Result Part C



Within the SDBM/R result, the value-in-use for the specific client segment “group living” is central. This value-in-use is based on the obtained information during the service-dominant strategy canvas application. Namely during the first workshop it became clear that Lunet Zorg wants to provide a “good life” feeling to all their clients, which makes providing a “good life” the value-in-use that Lunet Zorg is desirous of offering. The defined “good life” feeling to all clients is the reason that one of the purposes of Lunet Zorg is to provide a “good life” to the specific client segment “group living”. This purpose consists of diverse organisational challenges, which requires a cooperation with several roles. A collaboration between multiple roles should make it possible to offer the value-in-use to this specific client segment. The business model radar result addresses the need to bring multiple roles together in order to achieve this purpose successfully. All of the included roles within the radar namely form a network which together can realise the “good life” feeling to clients of the client segment “group living”. The SDBM/R result shows that the network consists of 26 roles.

The most important role within the network is the customer, because the customer is the co-creator of the value-in-use. Without the customer, it is not possible to deliver the service. Thus, the first defined role is the customer of the business model, which is also the receiver of the defined value-in-use. The customer of this business model is the client segment “group living” from the care area “*Wonen en Zorg*”. Lunet Zorg furthermore plays the role of the focal organisation. Lunet Zorg is the organisation that is in contact with all of the parties of the network and with the customer. Lunet Zorg is also the organisation that has the most customer contact, compared to all of the other parties within the network. Finally, there is a whole list of roles that needs to be involved, in the business model radar, in order to offer that “good life” feeling. This list consists of for instance emergency services, police, employers, and a transport company. Each role is required, because they all fulfil a specific value contribution to the defined central value-in-use of “good life”. The role of the client, Lunet Zorg, and one other exemplary role which is important for the “group living” client segment, namely employer, will now be discussed in detail. Appendix 5.2.1, “Result SDBM/R – “*Wonen en Zorg*””, discusses separately in detail each of the roles contained within the SDBM/R, along with the related contributions, activities, and costs and benefits provided.

#### *Client- group living*

The customer of this business model is the client, this client role encompasses the clients of the customer segment “group living”. The clients provide *presence* as the value contribution to the central value-in-use “good life”, because clients, for instance, need to receive care from Lunet Zorg in order to get the “good life” feeling that Lunet Zorg promotes. Their activity to make the *presence* value proposition occur is by receiving, for instance, care and by contributing to it. By completing these activities, they can experience the benefits of care, support, and pleasure. However, clients also have costs attached to these benefits and these costs are covered by their personal contribution. Clients need to pay several parties from their personal contribution, namely CAK and parties that are not included in their indication. The amount of personal contribution that clients need to pay to CAK depends on their equity. Additionally, parties that are not part of clients’ indications are, for example, clothes providers, beauticians, and veterinarians. The indication is person-dependent, which consequently varies based on clients’ limitations. The indication is determined by the CIZ (“*Centrum Indicatiestelling Zorg*”). The specified severity of the indication of the client determines the care budget the client may receive from the care office. However, this care budget is not paid to the clients themselves but to Lunet Zorg. All costs that are not covered by the clients’ indication or by the clients’ insurer need to be paid by the clients themselves from their personal contribution. This personal contribution can be paid by clients from their equity, their unemployment benefits, or from their salary when they have paid work.

### Lunet Zorg

Lunet Zorg is the focal organisation of the business model and has the value-in-use contribution of *personal live support*. This value contribution is realised by the activities of orchestration, analysing, and supporting clients. Lunet Zorg's benefits from being a part of this business model is through an increase in the company's revenue. Their total revenue is dependent on the number of clients they have, as for each client with an indication they receive a certain amount of money from the care office. The severity of the indication determines the amount of money Lunet Zorg receives from the clients' care office. Lunet Zorg has also costs, however. These costs can be divided into three types. The first type of costs can be paid from the clients' indication budget that they receive from the care office. The second type of costs cannot be covered by the clients' indication and thus needs to be paid out of Lunet Zorg's own budget, such as the domotica provider (Appendix 5.2.1, "Result SDBM/R – "Wonen en Zorg"" for more information about the domotica provider). Finally, Lunet Zorg also has operational costs, like employees and materials.

### Employers

Besides the unpaid day care provided by day care providers, there are also clients that have a job and receive a salary each month. The role of the employer is to take care of the value contribution *work*. This value contribution is realised by offering a workplace, and by motivating and supervising the clients. The employers benefit from being part of this network, as their company's work pressure is reduced and they have a social responsibility. The costs are salary and time.

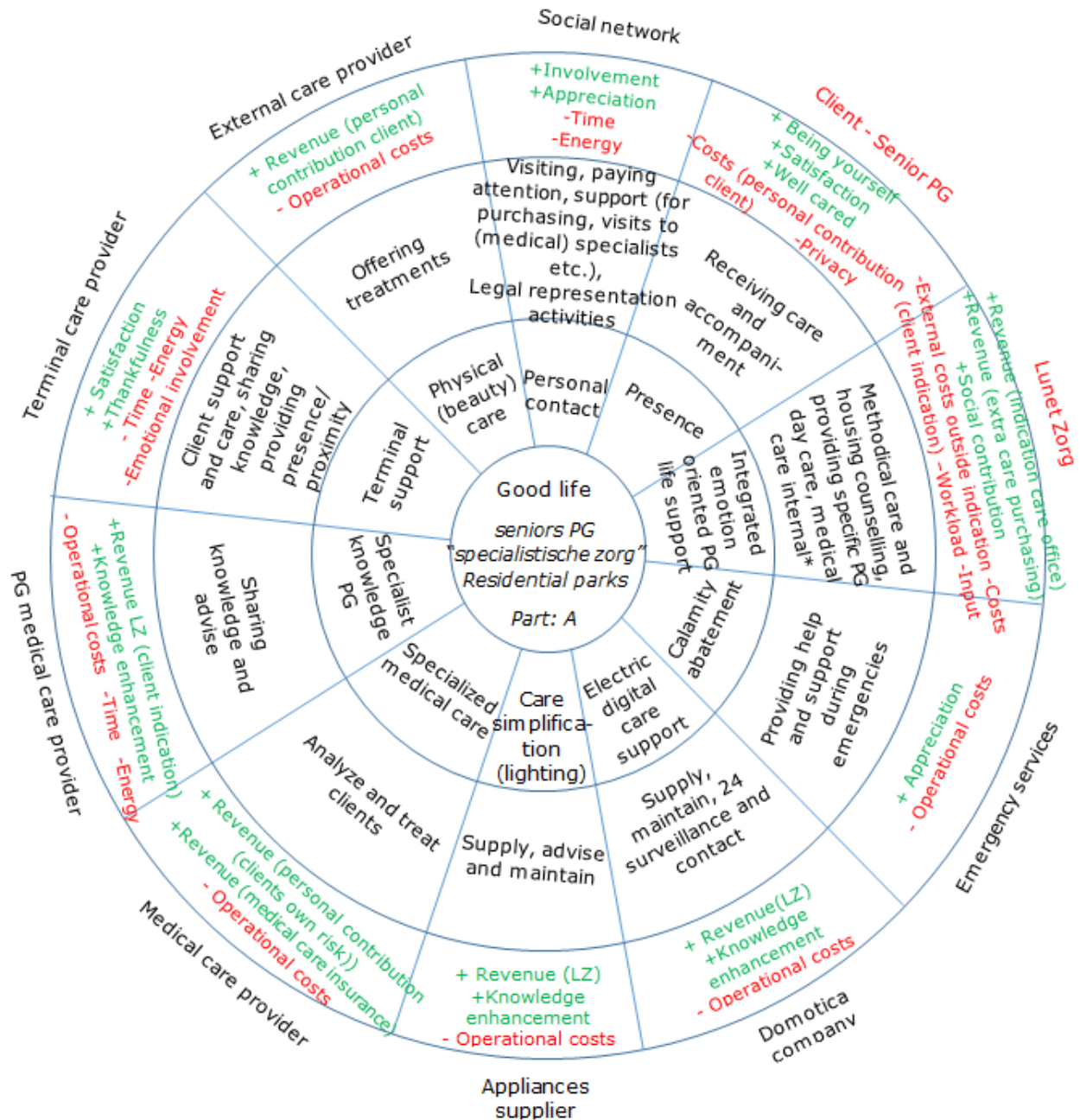
### 4.2.2 Business Model 2- "Specialistische Zorg"

The third workshop focused on the application of a second SDBM/R. This business model radar is applied for the care area "*Specialistische zorg*". This care area consists of multiple client segments as is the case with the "*Wonen en Zorg*" care area. These client segments were determined during the first workshop, which was the strategy canvas workshop (Appendix 5.1, "Result Strategy Canvas Tool Workshop" Figure 37). One client segment of the care area "*Specialistische zorg*" has been chosen for the application of this second SDBM/R, namely the client segment "seniors PG". This client segment, "seniors PG", includes seniors with mental disabilities who also need psycho-geriatric (PG) care. Seniors with PG form a specific client segment because these clients require special care and thus have unique needs, like special deterioration support.

The SDBM/R workshop consisted of six employees of the care area "*Specialistische zorg*" (Table 11). Table 11 shows that the participants have diverse functions within the care area "*Specialistische zorg*", which entails different insights and focus areas. These people facilitated the investigation, among others, of all of the required roles and their contributions in order to deliver the "good life" feeling to all clients in the "seniors PG" client segment. Figures 41 and 42 of Appendix 5.2.2, called "Result SDBM/R – "*Specialistische zorg*""", exhibit the workshop setup and result. The result shows the complete SDBM/R was filled in during the workshop, so the facilitator did not need to complete the model. After the workshop, the result was digitised and sent to all of the participants of the workshop. The participants were asked for feedback about the digitised model in order to supplement or improve the model, or both. Figures 18 and 19 show the approved digitised SDBM/R, which will now be discussed in detail.

Table 11 Workshop Group Setup

Function	Represents
Manager Seniors	Specialistische zorg
Coordinating supervisor	Specialistische zorg
Coordinating supervisor	Specialistische zorg
Coach Seniors PG	Specialistische zorg
Coach Seniors PG	Specialistische zorg
Behaviourist	Specialistische zorg



\* Methodical care and housing counselling, providing PG specific day care, medical care internal (doctor, physiotherapist, etc.), psychological care, mental health care, providing movement, entertainment, leisure, nutrition, household support, palliative care and additionally organising information meetings about PG for those involved with clients and development of Lunet Zorg’s knowledge.

Figure 18 SDBM/R Workshop – “Specialistische zorg” - Digital Result Part A

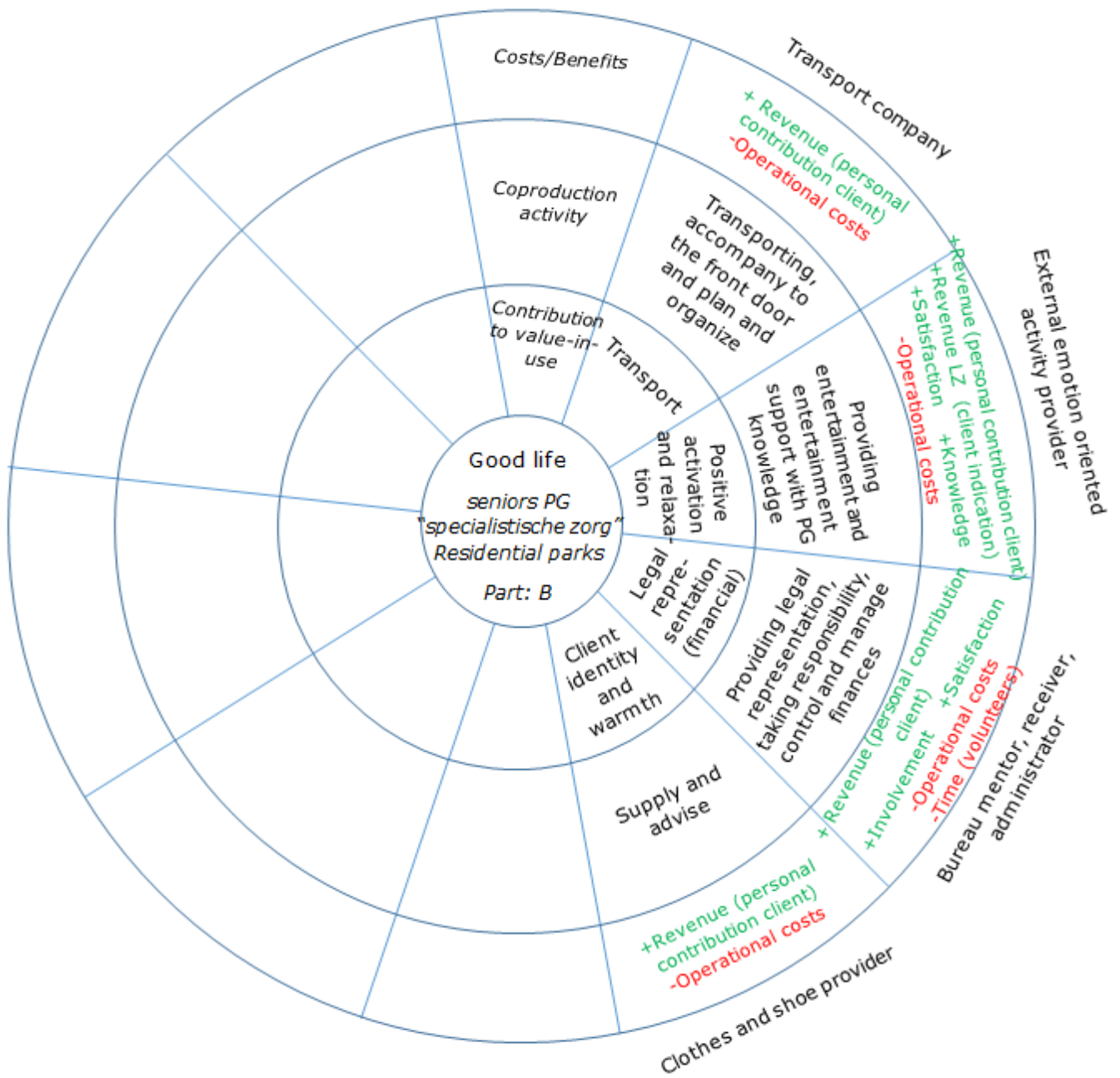


Figure 19 SDBM/R Workshop – “Specialistische zorg” - Digital Result Part B

As already discussed, Lunet Zorg wants to offer a “good life” to all of their clients. Thus, also to the clients of the client segment “seniors PG”. This purpose, of providing a “good life” feeling to all clients within the “senior PG” client segment, consists of diverse organisational challenges, which requires cooperation between several roles. The collaboration between the multiple roles within the SDBM/R should make it possible to offer the “good life” feeling to this specific client segment. The SDBM/R shows that the network consists of 14 roles.

For the “group living” SDBM/R as well as for this radar, the customer fulfils the most important role, because the customer is the co-creator of the defined value-in-use. Without the customer, it is not possible to deliver the service. Thus the first defined role is the customer of the business model, which is also the receiver of the defined value-in-use. The customers of this business model are the clients of the client segment “seniors PG” from the care area “*Specialistische zorg*”. Furthermore, Lunet Zorg again fulfils the role of the focal organisation, because they are in contact with all of the parties of the required network and the customer. Finally, there is an entire list of partners that needs to be involved in the business model radar, in order to offer that “good life” feeling to clients. This list for instance consists of emergency services, a transport company, and PG medical care providers. Each role is required because they all offer a specific value contribution to the defined value-in-use of “good life”. The roles client, Lunet Zorg, and one other example which is important for the “seniors PG” client segment, namely terminal care provider, is discussed in detail below. Appendix 5.2.2, “Result SDBM/R – “*Specialistische zorg*””, discusses all of the roles within the SDBM/R with the related contributions, activities, and costs and benefits separately in detail.

#### Client- Senior PG

The client is the customer of this business model, which covers all of the clients of the client segment “senior PG”. These clients have *presence* as their main value contribution to the central value-in-use of “good life”, because *presence* by clients is required so that, among other areas, care can be provided to the them. Clients’ activities must include receiving care and being accompanied in order for this value proposition of *presence* to occur. They can hereby encounter the benefits being themselves, satisfaction, and being well-cared. However, the clients have also costs, which consist of their personal contribution and their privacy (more details about the personal contribution can be found in the client description of the “group living” SDBM/R). Privacy is noted as a cost because the clients have no influence on their privacy, which can be experienced as disturbing for the clients. For example, some clients need to share their bathroom with three other clients.

#### Lunet Zorg

Lunet Zorg is the focal organisation and has as value contribution *integrated emotion-oriented PG life support*. Emotion-oriented care means that care is attuned to the individual needs of clients. This emotion-oriented care makes sure that the PG clients will be guided during their decline caused by the dementia. The employees that are responsible for the PG clients need to perform specific courses to offer the best possible guidance during the PG process, namely courses that are directed at PG.

The defined value contribution of *integrated emotion-oriented PG life support* is realised by the following activities: providing methodical care and housing counselling, providing PG specific day care, internal medical care (provided by a doctor, dentist, or physiotherapist, for instance), psychological care, mental health care, providing movement, offering entertainment, counselling on leisure, providing nutrition, household support, palliative care, organising information meetings about PG for those involved with the clients, and further developing Lunet Zorg’s knowledge. Psychological care and mental health care is separated, because mental health care focuses on clients’ mental disabilities and psychological care offers specialised help for, for instance, depression and schizophrenia. The activity description discloses that

Lunet Zorg provides and is responsible for the clients' care, leisure time, and day care. Thus, Lunet Zorg offers these clients an integrated package on location, which consists of care, leisure time, and day care. Clients of "seniors PG" consequently do not need to leave their location, because everything is offered at their residential park.

Lastly, Lunet Zorg also has costs and benefits, which ultimately form the reason that Lunet Zorg wants to be part of the network. Lunet Zorg as the focal organisation benefits from the earned revenue. Their total revenue is dependent on the number of clients they have. For each client with an indication they receive a specific amount of money from the care office, the height of the indication determines the height of money they receive. Next to this indication, revenue is also generated by clients that purchase extra care. In this case, clients buy extra care from Lunet Zorg, which is not covered by their indication. This includes, for example, going to hospital appointments together with an employee of Lunet Zorg. There is also a non-financial benefit next to the two revenue streams, namely the social contribution of the company's work. On the other hand, Lunet Zorg also has costs, more specifically, costs that cannot be paid by the clients' indication like the domotica company. Lunet Zorg, furthermore, has non-financial costs such as workload and input from their employees.

#### *Terminal care provider*

The role of the terminal care provider covers the value contribution of *terminal support*, which provides support during the final period of the clients' lives. This role includes the following activities to ensure the defined value contribution: providing the client with support and care, sharing knowledge, and finally being present during the terminal period. This role is performed by volunteers, which means that the benefits are non-financial. The benefits for volunteers that stem from being a part of this network, are satisfaction and thankfulness. On the other hand, their costs are time, energy, and emotional involvement.

## 5. Evaluation

This chapter evaluates the BASE/X framework tools that have been introduced and applied. This evaluation is based on the results of the application discussed in chapter 4, ‘Case Study’. This evaluation relates to the second research step, see Figure 10. This second step examines the evaluation of the strategy canvas tool and the SDBM/Rs introduced and applied during the first step. The evaluation of the BASE/X framework tools in this research consists of multiple evaluation methods which together provide a complete overview of the usefulness of the applied BASE/X framework tools within the healthcare sector (Table 2 and section 3.2 titled ‘Evaluation Methodology’). These evaluation methods consist of the following criteria: usability, effectivity and application process, outcome quality and finally, applicability in the healthcare sector.

This chapter consists of two sections that provide a complete evaluation of both the strategy canvas tool and the SDBM/Rs applied in the healthcare sector. The first section covers the evaluation of the strategy canvas tool and the second addresses the SDBM/Rs. Both sections are structured alike and consecutively discuss the evaluation results obtained from questionnaires, focus group interviews, observations, and meetings with experts. Table 12 shows the evaluation methods with the related evaluation criteria.

*Table 12 Evaluation Methods with Related Evaluation Criteria*

Evaluation Method	Evaluation Criteria
Questionnaire	Usability, effectivity and application process, applicability in healthcare
Focus group interview	Effectivity and application process
Observations	Effectivity and application process, applicability in healthcare
Expert meeting	Outcome, applicability in healthcare

### 5.1 Service-Dominant Business Strategy

This section separately discusses all evaluation methods with the information obtained that relates to the initial workshop, the strategy canvas workshop.

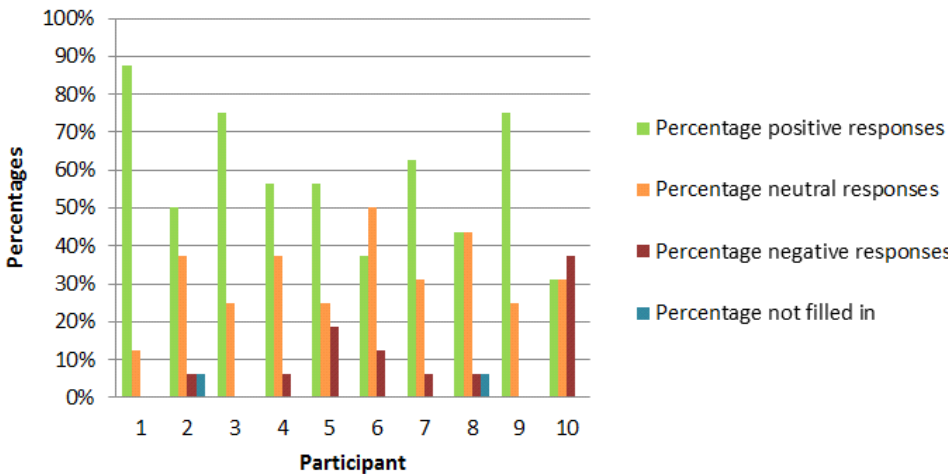
#### 5.1.1 Questionnaire

The questionnaire evaluation method covers multiple evaluation criteria (Table 12). This section concerns the usability, effectivity and application process, and the applicability of the strategy canvas tool based on information obtained from both sections of the questionnaire, closed and open.

First, the closed questionnaire section. The results of the closed questionnaire section can be understood from two perspectives, responses per participant and responses received per question. Figure 20 shows, for each participant present during the workshop, the percentage of questions answered positively, neutrally, negatively, or unanswered. This figure shows that the majority of participants had positive feelings about the likelihood of adopting the strategy canvas tool. Furthermore, Table 13 presents the average score for each participant. This table shows that nine of the 10 participants had an average of a positive feeling about the tool, as the average score was greater than 3 (based on a 5-point Likert scale). However, the participant who did not had an average positive feeling about the tool, participant 10, had an average score of 2.88, which is very close to neutral. Consequently, participants have positive feelings towards the usability of the tool, with the exception of one participant, suggesting that the tool is likely to be adopted in the future.

### Likelihood of Adoption - Strategy Canvas Tool

Table 13 Participants' Average Score (1 = strongly negative, 5 = strongly positive)



Participant	Average score (1-5)
1	4.19
2	3.47
3	3.94
4	3.50
5	3.38
6	3.25
7	3.56
8	3.40
9	3.94
10	2.88

Figure 20 Participants Feelings About the Likelihood of Adoption

In addition to feelings about the strategy canvas tool per participant, responses can be evaluated per question. Responses to the likelihood of adoption can be understood with three different constructs, perceived ease of use, perceived usefulness, and intention to use the tool. Figure 21 shows boxplots, these boxplots examining responses per question. The questionnaire numbers in the figure correlate to the numbers of the questionnaire included in Appendix 3.2, "Strategy Canvas Tool Questionnaire". The results show that all three constructs received mostly positive feelings from participants. The boxplots depict that 9 of the 16 questions were answered without a single negative response. These questions received at the very least a score of 3. Additionally, the boxplots show that 15 of the 16 questions have a median of three or higher, indicating a neutral or positive median. Question 15, concerning perceived ease of use, scored lower than the other questions with a median of 2.5. Question 15 concerned whether participants were confident that they could now independently apply the tool in practice. The score indicates that some participants doubt their capacity to successfully apply the tool on their own. The results concerning each construct are also described in Appendix 6.1, "Questionnaire Results - Strategy Canvas Tool". These results show that each question, with exception of one, within the three constructs received on average a positive score. This can be seen in the yellow marked means of all the questions. The exception question is question 15, as already noted by the boxplots. The question has an average score of 2.7 and a minimum score of 2, see the red marked mean in Table 18.

Based on these results, it can be concluded that participants viewed the usability of the strategy canvas tool positively and believed the tool to be applicable for Lunet Zorg, and thus for the healthcare sector. This assertion is based on the generally positive responses received to the three questionnaire constructs, especially to the construct concerning intention to use (Figure 21, question 9), indicating that the strategy canvas tool is applicable in the healthcare sector, otherwise participants would not intend to use the tool in Lunet Zorg again.



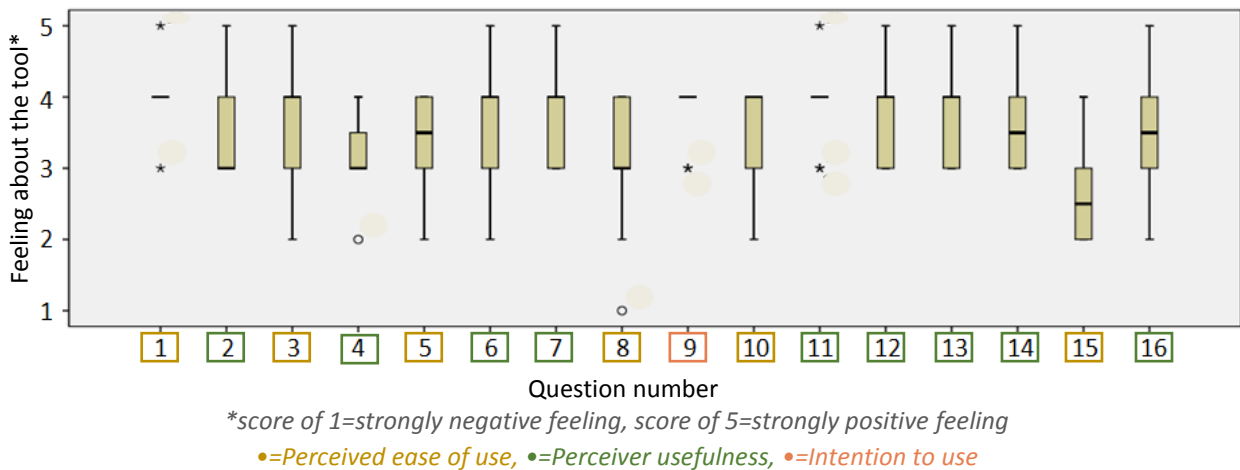


Figure 21 Boxplots- Feelings Related to Each Question

Figure 22 shows that only a few participants had negative feelings about the tool. The figure shows the number of negative responses from each participant. For example, participant two gave one negative response to the 16 question questionnaire. The total number of negative responses given by all participants is 15. These 15 responses can again be understood within the: perceived usefulness, perceived ease of use, and intention to use the tool. Table 14 shows the number of negative responses within each construct. Participants have zero negative feelings regarding the intention to use the tool. This indicates that all participants would like to use this tool in the future. The 15 negative responses are distributed over the other constructs, perceived ease of use and perceived usefulness of the tool. The construct concerning perceived usefulness received five negative responses. This indicates that some participants have doubts about the usefulness of the tool within Lunet Zorg. The construct concerning perceived ease of use received 10 negative responses. This indicates that participants encountered difficulty during the application of the tool. However, it is important to recognise that the total number of negative responses that were received are a small section of the total responses.

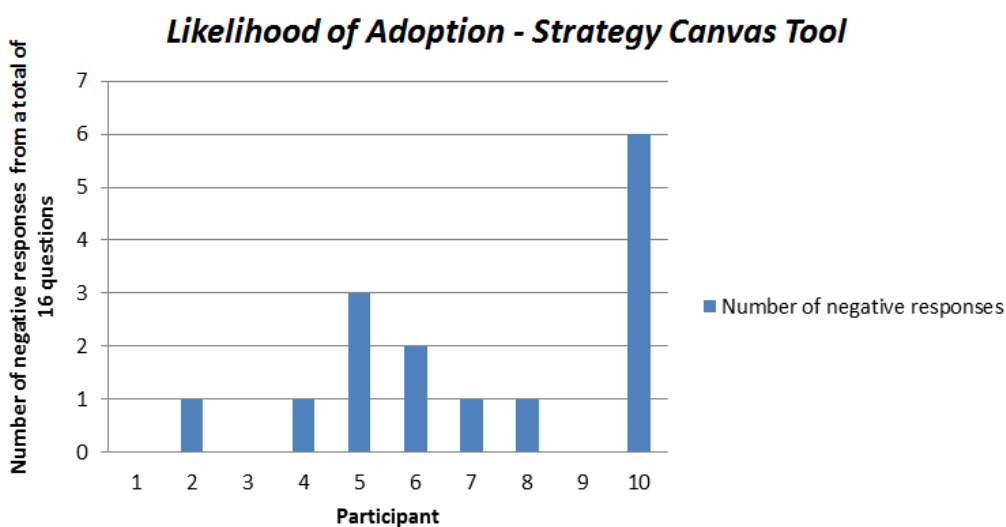


Figure 22 Participants' Negative Feelings

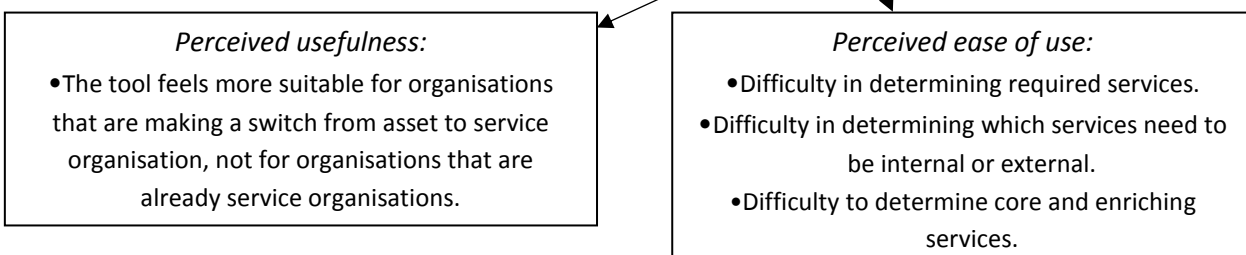
Table 14 Number and Percentage of Negative Feelings per Construct

Construct	Total number of responses	Number of negative responses	Percentage of negative responses
Intention to use	10	0	0%
Perceived usefulness	90	5	5.6%
Perceived ease of use	60	10	16.7%
<i>Total</i>	<i>160</i>	<i>15</i>	<i>22.3%</i>

Besides the closed-ended questions, the open-ended questions provide qualitative information. This qualitative information may be used to explain the negative results found in the closed section. Each questionnaire consisted of one open question after the 16, 5-point Likert scale questions (Appendix 3.2, “Strategy Canvas Tool Questionnaire”). This question asked for comments, recommendations, and improvements. Appendix 6.1, “Questionnaire Results - Strategy Canvas Tool”, provides an overview of the answers from participants regarding this open question. The answers to the open section of the questionnaire provided information to explain participants’ negative feelings about the perceived ease of use and perceived usefulness of the tool. Negative responses to the perceived usefulness of the tool can be explained by doubts whether the tool is suitable for organisations that are already specialised service organisations. Some participants felt that this strategy canvas tool may be more suitable for organisations that are making a switch from asset to service organisations. Negative responses concerning the perceived ease of use of the tool can be explained by the following difficulties that were encountered: determination of the required services for delivering the value-in-use, determination of internal and external services, and finally determination of core and enriching services. These difficulties caused participants to have doubts about their capacity to apply the strategy canvas tool on their own in the future (question 15 of Figure 21).

Table 15 Explanation of Negative Feelings

Construct	Number of negative responses
Intention to use	0
Perceived usefulness	5
Perceived ease of use	10



The conclusion can be made that, overall, participants have positive feelings about the use of the strategy canvas tool. All participants feel positively about using the tool again. However, participants desire clarity concerning a number of design aspects because they encountered difficulties with these aspects. These aspects concern determining which services are required to provide a “good life”, determining which services should be performed internally or externally, and finally determining which external services are core and which are enriching to provide a “good life”.

### 5.1.2 Focus Group interview

Each workshop was concluded with a focus group interview. The focus group interview investigated the effectivity and application process of a particular tool. The focus group interview obtained information about the following aspects: the facilitator's capacities, tool design, tool application process, and finally the recognised importance of the BASE/X framework and the tool. The following section discusses information obtained through this focus group interview. For raw data from the focus group interview, see Appendix 7.1, "Focus Group Interview Result Strategy Canvas Tool".

- First, the interview obtained information concerning the **facilitator's performance** during the introduction and design process. Participants were asked about the facilitator's capacities to transmit information and provide guidance. Additionally, the participants were asked for recommendations to improve facilitator's capacities and to make future workshops more successful. First, the transmission of information took place at a high rate. Participants prefer the transmission of information to take place at a lower rate. All the material was new for participants and new material takes time to understand. In addition to a lower rate, the lack of knowledge made participants desire BASE/X framework and strategy canvas tool information prior to the workshop. Moreover, participants preferred a general strategy canvas tool example during the introduction, before the application of the strategy canvas tool related to Lunet Zorg. Finally, participants recommended that the facilitator should provide them with a list of external organisations with which Lunet Zorg cooperates. This is because participants felt that they had insufficient knowledge regarding external partners of Lunet Zorg to properly fill in the service eco-system section of the strategy canvas tool (Figure 6).
- Second, the interview obtained information about the tool **design and application process** of the strategy canvas tool. This section first addresses ways in which participants encountered the design of the strategy canvas tool. First, participants suggest that the strategy canvas tool design is complete and the tool does not miss any important strategic aspects. Moreover, the terminology of the tool is easy to understand, however participants preferred that all terms be in Dutch. They also felt that the strategy canvas tool consists of a structured design, namely the multiple tool compartments that need to be filled in. This structure is pleasant because it ensures that no strategy canvas part can be forgotten, like customer interaction and required external services. In addition, the tool structure is strong because it forces a user to look at Lunet Zorg in a different way. The tool ensures that the customer comes first and requires an investigation of clients' desired experiences to realise the defined value-in-use of a "good life". However, participants felt that the tight structure hinders creativity compared with mind mapping. Lunet Zorg applies mind mapping as a tool for the translation of information to paper. Additionally, it provides the opportunity to think further than normally and it supports the development of a group vision. See Appendix 11, "Mind Mapping Document of Lunet Zorg", for an example of how Lunet Zorg applies the mind map. Additionally, the mind map is also used for clarifying what is expected by specific functions, so that employees know what other people expect from them and what they expect from others. This reduces disappointments among employees and ensures that all employees know where they stand. However, in contrast, participants mentioned that mind mapping does not directly lead to action. The mind map needs to be complemented with steps determining actions. Participants compared the stimulated creativity level of the strategy canvas tool and mind mapping; however, they were not of the opinion that the mind mapping tool is appropriate for strategy development, as structure is surely needed to set a business-wide strategy on paper. Besides the tool design, the application order of the strategy canvas tool was considered intuitive (Appendix 8.1, "Construction Steps of the Strategy Canvas Tool"). However, participants preferred to determine first, before the strategy canvas application, the required business services needed to deliver the defined value-in-use and decide for each business service whether it would be appropriate to perform the service internally or externally. Thus, the strategy canvas tool application order was considered excellent,

however a different BASE/X design sequence was preferred. Participants preferred to start with the bottom layer of the BASE/X frameworks business pyramid (Figure 5 and Appendix 1, “BASE/X Business Design Sequence”). This layer covers a determination of service-dominant business services. This order is preferred because of the uncertainty and difficulty, also identified during the questionnaire, of the following aspects that arose during the application of the strategy canvas: determination of the required services to deliver the defined value-in-use, determination of which services should be performed internally or externally, and finally which external services are core and which enriching. These uncertainties and difficulties are covered by the service-dominant business model layer, because this layer fully focuses on all aspects related to single services.

- Finally, the interview focused on the **recognised importance** of the general BASE/X framework and the strategy canvas tool. Participants considered the BASE/X framework suitable for Lunet Zorg because of the service-dominant business services layer. This bottom layer of the business pyramid helps the organisation to determine which services need to be done internally and which externally, and which are core and which enriching. Furthermore, the BASE/X framework was considered suitable because until now services were added and removed by Lunet Zorg based on thoughts and not valid reasons. The BASE/X framework ensures that the importance of each service is investigated based on the value contribution to the central value-in-use of providing a “good life” to clients. This ensures that services will not simply be added or removed, but that each service will be examined as to whether it contributes to the delivery of a “good life” to clients. In addition to the BASE/X framework, the participants were of the opinion that the strategy canvas tool could also be suitable for Lunet Zorg based on service-dominant thinking principles, which are supported by the strategy canvas tool. The primary service-dominant thinking principles, which are of high importance, are the value-in-use focus and network focus. However, participants also had doubts concerning the applicability of the strategy canvas tool within Lunet Zorg. First, participants questioned the suitability of defining value-in-use broadly, namely a “good life”. Participants felt that this definition of value-in-use is too broad, making the strategy canvas too complex. Finally, participants felt that this tool may be more suited to organisations that are making a switch from selling assets to offering services, instead of organisations like Lunet Zorg who already offer services.

The conclusion can be made that participants considered the strategy canvas tool design and design sequence pleasant to work with. However, a different BASE/X framework design sequence is preferred. Finally, participants recognised the importance of the BASE/X framework and the strategy canvas tool. Although, there are some hesitations concerning the suitability of the strategy canvas tool within Lunet Zorg based on the broad defined value-in-use of a “good life” and Lunet Zorg’s current service-oriented focus.

### 5.1.3 Observations

In addition to the questionnaire and the focus group interview, the facilitator used an evaluation method called observations. Observations were gained by the facilitator, based on her own findings, video, and audio records. These observations consist of information related to the workshop group (group dynamics), the tool application process, the applicability, and finally the facilitator.

- The **workshop group** consisted of 10 participants from both care areas “*Wonen en Zorg*” and “*Specialistische zorg*” (Table 8). These participants had a pleasant work attitude and were pleasant to guide. The behaviour can be described as follows: active, interested, eager to learn, enthusiastic, focused, and not distracted by non-workshop related aspects such as tablets, smart phones, or laptops. However, participant enthusiasm sometimes caused digressions into minor or previously discussed topics. Besides the individual work attitudes, there also was a pleasant cooperation between all participants. This pleasant cooperation was caused by the following aspects: a nice atmosphere, humor, the appreciation of opinions between

participants, openness to insights, and finally actively participating participants. There was one participant who often had different thoughts and opinions than the other participants. However, this kept the group fresh and required them to revisit various topics again. However, despite the pleasant collaboration, there was group formation between participants within the care areas “*Wonen en Zorg*” and “*Specialistische zorg*”. This group formation was observed through eye contact and support and mutual discussion between participants within the same care area. This is quite logical because participants within the same care areas collaborate more often and support their respective care areas.

- Besides the pleasant attitude of the group, observations of the facilitator also concerned information, drawn from participants, about the **effectivity and applicability** of the BASE/X framework and strategy canvas. Participants consistently gave confused looks during the introduction, however these were followed by questions from participants. These questions were answered by the facilitator which largely eliminated the confusion and uncertainty of participants. This mostly occurred during the introduction of the BASE/X framework, in particular when the structure and substantive knowledge about the BASE/X framework was explained. The confusion and facial expressions indicated a difficulty for participants to understand the new model and to think in different ways, foregoing old modes of thinking. As noted, participants felt that the strategy canvas tool is more suitable for organisations that want to make the switch from an asset to a service organisation. They had difficulty seeing this model as a new method to display their services to customers and business partners, namely to display their services as integrated service solutions. Finally, participants encountered difficulties during the application phase of the strategy canvas tool, namely the already mentioned application difficulties related to the determination of internal and external services and to core and enriching services. The determination problems of internal and external services are caused by the fact that participants have a lack of knowledge about which services are specialties of Lunet Zorg, which need to be done internally, and which services may be better performed by external service providers in order to deliver the best service package. Furthermore, participants placed almost all external services as core services, which indicates that they rank all the services as ‘must haves’ in order to achieve a “good life” feeling to clients. Besides determining internal, external, core, and enriching services, there was also difficulty identifying the type of relationships between Lunet Zorg and their core and enriching partners.
- Finally, there is information obtained through observation that relates to the **facilitator**. These observations can be divided into observations during the introduction and observations during the application phase. The observations obtained during the introduction are as follows: the facilitator spoke quickly during the introduction and the facilitator answered and tried to clarify all questions and ambiguities from participants. The fast mode of speaking observed by participants during the workshop suggests an area to focus for the facilitator in leading workshops in the future. Moreover, during the application phase, the facilitator occasionally encountered difficulties in understanding abbreviations of healthcare terms, however, the facilitator asked for the definition of unknown abbreviations and wrote these definitions down. Additionally, the facilitator had no difficulty keeping the group motivated. The only important area of focus for the facilitator during the application phase was guiding the group. The facilitator needed to continuously guide participants to ensure that they were focusing on important matters related to the strategy canvas tool and not on minor details, or stuck in old cases. The facilitator directly addressed the group when participants were distracted or off-track.

#### 5.1.4 Expert Meeting

The final evaluation was a quality check of the strategy canvas tool result. This quality check was done with an expert of the BASE/X framework. The quality check was performed through a conversation between the expert and the workshop facilitator. Besides quality, the conversation focused on findings, questions, and

uncertainties which arose during the workshop. There was also a focus on the composition of the workshop group.

First, the quality of the strategy canvas tool result was discussed. This discussion concluded that the strategy canvas tool result meets the required quality aspects. First, this achievement of quality was determined because the tool includes the following aspects: it represents what Lunet Zorg wants to provide/offer, who the customer is with the related experience and interaction, what external services are required from partners besides Lunet Zorg's offers to deliver the defined experience to their clients, and finally the basis of relationships between Lunet Zorg and external service providers. Second, the required quality was reached because all parts of the strategy canvas tool were filled in according to the application guidelines, the defined strategy canvas application approach (Grefen, 2015).

However, during the workshop participants had questions and uncertainties about the BASE/X framework and specifically about the strategy canvas tool. Participants had doubts about broadly defining the experience and value-in-use they want to deliver to clients. Participants were thinking that their defined customer experience they want to deliver to clients and the business goal of providing a "good life" is too broad for a company and also for this framework. However, during the meeting with the expert, it became clear that the scope is not too broad because Lunet Zorg wants to take responsibility for many different aspects and this requires a broad scope to address every concern. Such a broad scope indicates that Lunet Zorg is a large organisation with high ambitions. Moreover, this indicates that Lunet Zorg is a suitable organisation to apply the BASE/X framework because Lunet Zorg collaborates with many other parties to deliver a defined experience to their clients. Collaboration such as this is supported by the BASE/X framework and also by the specific strategy canvas tool. The strategy canvas tool considers the different parties, their services, and their relationships to Lunet Zorg.

Additionally, the expert mentioned that the large number of core services and partners, and the lower number of enriching services and partners, is likely caused by the participants involved in the workshops. The participants are currently positioned too low in the organisation's hierarchy. These participants cannot make rational decisions about which services and partners are core and enriching, because of a lack of knowledge and a position too close to that of the clients.

In conclusion, the strategy canvas tool achieves the desired quality. Based on the outcome quality and the appropriate use of the tool, it can be argued that the strategy canvas tool may be applicable in the healthcare sector. However, the expert suggests that going through this strategy canvas design process is more beneficial than the end result itself. The most important thing is the experience participants have gained thinking about and looking at their organisation in a different way.

## 5.2 Service-Dominant Business Models

This section discusses all evaluation methods concerning the second and third workshops, the SDBM/R workshops, separately.

### 5.2.1 Questionnaire

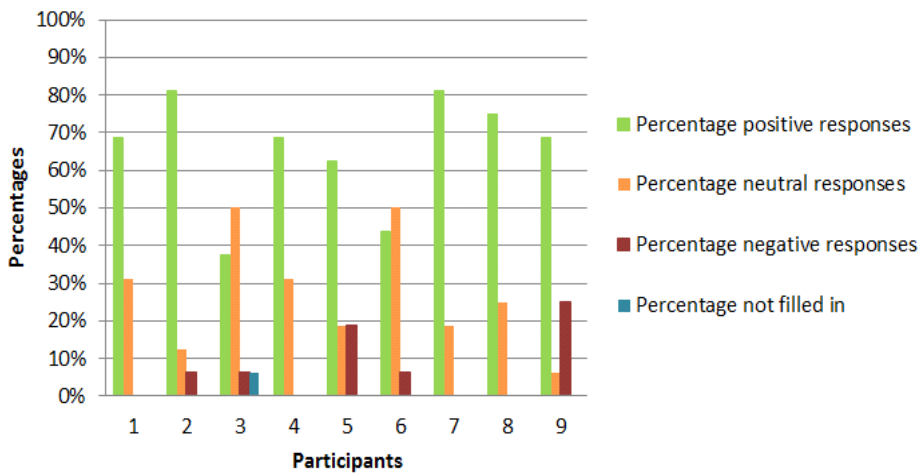
The questionnaire evaluation method concerned the evaluation criterion usability (Table 2). This questionnaire is based on the same questionnaire used during the strategy canvas tool workshop, however this questionnaire focused on the SDBM/R. The following section evaluates the SDBM/R tool based on the information obtained from both parts of the questionnaire, closed and open.

As before, the closed questionnaire section will first be discussed. Again, this section can be understood from two perspectives, responses per participant and responses received per question. The questionnaire

was distributed to 10 participants, yet one participant was not present to complete the questionnaire. This participant had an emergency situation and left the workshop directly after the application phase. The questionnaire was received back from 9 of the 10 participants. Figure 23 shows, per participant, the percentage of questions answered positively, neutral, negatively, or incomplete. The results show that participants have positive feelings about the likelihood of adopting the SDBM/R tool. Table 16 shows the average scores of each participant concerning the tool and shows that all participants have on average a positive feeling (based on a 5-point Likert scale). The conclusion can be made that all participants have an average positive feeling towards the usability of the tool, which suggests a likelihood that the tool will be adopted in the future.

### Likelihood of Adoption - SDBM/R Tool

Table 16 Participants' Average Score (1=strongly negative, 5 = strongly positive)



Participant	Average score (1-5)
1	3.81
2	3.75
3	3.40
4	3.69
5	3.44
6	3.38
7	3.81
8	4.00
9	3.50

Figure 23 Participants Feelings About the Likelihood of Adoption

Next to the feelings about the tool per participant, the responses can be evaluated per question. The questionnaire questions can again be divided into the three different constructs: perceived ease of use, perceived usefulness, and intention to use. Figure 24 presents boxplots per question. The questionnaire numbers in the Figure correlate to the numbers of the questionnaire included in Appendix 3.3 “SDBM/R Tool Questionnaire”. The results show that all constructs received mostly positive feelings from participants. The boxplots show that 14 out of the 16 questions received a median response of 4, indicating a positive feeling. Eleven of these 14 questions received a minimum response of 3, indicating that, with regard to these questions, no participants had negative feelings about the tool. Moreover, six of the 16 questions received a median score of 4 from all participants and for these questions, scores greater than or less than 4 were outliers (as was seen in questions 1 and 3). Additionally, the answers received for question 1 were reliable, as this question was answered by all participants with a score of 4, indicating that all participants had a positive feeling about the tool. However, question 15 concerning perceived ease of use scored lower than the other question. Question 15 concerned whether participants were confident that they could now independently apply the tool in practice. The answers to this question indicate that not all participants are confident that they can apply the tool by themselves in the future. This hesitation also arose in considerations of the strategy canvas tool. Additionally, results concerning each construct are presented in Appendix 6.2 “Questionnaire Results - SDBM/R Tool”. Tables 21, 22, and 23 (Appendix 6.2) show that all questions, except one, within the three constructs received positive responses, shown by the means of the questions which are marked in yellow. The exception was question 15, which returned an average score of 2.66 and a minimum score of 2, with a mean marked red in Table 21 of Appendix 6.2 “Questionnaire Results - SDBM/R Tool”.

As is the case for the strategy canvas tool, participants positively encountered the usability of the SDBM/R tool and believe the tool to be applicable in the healthcare sector. This conclusion is mainly based on the positive responses within the construct of intention to use, indicating that the strategy canvas tool is applicable within the healthcare sector, otherwise participants would not intend to use the tool again in Lunet Zorg. In addition to positive feelings, Figure 25 shows that a few participants had negative feelings about the tool. Five participants gave at least one negative response. The following section discusses these responses in greater detail.

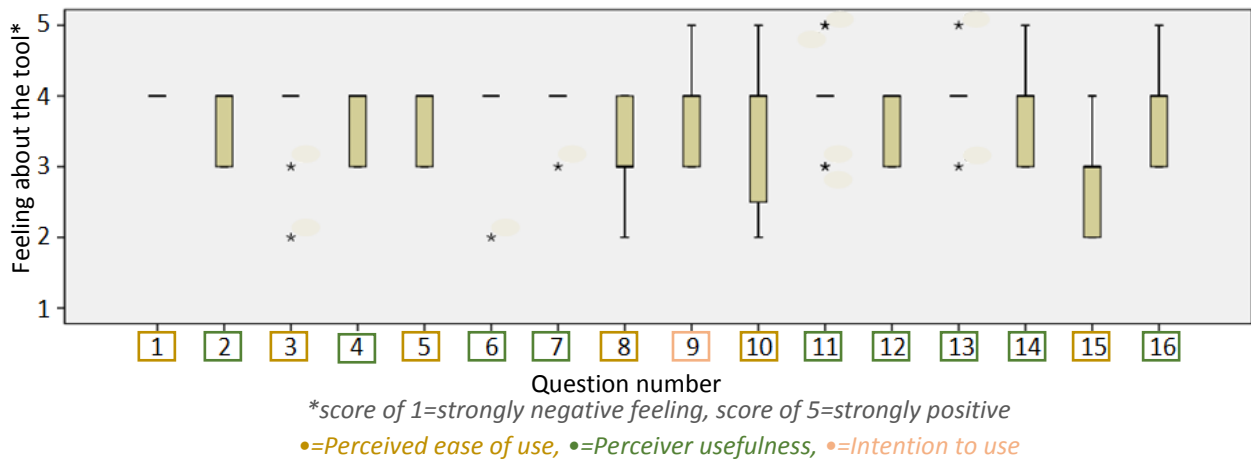


Figure 24 Boxplots- Feeling Related to Each Question

### Likelihood of Adoption - SDBM/R Tool

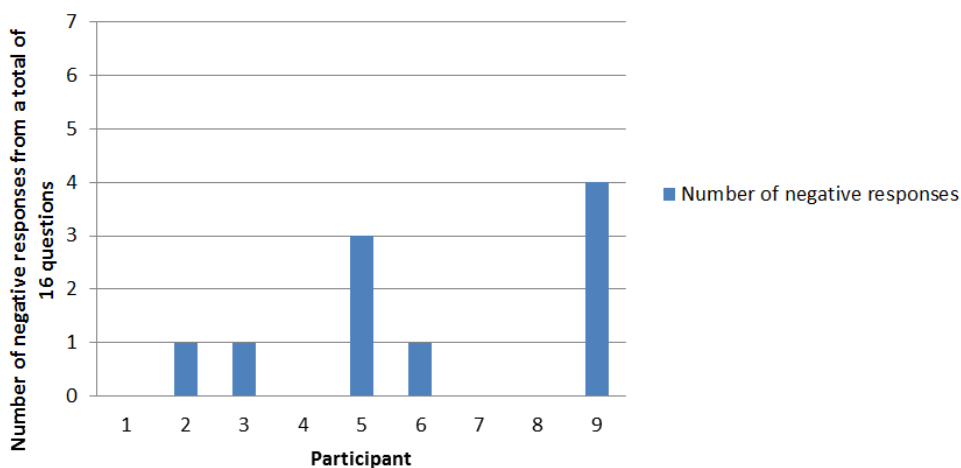


Figure 25 Participants' Negative Feelings

Figure 25 shows, per participant, the amount of negative feelings about the likelihood of adoption. The results show that three participants gave only one negative response, participants 2, 3, and 6 (Figure 25). Moreover, participants 5 and 9 gave multiple negative responses, respectively, three and four negative responses. Table 17 divides these negative feelings into the three constructs used to examine the questionnaire. This table shows that the negative feelings concerned the perceived usefulness and perceived ease of use of the tool. The percentage of negative responses is small, below 20% of the answers (Table 17). Additionally, all participants had positive feelings about the intention to use the tool. The constructs concerning the perceived usefulness of the tool received only 1 negative response out of 81 responses, suggest that a negative feeling is the exception. Moreover, the negative responses to the perceived ease of use of the tool indicate the participants' application difficulty during the application of the tool.



Table 17 Number and Percentage of Negative Feelings per Construct

Construct	Total number of responses	Number of negative responses	Percentage of negative responses
Intention to use	9	0	0%
Perceived usefulness	81	1	1.2%
Perceived ease of use	54	9	16.7%
<i>Total</i>	<i>144</i>	<i>10</i>	<i>17.9%</i>

In addition to the closed section of the questionnaire, some participants answered the open section. The result of the open questionnaire part is shown in Appendix 6.2 “Questionnaire Results - SDBM/R tool”. Unfortunately, this open question did not provide enough information about the reasons behind negative responses. However, some conclusions can still be made about the SDBM/R tool. Based on information obtained by the questionnaire, the conclusion can be made that participants had positive feelings about the tool. This conclusion can be made because all participants had positive feelings about the intention to use the tool and had positive feelings about the usefulness of the tool. Thus participants recognised the importance of the tool. The only obstacle was the difficulty of the tool, which led participants to doubt their capacities to use this tool in the future.

### 5.2.2 Focus Group interview

As with the strategy canvas tool workshop, these SDBM/R workshops were concluded with focus group interviews. These focus group interviews investigated the effectivity and application process of the SDBM/R tool based on the capacity of the facilitator, the application process and design of the SDBM/R tool, and participants’ recognition of the BASE/X framework and the SDBM/R tool. The interview results are discussed separately for the “*Wonen en Zorg*” and “*Specialistische zorg*” workshops because of the differences between these two workshops. The differences were as follows: different group compositions with different participants’ knowledge backgrounds, different participants’ positions in the organisation, different encountered experiences, and different participants’ attitudes during the workshop. For raw data from the focus group interview, see Appendix 7.2 “Focus Group Interview Result - SDBM/R Tool”.

#### “Wonen en Zorg”

- First, participants provided the facilitator with **general workshop feedback**. Participants preferred simple SDBM/R examples related to Lunet Zorg during the introduction of the workshop. Moreover, they preferred future workshops to be held in the morning because of the intensity and required effort during the workshops. Participants did not provide feedback on the performance of the facilitator.
- Participants were then asked about their opinions on the **tool application process and design**. The participants had positive feelings about the SDBM/R tool design. First, participants considered the tool terminology understandable and logical and found that the tool did not miss important components required for the business models. Furthermore, the participants experienced the circular shape of the tool in a positive manner because the shape represents the importance of the network to realise the defined value-in-use. Moreover, the tool ensures that the central purpose of providing a “good life” is clear to all parties within the network. This suggests that all parties have a common purpose. Finally, the SDBM/R gives rise to a tighter network, because all parties are present during the application of the business model. This cooperation gives the opportunity for all parties to meet each other and share experiences, which ensures less distance between the parties within the network. Participants suggested a single improvement in the design of the tool, preferring a fifth role layer. This layer ensures that roles are not placed outside the radar, but inside the radar in a special role layer. The application process of the tool also received feedback from participants. Participants considered the application order of the tool logical and did not feel that another order would be more pleasant to work with (Appendix 8.2, “Construction Steps of the SDBM/R

Tool”). Additionally, participants mentioned that roles need to be defined in a clear manner to prevent confusion about the original meaning of a defined role.

- Finally, the interview obtained information about the **recognised importance** of the SDBM/R tool in the context of Lunet Zorg. The participants were of the opinion that the SDBM/R tool is very suitable for Lunet Zorg because of the network focus. Moreover, the centrally defined purpose of a “good life” ensures that all parties within the network are familiar with this tenet as value-in-use. Furthermore, participants found that the model ensures that all parties within the network understand which contributions are required to realise a “good life” for clients.

*“Specialistische zorg”*

- This focus group interview initially focused on feedback to improve the performance of the **facilitator and the workshop**. The facilitator obtained information concerned the workshop to improve the workshop in the future. First, participants preferred, besides general SDBM/R examples during the introduction, additional examples related to Lunet Zorg. Participants suggested that this would make it easier for participants to understand the SDBM/R tool quickly and clearly. Additionally, participants expressed a desire to have a facilitator present when applying the tool in the future. Facilitator counselling was felt necessary to apply the tool successfully because participants felt that they were not experienced enough to do this themselves.
- After this feedback, the interview focused on the **application process and design** of the tool. Participants found the terminology of the tool very difficult to understand. The difficulty was in part caused by the English terms, which participants recommended that it should be translated into Dutch. Also, participants found it difficult to understand what was meant by the tool terminology, which was not caused by the English language but by the difficult terms. Thus, participants prefer simplified Dutch terms. In addition, participants suggested that the term “*klantwaarde*” return to the tool because this is an important term within the organisation. Participants did not provide feedback related to the structure of the tool and they did not feel that any components required in a business model were missing. Moreover, the radar form of the tool was considered positive. The radar form indicates that all parties of the network are important in realising the defined value-in-use. Participants believed that with the central value-in-use in the middle of the tool, along with service contributions, it will be possible to communicate to customers what they can expect. In addition, thinking in roles was considered positive because of the flexibility. Defined roles are abstract and may involve several specific parties, requiring a flexible model. Apart from the tool design, participants had feedback about the application process of the tool. Participants preferred to first define the coproduction activity layer followed by the costs and benefits. This is because participants had specific activities in mind for each value contribution and wanted to record this first. Besides the application order of the SDBM/R tool, participants preferred another BASE/X framework design sequence. Participants preferred to first look at the bottom layer of the pyramid, the service-dominant business services. This is so that all required services can be determined and decisions can be made concerning which services should be performed internally and which externally, and which are core services and which are enriching.
- Finally, the interview concerned the **recognised importance** of the SDBM/R tool in the context of Lunet Zorg. Participants considered the tool very suitable for Lunet Zorg for the following reasons: flexibility, network focus, and value-in-use focus. Furthermore, participants considered this tool not only suitable for the head of the organisation, but also for use at a team level. Participants suggested that the business models could be used at a team level to ensure that employees are familiar with the central purpose of the organisation and to ensure the required cooperation with partners to realise this defined purpose. Participants suggested this could be done to ensure that employees operate according to values which are consistent with the organisation.

The conclusion can be made that participants recognised the importance of the SDBM/R tool. However, the participants had some feedback to the SDBM/R tool design and BASE/X business design sequence. The provided feedback consists of recommendations to decline the difficulty of the tool. Finally, just as during the strategy canvas application, participants mentioned their preference for a different BASE/X framework business design sequence.

### 5.2.3 Observations

The information obtained from observations is, as in the preceding discussion of the focus group interviews, split into observations from the “*Wonen en Zorg*” and “*Specialistische zorg*” workshops. The reason for this separation is the same as the reason for separating the discussion of the focus group interviews.

#### “Wonen en Zorg”

- This **workshop group** consisted of four participants from the care area “*Wonen en Zorg*” (Table 10). These participants cooperated pleasantly and did not have serious disagreements, irritations, or conflicts. However, the group’s energy declined during the workshop. This may have been caused by several factors. One of these factors may have been the timing of the workshop. The workshop was in the afternoon (14:30). Participants probably already had multiple meetings, which may have led them to have less energy and concentration than in the morning. The decline in energy could also have been caused by the guidance of the facilitator. It is possible that the guidance was too strong which might be the reason that some participants took a more background attitude with less input. Moreover, the workshop was originally planned for five participants. The fifth participant was the director of the care area “*Wonen en Zorg*” who unfortunately could not attend the workshop. The four managers who attended the workshop were equal to each other, perhaps freeing them from the influence of colleagues higher in the corporate hierarchy. Though, the attendance of the director and his interest, enthusiasm, and recognition of the tool as important, could have influenced the attitudes of the attending participants.
- Besides the workshop group and their performance, observations were also made about considerations of the **effectivity and applicability** of the tool by the participants. First, the SDBM/R results shown in Appendix 5.2 “Results SDBM/R Workshops” and Figures 15, 16, and 17 indicate that participants added too many value contributions and roles within the radar in order to offer “good life” to clients, which makes the model too complex. However, many roles within the radar was not added to the business model (for example, veterinarian) when the model was made by the heads of the organisation (a fact confirmed during the midterm presentation with the directors of the care areas of “*Specialistische zorg*” and “*Wonen en Zorg*”). The addition of too many roles was likely caused by the fact that participants are closer to clients than higher management. However, this also indicates the difficulty of setting a SDBM/R scope. Furthermore, the SDBM/R results show that almost all costs and benefits are financial, which could be caused by participants’ backgrounds. The managers have financial responsibilities which could lead to financially concerned thinking.
- Finally, the observations contained information about the **facilitator**. The facilitator had trouble keeping the group active and motivated. Moreover, the SDBM/R application required more guidance than the application of the strategy canvas tool. The tool terms and compartments of the SDBM/R were too complex to understand for most participants. The facilitator tried to help the group during the application by providing guidance and examples, which may have caused a reserved attitude and drawn less input from participants.

### “Specialistische zorg”

- This **workshop group** consisted of six participants from the care area “*Specialistische zorg*” (Table 11). These participants came from diverse backgrounds within the “*Specialistische zorg*” care area. The group’s attitude can be characterised as enthusiastic, humorous, and motivated. Participants were energetic and this energy did not decrease during the workshop. Moreover, participants had fun during the application, an aspect which may have supported their energy level. This was noticeable in the humor and charisma of cheerful participants. The positive attitudes held by all participants may have been a result of the group’s composition. The group consisted of six participants: the manager, and five other participants. The manager was motivated and clearly recognised the importance of the tool. Perhaps the behaviour of the manager may have influenced the motivation, recognition of the tool as important, and enthusiasm of the other participants in a positive manner. Besides, participants recognised advantages provided by the tool, a recognition that may also be a reason for the high motivation. Participants recognised the importance of the tool because of the following reasons: it supports the communication of services to employees and customers, it has a network focus which delivers the defined value-in-use, and provides flexibility by defining roles rather than defining specific partners within the network.
- The second area of focus during the application phase of the workshop was the **effectivity and applicability** of the tool by participants. Participants encountered difficulty defining the value contribution and related activities of Lunet Zorg within the business model. This may have been caused by the desire of participants to define Lunet Zorg’s services uniquely for this client segment in the value and activity layer of the business model. Participants wanted to define the ways the client segment “seniors PG” makes specific and unique within Lunet Zorg’s value contribution and activities (the second and third layer). Moreover, during the application of the tool, it became clear that the participants preferred to directly link value contributions with roles and not first define the value contributions followed by the roles. This desire is derived from the fact that, during the determination of the value contributions, participants were already thinking about the roles. Participants wanted to record the roles during the determination of the value contributions for clarity. Additionally, participants preferred to first define activities before costs and benefits, because during the application of the value contributions and roles, participants were already considering the activities related to the realisation of the defined value contributions. Participants preferred to complete the cost and benefit layer last. In addition to the application order of the tool, during the tool application, participants recognised their main dependency on Lunet Zorg’s deliveries. This dependency was recognised mainly through the broadly defined internal deliveries. Finally, participants also recognised both non-financial and financial costs and benefits for clients, Lunet Zorg, and roles within the network.
- Finally, observations led to information about the **facilitator**. The facilitator did not have problems keeping the group enthusiastic and motivated. The participants were motivated for the entirety of the workshop. However, the facilitator provided strong guidance because participants required help by understanding the SDBM/R terminology.

### Differences between SDBM/R workshops

The energy level of the participants in the “*Wonen en Zorg*” group decreased during the workshop. On the other hand, there was no energy reduction during the “*Specialistische zorg*” workshop. The energy reduction may be explained by differences between the two SDBM/R workshops such as groups composition, time of day, and period of the year. The “*Wonen en Zorg*” workshop was planned just before the holidays. In contrast, the workshop of the highly motivated group, “*Specialistische zorg*”, took place between Christmas and the new year, which probably created a more relaxed atmosphere. Moreover, the “*Wonen en Zorg*” workshop began two hours later in the day than the “*Specialistische zorg*” workshop and the “*Wonen en Zorg*” participants mentioned that they would have preferred a workshop earlier in the day.

Additionally, the difference in motivation between the workshops may have been caused by the group compositions. The workshop for *“Specialistische zorg”*, a highly motivated group, contained the manager of all of the other participants of the workshop as a participant. However, the director of the present managers during the workshop of the *“Wonen en Zorg”* care area was absent, so there was no influence from a person higher in the hierarchy of the organisation.

Additionally, the SDBM/R results from the two workshops show variations. The SDBM/R results of both care areas are extremely complex in comparison to the available example radar results for the mobility sector. However, there is a difference in complexity when comparing the two radar results for the care areas *“Specialistische zorg”* and *“Wonen en Zorg”*. The *“Specialistische zorg”* SDBM/R includes fewer partners than the *“Wonen en Zorg”* SDBM/R. This indicated that Lunet Zorg has a larger number of external partners for the delivery of the “good life” to the “seniors PG” client segment than to the “group living” client segment. Besides the complexity of the SDBM/Rs, there is a difference between the recognition of non-financial costs for Lunet Zorg, the clients, and all roles within the network. The workshop for “group living” of the care area *“Wonen en Zorg”* had more difficulty thinking about non-financial costs and benefits. When the group of “seniors PG” was asked for reasons as to why the previous group had almost only defined financial benefits and costs, they responded that this may have been because the workshop group of *“Wonen en Zorg”* consisted only of managers who typically have financial goals. This suggests that the reason why the *“Wonen en Zorg”* workshop group almost did not recognise the non-financial costs and benefits was the composition of the workshop group and the focus of these participants during their typical work day.

#### 5.2.4 Expert meeting

The final evaluation was a quality check of the SDBM/R results. This quality check was, as with the strategy canvas quality check, performed with a BASE/X expert through a discussion of the SDBM/R results with the workshop facilitator. Besides the quality, the conversation focused on the reasons behind some of the results.

This conversation suggested that the SDBM/R results are too complex. The models consist of too many parties which indicates that the SDBM/R tool was not used correctly. The expert mentioned that SDBM/Rs such as these, with so many partners, indicate that the models consist of many smaller SDBM/Rs. Finally, the expert mentioned that the radars were overly complex for two reasons. First, because of the broadly defined value-in-use, a “good life”. This value-in-use is too broad for a SDBM/R. In addition to the defined value-in-use, the workshops were completed with participants who were positioned too low in the organisation’s hierarchy. Workshop participants could not make decisions about requirements, such as required value contributions and roles, because they lacked knowledge and were too close to clients.

In conclusion, the SDBM/Rs do not achieve the desired quality because of the size and complexity of the SDBM/Rs. However, the BASE/X expert mentioned that the desired quality could be achieved by using sub-SDBM/Rs. Thus, with the application of sub-SDBM/Rs, the SDBM/R tool could be applicable within healthcare organisations.

## 6. Lessons Learned

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The last part of this research entails an analysis of the insights related to the BASE/X framework and specific tools (Figure 10). These insights, based on and supported by the evaluation results of chapter 5 “Evaluation”, can be divided into conceptual and practical improvements.

### 6.1 Conceptual Improvements

- The first conceptual improvement relates to the **group composition of workshops**. The group compositions used during this study were discussed with the BASE/X expert, which proved feedback regarding the suitability of participants. This project consisted of three workshops with three different group compositions. All participants in the workshops came from Lunet Zorg’s middle management, or lower in the organisation’s hierarchy, and were all from the care areas “*Specialistische zorg*” or “*Wonen en Zorg*”. The participants’ positions in the organisation’s hierarchy, and their respective representation of their own care areas, meant that participants were familiar with only one specific care area and the related clients. This led to a low level of objectivity. Moreover, participants’ positions meant that they had little influence on strategic matters, insufficient control, and insufficient authority. These participants could not regard the subject matter rationally because of their low objectivity and could not make organisation wide decisions because they lacked authority. Since the BASE/X framework must be implemented across the entire organisation, the BASE/X framework design that is covered by the business pyramid application should be applied by the heads of the organisation (among others, the chief executive officer (CEO)). This is advantageous because these employees are more objective, have greater authority, tend to be courageous, and have a more strategic long-term perspective on managing and positioning the company. This head of the organisation, not middle management, determines the future of a company. Moreover, these employees are better able to define the goals of Lunet Zorg. Thus, the first general recommendation is that the heads of the business need to apply the BASE/X framework to realise its successful implementation. However, it is of great importance that the CEO is actually present at these application sessions of the business pyramid of the BASE/X framework. This process is best realised, for example, by making clear to the head of the organisation that the application of the business pyramid of the BASE/X framework concerns company-wide decisions and commitment, such as the service-dominant business strategy. Additionally, it can be made clear that applying the BASE/X framework is not comparable with daily decisions and process development, which can both be realised by middle management.

Additionally, application of the BASE/X framework and related tools by the heads of the organisation will eliminate or reduce the obstacles during application that arose during the workshops. First, participants encountered difficulties determining the necessary services required to ensure that the value-in-use of a “good life” can be offered to clients. Second, participants had difficulty determining Lunet Zorg’s service specialties and, in turn, services that should be performed internally or externally. Third, participants encountered difficulty determining which external services need to be core and which enriching. These application obstacles may be eliminated or reduced when tool application takes place with the heads of the organisation. The heads of the organisation are well acquainted with the strengths of Lunet Zorg and its organisational goals. Moreover, the heads of the organisation have distance from clients and are able to make more rational decisions about the needs of clients to provide them with a “good life”. Finally, the heads of the organisation will not only consider the interests of clients but also the interests, financial and otherwise, of Lunet Zorg. These attributes make the heads of the organisation more suitable to make decisions concerning which services should be performed internally or externally, and which services are core and which are enriching. Apart from the group composition, difficulties encountered in determining core and enriching services may be attributed to the facilitator. During the workshops, the facilitator explained core services as services required to provide a “good life” to clients. Clearer facilitation will explain core services as required services, otherwise Lunet Zorg cannot exist. Explaining core services in this

manner will likely simplify decisions concerning the distinction between core and enriching services. Clearer explanations and instructions about how to facilitate BASE/X framework workshops are recommended to ensure a smoother workshop process and better results.

- These difficulties of its application may also be eliminated through a different **design sequence of the BASE/X framework**. This study was based on the “strategy-based, top-down” BASE/X business design sequence (Appendix 1, “BASE/X Business Design Sequence”). This progression begins with the application of a service-dominant business strategy, the highest layer of the business pyramid. However, during workshops, it became clear that participants prefer to start with the bottom layer of the business pyramid such as service-dominant business services (see the “service-based, bottom-up” design sequence in Appendix 1 “BASE/X Business Design Sequence”). This layer examines difficulties encountered during the application of the strategy and business models. The service-dominant business services layer addresses the following difficulties in application: determination of services required to provide the value-in-use (“good life”), determination of internal and external services, and determination of core and enriching services. These difficulties are addressed by the bottom layer of the business pyramid because this layer examines all single service related issues. This service-dominant business model layer has, similar to the strategy and business model layer, a design tool (Appendix 9.1, “Service-Dominant Business Services Tool”). Thus, this layer, with the related tool, covers the determination of the required services to deliver a “good life” to clients. Additionally, the tool clarifies whether each service needs to be performed internally or externally and whether it is core or enriching. Appendix 9.2 “Service-Dominant Business Services Example” also provides insights into this business pyramid layer and includes two related examples concerning the use of the tool.
- Moreover, it became clear from the meeting with a BASE/X expert that the two SDBM/Rs of this study do not achieve the desired quality because of the complexity of the radars. The desired quality is not reached by radars that are too complex, as they are difficult to read and increase the difficulty of gaining a complete

**Umbrella Goal for Seniors PG: ‘Good Life’**

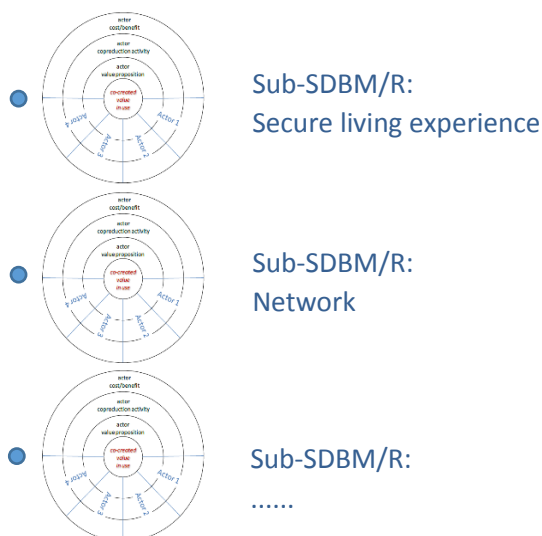


Figure 26 Example of an Umbrella Goal with Sub-SDBM/Rs

overview of the network. The two radars of this project include far too many roles, indicating that the tool has been misused (see section 5.2.4 “Expert Meeting”). The expert suggested that the size of the radars indicates that they consist of **multiple sub-SDBM/Rs**. A SDBM/R is feasible for an atomic model which is more concrete, such as a collaboration model with a single goal. However, the complexity of the SDBM/Rs indicates that the radars consist of multiple goals within one collaboration model. Thus, the defined goal of a “good life” consists of multiple sub-goals. If the main goal consists of many sub-goals, then each sub-goal requires a sub-SDBM/R. Each sub-SDBM/R contributes in a specific way to the main goal. There is no special SDBM/R required for the main goal, this is only an umbrella. Sub-SDBM/Rs for providing a “good life” to “seniors PG” could, for example, focus on providing clients with a

secure living, seamless transport, supported terminal experience, and pet health (Figure 26). Thus, a composition of multiple atomic models covers the umbrella goal of a “good life”. Appendix 10 “Sub-SDBM/Rs” shows the sub-goals and the required sub-SDBM/Rs into which the main goal of a “good life” for “seniors PG” can be divided as well as a sub-SDBM/R example with related scenario, process description.

This process description describes how each role is expected to behave and what can be expected from each role.

When the SDBM/R is split into multiple sub-business models it still addresses the purpose of offering an integrated solution. The purpose of offering an integrated solution needs to be interpreted so that it integrates all required parties. However, when all the sub-business models are based on the same technology, a business process model, business models can be composed and offered as integrated solutions (“good life”) to clients. Thus integrated solutions will reflect the identification of all required parties, but can also be related to the total service package (integrated solution) of “good life” offered to clients.

Additionally, the application of multiple sub-SDBM/Rs requires a longer application time. Each sub-SDBM/R requires a workshop related to the sub-goal with Lunet Zorg employees and external organisations. For example, the sub-goal ‘supported terminal experience’ requires an external party that covers the role of terminal care provider. Each of these workshops requires an investment of approximately 2.5 hours for BASE/X framework introduction, specific tool introduction, and tool application. However, the specific workshop time is dependent on the complexity of the sub-goal. An investment of 2.5 hours per workshop would require, in the case of the “seniors PG” client segment, a total investment of approximately 25 hours, based on the 10 sub-goals (Appendix 10.1, “Seniors PG Sub-Goals”). These 25 hours need to provide the main goal of a “good life” to clients of the client segment “seniors PG”. However, Lunet Zorg has multiple client segments, and each of these client segments requires a number of sub-SDBM/Rs. This would mean that, for each client segment, approximately 25 hours are needed for application, with more complex client segments requiring more time and less complex client segments less. Spending 25 hours per client segment is a rough estimate because some sub-SDBM/Rs may be used for multiple client segments. The two care areas “*Specialistische zorg*” and “*Wonen en Zorg*” examined by this study include nine client segments, which already indicates an investment of 225 hours. As previously mentioned, the heads of the organisation should organise the application. However, solely the application of the required business models already requires a great amount of time. That is why this study recommends that the first SDBM/R workshops will include both the head of the organisation and a representative of the head of the organisation. After a few workshops, the representative will continue the work. This representative is ideally trusted by the head of the organisation and is well versed in their beliefs. This would allow for limited time investment from the head of the organisation, likely with a busy schedule. Additionally, the representative has a less busy schedule and is less expensive for the organisation.

- Finally, it is clear that the **facilitator** plays an important role in workshops. The facilitator prepares participants with the required knowledge and guides participants during tool application. The application section of the workshops requires a highly skilled facilitator. The facilitator needs to influence the process in such a way that the effectiveness of development increases through improvement of the development process and structure (Schwarz, et al., 2011). However, the facilitator should not strongly influence or make decisions related to content. Though, the facilitator in this project provided suggestions during the workshops, especially in the first SDBM/R workshop. The suggestions were given by the facilitator because participants had difficulty coming up with ideas. For example, during SDBM/R application, the facilitator gave examples and guidance with respect to the determination of the required value contributions and the roles required to achieve the main goal of providing a “good life”. However, such influence may have given rise to particular participant attitudes. Participants may have felt that it was not necessary to think of ideas because the facilitator will seemingly present ideas when none can be thought of. Additionally, R. Schwarz suggests that “a facilitator needs to meet three criteria: (1) be acceptable to all members of the group, (2) be substantively neutral- that is, display no preference for any of the solutions the group considers- and (3)



not have substantive decision-making authority” (Schwarz, et al., 2011). One of these criteria was not met by the facilitator: neutrality. For future workshops it is important for the facilitator to stay neutral and avoid influencing the content of the workshop because this can lead to a negative effect on participants’ attitudes. When participants are unresponsive or do not come up with ideas, the facilitator can, for example, repeat theory related to the topic at hand. Additionally, the facilitator can provide examples of specific parts of the particular tool related to other business sectors and organisations to stimulate participants. Also, it could be a solution when the facilitator prepares one complete tool for another situation that is not related to the organisation of the workshop, which can thus not influence the content of the tool. This way, the group can use this tool to practice certain situations to overcome their difficulties. However, these approaches may only be successful when the group is interested and engaged. Additionally, facilitator skills may be improved by providing training for workshops facilitators. These trainings can, among other things, help participants know how to respond to various situations that may arise and how to guide the group without influencing the content of the workshop results.

## 6.1 Practical Improvements

In addition to the conceptual improvements, a number of practical improvements can also be made based on the information obtained during the introduction and application of the two BASE/X framework tools. These improvements are relative small and simple compared to the conceptual improvements. The first practical contribution relates to both tools and concerns the language that was used. The tools make use of English terminology which was not preferred by participants in the workshops. However, a director of Lunet Zorg indicated that English should not be a problem, because the use of English will increase and the new generation of Lunet Zorg already speaks English any way. The Delft University and Utrecht University have proposed increasing the number of English master’s and bachelor’s programs which they offer. Utrecht University has even suggested that they will offer all master’s programs in English (Lange, de 2015). When these ambitions are realised, the number of educated people with English language skills will increase. This group of highly educated people will become the heads of organisations, and also the people who will apply the BASE/X framework. This suggests that the English language barriers will diminish and eventually disappear. Additionally, participants indicated that they preferred to have workshops in the morning because of their energy level, motivation, and ability to focus. Smith (1992) suggests that a person’s focused attention and accuracy are highest at 9 AM and decrease over the course of the day. However, one of the directors refuted this practical recommendation because the performance of employees should not be dependent on the time of the day. They need to be equally productive in the morning as the afternoon.

- Additionally, based on experience gained during the workshops, some practical recommendations can be made related to the **workshop program**. The facilitator noticed that the theoretical introduction of the BASE/X framework and specific tools should be no longer than 45 minutes. When the introduction takes more time than 45 minutes, a break is necessary. Finally, after the end of the introduction there should also be a break. These breaks ensure that participants can absorb the information. These breaks also enable participants who did not want to ask questions during the introduction to approach the facilitator, the facilitator will resolve the questions or uncertainties before the workshop continues. Finally, a maximum application time of one and a half hours is recommended. After this time, a break is necessary to prevent reticent attitudes, distraction, or lack of engagement.

- Moreover, there are also practical improvements related to the specific **SDBM/R tool**. First, participants recommended adding an extra layer within the radar for the roles (Figure 27). This extra layer would ensure that everything related to the business model is covered within the radar. Additionally, participants preferred a different SDBM/R tool application order. Participants preferred to first define the actor coproduction activity layer then the actor cost and benefit layer. This has no adverse effect on the application of the SDBM/R, so both application orders are suitable. Thus, the order of the third and fourth layer, coproduction and cost and benefit layer, is dependent on the preference of the workshop group. This preference needs to be observed and incorporated by the facilitator. Second, participants preferred to define the role layer while defining the actor value proposition layer (Figure 8). However, this application order is not recommended because the order supports participants in thinking from their current business situation. This will ensure participants to consider their current partners and their related roles, and adjust the actor value propositions to these roles within the radar network. The original application order encourages participants to think from the inside-out from the centrally defined value-in-use, instead of outside-in based on current roles.

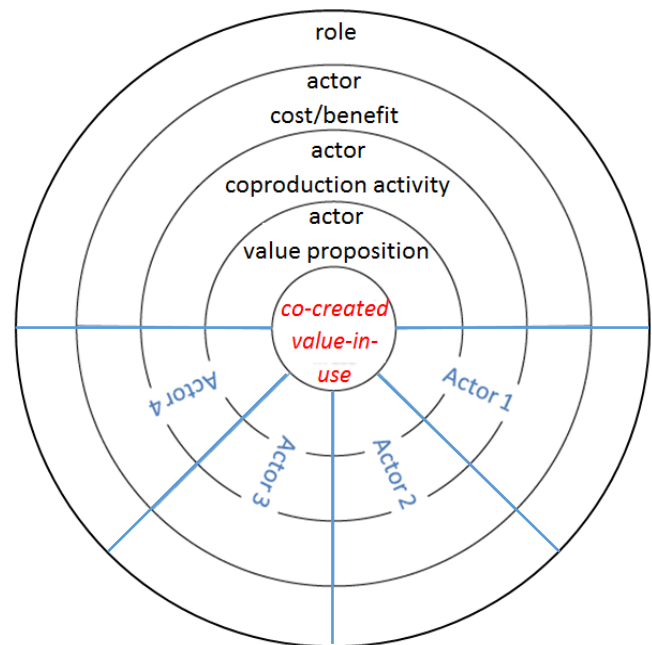


Figure 27 SDBM/R with Extra Role Layer

- There are also some practical recommendations concerning the **facilitator**. First, the facilitator should speak at an understandable speed to assure that participants can incorporate and process the information provided. Second, the facilitator needs to deepen their knowledge of the sector related to a given workshop so that he can understand and employ professional terms.
- Finally, some practical improvements can be made related to the **Business Modelling Handbook** (Grefen, 2015). The *Business Modelling Handbook* is intended as a practical guide for the application of the BASE/X framework. This handbook was used during this project by the facilitator to arrange and guide workshops. Through this experience, it is possible to propose improvements related to the handbook. First, a suggestion related to the strategy canvas tool. The handbook does not mention the way core and enriching services should be communicated to workshop participants. The handbook should suggest that core services can be explained as services that are necessary, otherwise the focal organisation (for example, Lunet Zorg) cannot exist. As previously mentioned, clearer explanations and instructions about how to facilitate BASE/X framework workshops should be provided to ensure smoother workshops with clearer results, which can be covered completely by the handbook. Second, there is a practical improvement related to the SDBM/R application. The handbook indicates that for each customer segment, only one SDBM/R is required. However, throughout Lunet Zorg's SDBM/R application, it became clear that Lunet Zorg needs to generate multiple sub-SDBM/Rs for each client segment because of their complexity. The study recommends that the handbook should suggest that it is not necessary to have one business model for each customer segment, but that the amount of SDBM/Rs depends on the complexity of value-in-use an organisation wants to deliver to a specific customer segment. The handbook should explain and recommend the accepted level of complexity within one SDBM/R. Additionally, the handbook should provide an example of a client segment that requires multiple SDBM/Rs, sub-SDBM/Rs. Finally, the BASE/X framework can also be used by companies that are making a switch from asset to service-based

organisations and organisations that are already service organisations. However, applying the BASE/X framework in these different situations may require a different BASE/X framework design sequence. It would be helpful if the handbook could explain which design sequences are recommended for different business situations when different BASE/X framework design sequences are recommended for different organisational situations, such as already service-oriented businesses and organisations switching from asset-oriented to service-oriented businesses. Furthermore, it would be helpful if it were identified for which organisations the BASE/X framework is properly applicable and for which organisations the BASE/X framework is not applicable. Finally, for a more successful application of the BASE/X, it is recommended that the *Business Modelling Handbook* also includes a manual for the facilitator, which concerns how to properly facilitate and guide the application of the BASE/X framework.

## 7. Conclusion

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In order to evaluate the applicability of the BASE/X framework in the healthcare domain this master thesis research introduced and applied the BASE/X framework within the specific healthcare context of the healthcare organisation Lunet Zorg and evaluated this application. The evaluation of the applicability of the BASE/X framework within this healthcare organisation has resulted in several practical and conceptual lessons learned, which should be implemented in order to further develop the applicability of the BASE/X framework for healthcare organisations in the future.

This thesis began by introducing the service-dominant logic for businesses, which is 'centred on the provisioning of solution-oriented, composed services to customers' (Grefen, 2015). Additionally, the first part of this thesis also described the BASE/X framework, which supports the application and implementation of service-dominant thinking within organisations, and the healthcare organisation Lunet Zorg where the BASE/X framework was applied. After introducing the service-dominant logic, the BASE/X framework, and Lunet Zorg, the thesis discussed the methodology of the research. The methodology included the case study methodology, which was established through the organisation of workshops, and the evaluation methodology. The actual application was subsequently treated which comprised the application of the two top layers of the business pyramid, the service-dominant strategy and business models. The information that was obtained on the basis of the application of the BASE/X framework was consequently evaluated by the project leader and practical and conceptual lessons learned were recommended.

### 7.1 Research Contributions

This research has made both theoretical and practical contributions. First, from a theoretical perspective, it addresses the fact that the BASE/X framework had not yet been introduced and applied to the healthcare sector. The BASE/X framework is already being applied in several business sectors, such as the financial industry, the mobility industry, the document handling industry, international logistics, and traffic management (Grefen, 2014). This study covers the first application of the BASE/X framework within a specific healthcare context, namely Lunet Zorg. This broadens the application of the BASE/X, which at present is a limited application. Second, this research covers the evaluation of the BASE/X framework within the healthcare sector. The application and evaluation of the BASE/X framework within Lunet Zorg demonstrates that the BASE/X framework is suitable and applicable for Lunet Zorg due to the following facts: employees recognised the importance of the BASE/X framework, Lunet Zorg was willing to use the framework in the future, and the fact that the organisation can be outlined successfully using this framework. The importance recognition and willingness to again use the BASE/X framework is based on the new way of thinking and by the fact that it enables a different perception of their organisation, which is valued by Lunet Zorg. The importance recognition based on the new way of thinking is largely the result of the network focus, which is well supported by the strategy canvas and the SDBM/R tools. The network focus is perceived as highly important because it is a requirement for the delivery of ultimate complete service solutions in the healthcare sector. Additionally the importance recognition is also based on the value-in-use, in this case the "good life", that remains central to the strategy and business models, and that the business models focus on the customer needs in order to realise the defined value-in-use. Finally, from a theoretical perspective, the research provided lessons learned which can be utilised to further enhance the application of the BASE/X framework and to make the BASE/X framework more suitable for use within the healthcare sector. The next section, Lessons Learned, provides an overview of recommended improvements related to the BASE/X framework.

This study also provided practical contributions, namely providing a guided introduction and application of a new business engineering approach, the BASE/X framework, in a specific healthcare context. The specific

healthcare organisation, Lunet Zorg, received the advantage of having a guided introduction and the application of a new, rising business engineering approach. Lunet Zorg was chosen for two reasons. Prior to the commencement of the study, BASE/X appeared very suitable for Lunet Zorg, as the main focus areas of the BASE/X framework are of high importance to Lunet Zorg. These focus areas included offering complete service packages (value-in-use), a network focus, and an emphasis on clients' needs. Furthermore, Lunet Zorg was also chosen because of their suitability for use as a case study in the inaugural application of the BASE/X framework in the healthcare sector, as the results of application within this organisation could be applied to several other healthcare organisations. This was made possible by the business characteristics and structure of Lunet Zorg, which are also seen in several other healthcare organisations. Therefore, this project does not only contribute knowledge related to the applicability of the BASE/X framework to Lunet Zorg, but the results also can be generalised to other organisations.

The results of this project can be generalised to organisations that include the same organisational characteristics and structures. This is because the structure influences, for example, how organisations deal with business changes, based on how they handle the application and implementation of changes, and their openness to new ways of thinking. Furthermore, business characteristics, for example organisational complexity, influence the applicability of the BASE/X framework and the related tools, and also influence the tool results. Lunet Zorg is a residential and care centre for disabled people. Characteristics of Lunet Zorg include, for example, that it is a complex organisation, it has a broad business goal (providing a "good life" to all clients), it offers a large number of services (total package of living, care, and daycare), and it requires cooperation with many businesses in order to achieve their goal and offer their service package. An examination of organisations with the same organisational characteristics can commence with organisations of the same type of care facility with identical characteristics. In the Netherlands, several of these organisations exist, such as Amstelrade, Siza, Nieuw Unicum, Raamwerk, Ipse, Middin, Bloemensteijn, and Pepijn en Paulus. These organisations are the organisations initially comparable with Lunet Zorg, based on the type of care facility and organisational characteristics (Figure 28). However, for generalisation within the healthcare sector, this does not necessarily include organisations of the same care facility. They must only consist of the same structure and characteristics. Other care organisations that are not from the same care facility but have the same characteristics, namely of being a complex care facility that has a broad goal and provides their clients a complete service package consisting of living, care and daycare, are shown in Figure 28. This figure shows several healthcare organisations that comply with the organisational characteristics of Lunet Zorg, such as care homes that are also known as retirement homes.

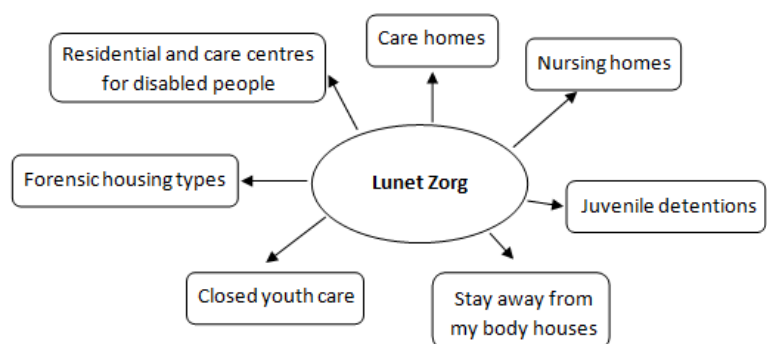


Figure 28 Other Care Organisations Comparable with Lunet Zorg

In addition, generalisations could also be possible to organisations with the same characteristics and structure but that are not healthcare organisations. The advantage of this is that, even in the non-healthcare sector, the BASE/X framework is not yet widely applied. A type of organisation that is not a care organisation but that has the same characteristics is, for example, prisons. Prisons have a broad business target that includes a large service scope, namely a complete service package involving client living, care, and day activities.

Finally, for the generalisation, the organisational structures must be examined. Mintzberg mentioned that the "structure of an organisation can simply be defined as the sum of the different ways in which the work is divided into separate tasks and the way these tasks are then coordinated" (Mintzberg, 2006).

Additionally, according to Mintzberg, there are five basic types of organisational structures. First, the simple structure, which is marked by a small, organic, flat structure, direct supervision, and finally the strategic level as the most important level. Second, the machine bureaucracy, which is marked as suitable for large organisations. It includes standardised work processes, vertical centralisation, and power related to position. Third, the professional bureaucracy, which is marked by being suitable to complex environments, the standardisation of skills, the operating core as the main component, and power related to knowledge. Next, the divisional structure, which is marked by divisionalised markets, mainly products and services, a central headquarters that supports the different divisions, and as suitable for large organisations. Finally, the adhocracy structure, which is marked by fast responses and decision making, fewer regulations and bureaucratic rules, and which is suitable to complex and dynamic environments (Mintzberg, 2006). When examining the organisational structures of healthcare organisations, an initial division into different lines of care can be made. For example, Lunet Zorg, hospitals, nursing homes, and juvenile detention centres belong to secondary care. Secondary care includes specialist care, and is only accessible after referral from primary care. Primary care, in contrast, includes short-term help and is directly accessible. Primary care organisations are, for example, the dentist, pharmacy, ambulatory care and family physician. Based on a discussion with an expert in organisational structures, a number of organisations from the primary and secondary care levels were positioned based on these structures described by Mintzberg. These structures were chosen because the conceptual framework is the most complete and up to date. The structures are raw characterisations, and organisations can have characteristics from multiple typologies; however, organisations will now be positioned based on the most predominant structure. When examining the organisation structures of secondary care providers, it can be concluded that these organisations are based on different organisational structures. For example, hospitals at the secondary care level are based on the professional bureaucratic structure, due to the power related to knowledge (power of operational people, specialists and partnerships), and the control that specialists have over their own work. Juvenile detention centres, in contrast, often consist of a divisional structure, namely one division for the closed unit and one division for the reintegration unit, with a machine bureaucracy within these divisions, because of the application of procedures, standards and rules. Juvenile detention is an example of a care organisation that consists of the same structure as Lunet Zorg. Lunet Zorg also consists of a divisional structure and includes within these divisions a machine bureaucracy. The divisions of Lunet Zorg are, for example, “*Specialistische zorg*” and “*Wonen en Zorg*” based on the fact that these organisational sections have, among others, their own teams and plans. However, a machine bureaucracy exists within these divisions. In addition, almost all healthcare organisations at the primary care level, such as family physicians, dentists, pharmacies, and small home care organisations (which focus on one type of service, such as domestic help) belong to the simple structure, due to the small organisations and the direct supervision made possible by the small business scale. However, larger home care organisations that offer a total package of services consist of a divisional structure including, within these divisions, a machine bureaucracy, due to the standard procedures. These organisations consist of several divisions, joined by a shared administrative body. These organisations include, among others, domestic help, personal care, nursing and maternity care.

Based on the fact that the results of Lunet Zorg can only be generalised to organisations that are similar in regards to organisational structure and characteristics, the results can be generalised to comparable residential and care centres for disabled people and to juvenile detention. However, although the project results cannot be generalised to healthcare organisations with different structures and characteristics, this does not mean that the BASE/X framework is not applicable to these types of healthcare organisations. For example, hospitals may be very suitable organisations in which to apply the BASE/X business engineering approach, as the BASE/X framework fully supports a network focus. This could be highly valued by a hospital, due to the many partnerships maintained by hospitals, which includes groups of independent specialists. The mere fact that hospitals must cooperate with these groups of independent specialists

indicates that it is particularly important to have a network focus, in order to ensure good cooperation with these partnerships and with all other parties involved in a hospital, such as primary care organisations and medical equipment suppliers. The SDBM/R of the BASE/X framework is an appropriate tool to apply this network focus within a hospital, and it ensures that all parties have the same goal (value-in-use), clarifies what each party contributes and by which activities, and identifies the costs and benefits of being part of the network. This is of high importance to partnerships, because this ensures that they understand the advantages of contributing and thus desire to be part of the network. Additionally, the simply-structured organisations, such as the primary care level dentist and family physician, are relative small and simple organisations compared to Lunet Zorg. The services that these simply-structured organisations deliver is just one link of the total service package that Lunet Zorg offers. However, the results from the case study described in this project do not support the conclusion that the BASE/X is less suitable for these types of organisations. In contrast, it may be even easier to apply because of the reduced complexity present, based on for example the number of services and required partner organisations. However, this would likely not be as beneficial, as the majority of smaller organisations consist of a better overview, have less waste being overlooked, and offer fewer services that can be reviewed to determine whether they are really necessary. Thus, for a complex organisation, it will be more beneficial and can provide more structure; however, that does not mean that it is less applicable in these smaller organisations.

In conclusion, through the various contributions, both practical and theoretical, this research has taken the first step in implementing the BASE/X framework in the healthcare sector. Additionally, section 7.2 discusses several recommendations regarding how to increase the successful implementation in the future application of the BASE/X framework in the healthcare sector.

## 7.2 Lessons Learned

The application and evaluation resulted in several detailed lessons learned that are specific to this research's case study. These lessons learned include both conceptual and practical recommendations. The first conceptual recommendation is to apply the BASE/X framework in conjunction with the head (CEO) of the organisation and to generate sub-SDBM/Rs with single goals that are part of an umbrella main goal, in order to reduce the SDBM/R complexity. This work furthermore recommends a different BASE/X business design sequence, the "service-based, bottom-up", in instances in which the head of the organisation encounters application issues concerning the determination of the required services and the positioning of services that are required during the application of the strategy and business models. This work further recommends the investigation of the effectiveness of different BASE/X business design sequences within different business types. More specifically, the effectiveness of a "service-based, bottom-up" sequence with a capability orientation should be further investigated for businesses that are already service-oriented, and the effectivity of a "strategy-based, top-down" sequence with an identity orientation should be investigated for businesses that are currently asset-oriented and desire to switch to being a service-oriented business. Moreover, the facilitator must stay neutral and cannot influence the content of the applied tools. Finally, there are also smaller and simpler practical recommendations. For instance, the *BASE/X Business Modelling Handbook* should include clearer explanations and instructions on how to facilitate BASE/X framework workshops, and an extra layer for the roles should be included in the SDBM/R tool. These recommendations do not only affect the success of the BASE/X framework in the healthcare sector, but these general recommendations are valid for all sectors.

This study concludes that the BASE/X framework is applicable in the healthcare sector. However, recommendations are given with regards to the design and the business design sequence of the BASE/X framework, and the design and application processes of the tools, in order to achieve a more successful BASE/X framework application process and produce better BASE/X results in the future.

### 7.3 Limitations & Further Research

The previous section already discussed detailed practical and conceptual improvements related to the specific case study and the concrete decisions that this study made. First, future work should cover the actual application and testing of these BASE/X framework recommendations. The BASE/X method should be adjusted based on these recommendation, in instances in which these recommendations appear to be successful after testing. A further point of research is to apply the complete BASE/X framework within a healthcare organisation, as this research only focused on the first pyramid. However, in order to have a full overview of the applicability of the BASE/X framework in the healthcare sector, the complete framework must be applied to investigate its applicability as well as the business design process based on the BASE/X framework and its implementation.

Additionally, this study offers more general recommendation related to methodological decisions made during this study. This study included one organisation and one case study. However, the absence of further examples is a limitation for the generalizability of our results. The results of one case study and one type of healthcare organisation are insufficient to draw general conclusions regarding the applicability and suitability of the BASE/X framework in the complete healthcare sector. Recommendations for future research include an application and evaluation of the BASE/X framework based on multiple case studies and multiple healthcare organisations with varying characteristics and organisational structures, in order to enable general conclusions to be drawn related to the complete healthcare sector.

In summary, further general conclusions can be drawn about the applicability and suitability of the BASE/X framework in the healthcare sector if the application is expanded to include several organisations from all kinds of care facilities, which have different characteristics and organisational structures. However, based on the information gained from this study, it can be conclusively stated that the BASE/X framework is highly applicable and suitable to healthcare organisations with a combination of a divisional structure (including machine bureaucratic structures) and specific organisational characteristics of being complex, having broad organisational goals, and offering wide service packages. However, it must be noted that this is only the case after an adjustment is made to the BASE/X framework based on the aforementioned recommendations.



## 8. List of Abbreviations

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CEO	chief executive officer
CIZ	centrum indicatiestelling zorg
GGZ	Geestelijke gezondheidszorg
MDC	multidisciplinary conversation
NAH	acquired brain injury
PG	psycho-geriatric
QoS	quality of service
SD	service-dominant
SDBM/R	service-dominant business model radar
SLA	service level agreement
WS	workshop
ZEVMB	both (very) serious intellectual disabilities and (very) serious motor disabilities

## 9. Bibliography

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- Alvaraz Kuri, F. (2002). Web-based Versus Paper-and-pencil Surveys: Reliability and Validity Estimates for the Self-disclosure Construct. 1-177.
- Amit, R., & Zott, C. (2015). Business Models. *International Encyclopedia of the Social & Behavioral Sciences*, 33-36.
- Baines, T., Lightfoot, H., Benedettini, O., & Kay, J. (2009). The servitisation of manufacturing: A review of literature and reflection on future challenges. *Journal of Manufacturing Technology Management*, 20(5), 547-567.
- Breen, R. (2006). A practical guide to focus-group research. *Journal of Geography in Higher Education*, 3(30), 463-475.
- Chau, P., & Hu, P. (1991). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, 91-113.
- Grefen, P. (2014). Achieving Business Agility through Service Engineering in Extended Business Networks - A BASE/X Primer. 1-9.
- Grefen, P. (2015). Business Modelling Handbook: Service-Dominant Engineering with BASE/X.
- Hall, R. (2000). Video recording is theory. 647-664.
- Hove, S., & Bente, A. (2005). Experiences from conducting semi-structured interviews in empirical software engineering research. *Software Metrics*, 1-10.
- Kaplan, B., & Duchon, D. (1988). Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study. *MIS quarterly*, 571-586.
- Kitzinger, J. (1995). Qualitative research. Introducing focus groups. *British medical journal*, 311(700), 299-302.
- Lange de, W.M. (2015). Werkprogramma Internationalisering
- Lüftnegger, E., Comuzzi, M., Grefen, P. & Weisleder, C. (2013). The Service-dominant Business Model: A Service Focused Conceptualisation. 1-50.
- Lüftnegger, E., Grefen, P., Linden van der, E., & Weisleder, C. (2014). BASE/X Business Agility through Cross Organisational Service Engineering.
- McLafferty, I. (2004). Focus group interviews as a data collecting strategy. 2(48), 187-194.
- Mintzberg, H. (2006). *Organisatie structuren*. Peason Benelux B.V.
- Moody, D. (2003). *The Method Evaluation Model: A Theoretical Model for Validating Information Systems Design Methods* (Vol. 79).
- Olivia, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International journal of service industry management*, 14(2), 160-172.
- Paul, J. (2011). *Zorgorganisaties in beeld*.

- Peppard, J., & Rylander, A. (2006). From Value Chain to Value Network. *European Management Journal*, 128-141.
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the nutrition society* 63, 655-660.
- Smith, A. P. (1992). Time of day and performance. *Handbook of human performance*, 3, 217-236.
- Schwarz, R., Davidson, A., Carlson, P., & McKinney, S. (2011). *The skilled facilitator fieldbook: Tips, Tools, and tested methods for consultants, facilitators, managers, trainers, and coaches*. John Wiley & Sons.
- Vargo, S., & Lusch, R. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68(1), 1-17.
- Yin, R. (2014). *Case Study Research*. Sage publications, INC.
- Zorg, L. (2015). Jaarverslag 2014. 1-21.

# Appendix

## Appendix 1 BASE/X Business Design Sequence

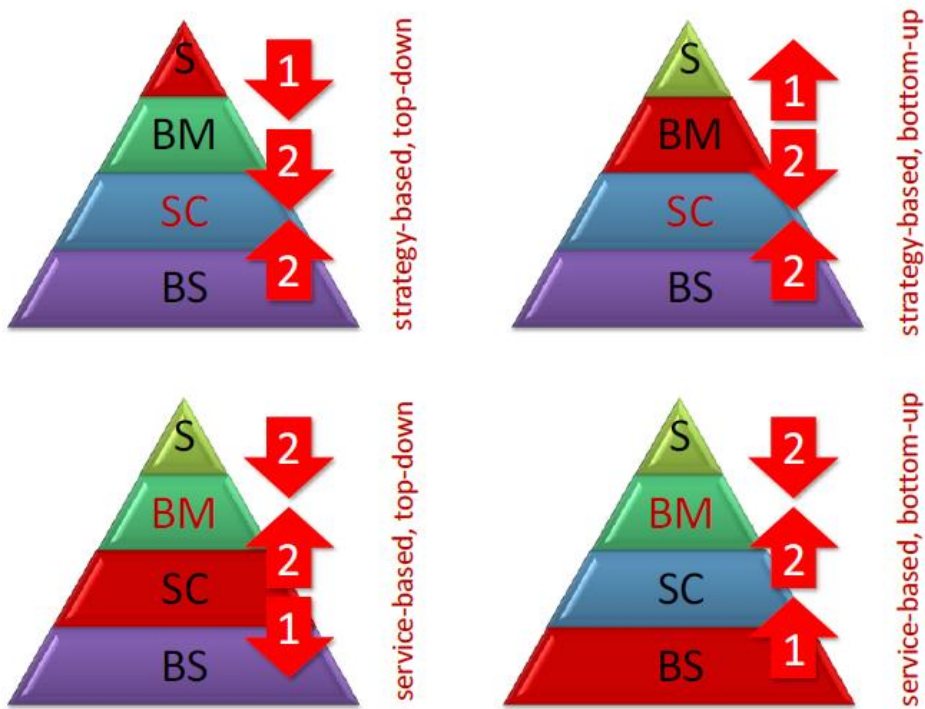


Figure 29 Four Practical Sequences for Business Design (Lüftenegger, et al., 2013)

## Appendix 2 Evaluation Criteria with Related Measures

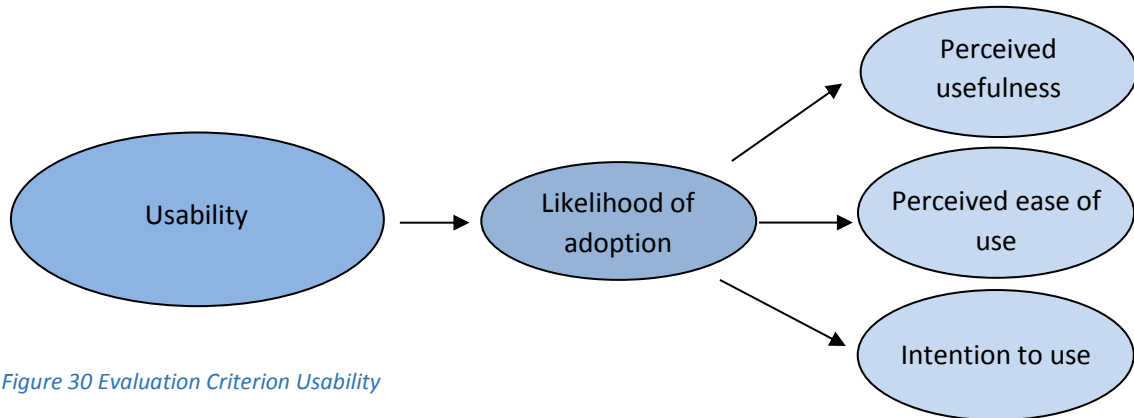


Figure 30 Evaluation Criterion Usability

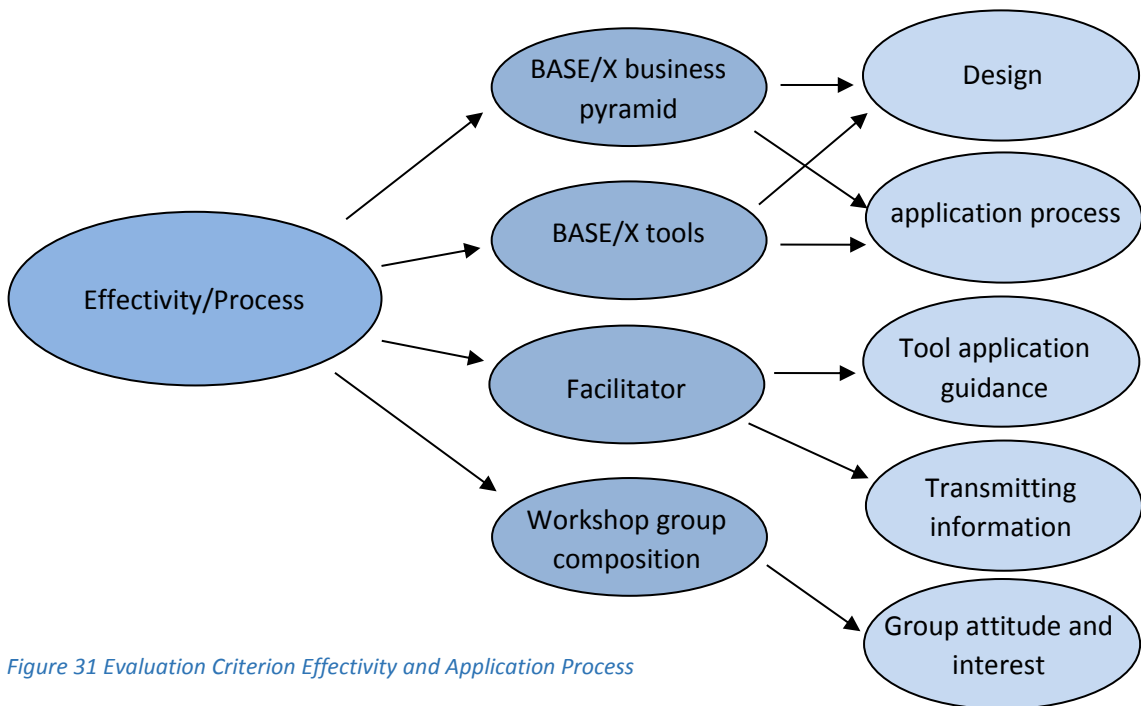


Figure 31 Evaluation Criterion Effectivity and Application Process

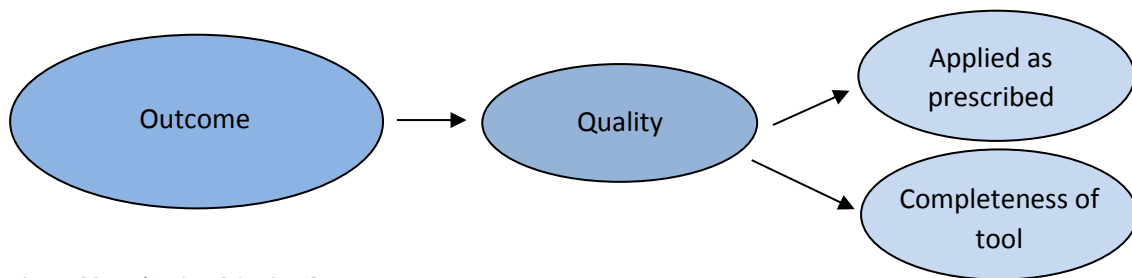


Figure 32 Evaluation Criterion Outcome

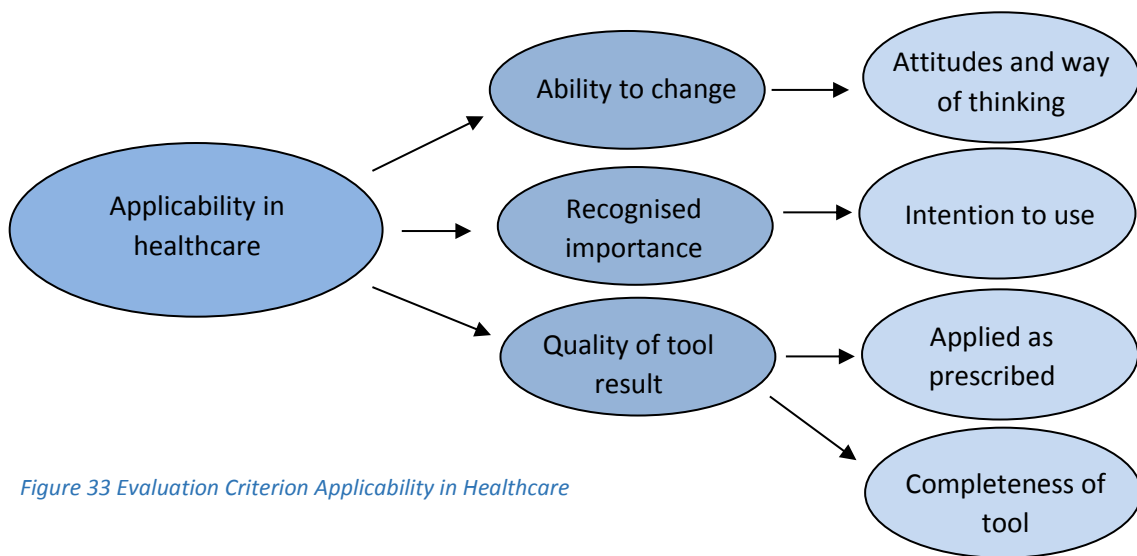


Figure 33 Evaluation Criterion Applicability in Healthcare

## Appendix 3 Usability Questionnaire

### *Appendix 3.1 Three Questionnaire Constructs*

#### Perceived ease of use

- I found the procedure for applying the tool complex and difficult to follow.
- Overall, I found the tool difficult to use.
- I found the tool easy to learn.
- I found it difficult to apply the tool by Lunet Zorg.
- I found the composition of the tool clear and easy to understand.
- I am not confident that I am now competent to apply this tool in practice.

#### Perceived Usefulness

- Lunet Zorg offerings represented using this tool would be more difficult for users to understand.
  - This tool would make it easier for users to verify whether the organisation is appropriate to satisfy their needs.
  - Overall, I found the tool to be useful.
  - Using this tool would make it more difficult to apply service-dominant thinking.
  - Overall, I think this tool does not provide an effective solution to represent the service-dominant thinking.
  - Overall, I think this service-dominant thinking is an improvement to the current business product focus.
  - Using this tool would make it easier to communicate the value-in-use to end users?  
Using this tool would make it easier to communicate the total service package to end users?\*
  - Using this tool would make it easier to communicate the network focus to end users?\*
- \*= added question*

#### Intention to Use

- If it were up to me, I would definitely not use this tool to document the service-dominant thinking of Lunet Zorg.

### Appendix 3.2 Strategy Canvas Tool Questionnaire

#### Vragenlijst over het gebruik van de strategy canvas tool

Deze evaluatie heeft betrekking op de strategy canvas tool die we tijdens deze workshop hebben toegepast bij Lunet Zorg. Met de term 'tool' vermeld in deze evaluatie wordt de strategy canvas tool bedoeld. Zie figuur 1 voor een overzicht van de strategy canvas tool. Deze evaluatie vragenlijst focust op drie gebieden, namelijk op de toepasbaarheid, geschiktheid en het design van de strategy canvas tool.

Geslacht: Man/Vrouw

Leeftijd: ..... Jaar

Het aantal jaren werkervaring bij Lunet Zorg.

..... Jaar

Beschikte u al over enige service-dominant denken kennis?

Ja/ Nee

Beschikte u al over enige BASE/X framework kennis?

Ja/ Nee

	Helemaal mee oneens	Mee oneens	Niet mee oneens & niet mee	Mee eens	Helemaal mee eens
1. Ik vond het stappenplan voor het toepassen van de tool complex en moeilijk te volgen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Lunet Zorgs aanbod (dagbesteding, vrijetijd, wonen etc.) is moeilijker te begrijpen voor cliënten en hun vertegenwoordigers als het is weergegeven met behulp van deze tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Over het algemeen vond ik de tool moeilijk te gebruiken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Deze tool maakt het eenvoudiger voor cliënten en hun vertegenwoordigers om te bepalen of de organisatie geschikt is om aan hun behoeften te voldoen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Ik vond de tool eenvoudig te leren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Over het algemeen vond ik de tool nuttig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Het gebruik van deze tool maakt het moeilijker om service-dominant denken toe te passen in organisaties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Ik vond het moeilijk om de tool toe te passen bij Lunet Zorg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Als het aan mij lag, zou ik zeker géén gebruik maken van deze tool om service-dominant denken te documenteren bij Lunet Zorg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Ik vond de samenstelling (Value-in-Use, service eco-systeem en samenwerkingsmanagement) van de tool duidelijk en eenvoudig te begrijpen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

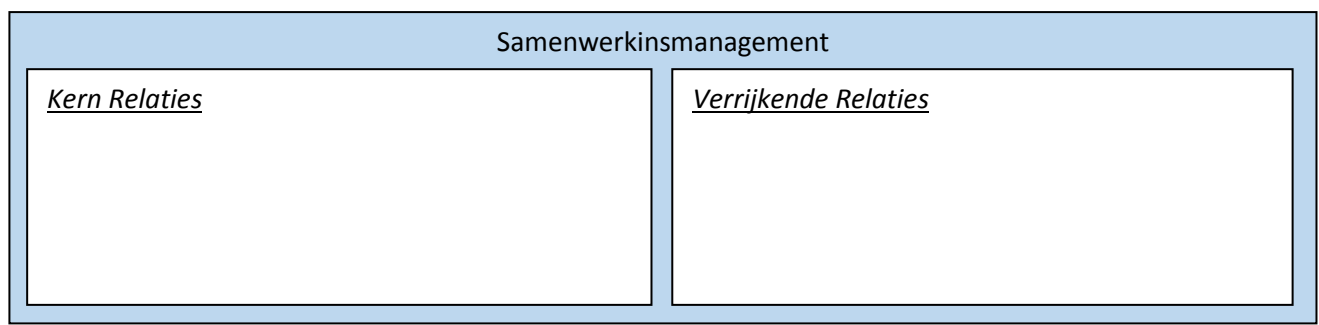
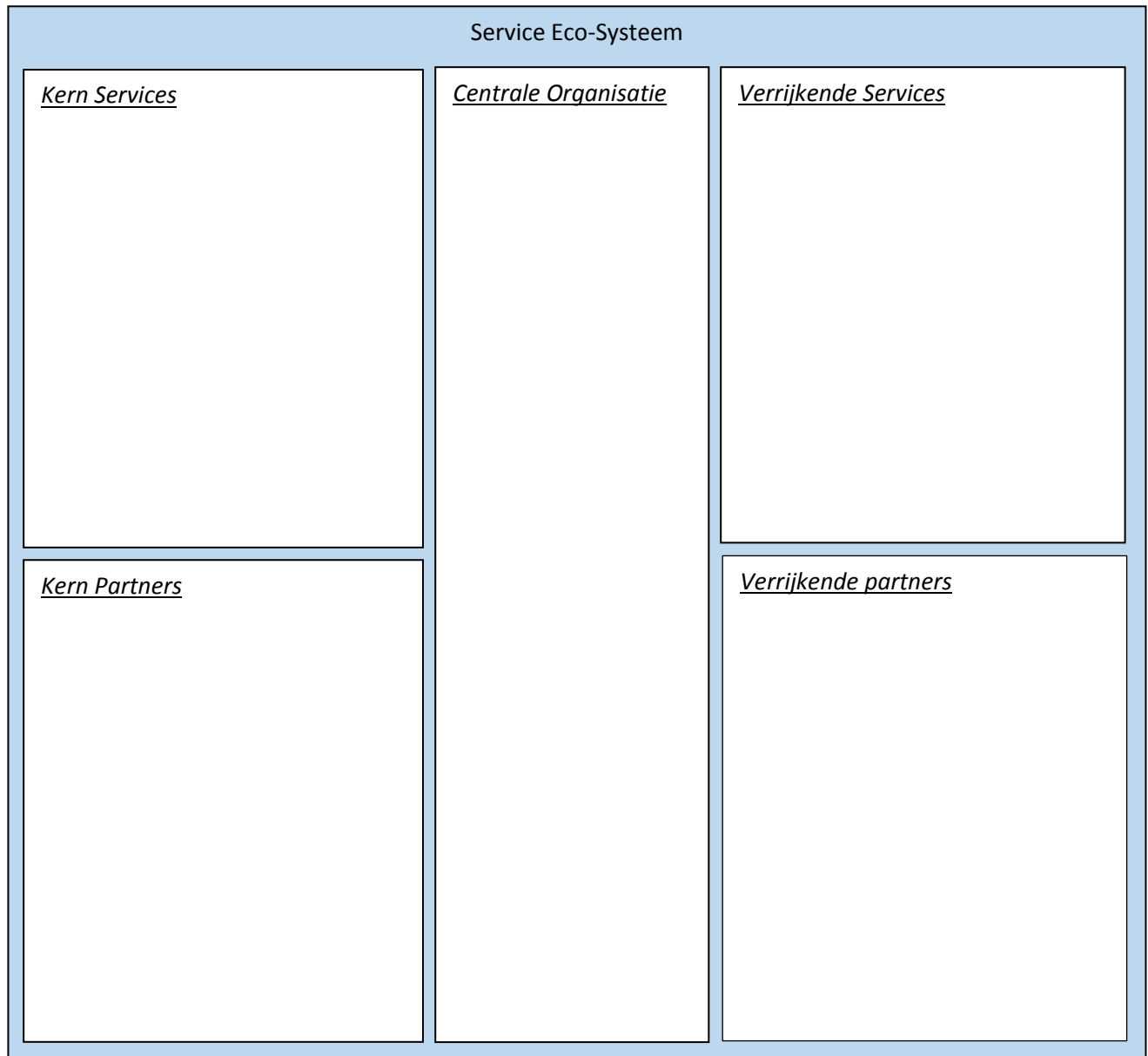
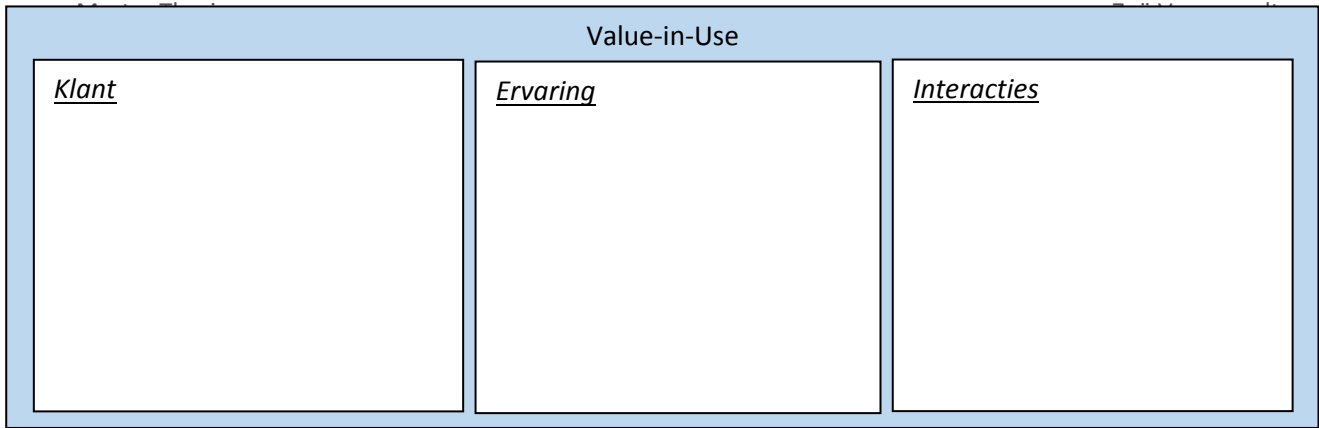


	Helemaal mee oneens	Mee oneens	Niet mee oneens & niet mee eens	Mee eens	Helemaal mee eens
Over het algemeen denk ik <u>niet</u> dat deze tool een geschikte manier is om het service-dominant denken weer te geven.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om de Value-in-Use naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om het totale servicepakket naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om de netwerk focus naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben er <u>niet</u> zeker van of ik nu bekwaam genoeg ben om de tool zelf toe te passen in de praktijk.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Over het algemeen denk ik dat het service-dominant denken een verbetering is op de huidige product focus van organisaties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enige andere opmerkingen, adviezen, verbeterpunten etc.:

*U mag ook opmerkingen plaatsen in figuur 1.*

**Bedankt voor de medewerking!**



Figuur 1 Strategy Canvas Tool

*Appendix 3.3 SDBM/R Tool Questionnaire*

**Vragenlijst over het gebruik van de Service Dominant Business Model Radar (SDBM/R)**

Deze evaluatie heeft betrekking op de SDBM/R tool die we tijdens deze workshop hebben toegepast bij Lunet Zorg. Met de term 'tool' vermeld in deze evaluatie wordt de SDBM/R tool bedoeld. Zie figuur 1 voor een overzicht van de SDBM/R. Deze evaluatie vragenlijst focust op drie gebieden, namelijk op de toepasbaarheid, geschiktheid en het design van de SDBM/R tool.

Geslacht: Man/Vrouw

Leeftijd: ..... Jaar

Functie: .....

Het aantal jaren werkervaring bij Lunet Zorg.

..... Jaar

Beschikte u al over enige service-dominant denken kennis?

Ja/ Nee

Beschikte u al over enige BASE/X framework kennis?

Ja/ Nee

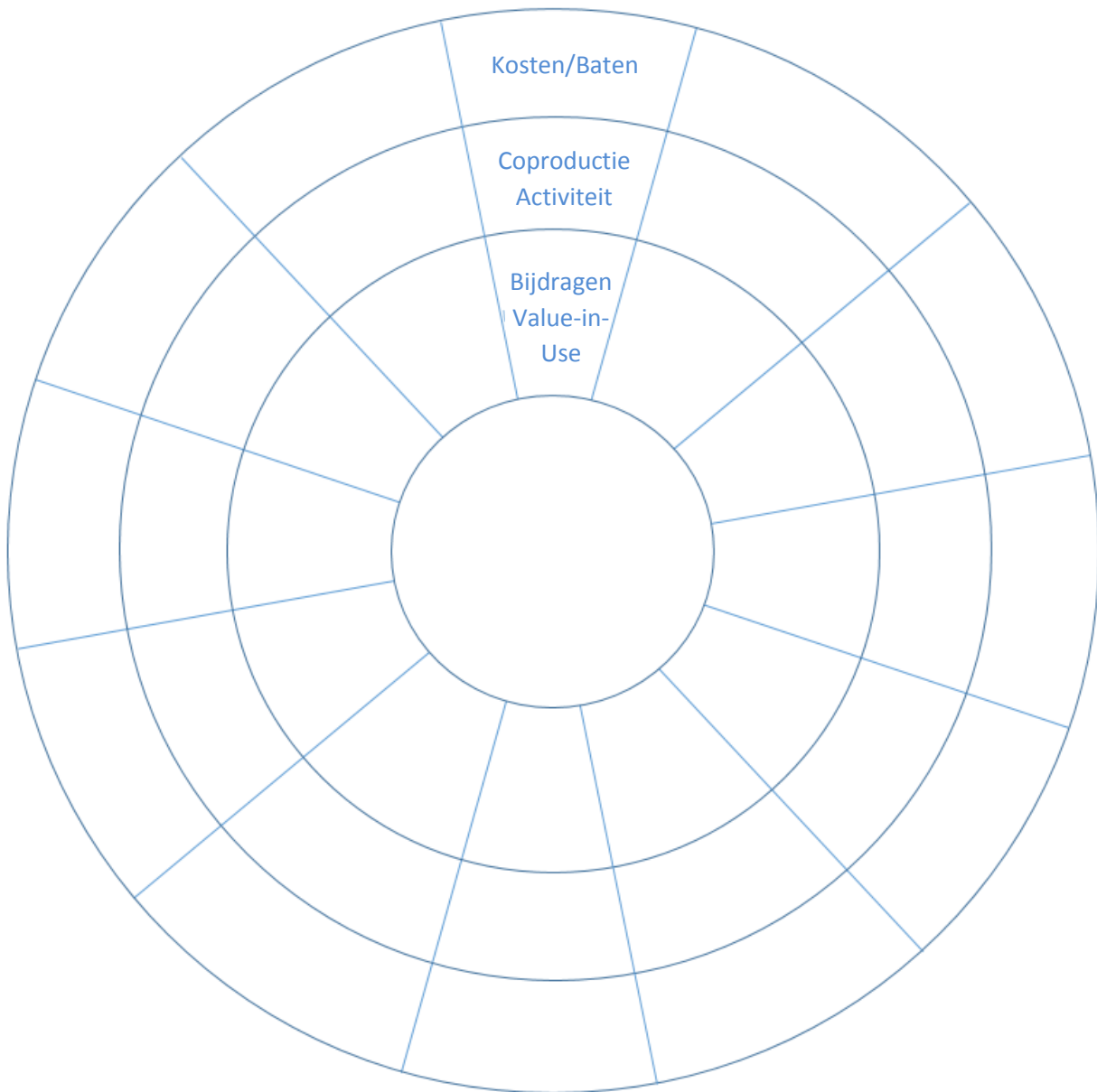
	Helemaal mee oneens	Mee oneens	Niet mee oneens & niet mee	Mee eens	Helemaal mee eens
1. Ik vond het stappenplan voor het toepassen van de tool complex en moeilijk te volgen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Lunet Zorgs aanbod (dagbesteding, vrijetijd, wonen etc.) is moeilijker te begrijpen voor cliënten en hun vertegenwoordigers als het is weergegeven met behulp van deze tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Over het algemeen vond ik de tool moeilijk te gebruiken.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Deze tool maakt het eenvoudiger voor cliënten en hun vertegenwoordigers om te bepalen of de organisatie geschikt is om aan hun behoeften te voldoen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Ik vond de tool eenvoudig te leren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Over het algemeen vond ik de tool nuttig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Het gebruik van deze tool maakt het moeilijker om service-dominant denken toe te passen in organisaties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Ik vond het moeilijk om de tool toe te passen bij Lunet Zorg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Als het aan mij lag, zou ik zeker géén gebruik maken van deze tool om service-dominant denken te documenteren bij Lunet Zorg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Ik vond de samenstelling (gecoproduceerde Value-in-Use, bijdrage Value-in-Use, coproductie activiteit en kosten/baten) van de tool duidelijk en eenvoudig te begrijpen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Helemaal mee oneens	Mee oneens	Niet mee oneens & niet mee eens	Mee eens	Helemaal mee eens
Over het algemeen denk ik <u>niet</u> dat deze tool een geschikte manier is om het service-dominant denken weer te geven.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om de Value-in-Use naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om het totale servicepakket naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het gebruik van deze tool zou het eenvoudiger maken om de netwerk focus naar cliënten en hun vertegenwoordigers te communiceren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben er <u>niet</u> zeker van of ik nu bekwaam genoeg ben om de tool zelf toe te passen in de praktijk.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Over het algemeen denk ik dat het service-dominant denken een verbetering is op de huidige product focus van organisaties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enige andere opmerkingen, adviezen, verbeterpunten etc.:

*U mag ook opmerkingen plaatsen in figuur 1.*

**Bedankt voor de medewerking!**



Figuur 2 SDBM/R Tool

## Appendix 4 Effectivity/Process Application Interview Questions

1. Do you have the feeling that you can apply the tool properly by the given introduction and the guidance during the application?  
How could this be improved?
2. What do you think about the understandability of the terminology of the tool?  
How could this be improved?
3. What do you think about the order of drawing the strategy canvas tool?  
Which order of drawing the tool would be more comfortable, logical in your opinion?
4. Do you miss any component that is not included in this strategy, but that needs to be covered by a business strategy?  
What is missing in the current tool?
5. What are strong points of the strategy canvas tool?  
And why?
6. What are weak points of the strategy canvas tool or things that could be improved?  
And why?
7. Do you think that the strategy canvas tool is an appropriate manner to implement service-dominant thinking in a business?  
Why or why not?
8. Do you think that the service-dominant thinking principal and the strategy canvas tool could be important for Lunet Zorg?  
And why?

## Appendix 5 Workshop Results

### Appendix 5.1 Result Strategy Canvas Tool Workshop

#### Workshop Pictures:



Figure 34 Strategy Canvas Workshop Setup

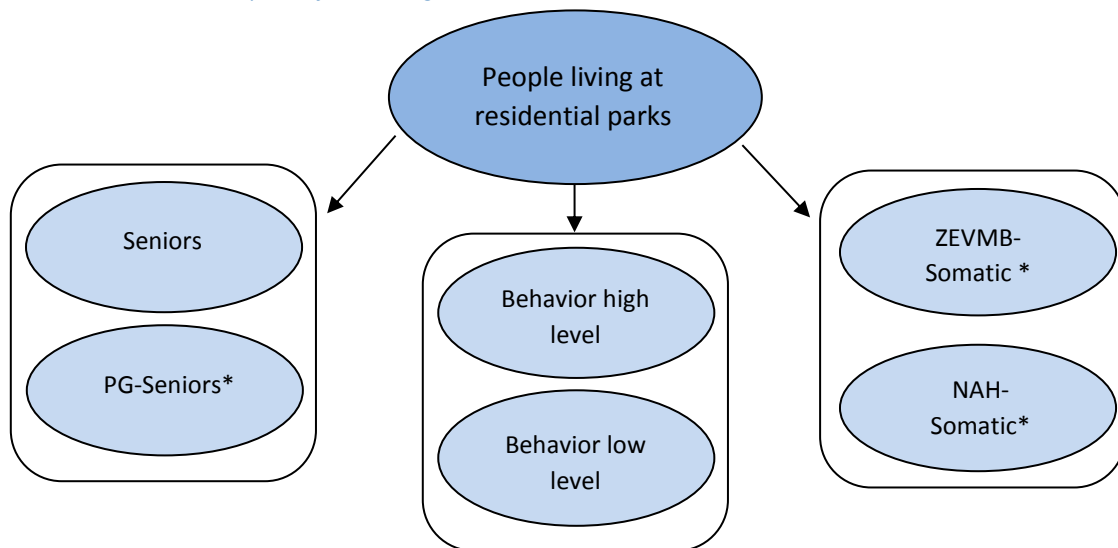


Figure 35 Strategy Canvas Workshop Result

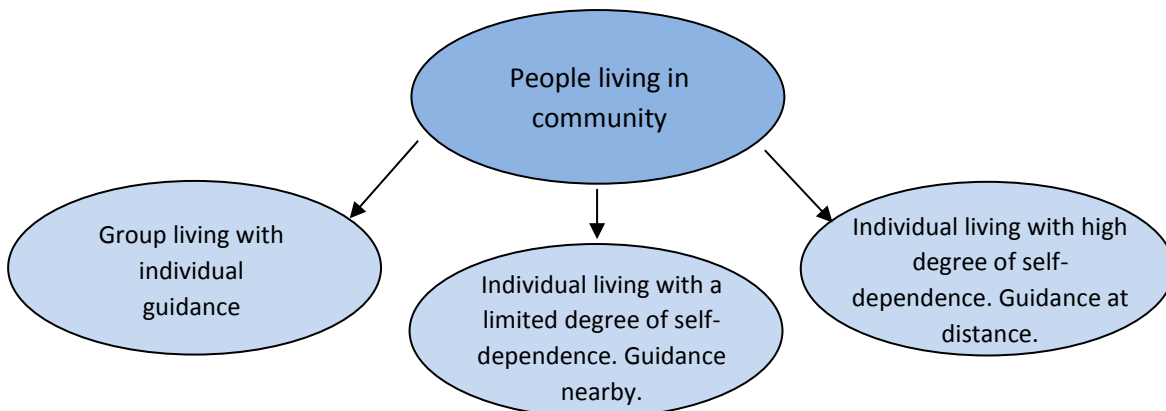
*Customer Segments Lunet Zorg:*



*Figure 36 Abstract Client Description of Lunet Zorg*



*Figure 37 Client Segments of the Client Group "People Living at Residential Parks"*



*Figure 38 Client Segments of the Client Group "People Living in Community"*

\* PG= Psycho-geriatric care, ZEVMB= Both (very) serious intellectual disabilities and (very) serious motor disabilities, NAH= acquired brain injury



Appendix 5.2 Results SDBM/R Tool Workshops  
Appendix 5.2.1 Result SDBM/R – “Wonen en Zorg”

Workshop Pictures “Wonen en Zorg”:



Figure 39 SDBM/R Workshop Setup – “Wonen en Zorg”

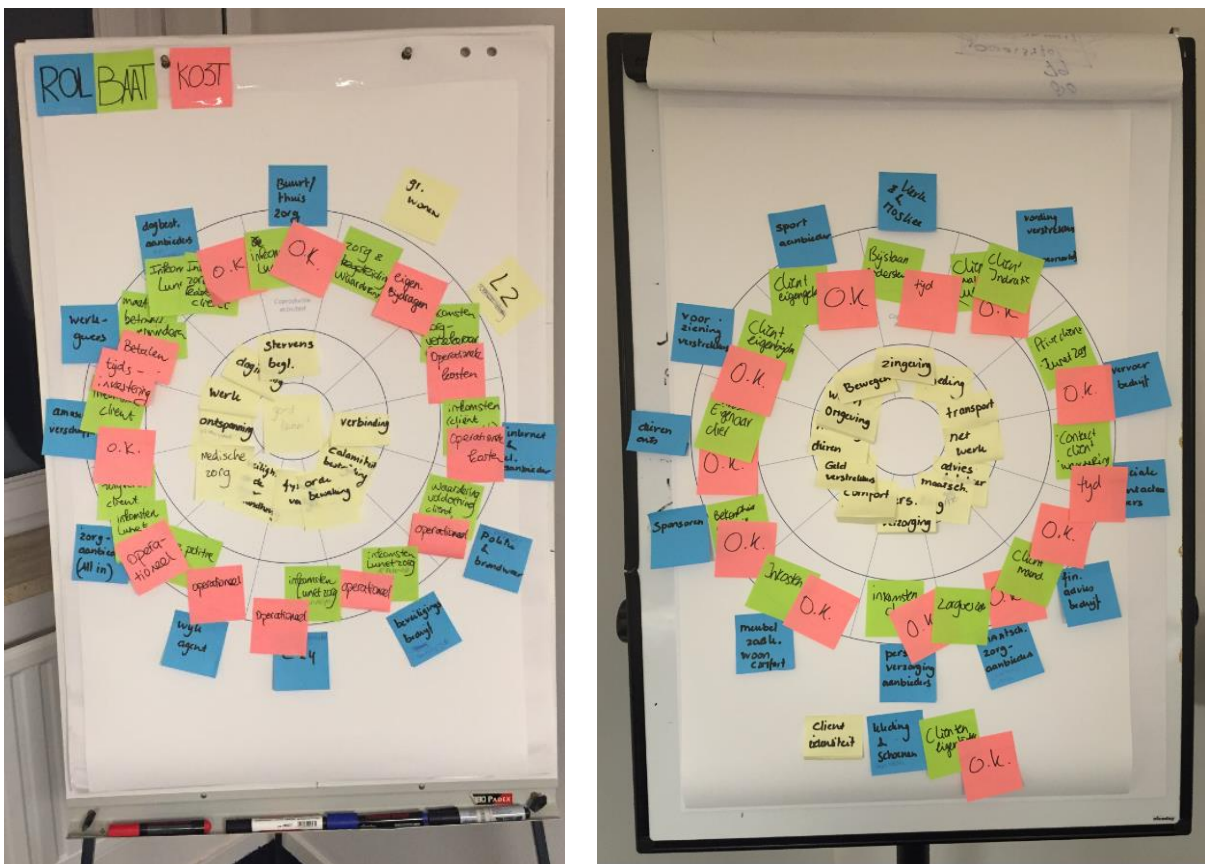


Figure 40 SDBM/R Workshop Result – “Wonen en Zorg”

### *Textual Explanation of the Roles of the Digitised SDBM/R “Wonen en Zorg”:*

The SDBM/R for the client segment “group living” comprises 26 roles, which are discussed separately below in the order in which they appear in the radar.

#### *Client- group living*

The customer of this business model is the client, this client role encompasses all the clients of the customer segment “group living”. The clients provide *presence* as the value contribution to the central value-in-use “good life”, because clients for instance need to receive care from Lunet Zorg in order to get the “good life” feeling that Lunet Zorg promotes. Their activity to make the *presence* value proposition occur is by receiving, for instance, care and by contributing to it. By completing these activities, they can experience the benefits of care, support and pleasure. However, clients also have costs attached to these benefits and these costs are covered by their personal contribution. Clients need to pay several parties with their personal contribution, namely the CAK and parties that are not included in their indication. The amount of personal contribution that clients need to pay to the CAK depends on their equity. Parties that are not part of clients’ indications are, for example, clothes providers, beauticians, and veterinarians. The indication is person-dependent, which consequently varies based on clients’ limitations. The indication is determined by the CIZ (“*Centrum Indicatiestelling Zorg*”). The specified severity of the indication of the client determines the care budget the client may receive from the care office. However, this care budget is not paid to the clients themselves but to Lunet Zorg. All costs that are not covered by the clients’ indication or by the clients’ insurer need to be paid by the clients themselves by their personal contribution. This personal contribution can be paid by clients from their equity, their unemployment benefits, or from their salary when they have paid work.

#### *Lunet Zorg*

Lunet Zorg is the focal organisation of the business model that has been developed in this case study and has the value-in-use contribution of *personal live support*. This value contribution is realised by the activities of orchestration, analysing, and supporting clients. Lunet Zorg’s benefits from being a part of this business model is through an increase in the company’s revenue. Their total revenue is dependent on the number of clients they have, as for each client with an indication they receive a certain amount of money from the care office. The severity of the indication determines the amount of money Lunet Zorg receives from the clients’ care office. Lunet Zorg has also costs, however. These costs can be divided into three types. The first type of costs can be paid from the clients’ indication budget that they receive from the care office. The second type of costs cannot be covered by the clients’ indication and thus needs to be paid out of Lunet Zorg’s own budget, like the domotica provider (see Appendix 5.2.1 “Results SDBM/R- “Wonen en Zorg”” for more information about the domotica provider). Finally, Lunet Zorg also has operational costs, such as employees and materials.

#### *Emergency services*

The emergency services will contribute the *calamity abatement*, which ensures that emergency situations will be managed correctly. This is realised by taking action at the appropriate moments and responding adequately to the emergency. This role consists of two parties, namely the police and the fire department. The emergency services have as their benefit of being part of this network the experience of being appreciated, they themselves feel satisfaction, accomplishment in the performance of their duty and their vocation. Next to these benefits, the costs for these parties consist of operational costs like employees, gasoline, and care maintenance.

### Security company

The value-in-use contribution of the security company is *orderliness security by surveillance on request*, which is possible by supervision. This service is used only when requested; for example, when there is great unrest for a few days, the security company will be asked to supervise, so that action can be taken very quickly when necessary. The security company will be paid by Lunet Zorg and has operational costs like employees and transport costs. The contact with a security company is hard (strictly business) and business based.

### Police

The value-in-use contribution of the police role is the *surveillance of safety and orderliness*. This is realised by the activities of checking security, communicating with, protecting, and reassuring clients. These activities are carried out by local police officers, who are in direct contact with Lunet Zorg. In comparison to the security company, contact with the local police officers is based on interactive communication. The police benefits from being part of this business model as they will receive appreciation, satisfaction, accomplishment of their duty and performing their vocation. Their costs on the other hand, are operational costs like employees and transport costs to right locations.

### Domotica company

The role of the domotica company will contribute the *physical safety* to the central value-in-use. These domotica providers do not just offer electronics, they offer electronics with people who manage this behind the scenes. Employees of the domotica company can monitor clients constantly and contact both clients and employees of Lunet Zorg. The type of contact is dependent on what is required, for example video calling or telephone contact. This role provides constant safety surveillance from a distance by listening and watching audio and video recordings. This is also called indirect surveillance. The activities of a domotica company are installing, maintaining, analysing safety situations, and contacting Lunet Zorg when necessary. The benefit for this service contribution is revenue, which is paid by Lunet Zorg. They also have their operational costs, like monitoring, installing and maintaining employees and materials.

### Healthcare provider

The role of the healthcare provider will contribute to the value *medical care* as part of the central value-in-use. This value contribution is possible through the activities of analysis, research, and treatment of clients. This value contribution is not delivered by one party, instead the healthcare provider role comprises several parties which all have the same purpose of providing medical care. These healthcare providers can be separated into first and second line providers. First line care providers consist of family doctors, dentists, pharmacists, physiotherapists, nurses, social workers and psychologists. The second line care providers are care specialists. The first line care providers can send clients to specialists, thus to second line care providers. This ensures a good distribution of clients on the second line care providers.

The benefit for these parties to be involved in this network is the revenue they receive. The revenues are based on revenue received from Lunet Zorg paid by the client indication and revenue received from the insurer of the client. On the other hand, the parties also have operational costs, which consist of employees, and materials.

### Care office

The care office has as its value contribution the *care budget*. The care office offers a personal care budget to each client with an indication, which is paid to Lunet Zorg. The height of the care budget is dependent on the indication determined by the CIZ. These care budgets are required for the client, because Lunet Zorg cannot accept clients without a care budget and who consequently do not have an indication. The activity of the care office is the determination and issuing of the care budget based on the client's indication. These

care offices will be paid by the government and their costs are operational costs and payments to other organisations, like the care budgets transferred to Lunet Zorg.

#### Neighbourhood and home care

It is also required to provide good *guidance during the dying process* in order to meet the purpose of providing a “good life” to all clients. This value contribution is offered by the neighbourhood and home care parties. This includes the activity of constant accompaniment during the final period of clients’ lives. This value contribution requires external partners, because Lunet Zorg does not have the ability to constantly assist specific clients during this period. Lunet Zorgs employees cannot spend all of their time on attending one specific client, because there are also other clients under their care that absolutely require supervision and support. These neighbourhood and home care parties will be paid by the insurer of the client. Next to benefiting from being a part of this network, they have also operational costs like employees and transportation costs.

#### Societal care providers

*Societal care and knowledge* is a required value proposition to the central value-in-use. This value contribution is covered by societal care providers. The role of societal care providers refers to multiple parties, such as rehab counselling and child protection. For example, the party AMK (“*Advies- en Meldpunt Kindermishandeling*”), which investigates the safety of the clients’ children and acts when necessary. These parties cover the following activities: support, accompaniment, and intervention when that is required. The benefit for these parties is the revenue by the insurer of the client. They also have operational costs like employees.

#### Personal caregiver

Clients need help with their personal care (for instance, maintaining body hair and help with ingrown nails), which requires a value contribution of *personal care*. This role of personal caregiver includes multiple parties, namely hairdressers, beauticians and pedicure therapists. These parties provide treatments to fulfil this value contribution. These parties will be paid from the personal contribution of clients. The costs of these personal caregivers are operational costs, like employees and materials.

#### Veterinarian

The clients of the client segment “group living” are allowed to have pets. These pets have a significant impact on the mood of the clients. Thus, the health of pets is of great importance as well, which ensures that a value contribution of *medical pet care* is required within the network. The role of veterinarian is therefore also included in the network to ensure that pets will receive the right medical treatments when needed. This value contribution is fulfilled by examining and treating sick pets. These veterinarians are paid from the personal contribution of clients and the veterinarian does have operational costs.

#### Day care provider

For “group living” clients it is of great importance that they have an active life. This can be stimulated by different roles in the radar, one of these roles is the day care provider. The day care provider takes care of the value contribution of unpaid *day care*. This value contribution covers the following activities: developing a day care and motivating and guiding the clients during day care. Day care examples are hoeing and helping with the firm which consists of multiple tasks. The day care parties are paid by Lunet Zorg from the clients’ indications or from clients’ personal contribution. The day care needs to be paid by clients’ personal contribution when clients want a specific type of day care that is not covered by their indication. The costs for these day care providers of being part of this network are operational costs like employees, but also materials to make the day care activities possible.

### Employers

Besides the unpaid day care provided by day care providers, there are also clients that have a job and receive a salary each month. The role of the employer is to take care of the value contribution *work*. This value contribution is realised by offering a workplace, and by motivating and supervising the clients. The employers benefit from being part of this network, as their company's work pressure is reduced and they have a social responsibility. The costs are salary and time.

### Entertainment provider

During the leisure time of clients, it is important that they can relax. This is made possible by entertainment providers, this role consists of multiple parties like tourist agencies, wellness centres, and escort companies. The value contribution of this role is called *relaxation*. Entertainment providers realise this value contribution by regulating and supervising relaxation. These providers are paid by the clients' personal contribution and the costs consist of operational costs.

### Sport provider

Clients that prefer more physical exercise can go to sport providers such as football and swimming. These sport providers deliver the value *physical movement* to the central value-in-use. This value contribution is possible when the sport providers supervise and motivate the clients during sport activities. The sport providers will receive revenue from clients' personal contribution. On the other hand, the sport providers do have operational costs like employees and rent of location.

### Social contacts

All clients have a certain network which consists, for example, of family, friends, and neighbours. These social contacts can be divided into informal caregivers (which help with the clients' care) and social contacts (which do not contribute to the care of clients). The social contacts together deliver the value contribution of *social network* to the central value-in-use. The persons that contribute to this network will visit, amuse, offer support (care and non-care based) and guide clients. The clients will be supported and guided during daily activities or when they are going somewhere on activities that can be very diverse, such as going to the supermarket or the zoo. These social contacts have non-financial benefits, namely the contact with the client and appreciation. On the other side, the cost for these social contacts is that they need to spend time on these activities.

### Supply provider

Local supply providers are an important factor in the life of "group living" clients, like the pub and the community centre. These supply providers add the value contribution of the *living environment* to the "good life" of clients. The living environment ensures that clients not only have a home but also have access to a complete environment that is accessible to them, which enlarges the clients' worlds. These supply providers will arrange everything that has to do with their provision. For example, the community centre will arrange activities like a bingo evening. The employees of the supply providers will furthermore guide the clients when needed. These supply providers will receive revenue from the clients out of clients' personal contribution, but they do have operational costs and need to supervise the clients when required.

### Church and mosque

The church and the mosque will add value to the central value-in-use of "good life" by giving the client a *sense of purpose*. This will be delivered by organising general church and mosque meetings and personal meetings when the clients prefer a personal conversation with the pastor or imam. The church and mosque do not have financial benefits, instead they receive appreciation by supporting people when they need it and they accomplish their vocation. Their cost is time.

### Internet and telephone provider

It is important that clients can contact their social network or others, which is possible by the value contribution *connect*. This value contribution is delivered by the role of the internet and telephone providers, who take care of the telephone and the internet connection. They will offer and maintain a constant connection. These providers will be paid from clients' personal contribution. Each client in a home needs to pay their own internet and telephone connection, each house consequently has several contracts with these providers. When Lunet Zorg recommends one provider it is possible that all clients contract that specific provider, which ensures a bigger revenue as compared to a normal household. The benefit for these providers is the monthly payment by clients. Their costs are operational costs.

### Transport company

Another important value contribution is *transport*, for without transport the clients have a very limited habitat. The *transport* is covered by the role of the transport provider, who will transport the clients and plan their routes. The transport provider can be paid by Lunet Zorg from the clients' indication or by the clients' personal contribution. The transport to day care and work can be paid by clients' indication. However, transport outside of clients' indications, like transport to their social contacts or supply providers, needs to be paid out of their personal contribution. These providers do have operational costs like employees, transportation maintenance and gasoline.

### Food provider

Nutrition is indispensable when you want to provide "good life" to clients. So *nutrition* is also an important value contribution, which is achieved by the following activities: creating or purchasing nutrition, delivering nutrition to Lunet Zorg or to clients and, finally, guiding clients when required during shopping for food. Thus, the food provider is in direct contact with Lunet Zorg and the clients. Lunet Zorg is in direct contact with food providers by making nutrition orders. Clients, on the other hand, have direct contact with food providers when they go to the local supermarket on their own. The revenue for the food providers can be extracted from the client's indication and from the client's personal contribution. Next to the benefits, the food provider has operational costs like employees, rental costs, and materials.

### Furniture provider

The role of furniture provider is of great importance in order to ensure that clients have a pleasant home environment and feeling. Thus the furniture provider covers one of the roles of the network, which provides the value contribution of *comfort*. The activities for these furniture providers are creating or purchasing furniture and delivering the furniture to Lunet Zorg. The benefit of being part of this network to them is revenue, which they receive from Lunet Zorg. They do have operational costs.

### Clothes and shoes providers

Each client has their own personality and taste when it comes to clothes and shoes. The clients' personality and taste ensures that clients have their own *identity*, which is a value contribution to the central value-in-use of "good life". This identity can be delivered by a shoe and clothes provider that supports clients by developing their own taste. The shoe and clothes provider can stimulate the clients' identity by supplying a diverse assortment of clothes and shoes, for example De Bijenkorf. The activities for these clothes and shoes providers are creating or purchasing and delivering. These providers will be paid from clients own contribution and the costs for these providers will be operational costs.

### Financial consultancy

Clients are not able to manage their own finances, so other parties are required to engage in these financial matters. This role includes multiple parties, for example banks and parties for special financial issues such as debt restructuring. These parties will contribute the value of *financial advice and management*, which is

realised by activities like examining and tracking clients' finances. These parties will be paid by the clients on a monthly basis. On the other hand, these parties will have operational costs.

### Sponsors

Sponsors contribute the value *money supply* to the central value-in-use. Sponsors make it possible to do additional activities and provide habitat changes (for example the gardens). The sponsors will donate money, arrange activities and provide habitat changes that cannot be paid from the clients' indications. The sponsors have a non-financial benefit, namely the familiarity and association with Lunet Zorg. Next to the benefits, the sponsors will have operational costs.

Appendix 5.2.2 Result SDBM/R – “Specialistische zorg”

Workshop Pictures “Specialistische zorg”:



Figure 41 SDBM/R Workshop Setup – “Specialistische zorg”



Figure 42 SDBM/R Workshop Result – “Specialistische zorg”



### *Textual Explanation of the Roles of the Digitised SDBM/R “Specialistische zorg”:*

The SDBM/R for the client segment “senior PG” consists of 14 roles, which is now discussed separately in the order in which they have been positioned in the radar.

#### *Client - Senior PG*

The client is the customer of this business model, which entails all of clients of the client segment “senior PG”. These clients have *presence* as the value contribution to the central value-in-use of “good life”, because *presence* by clients is required to provide among others care to clients. Clients’ activities involved in *presence* is to receive care and to be accompanied by people. Hereby they can encounter the benefits of being themselves, feeling satisfied and being taken care of properly. However, the clients have also costs, which are their personal contribution and their privacy (more details about the personal contribution can be found in the client description of business model 1, “group living”). The privacy can be considered a cost because the clients have no influence on their privacy, which can be experienced as disturbing for the clients. For example, some clients need to share their bathroom with three other clients.

#### *Lunet Zorg*

Lunet Zorg is the focal organisation and has as its value contribution *integrated emotion-oriented PG life support*. Emotion-oriented care means that care is attuned to the individual needs of clients. This emotion-oriented care makes sure that the PG clients will be guided during their decline caused by for instance dementia. The employees that are responsible for the PG clients need to perform specific courses in order to offer the best possible guidance during the PG process, which are courses directed at PG.

The defined value contribution of *integrated emotion-oriented PG life support* is realised by the following activities: providing methodical care and housing counselling, providing PG specific day care, medical internal care (through a doctor, dentist, physiotherapist, etc.), psychological care, mental health care, providing movement, offering entertainment, counselling on leisure, providing nutrition, household support, palliative care and, additionally, organising information meetings about PG for those involved with the clients and to ensure the further development of Lunet Zorg’s knowledge. A separation is made between the psychological care and mental health care, because mental health care focuses on clients’ mental disabilities and psychological care offers specialised help on for instance depression and schizophrenia. The activity description shows that Lunet Zorg provides and takes responsibility for clients’ care, leisure time and day care. Thus, Lunet Zorg offers these clients an integrated package on location, which consists of care, leisure time and day care. This ensures that clients of seniors PG do not have to leave their location, because everything is offered at their residential park.

Finally, Lunet Zorg has costs and benefits, which ultimately have the effect that Lunet Zorg wants to be part of the network. Lunet Zorg benefits as a focal organisation through its earned revenue. The total revenue is dependent on the number of clients they have. For each client with an indication they receive an amount of money from the care office, the height of the indication determines the height of money they receive. Besides this indication, revenue is also generated through the purchasing of extra care by clients. In that case, clients buy extra care from Lunet Zorg, which is not covered by their indication. For example, going to hospital appointments together with an employee of Lunet Zorg. There is also a non-financial benefit besides the two revenue streams, namely the social contribution. On the other hand, Lunet Zorg also has costs, namely costs that cannot be paid by the clients’ indication such as the domotica company. Lunet Zorg, furthermore, has non-financial costs such as workload and input from their employees.

#### *Emergency services*

The emergency services will contribute to *calamity abatement*, emergency situations will consequently be managed and guided in the right direction. This value contribution will be realised by providing help and

support during emergencies. This role comprises two parties, namely the police and the fire department. The emergency services receive the benefits of appreciation and their costs are operational costs like employees, gasoline, and care maintenance.

#### Domotica company

The role domotica company contributes *electric digital care support* to the central value-in-use. The domotica provider does not just offer electronics, as they also offer electronics with people who manage this behind the scenes. Employees of the domotica company can constantly monitor clients and also contact clients and employees of Lunet Zorg. The type of contact is dependent on the requirements of the client, for example video calling or telephone contact. This party provides the possibility to provide constant supervision from a distance by listening and watching audio and video recordings. This is called indirect surveillance. Apart from their surveillance services, these parties can also influence the way in which clients can live and provide data about clients to Lunet Zorg. The living area of the clients can be influenced in multiple ways, for example when a client needs to go to the toilet in the middle of the night, the way to the bathroom will be illuminated on the floor. Another example is that the domotica provider can turn off the television when a client falls asleep with the television on. The data that is obtained through this method during the day and night can be sent to Lunet Zorg and can be used for evaluation.

This surveillance, support and the offering data is covered by the activities of supplying, maintaining, and constant surveillance and contact. The domotica company benefits from this value contribution by enhancing their knowledge and revenue, the revenue is paid by Lunet Zorg. The close cooperation between Lunet Zorg and the customer surveillance allows for the fact that the domotica company develops knowledge within the network about mental disabilities and PG. This knowledge ensures advantages over competitors. Organisations working with mentally disabled or PG people, or both, prefer to include organisations in their network that have knowledge of their work field, through which this competitive advantage can be generated. Next to this, the domotica company also has operational costs, like materials and employees for monitoring, installing and maintaining their services and products.

#### Appliances supplier

Appliances suppliers will contribute to the value *care simplification (lighting)*. The role of appliances supplier comprises multiple parties, like providers of calming blankets, client lifts, incontinence products, customised wheelchairs. All these parties together make it possible to achieve the defined value contribution. These parties will realise the value contribution by the activities of supplying, advising on and maintaining their products. The benefit for these companies of being part of this network is revenue and knowledge enhancement. The parties do have operational costs like material and employees.

#### Medical care provider

The role of medical care provider will contribute the value *specialist medical care* to the central value-in-use. This role consists of multiple parties, for example the hospital, dentists, dieticians, and psychiatrists. Some of these parties are also covered internally by Lunet Zorg, however, the parties mentioned in this role are external. Thus, some parties of this role are included internally by Lunet Zorg or externally, like the dentist. For some types of care, a client can choose between the external party or the internal party that is offered by Lunet Zorg.

To realise this value contribution, the parties will perform the following two activities: analysing and treating clients. The benefits for these parties to be involved in this network are their increased revenues. The revenues are based on the revenues earned from clients' personal contribution (the amount of money that is part of the own risk of the clients' insurance) and from the clients' medical care insurance. On the other hand, the parties also have operational costs, like employees and materials.

### *PG medical care providers*

Besides the medical care providers, there are also specialised PG medical care providers. These care providers have special PG knowledge about, for example, how to handle PG and how to guide clients during this mental deterioration process. An exemplary party that fulfils this role is the organisation Vilans. This type of care providers will contribute with the value *specialist knowledge PG*, which is realised by the activities of knowledge sharing and providing advice. These parties benefit from an increase in their knowledge and their revenue. The revenue is paid by Lunet Zorg from the indication budget reserved for the clients. Next to these benefits, they also have financial and non-financial costs, namely operational costs, time and energy.

### *Terminal care provider*

The role of terminal care provider covers the value contribution of *terminal support*, which provides support during the final period of the client's life. This role will cover the following activities to ensure the defined value contribution: providing the client with support and care, sharing knowledge and finally being present during the terminal period. This role is performed by volunteers; therefore, the benefits are non-financial. The benefits for volunteers that derive from being a part of this network, are that they experience satisfaction for this work and are the recipients of thankfulness. On the other hand, the costs are time, energy and emotional involvement.

### *Social network*

All clients have a certain network which consists for instance of family and friends. These social contacts deliver the value contribution *network* to the central value-in-use. The persons that contribute to this network perform the following activities: visiting clients, giving them attention, supporting them during different situations (for example during purchasing and visiting (medical) specialists) and finally it covers legal representation activities. These social contacts do not contribute to the care of clients, because the care is fully conducted by employees of Lunet Zorg. These social contacts encounter non-financial benefits linked to being a part of this network, namely that they are involved in the clients' situation and are appreciated for their efforts. On the other hand, the costs for these people are, just like the benefits, non-financial. These non-financial costs consist of energy and time they spend with clients.

### *Transport company*

Another important value contribution is *transport*, as without this value the clients have a very limited habitat. *Transport* is embedded in the role of the transport provider, who will transport the clients and plan their routes. The transport provider will be paid from clients' personal contribution. This transport is not covered by the client's indication because the transport of seniors PG is only to family and friends or for leisure time activities. These providers have operational costs like employees, transportation maintenance and gasoline.

### *External emotion-oriented activity provider*

The role of external emotion-oriented activity provider ensures the value contribution *positive activation and relaxation*. This role consists of multiple parties who provide, for example, music, animals (such as rabbits, dogs, snakes), entertainment, massages and clowns. These parties will provide entertainment and support it with PG knowledge. This value contribution is emotion-oriented because it adapts to the needs of the clients, the entertainment suits PG and changes and adapts during the clients' decline. The benefit for these parties of being part of this network is revenue, this revenue is covered by payments from clients' personal contribution and by payments of Lunet Zorg. Besides the financial benefit, these parties also encounter the non-financial benefits of satisfaction and of gaining knowledge concerning mental disabilities and PG. The costs of being part of this network are operational costs.

### Bureau mentor, receiver, administrator

Clients are not able to monitor their own finances and to arrange personal matters, and non-financial aspects, like their care. For this reason, clients can make use of specific bureaus that offer a mentor who will take care of everything that needs to be arranged for clients. This works very well for clients who have no-one in their social circle who wants to arrange everything (like informal caregivers). This mentor or informal caregiver will be the external legal representative of the client. These parties will contribute the value *legal representation (financial)*, which is provided through the activities of providing legal representation, taking responsibility for clients' situations, and they control and manage the finances of these clients. These parties experience multiple benefits of being part of the network, namely they get paid from clients' their personal contribution, and that they are involved and satisfied. On the other hand, these parties will have operational costs and need to spend time on these clients' situations.

### Clothes and shoe providers

Each client has their own personality and their own individual taste for clothes and shoes. The client's personality and taste ensures that clients have their own *identity*, which is a value contribution to the central value-in-use of "good life". This identity can be identified by a shoe and clothes provider that supports clients by developing their own taste. Besides identity, the provider will also contribute with the value *warmth*. The shoe and clothes provider supports clients' identities by supplying a diverse assortment of clothes and shoes, this is done, for example, by De Bijenkorf. This provider will be paid out of clients' personal contribution and the costs for these providers will be operational costs.

## Appendix 6 Questionnaire Result

### Appendix 6.1 Questionnaire Results – Strategy Canvas Tool

#### Closed Questionnaire Part:

For all tables below a mean of 1 indicates a highly negative feeling and a mean of 5 indicates a highly positive feeling about the tool.

Table 18 Results Perceived Ease of Use

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I found the procedure for applying the tool complex and difficult to follow.( step1= focal organisation, step 2= Value-in-Use etc.).	10	3,00	5,00	4,0000	,47140
Overall, I found the tool difficult to use.	10	2,00	5,00	3,7000	,82327
I found the tool easy to learn.	10	2,00	4,00	3,4000	,69921
I found it difficult to apply the tool by Lunet Zorg.	10	1,00	4,00	3,1000	,99443
I found the composition (value-in-use, service eco-system, and collaboration management) of the tool clear and easy to understand.	10	2,00	4,00	3,4000	,84327
I am not confident that I am now competent to apply this tool in practice.	10	2,00	4,00	2,7000	,82327
Valid N (listwise)	10				

Table 19 Results Perceived Usefulness

## Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Lunet Zorg offerings (day care, leisure time, living etc.) represented using this tool would be more difficult for users to understand.	10	3,00	5,00	3,5000	,70711
This tool would make it easier for users to verify whether the organisation is appropriate to satisfy their needs.	8	2,00	4,00	3,1250	,64087
Overall, I found the tool to be useful.	10	2,00	5,00	3,6000	,96609
Using this tool would make it more difficult to apply service-dominant thinking.	10	3,00	5,00	3,9000	,73786
Overall, I think this tool does not provide an effective solution to represent the service-dominant thinking.	10	3,00	5,00	3,9000	,56765
Using this tool would make it easier to communicate the value-in-use to end users?	10	3,00	5,00	3,8000	,78881
Using this tool would make it easier to communicate the total service package to end users?	10	3,00	5,00	3,8000	,78881
Using this tool would make it easier to communicate the network focus to end users?	10	3,00	5,00	3,6000	,69921
Overall, I think this service-dominant thinking is an improvement to the current business product focus.	10	2,00	5,00	3,4000	,96609
Valid N (listwise)	8				

Table 20 Results Intention to Use

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Als het aan mij lag, zou ik zeker géén gebruik maken van deze tool om service-dominant denken te documenteren bij Lunet Zorg.	10	3,00	4,00	3,8000	,42164
Valid N (listwise)	10				

### Open Part Questionnaire Part:

The questionnaire concluded with an open question. This question asked for some comments, recommendations, improvements, etc. The answers provided to this question are as follow:

- This tool is definitely an addition to the thinking of Lunet Zorg and to professionalise Lunet Zorg.
- Complex matter, you need to delve into this matter.
- It is recommended to first make a simple example and after that develop the complex tool for Lunet Zorg.
- Processing of the information takes time.
- It is recommended to send preparation material to all participants before the workshop.
- The explanation is clear, however the conversion of information to application is difficult.
- It feels more suitable for organisations that make the switch from asset organisation to service organisation and less for organisation that are already service organisations.
- The feeling that it is unclear whether this is really effective for our organisation provides lack of clarity about the usefulness of the results.
- Difficulty to determine intern and extern services.
- Difficulty to determine core and enriching services.
- There is insufficient knowledge about all the services
- It is required to determine what services need to be done internal and what services need to be done external before you start with the development of the strategy canvas tool.
- It is required to determine what services are core and what services are enriching before you start with the development of the strategy canvas tool.
- It is required to investigate for each service whether the services actually contributes to good life. Thus what services are exactly required for “good life”.
- The focus on the strategy canvas tool compartments creates an obstacle to creativity. With mind mapping you have more space to make associations.
- Too many thoughts from current situation.
- The questionnaire assumes that the participants have sufficient knowledge about the tool and service-dominant thinking.
- Compliments for your approach.
- Thank you for your excellent (careful and skilled) preparation.

Besides comments, recommendations, improvements etc., some participants asked questions in the open question field. These questions are as followed:

- Is it required to implement this tool for the whole organisation or can we just implement this for “*wonen en zorg*” and “*Specialistische zorg*”?
- Is the defined value-in-use of “good life” too broad?

Appendix 6.2 Questionnaire Results – SDBM/R Tool

Closed Part Questionnaire Part:

For all tables below a mean of 1 indicates a highly negative feeling and a mean on 5 indicates a highly positive feeling about the tool.

Table 21 Results Perceived Ease of Use

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I found the procedure for applying the tool complex and difficult to follow.( step1= coproduced value-in-use, step 2= actor value propositions etc.).	9	4,00	4,00	4,0000	,00000
Overall, I found the tool difficult to use.	9	2,00	4,00	3,6667	,70711
I found the tool easy to learn.	9	3,00	4,00	3,5556	,52705
I found it difficult to apply the tool by Lunet Zorg.	9	2,00	4,00	3,2222	,83333
I found the composition (coproduced value-in-use, actor value proposition, actor coproduction activities, and actor costs and benefits) of the tool clear and easy to understand.	8	2,00	5,00	3,5000	1,06904
I am not confident that I am now competent to apply this tool in practice.	9	2,00	4,00	2,6667	,70711
Valid N (listwise)	10				

Table 22 Results Intention to Use

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Als het aan mij lag, zou ik zeker géén gebruik maken van deze tool om service-dominant denken te documenteren bij Lunet Zorg.	9	3,00	5,00	3,6667	,70711
Valid N (listwise)	9				



Table 23 Results Perceived Usefulness

## Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Lunet Zorg offerings (day care, leisure time, living etc.) represented using this tool would be more difficult for users to understand.	9	3,00	4,00	3,5556	,52705
This tool would make it easier for users to verify whether the organisation is appropriate to satisfy their needs.	9	3,00	4,00	3,5556	,52705
Overall, I found the tool to be useful.	9	2,00	4,00	3,7778	,66667
Using this tool would make it more difficult to apply service-dominant thinking.	9	3,00	4,00	3,8889	,33333
Overall, I think this tool does not provide an effective solution to represent the service-dominant thinking.	9	3,00	5,00	4,0000	,70711
Using this tool would make it easier to communicate the value-in-use to end users?	9	3,00	4,00	3,6667	,50000
Using this tool would make it easier to communicate the total service package to end users?	9	3,00	5,00	4,0000	,50000
Using this tool would make it easier to communicate the network focus to end users?	9	3,00	5,00	3,7778	,66667
Overall, I think this service-dominant thinking is an improvement to the current business product focus.	9	3,00	5,00	3,7778	,83333
Valid N (listwise)	8				

*Open Part Questionnaire Part:*

The last question of the questionnaire was an open question, where the participants were asked for any comments, recommendations, improvements etc. The participants noticed the following:

- The tool was nice to work with.
- Terminology/terms need to be explained with examples, when possible examples related to Lunet Zorg.
- The speed of the introduction was quite fast it could be slower.
- It is preferred to look at the internal offerings of Lunet Zorg in more detail. What do we offer our clients and does this contribute to the “good life” of the clients.

## Appendix 7 Focus Group Interview Result

### Appendix 7.1 Focus Group Interview Result – Strategy Canvas Tool

Question 1:	Do you have the feeling that you can apply the tool properly by the given introduction and the guidance during the application? <i>How could this be improved?</i>	<ul style="list-style-type: none"> <li>• The introduction needs to be slower.</li> <li>• Discuss a strategy canvas example before the development phase.</li> <li>• Send BASE/X framework and strategy canvas information prior to the workshop, like the manual.</li> <li>• Give all participants, during the development of the core and enriching partners/services, a list of suppliers (external organisations) which Lunet Zorg cooperates with.</li> </ul>
Question 2:	What do you think about the understandability of the terminology of the tool? <i>How could this be improved?</i>	Easy to understand, but prefer all terms in Dutch. So also the most important terms, like Value-in-Use.
Question 3:	What do you think about the order of drawing the SDBM/R tool? <i>Which order of drawing the tool would be more comfortable, logical in your opinion?</i>	<ul style="list-style-type: none"> <li>• The development order of the tool is very logical.</li> <li>• However it is preferred to first determine all business services (bottom layer of the business pyramid) and decide which services need to be done internal and which external. Thus a different BASE/X development order, namely starting with the lowest level of the BASE/X pyramid the determination of the <i>service dominant business services</i>. This is required because there is uncertainty about which services should be performed internal and which external and which are core and which enriching.</li> </ul>
Question 4:	Do you miss any component that is not included in this strategy, but that needs to be covered by a business strategy? <i>What is missing in the current tool?</i>	No, nothing is missing in the strategy.
Question 5:	What are <u>strong</u> points of the <i>strategy canvas tool</i> ?	<ul style="list-style-type: none"> <li>• The way of thinking in which the customer comes first.</li> <li>• The tool forces us to look in a</li> </ul>

		<p>different way to our organisation, Lunet Zorg. This strategy canvas tool ensures that the customer comes first and it ensures that there needs to be determined what the customer wants for an experience. In addition, this tool ensures that nothing will be missed, because of the tight structure (different tool compartments). This structure cause that you exactly know what needs to be determined (customer, experience, interaction, relationships etc.).</p> <ul style="list-style-type: none"> <li>• The tool also helps to focus, namely on the customer and the required network to deliver together the defined Value-in-Use.</li> </ul>
<p>Question 6:</p>	<p>What are <u>weak</u> points of the <i>strategy canvas tool</i> or things that could be improved?</p>	<ul style="list-style-type: none"> <li>• The tool hinders creativity, compared to mind mapping.</li> <li>• Difficult to determine what core and enriching services are.</li> </ul>
<p>Question 7:</p>	<p>Do you think that the <i>strategy canvas tool</i> is an appropriate manner to implement service-dominant thinking in a business, why or why not?</p>	<p>Yes and especially successful for companies that are moving from an asset company to a service company.</p>
<p>Question 8:</p>	<p>Do you think that the service-dominant thinking principal and the strategy canvas tool could be important for Lunet Zorg and why?</p>	<ul style="list-style-type: none"> <li>• Doubt about the applicability, partly because of wide defined goal (“good life”). However it could be a suitable model for Lunet Zorg, because the service dominant thinking principals fit with Lunet Zorg.</li> <li>• Besides the doubt caused by the wide goal, the participants have the feeling that this this tool is more suited for organisations that make the switch from selling assets to offering services. So the feeling is present that this model is less suitable for organisations that already offer services.</li> <li>• The BASE/X framework is also very suitable for Lunet Zorg because of the <i>service dominant business services</i> layer. The bottom layer of the pyramid.</li> </ul>

		<p>This layer helps to determine which services need to be done internal and which external.</p> <ul style="list-style-type: none"><li>• Finally, till now services were added and removed as they thought it was necessary, instead of investigating the service contribution of each service to the defined goal of offering “good life” to all clients. This will be covered by the BASE/X framework, because of the Value-in-use and customer focus.</li></ul>
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### Appendix 7.2 Focus Group Interview Result – SDBM/R Tool

#### Focus Group Interview “Wonen en Zorg”:

Question 1:	Do you have the feeling that you can apply the tool properly by the given introduction and the guidance during the application? <i>How could this be improved?</i>	Facilitator: <ul style="list-style-type: none"> <li>Do not show an complex SDBM/R example during the introduction, like the TraXP example. A complex example cause lack of clarity. It would be better to show a Lunet Zorg example.</li> <li>Plan future workshops in the morning instead of the afternoon.</li> </ul>
Question 2:	What do you think about the understandability of the terminology of the tool? <i>How could this be improved?</i>	<ul style="list-style-type: none"> <li>The terminology is understandable and logical.</li> <li>It is of great importance that you define the roles not in a too abstract way, because than it will cause confusion about what is meant by the role.</li> </ul>
Question 3:	What do you think about the order of drawing the SDBM/R tool? <i>Which order of drawing the tool would be more comfortable, logical in your opinion?</i>	The order feels logical and the candidates do not have the feeling that another order would be more pleasant.
Question 4:	Do you miss any component that is not included in this strategy, but that needs to be covered by a business strategy? <i>What is missing in the current tool?</i>	No there are no missing components, however they indicate that they have no business model knowledge.
Question 5:	What are strong points of the SDBM/R tool?	<ul style="list-style-type: none"> <li>The circular shape clarifies the importance of a network.</li> <li>It will cause a closer network, because all parties will be present during the business model development. This cooperation cause that all parties will meet each other and will go in discussion, which cause that they have faces by the parties and less distance.</li> <li>The central purpose, namely the central value-in-use of “good life”, is clear for all parties. Which cause that all parties have the same common purpose.</li> </ul>

Question 6:	What are weak points of the SDBM/R tool or things that could be improved?	It would be nice and more clear when there was also a circle layer for the roles. Thus a 5th circle.
Question 7:	Do you think that the SDBM/R tool is an appropriate manner to implement service-dominant thinking in a business, why or why not?	Yes, because of the network focus.
Question 8:	Do you think that service-dominant thinking and the SDBM/R tool could be important for Lunet Zorg and why?	Yes, because it is important that all parties are familiar with the central value-in-use, namely "good life". This model ensures that all parties know that they are a required piece to effectively address that "good life" feeling to clients.

*Focus Group Interview "Specialistische zorg":*

Question 1:	Do you have the feeling that you can apply the tool properly by the given introduction and the guidance during the application? <i>How could this be improved?</i>	<ul style="list-style-type: none"> <li>• It would be nice if there were besides the Google and Spotify examples a care organisation example. This would make it easier to understand the tool.</li> <li>• It is preferred to have a facilitator again when using the tool in the future. The facilitators counseling feels required to apply the tool successfully, because participants have the feeling that they are not experienced enough to do it by their selves.</li> </ul>
Question 2:	What do you think about the understandability of the terminology of the tool? <i>How could this be improved?</i>	<ul style="list-style-type: none"> <li>• The terminology is very difficult to understand, needs to be simplified.</li> <li>• It is preferred to translate all terms in Dutch.</li> <li>• The term 'klantwaarde' must return in this tool, because this is an important term for Lunet Zorg.</li> </ul>
Question 3:	What do you think about the order of drawing the SDBM/R tool? <i>Which order of drawing the tool would be more comfortable, logical in your opinion?</i>	It is preferred to first define the coproduction activity layer and afterwards the costs and benefits, because the participants have specific activities for each value contribution in their mind and want to put it on paper.
Question 4:	Do you miss any component that is not included in this strategy, but that needs to be covered by a business strategy? <i>What is missing in the current tool?</i>	No, there are no missing components.
Question 5:	What are <u>strong</u> points of the SDBM/R tool?	<ul style="list-style-type: none"> <li>• You could use this tool at different layers of the organisation. This tool could also be used at team level to represent what the goal is, the client values, what are the partners etc..</li> <li>• The tool makes it possible to properly define and communicate the client value.</li> <li>• The radar form, this form indicates that all partners are</li> </ul>



		<p>important to deliver the defined Value-in-Use.</p> <ul style="list-style-type: none"> <li>• Thinking in roles, you define the roles but the specific parties within these roles are flexible.</li> <li>• The flexibility of the tool.</li> </ul>
Question 6:	What are <i>weak</i> points of the SDBM/R tool or things that could be improved?	Difficult terms.
Question 7:	Do you think that the SDBM/R tool is an appropriate manner to implement service-dominant thinking in a business, why or why not?	Yes, because of the flexibility, network and value focus.
Question 8:	Do you think that service-dominant thinking and the SDBM/R tool could be important for Lunet Zorg and why?	<ul style="list-style-type: none"> <li>• Yes this would be a good tool. Not only for the top of the organisation but also at team level.</li> <li>• However it is preferred to first look at the internal services of Lunet Zorg. Lunet Zorg needs to determine what services need to be done internal and what services would be wise to do external.</li> </ul>

## Appendix 8 Construction Steps of BASE/X Framework Tools

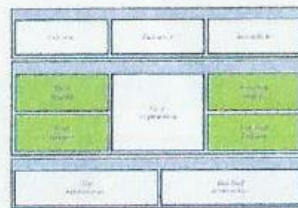
### Appendix 8.1 Construction Steps of the Strategy Canvas Tool



identify the focal organization for the strategy – note that organization and strategy are one-to-one



design the value-in-use in terms of the abstract experience, the generalized customer, and the high-level interactions with the customer (delivery of the experience)

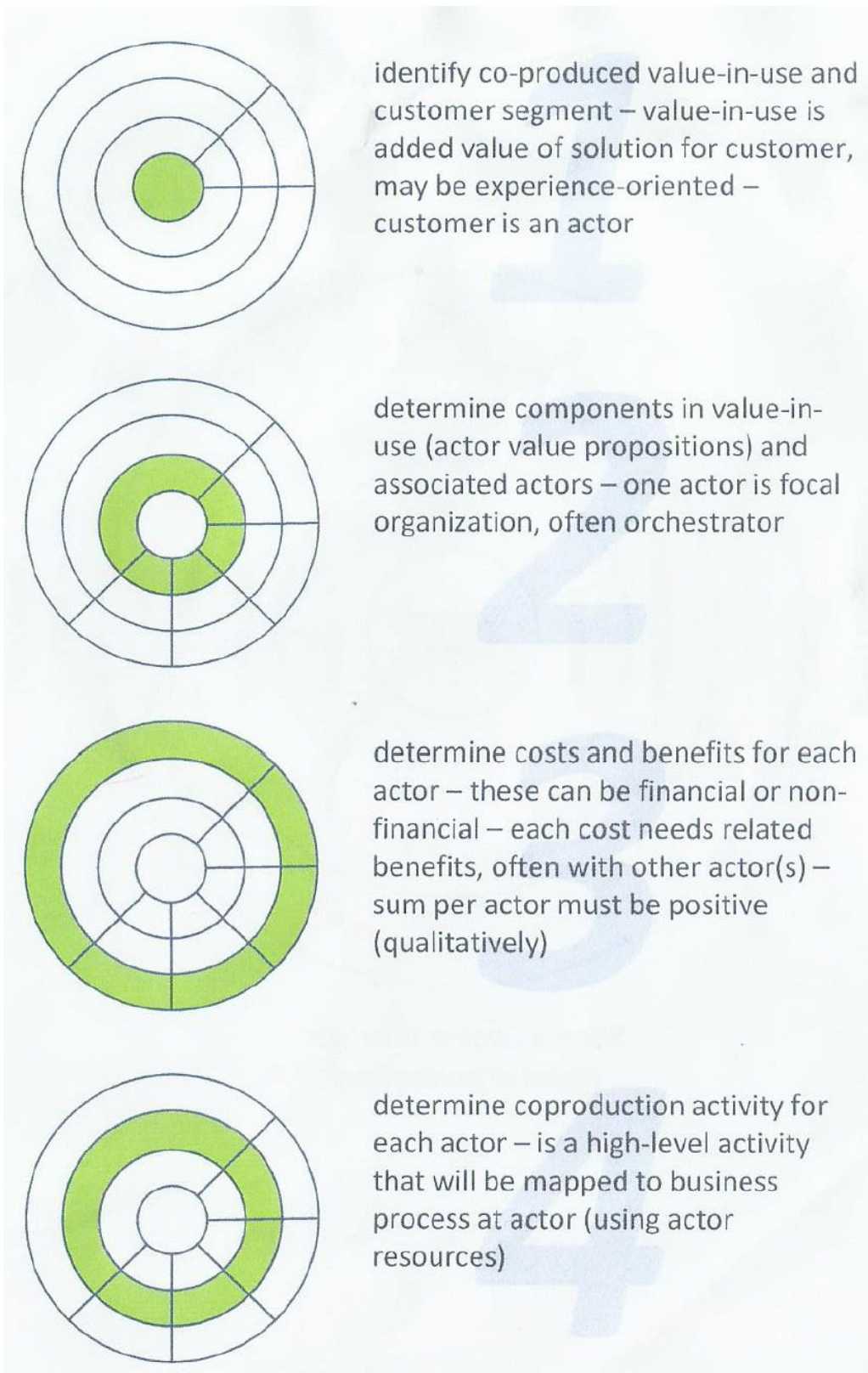


determine the core and enriching services required to co-create the value-in-use; determine the core and enriching partners in the eco-system to deliver these services



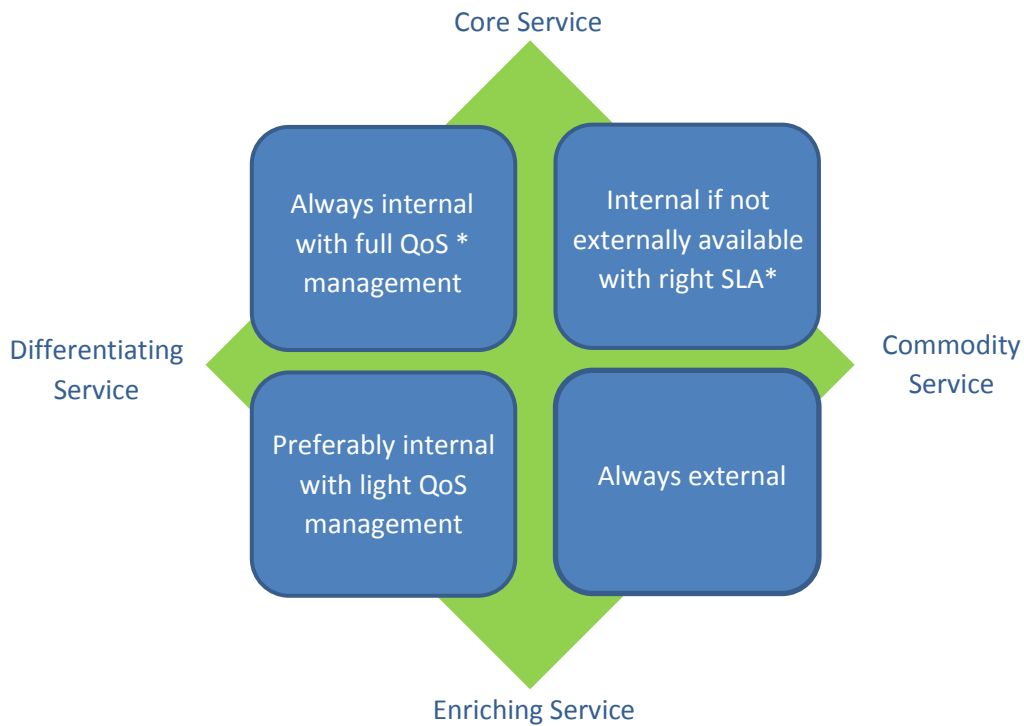
determine the high-level relationships with the core and enriching partners, for example in terms of length of relationship, trust management, exclusiveness of relation

*Appendix 8.2 Construction Steps of the SDBM/R Tool*



## Appendix 9 Service-Dominant Business Services

### Appendix 9.1 Service-Dominant Business Services Tool



\*QoS=Quality of Service, SLA=Service Level Agreement

Figure 43 Service-Dominant Business Services Tool (Grefen, 2015)

### Appendix 9.2 Service-Dominant Business Services Example

The bottom layer of the business pyramid includes all services required to provide a “good life” to clients. “good life” is the service umbrella which includes several sub-service categories to realize the defined service of a “good life”. These sub-service categories are called service domains and are covered in a business service catalog (Figure 45). All service domains include multiple services. One such service domain of Lunet Zorg may be to provide a secure home environment (Table 24 and Figure 46). This domain consists of four specific services, each of which needs to be positioned in the service-dominant business services tool (Figure 44). See Tables 25 and 26 and Figures 47 and 48 for two service position examples.

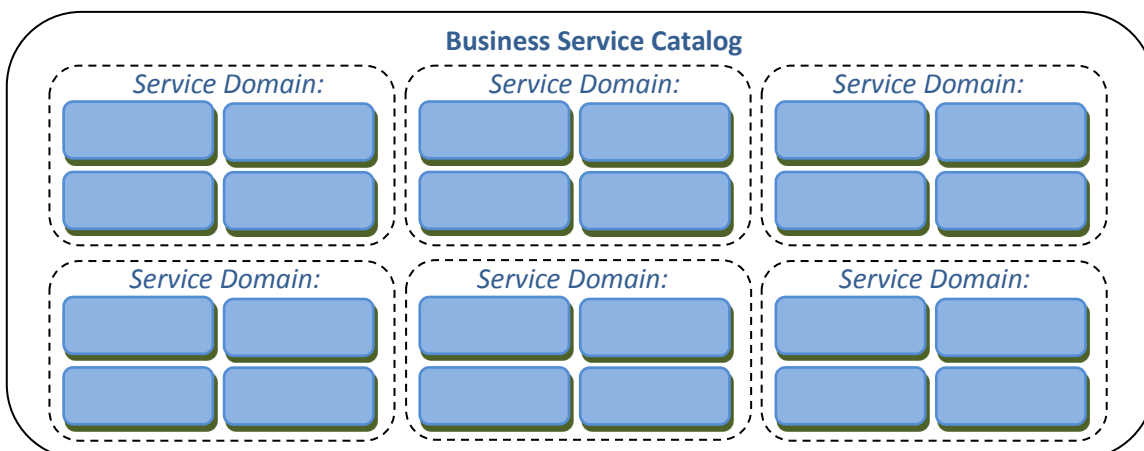


Figure 44 Business Service Catalog (Grefen, 2015)

Table 24 Service Domain Example

<b>Service domain specification</b>	<i>Provide a secure home environment</i>
<b>Domain description</b>	Services with functionality related to handling security through mediation during conflicts and unrest, monitoring, and police and firemen.
<b>Service criteria</b>	Services that contribute to the security of clients at home.

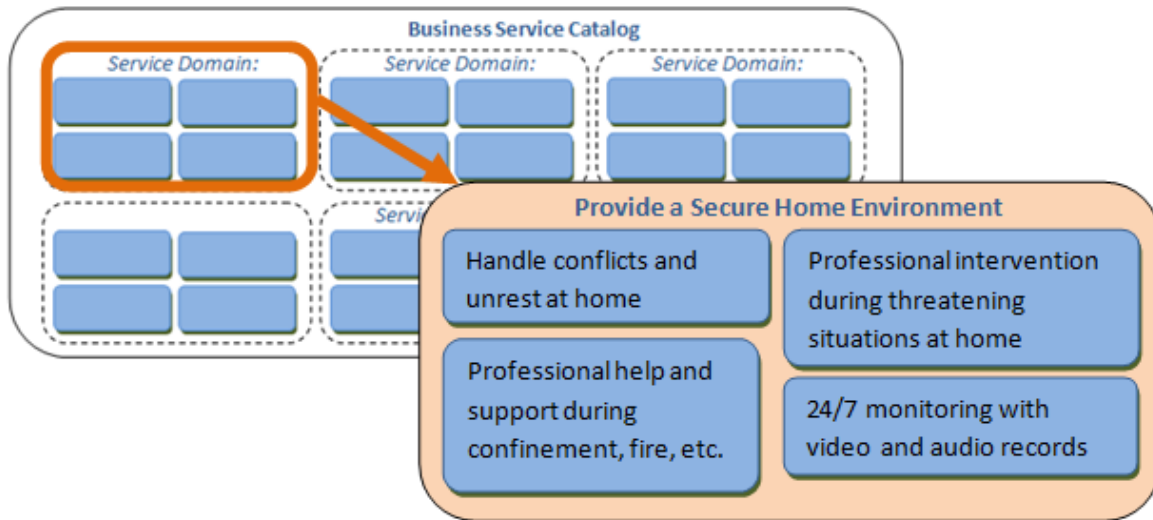


Figure 45 Service Domain Example

Table 25 Business Service Specifications Example 1

<b>Business service specification</b>	<u>Handle conflicts and unrest at home</u>			
<b>General service description</b>				
Service domain	Provide a secure home environment.			
Service functionality in terms of value-in-use	Provides security by intervening when there are conflicts or unrest. The care team will respond when there are conflicts or unrest and will facilitate the return of rest and peace between clients. This contributes significantly to a pleasant feeling at home.			
Business resources used by service	Care team at home.			
<b>Service classification</b>				
Core or enriching	<input checked="" type="checkbox"/> COR	<input type="checkbox"/> ENR	Remarks	
Commodity or differentiation	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> DIF	Remarks	
Internal or external	<input checked="" type="checkbox"/> INT	<input type="checkbox"/> EXT	Remarks	
<b>Quality of service</b>				
Parameter	Minimum availability	Value	Respond to conflicts and unrest with no exceptions.	
Parameter	Effectivity	Value	Handle the conflict so that it does not	

			escalate and without help from others outside the care team at the specific home.
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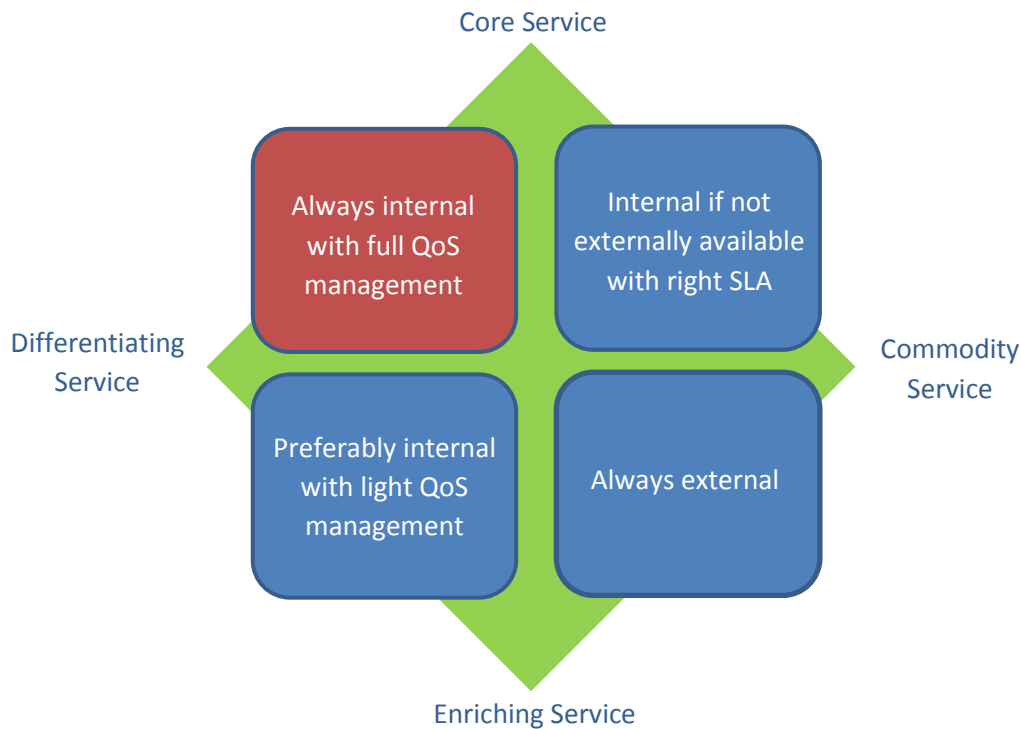


Figure 46 Business Service Classification Example 1

The service, handling conflicts and unrest at home, is positioned as a *core differentiating service*. This indicates that the service is essential for the market position of Lunet Zorg and that this service needs to be internal and equipped with full Quality of Service (QoS) management to ensure quality (Grefen, 2014).

Table 26 Business Service Specifications Example 2

<b>Business service specification</b>	<u>24/7 monitoring by video- and audio- records</u>		
<b>General service description</b>			
Service domain	Provide a secure home environment.		
Service functionality in terms of value-in-use	Provide security with 24/7 monitoring capabilities in the entire home. Employees of Lunet Zorg will be contacted directly if safety is threatened and can react directly when necessary.		
Business resources used by service	Cameras, electricity, software.		
<b>Service classification</b>			
Core or enriching	<input checked="" type="checkbox"/> COR	<input type="checkbox"/> ENR	Remarks
Commodity or differentiation	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> DIF	Remarks
Internal or external	<input type="checkbox"/> INT	<input checked="" type="checkbox"/> EXT	Remarks
			External because a correct service level agreement is possible with these service

			providers, which appears from cooperation with these parties in the past.
<b>Quality of service</b>			
Parameter	Monitor availability	Value	24 hours x 365 days
Parameter	Monitor quality	Value	All desirable home areas are in focus and image quality is sufficient to recognize clients.

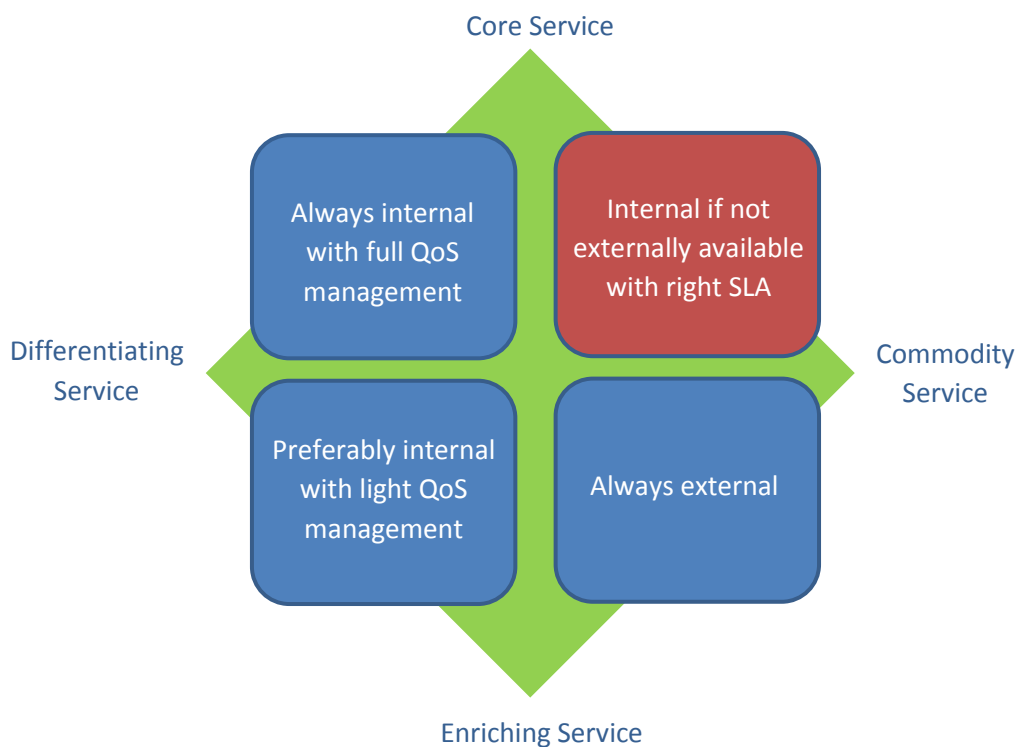


Figure 47 Business Service Classification Example 2

The service, 24/7 monitoring by video- and audio- records, is positioned as a core commodity service. This indicates that the service is important but not unique to Lunet Zorg, suggesting that this service can be external if available in the market with the proper Service Level Agreement (SLA) with an organisation (Grefen, 2014). Previous experience in Lunet Zorg suggests that there are service providers available to accomplish this service and that this relationship can be based on the correct SLA.

## Appendix 10 Sub-SDBM/Rs

### Appendix 10.1 Seniors PG Sub-Goals

The developed SDBM/R for the client segment PG consists of multiple sub-goals which can be related to sub-SDBM/Rs.

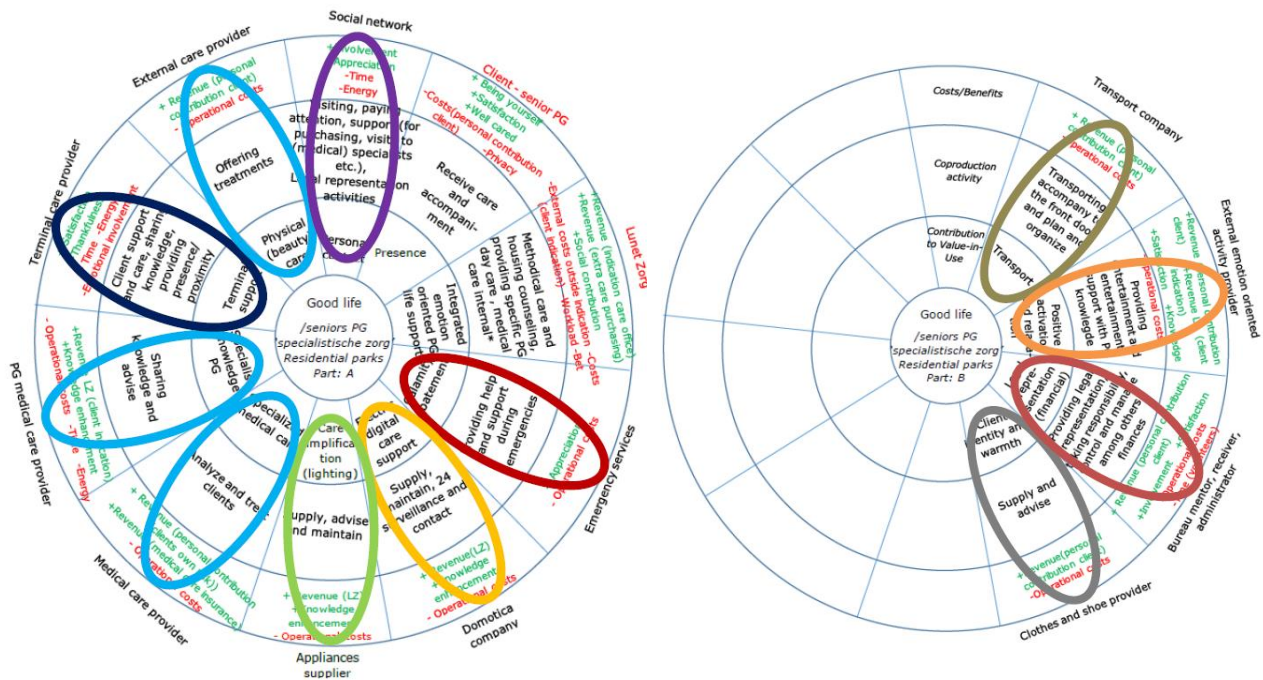


Figure 48 Seniors PG SDBM/R with Sub-Goals

Table 27 Seniors PG Sub-Goals

Color	"good life" Seniors PG Sub-Goals
Red	Security
Yellow	24/7 contact and oversight
Green	Live facilitation
Blue	Care
Dark Blue	Terminal care
Purple	Network
Olive	Transport
Orange	Day care
Red-Orange	Represented
Grey	Identity



Appendix 10.2 Example Sub-SDBM/R

The sub-SDBM/R below has as sub-goal delivering supported terminal experiences to clients from the client segment “senior PG”. This sub-SDBM/R is one of multiple sub-SDBM/Rs required to deliver the value-in-use of a “good life” to clients from the client segment “senior PG”. Figure 50 shows that the radar consists of three roles: the client, Lunet Zorg, and the terminal care provider. These roles are now discussed in turn.

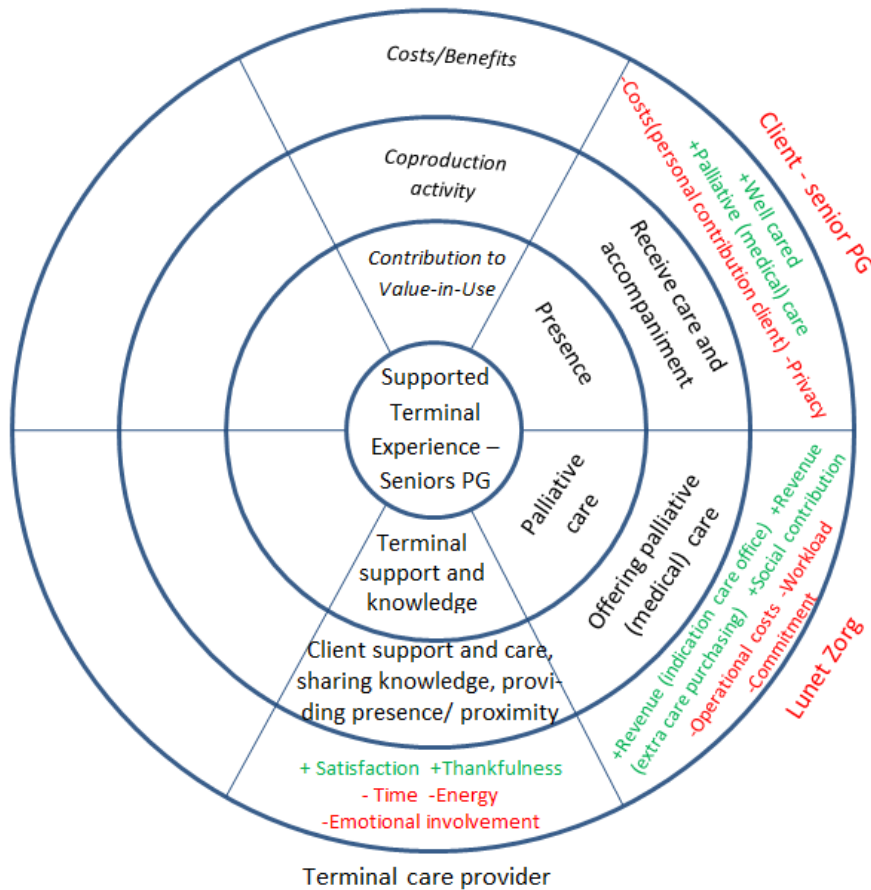


Figure 49 Sub-SDBM/R “Supported Terminal Experience”

Client

The client role covers all clients in the customer segment “senior PG”. Clients provide *presence* as a value contribution to the central value-in-use ‘supported terminal experience’ because clients need to receive care and accompaniment to receive the centrally defined value-in-use. Their activity, allowing the occurrence of the *presence* value proposition, is the reception of care and accompaniment. By completing these activities, they encounter the benefits of palliative care and the feeling that they are well cared for. However, clients also have costs covered by their personal contribution and privacy. Personal contributions cover payments to CAK and purchases of additional care services from Lunet Zorg.

Lunet Zorg

The role of Lunet Zorg contributes palliative care to the radar and is achieved through offering palliative care. Lunet Zorg benefits from the network from the revenues obtained from clients’ indication and purchases of additional services. Additionally, Lunet Zorg experiences the non-financial benefits of social contribution. In addition to the benefits accrued by Lunet Zorg from membership in the network, there are also costs such as operational costs, workload, and commitment.

Terminal care provider

The terminal care provider contributes terminal support and knowledge. Lunet Zorg cannot support the terminal client 24/7. The terminal care provider ensures that the client receives 24/7 support and does not

die alone. The terminal care provider, to realize 24/7 terminal support and provide necessary knowledge, contributes the following activities: client support and care, sharing knowledge, providing presence/proximity. The care provider is a volunteer so this role has non-financial benefits such as satisfaction and gratitude. Finally, there are also costs from time, energy, and emotional involvement.

*Scenario-description of the process*

In practice, this radar may work as follows. Lunet Zorg contacts the terminal care provider in this network when clients in the client segment "senior PG" require terminal care. Lunet Zorg takes responsibility that the terminal care provider is informed that they are required and that the client receives the necessary care and support. During the first visit, Lunet Zorg introduces the specific client and the terminal care provider and Lunet Zorg provides the terminal care provider with all necessary information concerning the client. After this meeting, the terminal care provider, together with Lunet Zorg, takes care of the client and ensures that the client does not die alone and receives any support or assistance as desired, 24/7.

## Appendix 11 Mind Mapping Document of Lunet Zorg

### Titel Mind Map

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Doel	: Het creëren van een gezamenlijk visie. Alle informatie die je in je hoofd hebt opgeslagen eenvoudig vertalen naar een overzichtelijk schema op papier
Duur	: 30 min- 120 min
Nodig	: Groot papier, stiften, pen, fantasie

---

Met de Mind Map kun je informatie die je in je hoofd hebt opgeslagen eenvoudig vertalen naar een overzichtelijk schema op papier. Deze techniek geeft je de mogelijkheid om verder te denken dan je normaal doet. Je ziet nieuwe verbanden en kunt creatieve oplossingen bedenken, vanzelf ontstaat een logische structuur.

Daarnaast is de mind map een goede werkvorm om met een groep een gezamenlijke visie te bepalen. Zeker bij het gebruik van 'containerbegrippen' als samenwerking of communicatie helpt de mind map om eenduidigheid te creëren.

#### Werkvorm

1. Teken in het midden van een groot papier een cirkel en schrijf in het midden een centraal onderwerp op.
2. Verbind takken aan het onderwerp. Bij elk tak schrijf je het woord dat te maken heeft met het centraal onderwerp
3. Gebruik een woord per tak. Een enkel woord kan beter gedachten triggeren dan hele zinnen of woordengroepen. Door een woord per tak te gebruiken houd je de mind map overzichtelijk. Als het op papier overzichtelijk is, is dit ook overzichtelijk in je hoofd.
4. Aan de grote takken kun je ook subtakken toevoegen. Hierdoor ontwikkel je het thema verder
5. Door het tekenen van een Mind Map merk je dat er steeds meer ideeën opkomen. Je hebt namelijk een beter overzicht en meer ruimte in je hersenen om na te denken over nieuwe toevoegingen.
6. je kunt de mind map gebruiken om alle aspecten verbonden aan het onderwerp verder uit te werken.

#### Tips

- gebruik gekleurde stiften, kleuren kun je beter onthouden
- raffel de Mind Map niet af, maar neem er de tijd voor.
- Maak er geen rommeltje van: één woord per tak en iedere tak moet verbonden zijn aan een hoofdtak
- maak niet te veel niveaus in de takken
- zorg takken met een vergelijkbaar aantal subtakken. Splits of groepeer om het in balans te krijgen.
- De mind map kun je ook regelmatig aanpassen, hang hem ergens op.
- De mind map is ook heel geschikt om individueel te gebruiken.

**Voorbeeld uit de praktijk**

Het feit dat er niet meer op de locatie wordt gekookt, maar dat er kant-en-klaar maaltijden worden klaargemaakt, is als een knelpunt van medewerkers en verwanten naar voren gekomen. We willen voor dit knelpunt een oplossing vinden. Het is goed om dan helder te hebben welke gedachten en ideeën er leven rondom dit onderwerp zodat je samen het probleem en de doelstelling kunt vaststellen op basis van de informatie die er is. Het maken van een mind map heeft hierbij geholpen.

