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PERFORMANCE MEASUREMENT OF SERVICES – A CASE STUDY

ABSTRACT

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Providing services has gained interest among traditional manufacturers due to complex markets and increasing competition. For performance measurement, services bring their unique context which has interested both scholars and managers. This thesis studies performance measurement in service context and aims to develop key performance indicators (KPIs) for services in a manufacturing case company. Focus is on performance measurement development's first phase, design, which translates strategy into KPIs.

The research design, a single case study, allows to study the phenomenon in its real context which in this thesis is the case company. Unstructured interviews, observations and workshops were conducted in the case company and its internal documents were analyzed to reach empirical findings. The thesis provides a balanced set of KPIs that meet the case company's current and near-future's needs in service business. The findings indicate that when designing performance measurement, the organizational strategy should be broken down into smaller pieces step by step in order to be able to maintain a link between the high-level strategy and the KPIs. Using company's existing measurement practices and KPIs as a basis for further performance measurement development saves resources and supports designing KPIs that can be efficiently implemented.

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Kompleksit markkinat ja kasvanut kilpailu ovat lisänneet teollisuusyritysten kiinnostusta palveluliiketoimintaa kohtaan. Suorituskyvyn mittaamiseen palvelut tuovat ainutlaatuisen kontekstinsa, joka kiinnostaa niin tutkijoita kuin johtajiakin. Tämä työ tutkii suorituskyvyn mittaamista palvelukontekstissa ja luo palveluiden suorituskykymittariston teolliselle case-yritykselle. Tutkimus keskittyy suorituskyvyn mittaamisen kehittämisvaiheista suunnitteluun, joka muuttaa strategian konkreettisiksi suoritusmittareiksi.

Tutkimus toteutettiin tapaustutkimuksena, joka mahdollistaa ilmiön tutkimisen sen luonnollisessa kontekstissa, joka tässä työssä on case-yritys. Tutkimusmenetelmiksi empiiristen havaintojen tekemiseen valittiin case-yrityksessä toteutetut jäsentämättömät haastattelut, havainnointi ja työpajat sekä yrityksen sisäisten asiakirjojen analysointi. Tutkimus loi tasapainoisen suorituskykymittariston, joka vastaa case-yrityksen nykyisiin sekä lähitulevaisuuden palveluiden kehittämistarpeisiin. Havainnot osoittavat, että korkean tason strategia tulee pienin askelin jakaa osiin sen ja konkreettisten suorituskykymittareiden välisen yhteyden säilyttämiseksi. Yrityksen nykyisten mittauskäytäntöjen ja KPI:den (suorituskykymittarien) käyttäminen suorituskykymittariston kehityksen perustana säästää resursseja ja tukee tehokkaasti käyttöönotettavien KPI:den suunnittelua.

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I have to say that writing this feels absurd. Just a moment ago, my dad helped me move to this eastern town called Lappeenranta and my mum packed me a survival package full of food. Luckily, Skinnarila spirit and the guilds of Enklaavi and later Pelletti ensured that I lived the best student life. LUT and Skinnarila created an excellent atmosphere for me to grow and gain experience. Now that I've moved elsewhere, I cherish the memories and relationships created during my years in Lappeenranta.

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My years in Lappeenranta may be over but I'll continue my environmental technology studies at LUT in Lahti. Let's continue the adventure there and keep the challenges coming!

In Helsinki, December 21st 2021

Taika Sipponen

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1. INTRODUCTION

Global trends, like globalization, increasing emerging market competition, new customer demands, and growing customer awareness, have made it hard for companies to rely on traditional product-orientated strategies focusing on technological innovations, cost reduction and quality improvement (Lay et al 2010). As a response to complex markets and increasing competition, during the 21st century many companies have shifted from focusing only on offering products to first offering both products and services and later to providing solutions (Cova and Salle 2008; Neu and Brown 2005; Raja et al 2020). Services can improve company's competitive advantage which is connected to superior performance (Lusch, Vargo, and O'Brien 2007). However, the value services create for customers is difficult to present and measure. As a result, literature and management have started to focus more on understanding the capabilities needed for value-based-pricing and value-based-selling which make the organizational performance improvement possible. (Raja et al 2020)

1.1. Background of the Study

Including services into company's portfolio can bring many advantages. Focusing more on service business, and especially on services related to core product business, does not only bring more sales and profit but can also improve the company value (Fang, Palmatier, and Steenkamp 2008). Customer centric strategies and service differentiation can improve manufacturing companies' profit and decrease their sensitiveness to complex customer needs (Gebauer, Gustafsson, and Witell 2011). However, the generated turnover from services is not always high and companies may struggle on defining effective service strategies (Lay et al 2010). Performance measurement helps analyzing financial and non-financial information of the company but developing effective performance measurement in the company requires understanding the causes and effects of the organization's operations, and ability to connect indicators to strategy (Neely, Andy and Bourne 2000). When developing service business, service strategy needs to be clarified which will allow performance measurement of services to be efficiently developed.

Performance measurement has been gaining a lot of interest among scholars and managers. It is viewed as part of strategic management which can benefit a company and help it succeed. It can contribute reaching organizational goals by clarifying strategy, improving financial results, and increasing effectiveness. When correctly implemented, used, and developed, performance measurement can also positively affect organization's people by motivating them to reach the common goal and improving employee satisfaction. Many companies have wanted to implement different performance measurement systems because they are seeking for the benefits these systems can bring. (de Waal and Kourtit 2013)

However, implementing performance measurement can also bring disadvantages if it is badly implemented with not enough non-financial measures, too many measures, or being too expensive and difficult to use (de Waal and Kourtit 2013; Neely and Bourne 2000). Developed performance measurement models do not fit for everybody because performance measurement is a multidimensional topic and it is widely dependent on its context and company's needs (Neely, A. et al 2002, 14). To avoid these disadvantages, the development process needs to take the challenges in implementing and usage into consideration already when designing performance measurement (Neely et al 2002, 2; Neely, Andy, Gregory, and Platts 2005)

Services bring their unique context to performance measurement. Performance measurement of services have gained interest among scholars and companies, but general characterizations and conceptualization have been difficult to form. Complex nature of services and their value-creation processes create challenges on top of traditional performance measurement challenges like it being context related. (Jääskeläinen, Laihonen, and Lönnqvist 2014)

The case company of this thesis is operating in chemical industry offering products for manufacturing industry and private consumers. The manufacturing company's heritage and headquarter is in Finland but it operates globally. Its yearly net sales is around 400 million euros. The case company has had a strong focus on sales and development of products. Services have been offered mainly to B2B-customers and without a broader conceptualization or management of services. Lately, the case company has begun

developing its service offering and this thesis will contribute by developing the performance measurement of services in the company.

1.2. Aim of the Research and Research Questions

This thesis aims to propose key performance indicators (KPIs) for measuring performance of services in the manufacturing case company. The KPIs will be formed under the case company's strategic initiatives. For proposing the KPIs, this thesis has three objectives. First one is to establish knowledge on service business and its needed capabilities, performance measurement in general, and combine those two by identifying special characteristics of performance measurement in service business. Another objective of this thesis is to understand the case company's current state of performance measurement and identify its topics that should be considered when designing KPIs for services. The third objective is to identify the strategic breakthrough objectives and must-wins of services under each strategic initiative in the case company to break down the strategic service business goals into more specific guidelines and later form strategy-based service KPIs. The concepts of strategic initiatives, breakthrough objectives, and must-wins are opened in the chapter 1.4.

A main research question (RQ) with three sub-questions were derived from the research aim and objectives of this thesis. These are guiding the study and supporting forming the proposed KPIs. The research questions are presented below in the Figure 1.
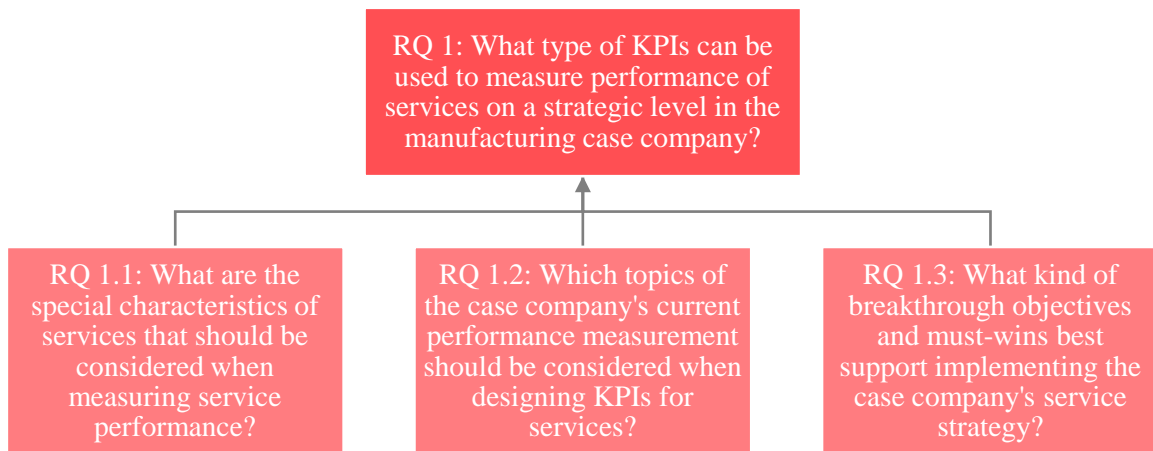
Figure 1. Research questions

The main research question (RQ 1) *What type of KPIs can be used to measure performance of services on a strategic level in the manufacturing case company?* answers to the aim of the thesis to propose a set of KPIs for measuring performance of services in the manufacturing case company. Sub-questions are supporting forming the KPIs. RQ 1.1 *What are the special characteristics of services that should be considered when measuring service performance?* targets describing the business environment services create and what kind of requirements it creates for performance measurement compared to performance measurement in a traditional business environment of manufacturing companies. The answer is formed mainly based on literature but supported also through findings from the empirical research of this study. RQ 1.2 *Which topics of the case company's current performance measurement should be considered when designing KPIs for services?* will help to understand the case company's current performance measurement and identify topics, like measurement practices or databases, that need to be considered when designing KPIs for services. The last sub-question (RQ 1.3) *What kind of breakthrough objectives and must-wins best support implementing the case company's service strategy?* will support identifying the breakthrough objectives and must-wins of services under each strategic initiative in the case company.

1.3. Delimitations

This thesis focuses on performance measurement on a strategic level. The focus will be in whole service business development, and not in specific services in the portfolio. However, operational topics will be kept in mind to reach the best outcome, but the focus is on the strategic level.

In addition, the thesis is delimited on the first step of performance measurement development which is designing the KPIs. The design phase includes defining strategic breakthrough objectives and must-wins for services based on the given organizational strategy and existing material for service strategy. These will be used when forming the KPIs. However, despite the strategic view and focus on designing strategic KPIs, implementation and usage of the KPIs are kept in mind but the focus stays in design phase.

1.4. Definitions of Key Concepts

This thesis has some key concepts that appear throughout the thesis. They are opened next in this chapter.

KPI	A key performance indicator (singular KPI, plural KPIs) is measuring an organization's long-term performance. KPIs mean a set of indicators focusing to measure the organization's most critical topics in the process of reaching the defined goals. (Twin and James 2021)
Must-win	Must-wins are the most critical things that a company must conquer to reach its strategic objectives. Usually, companies define three to five must-wins that answer the question "how" the company's vision is reached. (Killing, Malnight, and Keys 2006, 14-19)
Breakthrough objective	Breakthrough objectives are organization's targets set to reach organization's vision. They explain the "what" is required to meet the vision, but they do not answer "how" it is done. (Lean Methods 2015)

Strategic initiative	A strategic initiative translates an organization's vision and goals into practice. A set of initiatives is usually considered as a map to the organization's goals and vision, and they are used together to achieve them. (IMD - International Institute for Management Development 2021; Indeed 2021) The case company has identified five strategic initiatives.
Strategy house	Strategy house is a visualization of an organization's strategy. The case company's strategy house includes for example its vision, goal for the strategy, and values. In addition, it includes five strategic initiatives which each have breakthrough objectives, must-wins, and KPIs which are the focus of this thesis.

1.5. Research Methodology

This thesis aims to develop KPIs of services for a case company, so the focus is on the first phase, design, in the development of a performance measurement system which aims to translate strategy into concrete performance indicators. Performance measurement of services is not a traditional topic in the case company of this thesis, so the study needs to create in-depth and new knowledge. In addition, performance measurement is highly dependent on its context, being unique in every organization. This creates a unique research environment, to which a single case study is an appropriate research design. It allows to study the phenomenon in its real context which in this thesis is in the case company's natural environment. (Farquhar 2012, 5; Hirsjärvi, Remes, and Sajavaara 2012, 134-135 & 191; Yin 2003, 1 & 40-41)

Since the case is unique and requires in-depth knowledge, it is preferable to use qualitative research methods to answer the research questions. The chosen research methods for this thesis are observations, six unstructured interviews, analyzing existing internal documents, and two workshops. Internal unstructured interviews, observing the case company, and internal documents are used to understand the current state of performance measurement in the case company and to identify the topics to consider in the workshops. Workshop and internal documents are used to define breakthrough objectives. For must-wins and KPIs,

workshops were the main methods. The research was conducted between August and December 2021.

Answers for RQ 1.1 were formed through literature and for 1.2 through unstructured interviews, observations, and internal documents. The answers were presented in the first workshop, so the participants commented and validated them. The key findings for the questions were also used as a basis for the workshops and performance measurement design. The first workshop focused on breakthrough objectives and must-wins, and the other one on KPIs. Defined KPIs with must-wins and breakthrough objectives (RQ 1 and RQ 1.3) are visualized in a strategy house. It is a preferable way also for the case company since they have used that kind of presentation before. The case company uses strategy house to visualize and summarize their organizational strategy. In addition to five strategic initiatives with breakthrough objectives, must-wins, and KPIs under each, their strategy house includes also for example vision and values. This thesis presents a simpler version of the house with the topics under research (breakthrough objectives, must-wins and KPIs).

1.6. Previous Research and Framework

Many traditionally product-orientated companies have included services into their portfolio when seeking to gain competitive advantage, financial improvement, and to reach a more customer centric strategy (Cova and Salle 2008; Fang, Palmatier, and Steenkamp 2008; Gebauer, Gustafsson, and Witell 2011; Lusch, Vargo, and O'Brien 2007; Neu and Brown 2005). In service business, a service provider and a customer are both part of the value-creation process (Lusch and Vargo 2008). It makes possible for a service providing company to be involved in the value-generating process of their customers. This also expands their market offering from traditional manufactured goods to company-customer interactions. (Grönroos 2008) However, companies face difficulties because they cannot control the customer's actions after the service process and customers are not showing all their value-creating processes (Jääskeläinen, Laihonen, and Lönnqvist 2014).

Services have attributes that distinguish them from products. They are intangible, heterogenic, inseparable, and perishable (IHIP) (Lovelock and Gummesson 2004; Zeithaml, Parasuraman, and Berry 1985). Another important characteristics is that services depend on the context (Karpen et al 2015). Service process type explains how service processes work considering for example if the service is equipment or people focused, contact time with customer, degree of customization and discretion, the product/process focus, and if value is added more front or back office. Professional services are often more people focused, have longer contact, have higher customization and discretion, and are more front office and process focused. Mass services are often opposite of professional services. (Fitzgerald et al 1991; Mohd Amir, Nazli Nik Ahmad, and Har Sani Mohamad 2010)

If a company chooses to focus on services, it needs to be able to co-create best-in-class customer experiences and better services to gain competitive advantage (Karpen et al 2015). When developing services, it is important that a company sees the customer's point of view to be able to fully meet their needs. Companies tend to see solutions as a customized combination of services and products that are offered to a customer. On the contrary, customers often see solutions more broadly including a set of processes between customer and the company. In addition to customizing and integrating offer of services and products, these processes include defining customer requirements, product and service deployment and customer support. (Tuli, Kohli, and Bharadwaj 2007) Companies need to have truly customer centric service business strategies to improve their performance. However, providing services can bring benefits to the company but offering services and total solutions including both services and products is not always profitable. (Tuli, Kohli, and Bharadwaj 2007) Finnish based but globally operating industrial manufacturers Kone and Wärtsilä are examples of companies that have been transitioning from offering products to offering services and solutions. They have highlighted that services and complete solutions must be designed based on the customer needs. In addition, solutions must not only be effective but also cost efficient. The companies are reaching for cost efficiency by designing highly standardized solutions. This does not mean that customization is forgotten because standardization can be carried out by standardized internal processes or pre-existing modules which are built together as unique, modularized solutions. (Salonen 2011)

Service performance is a multidimensional topic which is affected by stakeholders, conditions (resources, environment etc.), and measurement timeframe. Given the nature of services and its unique characteristics, service performance is highly dependent on the customer. Main specific factors that construct service performance from customer point of view are quality of services, customer satisfaction, customer loyalty, and cost of services. These affect the competitive advantage and financial performance, which together form the overall service performance. Service orientation of the company influences highly especially the overall quality of services and wider service performance. Service quality constructs of professionalism and skills, attitudes and behavior, access and flexibility, reliability and trustworthiness, recovery and complaint handling, and reputation and credibility (Gronroos 1988). Excelling in these areas, which can mean acting professionally, highlighting good reputation, or endorsing trustworthiness by being open about offer and price formation, create competitive advantage and improve performance (Pekkola and Ukko 2016a). (Urban 2009)

If a company adopts customer centric strategies and implement service perspectives, defining goals and understanding cause-effect causalities of performance and its determinants is just the beginning. The defined goals must be translated into easily understandable objectives so the company can act like the strategy states and performance can be improved. (Kaplan and Norton 1996) Company's performance is created with effective and efficient behavior which means reaching goals and customer satisfaction to a great extent (effectiveness) but with economically used resources (efficiency). Performance management supports establishing a shared understanding of the organization's goals and through systematic processes aims to improve organization's performance (Arora, Khurana, and Choiden 2020, 1, 3-4; Schleicher et al 2018). Performance measurement on the other hand, is needed to find out the level of performance. (Neely, Andy, Gregory, and Platts 1995)

Neely, Gregory and Platts (2005) structured their article around a framework highlighting three levels which can be used to examine a performance measurement systems in general. In the core on the first level of the framework are individual performance indicators. Around that, on the second level, is the performance measurement system which includes a set of

performance indicators. Third level around the other two is the environment, and its relationship with the inner performance measurement system. All these levels depend on the context, so also performance measurement systems look different in every organization which creates challenges with general characterizations.

When performance measurement is considered in the complex nature of services and their value-creation processes, it is widely known that performance measurement of services has its own challenges. (Jääskeläinen, Laihonen, and Lönnqvist 2014) It has some similar features than performance measurement of product-focused businesses but there are also distinctive characteristics to considered. Jääskeläinen, Laihonen and Lönnqvist (2012) defined three distinctive characteristics that are different service contexts, customer-orientation, and various stakeholders. Service contexts vary, customer is always involved and has certain expectations, and role of intangible inputs and outputs are examples of attributes affecting the decision making on what to measure and with which indicators. When defining individual indicators or evaluating a set of indicators – a performance measurement system – in the service context, its special characteristics must be taken into consideration.

The framework for this thesis has been created based on the framework by Neely, Gregory and Platts (2005). The research framework of this thesis has three levels: individual KPIs, the proposed set of KPIs, and the environment of the case company. This has been presented also below in the Figure 2. The figure present how in every level of the framework has aspects that are defined in the case company's context and aspects that are researched from previous literature.

The Environment of the Case Company

Internally
- Organization and service strategy
- Current measurement practices
- Current organization and resources

Externally
- Customer
- Competitors

Literature
- Service business
- Adopting service perspective
- Performance measurement and management in general

The Proposed Set of KPIs

Case company
- Including strategic initiatives
- Considering breakthrough objectives, and must-wins
- Service performance measurement practices
- Financial & non-financial, internal & external, retrospective & future-looking indicators

Literature
- Balanced performance measurement
- Special characteristics of service performance measurement

Individual KPIs

Case company
- Forming strategy linked KPIs under strategic initiatives

Literature
- Considering indicators defined in literature to match service business needs

Figure 2. Research framework (Neely, Gregory, and Platts 1995)

Literature related topics are studied further in the beginning of the thesis in literature review in chapter number 0. Researching them also supports answering RQ 1.1. After the literature review, the framework's levels will be studied in the case company's context. This will be done by using chosen research methods. Because the levels of the framework from the case company's point of view reveal sensitive information, all of the aspects won't be opened in this study, but they will be considered when presenting empirical results and answering RQ 1.2, RQ 1.3 and finally RQ 1.

1.7.Research Structure

This thesis has 5 main chapters. The first chapter is an introduction to the topic. It presents background of the study, research aim, objectives, and questions, chosen theoretical framework, delimitations, and preliminary literature review. The second chapter includes further literature review focusing on performance in general, performance measurement, and performance measurement systems and indicators.

Third chapter presents research design and chosen methods for data collecting. Fourth chapter is for presenting the case company and the empirical results and findings. The last, fifth, chapter includes discussion and conclusions. Discussion also answers the research questions.

2. STRATEGY FOCUSED PERFORMANCE MEASUREMENT IN SERVICE CONTEXT

Organizations have strategies stating great future goals, but those goals must be translated into easily understandable objectives and actions which must be clearly communicated in the organization. Then all levels of an organization can act like the strategy states and the organization can move to the wanted direction. Otherwise, strategy and organization's vision remain unclear without affecting the daily business. (Kaplan and Norton 1996)

Organization's performance is created with effective and efficient behavior which means reaching goals and customer satisfaction to a great extent (effectiveness) but with economically used resources (efficiency). Organizations want to know the level of performance which creates a need for performance measurement. Contribution to organizational performance is a commonly used measure to evaluate the success of different functions and their actions in an organization. (Neely, Gregory, and Platts 1995)

Performance measurement is a diverse field of study that has been studied by scholars from different fields. In the field of performance measurement, strategy is seen as one of the central themes. Topics like performance measurement and its relation to organization's strategy and alignment of performance measurement systems with strategy have been widely studied by scholars with various backgrounds. (Neely, Andy 2005)

This chapter continues the introduction and presents literature on service business and performance measurement. The chapter's subchapter also combines these two themes. The chapter follows the structure of the research framework starting from the outermost layer, environment, and moving through the set of KPIs to the individual indicators. Chapter 1.6 already started describing the environment which is continued here by presenting previous literature on service perspective and then service and organizational performance. This is followed by performance management and the rest of the chapter focuses on performance measurement. First topic of that is service performance measurement which is followed by

presenting literature related to performance measurement system. Then, literature related to performance measurement models is reviewed. The chapter ends on presenting literature related to performance measurement indicators in service context.

2.1. Adopting Service Perspective

Previous literature has researched increasingly services (Grönroos 2008). When goods-dominant logic focuses on tangible assets and manufactured goods, service-dominant (S-D) logic emphasizes intangible exchange processes where value is co-created by customer, selling company and other stakeholders. Value created through services is often a result of this kind of co-creation where different stakeholders, like a company and a customer, join resources and create value together. (Lusch et al 2004; Lusch and Vargo 2008) However, in literature the definitions of value and value-creation are not complete. Grönroos (2008) defines value for a customer to mean that after a customer has consumed a service, the customer feels and is better off, or like Lusch and Vargo (2008) puts it, customer's well-being is increased. Also, the definition of value-creation is not complete when some argue that it means customer creating value-in-use when others think it as a wider concept of value-creation by different stakeholders throughout the process. On the other hand, *when* value for the customer is created during a service process depends also on an individual. Anyhow, the whole service process in the company is required in creating value for the customer even when the value itself is defined to be created when a service is used. (Grönroos 2011)

Service-dominant logic can be transformed into strategy which focuses on building competitive advantage through value creation *with* customer. This requires organization's role to shift from a value supplier to co-creator and to service facilitator and supporter. (Grönroos 2008; Karpen, Bove, and Lukas 2012) Effective service business and shift from product perspective to service perspective requires that a whole organization is involved in the change (Lusch, Vargo, and O'Brien 2007). Service perspective is hard to copy because it is intangible, complex and depends on the context. It can bring unique competitive advantage when the whole organization has adapted the service mindset. (Karpen et al 2015)

Previously mentioned Kone and Wärtsilä had unique reasons for the transition, but shared drivers were needs to be more customer centric and to find new ways to gain competitive advantages. (Salonen 2011)

Adopting service perspective in an organization is a strategic choice which requires identifying strategic actions that will lead the change and gain competitive advantages. Organization's skill portfolio or capabilities are the drivers for successful service-driven organizational behavior which support the customer centric service perspective implementation and the development of service centric. (Kandemir, Yaprak, and Cavusgil 2006; Karpen, Bove, and Lukas 2012) The interdependence of various stakeholders in a service process creates a need for scholars and managers to find out the critical capabilities under the strategic actions for successful and mutually beneficial service business (Karpen et al 2015). Kone and Wärtsilä also recognized the need to develop their organization and capabilities to answer the needs of service orientated organizations. Complex and large projects are handled by global project teams with the support for delivering from local teams. For designing larger solutions, the organizations have created their own teams that were previously external consultants. Developed capabilities have been related to visual design, specification analysis, and project planning, and developed together with sales personnel. However, the companies also state that successful transition requires that existing product related core capabilities are complemented rather than replaced. (Salonen 2011)

Karpen, Bove and Lukas (2012) conceptualized the organizational capabilities which are needed for value co-creation and successful exchange of services between a company and its customers. Their conceptualization, S-D orientation, is based on expert knowledge and previous literature like views of Lusch and Vargo (2004 & 2008) that S-D logic and its service perspective focuses on customer, long-term relationships, and quality services, and it is based on transparency and interactivity, integration, customization, co-production, and ethical and sustainable approaches. S-D orientation by Karpen, Bove and Lukas (2012) includes six service-driving capabilities which form together a value co-creation capability. The six categories are individuated, ethical, empowered, developmental, relational, and concerted interaction capabilities. (Karpen, Bove, and Lukas 2012)

After presenting the concept of S-D orientation, Karpen et al (2015) tested the portfolio and its impact on performance. Their research showed that S-D orientation positively affects on customer's perceived *value* of the interaction, which further affects on customer's *trust* on the company and customer's *affective commitment*. These three aspects engage customer for new interactions and enables market and later financial performance. Trust, value, and commitment are enabled by the capabilities Karpen, Bove and Lukas (2012) provided. This idea between organizational capabilities of S-D orientation and service performance is presented below in the Figure 3.

S-D Orientation – Organizational Capabilities					
Individuated interaction	Relational interaction	Ethical interaction	Empowered interaction	Developmental interaction	Concerted interaction
Understanding customer's unique service processes and context.	Creating dialogue and building relationship with customer.	Nonopportunistic and fair customer interaction.	Involving customer in shaping the service process.	Supporting customers in building their own service competences.	Facilitating coordinated service processes that include and are integrated to the customer.
Enables to meet customer expectations.	Improves bonding and customer's identification with the company.	Improves customer's trust and engagement.	Helps to meet customer expectations of the service outcomes and functions.	Improves customer experience by gaining their knowledge and understanding of service processes and their usage.	Reduces the value drain customer experiences when co-creation and service process run smoothly.

Value customer perceives	Trust customer perceives	Customer's affective commitment

Engage customer for new interactions

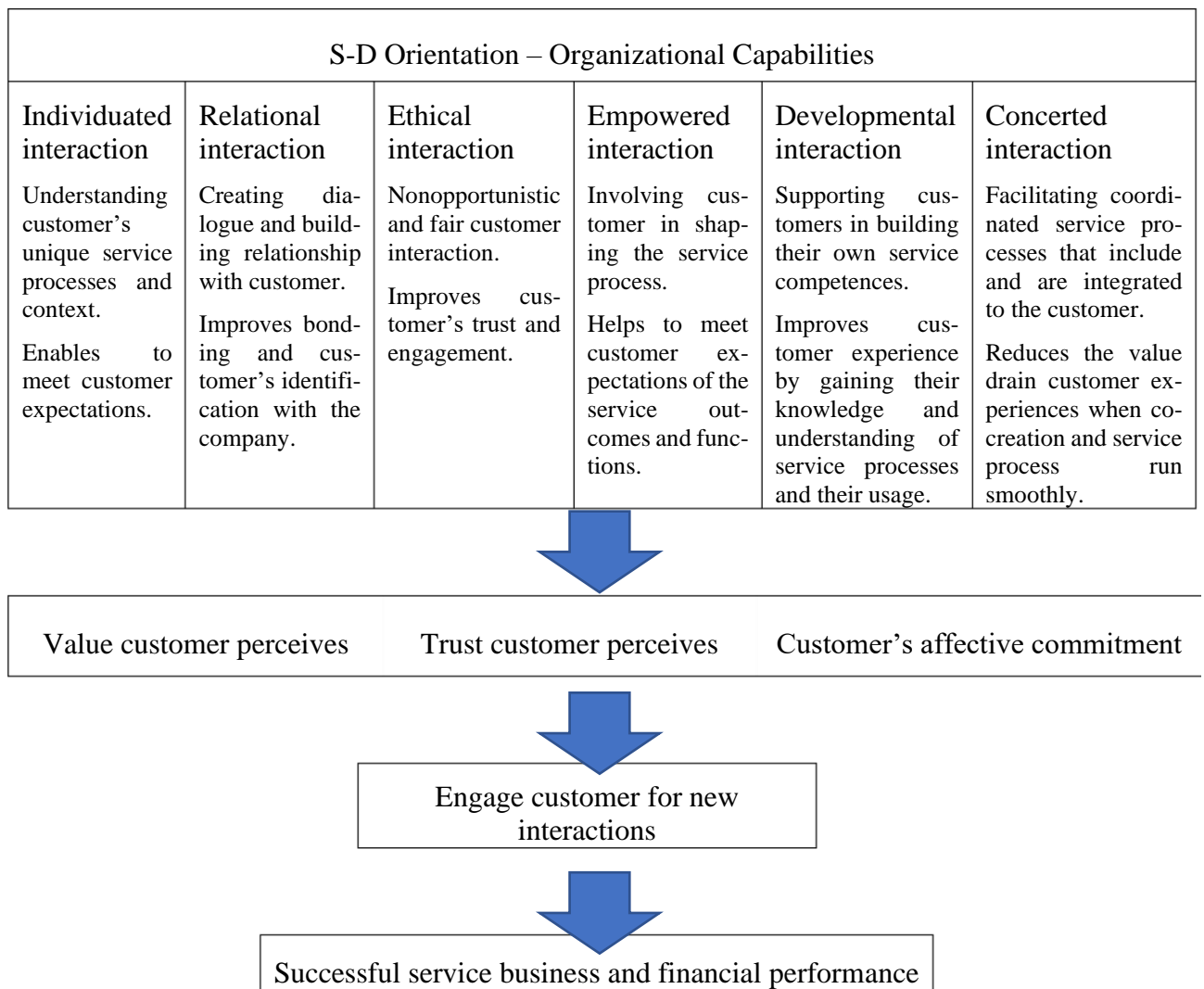| Successful service business and financial performance |
|---|

Figure 3. Connection between service performance and organizational capabilities (Karpen, Bove, and Lukas 2012; Lusch and Vargo 2008)

To conclude, Karpen et al (2015) results showed that successful service business requires that customer sees value in the action, trust the company and is committed. Company must perform well in these aspects which by Karpen et al (2015) is enabled by focusing on the capabilities offered by S-D orientation. Performing well in these aspects will lead to financial performance.

2.2. Organizational and Service Performance

Organizational performance is a multidimensional construct which describes how well organization's goals and strategic objectives have been achieved (Kaplan and Norton 1992; Richard et al 2009). Richard et al (2009) present three dimensions affecting organizational performance. These are an organization's stakeholders, conditions (resources, environment, strategy) and measurement timeframe. Understanding the dimensionality of performance can help managers more widely recognize the impacts of their actions (Luiz Artur Ledur Brito and Juliana Bonomi Santos 2012). Like organizational performance, also service performance is a multidimensional topic which is affected by stakeholders, conditions (resources, environment etc.), and measurement timeframe (Urban 2009).

Timeframe of measurement is one dimension affecting organizational performance through the results used indicators give. Short- or medium-term indicators are vulnerable to be affected by fluctuations, but the timeframe also depends on the examined phenomena. Industry and organizational factors also affect performance at different rates over time (McGahan and Porter 1999). The effect can be seen for example in cyclical industries. (Richard et al 2009)

Organizations have various stakeholders including for example employees, managers, customers, suppliers, and shareholders. Even though, some stakeholders are common across organizations, identified stakeholders depend on the organization, its environment, and time (Luiz Artur Ledur Brito and Juliana Bonomi Santos 2012). Considering stakeholders as a wide concept increases the multidimensionality of organizational performance. Stakeholders

have different motivations and thus require different ways of performance measurement. Correlations between stakeholders also add challenges to organizational performance and its measurement. (Hillman and Keim 2001; Richard et al 2009)

Organizations have different conditions to operate. Their resources and capabilities vary, and they have several ways to use them (Barney 1991). In addition, industrial, environmental, and strategical factors create organization specific atmospheres, and have effect on organizational performance (Hawawini, Subramanian, and Verdin 2003; McGahan and Porter 1997). These internal and external conditions add multidimensionality of organizational performance.

Given the nature of services and its unique characteristics, service performance is highly dependent on one of its stakeholders, the customer. Below in Figure 4 has been illustrated the connection between performance, its three dimensions affecting it, and the special characteristics services have when considering performance. Squares are representing general performance topics which affect both organizational and service performance. Circles are representing special characteristics of services. Main specific factors affecting service performance are quality of services, customer satisfaction, customer loyalty, and cost of services. These affect the competitional advantage and financial performance, which together form the overall service performance. The customer has strong role since they in the end define the value, they see in the service thus the level of experienced quality, customer satisfaction, and customer loyalty are on the hands of the customer which is also presented in the Figure 4. However, companies have several ways to influence these which means working on especially one of the three dimensions affecting organizational performance, company's conditions. Service orientation, resources, and capabilities of the company influence highly especially the overall quality of services and in the end wider service performance which has been illustrated also in Figure 4. Service quality constructs of professionalism and skills, attitudes and behavior, access and flexibility, reliability and trustworthiness, recovery and complaint handling, and reputation and credibility (Gronroos 1988). Excelling in these areas, which in practice can mean acting professionally, highlighting good reputation, or endorsing trustworthiness by being open about offer and

price formation, create competitive advantage and improve performance (Pekkola and Ukko 2016). (Urban 2009)
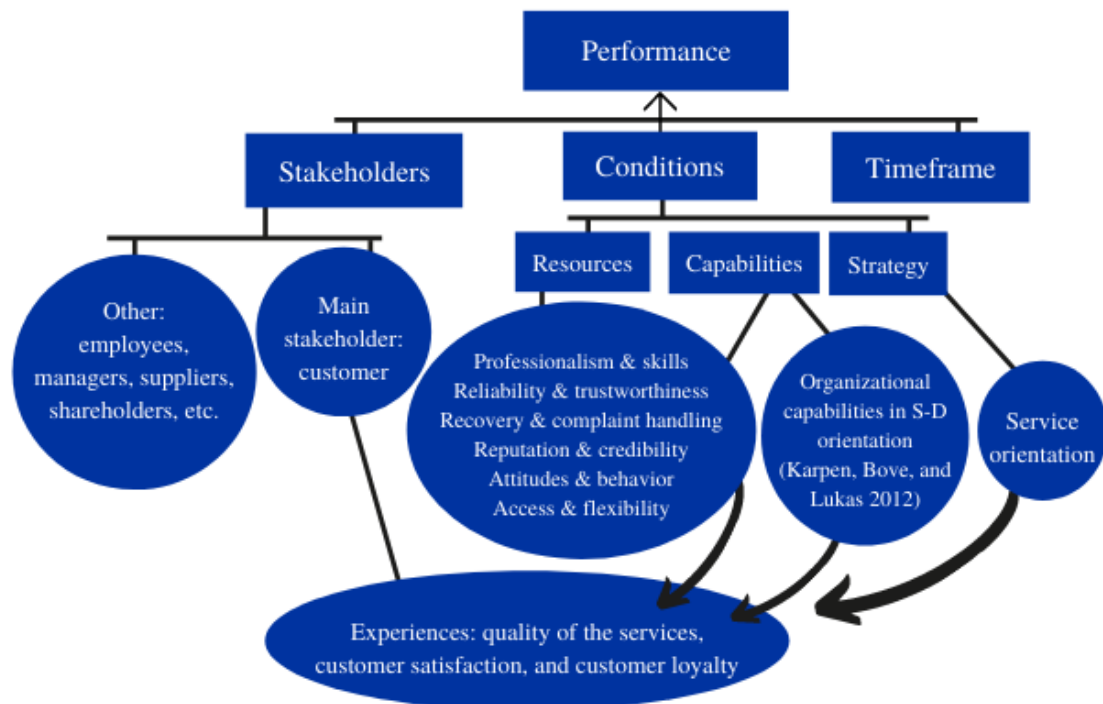
Figure 4. Organizational and service performance (Gronroos 1988; Karpen, Bove, and Lukas 2012; Richard et al 2009; Urban 2009).

The effect multidimensionality and different factors create on performance is complex. For example, organization's industry and strategy affect organizational performance, but the amount depends for example on the industry itself, size of the organization and its position in the competition. In organizations focusing on services, the level of service perspective is also affecting how performance is formed. In addition, scholars have presented different results on the amount factors affect performance. (McGahan and Porter 1997; McNamara, Aime, and Vaaler 2005)

Organizational performance is a research topic which has concerned scholars from different backgrounds. It is often seen as a dependent variable in management research. However, comparing results of different scientific papers related to performance and justifying their

normative recommendations is difficult. In literature, performance is lacking a clear definition, and used methodologies are not consistent. (Richard et al 2009)

2.3. Performance Management

Performance management has been widely studied in the recent years. It can be described as a process which aims to improve organization's performance. The improvement is created through focusing on future performance planning. Performance management focuses on developing teams and individuals within an agreed framework which includes the goals, competences, and standards. Performance management supports establishing a shared understanding of the organization's goals and moving to the wanted direction. (Arora, Khurana, and Choiden 2020, 1, 3-4; Schleicher et al 2018)

Performance management is built out of outputs, meaning delivered performance, and inputs that create the performance. Inputs are the topics that are given in the organization and they create the context for performance management. These can be the environment, resources, and strategy of the organization. An example of resources can be competences and knowledge that are needed to improve performance. These and their level need to be defined, so the developmental needs can be identified. Then, a strategy is created to develop the identified competences. Outputs on the other hand, are what comes out of performance management actions. They can be observed for example through performance indicators. (Arora, Khurana, and Choiden 2020, 1, 3-4; Schleicher et al 2018)

Performance management requires systematic processes and effective leadership. It builds an organization culture where individuals and teams take responsibility for continuous improvement of their own competences and business processes. Individual and organizational objectives need to be aligned which requires clarifying goals. Since a lot of focus is put on developing people, performance management needs managers to be available for the people and support their actions. Management needs to support the development of individuals and make sure everyone knows their expectations and goals. Performance of

individuals needs to be linked to organizational goals and the performance must be followed. Management is responsible for motivating people, giving performance related, and rewarding people for increased performance. (Arora, Khurana, and Choiden 2020, 1-3)

2.4. Services Performance Measurement

Performance measurement can be defined as the process which measures performance by using performance indicators (Lohman, Fortuin, and Wouters 2004). Performance is an outcome of actions whose efficiency is quantified by measuring (Neely, Gregory, and Platts 2005). Organization's strategy creates the basis for performance measurement which translates strategic goals to actions and supports implementing and following up strategic initiatives (Lohman, Fortuin, and Wouters 2004). Performance is measured by using both non-financial and financial indicators which generally relate to financial performance, customer-related success, learning and innovation and internal processes. Characteristics of the organization's operations, like the size of the organization or focusing on service business, are also affecting performance measurement, and performance measurement does not look the same in different organizations (Lohman, Fortuin, and Wouters 2004). (Kaplan and Norton 1992; Richard et al 2009; Singh, Darwish, and Potočnik 2016)

Performance measurement helps organizations clarify, communicate, and challenge their strategy (Neely et al 2002, 2). Effective performance measurement is a fundamental part in the management process, and it drives improvements in critical areas of the business (Kaplan and Norton 1993). Performance measurement can bring benefits especially to large organizations and organizations working in a turbulent environment (Tapinos, Dyson, and Meadows 2005).

Consuming services brings value to customer, but value is not only difficult to define but also challenging to measure (Grönroos 2008). Literature has been interested in increasing importance of services, their performance measurement and the special characteristics services bring to the measurement. However, general characterizations and

conceptualization have been difficult to form. It is widely known that performance measurement of services brings its own problems because of complex nature of services and its value-creation process. On the other hand, it is not always clear, what exactly creates the problems or how the issues can be formed. (Jääskeläinen, Laihonen, and Lönnqvist 2014) In addition, performance measurement in general depends on the context and varies across companies.

Performance measurement of services has some similar features than performance measurement of product-focused business but there are also distinctive characteristics to consider. Jääskeläinen, Laihonen and Lönnqvist (2012) defined three distinctive characteristics that are different service contexts, customer-orientation, and various stakeholders. Different service contexts bring requirements that need to be considered in performance measurement. For example, in industrial services performance measurement is affected by a need to support service design and change to more service-centric organization, a need to measure not visible customer processes and future expectations of customers, and service operations management. Performance measurement of knowledge intensive services on the other hand is affected by intense competition, difficulties in defining effective indicators to measure strategic objectives, and non-standardized services. Customer's continuous presence in service business is widely recognized in literature. Customer-orientation creates a need to measure customer actions and impacts of the service. Providing services includes various actors and stakeholders whose performance must also be measured. (Jääskeläinen, Laihonen, and Lönnqvist 2014)

Generic contingency factors affecting performance measurement are organizational structure and size, industry, other external factors (political, competition), strategy, purpose for measurement, available resources, organizational level, organizational culture, and existing measurement IT systems (Jääskeläinen et al 2012). Since services bring its special context for performance measurement, Jääskeläinen et al (2012) summarized contingency factors for specifically services. Contingency factors that are affecting choosing what to measure are customer's involvement in service provision (quality, customer expectations), the role of intangible inputs, and varying level of demand. Factors that are more related to

designing the indicators due to attributes of services are output complexity (intangible), focus on impacts, and repetitiveness of service process (customized services vs mass services). General and service specific contingency factors have been summarized into Figure 5.

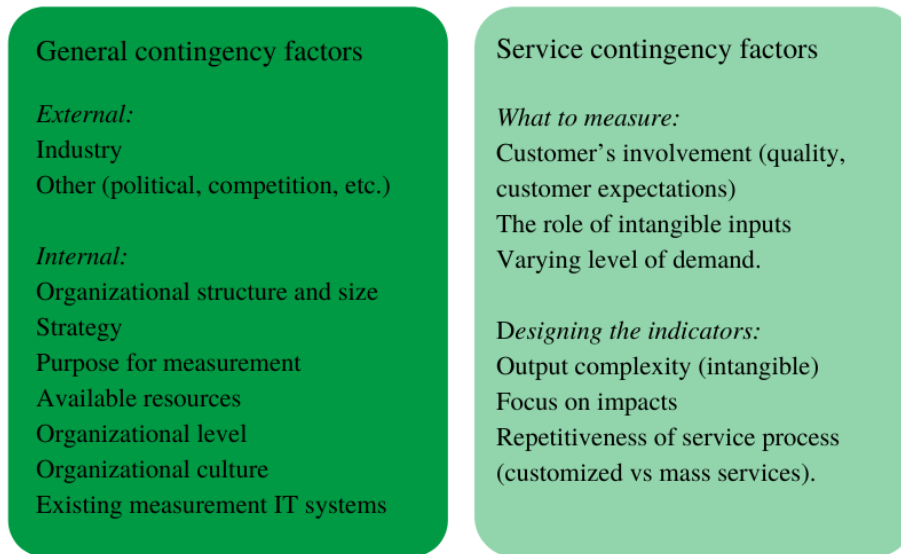| General contingency factors	Service contingency factors
External: Industry Other (political, competition, etc.) *Internal:* Organizational structure and size Strategy Purpose for measurement Available resources Organizational level Organizational culture Existing measurement IT systems	*What to measure:* Customer's involvement (quality, customer expectations) The role of intangible inputs Varying level of demand. *Designing the indicators:* Output complexity (intangible) Focus on impacts Repetitiveness of service process (customized vs mass services).

Figure 5. General and service contingency factors (Jääskeläinen et al 2012).

Service performance measurement has its challenges which also depend on the service type and the context of the service performance measurement. Measuring the service outcome and value customer perceives are some of the main concerns among managers. In addition, service provider cannot control all the actions of the customer which creates difficulties in measuring service performance. (Jääskeläinen, Laihonen, and Lönnqvist 2014)

2.5. Performance Measurement System

Organizations want to measure their performance to see the level in which goals set in strategies have been reached. To review the performance and measure it in an efficient and effective way, organizations implement performance measurement systems which include a set of performance measurement indicators (Neely, Gregory, and Platts 1995). In practice

this means, that performance measurement system includes procedures, databases or practices which are used to execute performance measurement in a complete and consistent way (Lohman, Fortuin, and Wouters 2004). Performance measurement systems have been widely studied in literature, but the terminology is not coherent, and terms may have multiple definitions (Keong Choong 2013).

In the previous literature, a widely shared characteristic is to have the organization's strategy in the core of a performance measurement system and specific indicators. (Lohman, Fortuin, and Wouters 2004; Medori and Steeple 2000) To conclude, performance measurement is often seen to be used to align performance of an organization with its own strategy. Therefore, even when previously developed models and indicators are used, performance measurement systems and performance measurement in practice is in the end organization specific. In addition to having strategy in the core, organizations and literature share some other common approaches related to performance measurement systems such as including non-financial indicators and considering perspectives of different stakeholders. (Medori and Steeple 2000; Taticchi and Balachandran 2008)

Performance measurement should be efficient and effective. Simple and automated processes which measure as little as possible but include all the important aspects make a performance measurement system efficient. Effective measurement, however, require that the measured data is used. To sum up, efficient measurement requires an efficient system which provides data that is analyzed and translated into actions which makes the measurement effective. (Neely and Bourne 2000)

Once developed, a performance measurement system does not stay relevant forever which is why the system should allow continual improvement and reviewing of the indicators. Performance measurement system can be described as iterative since it must be modified, and indicators updated when more information is gained. (Lohman, Fortuin, and Wouters 2004)

2.5.1. Development of a Performance Measurement System

Performance measurement system development process has been researched and frameworks for system development have been developed in literature and evaluated in practice (Medori and Steeple 2000). Next will be presented some common approaches and steps for system development. In the context of this thesis, focus will be on first steps of the development and not on implementation or usage of the indicators.

Bourne et al (2000) suggest that development of a performance measurement system includes three phases: (1) design, (2) implementation and (3) use of performance indicators. These have also been visualized below in the Figure 6. The goal of the design phase is that the business analysis and strategy should be translated into concrete performance indicators. Design includes identifying the organization's mission and strategy-based objectives which needs to be measured, developing the indicators themselves and agreeing on the developed indicators. Taticchi and Balachandran (2008) have five phases also including design but before that they have added assessment. That is for evaluating the current system to create a basis for further system development. In Figure 6, evaluating current system has been added inside design phase. (Bourne et al 2000; Lohman, Fortuin, and Wouters 2004)
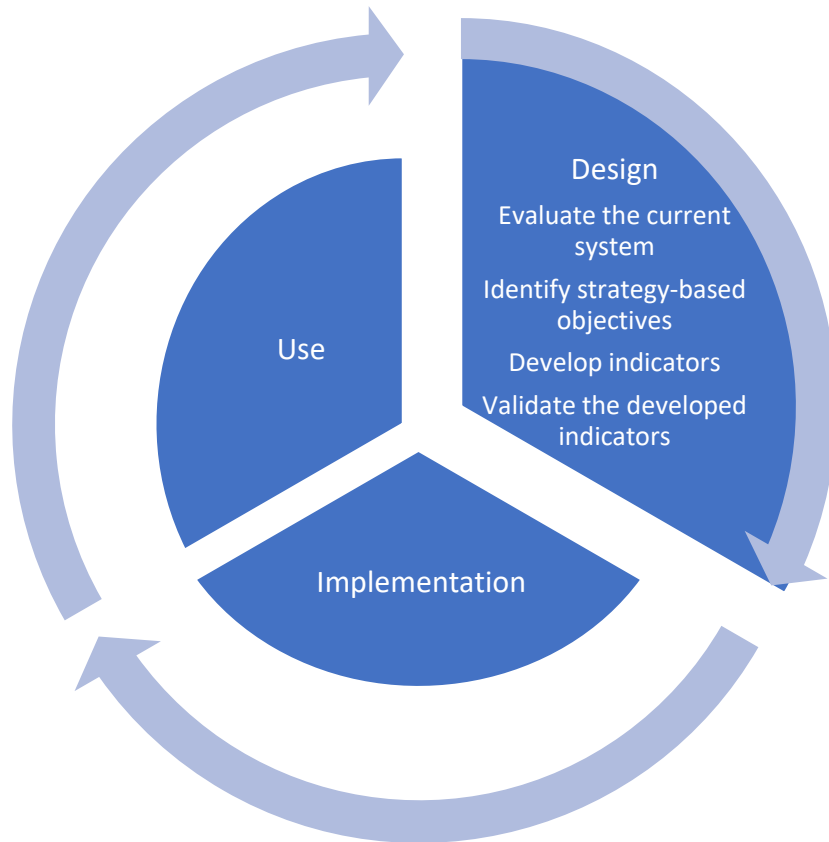
Figure 6. Performance measurement system development (Bourne et al 2000; Lohman, Fortuin, and Wouters 2004; Taticchi and Balachandran 2008)

Performance measurement systems are not similar in organizations, and the development process and used tools look different. When designing a performance system for services, the requirements of the characteristics of services need to be also considered to avoid focusing only on organizational objectives and lacking to capture the uniqueness of service business. Previously presented IHIP attributes, distinguishing characteristics of services compared products, must be considered. During the design process, service process type, organization and service business strategy, and perceived environmental uncertainty and competition need to be taken into consideration. (Fitzgerald et al 1991; Lovelock and Gummesson 2004; Mohd Amir, Nazli Nik Ahmad, and Har Sani Mohamad 2010; Zeithaml, Parasuraman, and Berry 1985)

Neely and Bourne (2000) argue that failing to implement a performance measurement system is often due to poorly designed systems or systems that are hard to implement. Organizations may find it relatively simple to define what things they could measure. The challenge often is to reduce that list of possible objects of measurement to a compact list which includes only the most crucial topics considering the given strategy. (Neely et al 2002, 2; Neely, Gregory, and Platts 2005) Many details of measurement can be decided later than in the design phase, but these details, like source of data or frequency of measurement, should not be forgotten in the design phase (Medori and Steeple 2000). End users or indicator providers, ICT personnel and data specialists, should be consulter throughout the performance measurement system development process. Otherwise, the gap between management performance system design and usage of the indicators become too large and the system is not efficient and effective and can be too costly. (Lohman, Fortuin, and Wouters 2004)

An effective performance measurement system also requires understanding the causes and effects of the organization's operations. Otherwise, an organization might only end up putting some chosen indicators into a framework, or even simply rearranging existing indicators. If the logic between chosen indicators and strategy is not clear and communicated, people in the organization get confused and do not adapt to the system. Resistance to measurement can occur also during design face if the people participating in development are not motivated (Bourne et al 2000). (Neely and Bourne 2000)

2.6. Multi-dimensional Organizational Performance Measurement Models

Already in the second half of the 20th century it was realized by companies that financial indicators alone don't answer to the needs of new strategies and competition they are facing. They understood that relying only on financial indicators can give misleading signals on the organization's state. (Eccles 1991). That is why a more holistic view of the performance was needed by managers and more balanced and multi-dimensional performance measurement

models were developed to categorize indicators and communicate the chosen indicators, their clusters and linkage to strategy to the whole organization. (Neely, Gregory, and Platts 1995; Taticchi, Balachandran, and Tonelli 2012). In addition to financial, past-looking, and internal indicators, these models emphasize non-financial, future-looking, and external indicators (Bourne et al 2000). (Kaplan and Norton 1992; Van Looy and Shafagatova 2016)

Theoretical models are not supposed to be implemented as such because companies have very specific situations and challenges that require attention. (Wongrassamee, Simmons, and Gardiner 2003) However, even if a company doesn't follow any specific performance measurement model, they can offer a good starting point for performance measurement development. More traditional models are also applicable for performance measurement of services, especially when focus is on the organizational level performance and characteristics of services are considered (Jääskeläinen, Laihonen, and Lönnqvist 2014). Thereby, next will be presented one popular multi-dimensional performance measurement model in literature and in practice, Balanced Scorecard (BSC) by Kaplan and Norton.

BSC provides a framework that translates organization's strategic goals and initiatives into performance indicators. Using balanced performance measurement means adopting financial and non-financial but also internal and external indicators. (Kaplan and Norton 1993) Financial indicators present the performance outcome which is driven by other performance topics of BSC. Financial indicators usually measure growth, profitability, and value to shareholders. In addition to financial indicators, the BSC includes so called operational indicators on three concepts: customer satisfaction, internal processes and innovation and improvement activities of the organization. Operational indicators are the drivers of the organization's financial performance in the future, but managers can view all the indicators simultaneously. (Kaplan and Norton 1992) When using BSC as a basis for performance measurement of services, customer perspective should be highlighted also on financial, internal processes and innovation indicators (Jääskeläinen, Laihonen, and Lönnqvist 2014).

Indicators related to customer satisfaction show how customers see the organization. Customer concerns are usually related to time, quality, performance, and service. To be able to meet customer expectations, customer related indicators are translated into indicators measuring internal processes. Internal processes and decisions drive the customer performance. Indicators should describe the key processes and factors affecting customer satisfaction which usually means for example quality, cycle time or productivity. Indicators under innovation and learning measure topics related to either new or existing products, services, or processes. One example of an indicator in this concept is sales from new products. (Kaplan and Norton 1992)

However, good results in operational indicators doesn't always mean that financial indicators are succeeding. Well defined indicators lead an organization to the direction of its strategy, but superior indicators don't mean the strategy is correct. If the operational performance is succeeding but financial is not, managers should view the chosen strategy again. On the other hand, lack of financial performance despite operational performance can also become from the lack of following the indicators and their results. Measuring and viewing the results should always be followed by taking actions which even further improve the financial and operational performance. (Kaplan and Norton 1992)

BSC is an important performance measurement model in literature. However, it has also been criticized for example by excluding environmental and supply chain management aspects and cross-organizational processes. (Van Looy and Shafagatova 2016) Additionally, it does not have a competitor perspective answering the questions about actions of competitors (Neely, Gregory, and Platts 1995). To conclude, BSC is not a performance measurement template that must be always implemented in the same way for all the organizations in different industries. In fact, the scorecard and its four different concepts can be modified for organization's needs and strategy. (Kaplan and Norton 1993) Even if an organization decides not to directly use BSC, the model and ideas behind it can be used as a basis for further performance measurement analysis (Van Looy and Shafagatova 2016). For example, for European Operations of Nike, Lohman, Fortuin and Wouters (2004) used an

indicator clustering model which resembles BSC but has been modified by additional clusters, sustainability, and people.

2.7. Performance Indicators of Services

In previous chapters, the clear connection between organization's strategy and performance measurement was discussed. When considering specific indicators to execute performance measurement the connection is still there, and it must be maintained when developing indicators. Strategy focus in performance measurement means that chosen performance indicators and their targets are long-term strategy's concrete formulations to short-term actions. The indicators' role is to translate the vision and strategic initiatives into specific guidelines and practices (Kaplan and Norton 1996; Lohman, Fortuin, and Wouters 2004).

Chosen performance indicators should be easy to use and encourage the wanted behavior which will lead to strategy implementation (Neely, Gregory, and Platts 1995). Financial indicators often face the critic that they focus on past performance. If organization has its strategy in the center of performance measurement, in addition to current situation the chosen indicators must also indicate future performance. (Eccles 1991; Kaplan and Norton 1993) In addition, performance indicators cost should not exceed the benefit they bring (Neely, Gregory, and Platts 1995)

2.7.1. Defining Performance Indicators of Services

Balanced and multidimensional performance measurement frameworks are relevant when organization's performance is described as a complex cause-effect system. In practice this means including non-financial, forward looking, and external indicators next to financial, retrospective, and internal indicators (Bourne et al 2000). When adding more balanced indicators instead of only focusing on financial ones, it is even more important to have a

holistic view of the business. This requires including senior management into the indicator developing projects. (Kaplan and Norton 1992)

Previously, organizational performance was presented as a multidimensional concept. These dimensions, stakeholders, context, and time must be kept in mind when choosing performance indicators. Before choosing indicators, stakeholders who are interested in the performance should be identified. Also, context, meaning for example resources and capabilities, industry, and strategy, of the organization must be clear. In addition, timeframe for measurement should be identified.

In the context of services, performance indicators need to be tailored to match the needs of a specific service context. There are no generic indicators that can be implemented for every company to measure the performance of their services. (Jääskeläinen, Laihonen, and Lönnqvist 2014) Having only an organizational approach, and focusing on measurement of inputs, outputs, and costs, will lead to not catching the uniqueness of services and often forgetting to measure for example service quality (Pekkola and Ukko 2016b).

One way to measure service performance is to define and measure the current level and set targets for future. Then the aim of the company is to fill this gap by different actions. This way of identifying current state and setting targets based on that can be used to measure the performance of for example internal processes and market share. (Lindholm, Laine, and Suomala 2017)

2.7.2. Examples of Service Performance Indicators

Performance measurement in the context of services has many similar aspects than performance measurement in product-orientated environment. Performance of services is also a multidimensional topic, but the dimensions vary. Fitzgerald et al (1991) identified six performance measurement dimensions in service context. These are competitiveness,

financial performance, quality of service, flexibility, resource utilization and innovation. First two describe the result of the action and latter four are the determinants for the result. Under the dimension Fitzgerald et al (1991) presented they also proposed possible indicators which are presented below in the Table 1.

Table 1. Performance measurement dimensions and KPIs in service context (Fitzgerald et al 1991)

Dimension of performance measurement	Types of indicator
Competitiveness	Market share
	Sales growth
	Indicators of customer base
Financial performance	Profitability
	Market ratio
Quality of service	Reliability
	Responsiveness
	Communication
	Availability
Flexibility	Volume flexibility
	Delivery speed flexibility
	Specification flexibility
Resource utilization	Productivity
	Efficiency
Innovation	Performance of the innovation process
	Performance of individual innovations

Sofiyabadi, Kolahi and Valmohammadi (2016) studied the importance of performance indicators in a service business company. Their study showed that indicators related to customer and learning & growth perspectives were especially important and should be prioritized. In the customer perspective, the specific important KPIs were related to time and quality of services, timely response to complaints, and customer awareness. In learning and growth, priority KPIs were related to human capital development. In addition, their study found out that in financial perspective comparing price to competitors is a valuable indicator. (Sofiyabadi, Kolahi, and Valmohammadi 2016)

Customer satisfaction is one of the factors affecting service performance from customer perspective (see chapter 2.2). It is created by comparing customer expectations to delivered service. Customer expectation is the target performance which is influenced by customer's

previous experiences and current requirements. Delivered service defines the actual performance. If the target performance exceeds actual performance, customer is not satisfied. If actual and target performances meet each other, customer is satisfied, and expectations are met. If the actual performance exceeds target performance, customer is satisfied and enthusiastic when expectations where excelled. To capture customer satisfaction fully in measurement, organization need to understand that it is formed by combining internal quality and external customer expectations and judged by the customer. Customer satisfaction score or Net Promoter Score are good overall indicators of customer satisfaction, but truly effective measurement requires paying attention to both internal indicators of quality in the service process and external indicators on customer's expectations and the level on which customer feels the expectations have been met. Internal indicators can be categorized in to three groups: indicators related to actual service (such as safety, perceived value, or sustainability of the service), delivery (such as on-time delivery or response time), and organizational aspects (personal characteristics, complaints handling, and transparency) and external indicators on customer's expectations and the level on which customer feels the expectations have been met. External customer satisfaction indicators can be related to topics such as trends in customer complaints, or market trends gathered from external reports. (ISO 2018; Marquardt, Marieta, and Ioana 2017)

How well the customer satisfaction is reached also affects the relationship customer and the service provider can form. Marquardt, Marieta, and Iona (2017) categorized performance indicators on three levels based on the level of customer satisfaction and on what the customer requires from the service provider. On the bottom is the basic level, which should always be cover. It means basic quality for safeguarding customer's basic operations. The performance of this level can be measured by indicators related to service and process knowledge of employees. The indicators can be for example a result of trainings related to specific services or service processes. Identifying service issues and measuring for example technical outages is also another topic of basic needs. On the next level customer requires that the ordered service is delivered in its full extent and how it is described in service level agreement. On this level, customer is properly satisfied, and service provider can expect steady cash flow. The number of cases when the service is not fully delivered and mean-time-to-repair (the time which it takes to solve a customer case) are examples of indicators

on this level. Customer's expectations are exceeded on the highest level where customer requires partnership and innovation, and competitive advantage can be created. Suggested indicators are customer retention by number of contract renewals, customer promotion by number of active recommendations, number of innovations, and employee retention. (Marquardt, Marieta, and Ioana 2017)

Even though, scholars have presented various performance indicators, literature has had only a little theoretical focus to choosing, developing, and using all these indicators (Richard et al 2009). Details regarding operationalization of the performance indicators are not often shared which makes it difficult to compare the research results. (Van Looy and Shafagatova 2016)

3. RESEARCH METHODOLOGY

Research design creates a framework for the methods used in the research. Chosen research design should best support answering the research questions to reach research aim and objectives. Research methods are the practices on how the data is collected and the research problem is later able to be solved. A study can utilize multiple research methods to gather enough data to be analyzed to form a holistic view of the researched phenomenon. Research methods depend on the chosen research design and the research aim and objectives. In addition, researcher's capabilities, and resources, like schedule of the research, affect the selection of methods. (Hirsjärvi, Remes, and Sajavaara 2012, 132, 183 & 185)

Like stated before, even though literature can bring frameworks and ideas on developing and implementing performance measurement in a company, performance measurement systems are not similar in every company. This thesis aims to develop KPIs of services for a case company, so the focus is on the first phase, design, in the development of a performance measurement system which aims to translate strategy into concrete performance indicators. This thesis will follow the ideas and practices of performance measurement development presented more detailed in the chapter 2.5.1. It is preferable to use qualitative research methods and a case study as a research design to answer the research questions. The chosen methods and the outputs of them have been visualized in the Figure 7 below and further opened in this chapter.
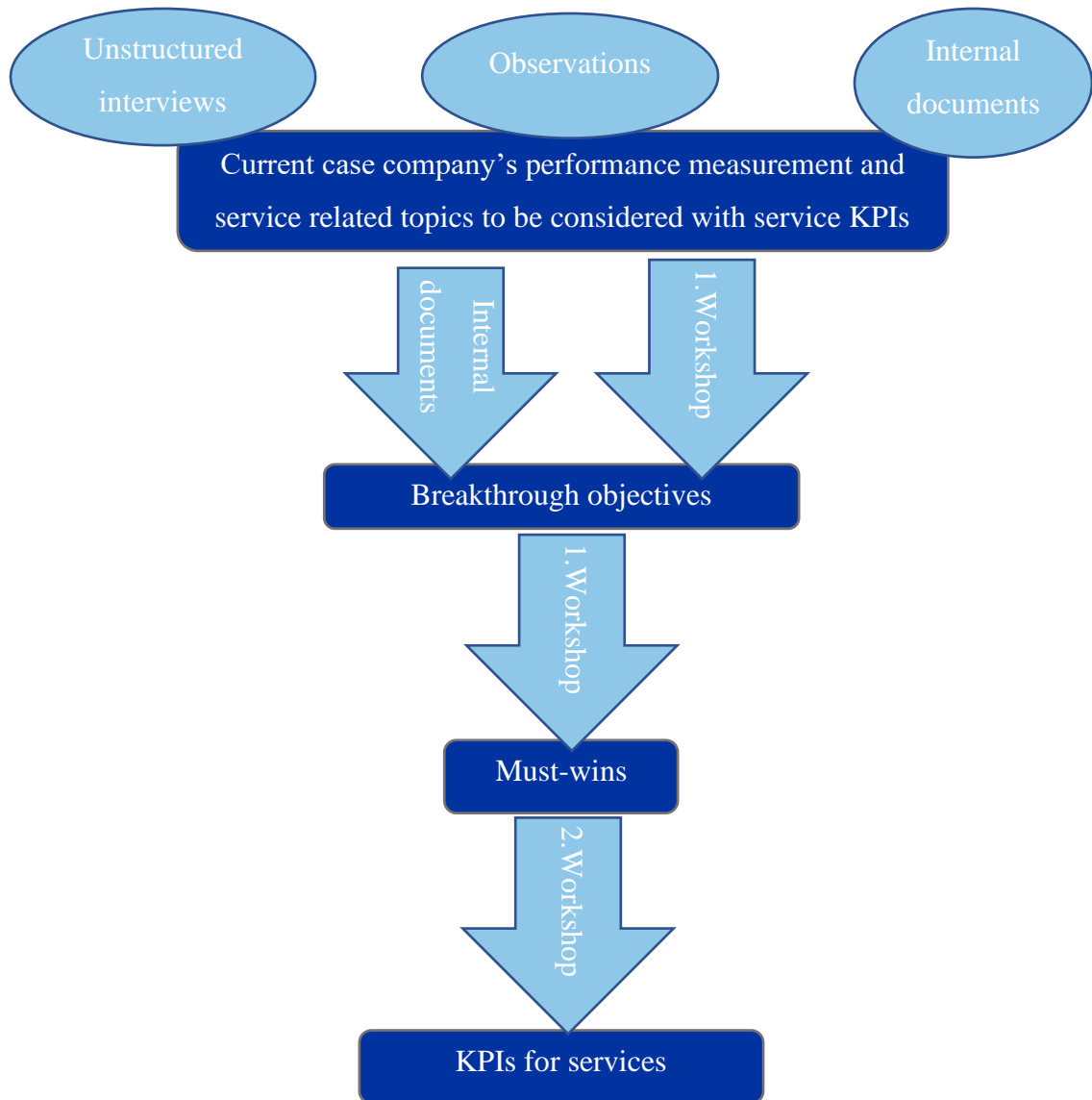
Figure 7. Research process

When the previous organizational strategy was formed in the case company, after the top management had identified the basis for the strategy, like vision and values, strategic initiatives, objectives, must-wins, and KPIs were formed in workshops and through discussions with various people. Now the case company is developing its service business, and this similar approach to use workshops and have multiple people from various functions involved is also used to define KPIs, breakthrough objectives, and must-wins. In addition to workshops, other methods are also used. Unstructured interviews, observations, and internal documents are used to understand the current state of performance measurement in the case company and to identify the topics to consider in the workshops. Workshop and internal

documents are used to define breakthrough objectives. For must-wins and KPIs, workshops were the main methods.

3.1. Research Design – A Single Case Study

Qualitative research has a comprehensive approach to the phenomenon which is under research. The research phenomenon is understood as a complex topic which must be viewed holistically. A qualitative research is supposed to rather reveal new facts of the phenomenon than test existing hypothesis and theories like in quantitative research. A qualitative research is usually conducted in the natural environment of the phenomenon to best research its true nature. The research group is intentionally formed, and random selection of participants is not usually used. (Hirsjärvi, Remes, and Sajavaara 2012, 161 & 164)

A case study research is an empirical investigation to usually study a contemporary phenomenon qualitatively or quantitatively with an interest to gain in-depth knowledge. When the case is unique, a single case study can be conducted (Yin 2003, 40-41). Performance measurement of services is not a traditional topic in the case company of this thesis, so the study needs to create in-depth and new knowledge. In addition, performance measurement is highly dependent on its context, being unique in every organization. This creates a unique research environment for this thesis, to which a single case study is an appropriate research design. (Farquhar 2012, 5; Hirsjärvi, Remes, and Sajavaara 2012, 134-135 & 191; Yin 2003, 1)

A case study allows to study a chosen phenomenon in its context which means examining a topic in its real environment where it takes place, such as in a company. This thesis aims to develop KPIs for service performance measurement in a specific case company, so the research is carried out in the case company's natural environment. This means using company's locations and tools to conduct the research and building the materials for interviews and workshops to be in line with company's habits, so that the participants feel

like working in their normal environment. (Farquhar 2012, 5; Hirsjärvi, Remes, and Sajavaara 2012, 134-135 & 191; Yin 2003, 1)

3.2. Research Methods and Data Collection

Qualitative research focuses on gathering non-numerical data and often includes people in the data-collection. A case study can be carried out by using multiple research methods which should give the people participating in the research a voice and let them state their opinions. Also, when designing performance measurement, different approaches can be used to reach the goals of design phase. *Asking* managers their requirements to performance measurement system and analyzing the needed information through interviews or group discussions is commonly used approach. *Planning* methods include understanding the context of the organization and identifying the key success factors to which indicators must be developed. Information can be also gathered from *existing reports*. (Lohman, Fortuin, and Wouters 2004) The research methods for this thesis are observations, unstructured interviews, analyzing existing internal documents, and two workshops. Unstructured interviews and workshops focus on *asking* and *planning*, and observations are used to understand the context of the case company.

A case study can include methods to gather data from both primary sources, and secondary sources. (Farquhar 2012, 5; Hirsjärvi, Remes, and Sajavaara 2012, 164, 182 & 186) In this thesis, observations, unstructured interviews, and workshops give new and direct data from the resourced phenomenon, services performance measurement in the case company, so they are primary sources. Internal documents are secondary sources since they are existing beforehand but analyzed from this study's point of view. The research was conducted between August and December 2021.

Qualitative research often begins by mapping the environment where the research is conducted (Hirsjärvi, Remes, and Sajavaara 2012, 181). In this thesis, environment of the research was mapped in theory from previous literature and in practice by observing the case

company, having internal unstructured interviews, and analyzing internal documents related to services and service strategy. Sample size does not have a standardized value, but the size is sufficient when the data is saturated, and it gives theoretically significant results. The level where saturation is met does not need to be defined in advance. Thereby, in qualitative research methods, like interviews or observations, can be repeated as many time as is needed to reach data saturation. (Hirsjärvi, Remes, and Sajavaara 2012, 164, 182 & 186) Based on the original research plan of the thesis, observations and analyzing documents were carried out throughout the research period. However, it was noticed during the research that observations and internal documents were not alone able to give enough in-depth data related to performance measurement and services in the case company. Since, the environment of the company and service strategy was not yet clear, unstructured interviews were also introduced as a research method. They can be used to create a natural environment for discussion with a single, a pair or a group of participants, and to find out the participant(s)'s opinions and views on the research topic. The specific topic of the unstructured interview can change during the interview. (Hirsjärvi, Remes, and Sajavaara 2012, 209-210) The data collected from the interviews supported and complemented other methods.

Observations, unstructured interviews, and analyzing documents is used especially before the workshops to gather data. Researcher creating emotional attachment to the researched topic can create issues with their objectivity (Hirsjärvi, Remes, and Sajavaara 2012, 213). In this thesis, the researcher's and the case company's connection may create bias. However, using workshops also to validate the data gathered by observations, unstructured interviews, and analyzing documents with the workshop participants will reduce the possible issues with declined objectivity of the researcher.

3.2.1. Interviews, Observations & Documents

The discussions related to current performance measurement practices, performance measurement design, and its link to strategy should be documented to gain all the valuable information on current indicators and development needs (Lohman, Fortuin, and Wouters

2004). Observations and relevant notes from interviews and documents were collected to a file by writing down the date and place, the person under observation/the interviewed person/the internal document, and summary of the observations, interviews, or relevant data from internal documents. The documentation was later used when analyzing the collected data. Summary of these methods and had events are presented in appendix 1.

Original research plan did not define in detail which topics these methods must cover, or how many times the methods must be repeated. During the research process, interviews were booked, observations were done, and documents were found. Often one research event, for example an interview, gave an input to have a next one when an interview participant suggested to also include someone else to the research or observations left something unclear and other methods were needed. Altogether, the researcher held six unstructured interviews, did observations from six events, and used two internal documents.

3.2.2. Workshops

Workshops can be used in qualitative research as a research method to collect valid and reliable data. It is especially useful when the research is on future-orientated, complex, and unique processes and the results are unpredictable. (Ahmed and Mohd. Asraf 2018; Ørngreen and Levinsen 2017) Performance measurement depends on the context, so for performance measurement design phase, Neely et al (2002) suggest using multiple facilitated workshops for identifying key objectives, and for defining and agreeing indicators. Other methods to build consensus can be interviews and documents (Lohman, Fortuin, and Wouters 2004). Considering the research aim and objectives of this thesis and their complex, future-orientated, and context related nature, workshop is a suitable research method complementing other three chosen methods.

Workshop is a method where a selected group of people solve a problem, acquire new knowledge, or create new ideas through actively participating to interactive discussion and to relevant problem-solving methods. The issue of the workshop is previously defined, but

the participants are usually expected to come up with new and fresh solutions. The workshop plan can be carefully defined and followed, or it can be reorientated during the workshop against new and unpredicted findings. (Ørngreen and Levinsen 2017) In this thesis, the goals of the workshops were clearly defined beforehand and communicated to the participants in the beginning of each workshops. Also, the agendas for the workshops were planned in advance, but after the first workshop the second workshop's agenda was modified to better follow were the first one had ended. Participants were expected to have the presented background information (RQ 1.1 and 1.2) in mind but come up with new and fresh ideas and present their point of views actively to the group.

The assigned team analyze their business, reassess strategy, and identify stakeholder needs. The team should discuss about the current system, the development of a new system an also about using the system (Lohman, Fortuin, and Wouters 2004). In the first workshop of this thesis, the key findings from literature for performance measurement in service environment (results for RQ 1.1), and key findings from observation, interviews, and documents for case company's current measurement practices and their relation to service KPIs (results for RQ 1.2) were presented in the workshop to discuss and validate them together with the workshop participants and to give a basis for service performance measurement design. After analyzing current system, the results should be used to identify strategic objectives, and then defining appropriate indicators (Bourne et al 2000). In this study, the first workshop was organized to define background information for the performance measurement, breakthrough objectives, and must-wins, and ideate topics of KPIs. The second workshop was used to validate the breakthrough objectives and must-wins defined in the first workshop and to define and validate the KPIs. The two workshops were held in November 2021. The five main phases in the workshops are visualized also in the Figure 8 below. The figure also presents the case company's five strategic initiatives: balance, customer, sustainability, improvement, and innovations. These are further opened in chapter 4.1.

STRATEGY	Balance	Customer	Sustainability	Improvement	Innovations

BREAKTHROUGH OBJECTIVES **1. Workshop** **MUST-WINS**	1. Background information for the performance measurement 2. Breakthrough objectives for services				
	3. Must-wins for services				
KPIs **2. Workshop**	4. Ideas for dimensions/ topics of service KPIs				
	5. KPIs for services				

Figure 8. Five main phases of the workshops

Workshop participants are usually carefully selected which increases the possibility to gain rich information from the workshop (Ahmed and Mohd. Asraf 2018). The participants share a common domain or a common agenda. A common domain can mean working in the same organization or field. The amount of workshop participants is usually kept small to give everybody time to share their ideas. (Ørngreen and Levinsen 2017) The workshops' participants in this thesis are all working in the case company. The group was decided together with the case company's representative and validated with a few other members. To build a complete picture of the current situation and used indicators, having a cross-functional team working with performance measurement system design is preferable (Lohman, Fortuin, and Wouters 2004). The workshop participants in this thesis consisted of management level personnel who had strategic view, knowledge of commercial side in general, and/or had been involved in service development. In addition, the group had members who have insight from financial aspects, KPIs in general, and business intelligence in the case company. The participants were also chosen so that the group would have insights from each case company's strategic initiative. However, in the first workshop it was noticed that the chosen group was lacking deeper understanding of topics related to innovation. Since one of the management and one of the finance representatives were not able to attend the second workshop, it was agreed together to include a person with innovation experience to the second workshop. The size of the group was six in the first workshop and five in the

second one. The facilitator of the workshops was the owner and writer of this thesis. The participants have been listed and described in a Table 2 below.

Table 2. Summary of the workshop participants and the area of their role on the organization

1. Workshop		2. Workshop	
Participant	Focus on the case company	Participant	Focus on the case company
1.	Management	1.	Management/Commercial
2.	Management/Commercial	2.	Commercial/Innovation
3.	Management/Finance	3.	Commercial/Services
4.	Commercial/Services	4.	Commercial/Business intelligence
5.	Commercial/Business intelligence	5.	Finance
6.	Finance		

Workshops strongly engage participants and the facilitator by collaborative conversation and constructive feedback where facilitator ends up also being part of the research. This interactive approach creates trust between all the people in the workshop which encourages participants to share rich information and create new ideas. Persistent nature of data collection carried out through workshop also increases the chance to gain deep knowledge. Strong engagement of participants and facilitator and persistent observation increase the credibility of a qualitative research and support the argument of workshops being a relevant research method. (Ahmed and Mohd. Asraf 2018) Workshops as a research method in this thesis support the aim of the thesis and answering the research questions. Participants are internal people of the case company, but they have different backgrounds and positions which enables to gather deep knowledge from different perspectives. Workshop methods were created so that they support interactive discussion and encourages participants to create and share their new ideas.

On the other hand, there is still limited amount of people working on the topic in the workshop. The participant group is representing strategic and management level of the organization, and financial views which leaves out the operating levels and other functions' views. However, focus of the thesis is on higher level, organizational performance, which requires strategic views. In addition, the research schedule, and busy schedules of the employees in the organization demanded to have a fixed number of people, and only two workshops.

Workshops have usually a limited duration. (Ørngreen and Levinsen 2017) The duration of the first workshop is two hours and of the other one hour. Participants did not have any pre-readings, but all of them had been involved in the research already before through some of the other used methods. The first workshop started by the facilitator sharing the key insights for RQ 1.1 and RQ 1.2. Then these topics were shortly discussed together with the participants, but there did not come up topics that should have been modified or updated. The workshop itself had four topics on the agenda like visualized in Figure 8. Five main phases of the workshops The used methods to reach the wanted outcomes for each topic will be presented next. More detailed questions and tasks that were given for the participants during the workshop are presented in appendix 2.

Background information for the performance measurement design was decided together with the workshop facilitator and participants. The facilitator presented a suggestion which the participants were given a chance to modify. Other methods, like interviews and looking for common practices from literature, were used to gather a suggestion for background information. Suggestion included strategy, timeframe, and stakeholder related topics which affect and create a basis for the workshops and service KPI development. The suggestion was modified with the participants by having an interactive discussion and jointly updating the suggestion.

When the background information was clear to everyone, the focus shifted to second topic on the agenda: breakthrough objectives for services. There methods included having existing material for the breakthrough objectives as a starting point for the discussion and complementing it with participants' ideas. Participants were given a printed strategy house which they used also with must-wins. A simplified version of the strategy house is presented in Figure 9. Participants were first asked to focus on the breakthrough objectives and their existing material individually. Then the ideas were collected to a joint strategy house and discussed together. A shared view and the breakthrough objectives themselves were formed by everyone presenting their ideas, completing others' ideas, and collecting the main topics together. Before moving to must-wins, defined breakthrough objectives were analyzed and validated together.
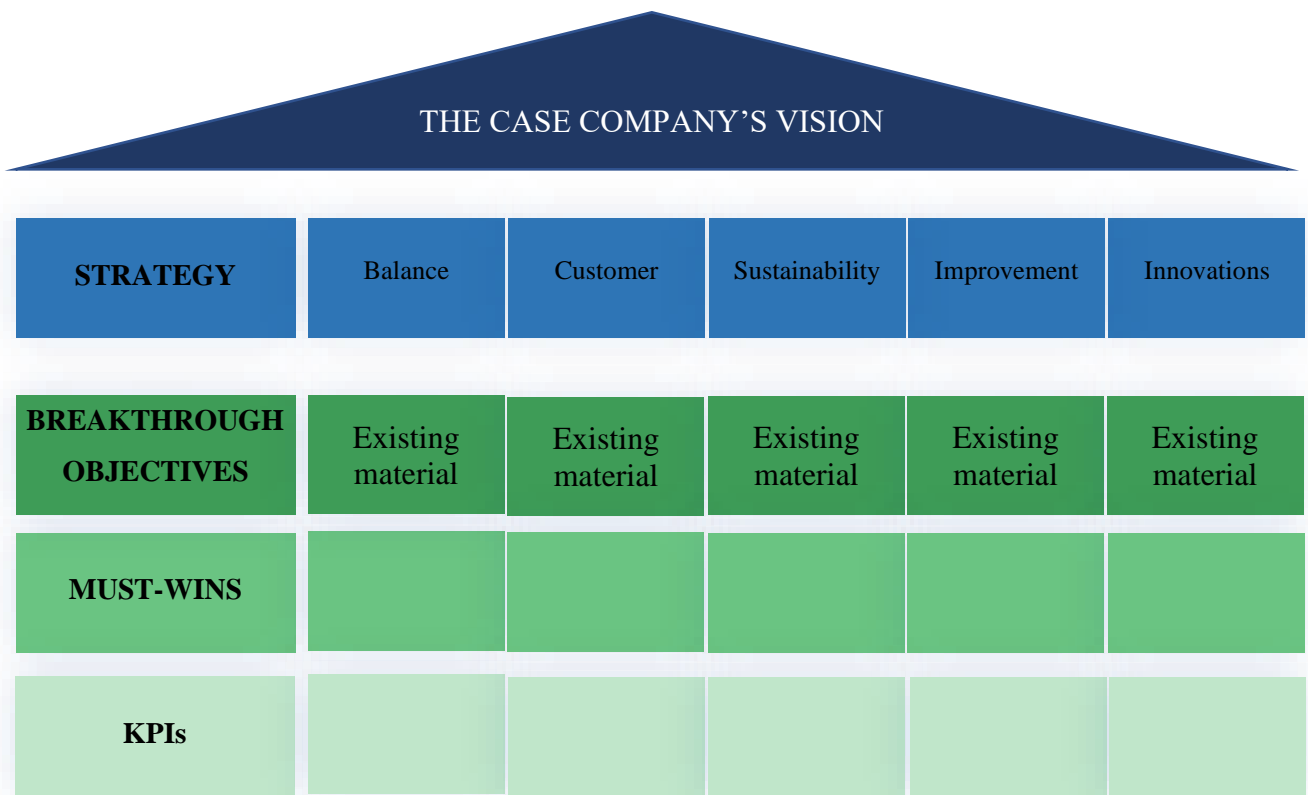
Figure 9. A simplified version of the strategy house used in the workshops

Must-wins were also worked with the strategy house like in the Figure 9. There was no existing ideas for must-wins, so the ideation started from scratch. Participants were first asked to individually consider the most critical things that need to be conquered to reach breakthrough objectives. Then the ideas were collected and discussed together. The focus was to find a consensus with a few specific and tangible enough must-wins under each strategic initiative. After identifying the must-wins and validating them with the participants, the workshop was finalized with everyone ideating topics and dimensions for possible KPIs, or even writing down their specific KPI ideas. These were collected under each strategic initiative, but the discussion continued in the second workshop.

The second workshop focused on updating the output of the first workshop and identifying the KPIs. A shared view among scholars in performance measurement system and KPI design is to compare existing indicators with desired ones. This helps to understand in the

design process, which indicators should be kept, and which are not relevant. Also, this way the existing gaps and needs for new indicators can be identified. (Lohman, Fortuin, and Wouters 2004) This method was also used in the second workshop. The facilitator had used other methods to collect a list of case company's existing indicators that could be relevant for services too. The list was complemented with ideas from the literature. The participants were given a printed strategy house filled with the validated outcome of the first workshop (breakthrough objectives, and must-wins), their ideas for KPIs and their topics, and a list of existing indicators in the company and possible ones from literature. The participants were asked to consider this existing material and highlight which KPIs they would have under each strategic initiative. They were also able to share their other KPI ideas. The KPIs were then together discussed, and the consensus was founded for the KPIs.

3.3. Analyzing the Collected Data

When the data for a research has been collected using qualitative methods, the analysis can be done throughout the research, but it should be started at least when all the data has been collected. When using qualitative methods, describing, categorizing, and combining collected data can be done during the research and new data can be added when collected. When using existing documents, they must be analyzed with caution. The data often needs to be modified and combined with other documents or data collected by other research methods (Hirsjärvi, Remes, and Sajavaara 2012, 189, 223 & 224) In this thesis, observations, interviews, and documents were analyzed during the process already before the workshops. The collected data was used to understand the case company's environment, service strategy, and current situation and needs of performance measurement. The data collected from existing documents was updated to match the data collected from observations and unstructured interviews.

The data of the case company from different sources was analyzed, combined, and categorized into themes. With a summary of the literature review, the themes were presented in the first workshop and the summaries were validated together the with the multi-functional

workshop participants who had the most up-to-date knowledge of service strategy and performance measurement. In addition to a basis for workshops and performance measurement design, the collected and validated data from observations, interviews and internal documents were used for describing the case company, its service strategy, its current state, and needs in performance measurement in the next chapter 4 and later answering the RQ 1.2.

In their literature review, Ørngreen and Levinsen (2017) argued that literature does not explain how the workshop materials and results can be analyzed. There is some literature on how to facilitate workshops and present the outcomes, but the analyzing techniques are not widely showed. They suggest that the workshop results should be gather in collaboration and be written down. In this thesis and in the organized workshops, the discussion was documented by everyone writing their ideas on paper, collecting them together, and collecting the decided and validated items together to a virtual strategy house. After each workshop, the facilitator documented all notes and other written information to a digitalized form.

The workshop results were validated with the participants and also later with the case company's representative. The results were also analyzed by comparing them to the results of other methods, like existing performance measurement practices in the case company. They were also compared to key findings from literature review related to service business needs and to performance measurement of services.

4. EMPIRICAL RESULTS AND FINDINGS

This chapter presents the empirical results and findings of this thesis. The findings are based on the case company related data which was collected through observations, unstructured interviews, internal documents, and workshops during the fall 2021. First will be presented the results of observations, unstructured interviews, and internal documents. This data was analyzed, combined, and categorized into four themes: services now, services in the future, performance measurement in general, and performance measurement of services. These themes with the results were presented in the workshop and validated with the participants. In this chapter, the first two themes will be presented first in chapter 4.1 Case Company and Services with also general knowledge about the case company and its strategy. This is followed by presenting the results for current performance measurement in general in the case company in chapter 0

Performance Measurement in the Case Company. These first two chapters focus on the research framework's outermost level, the environment of the case company. The results for performance measurement of services are presented in chapter 4.3 Performance Measurement of Services which begins describing the research frameworks second level. The last chapters present the results of the workshops: breakthrough objectives, must-wins, and KPIs. They continue describing the set of KPIs and also present individual KPIs.

4.1. Case Company and Services

The manufacturing case company's heritage and headquarter is in Finland but it operates globally with around 400 million euros yearly net sales. The case company is operating in chemical industry offering products for manufacturing industry and private consumers. Chemical industry is affected now and in the future by megatrends such as sustainability and digitalization. Stricter regulation and having a look on the whole lifecycle of products affects chemical industry but also industries of its customers. Increasing digitalization and virtual presence are required also from chemical companies and their customers.

Customer and sustainability are the key topics in the case company's vision. The case company's current organizational strategy target is to grow and be profitable. The target is to be reached by focusing on strategic initiatives on five themes: balance (financial and non-financial), customer, sustainability, improvement, and innovations. The case company defines these more detailed, but these words will be used in this thesis to describe the nature of each initiative. Under the strategic initiatives, the case company has identified breakthrough objectives, must-wins, and KPIs. The strategy needs to be reflected in all the actions of the company.

The case company has had a strong focus on sales and development of products. Services have been offered mainly to B2B-customers and without a broader conceptualization or management of services. Lately, the case company has begun developing and conceptualizing its service offering to be able to focus more on total solutions and value-

selling without forgetting profitability. The company aims to be more customer-centric in all its actions. Case company's competitors have also started to focus on service development. However, the competition in the industry is not yet too tough and industry in general is still quite product-orientated so there are many service innovations still to be discovered and the case company can gain competitive advantage through services.

Service development and reaching future goals to become more service orientated company require investments and changes in the organization. The case company has recognized topics that need focus and development, so the organization is able to meet its service-related target. These are related to organizational aspects, people, digitalization, and portfolio. Examples of more detailed topics are people's mindsets, competencies, data usage, and service conceptualization. Existing resources are related to good and long customer relationships, experience in offering services, valued brand, and suitable organization structure for services.

4.2. Performance Measurement in the Case Company

The case company of this thesis does not follow any specific model in performance measurement but connects indicators strongly under its own strategic initiatives. Performance measurement, the measurement process, KPIs, defining them, and analyzing them depend a lot on the function. In general, performance measurement is strongly related to project governance, and the case company uses a project management tool which also allows projects to define and follow their own KPIs. Functions may use also other systems and tools to define and follow KPIs. For example, sales uses common KPIs related to past topics such as sales volume, or future-looking topics such as sales leads. Many of the databases used in sales are constantly updated so a lot of data is available close to real-time, but many KPIs are analyzed monthly or every quarter. More finance related KPIs can be related for example to profitability. Marketing on the other hand conducts surveys on customer satisfaction yearly or every other year and measure for example overall satisfaction and satisfaction to product quality.

In the case company, the performance measurement begins by setting goals which are in consistent line with the organization's strategy. The goals are then broken down into smaller steps for example as yearly milestones, which are defined also by countries and/or by matrix business units. Then, actions that are required to reach the goals are defined by countries and/or matrix business units, and performance is viewed through milestones. Performance measurement development process in the case company is not always similar and depends also on the function.

Lately, KPIs were defined for the case company's one specific function which already had identified organizational strategy related goals for the function. One employee had a task to define KPIs for the function and act as an interviewer. Since the strategy and function specific goals were already defined, the KPI development started with interviewing relevant people and combining the collected data. Interviews were held mainly as 1-to-1 discussions and one interview as a group discussion with two people and the interviewer. 1-to-1

discussion were suitable for collecting information, but the group discussion made the participants challenge each other more for example on operationalization of the KPIs and country division which was needed for a holistic view of performance measurement. Interviews were not very structured which was sometimes challenging but the high professionalism of the participants helped to gather enough high-quality information. The interviews revealed suitable indicators which some can be implemented right away. Other were found out to not be yet suitable for implementing because of limitations with available data. Interviews did not reveal how many KPIs exactly would be appropriate for the function's needs.

4.3. Performance Measurement of Services

Service performance is not yet measured in the case company. The findings about the service performance measurement from unstructured interviews, observations and documents are visualized in Figure 10. When the measurement is possible, it should be connected to the company's strategy which is visualized in Figure 10 by having the case company's five strategic initiatives as a base. Performance measurement should focus on profitability, have customer views, and include indicators measuring service quality. These focus areas are visualized by circles on top of strategic initiatives. Performance measurement of services has also some requirements in the case company like integrating services into internal processes and databases. In addition, efficient service performance measurement demands tight cross-functional working and sharing resources. These requirements are visualized by yellow arrows on Figure 10.
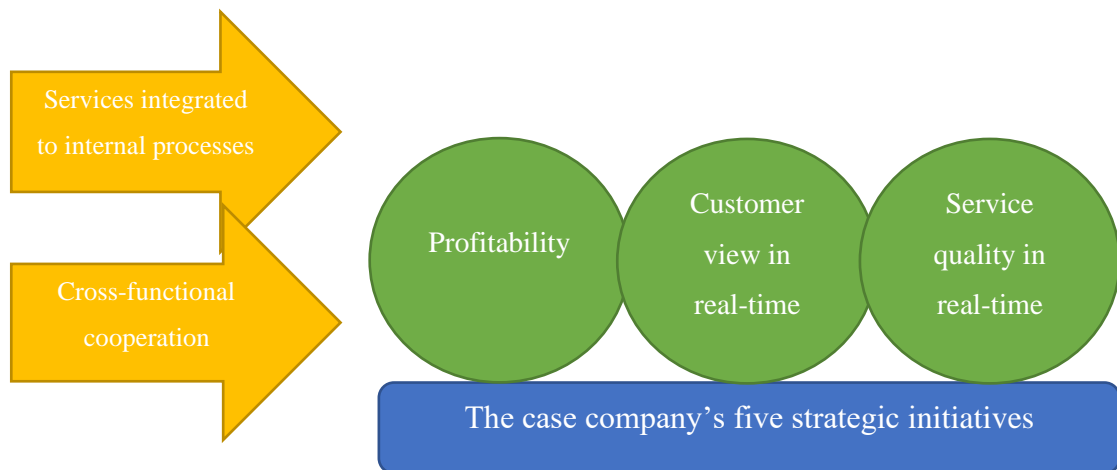
Figure 10. Key findings and requirements in performance measurement of services based on interviews, observations, and internal documents

In the case company, there are many existing processes and measurement practices that can be implemented also for service performance measurement. Challenges were identified especially on including indicators with a customer view or focus on quality. Individuals or specific teams might measure these closer to real-time, but currently these are systematically and in an organized way measured quite rarely. When considering the nature of services, it was noticed that measuring topics like customer satisfaction and service quality should be done more real-time. Implementing this requires cross-functional cooperation since the services might be provided by various functions, customer interaction organized by sales, but the tools for measurement could be provided by for example marketing.

In the first workshop, the background information for performance measurement design was decided by the participants. The facilitator's suggestion included strategy, timeframe, and stakeholder related topics which affect and create a basis for the workshops and service KPI development. These suggested topics were using the case company's strategy and five strategic initiatives as a base, choosing the current ongoing organizational strategy period as a timeframe for the measurement, and considering the case company and its customers as the primary stakeholders for the measurement design. The participants agreed to add two other external stakeholders and highlight that the case company means considering the company as a whole and cross functionally. They did not have any other topics they wanted to add. This information created the frame for defining breakthrough objectives, must-wins, and KPIs.

4.4.Defined Breakthrough Objectives

Breakthrough objectives are organization targets set to reach organization's vision. They are stretched targets that cannot be reached by doing business as usual. They explain the "what" is required to meet the vision and strategy, but they do not answer "how" it is done. Achieving breakthrough objectives are met with multi-functional teams and support from management team. (Lean Methods 2015) In the workshops, this definition was also presented to the workshop participants who presented different functions and management of the company.

Breakthrough objectives were defined and validated for each strategic initiative. The workshop modified the existing material, and the end results include topics from the material. Additional topics were also added, and some topics were removed. The results were formed in the given time in the first workshop, and the participants did not want to update them anymore in the second workshop. The facilitator of the workshops maintained as guiding the discussion and giving everyone a place to present their ideas. The facilitator documented the results and did not attend to the discussion of the topics but focused more on guiding the discussion so that the workshop reaches the goal to identify well defined breakthrough objectives. Balance, customer, and improvement got two objectives, sustainability one, and innovation three. The exact breakthrough objectives won't be presented in this thesis, but the themes of the objectives will be described.

Balance includes breakthrough objectives related to non-financial and financial topics. The identified objectives are about standardizing services and including them to solution offers, and also focus on profitability. Customer initiative has two objectives related to developing and visualizing value of services. For sustainability, one breakthrough objective was identified, and it is related to sustainable services. Improvement initiative has objectives related to competitive advantage and offering services for different parts of the case company's value chain. Innovation got the most objectives, which are focusing on innovative services, co-creation of services, and service models.

4.5. Defined Must-Wins

Must-wins are the most critical things that a company must conquer to reach its strategic objectives. Usually, companies define three to five must-wins that must have a real impact on the business when accomplished. In addition, most of the decided must-wins need to be market-orientated. They should also create excitement by being challenging and winnable which can mean having both, defensive (winning means avoiding catastrophes) and offensive (taking over new markets or developing new solutions) battles. To be able to bring the must-wins into measurable actions and targets, must-wins must be specific and tangible enough. (Killing, Malnight, and Keys 2006, 14-19)

The definition above was also presented for the workshop participants. The must-wins were mainly formed in the workshop, but they were updated in the second workshop mainly based on the ideas that came from the new participant. The facilitator gave everyone space to share their ideas and guided the communication so that the focus was kept on must-wins and not on overall strategic topics. The facilitator documented the discussion and defined must-wins and challenged the participants to focus on defining tangible and specific enough must-wins that are linked to breakthrough objectives and company's vision. In the second workshop, a few must-wins were updated to be even more tangible and clear than was defined in the first workshop. Overall, the workshops resulted to having two to four must-wins under each strategic initiative. Like in the case of breakthrough objectives, the specific must-wins will not be presented but the topics they cover are described next.

Four must-wins were identified for initiative balance. These focus on developing service concept, the case company's portfolio, the performance measurement system to support services, and legal topics. Customer initiative's must-wins cover two topics related to competences supporting customer centricity and services and creating value through services. Three identified sustainability must-wins are focusing on regulation, KPI work, and the case company's ecosystem. Also, improvement got three must-wins of which two cover external topics related to market and competitor knowledge, and the third focuses on internal

competences and mindset. Innovation initiative resulted in three must-wins focusing on innovation process, innovation opportunities, and internal service development processes.

4.6. Defined KPIs

The KPIs were defined in the second workshop based on the ideation on the first workshop, and ideas collected through other methods. The identified breakthrough objectives and must-wins acted as a foundation for KPI development. The case company's service business's goal is to be profitable and customer centric. It was raised in the interviews, that performance indicators should also focus on these topics and include also indicators measuring quality. In addition to general service strategy related information, these key findings from other methods with characteristics of balanced performance measurement and KPI characteristics were presented in the beginning of the second workshop. The participants agreed and focused on these topics on KPI design. The facilitator guided the workshop and documented the chosen KPIs. The workshop was resulted with KPIs but some of the participants had to left before the end so the KPIs were also validated with them after the workshop in an additional meeting.

All together eleven KPIs were identified. Each strategic initiative got one to three KPIs. Balance has two KPIs which targets profitability of services and specific customers. Customer initiative has three KPIs which are customer satisfaction and loyalty of customers that consume the case company's services and hit rate. On sustainability, the identified KPI is the impact of services on the case company's sustainability targets. Improvement KPIs were quantified unique selling propositions and rating of internal competences. Innovation KPIs were number of service innovations in the pipeline and launched, and number of customer service projects.

4.6.1. Categorization of the KPIs

The identified KPIs include indicators from different categories: non-financial, financial, internal, external, retrospective and future-looking indicators. With some indicators, like profitability, it is easy to see that the indicator is financial, focuses on internal profitability, and measures past events. However, especially retrospective, and future-looking indicators can be difficult to identify. In this thesis, retrospective indicators are KPIs that measure past events that describe what happened, and future-looking indicators measure current or future predictions that describe what will happen. Internal indicator measures the case company's internal topics and processes when external indicator measures topics related to for example customers. In the Table 3 below, can be found all KPIs with their categorization.

Table 3. Summary of the KPI categorization

STRATEGIC INITIATIVE	KPI	Categorization Financial = F, Non-financial = NF, Internal = I, External = E, Retrospective = R, Future-looking = FL
Balance	Profitability of customers	F/I/R
	Profitability of services	F/I/R
Customer	Customer satisfaction	NF/E/R
	Customer loyalty	NF/E/R
	Hit rate	NF/I/R
Sustainability	Services' impact to organization's sustainability target	NF/I/R
Improvement	Quantified unique selling proposition	NF/I/FL
	Competence rating	NF/I/R
Innovations	No. of service innovations in the pipeline	NF/I/FL
	No. of launched services	NF/I/R
	No. of customer service projects	NF/I/FL

All of the categories are represented in the set of defined KPIs. The KPIs are focusing on non-financial, internal, and retrospective topics. Only KPIs under strategic initiative balance are financial and all the others are non-financial. Customer related customer satisfaction and

loyalty are also the only external ones when all the other KPIs focus on internal topics. Improvement and innovations have a few future-looking KPIs focusing on sales and innovation projects on the pipeline. Other KPIs focus on retrospective topics.

5. DISCUSSION & CONCLUSIONS

The aim of this thesis was to propose key performance indicators (KPIs) for measuring performance of services in the manufacturing case company which has begun developing its service offering. This thesis contributed by developing performance measurement of services in the company. Since performance measurement of services was a reasonably new topic for the case company, the thesis started by establishing knowledge on performance measurement in service context in general. Then the thesis focused on analyzing the case company's current performance measurement and identifying its topics that should be considered when designing KPIs for services. The KPIs were formed under the case company's strategic initiatives, but to be able to design specific and tangible KPIs which are connected to the strategy, breakthrough objectives and must-wins for services were also formed since those were not yet existing.

This chapter first discusses the findings through research questions and connects the findings to the existing theory. This is be followed by final conclusions of the study. Then the study's theoretical contributions are discussed, and managerial implications are presented. The last chapter presents limitations and future research topics based on this study.

5.1. Discussion

This chapter discusses the findings of the study through the research questions. It also discusses how the sub-questions were used to answer the main research question. The answers for first two sub-questions (RQ 1.1 and RQ 1.2) are focusing on describing the environment of the case company and service performance measurement development. They also begin linking the environment to the set of KPIs that is proposed. The answer for the third sub-question (RQ 1.3) discusses topics related to the set of KPIs, which is further analyzed and complemented with discussion on individual KPIs when answering the main research question. The sub-questions will be answered first, and the main research question will be answered lastly.

5.1.1. Measuring Performance in a Service Context

The first research sub-question (RQ 1.1) is *what are the special characteristics of services that should be considered when measuring service performance*. Various stakeholders involved in providing services, organization's service-related conditions and nature of services are characteristics that need to be considered when measuring performance specifically in service context. This answer with the research question is also presented below in Figure 11. Richard et al (2009) present three dimensions, organization's stakeholders, conditions (resources, environment, strategy) and measurement timeframe, which affect both organizational and service performance and thus should be considered in performance measurement (Urban 2009). Jääskeläinen, Laihonen and Lönnqvist (2012) considered that different service context, customer orientation of services and various stakeholders involved in providing services are characteristics that need to be taken into consideration when measuring service performance. When combining these views, an answer for RQ 1.1 was able to be formed and it is more detailed opened in this subchapter. The answer is formed strongly based on literature but also supported by findings from the empirical research. For measurement timeframe, literature review or empirical research of this study were not able to give any service specific characteristics, so it is not considered as a service performance measurement specific characteristic. Timeframe of the performance measurement was agreed to be the current organizational strategy period since longer timeframe reduces the risk of fluctuations which is relevant generally in performance measurement.
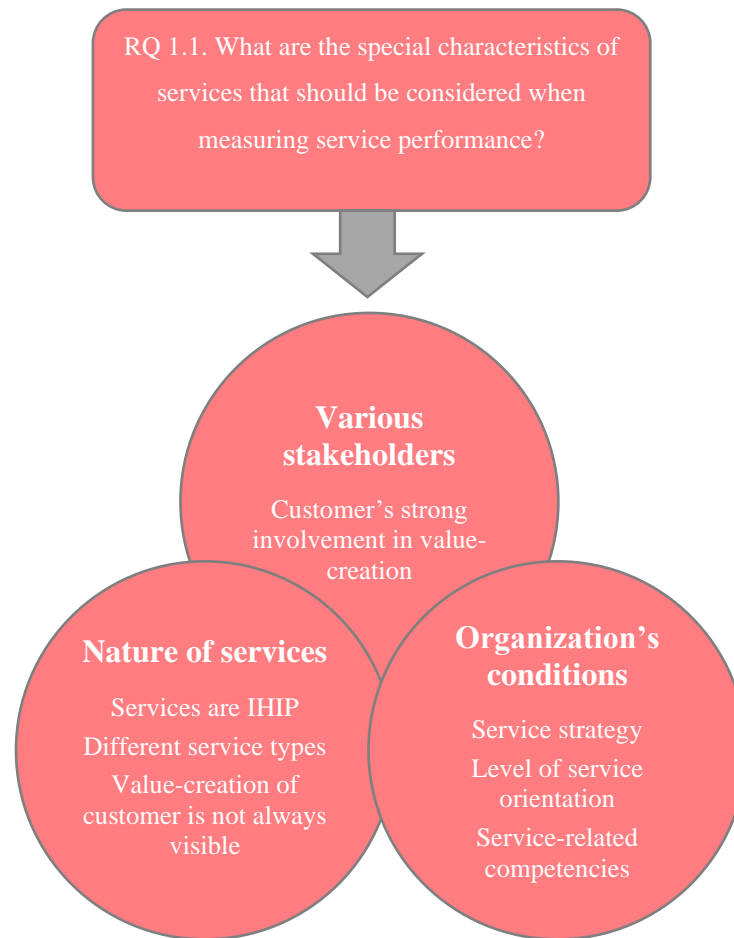
Figure 11. Answer to research question 1.1

Providing services includes various organization's stakeholders, but the identified stakeholders can also vary across organizations (Luiz Artur Ledur Brito and Juliana Bonomi Santos 2012). Stakeholders may have different motivations that need to be considered in performance measurement. The empirical research of this study also supported this since for the background information of performance measurement the workshop participants defined multiple stakeholders and considered them throughout the performance measurement development process. However, given the nature of services and its unique characteristics, service performance is highly dependent on one of its stakeholders, the customer, which was also noticed in the empirical research. Services need to be designed based on the customer needs without forgetting cost efficiency which may be reached through standardization of total or parts of services or internal processes (Salonen 2011; Tuli, Kohli, and Bharadwaj 2007). Main specific factors that construct service performance from customer point of view

are quality of services, customer satisfaction, customer loyalty, and cost of services. (Urban 2009) These topics are considered in the results of this thesis since standardization of services is one of the defined must-wins and defined KPIs include profitability and customer satisfaction.

Nature of services and their value creation process are also different from products and need to be considered in performance measurement. Services are intangible, heterogenic, inseparable, and perishable (IHIP) and these characteristics distinguish them from products (Lovelock and Gummesson 2004; Zeithaml, Parasuraman, and Berry 1985). The role of intangible inputs and outputs are examples of attributes affecting the decision making on what to measure and with which indicators (Jääskeläinen et al 2012). In addition, value of services is often a result of co-creation where different stakeholders join their resources (Lusch et al 2004; Lusch and Vargo 2008). In this thesis, performance measurement development considered the value-creation of the case company's services and the types of services in the case company's portfolio currently and in the near future. These were discussed in the workshops to get a clear idea of what type of services the case company provides and what are practical examples of the services' IHIP characteristics, being for example heterogenic or having intangible inputs.

Organization's conditions, like level of service orientation, strategy, and available service-related competences, also affect service performance measurement. Including services and developing value co-creation through services requires the whole organization's involvement in the change (Lusch, Vargo, and O'Brien 2007). In this study, the service performance measurement development was done together with management and in a multi-functional team. Since adopting service mindset and developing services require that the whole organization is involved, also performance measurement of services was decided to be developed with people from different functions. Having management involved gives an opportunity to get their approval and support right in the beginning of service performance measurement.

In this thesis, most of the workshop participants had been involved in service development before, but services' special nature was openly discussed in the workshops together to keep in mind the differences to products. Organization's service-related competences affect performance measurement development process itself and also the topics which are decided to be measured. The capabilities of the ones developing service performance measurement affects the developing process and the outcome. The competence level of the organization affects the strategy and its goals and through those also performance measurement.

5.1.2. Designing Performance Measurement in the Case Company

RQ 1.2 is *Which topics of the case company's current performance measurement should be considered when designing KPIs for services.* This thesis identified that the case company's existing performance measurement related practices and performance indicators should be considered when developing performance measurement of services. These answers and RQ 1.2 have been visualized in Figure 12. Although systematic performance measurement of services is a new topic in the case company, it does not have to implement totally new performance measurement systems for services. Performance measurement design was started by first assessing the current system which can be used as a basis for further performance measurement development. This way of working was supported by also literature (Bourne et al 2000; Lohman, Fortuin, and Wouters 2004). Whether it is measurement practices, databases or indicators, existing resources can be used to start measuring performance of services. However, implementing might require some modifications to existing practices or cross-functional cooperation. These existing resources can be combined into new practices fitting better for service needs or new resources can be implemented to complement existing ones. Starting the service performance measurement design from evaluating the current system saves resources when existing practices do not need to be discovered again.
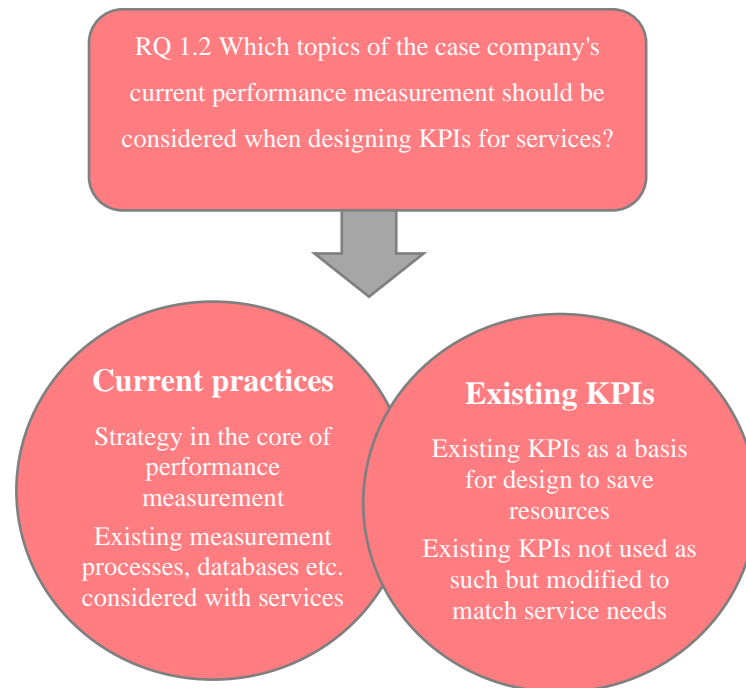
Figure 12. Answer to research question 1.2

The case company of this thesis does not follow any specific model in performance measurement but connects indicators strongly under its own strategic initiatives. Having the organization's strategy in the core of a performance measurement system and specific indicators is a commonly shared view also in literature (Lohman, Fortuin, and Wouters 2004; Medori and Steeple 2000). With the support from theory and the case company's existing practices, organizational strategic initiatives were agreed to be the basis also for service performance measurement. In addition, service-related strategy was considered and later broke down into smaller units by defining breakthrough objectives and must-wins. This idea of thinking first the bigger picture and breaking it into smaller pieces and in the end into KPIs was a method that the case company was used to, so it was a comfortable way to proceed also in this study.

Many details of measurement can be decided later than in the design phase, but these details should not be forgotten in the design phase to avoid designing performance measurement systems that are difficult to implement (Medori and Steeple 2000). That is why current measurement system's details and their possibilities in implementation and in usage of

service performance indicators were discussed in the design phase of service performance measurement system. Even though, the case company's current performance measurement practices have been developed for traditional product business's needs, many of the existing practices can be adjusted also for service performance measurement. It was noticed that many of the current databases and measurement tools can be used for services. For example, profitability is measured in the case company in various ways which could be implemented for services too. Customer satisfaction and quality are common topics to measure in service context and these are already measured in the case company, but quite rarely. The existing practices could be modified to match service needs. For example, more real-time measurement of customer satisfaction could be provided through cross-functional cooperation. Performance measurement of services can be started through these existing practices. At the same time, the case company can start to develop complementing measurement practices to further cover service-specific needs.

The existing indicators were used in service performance measurement design. Existing indicators already have measurement practices in place and if they are chosen for services too, only service-related modifications need to be done. The study included existing indicators from various functions, since service KPIs may have needs that cannot be met by focusing on traditional indicators of functions but rather combining indicators from different ones. Using existing KPIs saved resources in the design phase when it was already known that these are the indicators that have existing measurement practices and are more easily implemented for services. In addition, the participants were able to use the time to evaluate if the indicators match service needs rather than coming up with totally new ideas. However, giving the participants time to also ideate KPIs without existing materials gave good points to the discussion and complemented the existing indicators.

5.1.3. Breakthrough Objectives and Must-wins

The third sub-question, RQ 1.3, is *what kind of breakthrough objectives and must-wins best support implementing the case company's service strategy*. The breakthrough objectives and

must-wins were defined for each strategic initiative of the case company to guide the service business development in the following years. The defined breakthrough objectives are stretched targets that are set to reach organization's vision related to customer and sustainability. Tangible and specific must-wins were defined so the case company is able to reach the breakthrough objectives. To conclude, the defined breakthrough objectives and must-wins match their descriptions presented in the chapter 1.4. In addition to organizational strategy and vision, breakthrough objectives and must-wins are able to catch the service development's strategic goals related to developing customer-centric and profitable services. The answers for RQ 1.3 are visualized in Figure 13. More detailed descriptions of the defined breakthrough objectives are presented in chapter 4.4 and of the must-wins in chapter 4.5. This chapter focuses on discussing the findings and linking them to theory.
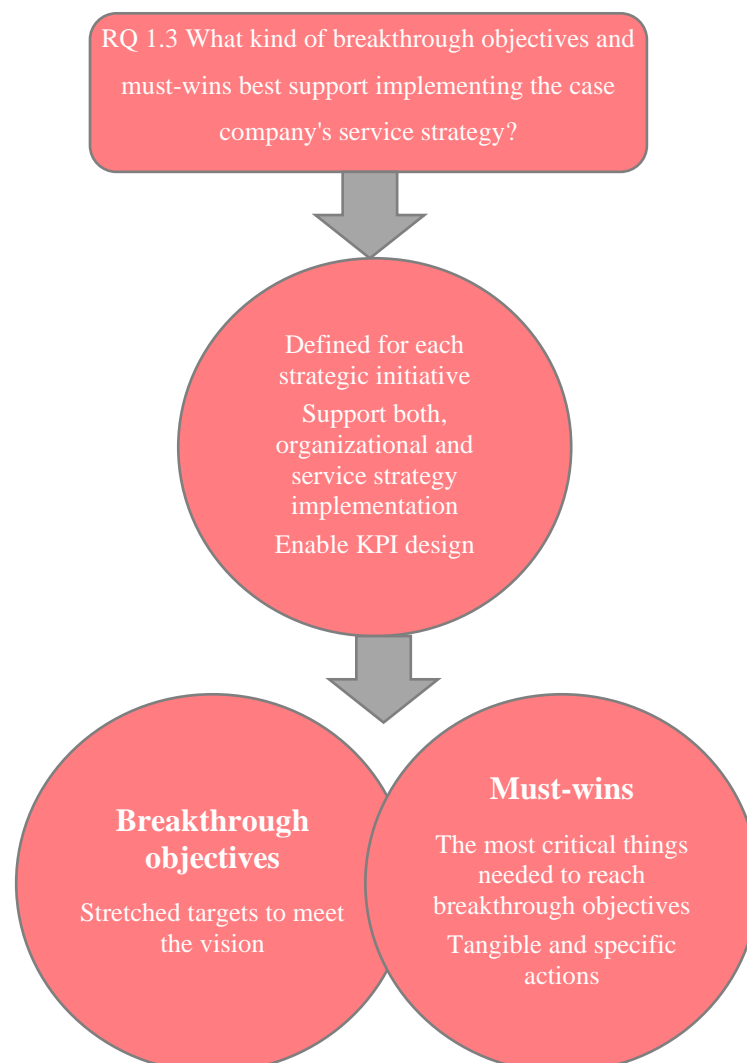
Figure 13. Answer to research question 1.3

The defined breakthrough objectives are answering to "*what*" is required to meet the case company's vision and service strategy (Lean Methods 2015). They are stretched targets to be achieved when reaching for the service strategy's goals and the case company's vision, but they are not easy to reach. Customer and sustainability, the main topics in the case company's vision, are clearly present in two of the strategic initiatives and in the service breakthrough objectives defined under them. However, they are reflected also in breakthrough objectives, which were defined under other initiatives. In addition to organizational vision, also service strategy's goal to be profitable is seen in the breakthrough objectives. The breakthrough objectives consider multiple angles and are linked to strategic initiatives. One clear measure of success was that the workshop participants were able to define must-wins after the breakthrough objectives and link them to each other.

The defined must-wins truly answer *how* the case company's vision and service strategy are reached (Killing, Malnight, and Keys 2006, 14-19). The must-wins are specific and tangible so that they are clearly understood and that the KPIs were possible to be formed. Many of the must-wins are quite challenging, but all of them are still able to be conquered. Most of the must-wins are offensive so they are aiming to create sales and gain competitive advantage. There are also defensive must-wins which focus on avoiding issues. Since the service business development is in its early stage in the case company, the must-wins are focusing on practical topics to be achieved in the following years when building the service business externally and developing internal aspects to match the service business goals.

One objective of this thesis was to break down the case company's strategic service business goals into more specific guidelines and then translate the guidelines into specific actions through KPIs. In order for performance measurement to be able to translate strategic goals to actions (Lohman, Fortuin, and Wouters 2004), the strategic breakthrough objectives and must-wins were needed to be clearly defined. Since this study was able to result in clear breakthrough objectives and must-wins, it was easier to keep the case company's strategy in the core of service performance measurement design. The defined breakthrough objectives offer stretched targets for the strategy and must-wins concrete and tangible guidelines for reaching the strategic objectives. They catch the nature of both, organizational and service

strategy, and were validated to be suitable for the case company's needs with the workshop participants including representatives of the case company's management. It was easier to start designing the KPIs when the higher level and more abstract organizational and service strategy was translated into more concrete actions which need to be taken and thus the success of those need to be measured.

Since the service development is an ongoing project and services do not have strict existing practices, it may be noticed later that the now defined breakthrough objectives and must-wins will need to be updated. The case company sees that it is important to be flexible enough with strategic goals and performance measurement system. If the situation changes or new capabilities are developed, also the breakthrough objectives and must-wins can be further developed.

5.1.4. Key Performance Indicators

The main research question, RQ 1, is *what type of KPIs can be used to measure performance of services on a strategic level in the manufacturing case company*. Using existing material for KPIs and brainstorming new ideas resulted in a balanced set of updated and totally new KPIs that have a strong connection to the company's strategy and answer the service needs. Many of the chosen KPIs have origin in existing indicators which have been modified for service business. These have been complemented by totally new KPIs that are needed to meet the service needs. Since the KPI design included also identifying strategic needs and analyzing them in a profound way, the KPIs are strongly connected to the organizational and service strategy. The answer for the main research question is illustrated in the Figure 14 and discussed more in this chapter.
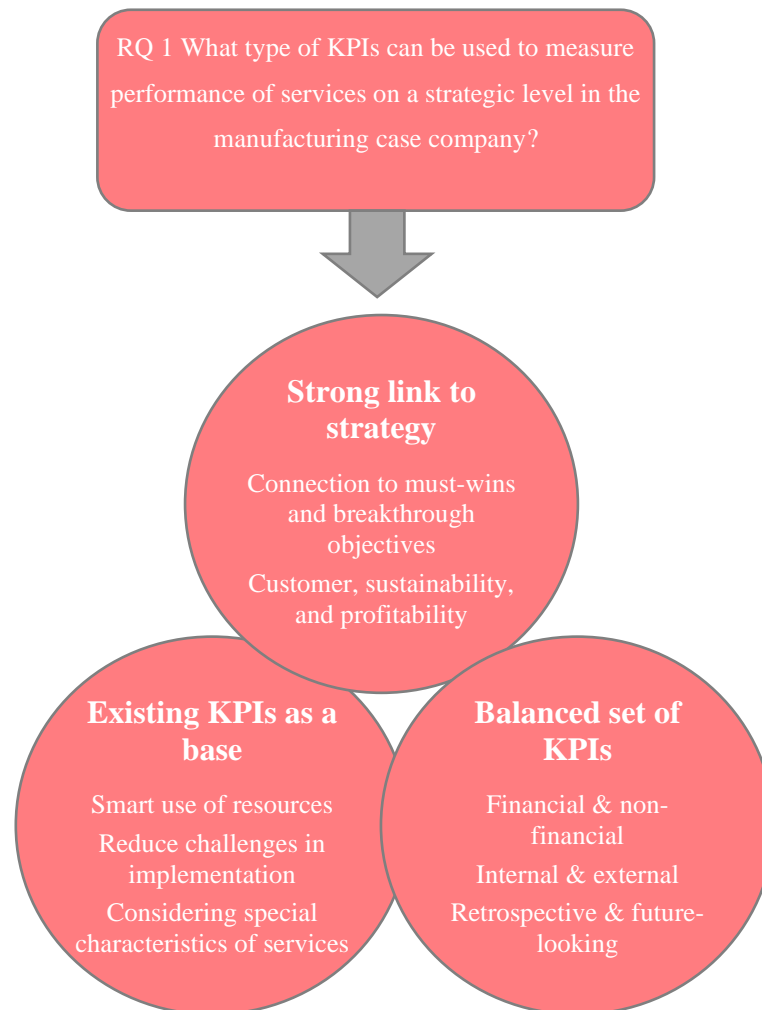
Figure 14. Answer to the main research question, RQ 1

It was discussed before when answering the research question 1.2 that the service performance measurement should consider the case company's existing measurement practices. One of these is having strategy in the core of performance measurement. This is widely shared view among scholars and the challenge often is to keep the strategy focus when designing the indicators (Lohman, Fortuin, and Wouters 2004). Answer for RQ 1.1 also discussed that organization's conditions, including service strategy, should be considered when developing service performance measurement. The KPI design phase considered these topics and the defined KPIs truly have the case company's organizational and service strategy in the core. The KPIs were formed under each strategic initiative after breaking the strategy into smaller pieces, breakthrough objectives and must-wins. The KPIs truly consider the organizational and service strategy's goals related to customer-centricity,

profitability, and sustainability. These topics are directly and indirectly presented in the KPIs.

In the answer for research question 1.2, it was also highlighted that the performance measurement development should consider the case company's existing KPIs and how they are implemented and used. Chosen performance indicators should be easy to use and the cost should not exceed the benefit they bring (Neely, Gregory, and Platts 1995). Considering existing KPIs when designing service KPIs saved resources from the design phase and resulted in KPIs that are possible to be implemented. Many of the KPIs are modified from existing ones so for example the databases or measurement practices are already existing. This enables smoother implementation without forgetting services' special characteristics, like their intangibility or challenging value-creation processes. The set of KPIs is efficient but does not compromise in KPI quality and includes new KPIs for crucial topics. The set is realistic since the KPI implementation does not require a lot of new resources and capabilities from the organization.

Many of the KPIs can be implemented to the existing measurement processes with fewer resources which releases resources to implement those few new but crucial service KPIs. An example of these new ones are the KPIs under improvement. There are no existing process for the two KPIs under it, but they are seen crucial in order to develop services. When designing KPIs before in the company for another function, it was noticed that KPIs without existing measurement practices are difficult to implement and the implementation may be postponed. Implementing the KPIs that require new resources may face difficulties also in this case. Successful implementation of these KPIs requires cross-functional operations and enough time and motivation for planning and testing.

The case company does not follow any specific performance measurement model, but it can be noticed that the designed set of service KPIs include guidelines and characteristics presented also in performance measurement literature and in existing models like BSC. For example, customer and learning & growth (including innovation) perspectives are included in strategic initiatives and thus in the service KPIs of the case company. In addition to

financial, retrospective, and internal indicators, the defined KPIs include non-financial, future-looking, and external indicators, so the set of KPIs is balanced and multidimensional (Bourne et al 2000; Kaplan and Norton 1992; Van Looy and Shafagatova 2016).

However, the focus is on non-financial, internal, and retrospective KPIs. Since the case company is in the beginning of its service development journey, it is understandable that it wants to focus on non-financial KPIs because it does not yet create a lot of revenue from services. Internal focus is also expected because the case company is focusing on building its internal processes and capabilities needed in service business. However, wider external view could reassure the case company that the internal development projects are correct, and the company is going to a correct direction. In addition, more future-looking KPIs could improve the service development process. However, the case company has more capacity to implement retrospective KPIs, so it can be seen as a strategic choice to not focus resources now on developing new ways to measure performance. Even though highly balanced performance measurement has its benefits, theoretical models are not supposed to be implemented as such because companies have unique requirements (Wongrassamee, Simmons, and Gardiner 2003).

5.2. Conclusions

The aim of the thesis was to study performance measurement in service context and propose a set of service business KPIs for a case company to further support its service business development. Performance measurement is a widely studied topic to which services create a unique context. Also, many companies have been measuring performance and developing KPIs for traditional product business needs but increasing focus on service business has brought new challenges. This thesis focused on understanding the context services create for performance measurement and applying the knowledge for the case company's needs.

Providing KPIs for the case company required understanding special characteristics of services and analyzing the case company's current measurement practices and service

strategy. Strategy focus of KPIs was enabled by first creating breakthrough objectives and must-wins for all strategic initiatives and then KPIs for the most critical topics. The chosen KPIs and amount of breakthrough objectives and must-wins have been visualized as a strategy house below in Figure 15. Similar kind of strategy house with also identified breakthrough objectives and must-wins (described more detailed in chapters 4.4 and 4.5) was proposed for the case company.

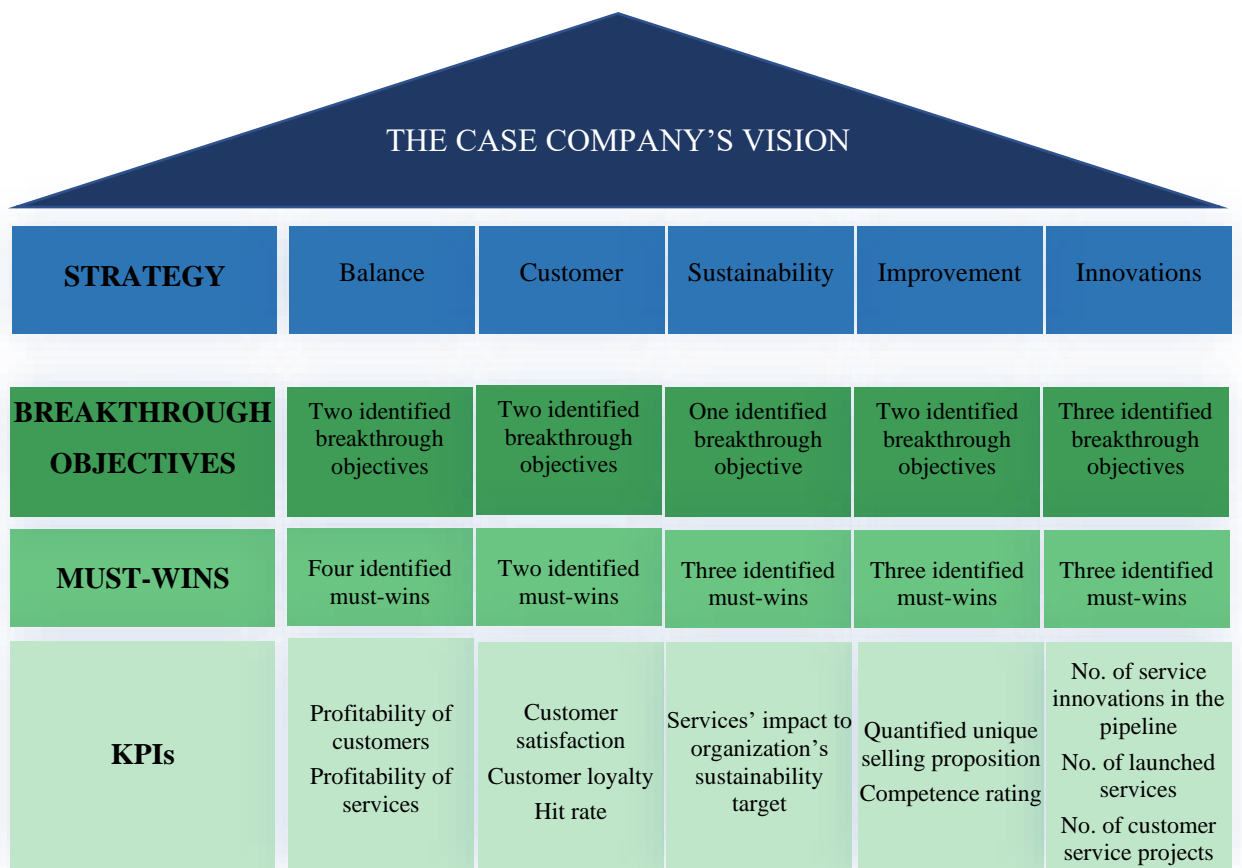| THE CASE COMPANY'S VISION					
STRATEGY	Balance	Customer	Sustainability	Improvement	Innovations
BREAKTHROUGH OBJECTIVES	Two identified breakthrough objectives	Two identified breakthrough objectives	One identified breakthrough objective	Two identified breakthrough objectives	Three identified breakthrough objectives
MUST-WINS	Four identified must-wins	Two identified must-wins	Three identified must-wins	Three identified must-wins	Three identified must-wins
KPIs	Profitability of customers Profitability of services	Customer satisfaction Customer loyalty Hit rate	Services' impact to organization's sustainability target	Quantified unique selling proposition Competence rating	No. of service innovations in the pipeline No. of launched services No. of customer service projects

Figure 15. A service strategy house representing the one proposed for the case company

This thesis focused on the first phase, design, of service performance measurement development process. It defined KPIs which aim to lead the case company to the direction of the defined service breakthrough objectives and must-wins, that are based on organizational and service strategy. However, well defined and strategy linked indicators do not mean that the organization will perform well. If the chosen strategy is not correct or the

indicators and their results are not followed, the performance will not automatically increase. (Kaplan and Norton 1992)

The case company should note that successful performance measurement development is not complete when the design phase has been completed. During the research, information about the current performance measurement practices and existing KPIs in the company was collected and used in service KPI design. This method aimed to design KPIs that can be efficiently implemented and later used since many of the existing practices may also support performance measurement of services. Design phase must be followed by implementing, then using and later by developing performance measurement system, and using it to challenge current strategy. (Bourne et al 2000) Once developed, a performance measurement system does not stay relevant forever which is why the system should allow continual improvement and reviewing of the indicators. Performance measurement system can be described as iterative since it must be modified, and indicators updated when more information is gained. (Lohman, Fortuin, and Wouters 2004)

5.3. Theoretical and Methodological Contributions

This thesis aimed to study performance measurement of services in the case company's context, but it was also able to make theoretical contributions. It gained understanding on how performance measurement can be successfully designed in a company. Especially, it provided detailed guidelines on how to plan and use workshops as a research method when designing performance measurement. The defined breakthrough objectives, must-wins and KPIs are more supporting existing knowledge about performance measurement in service context.

Designing performance measurement requires understanding how the KPIs are used and what are the measurement practices. This thesis found out that interviewing end users and indicator providers gain a lot of valuable information about the current system and implementation possibilities. This will reduce the gap between designing strategic KPIs and

putting them into practice which is a supported view also in literature (Lohman, Fortuin, and Wouters 2004). This knowledge was discussed in the workshops to keep the use and implementation of the KPIs in mind already in design.

One of the chosen research methods for designing performance measurement was workshops which was also supported by Neely et al (2002). However, literature did not offer clear guidelines on how to plan, execute and analyze outcomes of workshops. This thesis described the workshops and used workshop methods in detail, so it contributed to existing literature related to workshops as a research method, especially in performance measurement design context. This thesis found out that developing suitable workshop methods and communicating the aimed workshop outcome are crucial factors in ideating KPIs, reducing the list of the ideas, and forming a suitable set of KPIs.

A workshop must start by clearly sharing the goal of the workshop and it must be reminded throughout the workshop. The characteristics of good KPIs must be discussed together and reflected throughout the workshops. In addition, planning and choosing workshop methods and schedule are very important steps. Methods need to support ideating but guide the discussion into the wanted outcome, a compact list of strategy-related and balanced KPIs. The facilitator has to take the lead in guiding the discussion and demanding for outcomes. Otherwise, the discussion and brainstorming may keep going forever. This similar approach was found out to be suitable also when defining strategic breakthrough objectives and must-wins. However, it was noticed that reducing the list of ideas and defining the final outcome was even harder with KPIs than with strategic objectives. The case company found it easy to ideate all the possible things that could be measured, and the challenge was to reduce that list into a coherent and compact list of KPIs. Neely et al (2002, 2) and Neely, Gregory and Platts (2005) also supported this finding but literature did not offer a clear solution for this issue to which the workshop guidelines this study provides are offering one case study's solution.

The defined breakthrough objectives, must-wins and KPIs were not designed based on any theoretical model. The aim was to catch the case company's needs and special characteristics

of services based on the case company's strategic service goals; services to be customer centric and profitable. However, the results show support to multiple views from literature. In the case company, customer, learning and innovation topics are considered especially important perspectives in the service business development and thus highlighted throughout the defined KPIs. Also, Sofiyabadi, Kolahi, and Valmohammadi (2016) emphasized these perspectives in the service context. Customer-centricity is reflected in breakthrough objectives and must-wins and measured through customer satisfaction and loyalty KPIs. Customer needs were gaining a lot of focus, but profitability was not to be forgotten which is supported also in literature (Salonen 2011; Tuli, Kohli, and Bharadwaj 2007). Defined KPIs include profitability which was seen to be enhanced through standardization among other things and thus added as a must-win. In addition, the findings show that the case company has a need to focus on developing competences required in successful service business. The case company's competences were seen as one of the key drivers when developing successful and customer-centric service business. This view is also supported in literature, for example by Kandemir, Yaprak, and Cavusgil (2006) and Karpen, Bove, and Lukas (2012).

5.4. Managerial Implications

This study focused on designing performance measurement for the case company and proposed a strategy house with breakthrough objectives, must-wins, and KPIs that the case company can now implement and then use. The results proved that organizations could use their existing measurement practices as a starting point when designing new KPIs, even when the new context, like services in a product-orientated company, have their own special characteristics to consider. Multiple good measurement practices supported by literature, like having strategy in the core of KPIs and having a balanced set of KPIs, were also adopted without following any theoretical performance measurement model. Even when a company does not want to use any specific model, they can adopt characteristics from the existing models and literature.

In addition, the study used performance measurement design methods that can be used in other circumstances too. This thesis provided guidelines on how to design performance measurement in an efficient way. Interviewing, observing, and analyzing internal documents were suitable tools to analyze for example the current measurement practices and KPIs. Workshops can be used in the case company or in other contexts as method to analyze the current system, create strategic actions and design KPIs. It was noticed that a cross-functional team allowed different views to be presented and presence of management enabled final decisions to be made already in the workshops.

5.5. Limitations and Future Research

The qualitative approach and a single case study provide deep knowledge about the case company and its context affecting performance measurement. However, the research design does not provide insight about the topic generally. The empirical part of the thesis gives conclusions on the topic in the case company's context. However, the results can be considered in future research but with cautious.

Organizational performance is a much-researched topic but comparing results of different scientific papers related to performance and justifying their normative recommendations is difficult (Richard et al 2009). Performance measurement in general depends on the context. This thesis aimed to form key performance indicators for a case company. The result is dependent on the context the case company provides and may not be applicable in other contexts or comparable with other studies. In addition, the thesis used single case study as a research method which further limits the implications since it collects data only from one company. Thus, the thesis and its results are difficult to generalize, but it can be seen as a step closer to a generalization.

Given the nature of services where company creates value together with the customer, involving customer in designing performance measurement can bring benefits and give valuable information for the company. Involving customer provides insight on their

motivation to use the provided service, develop it, get involved in innovating, and in general on customer's value-creation process. (Ukko and Pekkola 2016) Proposed performance measurement framework with breakthrough objectives, must-wins, and KPIs, or parts of it like only KPIs can be further improved in the case company by validating it with key customers. Customers can also be involved in the future development of performance measurement for specific services or solutions. This would improve the case company's goal to be more customer centric also on performance measurement.

Even though S-D orientation was not the focus of this thesis, the results supported the suitability of the framework. The identified must-wins and breakthrough objectives are needed when the case company is reaching its goals to become more customer-centric and service-orientated organization which requires improving and complementing existing capabilities. The focus on capabilities in general is seen in the defined must-wins, and some reflect already specific types of capabilities like focus on customer's unique needs. These reflected capabilities in must-wins could be categorized under S-D orientation and its capabilities even though the case company has not used the S-D orientation as a framework on identifying the needed capabilities. This gives support for S-D orientation to be a suitable framework or a starting point to be used when developing the case company's service business related capabilities, but this has not been studied further. In addition, this thesis focused strongly on the case company's context and did not test if S-D orientation would be suitable as a framework in general.

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APPENDICIES

Appendix 1. Summary of the used internal documents, observations, and unstructured interviews

Internal document	
Type	**Agenda**
Organizational strategy	To get a holistic view of the company's strategy; To identify the organizational strategic initiatives under which breakthrough objectives, must-wins, and KPIs are developed.
Service strategic plan	To collect existing material of the views for services' future for workshops; To collect existing knowledge of strengths, weaknesses, opportunities, and threats of the case company related to services; To collect existing material for breakthrough objectives.
Observations	
Month	**Agenda**
August 2021	Case company's market intelligence
August 2021	Case company's current performance measurement
August 2021	Case company's current KPIs
September 2021	Future of services and organizational needs
October 2021	Service strategy and organizational needs; measuring service performance
November 2021	Developing service strategy
Unstructured internal interviews	
Month	**Agenda**
September 2021	Current performance measurement process and defining KPIs
September 2021	Performance measurement of services and service KPIs
September 2021	Current performance measurement, developing KPIs, used KPIs, and following KPIs
September 2021	Existing KPIs in the case company
September 2021	Recent KPI development process in the case company
October 2021	Development process of the current organizational strategy

Appendix 2. Workshops' questions and tasks

1. WORKSHOP		
Agenda	**Individual/group task**	**Question(s)**
1. Validate background information	Group task	Which suggested topics you would keep, or which would you remove? Which topics would you add?
2. Complete & validate breakthrough objectives for services	Individual task	Which existing breakthrough objectives are the ones you would highlight? How would you update existing breakthrough objectives? Which other topics are needed, and you would bring as new to meet the vision?
	Group task	Which breakthrough objectives we choose?
3. Identify & validate must-wins for services	Individual task	Which are the most critical things that must be conquered to reach breakthrough objectives?
	Group task	Are the defined must-wins winnable and tangible stretched targets? Are the must-wins linked to breakthrough objectives? Which must-wins we choose?
4. Ideate dimensions and topics for KPIs	Individual task	What topics should the KPIs measure? What dimensions should the KPIs have?
2. WORKSHOP		
5. Identify & validate KPIs	Individual task	Which existing KPIs are the ones you would include under each strategic initiative? Which other KPIs would you include under each strategic initiative?
	Group task	Which KPIs we choose?